FORM S-1/A

General form of registration statement for all companies including face-amount certificate companies [amend]

Filing Date: **1996-08-26**
SEC Accession No. 0000950109-96-005536

FILER

APPLIED IMAGING CORP

CIK:**816066**| IRS No.: **770120490** | State of Incorp.:**CA** | Fiscal Year End: **1231**
Type: **S-1/A** | Act: **33** | File No.: **333-06703** | Film No.: **96620614**
SIC: **3841** Surgical & medical instruments & apparatus

Mailing Address
2380 WALSH AVE
BUILDING B
SANTA CLARA CA 95051

Business Address
2380 WALSH AVE BLDG B
SANTA CLARA CA 95051
4085620250

AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON AUGUST 26, 1996

REGISTRATION NO. 333- 06703

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

AMENDMENT NO. 1

TO
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

APPLIED IMAGING CORP.
(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

<TABLE>
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<S>	<C>	<C>
CALIFORNIA (PRIOR TO REINCORPORATION) DELAWARE (AFTER REINCORPORATION) (STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION)	3841 (PRIMARY STANDARD INDUSTRIAL CLASSIFICATION CODE NUMBER)	77-012490 (I.R.S. EMPLOYER IDENTIFICATION NUMBER)

</TABLE>

2380 WALSH AVENUE, BUILDING B
SANTA CLARA, CALIFORNIA 95051
(408) 562-0250
(ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER, INCLUDING AREA CODE, OF REGISTRANT'S PRINCIPAL EXECUTIVE OFFICES)

ABRAHAM I. CORIAT
CHIEF EXECUTIVE OFFICER
APPLIED IMAGING CORP.
2380 WALSH AVENUE, BUILDING B
SANTA CLARA, CALIFORNIA 95051
(408) 562-0250
(NAME, ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER, INCLUDING AREA CODE, OF AGENT FOR SERVICE)

COPIES TO:

J. CASEY MCGLYNN, ESQ. DAVID J. SEGRE, ESQ. WILSON SONSINI GOODRICH & ROSATI PROFESSIONAL CORPORATION 650 PAGE MILL ROAD PALO ALTO, CA 94304 (415) 493-9300	ROBERT V. GUNDERSON, JR., ESQ. DAVID T. YOUNG, ESQ. GUNDERSON DETTMER STOUGH VILLENEUVE FRANKLIN & HACHIGIAN, LLP 600 HANSEN WAY, SECOND FLOOR PALO ALTO, CA 94304 (415) 843-0500

APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. [_]

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. [_]

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act

registration statement number of the earlier effective registration statement for the same offering. [_]

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. [_]

CALCULATION OF REGISTRATION FEE

<table>
<caption></caption>
<tr><th>TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED</th><th>AMOUNT TO BE REGISTERED(1)</th><th>PROPOSED MAXIMUM OFFERING PRICE PER SHARE(2)</th><th>PROPOSED MAXIMUM AGGREGATE OFFERING PRICE(1)(2)</th><th>AMOUNT OF REGISTRATION FEE(3)</th></tr>
<tr><td>Common Stock, $0.001 par value.....</td><td>2,645,000</td><td>$16.00</td><td>$42,320,000</td><td>14,593.11</td></tr>
</table>

(1) Includes shares that the Underwriters have the option to purchase to cover over-allotments, if any.

(2) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(a) promulgated under the Securities Act of 1933, as amended.

(3) A registration fee of $14,593.11 was previously paid.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933, AS AMENDED, OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

+INFORMATION CONTAINED HEREIN IS SUBJECT TO COMPLETION OR AMENDMENT. A REGISTRATION STATEMENT RELATING TO THESE SECURITIES HAS BEEN FILED WITH THE SECURITIES AND EXCHANGE COMMISSION. THESE SECURITIES MAY NOT BE SOLD NOR MAY OFFERS TO BUY BE ACCEPTED PRIOR TO THE TIME THE REGISTRATION STATEMENT BECOMES EFFECTIVE. THIS PROSPECTUS SHALL NOT CONSTITUTE AN OFFER TO SELL OR THE SOLICITATION OF AN OFFER TO BUY NOR SHALL THERE BE ANY SALE OF THESE SECURITIES IN ANY STATE IN WHICH SUCH OFFER, SOLICITATION OR SALE WOULD BE UNLAWFUL PRIOR TO REGISTRATION OR QUALIFICATION UNDER THE SECURITIES LAWS OF ANY SUCH STATE.+

SUBJECT TO COMPLETION, DATED AUGUST 26, 1996

2,300,000 SHARES

APPLIED IMAGING

[LOGO OF APPLIED IMAGING APPEARS HERE]

COMMON STOCK

All the shares of Common Stock offered hereby are being sold by Applied Imaging Corp. ("Applied Imaging" or the "Company"). Prior to this offering, there has been no public market for the Common Stock of the Company. It is currently estimated that the initial public offering price will be between $14.00 and $16.00. See "Underwriting" for a discussion of the factors to be considered in determining the initial public offering price. Application has been made to have the Common Stock approved for quotation on the Nasdaq National Market under the symbol "AICX."

THE SHARES OFFERED HEREBY INVOLVE A HIGH DEGREE OF RISK. SEE "RISK FACTORS" BEGINNING ON PAGE 5 FOR A DISCUSSION OF CERTAIN FACTORS THAT SHOULD BE CONSIDERED BY PROSPECTIVE PURCHASERS OF THE COMMON STOCK OFFERED HEREBY.

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION NOR HAS THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

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	Price to Public	Underwriting Discount (1)	Proceeds to Company (2)
<S>	<C>	<C>	<C>
Per Share	$	$	$
Total (3)	$	$	$

</TABLE>

(1) See "Underwriting" for information concerning indemnification of the Underwriters and other matters.

(2) Before deducting expenses payable by the Company estimated at $750,000.

(3) The Company has granted the Underwriters a 30-day option to purchase up to 345,000 additional shares of Common Stock solely to cover over-allotments, if any. If the Underwriters exercise this option in full, the Price to Public, Underwriting Discount and Proceeds to Company will be $, $ and $, respectively. See "Underwriting."

The shares of Common Stock are offered by the several Underwriters named herein, subject to receipt and acceptance by them and subject to their right to reject any order in whole or in part. It is expected that delivery of the certificates representing such shares will be made against payment therefor at the offices of Montgomery Securities on or about , 1996.

MONTGOMERY SECURITIES
DILLON, READ & CO. INC.
VECTOR SECURITIES INTERNATIONAL, INC.

, 1996

SOLUTIONS FOR PRENATAL SCREENING

FETAL CELL LABORATORY
The Company's prenatal screening system, if approved, will be sold to prenatal diagnostic laboratories where genetic analysis is typically done.

CONSUMABLE ENRICHMENT KIT
The Company's proprietary consumable enrichment kit is designed to enrich the concentration of fetal blood cells in a maternal blood sample.

FETAL CELL SLIDE SCANNING SYSTEM
The Company is developing an automated system to rapidly identify fetal blood cells based on adaptations of its image analysis, pattern recognition and slide scanning technologies incorporated in the Company's current cytogenetic products.

FETAL CELL
This fetal blood cell was identified using the Company's proprietary technology. In laboratory studies, the Company has enriched the concentration of fetal blood cells in maternal blood samples taken during early gestation. After identification, this fetal cell was subjected to a DNA probe assay.

THE COMPANY'S PRENATAL SCREENING SYSTEM HAS NOT BEEN APPROVED FOR MARKETING BY THE UNITED STATES FOOD AND DRUG ADMINISTRATION ("FDA") OR ANY INTERNATIONAL REGULATORY AUTHORITIES.

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY OVER-ALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF THE COMMON STOCK

OF THE COMPANY AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

CYTOSCAN(R) is a registered United States trademark of the Company and APPLIED IMAGING(TM), GENEVISION(TM) and CYTOVISION(TM) are trademarks of the Company. This Prospectus also contains trademarks and tradenames of other companies.

PROSPECTUS SUMMARY

This Prospectus contains certain statements of a forward-looking nature relating to future events or the future financial performance of the Company. Prospective investors are cautioned that such statements are only predictions and that actual events or results may differ materially. In evaluating such statements, prospective investors should specifically consider the various factors identified in this Prospectus, including the matters set forth under the caption "Risk Factors," which would cause actual results to differ materially from those indicated by such forward-looking statements. The following summary is qualified in its entirety by the more detailed information, including the Consolidated Financial Statements and Notes thereto, appearing elsewhere in this Prospectus.

THE COMPANY

Applied Imaging designs, develops, manufactures and markets automated clinical analysis systems used by laboratories for prenatal and other genetic testing. The Company's cytogenetic instrumentation business, which has sold systems to approximately 500 sites in more than 30 countries since its inception, includes systems that enable laboratories to automate aspects of the detection of chromosomal abnormalities associated with conditions such as Down's Syndrome. In addition to the Company's core instrument business, the Company is developing a proprietary genetic screening system designed to enable prenatal screening for genetic abnormalities by isolating fetal red blood cells ("fetal blood cells") from a routine maternal blood sample. This new system is designed to improve current prenatal screening techniques by providing an accurate, timely and cost-effective procedure without the risks of miscarriage or fetal damage associated with invasive prenatal testing.

Prenatal genetic testing is currently performed either invasively by extracting, culturing and analyzing fetal cells taken from amniotic fluid or placental tissue, or non-invasively by analysis of serum markers derived from a maternal blood sample. The Company estimates approximately 2.3 million pregnant women in the United States undergo some form of prenatal screening each year. Despite the widespread use of prenatal screening, there are significant shortcomings associated with existing screening methods. Invasive procedures, which include amniocentesis (extracting fetal cells from the amniotic sac) and chorionic villus sampling (extracting tissues from the placenta), involve direct extraction of fetal cells. These procedures can accurately detect a broad range of chromosomal disorders but pose a risk of fetal loss of between 0.5-1%. Due to this risk, these invasive procedures are usually only recommended for women age 35 or older, at which ages, the risk of having a child with a chromosomal disorder is greater than the risk of spontaneous miscarriage associated with these procedures. The Company estimates that these procedures are performed on approximately 300,000 women annually in the United States. The non-invasive screening procedures, which include alpha-fetoprotein ("AFP") and the "triple test," both of which are blood chemistry tests, are currently broadly used for pregnant women including those under the age of 35 with approximately 2 million tests performed annually in the United States. While these tests present no risk to the fetus since they do not directly analyze fetal cells, they are much less accurate with detection rates of approximately 60% for chromosomal disorders and false positive rates of approximately 5%.

The Company's prenatal screening system under development is intended to provide an accurate, non-invasive test by directly analyzing fetal blood cells isolated from a routine maternal blood sample. The Company's proprietary screening system incorporates (i) a patented blood-based procedure to enrich the concentration of fetal blood cells, (ii) automated image analysis instrumentation to identify the fetal blood cells and (iii) the use of third-party DNA probes to identify certain chromosomal disorders present in fetal blood cells. This system is expected to be accurate because it evaluates actual fetal cells while posing no risk to the fetus. The Company's prenatal screening system is currently in preclinical evaluation and application for FDA approval has not yet been submitted.

The Company believes that a key aspect of its prenatal screening system is its ability to enrich and identify fetal blood cells so that they can be directly analyzed using available DNA probe technology. As of August 1996, the Company and its collaborators have used the fetal blood cell enrichment procedure on a total of 133 maternal blood samples. The Company's system has achieved fetal blood cell identification in 120 of the 133 samples tested, or 90% of cases. In 13 maternal blood samples (10% of the total samples), no fetal blood cells were found. The Company intends to continue preclinical and clinical evaluation of this system and anticipates beginning a multi-site international clinical trial during the first half of 1997. Additionally, the Company intends to file two separate 510(k) applications for the fetal cell enrichment and automated imaging system components of its system before the end of 1996, and an additional application (either a 510(k), tier III or a PMA) for the DNA-probe component of its prenatal screening system. There can be no assurance that the Company will be successful in establishing its prenatal screening system as a broad-based prenatal screening procedure nor can there be any assurance that the prenatal screening system will be approved for marketing by the FDA or, if approved, that clinical acceptance will be achieved.

The Company's strategy is to establish its system as a broad-based prenatal screening procedure. The Company anticipates that sales of this system, if approved by the FDA, will include both its proprietary consumable enrichment kits, used to separate fetal blood cells from maternal blood samples and imaging instrumentation used to analyze the cells. These new image analysis systems are contemplated to be compatible with the Company's existing installed cytogenetic instrument base. The Company believes that it can leverage its existing infrastructure, worldwide distribution capabilities and extensive laboratory relationships to support the world-wide introduction of this fetal cell screening system under development. Furthermore, the Company believes that its new cell enrichment and image analysis system could have clinical utility for cancer applications and the prenatal diagnosis of single gene disorders, and it intends to pursue the development of these other potential applications. Significant additional research and development will be necessary to establish the clinical utility of the Company's cell enrichment techniques and image analysis system for these other potential applications.

THE OFFERING

Common Stock to be offered by the Company.....	2,300,000 shares
Common Stock to be outstanding after the Offering(1).....	7,436,064 shares
Use of proceeds.....	For research and development and clinical trials related to the prenatal screening system; repayment of indebtedness; working capital and general corporate purposes. See "Use of Proceeds."
Proposed Nasdaq National Market symbol.....	AICX

SUMMARY CONSOLIDATED FINANCIAL DATA
(IN THOUSANDS, EXCEPT PER SHARE DATA)

	YEAR ENDED DECEMBER 31,					SIX MONTHS ENDED JUNE 30,	
	1991	1992	1993	1994	1995	1995	1996
						(UNAUDITED)	
STATEMENT OF OPERATIONS DATA:							
Total revenues.....	$10,781	$11,711	$ 8,681	$ 9,571	$10,798	$ 5,215	$ 5,995
Cost of revenues.....	5,783	6,184	4,965	5,350	5,484	2,611	3,122

Gross profit.....	4,998	5,527	3,716	4,221	5,314	2,604	2,873
Operating expenses:							
Research and development.....	1,164	1,316	1,756	2,821	2,919	1,380	1,698
Sales and marketing....	2,565	3,279	2,543	2,524	2,918	1,335	1,476
General and administrative.....	1,453	1,642	1,229	1,898	2,094	996	949
Restructuring and reorganization costs..	396	--	--	--	--	--	--
Write-off of research and development in process.....	1,285	--	--	--	--	--	--
Total operating expenses.....	6,863	6,237	5,528	7,243	7,931	3,711	4,123
Operating loss.....	$(1,865)	$ (710)	$(1,812)	$(3,022)	$(2,617)	$(1,107)	$(1,250)
Net loss.....	$ (977)	$ (480)	$(1,773)	$(2,970)	$(2,546)	$(1,101)	$(1,235)
Pro forma net loss per common share(2).....					$ (0.45)		$ (0.22)
Shares used in computing pro forma net loss per common share(2).....					5,635		5,687

<TABLE>
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	JUNE 30, 1996	
	ACTUAL	AS ADJUSTED(3)
	(UNAUDITED)	
<S>	<C>	<C>
BALANCE SHEET DATA:		
Cash, cash equivalents and short-term investments.....	$ 3,236	$33,975
Working capital.....	2,238	33,573
Total assets.....	8,089	38,828
Long-term debt.....	223	223
Accumulated deficit.....	10,375	10,375
Total stockholders' equity(4).....	3,615	34,950

</TABLE>

(1) Based upon shares outstanding as of June 30, 1996. Excludes (i) 497,250 shares issuable upon exercise of options outstanding under the Company's Amended and Restated 1988 Incentive Stock Option Plan (the "1988 Option Plan"), (ii) 120,000 shares reserved for issuance under the Company's 1994 Director Option Plan (the "Director Plan"), (iii) 200,000 shares reserved for issuance under the Company's Employee Stock Purchase Plan (the "Purchase Plan"), (iv) 508,734 shares issuable upon exercise of outstanding warrants to purchase Common Stock and (v) an additional 632,113 shares reserved for issuance under the 1988 Option Plan. See "Management--Incentive Stock Plans," "Description of Capital Stock--Warrants."

(2) See Note 1 of Notes to Consolidated Financial Statements for information concerning the computation of pro forma net loss per share.

(3) As adjusted to reflect the sale of the 2,300,000 shares of Common Stock offered by the Company hereby at an assumed initial public offering price of $15.00 per share and the receipt of the estimated net proceeds therefrom and repayment of $596,000 of short-term debt. See "Use of Proceeds."

(4) No cash dividends have been declared with respect to the Company's Common and Preferred Stock.

Except as set forth in the Consolidated Financial Statements or as otherwise indicated, all information in this Prospectus assumes (i) the reincorporation of the Company from California to Delaware which will occur prior to this offering, (ii) the filing of the Company's Restated Certificate of Incorporation authorizing a class of undesignated Preferred Stock, to be effective upon the closing of this offering, (iii) the conversion of all

outstanding shares of Preferred Stock into Common Stock upon the closing of this offering, (iv) the net exercise of certain outstanding warrants to purchase Series F Preferred Stock into 85,387 shares of Common Stock and (v) no exercise of the Underwriters' over-allotment option. See "Description of Capital Stock" and "Underwriting."

RISK FACTORS

This Prospectus contains forward-looking statements that involve risks and uncertainties. The Company's actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including those set forth in the following risk factors and elsewhere in this Prospectus. The following principal factors should be carefully considered in evaluating the Company and its business before purchasing the Common Stock offered hereby.

PRENATAL SCREENING SYSTEM IN EARLY STAGE OF DEVELOPMENT; NO ASSURANCE OF SUCCESSFUL DEVELOPMENT OR COMMERCIALIZATION

The Company's prenatal screening system is in an early stage of development and testing, and application for FDA approval has not yet been submitted. To date, the Company's technology for enriching the concentration of nucleated fetal red blood cells in maternal blood samples has been subjected only to preclinical testing by the Company. The isolation, enrichment and analysis of fetal cells from a maternal blood sample is difficult and poses a significant technical challenge due to their rarity in maternal blood. Estimates of the frequency of fetal cells in maternal blood generally range from 1 in 1 million to 1 in 10 billion. Preclinical testing of the Company's prenatal screening system has only recently shown progress in fetal cell isolation and detection. As of August 1996, the Company and its collaborators have used the fetal blood cell enrichment procedure on a total of 133 maternal blood samples. In these studies, the Company's system achieved fetal cell identification in 120 of the 133 samples tested. In 13 of these 133 samples, no fetal blood cells were found. In seven of the 120 samples in which fetal cell identification was achieved, the Company's investigators identified and counted only one fetal cell. The Company has not yet determined how many fetal cells, if any, can be obtained using its process and whether its results can be duplicated in larger studies. There can be no assurance that the Company's prenatal screening system will be able to detect fetal cells in amounts sufficient to allow for the detection and analysis of chromosomal abnormalities. In addition, the Company's preclinical testing in analyzing cells has almost exclusively been limited to detecting male and female chromosomes and has not yet focused on chromosomal abnormalities such as Down's Syndrome. There can be no assurance that the Company's prenatal screening system will be able to effectively and accurately detect Down's Syndrome or other chromosomal abnormalities. The development and potential commercialization of the Company's prenatal screening system will require significant research and development, substantial investment and clinical testing and regulatory clearances or approvals. The Company plans to continue to conduct preclinical testing in order to analyze the feasibility of its prenatal screening system. Such efforts may disclose significant technical obstacles that need to be overcome prior to pursuing clinical trials and seeking necessary regulatory approvals. For example, during preclinical testing the Company discovered that the gel in the preformed density gradients portion of its prenatal screening system destabilized if not properly stored at cool temperatures and, in any event, destabilized within two weeks even if properly stored. Although the Company believes it has identified a modified gel with greater stability and longer shelf life, there can be no assurance that this instability will be resolved or that other problems will not be detected. Such problems could have the effect of delaying or preventing the successful development of the Company's prenatal screening system. There can be no assurance that the Company will be able to develop this technology into a reliable and effective prenatal screening system, that required regulatory clearances or approvals for commercialization of its system will be obtained in a timely manner, or at all, or that the Company's prenatal screening system or other products under development, if introduced commercially, will be successful. If the Company is unable to successfully develop and market its prenatal screening system, the Company's business, financial condition and results of operations would be materially and adversely affected. See "Business--Applied Imaging's Prenatal Screening System."

LACK OF CLINICAL DATA

The Company has conducted no clinical trials of its prenatal screening system pursuant to FDA reviewed or FDA approved protocols. There can be no

assurance that the Company will commence such clinical testing, or once commenced, that such testing can be completed successfully within the Company's expected time frame and budget, if at all, or that the Company's products will prove to be reliable and effective in clinical trials. If clinical trials are initiated, such trials may disclose significant technical obstacles having the effect of delaying

or preventing the development, testing, regulatory approval and commercialization of the Company's prenatal screening system. There can be no assurance that the results of such clinical trials will be consistent with the Company's limited preclinical results to date or would be sufficient to obtain regulatory clearance or approval or clinical acceptance. If the Company is unable to initiate and conclude successfully clinical trials of its prenatal screening system, the Company's business, financial condition and results of operations would be materially and adversely affected.

NO ASSURANCE OF CLINICAL ACCEPTANCE

The isolation of fetal cells from maternal blood is a new and novel development. The clinical acceptance of the Company's prenatal screening system will depend upon its acceptance by the medical community and third-party payors as clinically useful, reliable, accurate, and cost-effective compared to existing and future procedures. Clinical acceptance will depend on numerous factors, including the establishment of the system's ability to isolate sufficient numbers of fetal cells during the early stages of pregnancy, to adequately enrich the concentration of nucleated fetal cells, and to reliably analyze and detect the presence of chromosomal abnormalities. Clinical acceptance will also depend on the receipt of regulatory clearances in the United States and internationally, the availability of third-party reimbursement and the Company's ability to adequately train laboratory technicians and cytogeneticists on how to use the prenatal screening system. In addition, there can be no assurance that the Company's prenatal screening system will be a preferable alternative to existing procedures such as maternal AFP or triple test which detect neural tube defects in addition to chromosomal abnormalities, or that the prenatal screening system will not be rendered obsolete or noncompetitive by products under development by other companies. The Company's system is intended to initially screen for Down's Syndrome and may not compete favorably with widely accepted methodologies such as amniocentesis or CVS that are highly accurate and diagnose a broader range of abnormalities from one sample of fetal cells. Patient acceptance of the Company's prenatal testing system will depend in part upon physician recommendations as well as other factors, including the effectiveness and reliability of the procedure as compared to amniocentesis, CVS and serum marker procedures. Even if the Company's prenatal screening system is clinically adopted, physicians may elect not to recommend the procedure unless acceptable reimbursement from health care payors is available. There can be no assurance that the Company's prenatal screening system under development will be accepted by the medical community or that market demand for such system will be sufficient to allow the Company to achieve profitable operations. Failure of the Company's prenatal screening procedure, for whatever reason, to achieve significant clinical adoption or failure of the Company's system to achieve any significant market acceptance would have a material adverse effect on the Company's business, financial condition and results of operations. See "Business--Applied Imaging's Prenatal Screening System."

ACCUMULATED DEFICIT; FUTURE LOSSES

From its inception in July 1986 through June 30, 1996, the Company has generated an accumulated deficit of approximately $10.4 million. The Company expects its operating losses to continue to increase as it continues its efforts to develop and test its prenatal screening system. There can be no assurance that its prenatal screening system under development will be commercially marketed or, if commercially marketed, that the Company will ever receive sufficient revenue to achieve profitability and failure to do so would have a material adverse effect on the Company's business, financial condition and results of operations. See "Management's Discussion and Analysis of Financial Condition and Results of Operations."

QUARTERLY FLUCTUATIONS

The Company has experienced and expects to continue to experience significant fluctuations in its quarterly operating results. Factors which may have an influence on the Company's operating results in a particular quarter include (i) demand for the Company's products, new product introductions by the Company or its competitors or transitions to new products; (ii) the

results of preclinical or planned clinical trials and, if ever received, the timing

of regulatory and third-party reimbursement approvals; (iii) the timing of orders and shipments; (iv) the mix of sales between distributors and the Company's direct sales force; (iv) competition, including pricing pressures; (v) the timing and amount of research and development expenses, including clinical trial-related expenditures; (vi) seasonal factors; (vii) foreign currency fluctuation; and (viii) the delay between incurrence of expenses to develop new products, including related marketing and service capabilities, and realization of benefits from such efforts. The Company typically has experienced increased sales in its first and fourth quarter. The Company believes this pattern of fluctuating revenues reflects the budgetary spending practices of the Company's customer base which consists primarily of public and private cytogenetic laboratories, research organizations and hospitals operating on annual budgets. There can be no assurance that this trend will continue. Due to all the foregoing factors, it is likely that in some future quarter the Company's operating results will be below the expectations of public market analysts and investors. In such event, the price of the Company's Common Stock would likely be materially adversely affected. See "Management's Discussion and Analysis of Financial Condition and Results of Operations--Results of Operations" and "Business--Manufacturing."

ADDITIONAL CAPITAL REQUIREMENTS; NO ASSURANCE FUTURE CAPITAL WILL BE AVAILABLE

The Company has expended and will continue to expend substantial funds for research and development, preclinical testing, planned clinical investigations, capital expenditures, and manufacturing and marketing of its products. The timing and amount of spending of such capital resources cannot be accurately determined at this time and will depend upon several factors, including the progress of its research and development efforts and planned clinical investigations, competing technological and market developments, commercialization of products currently under development, and market acceptance and demand for the Company's products. To the extent required, the Company may seek to obtain additional funds through equity or debt financing, collaborative or other arrangements with other companies and from other sources. If additional funds are raised by issuing equity securities, further dilution to stockholders could occur. There can be no assurance that additional financing will be available when needed or on terms acceptable to the Company. If adequate funds are not available, the Company could be required to delay development or commercialization of certain of its products, to license to third parties the rights to commercialize certain products or technologies that the Company would otherwise seek to commercialize for itself, or to reduce the marketing, customer support or other resources devoted to certain of its products each of which could have a material adverse effect on the Company's business, financial condition and results of operations. See "Use of Proceeds," "Dilution" and "Management's Discussion and Analysis of Financial Condition and Results of Operations--Liquidity and Capital Resources."

DEPENDENCE ON PRENATAL SCREENING SYSTEM; RAPID TECHNOLOGICAL CHANGE AND RISK OF TECHNOLOGICAL OBSOLESCENCE

The Company is dependent on the successful development and commercialization of the Company's prenatal screening system. Unfavorable preclinical or clinical results, failure to obtain regulatory clearances or approvals in a timely manner, or at all, or failure to gain widespread market acceptance for the system would have a material adverse effect on the Company's business, financial condition and results of operations.

The medical device industry, particularly the prenatal testing, diagnostic, and screening markets, is characterized by rapid and significant technological change. The sale of the Company's current products is largely dependent upon the continued use of prenatal testing methodologies that require the location of fetal cells in metaphase and the karyotyping of chromosomes identified in the metaphase cells. In addition, the Company's current products require a testing laboratory to make a large one-time investment, and the availability of less expensive automated cytogenetic equipment could have a material adverse effect on the Company's business financial condition, and results of operations. The Company's future success will depend in large part on the Company's ability to continue to respond to such changes. There can be no assurance that the Company will be able to respond to such changes or that new or improved competing products will not be developed that render the Company's products obsolete. Product research and development will require substantial expenditures and will be subject to inherent risks, and there can be no

assurance that the Company will be successful in developing products that have the characteristics necessary to screen or diagnose particular indications or that any new product introduced will receive regulatory clearance or approval or will be successfully commercialized. See "Business--Research and Development."

HIGHLY COMPETITIVE MARKET; RISK OF COMPETING SCREENING APPROACHES

The market for the Company's current cytogenetic products is highly competitive, and the Company expects competition to increase. With respect to its current cytogenetic products, the Company's current competitors include Vysis Corp., a biotechnology subsidiary of Amoco Technology Company, Perceptive Scientific, Inc. (acquired by International Remote Imaging Systems, Inc.) and manual laboratory procedures. The market for the Company's current cytogenetic products is limited to laboratories and institutions performing prenatal and other genetic testing. There can be no assurance that the Company's competitive position in cytogenetic products will be maintained.

The medical diagnostic and biotechnology industries are subject to intense competition. The Company knows of certain companies that are in the process of developing genetic screening products based on competing technologies designed to enrich the concentration of nucleated fetal cells in maternal blood samples. These companies include Integrated Genetics, Inc., CellPro, Incorporated, Aprogenex, Inc. and Centocor, Inc. Many of the Company's competitors have greater financial and technical resources and production and marketing capabilities than the Company. There can be no assurance that these competitors will not succeed in developing technologies and products that are more accurate and effective, easier to use or less expensive than those which are currently offered or being developed by the Company or that would render the Company's technology and products obsolete and noncompetitive. In addition, many of the Company's competitors have significantly greater experience than the Company in conducting clinical investigations of new screening and diagnostic products and in obtaining FDA and other clearances or regulatory approvals of products. Accordingly, the Company's competitors may succeed in developing and obtaining regulatory approvals for such products more rapidly than the Company. The Company's prenatal screening system under development, if commercially marketed, will be subject to intense competition from existing prenatal screening and diagnostic approaches, such as AFP, triple test, CVS and amniocentesis. These competing approaches are widely accepted and screen and/or diagnose a broad range of abnormalities. There can be no assurance that the Company's prenatal screening system under development will replace or supplement any of these or other existing procedures. Such competition from new, developing or existing products or failure of the Company to successfully develop its prenatal screening system would have a material, adverse effect on the Company's business, financial condition and results of operations. See "Business--Competition."

UNCERTAINTY OF FDA OR OTHER REGULATORY CLEARANCES OR APPROVALS

The preclinical and clinical testing, manufacturing, labeling, distribution, sale, marketing, advertising and promotion of the Company's research, investigational and clinical screening and diagnostic products are subject to extensive and rigorous government regulation in the United States and certain other countries. In the United States and certain other countries, the process of obtaining and maintaining required regulatory clearances or approvals is lengthy, expensive and uncertain. The Company's future success will be significantly dependent upon commercial sales of its prenatal screening system under development. The Company will not be able to market this prenatal screening system for clinical diagnostic use in the United States unless and until the Company obtains clearance or approval from the United States Food and Drug Administration ("FDA") for each device within the system and will not be able to market such system overseas until it meets the safety and quality regulations of each foreign jurisdiction in which the Company, its agents or distributors seek to sell such system. Noncompliance with applicable FDA requirements can result in severe administrative, civil and criminal sanctions.

The Company's Cytoscan products were marketed until 1994 in the United States pursuant to pre-market notifications to the FDA under Section 510(k) of the Federal Food, Drug and Cosmetic Act ("510(k)"). A 510(k) pre-market notification must be supported by appropriate data establishing, to the satisfaction of the FDA, that a newly developed device is "substantially equivalent" to a legally marketed device that did not itself require FDA approval of a premarket approval application ("PMA"). The PMA process is

significantly more complex, expensive and time consuming than the 510(k) process. The decision whether to seek 510(k) clearance for a changed or modified device is left to the manufacturer in the first instance. The Company to date has not sought 510(k) clearance for its CytoVision system, which has been marketed since 1993, on the basis of the Company's conclusion, reflected in the Company's scientific report addressing this matter, that CytoVision is a new model of Cytoscan and there have not been any changes or modifications in design, components, method of manufacture or intended use, which could significantly affect the safety or effectiveness of the original 510(k)-cleared

Cytoscan device. There can be no assurance that the FDA will agree with the Company's decision not to seek 510(k) clearance for CytoVision, that it will not require the Company to cease sales and distribution of and seek 510(k) clearance for the CytoVision system, or that such clearance, if required, will be obtained in a timely manner or at all.

The Company intends to apply for two separate 510(k) clearances for the fetal cell enrichment and scanning components of its prenatal screening system. The DNA probe components of the Company's prenatal screening system will require either FDA clearance of a 510(k) with a tier III level of review (the most extensive level of FDA review of a 510(k), equivalent to the FDA review of a PMA in thoroughness and time) or FDA approval of a PMA.

The Company intends to submit a protocol for clinical trials of the DNA probe component of its prenatal screening system to the FDA before the end of 1996 and to initiate a multisite U.S. and international clinical trial of the DNA probe component of its prenatal screening system to detect chromosomal disorders in isolated fetal cells during the first half of 1997, based upon the response from the FDA. There can be no assurance regarding the timing or nature of the FDA response regarding the DNA probe related protocol or the timing for the commencement of clinical trials. There can be no assurance that 510(k) clearance for any portion of the fetal cell screening system under development or any other future product or modification of an existing product will be granted or that the clearance process will not be unduly lengthy and subjected to a thorough internal review equivalent to that ordinarily reserved for devices requiring premarket approval by the FDA. If substantial equivalence cannot be established or if the FDA determines that the device or the particular application for the device requires a more rigorous review, which the FDA has stated is possible for the Company's prenatal screening system under development, the FDA will require that the Company submit a PMA that must be reviewed and approved by the FDA prior to sales, distribution and marketing of these products in the United States. Currently, the DNA probes that the Company intends to purchase from third parties to incorporate into its prenatal screening system are sold on a research basis without FDA approval for commercial sale. The FDA requires DNA probes to have 510(k) clearance or PMA approval for commercial sale for clinical diagnostic use, which could cause the price of DNA probes to increase, making the Company's prenatal screening system less price competitive compared to existing prenatal genetic test procedures.

The regulation of medical devices continues to develop and there can be no assurance that new laws or regulations will not have a material adverse effect on the Company's business, financial condition and results of operations. Delays in receipt of clearance or approvals to market its products, failure to receive these clearances or approvals, the loss of previously received clearances or approvals, the determination that 510(k) clearance, pre-market approval or other approval is required for a product being marketed without such clearance or approval, or failure to comply with existing or future regulatory requirements could have a material adverse effect on the Company's business, financial condition and results of operations. See "Business--Government Regulation."

NEED TO COMPLY WITH INTERNATIONAL GOVERNMENT REGULATION

The regulatory review process varies from country to country. Currently, the Company's products are subject to pre-market approval in several of the countries that are members of the European Union and subject to other regulatory requirements in those and other countries. In addition, the regulation of in vitro diagnostic devices ("IVDs") and other medical devices continues to change. The Company may rely, in some circumstances, on its international distributors for compliance with clinical trial requirements in those countries where the Company intends to use distributors. Any enforcement action by regulatory authorities with respect to past or future regulatory

noncompliance would have a material adverse effect on the Company's business, financial condition and results of operations.

The time required to obtain approval for sale in foreign countries may be longer or shorter than that required for FDA approval, and the requirements may differ. In addition, there may be foreign regulatory barriers other than pre-market approval.

The Company plans to bring its instruments, when required, into compliance with the European Parliament's Electromagnetic Emissions Requirement (89/336/EEC) (the "EER") and to be entitled to apply the CE mark, with respect to the EER, to its instruments. The European Parliament has made a distinction between Medical Devices (MDs) and IVDs. The Company's instruments are not now subject to the requirements nor

advantages of the Medical Device Directive (93/42/EEC). There can be no assurance, however, that some or all of the Company's products will not be redefined as MDs and made subject to this Directive by the EU or its member states, which would have a material adverse effect on the Company's business, financial condition, and results of operations. Currently the European Union ("EU") and its member states have not adopted an EU-wide directive specifically regulating IVDs. A "Draft" EU IVD Directive (95/0013/EEC[COD]) has been prepared but has not been adopted into law either in the European Parliament or by any member state. To the Company's knowledge, there is no date established at this time for its enactment. Transposition into law in the member states may take up to two years to five years or longer following enactment by the European Parliament. Under the terms of the "Draft" IVD Directive a company (if it is in compliance) would be permitted to self-certify compliance with 95/0013/EEC[COD] without the intervention of a Competent Authority (a governmental agency of a member state with jurisdiction over matters pertaining to the directive) or a Notified Body (a private entity authorized by a Competent Authority to verify the compliance of a regulated entity with a particular directive) and thus apply the CE mark to its products with respect to this Directive. There can be no assurance, however, that the Draft IVD Directive will be adopted, or if adopted, will be implemented as drafted, or at all, that if adopted self-certification will be permitted, or that more extensive and more burdensome requirements will not be imposed under the IVD Directive (as adopted) or in the laws of the member states when implemented, or that any such requirements will not have a material adverse effect on the Company's business, financial condition, or results of operations. There can be no assurance, moreover, that member states, or any other European country, will not adopt other statutes or regulations that require premarket approval of the Company products, or that will otherwise have a material adverse effect on the Company's business, financial condition, or results of operations.

DEPENDENCE UPON PATENTS AND PROPRIETARY TECHNOLOGY; RISK OF INFRINGEMENT

The Company relies on trade secret protection and on its unpatented proprietary know-how in the development and manufacturing of its products. While the Company generally enters into confidentiality agreements with its employees and consultants, there can be no assurance that the Company's trade secrets or proprietary technology will not become known or be independently developed by competitors in such a manner that the Company has no practical recourse. Nor can there be any assurance that others will not develop or acquire equivalent expertise or develop products which render the Company's current or future products noncompetitive or obsolete. There can be no assurance that the claims allowed under its patents will be sufficiently broad to protect what the Company believes to be its proprietary rights. In addition, there can be no assurance that issued patents will not be disallowed or circumvented by competitors, or that the rights granted thereunder will provide competitive advantages to the Company. Companies have filed applications for, or have been issued patents relating to, products or processes that may be competitive with certain of the Company's products or processes. The Company is unable to predict how the courts would resolve issues relating to the validity and scope of such patents.

The validity and breadth of claims in medical technology patents involve complex legal and factual questions and, therefore, may be highly uncertain. No assurance can be given that any issued patent or patents based on pending patent applications or any future patent application will exclude competitors, that any of the Company's patent or patents in which it has licensed rights will be held valid if subsequently challenged or that others will not claim rights in or ownership of the patents and other proprietary rights held or

licensed by the Company. Furthermore, no assurance can be given that others have not developed or will not develop similar products, duplicate any of the Company's products or design around any patents issued to or licensed by the Company or that may be issued in the future to the Company. Since patent applications in the United States are maintained in secrecy until patents issue, the Company also cannot be certain that others did not first file applications for inventions covered by the Company's pending patent applications, nor can the Company be certain that it will not infringe any patents that may issue to others on such applications.

Legislation is pending in Congress that may limit the ability of medical device manufacturers in the future to obtain patents on surgical and medical procedures. While the Company cannot predict whether the legislation will be enacted, or precisely what limitations will result from the law if enacted, any limitation or reduction in

the patentability of medical and surgical technology could have a material adverse effect on the Company's ability to protect its proprietary methods and procedures.

In addition, patent applications in foreign countries are maintained in secrecy for a period after filing. Publication of discoveries in the scientific or patent literature tends to lag behind actual discoveries and the filing of related patent applications. The Company has not conducted an extensive search of patents issued to other companies, research or academic institutions, or others, and no assurances can be given that such patents do not exist, have not been filed, or could not be filed or issued, which contain claims relating to the Company's technology, products or processes. Patents issued and patent applications filed in the United States or internationally relating to medical devices are numerous and there can be no assurance that current and potential competitors and other third parties have not filed or in the future will not file applications for, or have not received or in the future will not receive, patents or obtain additional proprietary rights relating to products or processes used or proposed to be used by the Company. There are pending applications, which if issued with claims in their present form, might provide proprietary rights to third parties relating to products or processes used or proposed to be used by the Company. The Company may be required to obtain licenses to patents or proprietary rights of others.

The medical device industry in general, and the industry segment that includes products for prenatal diagnostic screening in particular, have been characterized by substantial competition. Litigation regarding patent and other intellectual property rights, whether with or without merit, could be time-consuming and expensive to respond to and could divert the Company's technical and management personnel. The Company may be involved in litigation to defend against claims of infringement by the Company, to enforce patents issued to the Company, or to protect trade secrets of the Company. If any relevant claims of third-party patents are held as infringed and not invalid in any litigation or administrative proceeding, the Company could be prevented from practicing the subject matter claimed in such patents, or would be required to obtain licenses from the patent owners of each such patent, or to redesign its products or processes to avoid infringement. The Company has recently received a letter from Vysis Corp. informing the Company that its products might fall within the claims of a United States patent exclusively licensed to Vysis Corp. Vysis Corp. offered the Company the right to obtain a sublicense to such patent. The Company does not believe it is necessary to obtain such a sublicense and does not believe it is infringing the patent . However, there can be no assurance that the Company will not ultimately be required to seek a license from Vysis Corp. or any other third party or that such license would be available or, if available, would be available on terms commercially-acceptable to the Company. In addition, in the event of any possible infringement, there can be no assurance that the Company would be successful in any attempt to redesign its products or processes to avoid such infringement. Accordingly, an adverse determination in a judicial or administrative proceeding or failure to obtain necessary licenses could prevent the Company from manufacturing and selling its products, which would have a material adverse effect on the Company's business, financial condition and results of operations. The Company intends to vigorously protect and defend its intellectual property. Costly and time-consuming litigation brought by the Company may be necessary to enforce patents issued to the Company, to protect trade secrets or know-how owned by the Company, or to determine the enforceability, scope and validity of the proprietary rights of others. See "Business--Patents and Proprietary Rights" and "--Competition."

LIMITED MANUFACTURING EXPERIENCE; NO MANUFACTURING EXPERIENCE FOR THE

CONSUMABLE ENRICHMENT KIT

To date, the Company's manufacturing activities have consisted primarily of the assembly and testing of its cytogenetic products. If the Company obtains necessary regulatory clearances, registrations and approvals for its prenatal screening system and such systems are successfully introduced, the Company will be required to increase its manufacturing capacity. The Company has no experience in manufacturing the consumable enrichment kit portion of its prenatal screening system. Manufacturers often encounter difficulties in commencing and increasing production, including problems involving production yields, adequate supplies of components, quality control and assurance (including failure to comply with the FDA's and State of California's GMP regulations, international quality standards and other regulatory requirements) and shortages of qualified personnel. Difficulties experienced by the Company in manufacturing could have a material adverse effect on its

business, financial condition and results of operations. There can be no assurance that the Company will be successful in commencing manufacture of the prenatal screening system in commercial quantities, increasing manufacturing capacity or that it will not experience manufacturing difficulties or product recalls in the future. See "Business--Manufacturing."

The Company plans to initially subcontract third parties to manufacture the consumable enrichment kit component of its prenatal screening system under development and may ultimately manufacture such components on its own. For clinical trials, the Company will purchase the consumable enrichment kit from a third party. The Company may encounter difficulties in scaling up production of the consumable enrichment kit of its prenatal screening system under development or in hiring and training additional personnel to manufacture its consumable enrichment kit products in commercial quantities.

NEED TO MANAGE GROWTH

Significant future growth in the Company's sales and expansion in the scope of its operations, should they occur, may place considerable strain on the Company's management, financial, manufacturing and other capabilities, procedures and controls. There can be no assurance that any existing or additional capabilities, procedures or controls will be adequate to support the Company's operations or that its capabilities, procedures or controls will be designed, implemented or improved in a timely and cost-effective manner. Failure to implement, improve and expand such capabilities, procedures and controls in an efficient manner at an appropriate pace could have a material adverse effect on the Company's business, financial condition and results of operations.

SINGLE SOURCE COMPONENTS; DEPENDENCE ON KEY DISTRIBUTORS

Certain components of the Company's prenatal screening system under development are expected to be in consumable enrichment kit form. The Company intends to initially subcontract the manufacture of such consumable enrichment kits; however, given the stage of the product's development, neither internal nor third-party manufacturing processes have been established. The Company currently relies on a sole supplier for a certain component of its consumable enrichment kit. There can be no assurance that reliable, high volume commercial supplies of such component can be established at commercially reasonable costs or that a new supplier could be qualified in a timely manner if the supply of such component were interrupted. The Company also relies on a sole source supplier for its preformed density gradients, an essential component for its consumable enrichment kit. There can be no assurance that reliable high volume manufacturing of such gradients can be established at commercially reasonable costs or that a new supplier could be qualified in a timely manner if the supply of such gradients were interrupted. In addition, the Company proposes to incorporate DNA probes into its prenatal screening system under development, which are currently provided by a limited number of vendors. The Company has an obligation to purchase certain types of DNA probes from a particular supplier subject to such supplier meeting various performance standards. Such probes require FDA clearance or approval for marketing for clinical diagnostic procedures in the United States and may require FDA approval for export. The DNA probe market is characterized by extensive patent litigation and any court order with respect to infringement of intellectual property could adversely affect the supply of available and cost-effective DNA probes. While the Company believes that other sources for such DNA probes are available, if there were to be interruptions in obtaining supplies from its present source, the Company would have to qualify new sources of approved supply. Outside of North America and the United Kingdom,

the Company relies substantially on independent distributors and sales agents to market and sell its products. There can be no assurance that distributors and agents will devote adequate resources to support sales of the Company's products. Moreover, agreements with a number of its distributors require that the Company indemnify such distributors against costs, expenses and liabilities relating to litigation regarding the Company's products and, despite these obligations of the company, distributors may decide to reduce or end their selling efforts until an infringement dispute is resolved or settled. See "Risk Factors--Patents and Proprietary Technology; Risk of Infringement," "Business--Applied Imaging's Prenatal Screening System," "--Current Cytogenetic Products," "--Sales, Distribution and Marketing" and "--Manufacturing."

RELIANCE ON INTERNATIONAL SALES AND OPERATIONS

The Company has significant international operations based in the United Kingdom employing approximately 40 employees. In 1993, 1994 and 1995, and in the six-months ended June 1996 approximately 64%, 62% and 61% and 58%, respectively, of the Company's total revenues were derived from customers and distributors outside of the United States and Canada. Until such time, if ever, as the FDA clears or approves the Company's fetal cell screening system for marketing in the United States, the Company expects that international sales of cytogenetic products will continue to account for a significant portion of its revenues. Changes in overseas economic conditions, currency exchange rates, foreign tax laws, or tariffs or other trade regulations could have a material adverse effect on the Company's business, financial condition and results of operations. The international nature of the Company's business subjects it and its representatives, agents and distributors to laws and regulations of the foreign jurisdictions in which it operates or in which its products are sold. The regulation of medical devices in a number of such jurisdictions, particularly in the European Community, continue to develop and there can be no assurance that new laws or regulations will not have a material adverse effect on the Company's business. The laws of certain foreign countries may not protect the Company's intellectual property rights to the same extent as do the laws of the United States. See "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Business--Sales, Distribution and Marketing," "--Manufacturing" and "--Facilities."

Currently, most of the Company's international sales are denominated in U.S. dollars or the U.K. pound sterling. The Company has significant operations in the U.K., and therefore, incurs significant operating expenses denominated in U.K. pounds. Accordingly, the Company has not historically attempted to reduce the risk of currency fluctuations by hedging, as changes in exchange rates between the U.S. dollar and the U.K. pound sterling immaterially affect the Company's results of operations. However, there can be no assurance that the Company will not be disadvantaged with respect to its competitors operating in a foreign country by foreign currency exchange rate fluctuations that make the Company's products more expensive relative to those of local competitors. See "Business--Sales, Distribution and Marketing."

INTERNATIONAL UNCERTAIN AVAILABILITY OF THIRD-PARTY REIMBURSEMENT; HEALTH CARE REFORM AND RELATED MATTERS

In the United States, hospitals, physicians and other health care providers that purchase medical devices generally rely on third-party payors, principally Medicare, Medicaid, private health insurance plans, health maintenance organizations and other sources of reimbursement for health care costs ("Third-Party Payors"), to reimburse all or part of the cost of the procedure in which the medical device is being used. Certain Third-Party Payors are moving toward a managed care system in which they contract to provide comprehensive health care for a fixed cost per person. The fixed cost per person established by these Third-Party Payors may be independent of the hospital's cost incurred for the specific case and the specific devices used. Medicare and other Third-Party Payors are increasingly scrutinizing whether to cover new products and the level of reimbursement for covered products. Because the Company's fetal cell screening system is currently under development and has not received FDA clearance or approval, uncertainty exists regarding the availability of third-party reimbursement for procedures that would use the Company's fetal cell screening system. Failure by physicians, hospitals and other potential users of the Company's products or products currently under development to obtain sufficient reimbursement from Third-Party Payors for the procedures in which the Company's products or products currently under the development are intended to be used could have a material adverse effect on the Company's business, financial condition and results of

operation.

Third-Party Payors that do not use prospectively fixed payments increasingly use other cost-containment processes that may pose administrative hurdles to the use of the Company's products and products currently under development. In addition, Third-Party Payors may deny reimbursement if they determine that the device used in a treatment is unnecessary, inappropriate, experimental, used for a non-approved indication or is not cost-effective. Potential purchasers must determine that the clinical benefits of the Company's products justify the additional cost or the additional effort required to obtain prior authorization or coverage and the uncertainty of actually obtaining such authorization or coverage.

If the Company obtains the necessary foreign regulatory registrations or approvals, market acceptance of the Company's products and products currently under development in international markets would be dependent, in part, upon the availability of reimbursement within prevailing health care payment systems. Reimbursement and health care payment systems in international markets vary significantly by country, and include both government sponsored health care and private insurance. Although the Company intends to seek international reimbursement approvals, there can be no assurance that any such approvals will be obtained in a timely manner, if at all. Failure to receive international reimbursement approvals could have a material adverse effect on market acceptance of the Company's products in the international markets in which such approvals are sought.

The Company believes that in the future reimbursement will be subject to increased restrictions both in the United States and in international markets. The Company believes that the overall escalating cost of medical products and services will continue to lead to increased pressures on the health care industry, both foreign and domestic, to reduce the cost of products and services, including the Company's products and products currently under development. There can be no assurance in either United States or international markets that third-party reimbursement and coverage will be available or adequate, that future legislation, regulation or reimbursement policies of Third-Party Payors will not otherwise adversely affect the demand for the Company's products or products currently under development or its ability to sell its products on a profitable basis. The unavailability of Third-Party Payor coverage or the inadequacy of reimbursement could have a material adverse effect on the Company's business, financial condition and results of operations. In addition, fundamental reforms in the health care industry in the United States and Europe continue to be considered, although the Company cannot predict whether or when any health care reform proposals will be adopted and there can be no assurance that such reform will not materially adversely affect the Company's business, financial condition and results of operations. See "Business--Third-Party Reimbursement and Health Care Reform."

DEPENDENCE UPON KEY PERSONNEL

The Company's future success depends in significant part upon the continued service of certain key scientific, technical and management personnel, and its continuing ability to attract and retain highly qualified scientific, technical and managerial personnel. Competition for such personnel is intense and there can be no assurance that the Company can retain its key scientific, technical and managerial personnel or that it can attract, assimilate or retain other highly qualified scientific, technical and managerial personnel in the future. The loss of key personnel, especially if without advanced notice, or the inability to hire or retain qualified personnel could have a material adverse effect upon the Company's business, results of operations and financial condition.

RISK OF SOFTWARE DEFECTS

The Company's cytogenetic products and fetal cell screening system currently under development involve a software component that facilitates the detection of chromosomal and genetic abnormalities through the interaction of certain imaging algorithms with the genetic sample under examination. The software, including any new versions that may be released, may contain undetected errors or failures. There can be no assurance that, despite testing by the Company and current and potential customers, errors will not be found in the software components of the Company's cytogenetic products or prenatal screening system, resulting in loss or delay in market acceptance, which could have a material adverse effect on the Company's business, financial condition and results of operations.

PRODUCT LIABILITY RISK; POSSIBLE INSUFFICIENCY OF INSURANCE

The manufacture and sale of the Company's products involves the risk of product liability claims. There can be no assurance that the coverage limits of the Company's insurance policies will be adequate. The Company intends to evaluate its coverage on a regular basis and in connection with the introduction of products currently under development. Such insurance is expensive and may not be available on acceptable terms, in sufficient amount of coverage, or at all. A successful claim brought against the Company in excess of its insurance coverage would have a material adverse effect on the Company's business, results of operations and financial condition. See "Business--Product Liability and Insurance."

CONTROL BY EXISTING STOCKHOLDERS

After the completion of this offering, current stockholders, including certain executive officers and directors of the Company and their affiliates, will own approximately 69.1% of the outstanding Common Stock. As a result, these stockholders will, to the extent they act together, continue to have the ability to exert significant influence and control over matters requiring the approval of the Company's stockholders, including the election of a majority of the Company's Board of Directors. See "Principal Shareholders."

RISK OF UNALLOCATED PROCEEDS

The Company expects that it will use a portion of the net proceeds of this offering for general corporate purposes, including working capital. Of the approximately $31.3 million net proceeds from this offering, approximately $15.7 million, or 50%, will be used for such general corporate purposes. The Company has no specific plans as to the use of the unallocated proceeds from this offering. Pending use, the Company plans to invest the net proceeds in investment-grade, interest-bearing securities. Accordingly, management will have significant discretion in applying a portion of the net proceeds of this offering. See "Use of Proceeds."

POTENTIAL IMPACT OF SHARES ELIGIBLE FOR FUTURE SALE

Sales of Common Stock (including shares issued upon the exercise of outstanding options) in the public market after this offering could materially and adversely affect the market price of the Common Stock. Such sales also might make it more difficult for the Company to sell equity securities or equity-related securities in the future at a time and price that the Company deems appropriate. Upon the completion of this offering, the Company will have 7,436,064 shares of Common Stock outstanding, of which the 2,300,000 shares offered hereby will be freely tradeable (unless held by affiliates of the Company) without restriction. The remaining 5,136,064 shares will be restricted securities within the meaning of the Securities Act of 1933, as amended (the "Securities Act"). The Company's directors, executive officers and certain of its stockholders, who in the aggregate hold more than 94% of the shares of Common Stock of the Company outstanding immediately prior to the completion of this offering, have entered into lock-up agreements under which they have agreed not to sell, directly or indirectly, any shares owned by them for a period of 180 days after the date of this Prospectus without the prior written consent of Montgomery Securities. Montgomery Securities may, in its sole discretion and at any time without notice, release all or any portion of the shares subject to such lock-up agreements. Of such shares, approximately 271,617 will be freely tradeable (unless held by affiliates of the Company) without restriction. Upon expiration of the 180-day lock-up agreements, approximately 4,014,253 additional shares of Common Stock (including approximately 258,373 shares subject to outstanding vested options) will become eligible for public resale, subject in some cases to volume limitations pursuant to Rule 144. The remaining approximately 1,617,301 shares held by existing stockholders (including up to 508,734 shares of Common Stock issuable upon exercise of certain outstanding warrants) will become eligible for public resale at various times over a period of less than two years following the completion of this offering, subject in some cases to vesting provisions and volume limitations. In addition, 4,105,674 of the shares outstanding immediately following the completion of this offering (including up to 508,734 shares of Common Stock issuable upon exercise of certain outstanding warrants) will be entitled to registration rights with respect to such shares upon termination of lock-up agreements. The number of shares sold in the public market could increase if registration rights are exercised and such sales may have an adverse effect on the market price of the Common Stock. See "Shares

Eligible for Future Sale."

NO PRIOR PUBLIC MARKET; POSSIBLE VOLATILITY OF STOCK; DILUTION

Prior to this offering, there has been no public market for the Common Stock. There can be no assurance that an active trading market will develop and continue upon the completion of this offering or that the market price of the Common Stock will not decline below the initial public offering price. The initial public offering price of the Common Stock has been determined by negotiations between the Company and the Underwriters, in conformity with Schedule E of the By-Laws of the National Association of Securities Dealers (the "NASD"). As such, the initial public offering price is not necessarily related to the Company's net worth or any other

established criteria of value and may not bear any relationship to the market price of the Common Stock following the completion of the offering. The market prices for securities of medical diagnostic instrument companies have historically been highly volatile. Announcements of technological innovations or new products by the Company or its competitors, developments concerning proprietary rights, including patents and litigation matters, publicity regarding actual or potential results with respect to products under development by the Company or others, regulatory developments in both the United States and foreign countries and public concern as to the safety of new technologies changes in financial estimates by securities analysts or failure of the Company to meet such estimates and other factors, may have a significant impact on the market price of the Common Stock. In addition, the Company believes that fluctuations in its operating results may cause the market price of its Common Stock to fluctuate, perhaps substantially. Purchasers of shares of Common Stock offered hereby will experience an immediate dilution of $10.30 in the net tangible book value per share of their Common Stock from the initial public offering price. See "Underwriting" and "Dilution."

ANTI-TAKEOVER EFFECT OF DELAWARE LAW AND CERTAIN CHARTER AND BYLAWS PROVISIONS

Certain provisions of the Company's Restated Certificate of Incorporation and Bylaws may have the effect of making it more difficult for a third party to acquire, or discouraging a third party from attempting to acquire control of the Company. Such provisions could limit the price that certain investors might be willing to pay in the future for shares of the Company's Common Stock. Certain of these provisions provide for the elimination of the right of stockholders to act by written consent without a meeting and specify procedures for director nominations by stockholders and submission of other proposals for consideration at stockholder meetings. In addition, the Company's Board of Directors has the authority to issue up to 6,000,000 shares of Preferred Stock and to determine the price, rights, preferences, privileges and restrictions of those shares without any further vote or action by the stockholders. The rights of the holders of Common Stock will be subject to, and may be adversely affected by, the rights of the holders of any Preferred Stock that may be issued in the future. The issuance of Preferred Stock, while providing desirable flexibility in connection with possible acquisitions and other corporate purposes, could have the effect of making it more difficult for a third party to acquire a majority of the outstanding voting stock of the Company. The Company has no present plans to issue shares of Preferred Stock. Certain provisions of Delaware law applicable to the Company could also delay or make more difficult a merger, tender offer or proxy contest involving the Company, including Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years unless certain conditions are met. The inability of stockholders to act by written consent without a meeting, the procedures required for director nominations and stockholder proposals and Delaware law could have the effect of delaying, deferring or preventing a change in control of the Company, including without limitation, discouraging a proxy contest or making more difficult the acquisition of a substantial block of the Company's Common Stock. These provisions could also limit the price that investors might be willing to pay in the future for shares of the Company's Common Stock. See "Description of Capital Stock--Preferred Stock," "--Certain Provisions of the Restated Certificate of Incorporation and Bylaws" and "--Certain Provisions of Delaware Law."

THE COMPANY

The Company was incorporated in California in July 1986, and will be reincorporated in Delaware in September, 1996. Unless the text otherwise requires, references in this Prospectus to "Applied Imaging" and the "Company" refer to Applied Imaging Corp., a California corporation, and its Delaware successor, together with their subsidiaries. The Company's principal executive offices are located at 2380 Walsh Avenue, Building B, Santa Clara, California 95051, and its telephone number at that address is (408) 562-0250.

USE OF PROCEEDS

The net proceeds to the Company from the sale of the shares of Common Stock offered hereby are estimated to be approximately $31,335,000 (approximately $36,147,750 if the Underwriters' over-allotment option is exercised in full) assuming an initial public offering price of $15.00 per share and after deducting the estimated underwriting discounts and commissions and estimated offering expenses.

The Company estimates that approximately $10 million of the net proceeds from this offering will be used for the development and commercialization of the Company's prenatal screening system, including costs related to clinical trials and regulatory approvals, approximately $5 million will be used to fund research and development related to additional applications of its prenatal screening technology, an aggregate of $596,000 will be used for repayment of the Company's bank line of credit bearing interest at 9.75% due in September 1996 and the Company's bank note payable bearing interest at 9.50% due in October 1996, and the remainder will be used for working capital and general corporate purposes. Although the Company believes the proceeds of this offering, together with its existing resources will be adequate to satisfy its capital needs through 1998, the timing and amount of spending of such capital resources cannot be accurately determined at this time and will depend upon several factors, including the timing of regulatory approvals or clearances, progress of its research and development efforts and clinical investigations, competing technological and market developments, commercialization of products currently under development, and market acceptance and demand for the Company's products. The Board of Directors has broad discretion in determining how the proceeds of this offering will be applied. In the event opportunities arise, proceeds also may be used to acquire businesses, technologies or products that complement the business of the Company, although the Company is not currently in negotiations regarding any such acquisitions. See "Management's Discussion and Analysis of Financial Condition and Results of Operations--Liquidity and Capital Resources."

Pending such uses, the Company intends to invest the net proceeds in short-term, interest-bearing investment grade securities.

DIVIDEND POLICY

The Company has not paid any cash dividends since its inception and does not intend to pay any cash dividends in the foreseeable future. Under the Company's line of credit agreement, the Company is prohibited from paying cash dividends without the bank's prior approval.

CAPITALIZATION

The following table sets forth the capitalization of the Company as of June 30, 1996, on a pro forma basis after giving effect to the conversion of all outstanding shares of Preferred Stock into Common Stock upon the closing of the offering made hereby and the restatement of the Company's Restated Certificate of Incorporation to provide for authorized capital stock consisting of 20,000,000 shares of Common Stock and 6,000,000 shares of undesignated Preferred Stock, and as adjusted to reflect the application of the estimated net proceeds from the sale of 2,300,000 shares of Common Stock offered hereby at an assumed initial public offering price of $15 per share and the repayment of $596,000 of short-term debt:

<TABLE>
<CAPTION>

	JUNE 30, 1996		
	ACTUAL	PRO FORMA	AS ADJUSTED

	(IN THOUSANDS)		
	<C>	<C>	<C>
Current portion of debt	$ 622	$ 622	$ 26
Long-term debt less current portion	223	223	223
Stockholders' equity:(1)			
Preferred Stock; $0.001 par value; 6,000,000 shares authorized; 3,919,179 shares issued and outstanding, actual; 6,000,000 shares authorized, none issued and outstanding, pro forma and as adjusted	4	--	--
Common Stock; $0.001 par value; 20,000,000 shares authorized; 1,090,660 shares issued and outstanding, actual; 20,000,000 shares authorized, 5,136,064 shares issued and outstanding, pro forma; 20,000,000 shares authorized, 7,436,064 shares issued and outstanding, as adjusted	1	5	7
Additional paid-in capital	15,729	15,729	47,062
Accumulated deficit	(10,375)	(10,375)	(10,375)
Deferred stock compensation	(1,377)	(1,377)	(1,377)
Cumulative translation adjustment	(367)	(367)	(367)
Total stockholders' equity	3,615	3,615	34,950
Total capitalization	$ 3,838	$ 3,838	$ 35,173

</TABLE>

(1) Based upon shares outstanding as of June 30, 1996. Excludes (i) 497,250 shares issuable upon exercise of options outstanding at a weighted average exercise price of $1.95 per share under the 1988 Option Plan, (ii) 120,000 shares reserved for the Company's 1994 Director Plan, (iii) 200,000 shares reserved for issuance under the Purchase Plan, (iv) 508,734 shares issuable upon exercise of outstanding warrants to purchase Common Stock and (v) 632,113 shares reserved for issuance under the 1988 Option Plan. See "Management--Incentive Stock Plans," "Description of Capital Stock--Warrants."

DILUTION

The pro forma net tangible book value of the Company as of June 30, 1996 was approximately $3,590,000 or $.70 per share of Common Stock. Pro forma net tangible book value per share represents the Company's total tangible assets less total liabilities, divided by the pro forma number of outstanding shares of Common Stock (after giving effect to the conversion of the Preferred Stock to Common Stock). Dilution per share represents the difference between the amount per share paid by investors in this offering and the pro forma net tangible book value per share after the offering. After giving effect to the sale of 2,300,000 shares in this offering at an assumed initial public offering price of $15.00 per share and after deducting the estimated underwriting discounts and commissions and offering expenses, the pro forma net tangible book value of the Company as of June 30, 1996 would have been $34,925,000 or $4.70 per share. This represents an immediate increase of net tangible book value of $4.00 per share to existing stockholders and an immediate dilution in net tangible book value of $10.30 per share to new investors purchasing shares at the assumed initial public offering price. The following table illustrates this per share dilution:

<TABLE>

<S>	<C>	<C>
Assumed initial public offering price per share		$15.00
Pro forma net tangible book value per share before the offering	$ .70	
Increase attributable to new investors	4.00	
Pro forma net tangible book value per share after the offering		4.70
Dilution per share to new investors		$10.30

</TABLE>

The following table summarizes, on a pro forma basis as of June 30, 1996,

the difference between existing stockholders and new investors with respect to the number of shares of Common Stock purchased from the Company, the total consideration paid and the average price per share paid at an assumed initial public offering price of $15.00 per share:

<TABLE>
<CAPTION>

	SHARES PURCHASED		TOTAL CONSIDERATION		AVERAGE PRICE
	NUMBER	PERCENT	AMOUNT	PERCENT	PER SHARE
<S>	<C>	<C>	<C>	<C>	<C>
Existing stockholders.....	5,136,064	69.1%	$14,900,000	30.2%	$2.90
New investors.....	2,300,000	30.9	34,500,000	69.8%	15.00
Total.....	7,436,064	100.0%	$49,400,000	100.0%	

</TABLE>

The computations in the above table (i) are determined before deducting estimated underwriting discounts and commissions and offering expenses payable by the Company, (ii) assume no exercise of outstanding stock options, and (iii) assume the conversion of all outstanding shares of Preferred Stock into Common Stock upon the closing of this offering, and (iv) assume the net exercise of certain outstanding warrants into 85,387 shares of Common Stock. As of June 30, 1996, there were options outstanding to purchase 497,250 shares of Common Stock at a weighted average exercise price of $1.95 per share under the Company's 1988 Option Plan. As of June 30, 1996, there were warrants outstanding to purchase 508,734 shares of Common Stock at a weighted average exercise price of $4.97 per share. To the extent outstanding options are exercised or warrants are further exercised, there will be further dilution to new investors. See "Management--Incentive Stock Plans," "Description of Capital Stock--Warrants" and "Underwriting."

SELECTED CONSOLIDATED FINANCIAL INFORMATION

The selected consolidated financial information presented below under the captions "Statement of Operations Data" and "Balance Sheet Data" for, and as of the end of, each of the years in the five-year period ended December 31, 1995, are derived from the consolidated financial statements of Applied Imaging Corp. and its subsidiaries, which financial statements have been audited by KPMG Peat Marwick LLP, independent certified public accountants. The consolidated financial statements as of December 31, 1994 and 1995, and for each of the years in the three-year period ended December 31, 1995, and the report thereon, are included elsewhere in this Prospectus. The selected consolidated financial data set forth below as of June 30, 1996 and for the six months ended June 30, 1995 and 1996 were derived from unaudited consolidated financial statements of the Company, which are included elsewhere in this Prospectus, and include, in the opinion of the Company, all adjustments (consisting only of normal recurring adjustments) necessary for a fair presentation of the Company's financial position at that date and results of operations for those periods. The results for the six months ended June 30, 1996 are not necessarily indicative of the results for any future period. The selected consolidated financial data set forth below is qualified in its entirety by, and should be read in conjunction with, the Consolidated Financial Statements and Notes thereto and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this Prospectus.

<TABLE>
<CAPTION>

	YEAR ENDED DECEMBER 31,					SIX MONTHS ENDED JUNE 30,	
	1991	1992	1993	1994	1995	1995	1996
	(IN THOUSANDS, EXCEPT PER SHARE DATA)						
<S>	<C>	<C>	<C>	<C>	<C>	<C>	<C>
STATEMENT OF OPERATIONS DATA:							
Revenues:							
Product sales.....	$ 8,995	$ 9,215	$ 6,182	$ 7,021	$ 8,106	$ 3,893	$ 4,662
Software maintenance and service.....	1,786	2,496	2,499	2,550	2,692	1,322	1,333

Total revenues.....	10,781	11,711	8,681	9,571	10,798	5,215	5,995
Cost of revenues.....	5,783	6,184	4,965	5,350	5,484	2,611	3,122
Gross profit.....	4,998	5,527	3,716	4,221	5,314	2,604	2,873
Operating Expenses:							
Research and development.....	1,164	1,316	1,756	2,821	2,919	1,380	1,698
Sales and marketing....	2,565	3,279	2,543	2,524	2,918	1,335	1,476
General and administrative.....	1,453	1,642	1,229	1,898	2,094	996	949
Restructuring and reorganization costs..	396	--	--	--	--	--	--
Write off of acquired research and development in process.....	1,285	--	--	--	--	--	--
Total operating expenses.....	6,863	6,237	5,528	7,243	7,931	3,711	4,123
Operating loss.....	(1,865)	(710)	(1,812)	(3,022)	(2,617)	(1,107)	(1,250)
Other (expense) income..	307	(23)	39	52	71	6	15
Loss before income taxes.....	(1,558)	(733)	(1,773)	(2,970)	(2,546)	(1,101)	(1,235)
Income tax expense (benefit).....	65	(253)	--	--	--	--	--
Net loss before extraordinary item..	(1,623)	(480)	(1,773)	(2,970)	(2,546)	(1,101)	(1,235)
Extraordinary item.....	646	--	--	--	--	--	--
Net loss.....	$ (977)	$ (480)	$(1,773)	$(2,970)	$(2,546)	$(1,101)	$(1,235)
Pro forma net loss per share.....					$ (.45)		$ (.22)
Shares used in calculation of pro forma net loss per share.....					5,635		5,687

	DECEMBER 31,					JUNE 30,
	1991	1992	1993	1994	1995	1996
			(IN THOUSANDS)			
BALANCE SHEET DATA:						
Cash, cash equivalents and short-term investments.....	$ 1,188	$ 1,151	$ 4,461	$ 2,503	$ 5,156	$ 3,236
Working capital.....	1,877	1,715	4,756	1,712	3,249	2,238
Total assets.....	7,442	6,567	9,666	7,441	9,373	8,089
Long-term debt.....	353	263	173	336	231	223
Accumulated deficit....	(1,372)	(1,852)	(3,625)	(6,594)	(9,140)	(10,375)
Total stockholders' equity(1).....	2,590	2,595	5,813	2,811	4,714	3,615

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(1) No cash dividends have been declared with respect to the Company's Common or Preferred Stock.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following Management's Discussion and Analysis of Financial Condition and Results of Operations contains forward-looking statements that involve risks and uncertainties. The Company's actual results could differ materially from those anticipated in these forward-looking statements as a result of

certain factors, including those set forth under "Risk Factors" and elsewhere in this Prospectus.

OVERVIEW

Since its inception in 1986, the Company has principally been engaged in the design, development, manufacture and marketing of automated clinical analysis systems used by cytogenetic laboratories for prenatal and other genetic screening. The Company's cytogenetic instrumentation products include systems that enable laboratories to automate aspects of the detection of chromosomal abnormalities associated with conditions such as Down's Syndrome. The Company's CytoVision family of products includes an automated metaphase finder which identifies cells in metaphase, a karyotyper which automates the classification and presentation of chromosomes within cells and a DNA probe analysis system which detects DNA probes within cell nuclei. The Company sells its cytogenetic systems to government and private clinical cytogenetic laboratories, research institutions, universities and pharmaceutical companies, and has sold such systems to approximately 500 sites in over 30 countries.

Historically, the Company has grown through both internal expansion and acquisitions. In 1989 and 1991, the Company acquired two separate companies based in the United Kingdom with complementary technologies and worldwide market presence. In 1991, the Company restructured its U.K. operations to combine the two acquired companies. In 1993, the Company eliminated certain unprofitable product lines in order to focus its efforts on the cytogenetic screening market.

In 1993, the Company established a research project to develop a proprietary prenatal screening system to detect chromosomal genetic disorders through the enrichment and analysis of fetal blood cells from a routine maternal blood sample. Since that time, the Company has devoted substantial resources to the development of this prenatal screening system. The Company's proprietary screening system, which the Company is developing, incorporates (i) a patented hematologically-based procedure to enrich and separate the fetal blood cells, (ii) automated image analysis instrumentation to identify the fetal cells and (iii) the use of third-party DNA probes to identify certain chromosomal disorders present in fetal cells. This prenatal screening system under development is currently in preclinical evaluation, and the Company intends to continue preclinical and clinical evaluation of this system to establish it as a broadly applicable prenatal screening procedure. The Company anticipates that sales of this system, if cleared or approved by the FDA, will include both a consumable enrichment kit used to separate fetal blood cells from maternal blood and imaging instrumentation used to analyze these cells. The implementation of the Company's strategy is dependent upon the successful development and commercialization of the Company's prenatal screening system.

The operating results of the Company have fluctuated significantly in the past on an annual and quarterly basis. The Company expects that its operating results will fluctuate significantly from quarter to quarter and year to year in the future and will depend on a number of factors, some of which may affect future sales of the Company's cytogenic products. These factors include, but are not limited to, demand for the Company's products, timing of orders and shipments, competition and its related pricing pressures, and seasonal factors, many of which are outside the Company's control. If FDA clearance or approval is received, the Company intends to increase the amount of expenditures for research and development and sales and marketing activities, principally for the commercial launch of its prenatal screening system. The Company intends to increase its research and development expenses related to follow-on products and additional applications of its fetal cell screening technology. The Company also intends to increase the amount of expenditures related to marketing and administrative activities. Management's plans discussed above assume the receipt of the net proceeds of this offering.

RESULTS OF OPERATIONS

SIX MONTHS ENDED JUNE 30, 1996 AND 1995

Revenues. The Company's revenues are derived primarily from the sale of products and software maintenance and instrument service contracts. Revenues increased by 15% to approximately $6.0 million for the six months ended June 30, 1996 from $5.2 million for the corresponding period of the prior year. This increase in revenues was primarily attributable to sales of the Company's CytoVision products to both new and existing customers, who were either adding

capacity or replacing earlier generation systems. Software maintenance and service contract revenue as a percentage of total revenue decreased to 22% for the six months ended June 30, 1996 from 25% for the corresponding period of the prior year. This decrease was primarily attributable to an increased rate of new system sales. Revenues from new system sales are recognized upon shipment, whereas revenues from the related maintenance and service contracts are deferred and recognized ratably over one year.

Cost of Revenues. Cost of revenues includes direct material and labor costs, manufacturing overhead, installation costs, warranty related expenses and post-warranty service and application support expenses. Cost of revenues as a percentage of total revenues increased to 52% for the six months ended June 30, 1996 from 50% in the corresponding period of the prior year, due to an inventory provision taken in the 1996 period relating to a component upgrade and an increase in service and application support expenses.

Research and Development Expenses. Research and development expenses consist of development of new products and software development costs to upgrade existing products. Research and development expenses increased by 23% to $1.7 million for the six months ending June 30, 1996 from $1.4 million in the corresponding period of the prior year. This increase was attributable to increased expenditures in 1996 for the development of the prenatal screening system.

Sales and Marketing Expenses. Sales and marketing expenses consist primarily of salaries, commissions and related travel expenses of the Company's direct sales force, as well as commissions paid to independent sales agents. Sales and marketing expenses increased by 11% to approximately $1.5 million for the six months ended June 30, 1996 from approximately $1.3 million for the corresponding period of the prior year. This increase was related to the incremental revenues during the six months ended June 30, 1996 as compared with the corresponding period of the prior year.

General and Administrative Expenses. General and administrative expenses consist primarily of payroll costs associated with the Company's management and support personnel, travel expenses, and legal and accounting fees. General and administrative expenses decreased by 5% to $949,000 for the six months ended June 30, 1996 from $996,000 in the corresponding period of the prior year. This decrease was primarily attributable to stock option compensation recorded in the six months ended June 30, 1995 relating to a transaction with certain officers that took place during that period.

YEARS ENDED DECEMBER 31, 1995, 1994 AND 1993

Revenues. Revenues increased to $10.8 million in 1995 from $9.6 million in 1994, and from $8.7 million in 1993, or annual increases of 13% and 10%, respectively. The 1995 and 1994 increases in revenues were primarily attributable to the introduction of the new CytoVision family of products in the fourth quarter of 1993. Software and service contract revenues as a percentage of total revenues remained relatively consistent from 1994 to 1995 at 27% and 25% of total revenues, respectively. In 1993, software and service contract revenues were 29% of total revenues due to higher priced service contracts associated with earlier-generation products. For the years ended 1995, 1994 and 1993, revenues derived outside of North America represented approximately 61%, 62% and 64% of total revenues, respectively.

Cost of Revenues. Cost of revenues increased to $5.5 million in 1995 from $5.4 million in 1994 and from $5.0 million in 1993, or 51%, 56% and 57% as a percentage of total revenues, respectively. This decrease in revenues as a percentage of total revenues increased to 52% for the six months ended June 30, 1996 from 50% in the corresponding period of the prior year, due to an inventory provision taken in the 1996 period relating to a component upgrand and an increase in service and application support expenses.

Research and Development Expenses. Research and development expenses increased to approximately $2.9 million in 1995 from $2.8 million in 1994 and from $1.8 million in 1993. These year to year increases were due to increasing expenditures on the development of the prenatal screening system which were partially offset by reduced expenditures on the base cytogenetic instrumentation business. cost of revenues as a percentage of revenues from year to year was attributable to increased sales volume, engineering design changes to reduce production costs, and the consolidation of worldwide manufacturing operations in 1994.

Sales and Marketing Expenses. Sales and marketing expenses increased to $2.9 million in 1995 from $2.5 million in 1994, which remained unchanged from 1993. In 1995, 1994 and 1993, sales and marketing expenses as a percentage of total revenues remained relatively consistent ranging from 26% to 29%.

General and Administrative Expenses. General and administrative expenses increased to $2.1 million in 1995, from $1.9 million in 1994, and from $1.2 million in 1993, or 19%, 20% and 14% of total revenues, respectively. This increased level of general and administrative expenses in 1994 was attributable primarily to costs associated with the Company's effort to complete an initial public offering, which was abandoned due to unfavorable market conditions. In addition, the 1994 amounts include certain patent and legal costs associated with the prenatal screening system and expenses related to the addition of quality assurance and regulatory personnel.

LIQUIDITY AND CAPITAL RESOURCES

From inception in July 1986 through June 1996, the Company has generated an accumulated deficit of approximately $10.4 million. The Company has financed its operations primarily through the private placement of equity securities and bank loans. From its inception, the Company has raised a total of approximately $14.9 million in net proceeds from such private equity financings. The Company's primary uses of cash were to fund working capital requirements, for capital expenditures and to consummate acquisitions of companies with complementary products, technology, and marketing and sales organizations.

Net cash used for operating activities was $1.9 million in the six months ended June 30, 1996 and $593,000, $1.2 million and $1.0 million for 1995, 1994 and 1993, respectively. For the six months ended June 30, 1996, accounts receivable increased to $2.1 million from $1.5 million at 1995 year end, reflecting a slight increase in accounts receivable aging, coupled with the effect of a 15% increase in revenues over the corresponding prior year period. For the year ended 1995, the Company had an approximate $2.5 million net loss, which was offset to a large extent by $556,000 in depreciation and amortization expenses, a $439,000 decrease in trade accounts receivable, a $253,000 decrease in inventories, and a $497,000 increase in accrued expenses. Despite the 13% increase in the Company's revenues in 1995, accounts receivable decreased 23% to $1.5 million at the end of 1995 from $1.9 million at the prior year end. This decrease was primarily attributable to a significant reduction in accounts receivable aging due to increased collection efforts. In addition, inventories decreased 22% to $880,000 at the end of 1995 from $1.1 million at the prior year end. Significant factors contributing to this inventory decrease include the consolidation of worldwide manufacturing activities and the introduction of the CytoVision product family in 1994, both of which substantially reduced direct material costs. Accrued expenses totaled $1.4 million at the end of 1995, a 70% increase over the $839,000 level at the end of 1994. This increase was primarily attributable to accrued compensation costs, consisting of bonus accruals and a significant severance accrual which were paid for the most part, during the first quarter of 1996. In addition, the Company had customer deposits totaling $198,000 as of December 31, 1995.

Net cash used for investing activities has been primarily impacted by the purchases and subsequent sales of short-term investments in U.S. Treasury instruments with varying maturities. Such purchases have resulted from investment of private placement proceeds in excess of short-term cash requirements. In the six months ended June 30, 1996, net cash provided by investing activities was $720,000, which consisted of the $972,000 maturity of a short-term investment offset in part by $300,000 in capital expenditures. For the year ended December 31, 1995, net cash used by investing activities was $3.8 million, $3.0 million of which was related to the purchase of such U.S. Treasury instruments following the Company's most recent private equity financing. In addition, the Company invested $808,000 in capital expenditures. For the year ended December 31, 1994, net cash provided by investing activities was $2.5 million primarily attributable to the maturity of $3.4 million in short-term investments purchased during the prior year, offset in part by $653,000 in capital expenditures and $259,000

associated with the purchase of real property. Net cash used by investing activities was $4.0 million for the year ended 1993, $3.4 million of which was related to the purchase of U.S. Treasury instruments following a private equity financing.

Net cash provided by financing activities was $183,000 for the six months

ended June 30, 1996, and $4.0 million, $389,000 and $4.9 million in 1995, 1994 and 1993, respectively. The significant contributions of cash from financing activities occurred as a result of the Company's sale of preferred stock in private rounds of financing in 1993 and again in 1995. Less significantly, cash provided by or used for financing activities has been impacted by bank borrowings or repayment of such debt.

The Company currently has a $1.0 million credit facility with a U.S. bank consisting of a term note and revolving credit line, of which approximately $596,000 was outstanding as of June 30, 1996. Under the line of credit agreement, the Company cannot pay cash dividends without the bank's prior approval. The term note, which matures in October 1996 and is subject to monthly payments of principal and interest, bears interest at the bank's prime rate plus 1.25% (9.50% at June 30, 1996). The line of credit bears interest at the bank's prime rate plus 1.5% (9.75% at June 30, 1996). The credit line expires by its current terms in September 1996 and the Company expects to negotiate a new bank credit facility after the closing of the offering made hereby. This credit line is currently secured by the Company's domestic assets, including two-thirds of the shares of Applied Imaging International, Ltd. held by the Company. See Note 5 of Notes to Consolidated Financial Statements. The Company's wholly-owned subsidiary, Applied Imaging International, Ltd. has a (Pounds)500,000 ($775,000) unsecured line of credit with a United Kingdom bank guaranteed by the Company. No amounts were outstanding under this facility as of June 30, 1996.

As of June 30, 1996 cash equivalents and short-term investments were approximately $3.2 million, compared to approximately $5.2 million as of December 31, 1995. As of June 30, 1996, the Company also had approximately $189,000 available under its secured domestic line of credit and (Pounds)500,000 ($775,000) available under its unsecured international line of credit. Based upon its current plans, the Company believes the proceeds of this offering, together with its existing resources, will be adequate to satisfy its capital needs through 1998. The timing and amount of spending of such capital resources cannot be accurately determined at this time and will depend on several factors, including, but not limited to, the progress of its research and development efforts and clinical investigations, the timing of regulatory approvals or clearances, competing technological and market developments, commercialization of products currently under development, and market acceptance and demand for the Company's products. In addition, as opportunities arise, proceeds may also be used to acquire businesses, technologies or products that complement the business of the Company, although the Company is not currently in negotiations regarding any such acquisitions. The Company may seek to obtain additional funds through equity or debt financing, collaborative or other arrangements with other companies and from other sources. After December 1998, the Company will likely need to raise additional funds through public or private financings. No assurance can be given that additional financing will be available when needed or on terms acceptable to the Company. If adequate funds are not available, the Company could be required to delay development or commercialization of certain of its products, to license to third parties the rights to commercialize certain products or technologies that the Company would otherwise seek to commercialize itself, or to reduce the marketing, customer support or other resources devoted to certain of its products.

The Internal Revenues Code of 1986 and the California Conformity Act of 1987 substantially restrict the ability of a corporation to utilize existing net operating losses carryforwards and credits in the event of an "ownership change." The several issuances of preferred stock have resulted in multiple ownership changes since the inception of the Company. The majority of the federal net operating loss carryforwards are limited by an ownership change occurring in July 1995. Approximately $6,700,000 of the $7,700,000 federal net operating loss carryforward will be subject to an annual limitation of $850,000. Any unused annual limitation can be carried over and added to the succeeding year's annual limitation within the allowable carryforward period. Management believes that the initial public offering of the Company's stock will most likely result in an ownership change, however, the July 1995 change will continue to be the most restrictive limitation because the majority of the Company's net operating losses were incurred prior to July 1995.

BUSINESS

The following Business section contains forward-looking statements which involve risks and uncertainties. The Company's actual results could differ materially from those anticipated in these forward-looking statements as a

result of certain factors, including those set forth under "Risk Factors," and elsewhere in this Prospectus.

THE COMPANY

Applied Imaging designs, develops, manufactures and markets automated clinical analysis systems used by cytogenetic laboratories where prenatal and other genetic testing is performed. The Company's cytogenetic instrumentation business, which has sold systems to approximately 500 sites in more than 30 countries since its inception, includes systems that enable laboratories to automate aspects of the detection of chromosomal abnormalities associated with conditions such as Down's Syndrome. In addition to the Company's core instrument business, the Company is developing a proprietary genetic screening system designed to enable prenatal screening for genetic abnormalities by isolating fetal red blood cells ("fetal blood cells") from a routine maternal blood sample. This new system is designed to improve current prenatal screening techniques by providing an accurate, timely and cost-effective procedure without the risks of miscarriage or fetal damage associated with invasive prenatal testing.

The Company's prenatal screening system under development is intended to provide an accurate, non-invasive test by directly analyzing fetal blood cells isolated from a routine maternal blood sample. The Company's proprietary screening system incorporates (i) a patented blood-based procedure to enrich the concentration of fetal blood cells, (ii) automated image analysis instrumentation to identify the fetal blood cells and (iii) the use of third-party DNA probes to identify certain chromosomal disorders present in fetal blood cells. This system is expected to be accurate because it evaluates actual fetal cells while posing no risk to the fetus. The Company's prenatal screening system is currently in preclinical evaluation and no application for FDA approval has been submitted.

The Company's strategy is to establish its system as a broad-based prenatal screening procedure. The Company anticipates that sales of this system, if approved by the FDA, will include both its proprietary consumable enrichment kits, used to separate fetal blood cells from maternal blood samples and imaging instrumentation used to analyze the cells. These new image analysis systems are contemplated to be compatible with the Company's existing installed cytogenetic instrument base. The Company believes that it can leverage its existing infrastructure, worldwide distribution capabilities and extensive cytogenetic laboratory relationships to support the world-wide introduction of this fetal cell screening system under development. Furthermore, the Company believes that its new cell enrichment and image analysis system could have clinical utility for cancer applications and the prenatal diagnosis of single gene disorders, and it intends to pursue the development of these other potential applications.

GENETIC DISORDERS

All genetic information in an organism is contained in chromosomes, made up of strands of DNA and associated protein molecules. DNA is comprised of paired nucleotide bases, and genetic information is encoded by the specific order of the nucleotide bases within units called genes. Genes are organized linearly along the chromosomes and carry the required information for the synthesis of the proteins that provide the structural components of cells and tissues, as well as enzymes for the basic biochemical and physiological functions of the cells.

Chromosomal Disorders

The nuclei of normal human cells (except sperm and egg cells) contain two sets of 23 different chromosomes, one set provided by each parent. Sperm and egg cells are formed in a special cell division process called meiosis, and they each contain only one set of the 23 individual chromosomes. When these cells unite during fertilization, each contributes its set of 23 chromosomes to the genetic information for a new human fetus, and the fertilized egg then has the two sets of 23 chromosomes. Chromosomal disorders may occur when genes

or portions of genes move between chromosomes (chromosomal translocations) , when portions of chromosomes and the genes they contain are missing, or when an abnormal number of chromosomes are present in the cell. Certain chromosomal disorders are thought to occur during meiosis when the division of the chromosomes to form the egg cell or the sperm cell takes place. During this process the chromosomes may not divide properly resulting in an extra

chromosome being present in the cell, an extra piece of genetic material being attached to a chromosome, or a piece of chromosome being broken.

Chromosomes can be seen under a light microscope and, when stained with certain dyes, reveal light and dark bands reflecting regional variations of certain paired bases comprising the DNA of the cell. Differences in size and banding pattern allow the chromosomes to be distinguished from each other and can be used to identify a chromosomal disorder. The most common chromosomal disorder, Down's Syndrome, also known as Trisomy 21, occurs when there are three copies of chromosome 21 in the human cell. Syndromes caused by various chromosomal abnormalities may result in mental retardation, impaired physical development and abnormal sexual development.

There are approximately four million births in the United States annually. Of these, approximately 90% are to women under the age of 35. The Company estimates that there are approximately 11 million births in industrialized countries where prenatal screening and diagnostic testing is routine. Approximately 2% of newborns have birth defects, approximately 12% of which are caused by chromosomal genetic disorders. The risk of bearing a child with a chromosomal abnormality increases with maternal age and more than doubles from one in 526 births for mothers of age 20 to more than one in 192 births for mothers of age 35.

Single Gene Disorders

In addition to chromosomal disorders caused by translocations or an abnormal number of chromosomes, single gene disorders may occur when the DNA sequences of individual genes are altered, resulting in incorrect instructions to the cells and disruption of the normal balance or function of essential proteins. Single gene disorders are responsible for many inherited diseases such as cystic fibrosis, sickle cell anemia, Tay-Sachs disease, and may predispose an individual to cancer, psychiatric illnesses, and other complex diseases.

PRENATAL TESTING

Prenatal testing is the process of detecting certain types of chromosomal disorders in a fetus at an early stage of pregnancy. Prenatal testing is currently performed either invasively, by extracting fetal cells or cells having fetal-cell characteristics and inspecting the chromosomes within such cells to diagnose chromosomal disorders, or non-invasively, by an analysis of a maternal blood sample ("serum test").

The invasive diagnostic procedures yield accurate results on a broad range of chromosomal disorders because actual fetal cells are obtained and analyzed, however, these procedures involve the risk of spontaneous miscarriage and other risks. Due to the risk of spontaneous miscarriage, invasive diagnostic procedures are usually recommended to only those women who are age 35 or older, at which ages the risk of having a child with a chromosomal disorder is greater than the risk of spontaneous miscarriage due to the procedure. Those women younger than 35 may be screened using non-invasive techniques. For this group, an invasive diagnostic procedure is generally only recommended to confirm the result of the non-invasive serum test if such test indicates a heightened risk of a chromosomal disorder. The serum tests present no risk to the fetus, but are less accurate because they do not diagnose chromosomal genetic disorders by direct analysis of fetal cells. Such tests have a relatively high false negative rate resulting in the failure to identify a significant portion of chromosomal disorders.

Women under the age of 35 have a lower risk of giving birth to an infant with a chromosomal disorder than do women age 35 or older, but because the number of births to women under the age of 35 is significantly higher, the total number of newborns with chromosomal disorders born to women in this age group is higher than that of women age 35 and older. Consequently, women younger than 35 bear over 75% of infants with Down's Syndrome. The graph below illustrates the number of chromesomally abnormal U.S. birth per year by maternal age:

[GRAPH APPEARS HERE]

CHROMOSOMALLY ABNORMAL U.S. BIRTHS BY MATERNAL AGE

[Graph: Depicts a relationship showing absolute number of chromosomally abnormal births by maternal age.]

The most common prenatal testing procedures are described below.

Invasive Diagnostic Procedures

Amniocentesis. Amniocentesis, usually performed between the 14th and 20th weeks of pregnancy, is the most common procedure used to obtain fetal cell samples for prenatal genetic testing. In an amniocentesis procedure a small amount of amniotic fluid is withdrawn from the amniotic sac via a long needle inserted through the mother's abdominal wall. Simultaneously during the procedure, the physician uses ultrasound to guide the needle in order to minimize potential harm to the unborn child. Once the amniotic sample is extracted, it is forwarded to a cytogenetic laboratory, where the cells are cultured and deposited on a slide. The slide is then examined under a microscope in order to locate and analyze a number of fetal cells in metaphase (undergoing cell division). In metaphase, a cell's chromosomes are individually visible in its nucleus.

To find a cell in metaphase a laboratory technician scans the slide manually to locate cells in metaphase. Once metaphase cells are found, they are photographed using a camera attached to the microscope. This photograph is printed and each photographed chromosome is manually cut out of the photograph, arranged in order and pasted on a sheet to show the two sets of 23 chromosomes present in the cell. This presentation of the chromosomes is called a karyotype. Alternatively, laboratories may eliminate manual karyotyping by using an automated computer-based karyotyping system to scan the slides to locate cells in metaphase, classify the chromosomes, present them in a display and print hard copies.

Once the karyotype is completed it is then visually analyzed by a trained geneticist or genetic counselor to determine if any chromosomal abnormalities are present. The processing and analysis of prenatal genetic samples obtained by amniocentesis generally requires seven to 14 days. A significant portion of this time is required to culture the fetal cell samples obtained by the procedure.

Spontaneous miscarriage occurs in approximately one in every 200 amniocentesis procedures. As a result, only pregnant women who are in a high-risk group are regularly tested using amniocentesis. In the United States, amniocentesis generally costs approximately $1,000 per procedure. With an estimated fetal loss rate of approximately 0.5%, (one in every 200) one normal fetus will be lost by spontaneous miscarriage resulting from amniocentesis for every one-to-two fetuses with chromosomal disorders detected by this procedure for women at age 35.

Amniocentesis is the most common and accurate of all prenatal screening procedures. All principal chromosomal disorders can be detected and the Down's Syndrome detection rate is greater than 99%.

Chorionic Villus Sampling (CVS). CVS, typically performed between the 9th and 11th weeks of pregnancy, involves the extraction of placental tissue samples, generally through the pregnant woman's cervix. The tissue, which is genetically representative of the fetus, is analyzed in the same manner as the fetal cells obtained by amniocentesis to determine if chromosomal disorders are present. CVS is an alternative to amniocentesis and can be performed earlier in the pregnancy, but poses a risk of miscarriage that is one in every 100 CVS procedures, double that of amniocentesis. CVS is generally as accurate as amniocentesis for detecting chromosomal abnormalities. The cost of the CVS procedure is approximately $1,000. With an estimated fetal loss rate of approximately 1% (one in every 100), two normal fetuses will be lost by spontaneous miscarriage resulting from CVS for every one-to-two fetuses with chromosomal disorders detected by this procedure for women at age 35. Due to its higher associated risk, CVS is used less frequently than amniocentesis.

Non-invasive Screening Procedures

In the United States, approximately 2,000,000 pregnant women under the age of 35 are screened for chromosomal disorders. Of those screened, a majority are screened using non-invasive serum tests due to the risk associated with invasive prenatal diagnostic procedures.

Alpha-fetoprotein Test. A common serum prenatal screening test for certain chromosomal disorders involves the analysis of alpha-fetoprotein ("AFP") in the maternal blood. This test is performed on a standard blood sample taken

from the mother that is tested for levels of serum AFP. Down's Syndrome and other similar chromosomal disorders are associated with low levels of AFP. Although this serum test is relatively accurate in detecting open neural tube defects (such as spina bifida), studies indicate that the AFP test can detect only 20-30% of fetuses with Down's Syndrome.

Triple Test. In recent years, the accuracy of the AFP test has been improved by combining it with additional blood chemistry tests. This combination is commonly referred to as "triple marker screening" or the "triple test." This test identifies Down's Syndrome in 60% of the pregnancies where Down's Syndrome is present. In 40% of the cases where Down's Syndrome is present, this test inaccurately concludes Down's Syndrome is not present (a false negative result). And in approximately 5% of the cases, the triple test indicates the presence of Down's Syndrome where Down's Syndrome is not present (a false positive result).

Women whose serum screening results indicate a heightened risk of chromosomal disorder are usually recommended to have an amniocentesis to confirm these results. Due to the high false positive rate of the triple test, amniocentesis procedures are performed in many cases where no chromosomal disorder exists. Assuming two million serum screening tests per year and a 5% false positive rate, as many as 100,000 unnecessary procedures may be performed on women with healthy fetuses each year in the U.S. In addition, assuming an average cost of $1,000 per amniocentesis, the unnecessary cost to the health care system associated with these false positive results could be as high as $100 million per year. With an estimated fetal loss rate of 0.5% approximately 500 normal fetuses could be lost each year due to unnecessary amniocentesis procedures.

The characteristics of the current prenatal testing procedures are summarized below:

CURRENT PRENATAL DIAGNOSTIC AND SCREENING PROCEDURES

TEST	ABNORMALITIES DETECTED	APPROX. ANNUAL U.S. TEST VOLUME	APPROX. DOWN'S DETECTION RATE	APPROX. RISK OF FETAL LOSS	APPROX. DOWN'S FALSE POSITIVE RATE	TURNAROUND TIME FOR RESULTS	WEEK OF GESTATION WHEN TEST ADMINISTERED	APPROXIMATE COST OF PROCEDURE
INVASIVE TESTS:								
Amniocentesis	Chromosomal Disorders	99+%	0.5%	0%	1-2 weeks	14-20 weeks	$1,000	
		3000,000						
CVS	Chromosomal Disorders	99+%	1.0%	0%	~1 week	9-11 weeks	$1,000	
NON-INVASIVE TESTS:								
AFP	Neural Tube Defects and certain Chromosomal Disorders	20% to 35%	0.0%	5%	1-2 days	15-18 weeks	$35 to $70	
		2,000,000						
Triple Test	Neural Tube Defects and certain Chromosomal Disorders	60%	0.0%	5%	1-2 days	15-18 weeks	$60 to $150	

The most accurate prenatal testing involves direct analysis of fetal cells, which contain the chromosomes of the fetus. The only commercially-available procedures to extract fetal cells in order to examine the fetal chromosomes are invasive and pose risks of injury to the fetus and spontaneous miscarriage. The non-invasive serum screening procedures, which do not pose such risks, are much less accurate because they do not allow direct examination of fetal chromosomes. The Company believes that there is a significant need for a prenatal testing procedure which would allow direct analysis of the fetal cells without the risks associated with the currently-available invasive procedures.

Fetal blood cells exist in miniscule proportions in samples of maternal

blood. In contrast to adult red blood cells, many of these fetal red blood cells are nucleated, that is they contain a nucleus with chromosomes. A number of companies are attempting to isolate these fetal blood cells for testing through a variety of methods, including various combinations of immunologically based separation techniques that use monoclonal antibodies, flow cytometry, or magnetic separation techniques. Although the feasibility of genetic analysis of fetal blood cells isolated from maternal blood has been demonstrated, obtaining a sufficient number of fetal blood cells for analysis has been difficult and generally not suitable to routine clinical applications.

APPLIED IMAGING'S PRENATAL SCREENING SYSTEM

The Company is developing a proprietary prenatal screening system to detect chromosomal abnormalities by identifying fetal blood cells from a routine maternal blood sample. The Company's proprietary screening system incorporates (i) a patented hematologically-based procedure to enrich the concentration of fetal blood cells utilizing the Company's consumable enrichment kit, (ii) automated image analysis instrumentation to identify the fetal blood cells and (iii) the use of third-party DNA probes to identify certain chromosomal disorders present in fetal blood cells. This new system is designed to improve current prenatal screening techniques by providing an accurate, timely and cost-effective procedure without the risks of miscarriage or fetal damage associated with invasive prenatal screening techniques.

In contrast to immunologically-based procedures to isolate fetal blood cells from maternal blood, the Company is developing a proprietary hematologically-based procedure for enriching the concentration of fetal blood cells from maternal blood samples for prenatal genetic testing. The Company's process for enriching the

concentration of fetal blood cells from a maternal blood sample involves the following steps: (i) a centrifugation step for bulk separation of the blood components, utilizing the Company's patented device which removes the vast majority of the maternal blood cells; (ii) a selective lysis process that ruptures the remaining maternal red blood cells; and (iii) a second centrifugation step to remove the majority of maternal white blood cells using the Company's patented preformed density gradient medium. The enrichment process is designed to increase the concentration of fetal blood cells in a maternal sample approximately 10,000 times. The fetal cell enriched sample is then harvested and deposited on a slide for examination through image analysis. The Company has developed an automated system to rapidly (under one hour) identify fetal cells on the slide based on adaptations of its image analysis, pattern recognition, and slide-scanning technologies incorporated in the Company's current cytogenetic products. See "Business--Current Cytogenetic Products."

Once fetal cells are located by the automated scanning system, fluorescent DNA probes are added that specifically bind to certain DNA sequences within the fetal cells indicating the presence or absence of chromosomal disorders. DNA probes can be designed to locate specific chromosomal changes, additions, or deletions that result in genetic disorders. The results of the DNA probe analysis are captured and processed using the Company's automated visualization technology for the detection, analysis, and documentation of the DNA probe results. The Company's prenatal screening system is illustrated below:

[ART GRAPHIC APPEARS HERE]

[Graphic depicts the steps in the Company's prenatal screening system].

Preclinical Data

The Company believes that a key aspect of its prenatal screening system is its ability to enrich and identify fetal blood cells so that they can be directly analyzed using available DNA probe technology. As of August 1996, the Company and its collaborators have used its fetal cell enrichment procedure on a total of 133 maternal blood samples at sites internationally and in the United States. The Company's system has achieved fetal blood cell identification in 120 of the 133 samples tested or (90%) of the cases.

During 1995, the Company used its fetal cell enrichment procedure on 37 blood samples obtained from mothers in their 11th to 20th week of pregnancy shortly after they had undergone an invasive prenatal procedure (amniocentesis, CVS or termination of pregnancy). The Company achieved fetal blood cell identification in 33 of the 37 samples, or 89% of the samples. The Company planned international evaluations of its fetal cell enrichment procedure in 1995, however, the gel in the preformed density gradients was found to be destabilized at the international evaluation sites. Following further investigation, the Company determined that the gel in its preformed density gradient required use within two weeks of its manufacture.

In the first half of 1996, utilizing new shipment and handling protocols, the Company commenced further studies to determine if fetal blood cells could be enriched and identified in maternal blood samples from mothers in their 11th to 21st week of pregnancy who had not undergone an invasive prenatal procedure. At the Company's Santa Clara and Israel sites, a total of 20 samples were tested and fetal blood cell identification was achieved in all 20 samples. An independent site in the Netherlands used the fetal cell enrichment procedure on a group of 20 samples and achieved fetal blood cell identification in 16 samples, or 80% of the samples. At an independent site in the United Kingdom 12 samples were processed and in 10 samples, or 83% of the samples, fetal blood cells were found. As of June 1996, of the 52 samples processed in 1996, fetal cell identification was achieved in 46 samples, or 88% of the samples.

In July 1996, the Company conducted an evaluation at its Santa Clara and Israel sites, and at two independent sites in the Netherlands on 44 samples from pregnant women in their 9th to 16th week of pregnancy. This evaluation used fetal cell enrichment procedures which the Company expects to be similar to those to be submitted to the FDA for review prior to commencing clinical trials, and utilized a new formulation of the preformed density gradients. Fetal cell identification was achieved in 41 of these 44 samples, or 93% of the samples. In three of these samples no fetal cells were found, and in two samples in which fetal cell identification was achieved only one fetal cell was found. To date, no application for FDA approval has been submitted with respect to the fetal cell enrichment system, and there can be no assurance that FDA approval will be obtained on a timely basis, or at all. See "Risk Factors--Prenatal Screening System in Early Stage of Development; No Assurance of Successful Development or Commercialization" and "--Lack of Clinical Data."

Clinical/Regulatory Matters

The Company intends to apply for two separate 510(k) clearances for the fetal cell enrichment and scanning components of its system. The DNA probe components of the Company's system will require either FDA clearance of a 510(k) with a tier III level of review (the most extensive level of FDA review of a 510(k), equivalent to the FDA review of a PMA in thoroughness and time) or FDA approval of a PMA. The Company plans to market its prenatal screening system internationally upon receipt of required regulatory clearances or approvals. See "Business--Government Regulation."

Commercialization Strategy

The Company's prenatal screening system under development is currently expected to be introduced in Europe in 1997 and subsequently in the United States and the Pacific Rim, subject to receipt of required clearances or approvals in such jurisdictions.

The system is being designed to initially screen for chromosomal abnormalities resulting in conditions such as Down's Syndrome and certain sex chromosome abnormalities such as Turner Syndrome, Klinefelter Syndrome, Triple X Syndrome and certain other conditions. These abnormalities account for approximately 80% of the incidence of all birth defects which result from chromosome-based genetic disorders. The proprietary prenatal screening system under development will consist of (i) a prepackaged kit to enrich the concentration of nucleated fetal red blood cells in the maternal blood sample, (ii) the Company's instrumentation to automate the identification of fetal blood cells and the acquisition and presentation of the DNA probe analysis, and (iii) may or may not include a DNA probe kit that is comprised of DNA probes available from third parties. The Company's prenatal screening system under development is being designed to be compatible with its existing cytogenetic products so that customers could potentially add the prenatal screening system to their existing installations.

FUTURE APPLICATIONS OF THE PRENATAL SCREENING TECHNOLOGY

The Company's prenatal screening system is being designed to accommodate various chromosome-specific DNA probes, which are currently commercially available. The Company believes that its fetal cell enrichment technology developed for prenatal screening could have future applications for cancer diagnosis via the isolation of tumor cells from peripheral blood and the genetic analysis of such cells. The Company is also developing proprietary uses for its fetal cell analysis that may facilitate the early detection of single gene disorders such as cystic fibrosis, hemophilia, thalassemia, sickle-cell anemia and Tay-Sachs. The Company intends to pursue these potential additional applications to leverage its proprietary technology. Because evaluations of future applications are at an early stage, no assurance can be given when, if ever, the Company's fetal cell enrichment technology may facilitate the early detection of single gene disorders or cancers.

CURRENT CYTOGENETIC PRODUCTS

In the United States, approximately 500,000 cytogenetic tests are performed annually. Cytogenetic testing includes prenatal screening for genetic disorders using amniotic fluid obtained through amniocentesis and fetal tissue samples obtained through CVS. Other cytogenetic testing includes screening tests for diagnosis and prognosis of cancer-related conditions using bone marrow, blood and tumor tissue samples. The Company currently manufactures, markets and sells a family of automated instruments for cytogenetic applications based on the Company's prior generation Cytoscan and GeneVision product families. The Company's primary cytogenetic products are described below. The Company currently has an installed base at approximately 500 sites worldwide in more than 30 countries. The Company's primary cytogenetic products currently sell for prices ranging from $50,000 to $125,000.

CytoVision Metaphase Finder. The CytoVision Metaphase Finder consists of a computer-controlled scanning microscope with a patented autofocus mechanism, image processing hardware, and pattern recognition software. This product continuously scans laboratory slides for cells in metaphase and records their location for future identification and analysis of the cells' chromosomes. The Metaphase Finder uses the Company's patented autofocus system for continuous scanning. Cytogenetic analysis involves identifying and inspecting a number of relatively rare metaphase cells on a slide containing a large number of cells, a majority of which are not in metaphase. This analysis can take a cytogeneticist up to one hour per slide if performed manually. The Metaphase Finder is designed to save laboratory time and cost by automating this labor-intensive process and can identify the cells in metaphase in approximately ten minutes. This product is fully compatible with the Company's other cytogenetic products, which have the potential to save laboratories the expense of using trained technicians to perform routine tasks prior to actual cytogenetic analysis.

CytoVision Karyotyper. The CytoVision Karyotyper consists of a computerized image capture and analysis system which incorporates pattern recognition, automated chromosome classification algorithms and a high resolution output device. This product supplants many otherwise manual processes in the preparation of the data for cytogenetic analysis. The CytoVision Karyotyper provides automated karyotyping, automatic separation of touching and overlapping chromosomes, image enhancement features, chromosome rotation and straightening, image zooming for band analysis, annotation capabilities, and full screen karyotyping display. This product replaces manual photographing of cells in metaphase, printing of the photograph, manual cutting out of each chromosome, identifying the chromosomes, arranging the chromosomes in order, and pasting them on a sheet of paper. In contrast to the automated process which takes approximately 10 minutes, this manual process takes approximately thirty minutes to one hour.

CytoVision Probe. The CytoVision Probe consists of a computerized image capture and image enhancement system which detects and analyzes fluorescent DNA probes applied to cell nuclei. These probes are designed to attach themselves to specific DNA sequences which may indicate genetic disorders. Fluorescent DNA probes are often very faint when viewed by the human eye through a microscope. This system enhances images of DNA probes and provides a range of analytical tools. The Company also offers a comparative genomic hybridization software upgrade package to the CytoVision Probe to detect genetic amplifications and deletions in tumor cells. The CytoVision Probe system is not dependent on specific fluorescent DNA probes and may be used in conjunction with probes from different manufacturers. In the United States the

CytoVision probe is sold for research purposes only.

All of the products in the CytoVision family, a product generation evolving from the Company's former Cytoscan and GeneVision product lines, are compatible and can be integrated into a network with common data management protocols. In addition to the primary products, the Company also sells a number of peripherals including a range of high quality printers and image capture workstations. A typical installation will include a number of interconnected CytoVision systems.

SALES, DISTRIBUTION AND MARKETING

The Company currently sells its cytogenetic products to government and private clinical cytogenetic laboratories, research institutions, universities and pharmaceutical companies. The Company has sold such systems to approximately 500 sites in more than 30 countries. These customers utilize the Company's cytogenetic

products for prenatal genetic screening as well as for certain cancer screening applications. The Company's prenatal screening system under development is being designed to be compatible with its existing cytogenetic products so that customers could potentially update their new or existing installations to accommodate its prenatal screening system. If regulatory clearance or approval is received, the Company initially plans to sell and distribute its prenatal screening system directly and through its established worldwide network of distributors and agents through which it sells and distributes its current products.

In North America, the Company sells its cytogenetic products directly to its customers. The North American sales team is comprised of six sales and application support individuals, four of whom are based in Pittsburgh, Pennsylvania and two in Santa Clara, California. Outside of North America, the Company sells its products either directly through local agents who are remunerated on a commission basis or through independent distributors. The Company manages its international sales and distribution activities from Applied Imaging International, the Company's wholly-owned subsidiary located in the United Kingdom. The international sales team is comprised of eight sales and application support individuals, all of whom are based in the United Kingdom. The Applied Imaging International Ltd. sales team supports all distributors and agents upon request. The Company's distributors are located in Australia, Hong Kong, Japan, Italy and South Korea. In addition, the Company has agents selling its cytogenetic products in other countries primarily within Europe, the Middle East and the Pacific Rim. See "Note 11 of Notes to Consolidated Financial Statements" for financial information concerning foreign and domestic operations and export sales.

Because the Company's products are technically sophisticated the Company's sales staff is supported by scientifically qualified and highly trained product specialists. The Company offers an annual maintenance program to its customers through its own support organization. The Company's marketing activities include telemarketing, product advertising and participation in trade shows and product seminars.

MANUFACTURING

The Company assembles and tests components and subassemblies made by outside vendors to the Company's specifications and manufactures only when it believes significant value can be added. The Company's current products are assembled from a combination of (i) commodity technology components such as computers and monitors, (ii) custom subassemblies, such as special image capture circuit boards, and (iii) operating system and application software. Any disruption or delay in the supply of components or custom subassemblies will have a material adverse effect on the Company. While the Company typically uses components and subassemblies which are available from alternate sources, any unanticipated interruption of the supply of these components or subassemblies could require the Company to redesign its products.

The Company orders components and subassemblies to forecast and assembles specific configurations on receipt of firm orders. The Company's research, investigational and clinical products are subject to regulation by the FDA and all products are subject to regulation by the U.S. Department of Commerce export controls, primarily as they relate to the associated computers and peripherals. The Company has experienced no material difficulties in obtaining necessary export licenses to date.

The Company plans to initially subcontract third parties to manufacture the consumable enrichment kit component of its fetal cell screening system under development and may ultimately manufacture such components on its own. For clinical trials, the Company will purchase the consumable enrichment kit from a third party contracted to manufacture the kit. The Company has no experience manufacturing such components. The Company may encounter difficulties in scaling up production of the consumable component of its fetal cell screening system under development or in hiring and training additional personnel to manufacture its consumable enrichment kit products in commercial quantities.

Under current law, if the Company manufactures finished devices in the United States, it will be required to comply with the FDA's and the State of California's current GMP regulations. In addition, the FDA and/or the California authorities will inspect the Company's manufacturing facilities on a regular basis to determine such compliance. Failure to comply with applicable FDA or other regulatory requirements can result in fines, injunctions, civil penalties, recalls or seizures of products, total or partial suspensions of production and criminal prosecutions. See "Business--Government Regulation."

RESEARCH AND DEVELOPMENT

The Company's research and development efforts include various research, product development, clinical evaluation and testing, quality assurance and process development activities. The current focus of the Company's research and development efforts is the completion of the development of the Company's prenatal screening system and particularly the initiation of clinical trials. The Company is using a consultant to assist in the design the protocols for the planned clinical trials. The Company's future research and development efforts are expected to include development of additional applications of the Company's current cytogenetic products and additional applications of the fetal cell screening system under development. These potential additional applications include the use of technology developed for fetal cell analysis for the diagnosis and screening for certain cancers and certain single gene disorders. Development of these applications will require substantial additional funds and will be subject to technological, clinical, regulatory and other risks associated with new medical technologies. There can be no assurance that the Company will develop its prenatal screening system or any other future applications of such technology.

In 1995, the Company entered into a clinical testing agreement with the Academic Medical Center in Amsterdam to evaluate the Company's technology relating to fetal cell enrichment from maternal blood and associated instrumentation. The Company has an unrestricted right to use the data resulting from the evaluation. In 1995, the Company established a wholly-owned subsidiary in Israel to conduct further research and development focused on the enrichment aspect of the prenatal screening system. These research activities are being primarily funded by a $543,000 research grant issued by the Binational Research and Development ("BIRD") Organization pursuant to which repayment is required in the form of royalties from the sale of the prenatal screening system. In 1996, the Company entered into a collaborative research agreement with Leiden University in the field of enrichment, isolation and analysis of fetal cells derived from maternal blood. See "Business--Patents and Proprietary Rights."

Research and development expenses were approximately $2.9 million, $2.8 million and $1.8 million for 1995, 1994 and 1993, respectively.

PATENTS AND PROPRIETARY RIGHTS

The Company actively seeks, when appropriate, protection for its products and proprietary information by means of United States and foreign patents and trademarks. The Company has one issued United States patent relating to its CytoVision Metaphase Finder and has corresponding issued patents in certain European countries. In addition, the Company has three United States patents concerning its technology for enriching the concentration of nucleated fetal red blood cells from maternal blood samples. Corresponding applications were filed through the Patent Cooperation Treaty and preserve for the Company the right to file applications in various countries. The Company relies upon trade secrets, know-how and contractual arrangements to protect certain of its proprietary information and products.

The fields of life science instrumentation and genetic screening processes are covered by many issued patents and patent applications. The Company is not currently aware of any patents which it may be infringing; however, patent applications in the United States remain confidential until a patent is

issued, and, therefore, the Company's products could infringe patents to be issued in the future. If the Company's technology is determined to use products, processes or other subject matter that is claimed under other existing U.S. or foreign patents, or if other patents claiming subject matter utilized by the Company are issued, such companies may bring infringement actions against the Company. The Company has recently received a letter from Vysis Corp. informing the Company that its products might fall within the claims of a United States patent exclusively licensed to Vysis Corp. Vysis Corp. offered the Company the right to obtain a sublicense to such patent. The Company does not believe it is necessary to obtain such a sublicense and does not believe it is infringing the patent. However, there can be no assurance that the Company will not ultimately be required to seek a license from Vysis Corp. or any other third party. The Company may be required to obtain licenses to patents or proprietary rights of others. There can be no assurance that any such license would be made available or, if available, would be available on commercially acceptable terms. Failure to obtain a required license could prevent the Company from commercializing its products resulting in a material adverse affect on the Company's business, financial condition and results of operations.

The Company generally enters into confidentiality agreements with its employees and consultants designed to both protect the Company's confidential information and prevent the disclosure of confidential information of prior employers and other parties. There can, however, be no assurance that the Company's trade secrets or proprietary technology will not become known or be independently developed by competitors in such a manner that the Company has no practical recourse. Certain employees of and consultants to the Company are subject to the terms of confidentiality agreements with respect to proprietary information of their former employers. The failure of these persons to comply with the terms of their agreements could result in assertion of claims against the Company and such persons which, if successful, might restrict their roles within the Company.

In 1996, the Company entered into a collaborative research agreement with Leiden University ("Leiden") in the field of enrichment, isolation and analysis of fetal cells derived from maternal blood. Under the terms of the agreement, the Company has sole ownership of any jointly developed inventions and has an exclusive license to any issued patents owned solely by Leiden. The royalty rate for the exclusive license shall not be more than 5% of associated sales.

The Company also relies upon trademarks to protect certain of its products, and holds a United States trademark registration for the mark "CYTOSCAN." Registration for this mark and the mark "CYTOVISION" are held by the Company in certain foreign jurisdictions.

The Company also has certain trademark rights in the United States and other foreign countries. It is possible that third parties may allege superior rights to one or more of the Company's trademarks, or close variations, for those countries in which the Company is presently conducting business or may do so in the future. The Company's rights to use and register its marks in a given jurisdiction may depend on its rights relative to a third party's rights as governed by the laws of the pertinent country. Factors utilized to determine the relevant rights between parties include priority of the use or registration of the mark, how close the respective marks are in appearance, sound and/or meaning, as well as the goods to which they are applied. It is possible that the Company could be prevented from using or registering its trademarks in certain countries due to a superior third party right.

COMPETITION

The market for the Company's current cytogenetic products is highly competitive. The Company believes that its primary competitors in this market include Perceptive Scientific, Inc. (acquired by International Remote Imaging Systems, Inc.), and Vysis Corp., a biotechnology subsidiary of AMOCO Technology Company. The principal competitive factors in this market are product features offered, ease of use, clarity of output, customer service capabilities, price and installed base. The Company believes it competes favorably with regard to these factors.

With respect to its prenatal screening system under development, the Company is aware of a number of companies that are in the process of developing genetic screening products based on competing technologies designed to enrich the concentration of fetal blood cells in maternal blood samples. Many of these companies have greater research and development, marketing and financial

resources than the Company. These companies include Integrated Genetics, Inc. (a wholly-owned subsidiary of Genzyme Corp.), CellPro, Incorporated, Aprogenex, Inc., and Centocor, Inc. Integrated Genetics specializes in providing genetic testing services. CellPro specializes in cell separation and gene therapy, Aprogenex specializes in providing DNA probes, and Centocor specializes in providing monoclonal antibodies.

The medical diagnostic and biotechnology industries are subject to intense competition. The Company's fetal cell screening system under development, if commercially marketed, will also be subject to intense competition from existing procedures such as maternal AFP, triple test, CVS and amniocentesis. There can be no assurance that the Company's fetal cell screening system under development will replace any existing procedures. The Company expects the principal competitive factors in the fetal cell screening market to be reliability, accuracy, range of disorders detected, risk to the fetus and the price of testing.

Many of the Company's competitors have greater financial and technical resources and production and marketing capabilities than the Company. There can be no assurance that these competitors will not succeed in

developing technologies and products that are more effective, easier to use or less expensive than those which are currently offered or being developed by the Company or that would render the Company's technology and products obsolete and noncompetitive. In addition, many of the Company's competitors have significantly greater experience than the Company in conducting clinical investigations of new diagnostic products and in obtaining FDA and other regulatory clearances and approvals of products. Accordingly, the Company's competitors may succeed in developing and obtaining regulatory approvals for such products more rapidly than the Company.

GOVERNMENT REGULATION

The preclinical and clinical testing, manufacturing, labeling, distribution, sales, marketing, advertising and promotion of the Company's research, investigational and clinical diagnostic products are subject to extensive and rigorous government regulation in the United States and in other countries. In the United States and certain other countries, the process of obtaining and maintaining required regulatory clearances or approvals is lengthy, expensive and uncertain. The Company believes that its future success will be significantly dependent upon commercial sales of its prenatal screening system under development. The Company will not be able to market this system for clinical diagnostic use in the United States unless and until the Company obtains clearance or approval from the FDA and will not be able to market such system overseas until it meets the safety and quality regulations of each foreign jurisdiction in which the Company, its agents or distributors seeks to sell such system. In the United States, the Company's products are also subject to regulation by state authorities. The State of California's requirements in this area, in particular, are extensive, and require registration with the state and compliance with GMP regulations during clinical trials.

Noncompliance with applicable FDA requirements can result in, among other things, fines, injunctions, civil penalties, recall or seizure of products, total or partial suspension of production, distribution, sales, and marketing, refusal of the government to grant approval of a PMA or clearance of a 510(k), withdrawal of marketing approvals or clearances, a recommendation by the FDA that the manufacturer or distributor not be permitted to enter into government contracts, and criminal prosecution. In certain circumstances, the FDA also has the authority to order the manufacturer or distributor of a device to repair, replace or refund of the cost of the device. Failure to comply with regulatory requirements in the United States or abroad could have a material adverse effect on the company's business, financial condition, and results of operations.

With exceptions for certain medical devices first marketed before May 28, 1976, prior to their commercial sale in the United States, medical devices must be cleared or approved by the FDA or be exempted from the requirement of FDA clearance or approval. In general, the regulatory process can be lengthy, expensive and uncertain, and securing FDA clearances or approvals may require the submission of extensive clinical data together with other supporting information to the FDA.

In the United States, medical devices are classified as Class I, II, or III, on the basis of the controls deemed by the FDA to be necessary to reasonably

ensure their safety and effectiveness. Class I devices are subject to general controls (e.g., labeling, premarket notification and adherence to FDA-mandated current good manufacturing practices ("GMP") requirements), and Class II devices are subject to general controls and special controls (e.g., performance standards, postmarket surveillance, patient registries and FDA guidelines). Generally, Class III devices are those that must receive premarket approval by the FDA to ensure their safety and effectiveness (e.g., life sustaining, life supporting and implantable devices) and also include most devices that were not on the market before May 28, 1976 ("new medical devices") and for which the FDA has not made a finding of "substantial equivalence" based on a 510(k). Class III devices usually require clinical testing and FDA approval prior to marketing and distribution.

Before a new medical device can be introduced into the market, the manufacturer must obtain FDA clearance of a 510(k) or approval of a PMA, unless the device is exempt from the requirement of such clearance or approval. A 510(k) clearance will be granted if the submitted information establishes that the device is substantially equivalent to a legally marketed Class I or II medical device or to a legally marketed Class III device that does not itself require an approved PMA prior to marketing ("predicate device"). A 510(k) must

contain information to support a claim of substantial equivalence, which may include laboratory test results or the results of clinical studies of the device in humans. Such studies can take years to complete, analyze, and prepare for submission to the FDA. Commercial distribution of a device for which a 510(k) is required may begin only after the FDA issues an order finding the device to be "substantially equivalent" to a predicate device. The FDA has recently been requiring a more rigorous demonstration of substantial equivalence than in the past and is more likely to require the submission of data from one or more human clinical trials. A 510(k) for a device incorporating new technology may be given a tier III level of review, which is equivalent to the review given to a PMA in thoroughness and time. The FDA has no specific time limitation by which it must respond to a 510(k). It generally takes from five to twelve months from the date of submission to obtain 510(k) clearance from the FDA, but it may take longer and 510(k) clearance may never be obtained. The FDA may determine that a device is not "substantially equivalent" to a predicate device, or that additional information is needed before a substantial equivalence determination can be made.

A PMA must be filed with and approved by the FDA before marketing may begin if a device is not found by the FDA to be substantially equivalent to a predicate device. A PMA must be supported by valid scientific evidence that typically includes extensive data, including data from preclinical testing and human clinical trials to demonstrate the safety and effectiveness of the device. The FDA often requires the performance of at least two independent, statistically significant human clinical trials that must demonstrate the safety and effectiveness of the device in order to obtain FDA approval of the PMA. If human clinical trials of a device are required and the device presents a "significant risk," the sponsor of the trial (usually the manufacturer or the distributor of the device) is required to file an investigational device exemption ("IDE") application with the FDA prior to commencing human clinical trials. The IDE application must be supported by data, typically including the results of animal and laboratory testing. If the IDE application is approved by the FDA (or the FDA does not notify the sponsor 30 days after receipt of the application that the trials may not begin) and the study protocol is approved by one or more appropriate institutional review boards ("IRBs"), human clinical trials may begin at a specific number of investigational sites with a specific number of patients, as approved by the FDA. If the device presents a "nonsignificant risk" to the patient, a sponsor may begin the human clinical trials after obtaining approval of the study protocol by one or more appropriate IRBs, but not by the FDA unless the FDA notifies the sponsor that an IDE application is required. Sponsors of human clinical trials are permitted under the FDA's regulations to sell those devices distributed in the course of the trials provided the price charged is not larger than that necessary to recover the costs of manufacture, research, development and handling. An IDE supplement must be submitted to, and approved by, the FDA (or the FDA does not notify the sponsor 30 days after receipt of the supplement that the change may not be implemented) before a sponsor or an investigator may make a change to the investigational plan that may affect its scientific soundness or the rights, safety or welfare of human subjects. The FDA has the authority to re-evaluate, alter, suspend or terminate clinical testing based on its assessment of data collected throughout the trials.

The PMA must also contain the results of all relevant bench tests,

laboratory and animal studies, a complete description of the device and its components, and a detailed description of the methods, facilities and controls used to manufacture the device. In addition, the submission must include the proposed labeling and promotional labeling. Upon submission of a PMA, the FDA makes a threshold determination regarding whether the application is sufficiently complete to permit filing for a substantive review. If the FDA determines that the PMA application is sufficiently complete to permit such review, the FDA will accept the application for filing. Once the submission is accepted for filing, the FDA begins an in-depth review of the PMA. An FDA review of a PMA generally takes one to two years from the date the PMA is accepted for filing, but may take significantly longer if the FDA requests additional information and any major amendments to the PMA are filed. The review time is often significantly extended by the FDA's asking for more information or clarification of information already provided in the submission. During the review period, an advisory committee, typically a panel of clinicians, will likely be convened to review and evaluate the application and provide recommendations to the FDA regarding whether the PMA should be approved. The FDA is not bound by the recommendations of the advisory panel. Toward the end of the PMA review process, the FDA generally will conduct an inspection of the manufacturer's facilities to ensure that the facilities are in compliance with the applicable GMP requirements.

If the FDA's evaluations of both the PMA and the manufacturing facilities are favorable, the FDA will issue either an approval letter (order) or an "approvable letter" containing a number of conditions that must be met in order to secure approval of a PMA. When and if those conditions have been fulfilled to the satisfaction of the FDA, the agency will issue an order approving the PMA, authorizing commercial marketing of the device for certain indications. If the FDA's evaluation of the PMA or manufacturing facilities is not favorable, the FDA will deny approval of the PMA or issue a "not approvable letter." The FDA may also determine that additional preclinical testing or human clinical trials are necessary, in which case approval of the PMA could be delayed for several years while additional testing or trials are conducted and submitted in an amendment to the PMA. The PMA process can be expensive, uncertain and length, and a number of devices for which FDA approval has been sought by other companies have never been approved for marketing.

Under the FDA's regulatory scheme, the decision whether to seek 510(k) clearance for a changed or modified device is left to the manufacturer in the first instance. The Company to date has not sought 510(k) clearance for its CytoVision products on the basis of the Company's conclusion, reflected in the Company's scientific report addressing this matter, that CytoVision is a new model of Cytoscan and there have not been any changes or modifications in design, components, method of manufacture, or intended use, which could significantly affect the safety or effectiveness of the original device. There can be no assurance that the FDA will agree with the Company's decision not to seek 510(k) clearance for CytoVision, and that it will not require the Company to cease sales and distribution and seek 510(k) clearance for the CytoVision system, or that such clearance, if required, will be obtained in a timely manner if at all.

The Company intends to submit a protocol for clinical trials of the DNA probe component of its prenatal testing system to the FDA before the end of 1996 and to initiate a multisite United States and international clinical trial of the DNA probe component of its prenatal testing system to detect chromosomal disorders in isolated fetal cells during the first half of 1997. There can be no assurance regarding the timing or nature of the FDA response regarding the DNA probe related protocol or the timing for the commencement of clinical trials. There can be no assurance that 510(k) clearance for any portion of the prenatal screening system under development or any other future product or modification of an existing product will be granted or that the clearance process will not be unduly lengthy and subjected to a thorough internal review equivalent to that ordinarily reserved for devices requiring premarket approval by the FDA. If substantial equivalence cannot be established or if the FDA determines that the device or the particular intended use for the device falls within its guideline the FDA may require a more rigorous review which the FDA has stated is possible for the Company's prenatal screening system under development, the FDA will require that the Company submit a PMA that must be reviewed and approved by the FDA prior to sales, distribution and marketing of these products in the United States. The PMA process is significantly more complex, expensive and time consuming than the 510(k) process. While the Company has made determinations regarding the appropriate form of approval, if any, required for its products, there can be no assurance that such determinations are correct, that the FDA will concur

with such determinations or that such determinations may not be altered due to new interpretations or new data that may become available or changes in the FDA's policies. Currently, the DNA probes that the Company intends to purchase from third parties to incorporate into its prenatal screening technology are sold on a research basis without FDA approval for commercial sale. The FDA requires DNA probes to have 510(k) clearance or PMA approval for commercial sale for clinical diagnostic use, which could cause the price of DNA probes to increase, making the Company's prenatal screening system less price competitive compared to existing prenatal genetic test procedures.

Export sales of investigational devices that are subject to PMA or investigational device exemption application requirements and have not received FDA marketing approval generally may be subject to FDA export permit requirements depending upon, among other things, the purpose of the export (investigational or commercial), the country to which the device is intended for export, and on whether the device has valid marketing authorization in a country listed in the FDA Export Reform and Enhancement Act of 1996. In order to obtain such a permit, when one is required, the Company must provide the FDA with documentation from the medical device regulatory authority of the country in which the purchaser is located, stating that the device has the approval of the country. In addition, the FDA must find that exportation of the device is not contrary to the public health and safety of the country in order for the Company to obtain the permit.

In addition to domestic regulation of medical devices, the Company's current products and its products under development are subject to corresponding regulations governing safety processes, manufacturing processes and quality in foreign jurisdictions in which it operates or such products are sold. The sale of the fetal cell screening system under development may be materially affected by the policies of regulatory bodies or the domestic politics of the countries involved. There can be no assurance that an early prenatal screening test for genetic disorders will not be prohibited or restricted in some jurisdictions. In addition, FDA export permits may be required for shipment of the Company's fetal cell screening system under development to certain foreign countries. Failure to comply with applicable regulatory requirements can, among other consequences, result in fines, injunctions, civil penalties, suspensions or loss of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution. In addition, future governmental regulations may be established that could prevent or delay regulatory approval of the Company's products. The regulation of medical devices in a number of such jurisdictions continues to develop and there can be no assurance that new laws or regulations will not have a material adverse effect on the Company's business. The European Community and its member countries currently are imposing more substantial regulation on in vitro diagnostic devices and equipment-like medical devices, and such regulation may affect the Company's current products and products under development.

Delays in receipt of clearances or approvals to market its products, failure to receive these clearances or approvals, the loss of previously received clearances or approvals or the determination that 510(k) clearance, pre-market approval or other approval is required for a product being marketed without such clearance or approval could have a material adverse effect on the Company's business, financial condition and results of operations.

In addition, the Company's current products and the fetal cell screening system under development could be affected by the Clinical Laboratory Improvement Amendments of 1988 ("CLIA"), which are intended to ensure the quality and reliability of medical testing in the United States regardless of where tests are performed. CLIA or regulations thereunder could negatively affect the Company's ability to market its products.

The Company is also required to register as a medical device manufacturer with the FDA and state agencies, such as the California Department of Health Services ("CDHS") and to list its products semi-annually. Marketed devices are subject to pervasive and continuing regulatory oversight by the FDA and other agencies, including record-keeping requirements and reporting of adverse experiences with the use of the device. Device manufacturers are required to register their establishments and list their devices with the FDA and certain state agencies and are subject to periodic inspections by the FDA and CDHS. The Federal Food, Drug and Cosmetic Act requires that medical devices be manufactured in accordance with the FDA's GMP regulation and documented. This regulation requires, among other things, that (i) the manufacturing process be regulated and controlled by the use of written procedures, and (ii) the ability to produce devices which meet the manufacturer's specifications be validated by extensive and detailed testing of every aspect of the process.

The regulation also requires investigation of any deficiencies in the manufacturing process or in the products produced and detailed record keeping. Manufacturing facilities are subject to FDA inspection on a periodic basis to monitor compliance with GMP requirements. If violations if the applicable regulations are noted during FDA inspections of manufacturing facilities, the FDA can prohibit further manufacturing, distribution and sale of the devices until the violations are cured. The FDA has proposed changes to the GMP regulation that would, among other things, subject manufacturers of components to GMP requirements in certain circumstances, and require pre-production design controls and maintenance of service records. If finalized these changes would likely increase the cost of complying with GMP requirements. Other applicable requirements include the FDA's medical device (manufacturer) reporting regulation, which requires that the device manufacturer provide information to the FDA on deaths or serious injuries alleged to have been associated with the use of its marketed devices, as well as product malfunctions that would likely cause or contribute to a death or serious injury if the malfunction were to recur.

Labeling, advertising and promotional activities for investigational and marketed devices are subject to scrutiny by the FDA and, in certain instances, by the Federal Trade Commission. The FDA enforces statutory prohibitions against promoting or marketing products for unapproved uses.

The Company is also subject to other federal, state, local and foreign laws, regulations and recommendations relating to safe working conditions, laboratory and manufacturing practices, including but not limited to the requirements of the CLIA. The extent of government regulation that might result from any future legislation or administrative action cannot be accurately predicted. Failure to comply with any federal or state regulatory requirements could have a material adverse effect on the Company's business, financial condition and results of operations.

THIRD-PARTY REIMBURSEMENT AND HEALTH CARE REFORM

In the United States, the Company's products are purchased primarily by medical institutions which then bill various third-party payors, such as Medicaid, other government programs and private insurance plans, for the health care services provided to their patients. Third-party payors may deny reimbursement if they determine that the device used in a treatment was unnecessary, inappropriate, experimental or investigational, used for a non-approved indication, or not cost-effective and typically do not reimburse for devices used for research and investigational purposes. Accordingly, physicians must determine that the clinical benefits of genetic screening procedures justify additional cost. The market for the Company's current cytogenetic products could be adversely affected by changes in governmental and private third-party payors' policies and the market for the Company's fetal cell screening system under development could be materially adversely effected by the failure of governmental and third-party payors adopting policies to reimburse health care providers for the use of the Company's fetal cell screening system under development. The unavailability of third-party coverage or the inadequacy of the reimbursement for medical procedures using the Company's products would adversely affect the Company's business, financial condition and results of operations. In both the United States and internationally, third-party payors are increasingly challenging the prices charged for medical products and services. There can be no assurance that reimbursement for the procedures using the Company's products will be available or, if currently available, will continue to be available, or that future reimbursement policies of payors will not adversely affect the Company's ability to sell its products on a profitable basis. In addition, there can be no assurance that third-party reimbursement will be available for diagnostic procedures based on the Company's fetal cell screening system under development.

The levels of revenues and profitability of medical device companies may be affected by the continuing efforts of governmental and third-party payors to contain or reduce the costs of health care through various means. In the United States, there have been, and the Company expects that there will continue to be, a number of federal and state proposals to implement government regulation of health care costs. It is uncertain what legislative proposals will be adopted or what actions federal, state or private payers for health care goods and services may take in response to any health care reform proposals or legislation. The Company cannot predict the effect health care reforms may have on its business, and no assurance can be given that any such reforms will not have a material adverse effect on the Company's business, financial condition and results of operations. Further, to the extent that

such proposals or reforms have a material adverse effect on the business, financial condition and profitability of the clinical and research laboratories, hospitals and other institutions that comprise the Company's customer base, the Company's business, financial condition and results of operations could be adversely affected.

PRODUCT LIABILITY AND INSURANCE

The Company's business may involve the risk of product liability claims, including those relating to inaccurate results from its screening products. Although the Company has not experienced any product liability claims to date, any such claims could have a material adverse impact on the Company. The Company maintains product liability insurance at coverage levels which it deems commercially reasonable; however, there can be no assurance that product liability or other claims will not exceed such insurance coverage limits or that such insurance will continue to be available on commercially acceptable terms, or at all. The Company intends to evaluate, depending on the circumstances that exist at the time, whether or not to obtain any additional product liability insurance coverage prior to the time that the Company engages in any extensive marketing of its fetal cell screening system under development. Even if the Company obtains additional product liability insurance,

there can be no assurance that it would prove adequate or that a product liability claim, insured or uninsured, would not have a material adverse effect on the Company's business, financial condition and results of operations. Even if a product liability claim is not successful, the time and expense of defending against such a claim may adversely affect the Company's business, financial condition and results of operations.

EMPLOYEES

As of June 30, 1996, the Company had 85 employees, of whom 32 were involved in research and development, 9 in manufacturing and manufacturing engineering, 30 in sales, marketing and customer service and 14 in finance and administration. As of June 30, 1996, 39 of the employees were based in the United Kingdom, 41 in the United States, 4 in Israel, and 1 in France. A total of 12 employees hold Ph.Ds, and 2 employees are M.D.s. The Company's employees include trained cytogeneticists to specify, support and sell its product range. The Company believes that its relationship with its employees is good.

FACILITIES

In the United States, Applied Imaging leases an approximately 14,000 square foot facility in Santa Clara, California, under a lease which terminates in April 1997. The Company also leases an approximately 2,700 square foot facility in Pittsburgh, Pennsylvania, under a lease which terminates in July 1999. In the United Kingdom, Applied Imaging International Ltd. leases an approximately 10,000 square foot facility in Sunderland, which lease terminates in June 1998. In Israel, Applied Imaging Ltd. leases an approximately 1,500 square foot facility near Tel Aviv under a short-term lease arrangement. The Company believes that its facilities are adequate to meet its requirements until at least through mid-1997.

MANAGEMENT

EXECUTIVE OFFICERS, DIRECTORS AND KEY EMPLOYEES

The executive officers, directors and key employees of the Company are as follows:

<TABLE>
<CAPTION>

NAME	AGE	POSITION
<S>	<C> <C>	
Executive Officers and Directors		
Abraham I. Coriat (1)	48	Chief Executive Officer and Chairman of the Board of Directors
Michael W. Burgett, Ph.D.	51	President, Genetic Diagnostics Division
Leslie G. Grant, Ph.D.	43	President and Chief Operating Officer,

		Cytogenetics Division
Neil E. Woodruff	49	Chief Financial Officer and Secretary
John F. Blakemore, Jr. (1)(2)	56	Director
Michael S. Elias (1)	36	Director
Gilbert J.R. McCabe (2)	51	Director
Thomas C. McConnell (2)	42	Director
Andre F. Marion	60	Director
Robert C. Miller	30	Director
G. Kirk Raab	60	Director
Key Employees		
Alex Saunders, M.D.	65	Chief Scientist and Medical Director
Simon B. Goldbard, Ph.D.	44	Director of Product Development
Paddy O'Kelly	38	Director of Engineering
Paul H. Hardiman	50	Manager of Regulatory Affairs and Quality Assurance

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(1) Member of the Audit Committee.

(2) Member of the Compensation Committee.

ABRAHAM I. CORIAT the founder of the Company, has been with the Company since 1986. He is Chief Executive Officer and Chairman of the Board. From 1981 to 1986, he served as Business Area Manager and Engineering Manager for International Imaging Systems in their medical and industrial imaging divisions. Mr. Coriat has 23 years of experience in the imaging and medical industry, including various senior engineering positions in England, Belgium and Italy. He holds an Electrical Engineering degree from INSA (Institut National de Sciences Appliquees), France.

MICHAEL W. BURGETT PH.D., joined the Company as President of the Genetic Diagnostics Division in February 1996. Dr. Burgett has 23 years of experience in the medical diagnostics industry, including 14 years in senior management positions. From 1987 to 1996, Dr. Burgett held various general management, operations and product development positions with Ortho Diagnostic System Inc., a Johnson & Johnson Company, most recently acting as Vice President and General Manager of their blood bank business. Prior to that, Dr. Burgett held various research and development and program management positions with SmithKline Beckman, Inc., International Diagnostics Technology, Inc., and BioRad Laboratories, Inc. Dr. Burgett holds a B.A. and an M.A. in Biology from San Francisco State University and a Ph.D. in Chemistry from the University of Texas at Austin.

LESLIE G. GRANT PH.D., has been President and Chief Operating Officer of the Company's Cytogenetics Division since February 1992. He joined the Company in October 1991 as Managing Director of Applied Imaging International Ltd. From 1980 to 1991, Dr. Grant held various general management and senior

engineering positions with GEC-Marconi. Dr. Grant has 20 years experience in the instrumentation and medical industry, including 11 years in senior management positions. Dr. Grant holds a B.S. in Mathematics and a Ph.D. in Mathematics and Electronic Engineering from the University of Hull, United Kingdom.

NEIL E. WOODRUFF has served as Chief Financial Officer of the Company since April 1990 and Secretary since 1993. Mr. Woodruff has 25 years experience in finance and the high technology industry. From 1983 to 1990, Mr. Woodruff held various financial and general management positions with General Signal Corp. Prior to that, Mr. Woodruff held various finance posts with Epitaxy, Inc., National Semiconductor and General Instrument Corp. Mr. Woodruff holds a B.S. in Finance from the University of Santa Clara.

JOHN F. BLAKEMORE, JR. has been a director of the Company since December 1987. Since 1987 he has been an independent investor and consultant. At present he is also a director, Vice President and CFO of Pro-Log Corp., an industrial computer company. From 1979 to 1987 he worked for Compumotor Corp., a company he co-founded. Prior to that, he held three general management positions including Vice President of Wells Fargo Investment Co. Mr. Blakemore holds a B.S. in Mechanical Engineering and an M.B.A. from Stanford University.

MICHAEL S. ELIAS became a director of the Company in April 1988. From 1987 to 1995, Mr. Elias was a director of Thompson Clive Inc., an investment advisor to Thompson Clive Ventures and Thompson Clive Ventures (L.P.). He is currently a director of Thompson Clive & Partners Limited and Thompson Clive

(Jersey) Limited, the manager of Thompson Clive Ventures. Mr. Elias holds an A.B. in Biological Anthropology from Harvard University and an M.S. in Neurobiology from Cambridge University in Great Britain. He currently serves as a member of the Board of Directors of Applied Osteo Systems, Inc., Com'X S.A., Esker S.A., Sorediv S.A. and Alpha-MOS S.A.

GILBERT J.R. MCCABE has been a director of the Company since July 1992. Mr. McCabe has been an independent advisor for the past four years to international investment partnerships investing in start-up companies in North America, Europe and Asia. For the previous 20 years he was a Vice President with Citicorp, where he served in the United States, Asia and Europe working with international investors. He holds an M.A. in Humanities from Oxford University.

THOMAS C. MCCONNELL became a director of the Company in August 1990. Mr. McConnell has been with New Enterprise Associates, a venture capital investment firm since 1983 where he has been a General Partner since 1989. Previously, he was a Product Manager in the Lisa Division of Apple Computer, Inc. and a consultant with the Boston Consulting Group. He received an A.B. in Engineering Science from Dartmouth College and an M.B.A. from the Stanford University Graduate School of Business. Mr. McConnell serves on the Board of Directors of CardioThoracic Systems, Inc., Conceptus, Inc., Sequana Therapeutics, Inc., Innovasive Devices and a number of private companies.

ANDRE F. MARION has been a director of the Company since November 1995. Mr. Marion was a founder of Applied Biosystems, Inc., a supplier of instruments for biotechnology research, and served as its Chief Operating Officer from 1983 to 1986, its Chief Executive Officer from 1986 to 1993, and its Chairman of the Board from 1987 to February 1993, when it merged with the Perkin Elmer Corporation, a manufacturer of analytical instruments. Mr. Marion served as Vice President of Perkin Elmer and President of its Applied Biosystems Division until his retirement in February 1995. Mr. Marion holds a degree in engineering from the French Ecole Nationale Superieures d'Ingenieurs Arts et Metiers in both Mechanical and Electronic Engineering. Mr. Marion is an independent consultant and also a director of Cygnus Corporation and Molecular Devices Inc.

ROBERT C. MILLER has been a director of the Company since November 1995. He is a Vice President and Director of the investment banking firm of Allen & Company Incorporated and has been associated with the firm since June 1986. Mr. Miller received his B.A. from Williams College and his M.B.A. from the Leonard N. Stern School of Business, New York University. Mr. Miller is a director of Envirogen, Inc., Audits & Surveys Worldwide, Inc., and Mediscience Technology Corp., as well as a director of a number of private companies.

G. KIRK RAAB became a director of the Company in 1996. Mr. Raab was President and Chief Operating Officer from 1985 to 1989 and President and Chief Executive Officer from 1990 to July 1995 of Genentech Inc., a pharmaceutical company. He was with Abbott Laboratories from 1975 to 1985, serving as President and Chief Operating Officer from 1981 to 1985. He is currently Chairman of the Board of Shaman Pharmaceuticals, Inc. and Connective Therapeutics, Inc., and a director of a number of private companies. He received his B.A. from Colgate University, where he serves as a Trustee.

ALEX SAUNDERS M.D., has been Chief Scientist and Medical Director of the Company since April 1993. Dr. Saunders is the founder and President of Chronomed, Inc., a medical device company, where he was employed from 1986 to 1993. Prior to this, he was Director of Clinical Cytometry Systems for Becton Dickinson, Vice President of Research and Development and Medical Affairs at Geometric Data, a division of SmithKline Beckman, and Medical Director and Technical Director at Technicon Corporation. Dr. Saunders has concentrated on blood cell separation methods for the past ten years. Prior to this, he taught pathology for eight years at Stanford University School of Medicine. Dr. Saunders holds a B.A. from Stanford University and an M.D. from University of British Columbia.

SIMON B. GOLDBARD PH.D., became a Director of Product Development of the Company in 1994. From 1991 to 1994, Dr. Goldbard was Director of Research at MediGene Corp., a clinical genetic testing company. Prior to this, he held various research and development positions at Lifecode Division of Quantum Chemical Inc., Genet Corp. and Enzo Biochemical Inc. He has 11 years of biotechnology research and product development experience. Dr. Goldbard holds a B.S. in Microbiology from the National University of Mexico and a Ph.D. in Immunobiology from Iowa State University.

PADDY O'KELLY has been Director of Engineering of the Company since June 1992 with responsibilities in both the United States and United Kingdom facilities for the engineering of the Company's cytogenetic product line. From 1982 to 1992, he held several positions with the Simulation Division of GEC-Marconi, a computing and imaging systems company. He holds a B.S. in Mathematics from Imperial College, University of London.

PAUL H. HARDIMAN has been the Manager of Regulatory Affairs and Quality Assurance of the Company since May, 1994. From 1992 through 1994 Mr. Hardiman was employed with Chiron Corporation as Manager of Diagnostic Quality Control. He has 15 years of medical diagnostics experience, holding various positions in product development, quality control/quality assurance and regulatory compliance (domestic and international). He holds a B.Sc. in Biochemistry, Botany and Zoology from the University College, Dublin, Ireland and a M.S. in Molecular Genetics from the Michigan Technological University.

EMPLOYMENT AGREEMENTS

Under the terms of a letter dated August 12, 1991 (the "Letter Agreement") setting forth the terms of Leslie G. Grant's employment with the Company, the Company has agreed to provide Dr. Grant, in addition to an annual salary and bonus, medical insurance, vacation time, mortgage interest payments on a new residence purchased by Dr. Grant in connection with his move from Scotland to England and an option to purchase 45,000 shares of the Company's Common Stock, upon a change in control of the Company, with accelerated vesting of Dr. Grant's option. In February 1996, the Letter Agreement was amended (the "Amendment"). The Amendment contains a confidential nondisclosure provision that restricts Dr. Grant's ability to disclose the Company's proprietary information to third parties and a noncompetition provision that temporarily restricts Dr. Grant's ability to indirectly complete with the Company following Dr. Grant's termination from the Company.

Under the terms of a letter dated January 20, 1996 setting forth the terms of Michael Burgett's employment with the Company, the Company has agreed to provide Dr. Burgett, in addition to an annual salary and bonus, medical insurance, vacation time and an option to purchase 70,000 shares of the Company's Common Stock at an exercise price of $1.80 per share, with (i) reimbursements for relocation expenses incurred by Dr. Burgett in connection with his move from New Jersey to California up to a maximum of $70,000, (ii) a severance payment equal to six times Dr. Burgett's then existing monthly salary in the event his employment is terminated by the Company and (iii) upon a change in control of the Company, accelerated vesting of Dr. Burgett's option.

BOARD COMPOSITION

The Company currently has authorized eight directors. In accordance with the terms of the Company's Restated Articles of Incorporation, effective upon the closing of this offering, the terms of office of the Board of Directors will be divided into three classes; Class I, whose term will expire at the annual meeting of shareholders to be held in 1997; Class II, whose term will expire at the annual meeting of shareholders to be held in 1998; and Class III, whose term will expire at the annual meeting of shareholders to be held in 1999. The Class I directors are Michael S. Elias, Thomas C. McConnell and Gilbert J. R. McCabe, the Class II directors are John F. Blakemore, Jr., Robert C. Miller and G. Kirk Raab, and the Class III directors are Abraham I. Coriat and Andre F. Marion. At each annual meeting of shareholders after the initial classification, the successors to directors whose term will then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. In addition, the Company's Restated Articles of Incorporation provide that the authorized number of directors may be changed only by resolution of the Board of Directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. This classification of the Board of Directors may have the effect of delaying or preventing changes in control or management of the Company.

Each officer is elected by and serves at the discretion of the Board of Directors. Each of the Company's officers and directors, other than nonemployee directors, devote substantially full time to the affairs of the Company. The Company's nonemployee directors devote such time to the affairs of the Company as is necessary to discharge their duties. There are no family relationships among any of the directors, officers or key employees of the Company.

BOARD COMMITTEES

The Audit Committee of the Board of Directors reviews the internal accounting procedures of the Company and consults with and reviews the services provided by the Company's independent accountants. The members of the Audit Committee are Messrs. John F. Blakemore, Jr., Michael S. Elias and Abraham I. Coriat. The Compensation Committee of the Board of Directors reviews and recommends to the Board the compensation and benefits of all officers of the Company and establishes and reviews general policies relating to compensation and benefits of employees of the Company. The members of the Compensation Committee are Messrs. Thomas C. McConnell, Gilbert J. R. McCabe and John F. Blakemore.

DIRECTOR COMPENSATION

Gilbert J. R. McCabe, G. Kirk Raab, John F. Blakemore, and Andre F. Marion receive $800 per meeting attended, and all Directors receive reimbursement of travel expenses from the Company for their service as members of the Board of Directors. Under the Company's Director Option Plan, each director who is not also an employee or consultant of the Company (an "Outside Director") will automatically receive an option to purchase 5,000 shares of Common Stock upon joining the Board of Directors or, in the case of current Outside Directors, upon re-election to the Board of Directors at the first annual meeting of the shareholders following this offering. Thereafter, each Outside Director who has served on the Board of Directors for at least six months shall receive an option to acquire 5,000 shares of Common Stock on the date of each of the Company's annual meetings of shareholders, provided such Outside Director is re-elected. Each option granted under the Director Option Plan will become exercisable ratably over a four-year period.

EXECUTIVE COMPENSATION

Summary Compensation Table. The following table sets forth the information for the years ended December 31, 1993, 1994 and 1995 regarding the compensation of the Company's Chief Executive Officer and each of the Company's two other most highly compensated executive officers whose total annual salary and bonus for such fiscal years were in excess of $100,000 (the "Named Executive Officers").

SUMMARY COMPENSATION TABLE

<TABLE>
<CAPTION>

		ANNUAL COMPENSATION			LONG-TERM COMPENSATION AWARDS	
NAME AND PRINCIPAL POSITION	YEAR	SALARY($)	BONUS($)	OTHER ANNUAL COMPENSATION($)	SECURITIES UNDERLYING OPTIONS	ALL OTHER COMPENSATION($)
<S>	<C>	<C>	<C>	<C>	<C>	<C>
Abraham I. Coriat.....	1993	$120,000	$30,000(1)	$ --	--	$2,400(2)
Chief Executive Officer and Chairman of the Board	1994	140,000	37,500(3)	--	--	7,950(4)
	1995	147,000	37,500(5)	--	--	8,373(6)
Leslie G. Grant, Ph.D....	1993	89,400	--	36,706(7)	10,000(8)	16,351(9)
President, and Chief Operating	1994	92,256	17,298(3)	13,172(10)	--	17,079(11)
Officer Cytogenics Division	1995	102,570	39,450(5)(12)	--	--	16,197(13)
Neil E. Woodruff.....	1994	92,524	23,200(3)(14)	--	--	4,133(15)
Chief Financial Officer and Secretary	1995	98,000	15,000(5)	--	10,000(16)	4,465(17)

</TABLE>

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(1) Consists of bonuses earned during the year ended December 31, 1993 but paid in the year ended December 31, 1994.

(2) Consists of amounts contributed to the Company's retirement plan.

(3) Consists of bonuses earned during the year ended December 31, 1994 but paid in the year ended December 31, 1995.

(4) Consists of $4,000 contributed to the Company's retirement plan and $3,950 in insurance premiums paid by the Company on behalf of Mr. Coriat.

(5) Consists of bonuses earned during the year ended December 31, 1995 and paid in the year ending December 31, 1996.

(6) Consists of $4,392 contributed to the Company's retirement plan and $3,981 in insurance premiums paid by the Company on behalf of Mr. Coriat.

(7) Consists of a mortgage interest reimbursement paid by the Company to Dr. Grant.

(8) One-fourth (1/4) of the shares subject to the option became exercisable on each of October 1, 1993, October 1, 1994 and October 1, 1995. The remaining one-fourth (1/4) of the shares subject to the option shall be exercisable on October 1, 1996, based upon Dr. Grant's continued relationship with the Company.

(9) Consists of $9,387 contributed to a private pension scheme, $5,468 paid by the Company for operating expenses of a car leased by the Company and used by Dr. Grant and $1,496 in insurance premiums paid by the Company on behalf of Dr. Grant.

(10) Consists of a mortgage reimbursement paid by the Company to Dr. Grant.

(11) Consists of $9,687 contributed to a private pension scheme, $5,784 paid by the Company for operating expenses of a car leased by the Company and used by Dr. Grant and $1,608 in insurance premiums paid by the Company on behalf of Dr. Grant.

(12) Consists of bonus earned during the year ended December 31, 1994 but paid in the year ended December 31, 1995. Does not include the Board's currently outstanding offer to pay a bonus to Dr. Grant equal to $81,000 solely for the purpose of exercising his stock option to purchase 45,000 shares of Common Stock at $1.80.

(13) Consists of $9,941 contributed to a private pension scheme, $4,500 paid by the Company for operating expenses of a car leased by the Company and used by Dr. Grant and $1,756 in insurance premiums paid by the Company on behalf of Dr. Grant.

(14) Consists of bonus earned during the year ended December 31, 1994 but paid in the year ended December 31, 1995. Consists of $10,000 paid in cash and $13,200 as payment of the exercise price on certain options granted to Mr. Woodruff.

(15) Consists of $2,658 contributed to the Company's retirement plan and $1,475 in insurance premiums paid by the Company on behalf of Mr. Woodruff.

(16) One-fourth (1/4) of the shares subject to the option became exercisable on October 24, 1995. One-fourth of the shares subject to the option shall become exercisable at the end of each full year following October 24, 1995 until all such shares have become exercisable, based upon Mr. Woodruff's continued relationship with the Company.

(17) Consists of $2,926 contributed to the Company's retirement plan and $1,539 in insurance premiums paid by the Company on behalf of Mr. Woodruff.

Option Grants in Last Fiscal Year. The following table sets forth each grant of stock options made during the fiscal year ended December 31, 1995 to each of the Named Executive Officers:

OPTION GRANTS IN YEAR ENDED DECEMBER 31, 1995

<TABLE>
<CAPTION>

	INDIVIDUAL GRANTS				POTENTIAL REALIZABLE VALUE AT ASSUMED ANNUAL RATES OF STOCK PRICE APPRECIATION FOR OPTION TERM (4)

NAME	NUMBER OF SECURITIES UNDERLYING OPTIONS GRANTED (#)(1)	PERCENT OF TOTAL OPTIONS GRANTED DURING FISCAL 1995 (%) (2)	EXERCISE PRICE ($/SH) (3)	EXPIRATION DATE	5% ($)	10% ($)
<S>	<C>	<C>	<C>	<C>	<C>	<C>
Abraham I. Coriat.....	--	--%	$ --	--	$ --	$ --
Leslie G. Grant, Ph.D...	--	--	--	--	--	--
Neil E. Woodruff.....	10,000	15.0	1.80	4/27/05	11,320	28,687

</TABLE>

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(1) Options were granted under the Company's Amended and Restated 1988 Incentive Stock Option Plan and generally vest over four years from the date of commencement of employment.

(2) Based on an aggregate of 66,500 options granted by the Company in the year ended December 31, 1995 to employees of and consultants to the Company, including the Named Executive Officers.

(3) The exercise price per share of each option was equal to the fair market value of the Common Stock on the date of grant as determined by the Board of Directors.

(4) The potential realizable value is calculated based on the term of the option at its time of grant (ten years). It is calculated assuming that the fair market value of the Company's Common Stock on the date of grant appreciates at the indicated annual rate compounded annually for the entire term of the option and that the option is exercised and sold on the last day of its term for the appreciated stock price.

Option Exercises in Last Fiscal Year and Fiscal Year End Option Values. The following table sets forth the information with respect to stock option exercises during the year ended December 31, 1995 by each of the Named Executive Officers, and the number and value of securities underlying unexercised options held by the Named Executive Officers at December 31, 1995:

AGGREGATE OPTION EXERCISES IN YEAR ENDED DECEMBER 31, 1995 AND OPTION VALUES AT DECEMBER 31, 1995

<TABLE>
<CAPTION>

NAME	SHARES ACQUIRED ON EXERCISE (#)	VALUE REALIZED ($)	NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS AT DECEMBER 31, 1995 (#)		VALUE OF UNEXERCISED IN-THE-MONEY OPTIONS AT DECEMBER 31, 1995 ($) (1)	
			EXERCISABLE	UNEXERCISABLE	EXERCISABLE	UNEXERCISABLE
<S>	<C>	<C>	<C>	<C>	<C>	<C>
Abraham I. Coriat.....			--	--	--	--
Leslie G. Grant, Ph.D...	--	--	45,000	0	594,000	0
	--	--	7,500	2,500	99,000	33,000
Neil E. Woodruff.....	40,000	58,800	--	--	--	--
		--	2,500	7,500	33,000	99,000

</TABLE>

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(1) Based on a value of $15.00 per share, the assumed initial public offering price, minus the per share exercise price, multiplied by the number of shares underlying the option.

INCENTIVE STOCK PLANS

Amended and Restated 1988 Incentive Stock Option Plan. The Company's Amended and Restated 1988 Incentive Stock Option Plan (the "1988 Option Plan") was adopted by the Board of Directors in October 1988 and approved by the stockholders in October 1989. As of June 30, 1996, 497,250 shares were subject to outstanding options at exercise prices ranging from $0.15 to $3.00 per share and 632,113 shares were available for future grant under the 1988 Option Plan. In June 1996 the Board of Directors approved an increase of 450,000 shares available for grant under the 1988 Option Plan subject to approval of the stockholders within twelve months of the approval by the Board of Directors. The purposes of the 1988 Option Plan are to attract and retain qualified personnel, to provide additional incentives to employees, officers

and consultants of the Company and to promote the success of the Company's business. Pursuant to the 1988 Option Plan, the Company may grant options which qualify as incentive stock options under Section 422 of the Internal Revenue Code of 1986, as amended (the "Code"), to employees (including officers and directors who are employees) and nonqualified stock options to employees, officers, directors and consultants.

The Compensation Committee is authorized to administer the 1988 Option Plan, including the selection of the employees, directors and consultants of the Company to whom stock options may be granted and the interpretation and adoption of rules for the operation of the 1988 Option Plan. Options granted under the 1988 Option Plan generally become exercisable at the rate of 25% of the shares one year from the grant date and approximately 25% of the shares at the end of each one-year period thereafter such that the option is fully exercisable four years from the grant date. However, the vesting schedule is subject to modification by the Board of Directors. The maximum term for options granted under the 1988 Option Plan is ten years, except that if at the time of the grant the optionee possesses more than 10% of the combined voting power of the Company or is an affiliate (as defined in the Code) of the Company (a "10% Stockholder"), the maximum term of an option is five years. The exercise price of incentive stock options granted to a 10% Stockholder must be at least 110% of the fair market value of the stock subject to the option on the date of grant. The exercise price of nonqualified stock options granted under the 1988 Option Plan must be at least 85% of the fair market value of the stock subject to the option on the date of grant. Payment of the exercise price may be made by cash, promissory note or other consideration as determined by the Board of Directors. The 1988 Option Plan may be amended at any time by the Board of Directors, although certain amendments would require stockholder approval. The 1988 Option Plan will terminate in 1998, unless earlier terminated by the Board of Directors.

1994 Director Option Plan. The Company's 1994 Director Option Plan (the "Director Plan") was adopted by the Board of Directors and approved by the stockholders in February 1994. As of March 31, 1996, 50,000 shares of Common Stock were reserved for issuance under the Director Plan. In June 1996, the Board of Directors approved an increase of 70,000 shares of Common Stock available for grant under the Director Plan subject to approval by the stockholders within twelve months of Board of Directors approval of such increase. Each nonemployee director who becomes a director after the date of this Prospectus will be automatically granted a nonstatutory option to purchase 5,000 shares of Common Stock on the date on which such person first becomes a director or in the case of current nonemployee directors, upon re-election to the Board of Directors at the first annual meeting of the stockholders following this offering. Thereafter, each nonemployee director who has served on the Board of Directors for at least six months shall receive an option to acquire 5,000 shares of Common Stock on the date of each of the Company's annual meetings of the shareholders, provided such nonemployee director is re-elected. Each option granted under the Director Plan will become exercisable ratably over a four-year period. In the event of a change in control of the Company, including a merger or sale of substantially all of the Company's assets, outstanding options must be assumed by any successor corporation, or they will become fully vested and exercisable. The exercise price of all options granted under the Director Plan after the date of this Prospectus will be equal to the fair market value of the Common Stock on the date of grant. Each option grant under the Director Plan will vest on a cumulative yearly basis over a four-year period. All such options will expire ten years from the date of grant unless terminated sooner pursuant to the provisions of the Director Plan. The Board of Directors may amend the Director Plan at any time. The Director Plan will terminate in February 2004. No options have been granted under the Director Plan to date.

Employee Stock Purchase Plan. The Company's Employee Stock Purchase Plan (the "Purchase Plan") was adopted by the Company's Board of Directors in June 1996 and it is anticipated that the Purchase Plan will be approved by the stockholders prior to the closing of this offering. The Purchase Plan is intended to qualify under Section 423 of the Code. The Company has reserved 200,000 shares of Common Stock for issuance under the Purchase Plan. Under the Purchase Plan, an eligible employee may purchase shares of Common Stock from the Company through payroll deductions of up to 10% of his or her compensation, at a price per share equal to 85% of the lower of (i) the fair market value of the Company's Common Stock on the first day of an offering period under the Purchase Plan or (ii) the fair market value of the Common Stock on the last day of an offering period. Except for the first offering period, each offering period will last for six months and will commence the

first day on which the national stock exchanges and The Nasdaq Stock Market are open for trading, on or after May 1 and November 1 of each year. The first offering period will begin upon the effective date of this offering and will end on April 30, 1997. Any employee who is customarily employed for at least 20 hours per week and more than five months per calendar year, and who has been so employed for at least three consecutive months on or before the commencement date of an offering period is eligible to participate in the Purchase Plan. No shares have been purchased under the Purchase Plan to date.

EMPLOYEE RETIREMENT PLANS

United States. In January 1994, the Company implemented a Retirement Savings and Investment Plan that is intended to qualify under Section 401(k) of the Code (the "401(k) Plan") covering all of the Company's United States based employees who have completed three months of service and have attained age 21. An employee may elect to defer, in the form of contributions to the 401(k) Plan on his or her behalf, up to 15% of the total compensation that would otherwise be paid to the employee, not to exceed the amount allowed by applicable Internal Revenue Service guidelines. The Company will match 100% of amounts deferred by the employee participants up to 3% of such employee's total compensation and such matching amounts vest over a three year period from the initial participation date. During 1993, 1994 and 1995, the Company made contributions to the 401(k) Plan totalling approximately $18,000, $38,000 and $51,000, respectively. Contributions by employees or by the Company to the 401(k) Plan, and income earned on plan contributions, are not taxable to employees until withdrawn from the 401(k) Plan. Contributions by the Company are deductible by the Company when made.

United Kingdom. The Company's United Kingdom based employees are covered by retirement savings plans (the "International Retirement Plans"). Under such plans, an employee may elect to make contributions of 3.5% of such employee's earnings. Amounts contributed by the Company range from 5.5% to 10.5% of such employee's earnings. During 1993, 1994 and 1995, the Company paid or accrued contributions to the International Retirement Plans totaling $83,000, $60,000 and $43,000, respectively. Contributions by employees or by the Company to the International Retirement Plans, and income earned on plan contributions, are not taxable to employees until withdrawn from such plans. Contributions by the Company are deductible by the Company when made.

CERTAIN TRANSACTIONS

In August 1993, the Company issued and sold 1,016,407 shares of Series I Preferred Stock at a purchase price of $5.25 per share to a total of 33 investors. The 5% shareholders that purchased shares of Series I Preferred Stock and the number of shares each 5% shareholder purchased are (i) Allen & Company Incorporated and affiliates, 339,300 shares, (ii) New Enterprise Associates V, Limited Partnership, 11,905 and (iii) the Thompson Clive Funds, 9,524 shares. In connection with the Series I Preferred Stock Financing, the Company issued to Allen & Company Incorporated a warrant to purchase 140,000 shares of the Company's Common Stock at a purchase price of $5.25 per share and the Company paid to Allen & Company Incorporated a placement agent fee in the amount of $252,504.

In connection with Dr. Grant's relocation from Edinburgh, Scotland to Sunderland, England, the Company initially agreed to pay the mortgage interest payments on Dr. Grant's new residence while Dr. Grant sought to sell his prior residence. Mortgage interest payments made by the Company pursuant to this arrangement totalled $21,263 and $36,706 in 1992 and 1993, respectively. In March 1994, this arrangement was replaced as the Company purchased Dr. Grant's former Edinburgh residence for $262,500 by obtaining a new mortgage on the residence and discontinued payment of mortgage interest on his new residence. The Company has incurred and expects to continue to incur reduced interest costs as a result of this transaction.

In July and September 1995, the Company issued and sold 1,106,217 shares of Series J Preferred Stock at a purchase price of $4.25 per share and issued warrants for the purchase of 368,734 shares of the Common Stock at a purchase price of $5.25 per share to a total of 30 investors pursuant to the terms of the Series J Preferred Stock and Warrant Purchase Agreement. The 5% shareholders that purchased shares of Series J Preferred Stock and the number of shares each 5% shareholder purchased are (i) Allen & Company Incorporated and affiliates, 524,038 and (ii) New Enterprise Associates V, Limited Partnership, 176,332. Allen & Company Incorporated and affiliates and New Enterprise Associates V, Limited Partnership were issued warrants to purchase 174,678 and 58,777 shares of Common Stock, respectively. In addition, pursuant

to the terms of the Series J Preferred Stock and Warrant Purchase Agreement, the Company issued to Allen & Company Incorporated a warrant to purchase 140,000 shares of Common Stock at a purchase price of $4.25 per share in exchange for the warrant to purchase 140,000 shares of Common Stock at a purchase price of $5.25 per share issued to Allen & Company Incorporated pursuant to the Series I Preferred Stock Financing. Additionally, the Company paid to Allen & Company Incorporated a placement agent fee in the amount of $238,307.

In January 1996, the Company paid the sum of $77,666 to a former officer of the Company in connection with a severance agreement.

In January 1996, the Company granted Dr. Grant an option to purchase 35,000 shares of the Company's Common Stock at an exercise price of $1.80 per share. One-fourth of the shares subject to the option shall become exercisable at the end of each full year following January 15, 1996 until all such shares have become exercisable, based upon Dr. Grant's continued relationship with the Company.

In March 1996, the Company granted an option to Michael W. Burgett, President, Genetic Diagnostics Division of the Company, to purchase 70,000 shares of Common Stock at an exercise price of $1.80 per share. One-fourth of the shares subject to the option shall become exercisable at the end of each full year following March 28, 1996, until all such shares have become exercisable, based upon Dr. Burgett's continued relationship with the Company.

In March 1996, the Company granted options to certain non-employee members of the Board of Directors exercisable at $1.80 per share. The following directors were granted options to acquire the following number of shares of Common Stock: Mr. Raab, 35,000; Mr. Marion, 20,000; Mr. Blakemore, 20,000; Mr. McConnell, 5,000; Mr. Elias, 5,000; Mr. McCabe, 5,000; and Mr. Miller, 5,000. One-fourth of the shares subject to each of these options shall become exercisable at the end of each full year following March 28, 1996, until all such shares have become exercisable.

PRINCIPAL STOCKHOLDERS

The following table sets forth information known to the Company with respect to the beneficial ownership of its Common Stock as of June 30, 1996, and as adjusted to reflect the sale of Common Stock offered by the Company hereby for (i) each person who is known by the Company to own beneficially more than 5% of the Common Stock, (ii) each of the Company's directors, (iii) each executive officer named in the summary compensation table and (iv) all directors and officers as a group.

<TABLE>
<CAPTION>

NAME AND ADDRESS	SHARES BENEFICIALLY OWNED	PERCENT OF TOTAL BEFORE OFFERING	PERCENT OF TOTAL AFTER OFFERING
<S>	<C>	<C>	<C>
Individuals and Entities Affiliated with Allen Holding Inc.(1) 711 Fifth Avenue New York, NY 10022	1,704,972	31.0%	21.9%
Entities Affiliated with Thompson Clive Ventures/Midland Bank Trustee (Jersey) Ltd. (2) c/o Midland Bank International Finance Corporation Limited P.O. Box 26 28-34 Hill Street. St. Helier, Jersey, Channel Islands	706,077	13.7%	9.5%
Entities Affiliated with New Enterprise Associates (3) 2490 Sand Hill Road Menlo Park, CA 94025	679,756	13.1%	9.1%
CV Sofinnova Ventures Partners II (4) c/o Alix Marduel, M.D. Stuart Tower, Suite 2630 San Francisco, CA 94105	283,266	5.5%	3.8%

Michael S. Elias (2)	706,077	13.7%	9.5%
Robert C. Miller (1)	1,704,972	31.0%	21.9%
Abraham I. Coriat (5)	464,568	9.0%	6.2%
Thomas C. McConnell (3)	679,756	13.1%	9.1%
John F. Blakemore, Jr. (6)	76,762	1.5%	1.0%
Gilbert J.R. McCabe (7)	63,571	1.2%	*
G. Kirk Raab	--	*	*
Andre Marion	6,269	*	*
Leslie G. Grant, Ph.D. (8)	52,500	1.0%	*
Neil E. Woodruff (9)	45,000	*	*
All executive officers and directors as a group (11 persons) (1)(2)(3)(5)(6)(7)(8)(9)	3,799,475	67.7%	48.0%

</TABLE>

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* Less than 1%.

(1) Consists of 198,678 shares and warrants to purchase 179,216 shares held by Allen & Company Incorporated, 39,859 shares and a warrant to purchase 6,257 shares held by Allen Value Limited, 333,715 shares and a warrant to purchase 52,388 shares held by Allen Value Partners, L.P. and an aggregate of 776,635 shares and warrants to purchase an aggregate of 118,224 shares held by certain officers, directors, employees, individuals related to officers, directors and employees and shareholders of Allen Holding Inc. or its affiliated entities. Allen Holding Company is a holding company of each of Allen & Company Incorporated, Allen Value Limited and Allen Value Partners, L.P. and disclaims beneficial ownership of the shares held by such entities except to the extent of its proportionate ownership interest therein. Robert C. Miller, a director of the Company and a holder of 1,759 shares and a warrant to purchase 586 shares, is an affiliate of Allen Holding Inc. and the related entities, and disclaims beneficial ownership of the shares held by such entities except to the extent of his proportionate ownership interest therein.

(2) Consists of 209,348 shares held by Thompson Clive Investments plc, 5,500 shares held by Thompson Clive, Inc. (collectively, the "Thompson Clive Entities") and 488,479 shares held by Midland Bank Trustee (Jersey) Limited. Because Midland Bank Trustee (Jersey) Limited acts as the nominee for the Thompson Clive Entities, the Thompson Clive Entities are deemed the beneficial owners of the shares held by Midland Bank Trustee (Jersey) Limited. Michael S. Elias, a director of the Company and a holder of 2,750 shares, is an affiliate of the Thompson Clive Entities and disclaims beneficial ownership of the shares held by the Thompson Clive Entities and Midland Bank Trustee (Jersey) Limited except to the extent of his proportionate ownership interest therein.

(3) Consists of 609,214 shares and warrants to purchase 58,777 shares held by New Enterprise V, Limited Partnership and 11,765 shares held by The Silverado Fund I, Limited Partnership. Thomas C. McConnell, a director of the Company, is a general partner of New Enterprise Associates V, Limited Partnership and The Silverado Fund I, Limited Partnership, and disclaims beneficial ownership of the shares held by such entities except to the extent of his proportionate ownership interest therein.

(4) Includes a warrant to purchase 11,755 shares.

(5) Consists of 414,732 shares held as community property by Abraham I. Coriat and Shira Shamssian and an aggregate of 49,836 shares held by Abraham I. Coriat and Shira Shamssian as Custodian for each of Salomon Israel Coriat and Yael Israel Coriat.

(6) Includes an option to purchase 7,500 shares within 60 days of after June 30, 1996.

(7) Consists of 10,000 shares held by Mr. McCabe and 53,571 shares held by SEFTA Trustees Ltd. for family trusts. Mr. McCabe, a director of the Company, disclaims beneficial ownership of the shares held by SEFTA Trustees Ltd. except to the extent of his proportionate ownership interest therein.

(8) Consists of options to purchase 52,500 shares within 60 days of after June 30, 1996.

(9) Includes an option to purchase 2,500 shares within 60 days of after June 30, 1996.

DESCRIPTION OF CAPITAL STOCK

The authorized capital stock of the Company will consist of 20,000,000 shares of Common Stock and 6,000,000 shares of Preferred Stock after giving effect to the conversion of all outstanding shares of Preferred Stock into Common Stock and the restatement of the Company's Articles of Incorporation upon the closing of this offering.

The following summary of certain provisions of the Common Stock and Preferred Stock does not purport to be complete and is subject to, and qualified in its entirety by, the provisions of the Company's Restated Articles of Incorporation which are included as an exhibit to the Registration Statement of which this Prospectus is a part, and by the provisions of applicable law.

COMMON STOCK

As of June 30, 1996, there were 5,136,064 shares of Common Stock outstanding which were held of record by 137 stockholders, on a pro forma basis to reflect the conversion of all outstanding shares of Preferred Stock which will occur upon the closing of this offering.

The holders of Common Stock are entitled to one vote per share on all matters to be voted upon by the shareholders. Subject to preferences that may be applicable to any outstanding Preferred Stock, the holders of Common Stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by the Board of Directors out of funds legally available for that purpose. See "Dividend Policy." In the event of a liquidation, dissolution or winding up of the Company, the holders of Common Stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to prior distribution rights of Preferred Stock, if any, then outstanding. The Common Stock has no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the Common Stock. The holders of 15,000 shares of Common Stock issued pursuant to the Series H Preferred Stock Financing or their transferees are entitled to certain rights with respect to the registration of such shares under the Securities Act. All outstanding shares of Common Stock are fully paid and non-assessable, and the shares of Common Stock to be issued upon the closing of this offering will be fully paid and non-assessable.

PREFERRED STOCK

Effective upon the closing of this offering, the Company will be authorized to issue 6,000,000 shares of undesignated Preferred Stock, none of which will be outstanding upon the closing of this offering. The Board of Directors will have the authority, without further action by the shareholders, to issue the undesignated Preferred Stock in one or more series, to fix the rights, preferences, privileges and restrictions granted to or imposed upon any wholly unissued shares of undesignated Preferred Stock and to fix the number of shares constituting any series and the designation of such series.

The issuance of Preferred Stock may have the effect of delaying, deferring or preventing a change in control of the Company without further action by the shareholders, may discourage bids for the Company's Common Stock at a premium over the market price of the Common Stock and may adversely affect the market price of and the voting and other rights of the holders of Common Stock. At present, the Company has no plans to issue any of the Preferred Stock.

WARRANTS

As of June 30, 1996, the Company had outstanding a warrant to purchase 140,000 shares of Common Stock at $4.25 per share expiring in July 2000 and warrants to purchase 368,734 shares of Common Stock at $5.25 per share expiring in July 1998. The shares underlying these warrants are entitled to registration rights. See "Description of Capital Stock--Registration Rights of Certain Holders."

REGISTRATION RIGHTS OF CERTAIN HOLDERS

The holders of 3,596,940 shares of Common Stock and warrants to purchase

508,734 shares of Common Stock (the "Registrable Securities") or their transferees are entitled to certain rights with respect to the registration of such shares under the Securities Act. These rights are provided under the terms of an agreement between the Company and the holders of Registrable Securities. Subject to certain limitations in the agreement, the holders of at least a majority of the Registrable Securities may require, on two occasions beginning six months after the date of this Prospectus, that the Company use its best efforts to register the Registrable Securities for public resale. If the Company registers any of its Common Stock either for its own account or for the account of other security holders, the holders of Registrable Securities are entitled to include their shares of Common Stock in the registration, subject to the ability of the underwriters to limit the number of shares included in the offering. The holders of at least five percent of the Registrable Securities may also require the Company to register all or a portion of their Registrable Securities on Form S-3 when use of such form becomes available to the Company, provided, among other limitations, that the proposed aggregate selling price (net of any underwriters' discounts or commissions) is at least $1 million. All registration expenses must be borne by the Company and all selling expenses relating to Registrable Securities must be borne by the holders of the securities being registered.

CERTAIN PROVISIONS OF THE RESTATED CERTIFICATE OF INCORPORATION AND BYLAWS

Certain provisions of the Company's Restated Certificate of Incorporation and Bylaws may have the effect of preventing, discouraging or delaying a change in the control of the Company and may maintain the incumbency of the Board of Directors and management. The authorization of undesignated Preferred Stock makes it possible for the Board of Directors to issue Preferred Stock with voting or other rights or preferences that could impede the success of any attempt to change control of the Company. In addition, the Company's Bylaws limit the ability of stockholders of the Company to raise matters at a meeting of stockholders without giving advance notice.

The Restated Certificate of Incorporation provides that stockholder action can be taken only at an annual or special meeting of stockholders and cannot be taken by written consent in lieu of a meeting. The Certificate of Incorporation and the Bylaws provide that, except as otherwise required by law, special meetings of the stockholders can only be called pursuant to a resolution adopted by a majority of the Board of Directors, by the Chief Executive Officer of the Company, or by stockholders holding shares in the aggregate entitled to cast not less than 10% of the votes at that meeting.

The Bylaws establish an advance notice procedure for stockholder proposal to be brought before an annual meeting of stockholders of the Company, including proposed nominations of persons for election to the Board. Stockholders at an annual meeting may only consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of the Board or by a stockholder who was a stockholder who was a stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has given to the Company's Secretary timely written notice, in proper form, of the stockholder's intention to bring that business before the meeting. Although the Bylaws do not give the Board the power to approve or disapprove stockholder nominations of candidates or proposals regarding other business to be conducted at a special or annual meeting, the Bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or defer a potential acquiror from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of the Company.

CERTAIN PROVISIONS OF DELAWARE LAW

Following the consummation of the offering, the Company will be subject to the "Business Combination" provisions of the Delaware General Corporation Law. In general, such provisions prohibit a publicly held Delaware corporation form engaging in various "business combination" transactions with any "interested stockholder" for a period of three year after the date of the transaction which the person became an "interested stockholder," unless (i) the transaction is approved by the Board of Directors prior to the date the interested

stockholder obtained such status, (ii) upon consummation of the transaction which resulted in the stockholder becoming an "interested stockholder," the "interested stockholder" owned at least 85% of the voting stock of the corporation outstanding those shares owned by (a) persons who are directors

and also officers an (b) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer, or (iii) on or subsequent to such date the "business combination" is approved by the board of directors and authorized at an annual or special meeting of stockholders by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the "interested stockholder." A "business combination" is defined to include mergers, asset sales and other transactions resulting in a financial benefit to a stockholder. In general, an "interested stockholder" is a person who, together with affiliates and associates, owns (or within three years, did own) 15% or more of a corporation's voting stock. The statute could prohibit or delay mergers or other takeover or change in control attempts with respect to the Company and, accordingly, may discourage attempts to acquire the Company.

TRANSFER AGENT AND REGISTRAR

The transfer agent and registrar for the Common Stock is Norwest Bank Minnesota, N.A.

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no market for the Common Stock of the Company. Future sales of substantial amounts of Common Stock in the public market could materially and adversely affect market prices prevailing from time to time. Sales of substantial amounts of Common Stock of the Company in the public market after the restrictions lapse could materially and adversely affect the prevailing market price and the ability of the Company to raise equity capital in the future.

Upon the completion of this offering, the Company will have 7,436,064 shares of Common Stock outstanding, assuming no exercise of options after June 30, 1996. Of these shares, the 2,300,000 shares sold in this offering will be freely tradeable without restriction under the Securities Act, unless held by "affiliates" of the Company, as that term is defined in Rule 144 under the Securities Act. The remaining 5,136,064 shares of Common Stock held by existing stockholders were issued and sold by the Company in reliance on exemptions from the registration requirements of the Securities Act. These shares may be sold in the public market only if registered, or pursuant to an exemption from registration such as Rule 144, 144(k) or 701 under the Securities Act. Such restricted shares will be available for sale in the public market as follows: (i) approximately 271,617 shares will be eligible for immediate sale on the date of this Prospectus, (ii) approximately 4,014,253 additional shares (including approximately 258,373 shares subject to outstanding vested options) will be available for sale 180 days after the date of this Prospectus upon expiration of lock-up agreements and (iii) approximately 1,617,301 additional shares (including approximately 508,734 shares of Common Stock issuable upon exercise of certain outstanding warrants) will be eligible for sale at various times thereafter. The Company's directors, executive officers and certain of its stockholders, who in the aggregate hold more than 94% of the shares of Common Stock of the Company outstanding immediately prior to the completion of this offering, have entered into lock-up agreements under which they have agreed not to offer, sell, contract to sell, grant any option to purchase or otherwise dispose of, or agree to dispose of, directly or indirectly, any shares of Common Stock or options to acquire shares of Common Stock owned by them for a period of 180 days after the date of this Prospectus, without the prior written consent of Montgomery Securities. Montgomery Securities may, in its sole discretion, and at any time without notice, release all or any portion of the shares subject to such lock-up agreements. The Company has entered into a similar agreement, except that the Company may grant options and issue stock under its current stock option and stock purchase plans and pursuant to other currently outstanding options.

As of June 30, 1996, 497,250 shares were subject to outstanding options. All of these shares are subject to the lock-up agreements described above. In addition, 3,596,940 of the shares outstanding immediately following the completion of this offering and up to 508,734 shares of Common Stock subject to outstanding warrants, if exercised before the expiration of the warrants, will be entitled to registration rights with respect to such shares upon the release of lock-up agreements. The number of shares sold in the public market could increase if such rights are exercised.

In general, under Rule 144 as currently in effect, a person (or persons whose shares are aggregated) who has beneficially owned shares for at least

two years (including the holding period of any prior owner, except an affiliate) is entitled to sell in "broker's transactions" or to market makers, within any three-month period commencing 90 days after the date of this Prospectus, a number of shares that does not exceed the greater of (i) one percent of the number of shares of Common Stock then outstanding (approximately 74,000 shares immediately after this offering) or (ii) the average weekly trading volume of the Common Stock during the four calendar weeks preceding the required filing of a Form 144 with respect to such sale. Sales under Rule 144 are generally subject to certain manner of sale provisions and notice requirements and to the availability of current public information about the Company. Under Rule 144(k), a person who is not deemed to have been an affiliate of the Company at any time during the 90 days preceding a sale, and who has beneficially owned the shares proposed to be sold for at least three years (including the holding period of any prior owner, except an affiliate), is entitled to sell such shares without having to comply with the manner of sale, public information, volume limitation or notice provisions of Rule 144. Under Rule 701 under the Securities Act, persons who purchase

shares upon exercise of options granted prior to the effective date of this offering are entitled to sell such shares 90 days after the effective date of this offering in reliance on Rule 144, without having to comply with the holding period requirements of Rule 144 and, in the case of non-affiliates, without having to comply with the public information, volume limitation or notice provisions of Rule 144.

The Securities and Exchange Commission has recently proposed reducing the initial Rule 144 holding period to one year and the Rule 144(k) holding period to two years. There can be no assurance as to when or whether such rule changes will be enacted. If enacted, such modifications will have a material effect on the times when shares of the Company's Common Stock become eligible for resale.

UNDERWRITING

The Underwriters named below, represented by Montgomery Securities, Dillon, Read & Co. Inc. and Vector Securities International, Inc. (the "Representatives"), have severally agreed, subject to the terms and conditions of the Underwriting Agreement, to purchase from the Company the number of shares of Common Stock indicated below opposite their respective names below. The Underwriting Agreement provides that the obligations of the Underwriters to pay for and accept delivery of the shares of Common Stock are subject to certain conditions precedent, and that the Underwriters are committed to purchase all of the shares if they purchase any of the shares.

<TABLE>
<CAPTION>

NAME	NUMBER OF SHARES
<S>	<C>
Montgomery Securities.....	
Dillon, Read & Co. Inc.	
Vector Securities International, Inc.	
Total.....	2,300,000

</TABLE>

The Representatives have advised the Company that the Underwriters propose initially to offer the shares of Common Stock to the public on the terms set forth on the cover page of this Prospectus. The Underwriters may allow to selected dealers a concession of not more than $ per share, and the Underwriters may allow, and such dealers may reallow, a concession of not more than $ per share to certain other dealers. After the initial public offering, the price and concessions and reallowances to dealers may be changed by the Representatives. The Common Stock is offered subject to receipt and acceptance by the Underwriters, and to certain other conditions, including the right to reject orders in whole or in part.

The Company has granted an option to the Underwriters, exercisable during the 30-day period after the date of this Prospectus, to purchase up to a

maximum of 345,000 additional shares of Common Stock to cover over-allotments, if any, at the same price per share as the initial 2,300,000 shares to be purchased by the Underwriters. To the extent the Underwriters exercise this option, each of the Underwriters will be committed, subject to certain conditions, to purchase such additional shares in approximately the same proportion as set forth in the above table. The Underwriters may purchase such shares only to cover over-allotments made in connection with this offering.

The Representatives have informed the Company that the Underwriters do not expect to make sales to accounts over which they exercise discretionary authority in excess of 5% of the number of shares of Common Stock offered hereby.

The Underwriting Agreement provides that the Company will indemnify the several Underwriters against certain liabilities, including civil liabilities under the Securities Act, or will contribute to payments the Underwriters may be required to make in respect thereof.

The holders of more than 94% of the shares of the Company's Common Stock outstanding immediately prior to the completion of this offering, including all of the Company's directors and executive officers, have agreed that, for a period of 180 days after the date of the final Prospectus relating to this offering, they will not, without the prior written consent of Montgomery Securities, directly or indirectly sell, offer to sell or otherwise dispose of any such shares of Common Stock or any right to acquire such shares. The Company has agreed that,

for a period of 180 days after the date of the final Prospectus relating to this offering, it will not, without the prior written consent of Montgomery Securities or each of the Representatives, issue, offer, sell, grant options to purchase or otherwise dispose of any of the Company's equity securities or any other securities convertible into or exchangeable for the Common Stock or other equity security, other than the grant of options to purchase Common Stock or the issuance of shares of Common Stock reserved for issuance under the Company's stock plan's and the issuance of shares of Common Stock pursuant to the exercise of outstanding options.

Prior to this offering, there has been no public market for the Common Stock. Consequently, the initial public offering price will be determined by negotiations between the Company and the Representatives. Among the factors to be considered in such negotiations are the history of, and the prospects for, the Company and the industry in which it competes, an assessment of the Company's management, the Company's past and present operations, its past and present financial performance, the prospects for future earnings of the Company, the present state of the Company's development, the general condition of the securities markets at the time of the offering and the market prices of and demand for publicly traded common stock of comparable companies in recent periods.

LEGAL MATTERS

The validity of the Common Stock offered hereby will be passed upon for the Company by Wilson Sonsini Goodrich & Rosati, Professional Corporation, Palo Alto, California. Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP Palo Alto, California is acting as counsel for the Underwriters in connection with certain legal matters relating to the shares of Common Stock offered hereby. As of March 31, 1996, a certain investment partnership of Wilson Sonsini Goodrich & Rosati, Professional Corporation beneficially owned an aggregate of 4,412 shares of the Company's Common Stock.

EXPERTS

The consolidated financial statements and schedule of the Company as of December 31, 1994 and 1995 and for each of the years in the three-year period ended December 31, 1995, have been included herein and in the registration statement in reliance upon the reports of KPMG Peat Marwick LLP, independent certified public accountants, appearing elsewhere herein and upon the authority of said firm as experts in accounting and auditing.

The statements in this Prospectus under the captions "Risk Factors--Dependence Upon Patents and Proprietary Technology; Risk of Infringement" and "Business--Patents and Proprietary Rights" have been reviewed and approved by Townsend and Townsend and Crew, special patent counsel for the Company, as experts in such matters, and are included herein in reliance upon such review and approval.

ADDITIONAL INFORMATION

The Company has filed with the Securities and Exchange Commission (the "Commission"), in Washington, D.C. 20549, a Registration Statement on Form S-1 under the Securities Act with respect to the shares of Common Stock offered hereby. This Prospectus, which is part of the Registration Statement, does not contain all the information set forth in the Registration Statement and the exhibits and schedules thereto. For further information with respect to the Company and Common Stock offered hereby, reference is made to the Registration Statement and such exhibits and schedules filed therewith, which may be inspected without charge at, or copies of such material may be obtained at prescribed rates from the Public Reference Section of the Commission at Judiciary Plaza, 450 Fifth Street, N.W., Washington, D.C. 20549. The Registration Statement and such exhibits and schedules are also available on the Commissions's Web site (http://www.sec.gov). Statements contained in this Prospectus as to the contents of any contract or other document referred to are not necessarily complete, and in each instance reference is made to the copy of such contract or other document filed as an exhibit to the Registration Statement, each such statement being qualified in all respects by such reference.

APPLIED IMAGING CORP.
AND SUBSIDIARIES

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

FORM OF REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

When the reincorporation referred to in Note 14 of Notes to Consolidated Financial Statements has been consummated, we will be in a position to render the following report.

KPMG Peat Marwick LLP

The Board of Directors
Applied Imaging Corp.:

We have audited the accompanying consolidated balance sheets of Applied Imaging Corp. and subsidiaries as of December 31, 1994 and 1995, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 1995. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit

also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Applied Imaging Corp. and subsidiaries as of December 31, 1994 and 1995, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 1995, in conformity with generally accepted accounting principles.

San Jose, California

February 26, 1996, except as to Note 14, which is as of July 15, 1996

APPLIED IMAGING CORP.
AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

<TABLE>
<CAPTION>

	DECEMBER 31,		JUNE 30, 1996	
	1994	1995	ACTUAL	PRO FORMA
			(UNAUDITED)	
<S>	<C>	<C>	<C>	<C>
ASSETS				
Current assets:				
Cash and cash equivalents.	$ 2,503,000	$ 2,159,000	$ 1,211,000	$ 1,211,000
Short-term investments....	--	2,997,000	2,025,000	2,025,000
Trade accounts receivable (less allowance for doubtful accounts of $122,000, $166,000, and $210,000 as of December 31, 1994 and 1995 and June 30, 1996, respectively).....	1,940,000	1,501,000	2,071,000	2,071,000
Inventories.....	1,133,000	880,000	749,000	749,000
Prepaid expenses and other current assets.....	430,000	140,000	433,000	433,000
Total current assets....	6,006,000	7,677,000	6,489,000	6,489,000
Property and equipment.....	995,000	1,319,000	1,271,000	1,271,000
Other assets.....	440,000	377,000	329,000	329,000
	$7,441,000	$ 9,373,000	$ 8,089,000	$ 8,089,000
LIABILITIES AND STOCKHOLDERS' EQUITY				
Current liabilities:				
Current portion of bank debt.....	$ 710,000	$ 471,000	$ 622,000	$ 622,000
Accounts payable.....	1,450,000	1,141,000	924,000	924,000
Accrued expenses.....	839,000	1,430,000	1,416,000	1,416,000
Deferred revenue.....	1,295,000	1,386,000	1,289,000	1,289,000
Total current liabilities.....	4,294,000	4,428,000	4,251,000	4,251,000
Bank debt, less current portion.....	336,000	231,000	223,000	223,000
Stockholders' equity:				
Preferred stock; $0.001 par value; 6,000,000				

shares authorized; 2,812,962, 3,919,179 and 3,919,179 shares issued and outstanding, as of December 31, 1994 and 1995 and June 30, 1996, respectively, actual; 6,000,000 shares authorized, none issued and outstanding, pro forma. Aggregate liquidation preference of $11,065,000, $15,766,000, and, $15,766,000 as of December 31, 1994 and 1995, and June 30, 1996, respectively.....	3,000	4,000	4,000	--
Common stock; $0.001 par value; 20,000,000 shares authorized; 973,510, 1,067,785 and 1,090,660 shares issued and outstanding as of December 31, 1994 and 1995 and June 30, 1996, respectively, actual; 20,000,000 shares authorized, 5,136,064 shares issued and outstanding, pro forma...	1,000	1,000	1,000	5,000
Additional paid-in capital.....	9,768,000	14,216,000	15,729,000	15,729,000
Accumulated deficit.....	(6,594,000)	(9,140,000)	(10,375,000)	(10,375,000)
Deferred stock compensation.....	--	--	(1,377,000)	(1,377,000)
Cumulative translation adjustment.....	(367,000)	(367,000)	(367,000)	(367,000)
Total stockholders' equity.....	2,811,000	4,714,000	3,615,000	3,615,000
	$ 7,441,000	$ 9,373,000	$ 8,089,000	$ 8,089,000

</TABLE>

See accompanying notes to consolidated financial statements.

APPLIED IMAGING CORP.
AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

<TABLE>
<CAPTION>

	YEARS ENDED DECEMBER 31,			SIX MONTHS ENDED JUNE 30,	
	1993	1994	1995	1995	1996
				(UNAUDITED)	
<S>	<C>	<C>	<C>	<C>	<C>
Revenues:					
Product sales.....	$ 6,182,000	$ 7,021,000	$ 8,106,000	$ 3,893,000	$ 4,662,000
Software maintenance and service.....	2,499,000	2,550,000	2,692,000	1,322,000	1,333,000
Total revenues.....	8,681,000	9,571,000	10,798,000	5,215,000	5,995,000
Cost of revenues:					
Product sales.....	3,893,000	3,937,000	4,171,000	1,953,000	2,340,000
Software maintenance and service.....	1,072,000	1,413,000	1,313,000	658,000	782,000
Total cost of revenues.....	4,965,000	5,350,000	5,484,000	2,611,000	3,122,000

Gross profit.....	3,716,000	4,221,000	5,314,000	2,604,000	2,873,000
Operating expenses:					
Research and development.....	1,756,000	2,821,000	2,919,000	1,380,000	1,698,000
Sales and marketing....	2,543,000	2,524,000	2,918,000	1,335,000	1,476,000
General and administrative.....	1,229,000	1,898,000	2,094,000	996,000	949,000
Total operating expenses.....	5,528,000	7,243,000	7,931,000	3,711,000	4,123,000
Operating loss.....	(1,812,000)	(3,022,000)	(2,617,000)	(1,107,000)	(1,250,000)
Other income.....	39,000	52,000	71,000	6,000	15,000
Net loss.....	$ (1,773,000)	$ (2,970,000)	$ (2,546,000)	$ (1,101,000)	$ (1,235,000)
Pro forma net loss per common share.....			$ (0.45)		$ (0.22)
Shares used in computing pro forma net loss per common share.....			5,635,393		5,686,583

</TABLE>

See accompanying notes to consolidated financial statements.

APPLIED IMAGING CORP.
AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

<TABLE>
<CAPTION>

	PREFERRED STOCK		COMMON STOCK		ADDITIONAL		DEFERRED	CUMULATIVE	TOTAL
	SHARES	AMOUNT	SHARES	AMOUNT	PAID-IN CAPITAL	ACCUMULATED DEFICIT	STOCK COMPENSATION	TRANSLATION ADJUSTMENT	STOCKHOLDERS' EQUITY
<S>	<C>	<C>	<C>	<C>	<C>	<C>	<C>	<C>	<C>
Balances as of December 31, 1992..	1,796,555	$2,000	934,698	$ 1,000	$ 4,740,000	$ (1,851,000)	$ --	$(295,000)	$ 2,597,000
Exercise of common stock options.....	--	--	12,875	--	2,000	--	--	--	2,000
Issuance of Series I preferred stock, net of $319,100 offering costs....	1,016,407	1,000	--	--	5,016,000	--	--	--	5,017,000
Cumulative translation adjustment.....	--	--	--	--	--	--	--	(30,000)	(30,000)
Net loss.....	--	--	--	--	--	(1,773,000)	--	--	(1,773,000)
Balances as of December 31, 1993..	2,812,962	3,000	947,573	1,000	9,758,000	(3,624,000)	--	(325,000)	5,813,000
Exercise of common stock options.....	--	--	25,937	--	10,000	--	--	--	10,000
Cumulative translation adjustment.....	--	--	--	--	--	--	--	(42,000)	(42,000)
Net loss.....	--	--	--	--	--	(2,970,000)	--	--	(2,970,000)
Balances as of December 31, 1994..	2,812,962	3,000	973,510	1,000	9,768,000	(6,594,000)	--	(367,000)	2,811,000
Exercise of common stock options.....	--	--	94,275	--	44,000	--	--	--	44,000
Compensation expense related to employee stock options.....	--	--	--	--	59,000	--	--	--	59,000
Issuance of Series J preferred stock, net of $356,500 offering costs....	1,106,217	1,000	--	--	4,345,000	--	--	--	4,346,000
Net loss.....	--	--	--	--	--	(2,546,000)	--	--	(2,546,000)

Balances as of December 31, 1995..	3,919,179	4,000	1,067,785	1,000	14,216,000	(9,140,000)	--	(367,000)	4,714,000
Exercise of common stock options (unaudited).....	--	--	22,875	--	40,000	--	--	--	40,000
Deferred stock compensation (unaudited).....	--	--	--	--	1,473,000	--	(1,473,000)	--	--
Amortization of deferred stock compensation (unaudited).....	--	--	--	--	--	--	96,000	--	96,000
Net loss (unaudited).....	--	--	--	--	--	(1,235,000)	--	--	(1,235,000)
Balances as of June 30, 1996 (unaudited).....	3,919,179	$4,000	1,090,660	$ 1,000	$15,729,000	$(10,375,000)	$(1,377,000)	$(367,000)	$ 3,615,000

</TABLE>

See accompanying notes to consolidated financial statements.

APPLIED IMAGING CORP.
AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

<TABLE>
<CAPTION>

	YEARS ENDED DECEMBER 31,			SIX MONTHS ENDED JUNE 30,	
	1993	1994	1995	1995	1996
				(UNAUDITED)	
<S>	<C>	<C>	<C>	<C>	<C>
Cash flows from operating activities:					
Net loss.....	$ (1,773,000)	$ (2,970,000)	$ (2,546,000)	$(1,101,000)	$(1,235,000)
Adjustments to reconcile net loss to net cash used for operating activities:					
Depreciation and amortization.....	449,000	602,000	556,000	217,000	341,000
(Gain) loss from remeasurement.....	--	140,000	(17,000)	--	7,000
Compensation expense related to employee stock options.....	--	--	153,000	153,000	96,000
Changes in operating assets and liabilities:					
Trade accounts receivable.....	(520,000)	1,025,000	439,000	(2,000)	(570,000)
Inventories.....	494,000	(153,000)	253,000	60,000	131,000
Prepaid expenses and other assets.....	6,000	(185,000)	290,000	105,000	(293,000)
Accounts payable.....	206,000	187,000	(309,000)	(404,000)	(217,000)
Accrued expenses.....	(80,000)	127,000	497,000	113,000	(14,000)
Deferred revenue.....	(67,000)	8,000	91,000	(32,000)	(97,000)
Taxes refundable.....	278,000	--	--	--	--
Net cash used for operating activities.....	(1,007,000)	(1,219,000)	(593,000)	(891,000)	(1,851,000)
Cash flows from investing activities:					
Sales of short-term investments.....	--	3,439,000	--	--	972,000
Purchase of short-term investments.....	(3,439,000)	--	(2,997,000)	--	--

Proceeds from sale of equipment, net.....	87,000	--	--	--	--
Purchases of equipment.	(385,000)	(653,000)	(808,000)	(253,000)	(300,000)
Other assets.....	(249,000)	(259,000)	9,000	9,000	48,000
Net cash provided by (used for) investing activities.....	(3,986,000)	2,527,000	(3,796,000)	(244,000)	720,000
Cash flows from financing activities:					
Proceeds from issuance of preferred stock....	5,017,000	--	4,346,000	--	--
Proceeds from issuance of common stock.....	2,000	10,000	44,000	35,000	40,000
Bank borrowings.....	--	469,000	--	--	200,000
Payment of bank debt...	(130,000)	(90,000)	(345,000)	(44,000)	(57,000)
Net cash provided by (used for) financing activities.....	4,889,000	389,000	4,045,000	(9,000)	183,000
Effect of exchange rate changes on cash and cash equivalents.....	(25,000)	(216,000)	--	--	--
Net increase (decrease) in cash and cash equivalents.....	(129,000)	1,481,000	(344,000)	(1,144,000)	(948,000)
Cash and cash equivalents at beginning of period....	1,151,000	1,022,000	2,503,000	2,503,000	2,159,000
Cash and cash equivalents at end of period.....	$ 1,022,000	$ 2,503,000	$ 2,159,000	$ 1,359,000	$ 1,211,000
Supplemental disclosure of cash paid for interest.....	$ 55,000	$ 86,000	$ 110,000	$ 40,000	$ 64,000

</TABLE>

See accompanying notes to consolidated financial statements.

APPLIED IMAGING CORP.
AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(INFORMATION AS OF JUNE 30, 1996 AND FOR THE SIX MONTHS ENDED JUNE 30, 1995 AND 1996 IS UNAUDITED.)

(1) SUMMARY OF THE COMPANY AND SIGNIFICANT ACCOUNTING POLICIES

The Company

Applied Imaging Corp. (the Company) was incorporated in 1986 to develop, manufacture, and market automated clinical analysis systems used by cytogenetic laboratories in prenatal genetic screening. The Company sells its products to government and private clinical cytogenetic laboratories, research institutions, universities, and pharmaceutical companies located primarily in the United States, Canada, Europe, and the Pacific Rim. The Company is currently devoting significant resources to the development of a new prenatal screening designed to enable the detection of prenatal chromosomal disorders through the analysis of fetal blood cells drawn from maternal blood. There have been no revenues earned in relation to this new prenatal screening system.

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries, Applied Imaging International, Limited (United Kingdom) and Applied Imaging, Limited (Israel). All significant intercompany accounts and transactions have been eliminated in

consolidation.

Foreign Exchange

The Company accounts for its foreign operations in accordance with Statement of Financial Accounting Standards (SFAS) No. 52, Foreign Currency Translation. Prior to April 1994, the functional currency for Applied Imaging International, Limited was the British pound and, accordingly, translation adjustments resulting from the conversion of the subsidiary's financial statements into U.S. dollars were accumulated and reported as a separate component of stockholders' equity. Beginning in April 1994, certain operational and organizational changes within the Company caused the functional currency for the Company's subsidiary to become the U.S. dollar. Therefore, monetary assets and liabilities of the subsidiary are remeasured at year-end exchange rates while nonmonetary items are remeasured at historical rates. Most income and expense accounts are remeasured at the average rates in effect during the year. Translation adjustments resulting from the conversion of the subsidiary's financial statements into U.S. dollars are currently recognized in the consolidated statement of operations in the year of occurrence. The functional currency of Applied Imaging, Limited is also the U.S. dollar.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Interim Financial Data

The unaudited interim consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements and, in the opinion of management, include all adjustments (consisting of only normal recurring adjustments) necessary to present fairly the financial information set forth therein, in accordance with generally accepted accounting principles. The Company's interim results may be subject to fluctuations. As a result, the Company believes the results of operations for the interim periods are not necessarily indicative of the results to be expected for any future period.

Initial Public Offering and Unaudited Pro Forma Financial Information

The Board of Directors (the Board) authorized the filing of a registration statement with the Securities and Exchange Commission (SEC) permitting the Company to issue and sell up to 5 million shares of its common stock in connection with a proposed initial public offering (IPO). The unaudited pro forma amounts included in the accompanying pro forma balance sheet as of June 30, 1996, reflect the conversion of all outstanding shares of preferred stock into 3,960,017 shares of common stock and the net exercise of the Series F warrants into 85,387 shares of common stock.

Revenue Recognition

The Company recognizes revenue on product sales upon shipment and concurrently accrues for expected hardware warranty expenses, hardware service costs, and product returns. Revenue on renewed maintenance contracts, including amounts attributable to software maintenance bundled in original product sale agreements, is deferred and recognized ratably over the period of the contract, generally one year.

Research and Development Expenditures

Research and development expenditures are charged to expense as incurred unless they are reimbursed under a specific contract.

Pro Forma Net Loss Per Common Share

Pro forma net loss per share data has been computed using the weighted average number of shares of common stock, including common equivalent shares from stock options and warrants outstanding (when dilutive using the treasury stock method) and the shares resulting from the conversion of all outstanding shares of preferred stock at the closing of the IPO. Pursuant to SEC Staff Accounting Bulletins, common equivalent shares issued during the 12-month period prior to the initial filing of the Company's proposed IPO have been included in the calculation as if they were outstanding for all periods presented (even if antidilutive), using the treasury stock method and the $15.00 anticipated initial public offering price. Due to the significant impact of the conversion of preferred shares into common shares at the closing of the IPO, historical net loss per common share is not meaningful and is therefore not presented.

Cash Equivalents and Investments

All highly liquid investments with maturities of three months or less when acquired are considered by the Company to be cash equivalents.

The Company adopted the provisions of SFAS No. 115, Accounting for Certain Investments in Debt and Equity Securities, effective January 1, 1994. Under SFAS No. 115, investments in equity and debt securities are classified in three categories and accounted for based upon the classification. The Company has accounted for investments in debt securities, consisting of U.S. Treasury instruments, as "available-for-sale" and has stated applicable investments at fair value, which approximates cost. Approximately $1,030,000 and $1,061,000 of investments as of December 31, 1995 and June 30, 1996, respectively, consisted of a U.S. Treasury Note maturing in January 1997.

Inventories

Inventories are stated at the lower of cost (first in, first out) or market.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation. Depreciation is provided using the straight-line method over the estimated useful lives of the respective assets, generally three to five years.

Capitalized Software Costs

Computer software development costs incurred subsequent to the determination of product technological feasibility are capitalized in accordance with the provisions of SFAS No. 86, Accounting for the Cost of Computer Software to be Sold, Leased or Otherwise Marketed. Amortization of these capitalized costs is provided using the greater of the ratio of revenues generated in the period over total future revenues of the product, or the straight-line method over the estimated market life of the related products, generally three years, commencing when the product becomes generally available to customers. For the years ended December 31, 1993, 1994, and 1995 and the six months ended June 30, 1995 and 1996, software development costs incurred subsequent to the establishment of technological feasibility have not been material. The net book value of capitalized costs is not significant and is included in other assets on the consolidated balance sheets.

Income Taxes

The Company accounts for income taxes in accordance with SFAS No. 109, Accounting for Income Taxes, which prescribes an asset and liability approach that results in the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the Company's consolidated financial statements or tax returns. In estimating future tax consequences, SFAS No. 109 generally considers all expected future

events other than enactment of changes in tax laws or rates.

Fair Value of Financial Instruments

Financial instruments consist principally of cash equivalents, short-term investments, trade receivables, notes receivable, accounts payable, and bank debt. The carrying amounts of cash and cash equivalents, notes receivable, trade receivables, accounts payable and bank debt approximate fair value.

Financial instruments that potentially subject the Company to concentrations of credit risk are cash equivalents and short-term investments which the Company places with high-credit qualified financial institutions and, by policy, limits the amount of credit exposure to any one financial institution. The Company sells its products to government and private clinical cytogenetic laboratories, research institutions, universities, and pharmaceutical companies located primarily in the United States, Canada, Europe, and the Pacific Rim. The Company's credit risk is concentrated primarily in the United States and Europe. The Company does not have a significant concentration of credit risk with any single customer.

Future Adoption of New Accounting Standard

The Financial Accounting Standards Board recently issued SFAS No. 123, Accounting for Stock-Based Compensation. This statement requires that the Company either recognize in its consolidated financial statements costs related to its stock-based employee compensation plans, including employee stock purchase plans and stock option plans, or make pro forma disclosures of such costs in a footnote to the consolidated financial statements. The Company will adopt SFAS No. 123 effective January 1, 1996. Management plans to remain on APB No. 25, Accounting for Stock Issued to Employees, as allowed under SFAS No. 123, for purposes of measurement of compensation expense. SFAS No. 123 is not expected to have a material effect on the Company's consolidated results of operations.

(2) INVENTORIES

A summary of inventories follows:

<TABLE>
<CAPTION>

	DECEMBER 31,		JUNE 30,
	1994	1995	1996
<S>	<C>	<C>	<C>
Raw materials	$ 852,000	$734,000	$647,000
Work in process	112,000	88,000	81,000
Finished goods	169,000	58,000	21,000
	$1,133,000	$880,000	$749,000

</TABLE>

(3) PROPERTY AND EQUIPMENT

A summary of property and equipment follows:

<TABLE>
<CAPTION>

	DECEMBER 31,		JUNE 30,
	1994	1995	1996
<S>	<C>	<C>	<C>
Equipment	$1,297,000	$1,873,000	$1,943,000
Demonstration equipment	688,000	760,000	844,000

Furniture and fixtures	102,000	173,000	319,000
	2,087,000	2,806,000	3,106,000
Less accumulated depreciation	1,092,000	1,487,000	1,835,000
	$ 995,000	$1,319,000	$1,271,000

</TABLE>

(4) ACCRUED EXPENSES

A summary of accrued expenses follows:

<TABLE>
<CAPTION>

	DECEMBER 31,		JUNE 30,
	1994	1995	1996
<S>	<C>	<C>	<C>
Warranty	$ 111,000	$ 105,000	$ 133,000
Compensation and related costs	352,000	641,000	638,000
Professional fees	131,000	196,000	249,000
Customer deposits	--	198,000	92,000
Royalties	38,000	103,000	59,000
Other	207,000	187,000	245,000
	$ 839,000	$1,430,000	$1,416,000

</TABLE>

(5) BANK DEBT

A summary of bank debt follows:

<TABLE>
<CAPTION>

	DECEMBER 31,		JUNE 30,
	1994	1995	1996
<S>	<C>	<C>	<C>
Applied Imaging Corp.:			
Advances on bank line of credit, available through September 1996; bearing interest at 9.5%, 10.25%, and 9.75% as of December 31, 1994 and 1995, and June 30, 1996, respectively	$ 600,000	$358,000	$558,000
Bank note payable in monthly installments of $7,500 through October 1996, plus interest at 9.625%, 9.75%, and 9.50% as of December 31, 1994 and 1995, and June 30, 1996, respectively	172,000	83,000	38,000
Applied Imaging International, Limited:			
Bank note payable in monthly installments through June 2004; bearing interest at the bank's base rate plus 3% (7.43%, 6.57%, and 8.75% as of December 31, 1994 and 1995 and June 30, 1996, respectively)	274,000	261,000	249,000
	1,046,000	702,000	845,000
Less current portion	710,000	471,000	622,000
Long-term portion	$ 336,000	$231,000	$223,000

</TABLE>

The line of credit and bank note payable relating to the U.S. Company cannot

exceed $1,000,000 in the aggregate and is subject to a maximum borrowing base formula based on certain accounts receivable. This bank debt is secured by all of the Company's domestic assets and the pledge of 660,000 shares of Applied Imaging International, Limited representing approximately 66% of such outstanding shares. Under the line of credit agreement, the Company cannot pay cash dividends without the bank's prior approval. The maximum balance outstanding during 1995 was $773,000, and the average balance during that year was $608,000.

The bank note relating to Applied Imaging International, Limited is denominated in British pounds and relates to the purchase of real property from a related party in March 1994. The real property is recorded at cost, which approximates market value, and is included in other assets in the accompanying consolidated balance sheet. This note is secured by such real property.

Applied Imaging International, Limited has a (Pounds)500,000 unsecured line of credit with an international bank which is guaranteed by the Company. No amounts were outstanding under this facility as of December 31, 1994 and 1995, and June 30, 1996.

The Company is currently in compliance with all of the covenants contained in the basic agreements governing these borrowings.

(6) PREFERRED STOCK

As of December 31, 1995 and June 30, 1996, the Company is authorized to issue 6,000,000 shares of preferred stock.

A summary of preferred stock as of December 31, 1995 and June 30, 1996 follows:

<TABLE>
<CAPTION>

	DESIGNATED SHARES	SHARES OUTSTANDING	NET ORIGINAL ISSUE PRICE
<S>	<C>	<C>	<C>
A	190,000	180,000	$ 144,000
B	250,000	198,077	258,000
C	283,019	220,126	350,000
D	375,000	200,557	361,000
E	181,819	181,819	600,000
F	625,000	460,295	1,551,000
G	700,000	287,500	1,147,000
H	300,000	250,000	995,000
I	1,100,000	1,016,407	5,017,000
J	1,176,470	1,106,217	4,346,000
Repurchased shares of Series E	--	(181,819)	(727,000)
		3,919,179	

</TABLE>

The rights, preferences, privileges, and restrictions of the preferred stock are as follows:

- The holders of preferred stock are entitled to preferential noncumulative dividends, when, as and if declared by the Board at a rate of $0.05 per share (in the case of Series A) and at the rate of $0.08 per share (in the case of all other series).

- The holders of Series A, B, C, D, F, G, H, I, and J preferred stock have liquidation preferences of $0.80, $1.30, $1.59, $1.80, $4.00, $4.00, $6.50, $5.25, and $4.25 per share, respectively, plus all declared but unpaid dividends.

- Each share of preferred stock is convertible at any time at the option of the holder into one share of common stock (or approximately 1.04 shares of common stock in the case of Series I). Conversion is automatic in the event of certain defined public offerings of common stock, the achievement by the Company of certain revenue and income goals, or a majority vote of the holders of outstanding preferred stock.

- The preferred stock is subject to certain antidilutive provisions relating to stock splits and stock dividends.

- Each share of preferred stock has voting rights on an "as if converted" basis.

As of December 31, 1995 and June 30, 1996, there were warrants outstanding and exercisable for 110,416 shares of Series F preferred stock at $3.40 per share which expire in 1997. However, such warrants will terminate if not exercised or converted prior to the effective date of the Company's contemplated IPO (Note 13).

(7) COMMON STOCK

The Company is authorized to issue 20,000,000 shares of common stock. As of December 31, 1995 and June 30, 1996, there were warrants outstanding to purchase 368,734 shares of common stock at $5.25 per share and 140,000 shares at $4.25 per share. These warrants expire in 1998 and 2000, respectively.

As of December 31, 1995, 950,000 shares of common stock were reserved for issuance under the Company's 1988 Amended and Restated Incentive Stock Option Plan (the 1988 Option Plan). On June 19, 1996, the Board

authorized, effective upon the closing of the proposed IPO, reserving an additional 450,000 shares of common stock for issuance under the 1988 Option Plan. Under the 1988 Option Plan, stock options may be granted to Board members, officers, key employees, and consultants at the fair market value of the common stock at the date of the grant, as determined by the Board. Options are exercisable over 5 to 10 years from the date of grant, and typically vest ratably over 4 years. In 1994, the Company enacted a Directors Option Plan designed to encourage participation on the Company's Board. Under this plan, 3,000 shares per year are automatically granted to non-employee directors. The terms of the plan allow the granting of stock options upon initial election to the Board and for each subsequent term on the Board. As of June 30, 1996 there were 50,000 shares reserved for issuance under this plan and no options have been granted. As of December 31, 1995 and June 30, 1996, 5,000 and 75,000 options were granted to Board members out of the shares reserved under the 1988 Option Plan. On June 19, 1996, the Board amended the Director Option Plan, effective upon the closing of the proposed IPO, to increase the number of shares subject to be automatically granted to non-employee directors for subsequent grants from 3,000 to 5,000 shares per year and to increase the number of shares reserved for issuance to 120,000 shares.

The Company has recorded for financial statement purposes, a deferred charge of $1,473,000, representing the difference between the exercise price and the deemed fair value of the Company's common stock for 246,750 shares subject to common stock options granted in the 12-month period preceding the IPO, mainly in the first quarter of 1996. The deferred stock compensation is being amortized to compensation expense over the period during which the options become exercisable, generally four years.

Below is a table of stock option activity:

<TABLE>
<CAPTION>

		OPTIONS OUTSTANDING	
	SHARES AVAILABLE FOR GRANT	SHARES	PRICE PER SHARE

BALANCES AS OF DECEMBER 31, 1992	138,275	257,050	$ 0.15 - 1.80
Options granted	(106,750)	106,750	1.80 - 2.80
Options canceled	20,375	(20,375)	0.33 - 2.80
Options exercised	--	(12,875)	0.15 - 0.33
BALANCES AS OF DECEMBER 31, 1993	51,900	330,550	0.15 - 2.80
Shares authorized	440,000	--	--
Options granted	(100,000)	100,000	3.00
Options canceled	8,063	(8,063)	1.80 - 2.80
Options exercised	--	(25,937)	0.15 - 1.80
BALANCES AS OF DECEMBER 31, 1994	399,963	396,550	0.15 - 3.00
Options granted	(66,500)	66,500	1.80 - 3.00
Options canceled	12,525	(12,525)	1.80 - 3.00
Options exercised	--	(94,275)	0.15 - 1.80
BALANCES AS OF DECEMBER 31, 1995 (143,668 exercisable)	345,988	356,250	0.15 - 3.00
Options granted	(238,750)	238,750	1.80
Options canceled	74,875	(74,875)	1.80 - 3.00
Options exercised	--	(22,875)	1.80
BALANCES AS OF JUNE 30, 1996 (172,002 exercisable)	182,113	497,250	0.15 - 3.00

</TABLE>

On June 19, 1996, the Board adopted, effective upon the closing of the proposed IPO, the Company's Employee Stock Purchase Plan (the Plan) whereby eligible employees may purchase common stock through payroll deductions of up to 10% of compensation, at a per share price of 85% of the fair market value of the Company's common stock on the enrollment date or the exercise date, whichever is lower. Upon the closing of the IPO there will be 200,000 shares reserved for issuance under the Plan.

(8) INCOME TAXES

The Company has not recorded an income tax benefit in 1993, 1994, and 1995 due to the recording of a valuation allowance as an offset to net deferred tax assets. A valuation allowance is provided due to uncertainties relating to the realization of deferred tax assets.

The tax effects of temporary differences that give rise to significant portions of deferred tax assets are presented below:

<TABLE>
<CAPTION>

	DECEMBER 31,		JUNE 30,
	1994	1995	1996
Deferred tax assets:			
Accounts receivable, principally due to the allowance for doubtful accounts	$ 45,000	$ 24,000	$ 44,000
Inventories, principally due to the allowance for obsolete inventory, and additional costs inventoried for tax purposes	134,000	96,000	160,000
Tangible and intangible assets, principally due to differences in depreciation and amortization	149,000	45,000	114,000
Revenue deferred for financial statement purposes, not for tax reporting purposes	184,000	241,000	235,000
Accrued expenses, not currently deductible	70,000	75,000	187,000
Net operating loss carryforwards	2,170,000	3,081,000	3,292,000
Business credit carryforwards	130,000	282,000	302,000

	2,882,000	3,844,000	4,334,000
Less valuation allowance.....	2,882,000	3,844,000	4,334,000
Net deferred tax assets.....	$ --	$ --	$ --

</TABLE>

As of December 31, 1995, the Company had net operating loss carryforwards for U.S. federal, U.K., and California state tax return purposes of approximately $7,700,000, $945,000, and $1,450,000, respectively. The federal and California net operating loss carryforwards expire in the years 2011 and 1999, respectively. The Company's U.K. net operating loss carryforward is available indefinitely to offset its U.K. trading profits arising from distribution operations. The difference between the tax loss carryforwards and the accumulated deficit primarily relates to timing differences in the recognition of deferred revenue, accrued compensation, and certain reserves.

The Internal Revenue Code of 1986 and the California Conformity Act of 1987 substantially restrict the ability of a corporation to utilize existing net operating losses and credits in the event of an "ownership change". The several issuances of preferred stock have resulted in multiple ownership changes since inception of the Company. The majority of the federal net operating loss carryforwards are limited by an ownership change

occurring in July 1995. Approximately $6,700,000 of the federal net operating loss carryforward will be subject to an annual limitation in the aggregate of $850,000. Any unused annual limitation can be carried over and added to the succeeding year's annual limitation within the allowable carryforward period. Management believes that the IPO of the Company's stock will most likely result in an ownership change, however, the July 1995 change will continue to be the most restrictive limitation because the majority of the Company's net operating losses were incurred prior to July 1995.

(9) COMMITMENTS

The Company has several noncancelable operating leases for equipment, vehicles, and facilities expiring through 2005. The facilities' leases generally contain renewal options for periods ranging from two to three years and require the Company to pay all executory costs such as maintenance, property taxes, and insurance. Rent expense under operating leases aggregated $267,000, $287,000, and $326,000 during 1993, 1994, and 1995, respectively, and $151,000 and $165,000 during the six months ended June 30, 1995 and 1996, respectively. The Company's primary lease commitments are for its facilities in the United Kingdom, which aggregate approximately (Pounds)100,000 per year through 1998, with a six-year renewal option held by the Company, and for its facilities in the United States, which aggregate approximately $143,000 and $42,000 for 1996 and 1997, respectively.

(10) EMPLOYEE BENEFIT PLANS

In January 1994, the Company implemented a retirement savings and investment plan that is intended to qualify under Section 401(k) of the Internal Revenue Code (the 401(k) Plan) covering all of the Company's United States-based employees. An employee may elect to defer, in the form of contributions to the 401(k) Plan on his or her behalf, up to 15% of the total compensation that would otherwise be paid to the employee, not to exceed the amount allowed by applicable Internal Revenue Service guidelines. The Company matches 100% of amounts deferred by the employee participants up to 3% of such employee's total compensation and such matching amounts vest over a three-year period from the initial participation date. Contributions by employees or by the Company to the 401(k) Plan, and income earned on plan contributions, are not taxable to employees until withdrawn from the 401(k) Plan. Contributions by the Company are deductible by the Company when made. The Company contributed $38,000, and $51,000 in 1994 and 1995, respectively, and $25,000 and $34,000 in the six months ended June 30, 1995 and 1996, respectively.

The Company's United Kingdom-based employees are covered by retirement savings plans (the International Retirement Plans). Under such plans, an employee may elect to make contributions of 3.5% of such employee's earnings. Amounts contributed by the Company range 5.5% to 10.5% of such employee's earnings. During 1993, 1994, and 1995, and during the six months ended June 30, 1995 and 1996, respectively, the Company made contributions to the International Retirement Plans totaling $83,000, $60,000, $43,000, $21,000, and $22,000. Contributions by employees or by the Company to the International Retirement Plans, and income earned on plan contributions, are not taxable to employees until withdrawn from such plans. Contributions by the Company are deductible by the Company when made.

(11) FOREIGN OPERATIONS

The Company markets its products worldwide from its operations in the United States and the United Kingdom and performs research and development in the United States and Israel. Sales from the United States are primarily to customers within the United States. Revenues in the United Kingdom resulted from drop shipments of product from the United States directly to customers for the years ended December 31, 1994 and 1995 and the six months ended June 30, 1995 and 1996. Selected financial data by primary geographic area for the years ended December 31, 1993, 1994 and 1995, and the six months ended June 30, 1995 and 1996 follow. Operating losses incurred by Israel are offset by funding received in connection with the grant discussed at Footnote 12.

<TABLE>
<CAPTION>

	YEARS ENDED DECEMBER 31,			SIX MONTHS ENDED JUNE 30,	
	1993	1994	1995	1995	1996
<S>	<C>	<C>	<C>	<C>	<C>
Sales to unaffiliated customers:					
United States.....	$ 3,159,000	$ 3,639,000	$ 4,254,000	$ 2,006,000	$ 2,525,000
United Kingdom.....	5,522,000	5,932,000	6,544,000	3,209,000	3,470,000
	$ 8,681,000	$ 9,571,000	$10,798,000	$ 5,215,000	$ 5,995,000
Operating income (loss):					
United States.....	$ (478,000)	$(2,069,000)	$(2,548,000)	$(1,223,000)	$(1,278,000)
United Kingdom.....	(1,334,000)	(953,000)	(69,000)	116,000	28,000
	$ (1,812,000)	$(3,022,000)	$(2,617,000)	$(1,107,000)	$(1,250,000)

</TABLE>

<TABLE>
<CAPTION>

	DECEMBER 31,			JUNE 30,
	1993	1994	1995	1996
<S>	<C>	<C>	<C>	<C>
Total assets:				
United States.....	$6,335,000	$3,977,000	$6,473,000	$4,585,000
United Kingdom.....	3,331,000	3,464,000	2,755,000	3,151,000
Israel.....	--	--	145,000	353,000
Total.....	$9,666,000	$7,441,000	$9,373,000	$8,089,000
Net assets:				
United States.....	$4,494,000	$1,321,000	$4,183,000	$2,422,000
United Kingdom.....	1,319,000	1,490,000	491,000	953,000
Israel.....	--	--	40,000	240,000

Total	$5,813,000	$2,811,000	$4,714,000	$3,615,000

</TABLE>

Substantially all of the U.K. sales are denominated in British pounds. The Company generally does not enter into any arrangements to hedge the effect of foreign currency changes on its foreign currency denominated assets and liabilities.

(12) RESEARCH AND DEVELOPMENT ARRANGEMENT

During 1995, the Company was awarded a grant by the Binational Industrial Research and Development (BIRD) Foundation. With the funding received from the grant, the Company began research operations in its

Israel subsidiary relating to its fetal cell program. All funds received by the Company in advance of performing the related research and development are recorded as a deferred credit in the accompanying consolidated balance sheet and, as expenses are incurred, the deferred credit is depleted. Over the life of the grant, the Company will receive up to $543,000 in matching funds. These funds, as well as any accrued interest, will be required to be paid back to the BIRD Foundation if future revenues are realized from the related research and development activities, at the rate of 2 1/2% of such future revenues generated in the first year such revenues occur, and 5% of revenues in succeeding years, over a six-year period, up to a maximum of 150% of the funds received. Of the approximately $362,000 in funding received, the Company has recognized credits to its expenses of approximately $97,000 during 1995 and $186,000 during the six months ended June 30, 1996.

(13) PROPOSED INITIAL PUBLIC OFFERING

On June 19, 1996, the Board authorized the filing of a registration statement with the Securities and Exchange Commission permitting the Company to issue and sell up to 5 million shares of its common stock in connection with a proposed IPO. If the offering is consummated under terms presently anticipated, all of the currently outstanding preferred stock will automatically convert into 3,960,017 shares of common stock. In addition, the net exercise of the warrants described in Note 6 into 85,387 shares of common stock is expected prior to the effectiveness of the Company's public offering. The effect of the preferred stock conversion and the warrant exercise has been reflected in the accompanying pro forma consolidated balance sheet as of June 30, 1996.

(14) SUBSEQUENT EVENTS

Reincorporation

On July 15, 1996, the Board approved the Company's reincorporation in the state of Delaware prior to the IPO, providing for 20,000,000 authorized shares of common stock with a $.001 par value per share and for 6,000,000 authorized shares of preferred stock with a $.001 par value per share. The accompanying consolidated financial statements have been retroactively restated to give effect to the reincorporation.

Caption: AUTOMATED SOLUTIONS FOR CYTOGENETICS
The Company currently manufactures, markets and sells a family of automated cytogenetic systems for prenatal and cancer applications.

[Graphic: Depicts laboratory technician in front of automated karyotyping equipment]

Caption: CYTOVISION
KARYOTYPER

A high speed imaging instrument for automated classification (karyotyping) of chromosomes from cells in a particular phase of the life cycle (metaphase) in which such chromosomes are individually visible.

[Graphic: Picture of paired chromosomes in display referred to as a karotype]

Caption: KARYOTYPE IMAGE
A karyotype produced from a metaphase image.

[Graphic: Picture of chromosomes]

Caption: METAPHASE CHROMOSOMES
Image of chromosomes from a cell in metaphase.

[Graphic: Picture of part of globe with points showing major cities where Company customers are located.]
Caption: WORLD WIDE INSTALLED BASE
The Company has an installed base of cytogenetic products at approximately 500 sites in more than 30 countries. The Company believes that it can initially distribute its prenatal screening system, if approved, through its established world wide distribution channels and that its current customers could add the Company's prenatal screening system to their existing installations.

No dealer, sales representative, or any other person has been authorized to give any information or to make any representations in connection with this offering other than those contained in this Prospectus, and, if given or made, such information or representations must not be relied upon as having been authorized by the Company or any of the Underwriters. This Prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities other than the shares of Common Stock to which it relates or an offer to, or a solicitation of, any person in any jurisdiction where such an offer or solicitation would be unlawful. Neither the delivery of this Prospectus nor any sale made hereunder shall, under any circumstances, create an implication that there has been no change in the affairs of the Company since the date hereof or that information contained herein is correct as of any time subsequent to the date hereof.

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<TABLE>
<CAPTION>

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Until , 1996 (25 days after the date of this prospectus), all dealers effecting transactions in the Common Stock, whether or not participating in the distribution, may be required to deliver a Prospectus. This is in addition to the obligation of dealers to deliver a Prospectus when acting as

Underwriters and with respect to their unsold allotments or subscriptions.

2,300,000 SHARES

APPLIED IMAGING
[LOGO OF APPLIED IMAGING APPEARS HERE]

COMMON STOCK

PROSPECTUS

MONTGOMERY SECURITIES

DILLON, READ & CO. INC.

VECTOR SECURITIES INTERNATIONAL, INC.

, 1996

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth the costs and expenses, other than underwriting discounts, commissions and certain accountable expenses, payable by the Company in connection with the sale of Common Stock being registered. All amounts are estimates except the SEC registration fee and the NASD filing fee.

<TABLE>

<S>	<C>
SEC Registration Fee	$ 14,593
NASD Filing Fee	4,732
Nasdaq National Market Listing Fee	40,508
Printing Fees and Expenses	150,000
Legal Fees and Expenses	225,000
Accounting Fees and Expenses	200,000
Blue Sky Fees and Expenses	15,000
Transfer Agent and Registrar Fees	15,000
Miscellaneous	110,675
Total	$750,000

</TABLE>

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Section 145 of the Delaware General Corporation Law allows for the indemnification of officers, directors and other corporate agents in the terms sufficiently broad to indemnify such persons under certain circumstances for liabilities (including reimbursement for expenses incurred) arising under the Securities Act of 1993. as amended (the "Act"). The Registrant's Restated Certificate of Incorporation to be filed upon the closing of the offering to which this Registration Statement relates (Exhibit 3.3 hereto) and the Registrant's Bylaws (Exhibit 3.4 hereto) provides for indemnification of the Registrant's directors, officers, employees and other agents to the extent and under the circumstances permitted by the Delaware General Corporation Law. The Registrant also intends to enter into agreements with its directors and executive officers that will require the Registrant among other things to indemnify them against certain liabilities that may arise by reason of their status or service as directors to the fullest extent not prohibited by

Delaware law.

The Underwriting Agreement provides for indemnification by the Underwriters of the Registrant, its directors and officers, and by the Registrant of the Underwriters, for certain liabilities, including liabilities arising under the Act, and affords certain rights of contribution with respect thereto.

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES

Since June 1993, the Registrant has issued and sold the following unregistered securities:

(1) From June 1993 to June 1996, the Registrant issued and sold 151,487 shares of Common Stock to a total of 32 employees in reliance upon Rule 701 promulgated under the Securities Act of 1933, as amended (the "Act") at purchase prices ranging from $0.15 per share to $1.80 per share upon the exercise of stock options, pursuant to the Registrant's 1988 Option Plan.

(2) In August 1993, the Registrant issued and sold 1,016,407 shares of Series I Preferred Stock to a total of 33 accredited investors at a purchase price of $5.25 per share for an aggregate purchase price of $5,336,136.75 in reliance upon Rule 506 of Regulation D promulgated under the Act. In connection with the sale of shares of Series I Preferred Stock, the Registrant issued a warrant to purchase 140,000 shares of Common Stock at a purchase price of $5.25 per share to Allen & Company Incorporated (the "Initial Warrant").

(3) In July and September 1995, the Registrant issued and sold 1,106,217 shares of Series J Preferred Stock at a purchase price of $4.25 per share, and issued warrants priced at $0.01 per share to purchase 368,734 shares of Common Stock at an exercise price of $5.25 per share to a total of 30 accredited investors in reliance upon Rule 506 of Regulation D promulgated under the Act. In addition, the Registrant issued a warrant to purchase 140,000 shares of Common Stock at an exercise price of $4.25 per share to Allen & Company in exchange for the Initial Warrant.

The sales of the above securities were deemed to be exempt from registration under the Securities Act in reliance on Section 4(2) of the Securities Act, or Regulation D promulgated thereunder, or Rule 701 promulgated under Section 3(b) of the Securities Act as transactions by an issuer not involving a public offering or transactions pursuant to compensatory benefit plans and contracts relating to compensation as provided under such Rule 701. The recipients of securities in each such transaction represented their intention to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the share certificates and warrants issued in such transactions. All recipients had adequate access, through their relationships with the Company, to information about the Registrant.

ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) EXHIBITS

<TABLE>

<C>	<S>
1.1**	Form of Underwriting Agreement.
3.1*	Restated Articles of Incorporation, as amended as of July 19, 1995.
3.2	Form of Certificate of Incorporation, to be filed prior to the effective date of the Registration Statement under which the offering is being made.
3.3	Form of Restated Certificate of Incorporation, to be filed after the closing of the offering made under this Registration Statement.
3.4*	Bylaws, as amended.
3.5	Form of Bylaws of Registrant, to be effective upon consummation of the Registrant's reincorporation into Delaware.
4.1**	Specimen Common Stock Certificate.
5.1**	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.
10.1	Form of Indemnification Agreement for directors and officers.
10.2*	Amended and Restated 1988 Incentive Stock Option Plan and form of agreement thereunder.
10.3*	1994 Director Option Plan and form of subsequent agreement thereunder.
10.4*	Employee Stock Purchase Plan.
10.5	Amended and Restated Registration Rights Agreements.

10.6*	License Agreement dated December 1, 1993 between the Registrant and Chronomed, Inc.
10.7*	Assignment dated December 1, 1993 by and between the Registrant and Alex Saunders, M.D.
10.8*	Lease dated February 15, 1994 for the Registrant's headquarters in Santa Clara, CA.
10.9(a)*	Lease for Site No. BT.2003/1A, Hylton Park, Sunderland, England, between English Industrial Estates Corporation and Applied Imaging International Ltd., dated June 12, 1992.
10.9(b)*	Lease for Site No. BT.2003/3A, Hylton Park, Sunderland, England, between English Industrial Estates Corporation and Applied Imaging International Ltd., dated June 12, 1992.
10.9(c)*	Underlease for Site No. BT.2003/1A between Applied Imaging International Ltd. and RTC North Limited, dated February 14, 1996.
10.9(d)*	Supplement to Underlease for Site No. BT.2003/1A between Applied Imaging International Ltd. and RTC North Limited, dated February 14, 1996.
10.10*	Lease Agreement dated October 31, 1995 between Asaf Harofe Hospital and Applied Imaging Ltd. for Registrant's Israeli entity in Tzripin, Israel.
10.11*	Employment Letter Agreement dated August 12, 1991 between the Registrant and Leslie G. Grant.
10.12*	Amendment to Employment Letter Agreement between the Registrant and Leslie G. Grant, dated February 12, 1996.

10.13*	Employment Letter Agreement dated January 12, 1996 between the Registrant and Michael W. Burgett, Ph.D., and supplement thereto, dated January 20, 1996.
10.14*+	Know-How License Agreement dated November 1989 between Medical Research Council and Shandon Scientific Limited (assigned to the Registrant in November 1989), as amended, July 5, 1994.
10.15*	Cooperative Research and Development Agreement, dated June 10, 1995 between Registrant and the National Institute of Health.
10.16*+	Supply & Distribution Agreement dated March 3, 1994 between Cytocell Ltd. and Registrant.
10.17*+	Research Purchase Agreement dated March 26, 1996 between Pharmacia Biotech AB and Registrant.
10.18*+	Development Agreement dated February 5, 1996 between EM Industries and Registrant.
10.19**	Cooperation and Project Funding Agreement dated July 16, 1995 between the Israel-United States Binational Industrial Research and Development Foundation, the Registrant and Applied Imaging Ltd.
11.1*	Calculation of pro forma net loss per common share.
21.1*	List of Subsidiaries of the Registrant.
23.1*	Consent and Form of Independent Certified Public Accountants Report on Financial Statement Schedule
23.2**	Consent of Counsel (included in Exhibit 5.1).
23.3*	Consent of Special Patent Counsel
24.1*	Power of Attorney (see page II-4).
27.1*	Financial Data Schedule

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*Previously filed

**To be filed by amendment.

+Confidential Treatment Requested.

(b) FINANCIAL STATEMENT SCHEDULES

Schedule II--Valuation and Qualifying Accounts

Schedules not listed above have been omitted because the information required to be set forth therein is not, applicable or is shown in the financial statements or notes thereto.

ITEM 17. UNDERTAKINGS

The undersigned Registrant hereby undertakes to provide to the Underwriters at the closing specified in the Underwriting Agreement certificates in such

denominations and registered in such names as required by the Underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification by the Registrant for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the provisions referenced in Item 14 of this Registration Statement or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer, or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered hereunder, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of Prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of Prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the

Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of Prospectus shall be deemed to be a new Registration Statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement (i) to include any prospectus required by Section 10(a)(3) of the Securities Act of 1933; (ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereto which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement; and (iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

SIGNATURES

PURSUANT TO THE REQUIREMENTS OF THE SECURITIES ACT, THE REGISTRANT HAS DULY CAUSED THIS REGISTRATION STATEMENT TO BE SIGNED ON ITS BEHALF BY THE UNDERSIGNED, THEREUNTO DULY AUTHORIZED, IN THE CITY OF SANTA CLARA, STATE OF CALIFORNIA, ON THE 26TH DAY OF AUGUST, 1996.

Applied Imaging Corp.

By: /s/ Abraham I. Coriat

Abraham I. Coriat Chief Executive Officer

PURSUANT TO THE REQUIREMENTS OF THE SECURITIES ACT, THIS REGISTRATION STATEMENT HAS BEEN SIGNED BY THE FOLLOWING PERSONS IN THE CAPACITIES AND ON THE DATES INDICATED:

SIGNATURE	TITLE	DATE
/s/ Abraham I. Coriat (Abraham I. Coriat)	Chief Executive Officer and Director (Principal Executive Officer)	August 26, 1996
/s/ Neil E. Woodruff (Neil E. Woodruff)	Chief Financial Officer (Principal Financial and Accounting Officer)	August 26, 1996
(John F. Blakemore, Jr.)	Director	, 1996
(Michael S. Elias)	Director	, 1996
(Gilbert J.R. McCabe)	Director	, 1996
/s/ Thomas C. McConnell* (Thomas C. McConnell)	Director	August 26, 1996
/s/ Andre F. Marion* (Andre F. Marion)	Director	August 26, 1996
/s/ Robert C. Miller* (Robert C. Miller)	Director	August 26, 1996
/s/ G. Kirk Raab* (G. Kirk Raab)	Director	August 26, 1996

*By: /s/ Abraham I. Coriat
(Abraham I. Coriat)
(Attorney-in-Fact)

SCHEDULE II

APPLIED IMAGING CORP.
VALUATION AND QUALIFYING ACCOUNTS

DESCRIPTION	BALANCE AT BEGINNING OF YEAR	ADDITIONS CHARGED TO COST AND EXPENSES	DEDUCTIONS	BALANCE AT END OF YEAR
Trade accounts Receivable Year Ended December 31, 1993.....	$ 48	$94	$47	$ 95

Year Ended December 31, 1994.....	$ 95	$66	$39	$122
Year Ended December 31, 1995.....	$122	$93	$49	$166

</TABLE>

EXHIBIT INDEX

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21.1*	List of Subsidiaries of the Registrant.	
23.1*	Consent and Form of Independent Certified Public Accountants Report on Financial Statement Schedule	
23.2**	Consent of Counsel (included in Exhibit 5.1).	
23.3*	Consent of Special Patent Counsel	
24.1*	Power of Attorney (see page II-4).	
27.1*	Financial Data Schedule	

</TABLE>

*Previously filed

**To be filed by amendment.
+Confidential Treatment Requested.

EXHIBIT 3.2

CERTIFICATE OF INCORPORATION

OF

APPLIED IMAGING CORP.

ARTICLE I

The name of the Corporation is Applied Imaging Corp.

ARTICLE II

The address of the corporation's registered office in the State of Delaware is 1209 Orange Street, City of Wilmington, County of Newcastle, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE III

The purpose of the Corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of Delaware.

ARTICLE IV

The Corporation is authorized to issue two classes of shares, which shall be designated "Common Stock" and "Preferred Stock". The total number of shares of Common Stock which the Corporation is authorized to issue is 20,000,000 with a par value of $0.001 per share, and the total number of shares of Preferred Stock which the corporation is authorized to issue is 6,000,000 with a par value of $0.001 per share. Of the Preferred Stock, 190,000 shares are fixed and designated as "Series A Preferred Stock", 250,000 shares are fixed and designated as "Series B Preferred Stock", 283,019 shares are fixed and designated as "Series C Preferred Stock", 375,000 shares are fixed and designated as "Series D Preferred Stock", 181,819 shares are fixed and designated as "Series E Preferred Stock," 625,000 shares are fixed and designated as "Series F Preferred Stock", 700,000 shares are fixed and designated "Series G Preferred Stock", 300,000 shares are fixed and designated "Series H Preferred Stock", 1,100,000 shares are fixed and designated "Series I Preferred Stock" and 1,176,470 shares are fixed and designated "Series J Preferred Stock".

ARTICLE V

Preferred Stock may be issued from time to time in one or more series. Except for Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock, Series D Preferred

Stock, Series E Preferred Stock, Series F Preferred Stock, Series G Preferred Stock, Series H Preferred Stock, Series I Preferred Stock and Series J Preferred Stock, the Board of Directors is authorized to fix the number of shares in any series of Preferred Stock and to determine the designation of any such series. The Board of Directors is also authorized to determine or alter the rights, preferences, privileges and restrictions granted to or imposed upon any wholly unissued series of Preferred Stock and, within the limits and restrictions stated in any resolution or resolutions of the Board of Directors originally fixing the number of shares constituting any series, to increase or decrease (but not below the number of shares of any such series then outstanding) the number of shares of any such series subsequent to the issue of shares of that series.

ARTICLE VI

The rights, preferences, privileges and restrictions granted to or imposed upon Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock, Series D Preferred Stock, Series E Preferred Stock, Series F Preferred Stock, Series G Preferred Stock, Series H Preferred Stock, Series I Preferred Stock and Series J Preferred Stock are as follows:

1. Reference. For purposes of this Article Five, the Series A Preferred Stock is referred to as "Series A", the Series B Preferred Stock is referred to as "Series B", the Series C Preferred Stock is referred to as "Series C", the Series D Preferred Stock is referred to as "Series D", the Series E Preferred Stock is referred to as "Series E", the Series F Preferred Stock is referred to as "Series F", the Series G Preferred Stock is referred to as "Series G", the Series H Preferred Stock is referred to as "Series H", the Series I Preferred Stock is referred to as "Series I" and the Series J Preferred Stock is referred to as "Series J".

2. Dividends. The holders of Series A, Series B, Series C, Series D, Series E, Series F, Series G, Series H, Series I and Series J shall be entitled to receive dividends, out of funds legally available therefor, at the rate of Five Cents ($0.05), Eight Cents ($0.08), Eight Cents ($0.08), Eight Cents ($0.08), Eight Cents ($0.08), Eight Cents ($0.08), Eight Cents ($0.08), Eight Cents ($0.08) and Eight Cents ($0.08), respectively, per share per annum, calculated to the nearest whole cent, payable when, as and if, and in such manner as may be, declared by the Board of Directors from time to time; provided, however, that, whenever any dividend is declared or paid, or other distribution is made, on Series A, Series B, Series C, Series D, Series E,

Series F, Series G, Series H, Series I or Series J, a pro rata dividend or other distribution shall be concurrently declared, paid, or made, as the case may be, on the shares of all ten of such series of Preferred Stock in proportion to the dividend preferences of such series set forth above (i.e., the per share dividend or other distribution on Series B, Series C, Series D, Series E, Series F, Series G, Series H, Series I and Series J shall equal 160% of the per share dividend or other distribution on Series A); and provided, further, that no dividends may be declared or paid on the Corporation's outstanding shares of Common Stock in any fiscal year of the Corporation unless dividends in the amount of $0.05, $0.08, $0.08, $0.08, $0.08, $0.08, $0.08, $0.08, $0.08 and $0.08 per share have been declared and paid during such fiscal year to the holders of Series A, Series B, Series C, Series D, Series E, Series F, Series G, Series H, Series I and Series J, respectively. The right to dividends on Preferred Stock shall

not be cumulative, and no right to dividends shall accrue to holders of Preferred Stock unless declared by the Board of Directors.

3. Liquidation Rights. In the event of a voluntary or involuntary liquidation, dissolution, or winding up of the Corporation:

3.1 (i) The holders of Series A, Series B, Series C, Series D, Series E, Series F, Series G, Series H, Series I and Series J, shall be entitled to receive, out of the assets of the Corporation, whether such assets are capital or surplus, an amount equal to Eighty Cents ($0.80), One Dollar and Thirty Cents ($1.30), One Dollar and Fifty-Nine Cents ($1.59), One Dollar and Eighty Cents ($1.80), Three Dollars and Thirty Cents ($3.30), Four Dollars ($4.00), Four Dollars ($4.00), Six Dollars and Fifty Cents ($6.50), Five Dollars and Twenty-Five Cents ($5.25) and Four Dollars and Twenty-Five Cents ($4.25), respectively, per share of such series of Preferred Stock, and a further amount equal to any dividends thereon declared and unpaid on the date of such distribution, and no more, before any payment shall be made on or any assets distributed to the holders of Common Stock.

(ii) If upon liquidation, dissolution, or winding up of the Corporation the assets to be distributed among the holders of Series A, Series B, Series C, Series D, Series E, Series F, Series G, Series H, Series I and Series J shall be insufficient to permit the payment to such shareholders of the full preferential amounts to which they are entitled, then the entire assets of the Corporation available for distribution shall be distributed ratably among the holders of Series A, Series B, Series C, Series D, Series E, Series F, Series G, Series H, Series I and Series J, without priority or preference, in proportion to the full preferential amount each such holder is otherwise entitled to receive, and no distribution of the Corporation's assets shall be made to the holders of Common Stock.

(iii) After payment or distribution to the holders of Series A,

Series B, Series C, Series D, Series E, Series F, Series G, Series H, Series I and Series J of the full preferential amounts aforesaid, the remaining assets of this Corporation shall be distributed ratably among the holders of the Common Stock.

3.2 A reorganization, consolidation or merger of the Corporation, or a sale of all or substantially all of the assets of the Corporation in which all of the shareholders of the Corporation immediately prior to such transaction own less than 50% of the voting securities of the surviving or controlling entity immediately after such transaction, shall be deemed a liquidation, dissolution or winding up, within the meaning of this Section 3; provided that the holders of Series A, Series B, Series C, Series D, Series E, Series F, Series G, Series H, Series I, Series J and Common Stock shall be paid in cash or in securities received from the acquiring entity or in a combination thereof (in the same proportions as the consideration received in the transaction). Any securities to be delivered to the holders of the Series A, Series B, Series C, Series D, Series E, Series F, Series G, Series H, Series I, Series J and Common Stock upon a reorganization, consolidation or merger of the Corporation, or a sale of all or substantially all of the assets of the Corporation, shall be valued as follows:

(i) If traded on a securities exchange, the value shall be deemed to be the average of the closing prices of the securities on such exchange over the 30-day period ending three (3) business days prior to the closing;

(ii) If actively traded over-the-counter, the value shall be deemed to be the average of the closing bid prices over the 30-day period ending three (3) business days prior to the closing; and

(iii) If there is no active public market, the value shall be the fair market value thereof, as mutually determined by the corporation and the holders of not less than a majority of the outstanding shares of Preferred Stock, provided that if the corporation and the holders of a majority of the outstanding shares of Preferred Stock are unable to reach agreement, then by independent appraisal by an investment banker hired and paid by the Corporation, but acceptable to the holders of a majority of the outstanding shares of Preferred Stock.

4. Voting Rights. Except as otherwise expressly provided herein or as required by law, each holder of shares of Series A, Series B, Series C, Series D, Series E, Series F, Series G, Series H, Series I and Series J shall be entitled to vote on all matters and shall be entitled to the number of votes equal to the largest number of full shares of Common Stock into which such shares of Series A, Series B, Series C, Series D, Series E, Series F, Series G, Series H, Series I or Series J could be converted, pursuant to the provisions of Section 5 hereof, at the record date for the determination of shareholders

entitled to vote on such matters or, if no such record date is established, at the date such vote is taken or any written consent of shareholders is obtained. Except as otherwise expressly provided herein or as required by law, the holders of shares of Series A, Series B, Series C, Series D, Series E, Series F, Series G, Series H, Series I, Series J and Common Stock shall vote together and not as separate classes.

5. Conversion of Preferred Stock. The holders of Preferred Stock shall have the following conversion rights:

5.1 Automatic Conversion.

5.1.1 Each share of each series of Preferred Stock shall automatically be converted into shares of Common Stock at the Conversion Price (as defined below) for such series then in effect, immediately upon either (i) the sale of Common Stock by the Corporation through an underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, at a per share public offering price (prior to underwriting commissions and expenses) of not less than $6.00 per share and with gross proceeds (prior to underwriting commissions and expenses) of $7,500,000, (ii) the Corporation's reporting audited consolidated revenues of at least $50,000,000 for a fiscal year and audited consolidated income before taxes and extraordinary items (determined in accordance with generally accepted accounting principles) of at least 10% of the revenues for the same period, or (iii) upon the vote approving such conversion by holders of at least a majority of the outstanding shares of such series; however, such conversion of each such series shall be conditioned upon the Corporation paying all declared and unpaid dividends

on such series, to and including the date of conversion. The Corporation, may, at its option, in lieu of making a cash payment of all declared dividends, make payment thereof in whole shares of Common Stock, valued at such Conversion Price for such series, plus cash in lieu of any fractional shares, so that such cash plus the value of such Common Stock shall equal the amount of accrued and unpaid dividends.

5.1.2 Upon the occurrence of any event specified in Section 5.1.1 above as to a series of Preferred Stock, the outstanding shares of such series shall be converted automatically without any further action by the holders of such shares and whether or not the certificates repre senting such shares are surrendered to the Corporation or its transfer agent. Upon the automatic conversion of a series of Preferred Stock, the holders of such series shall surrender the certificates representing such shares at the office of the Corporation or transfer agent for the Common Stock as hereinafter provided, or shall notify the Corporation or transfer agent that such certificates have been lost, stolen or destroyed and execute an agreement satisfactory to the

Corporation to indemnify the Corporation from any loss incurred by it in connection therewith. The Corporation shall then cause to be issued and delivered to such holders, promptly at such office and in their names as shown on such surrendered certificates, certificates for the number of shares of Common Stock into which the shares of such series of Preferred Stock, so surrendered were convertible on the date on which automatic conversion occurred.

5.2 Right to Convert. Each share of each series of Preferred Stock shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such share, at the office of the Corporation or any transfer agent for such series or for Common Stock, into fully paid and nonassessable shares of Common Stock, at the Conversion Price for such series (as defined below) in effect at the time of the conversion determined as provided below.

5.3 Mechanics of Voluntary Conversion.

5.3.1 A holder of shares of a series of Preferred Stock may only convert such shares into shares of Common Stock by: (i) surrendering the certificate or certificates representing the shares of such series to be converted, duly endorsed, at the office of the Corporation or any transfer agent for such series or Common Stock, and (ii) giving written notice to the Corporation at such office stating that such holder elects to convert all or part of the shares of such series held by such holder. The Corporation shall promptly issue and deliver at such office to such holder of such series a certificate or certificates for the number of shares of Common Stock to which such holder shall be entitled and a certificate or certificates for the number of shares of such series not converted, if any.

5.3.2 Such conversion shall be deemed to have been made immediately prior to the close of business on the date of the surrender of the shares of such series of Preferred Stock to be converted as provided in Section 5.3.1 above, and the person or persons entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock on such date.

5.4 Number of Shares; Conversion Price.

5.4.1 Each share of Series A shall be convertible into the number of shares of Common Stock which result from dividing the Conversion Price per share for such series in effect at the time of conversion into Eighty Cents ($0.80) for each share of Series A being converted. The Conversion Price for Series A shall be Eighty Cents ($0.80) unless adjusted as provided herein.

5.4.2 Each share of Series B shall be convertible into the number of shares of Common Stock which result from dividing the Conversion Price

per share for such series in effect at the time of conversion into One Dollar and Thirty Cents ($1.30) for each share of Series B being converted. The Conversion Price for Series B shall be One Dollar and Thirty Cents ($1.30) unless adjusted as provided herein.

5.4.3 Each share of Series C shall be convertible into the number of shares of Common Stock which result from dividing the Conversion Price per share for such series in effect at the time of conversion into One Dollar and Fifty-Nine Cents ($1.59) for each share of Series C being converted. The Conversion Price for Series C shall be One Dollar and Fifty-Nine Cents ($1.59) unless adjusted as provided herein.

5.4.4 Each share of Series D shall be convertible into the number of shares of Common Stock which result from dividing the Conversion Price per share for such series in effect at the time of conversion into One Dollar and Eighty Cents ($1.80) for each share of Series D being converted. The Conversion Price for Series D shall be One Dollar and Eighty Cents ($1.80) unless adjusted as provided herein.

5.4.5 Each share of Series E shall be convertible into the number of shares of Common Stock which result from dividing the Conversion Price per share for such series in effect at the time of conversion into Three Dollars and Thirty Cents ($3.30) for each share of Series E being converted. The Conversion Price for Series E shall be Three Dollars and Thirty Cents ($3.30) unless adjusted as provided herein.

5.4.6 Each share of Series F shall be convertible into the number of shares of Common Stock which result from dividing the Conversion Price per share for such series in effect at the time of conversion into Three Dollars and Forty Cents ($3.40) for each share of Series F being converted. The Conversion Price for Series F shall be Three Dollars and Forty Cents ($3.40) unless adjusted as provided herein.

5.4.7 Each share of Series G shall be convertible into the number of shares of Common Stock which result from dividing the Conversion Price per share for such series in effect at the time of conversion into Four Dollars ($4.00) for each share of Series G being converted. The Conversion Price for Series G shall be Four Dollars ($4.00) unless adjusted as provided herein.

5.4.8 Each share of Series H shall be convertible into the number of shares of Common Stock which result from dividing the Conversion Price per share for such series in effect at

the time of conversion into Four Dollars ($4.00) for each share of Series H being converted. The Conversion Price for Series H shall be Four Dollars ($4.00) unless adjusted as provided herein.

5.4.9 Each share of Series I shall be convertible into the

number of shares of Common Stock which result from dividing the Conversion Price per share for such series in effect at the time of conversion into Five Dollars and Twenty-Five Cents ($5.25) for each share of Series I being converted. The Conversion Price for Series I shall be Five Dollars and Twenty-Five Cents ($5.25) unless adjusted as provided herein.

5.4.10 Each share of Series J shall be convertible into the number of shares of Common Stock which result from dividing the Conversion Price per share for such series in effect at the time of conversion into Four Dollars and Twenty-Five Cents ($4.25) for each share of Series J being converted. The Conversion Price for Series J shall be Four Dollars and Twenty-Five Cents ($4.25) unless adjusted as provided herein.

5.5 Adjustment for Stock Issuances Below Conversion Price. If the Corporation shall at any time or from time to time after the issuance of any shares of Series H, Series I or Series J issue (or, pursuant to this Section 5.5 hereof, shall be deemed to have issued) any Common Stock other than "Excluded Stock" (as defined below) for a consideration per share less than the Conversion Price for Series H, Series I or Series J in effect immediately prior to the issuance of such Common Stock (excluding stock dividends, subdivisions, split-ups, combinations, dividends or recapitalizations which are covered by Sections 5.6, 5.7, 5.8, 5.9, and 5.10), the Conversion Price for Series H, Series I or Series J (but not any other series of Preferred Stock) in effect immediately after each such issuance shall forthwith be adjusted to a price equal to the quotient obtained by dividing:

(i) an amount equal to the sum of

(x) the total number of shares of Common Stock outstanding (including any shares of Common Stock issuable upon conversion of such series of Preferred Stock, or deemed to have been issued pursuant to subdivision (3) of this clause (i) and to clause (ii) below) immediately prior to such issuance multiplied by the Conversion Price for such series of Preferred Stock in effect immediately prior to such issuance, plus

(y) the consideration received by the corporation upon such issuance, by

(ii) the total number of shares of Common Stock outstanding immediately prior to such issuance of Common Stock (including any shares of Common Stock issuable upon conversion of Series H, Series I or Series J Preferred Stock or deemed to have been issued pursuant to subdivision (3) of this clause (i) and to clause (ii) below) plus the number of shares of Common Stock actually issued in the transaction which resulted in the adjustment pursuant to this Section 5.5.

For the purposes of any adjustment of the Conversion Price for

Series H, Series I or Series J Preferred Stock pursuant to clauses (i) and (ii), the following provisions shall apply:

(1) In the case of the issuance of Common Stock for cash, the consideration shall be deemed to be the amount of cash paid therefor after deducting any discounts or commissions paid or incurred by the corporation in connection with the issuance and sale thereof.

(2) In the case of the issuance of Common Stock for a consideration in whole or in part other than cash, the consideration other than cash shall be deemed to be the fair value thereof as reasonably determined by the board of directors of the corporation, in accordance with generally accepted accounting treatment.

(3) In the case of the issuance of (i) options to purchase or rights to subscribe for Common Stock (other than Excluded Stock), (ii) securities by their terms convertible into or exchangeable for Common Stock (other than Excluded Stock), or (iii) options to purchase or rights to subscribe for such convertible or exchangeable securities:

(A) the aggregate maximum number of shares of Common Stock deliverable upon exercise of such options to purchase or rights to subscribe for Common Stock shall be deemed to have been issued at the time such options or rights were issued and for a consideration equal to the consideration (determined in the manner provided in subdivisions (1) and (2) above), if any, received by the corporation upon the issuance of such options or rights plus the minimum purchase price provided in such options or rights for the Common Stock covered thereby;

(B) the aggregate maximum number of shares of Common Stock deliverable upon conversion of or in exchange for any such convertible or exchangeable securities, or upon the exercise of options to purchase or rights to subscribe for such convertible or exchangeable securities and subsequent conversion or exchange thereof, shall be deemed to have been issued at the time such securities were issued or such options or rights were issued and for a consideration equal to the consideration received by the corporation for any such securities and related options or rights (excluding any cash received on account of accrued interest or accrued dividends), plus the additional minimum consideration, if any, to be received by the corporation upon the conversion or exchange of such securities or the exercise of any related options or rights (the consideration in each case to be determined in the manner provided in subdivisions (1) and (2) above);

(C) on any change in the number of shares of Common Stock deliverable upon exercise of any such options or rights or conversion of or exchange for such convertible or exchangeable securities, or on any change in the minimum purchase price of such options, rights or securities, other than a change resulting from the antidilution provisions of such options, rights or securities, the Conversion Price shall forthwith be readjusted to such Conversion Price as would have obtained had the adjustment made upon (x) the issuance of such options, rights or securities not exercised, converted or

exchanged prior to such change or (y) the options or rights

related to such securities not converted or exchanged prior to such change, as the case may be, been made upon the basis of such change; and

(D) on the expiration of any such options or rights, the termination of any such rights to convert or exchange or the expiration of any options or rights related to such convertible or exchangeable securities, the Conversion Price shall forthwith be readjusted to such Conversion Price as would have obtained had the adjustment made upon the issuance of such options, rights, convertible or exchangeable securities or options or rights relate to such convertible or exchangeable securities, as the case may be, been made upon the basis of the issuance of only the number of shares of Common Stock actually issued upon the exercise of such options or rights, upon the conversion or exchange of such convertible or exchangeable securities or upon the exercise of the options or rights related to such convertible or exchangeable securities, as the case may be.

(4) If the Corporation shall issue (or pursuant to Section 5.5 hereof, shall be deemed to have issued) in the same transaction (or a series of related transactions) any Common Stock other than Excluded Stock at different prices, the shares of Common Stock issued in such transaction (or series of related transactions) shall be deemed to have been issued simultaneously for purposes of the computations in this Section 5.5.

5.5.1 "Excluded Stock" shall mean:

(i) all shares of Common Stock issued and outstanding on the date this certificate is filed with the California Secretary of State and all shares of Common Stock issuable upon exercise of options and warrants outstanding on the date this certificate is filed with the California Secretary of State;

(ii) all shares of Preferred Stock outstanding on the date this certificate is filed with the California Secretary of State and the Common Stock into which such shares of Preferred Stock are convertible;

(iii) all shares of Common Stock or other securities hereafter issued to officers, directors, consultants or employees of or scientific advisors to the corporation which issuances are approved by of the board of directors of the corporation;

(iv) all shares of Series J Preferred Stock and the Common Stock into which such shares of Series J Preferred Stock are convertible; and

(v) all shares of Common Stock issuable upon exercise or conversion of a warrant hereafter issued to Allen & Company Incorporated.

All outstanding shares of Excluded Stock (including shares issuable upon conversion of the Preferred Stock) shall be deemed to be outstanding for all purposes of the computations of Section 5.5 above.

5.6 Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the issuance of any shares of a series of Preferred Stock effect a subdivision of any outstanding Common Stock, the Conversion Price then in effect for such series immediately before that subdivision shall be proportionately decreased. Conversely, if the Corpora tion shall at any time or from time to time after the issuance of any shares of a series of Preferred Stock combine the outstanding shares of Common Stock, the Conversion Price then in effect for such series immediately before the combination shall be proportionately increased. Any adjustment under this Section 5.6 shall become effective at the close of business on the date the subdivision or combination becomes effective.

5.7 Adjustment for Certain Dividends and Distributions. If the Corporation at any time or from time to time shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in additional shares of Common Stock, in each such event the Conversion Prices then in effect for each series of Preferred Stock shall be decreased as of the time of such issuance or, if such record date shall have been fixed, as of the close of business on such record date, by multiplying the Conversion Price of each series then in effect by a fraction:

5.7.1 The numerator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance, or the close of business on such record date, and

5.7.2 The denominator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance, or the close of business on such record date, plus the number of shares of Common Stock issuable in payment of such dividend or distribution; provided, however, if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the Conversion Prices of each series shall be recomputed accordingly as of the close of business on such record date, and thereafter the Conversion Price of each series shall be adjusted pursuant to this Section 5.7 as of the time of actual payment of such dividend or distribution.

5.8 Adjustment for Other Dividends and Distributions. If the Corporation at any time or from time to time shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the

Corporation, other than shares of Common Stock, then and in each such event provisions shall be made so that the holders of each series of Preferred Stock shall receive upon conversion of their shares, in addition to the number of shares of Common Stock receivable upon such conversion, the amount of securities of the Corporation which they would have received had their shares of such series been converted into Common Stock on the date of such dividend or distribution and had they thereafter, during the period from the date of such event to and including the conversion date, retained such securities receivable by them as provided above during such period, giving application to all applicable adjustments called for during such periods under this Section 5 with respect to the rights of the holders of each series of Preferred Stock.

5.9 Adjustment for Recapitalizations, Reclassifications, or Other Changes to Common Stock. If the Common Stock shall be changed into the same or a different number of shares of any class or classes of stock, whether by a recapitalization, reclassification or otherwise (other than a subdivision or combination of shares or stock dividend provided for above, or a capital reorganization, merger, consolidation or sale of assets provided for below), then and in each such event the holders of shares of each series of Preferred Stock shall have the right thereafter to convert such shares into the kind and amount of shares of stock and other securities and property receivable upon such reorganization, reclassification or other change, by holders of the number of shares of Common Stock into which such shares of such series might have been converted immediately prior to such reorganization, reclassification or change, all subject to further adjustment as provided in this Certificate.

5.10 Adjustment for Capital Reorganizations, Mergers, Consolidations, or Sales of Assets. If at any time or from time to time there shall be a capital reorganization of the capital stock of the Corporation (other than a subdivision, combination, stock dividend, recapitalization, reclassification or other change to Common Stock provided for above in this Section 5), or a merger or consolidation of the Corporation with or into another corporation, or the sale of all or substantially all of the Corporation's properties and assets to any other person, then, as a part of such capital reorganization, merger, consolidation or sale, provision shall be made so that the holders of each series of Preferred Stock shall thereafter be entitled to receive upon conversion of the shares of such series the number of shares of stock or other securities or property of the Corporation, or of the successor corporation resulting from such merger, consolidation or sale, to which a holder of Common Stock deliverable upon conversion would have been entitled on such capital reorganization, merger, consolidation or sale. In any such case, appropriate adjustment shall be made in the application of the provisions of this Section 5 with respect to the rights of the holders of each series of Preferred Stock after such capital reorganization, merger, consolidation or sale so that the

provisions of this Section 5 (including adjustment of the Conversion Prices then in effect for each series of Preferred Stock and the number of shares issuable upon conversion of each series of Preferred Stock) shall be applicable after that event as nearly equivalent as may be practicable.

5.11 Certificate of Adjustment by Chief Financial Officer. In each case of an adjustment or readjustment of the Conversion Price, or the number of shares of Common Stock or other securities issuable upon conversion, of a series of Preferred Stock, the Corporation shall cause its Chief Financial Officer to compute such adjustment or readjustment in accordance with the Corporation's Articles of Incorporation and prepare a certificate showing such adjustment or readjustment, and shall mail such certificate, by first class mail, post prepaid, to each registered holder of shares of such series, at the holder's address as shown in the Corporation's books. The certificate shall set forth such adjustment or readjustment, showing in detail the facts upon which such adjustment or readjustment is based including a statement of (i) the Conversion Price for such series immediately before and immediately after such adjustment, and (ii) the number of shares of Common Stock and the type and amount, if any, of other securities and property which, immediately before and immediately after such adjustment would be receivable upon conversion of such series.

5.12 Notice of Record Date. In the event of any recapitalization, reclassification or other change to the Common Stock, any capital reorganization, any merger or consolidation of the Corporation, any sale of all or substantially all of the Corporation's properties and assets to another person, or any voluntary or involuntary liquidation of the Corporation, the Corporation shall mail to each holder of shares of Preferred Stock at least thirty (30) days prior to any record date with respect thereto, a notice specifying the date on which such recapitalization, reclassification or other change, capital reorganization, merger, consolidation, or liquidation is expected to be effective, and the time, if any, that is to be fixed, as to when the holders of record of Common Stock (or other securities) shall be entitled to exchange their shares of Common Stock (or other securities) for securities or other property deliverable upon such recapitalization, reclassification or other change, capital reorganization, merger, consolidation, or liquidation.

5.13 Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of shares of Preferred Stock. The number of shares of Common Stock to which a holder of shares of a series of Preferred Stock is entitled shall be based on the aggregate number of shares of such series being converted at any one time. In lieu of any fractional share to which such holder would otherwise be entitled, the Corporation shall pay cash equal to the product of such fraction multiplied by the fair market value of one share of the Corporation's Common Stock on the date of conversion, as determined in good faith by the Board of Directors and calculated to the nearest whole cent.

5.14 Reservation of Stock Issuable Upon Conversion. The Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock, solely for the purpose of effecting the conversion of the shares of Preferred Stock, such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of Preferred Stock, and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of Preferred Stock, the Corporation will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such a number of shares as shall be sufficient for such purpose.

5.15 Notices. Any notice required by the provisions of this Section 5 to be given to a holder of record of shares of a series of Preferred Stock shall be deemed given two (2) business days after the same has been deposited in the United States mail, certified mail, return receipt requested (or insured if mailed to an address outside of the United States), postage and charges prepaid, and addressed to such holder at his address appearing on the books of the Corporation, or upon delivery if personally delivered, sent by messenger or private delivery service.

5.16 Payment of Taxes. The Corporation will pay all taxes and other governmental charges (other than taxes based on income) that may be imposed in respect to the issue or delivery of shares of Common Stock upon conversion of shares of Preferred Stock to the record holder of such shares.

5.17 Retirement of Series A, Series B, Series C, Series D, Series E, Series F, Series G, Series H, Series I and Series J. Upon conversion of any shares of Preferred Stock, such shares shall be restored to the status of undesignated, and authorized but unissued, shares of Preferred Stock.

6. Covenants of the Corporation. In addition to any vote or approval of the shareholders required by law, so long as at least 200,000 shares of Preferred Stock are outstanding, the Corporation shall not take any of the following actions set forth below without obtaining the approval (by vote or written consent, as provided by law) of the holders of more than 50% of the outstanding shares of Preferred Stock.

6.1 Amendment or repeal of any provision of, or addition of any provision to, the Corporation's Articles of Incorporation if such action would

(i) alter or change the rights, preferences, privileges or restrictions granted to or imposed upon any outstanding series of Preferred Stock, or (ii) reclassify any shares of capital stock which are subordinate to any outstanding series of Preferred Stock as to dividends or as to distribution of assets on liquidation, dissolution or winding up of the Corporation into shares having parity with, or any preference or priority over, any outstanding series of Preferred Stock as to dividends or as to distribution of assets on liquidation, dissolution or winding up of the Corporation.

6.2 Disposition of all or a substantial part of all of the Corporation's business and assets as an entirety in a single transaction or series of related transactions not in the ordinary course of business, or disposition of a controlling interest in any subsidiary corporation which represents a substantial part of the business and assets of the Corporation (a "Disposition"), unless the Corporation shall immediately after the Disposition, have sufficient cash legally available for distri bution to the holders of the outstanding shares of Series A, Series B, Series C, Series D, Series E, Series F, Series G, Series H, Series I and Series J at least equal to the full preferential amounts to which such holders are entitled pursuant to Section 3.1.

6.3 Voluntary liquidation, dissolution or winding up of the Corporation.

6.4 Creation of any new class or series of shares having preferences over or being on a parity with any outstanding shares of Preferred Stock as to dividends or assets, or authorization or issuance of shares of stock of any class or series or any bonds, debentures, notes or other obligations convertible into or exchangeable for, or having option rights to purchase, any shares of stock of this corporation having any preference or priority as to dividends or assets superior to or on a parity with any such preference or priority of any outstanding shares of Preferred Stock.

6.5 Acquisition of another business entity, whether by merger or consolidation, purchase of assets, purchase of stock, or otherwise, if, based upon the most recent financial infor mation available to the Corporation prior to the acquisition either:

(i) the net worth of the business to be acquired by the Corporation (i.e., the fair market value of the assets acquired less the amount of liabilities assumed by the Corporation

in the acquisition or to which the assets acquired are subject) exceeds one third (1/3rd) of the net worth of the Corporation prior to the acquisition, or

(ii) the amount of liabilities assumed by the Corporation in the acquisition or to which the assets acquired are subject, other than liabilities secured by assets acquired by the Corporation which have a market value of at least 125% of the amount of such liabilities, exceeds one third (1/3rd) of the

net worth of the Corporation prior to the acquisition.

7. Certain Repurchases of Common Shares. Notwithstanding any other provision of this Article Five, insofar as the rights, preferences, privileges, and restrictions granted to or imposed upon the Preferred Stock are concerned, neither Section 502 nor Section 503 of the California Corporations Code shall apply in whole or in part with respect to purchases by the Corporation of outstanding shares of Common Stock in connection with the termination of employment or other cessation of services to or for the benefit of the Corporation by a holder of such shares or a predecessor in interest of such a holder.

ARTICLE VII

The Corporation reserves the right to amend, alter, change, or repeal any provisions contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon the stockholders herein are granted subject to this right.

ARTICLE VIII

The Corporation is to have perpetual existence.

ARTICLE IX

1. Limitation of Liability. To the fullest extent permitted by the General Corporation Law of the State of Delaware as the same exists or as may hereafter be amended, a director of the Corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director.

2. Indemnification. The corporation may indemnify to the fullest extent permitted by law any person made or threatened to be made a party to an action or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact that such person or his or her testator or intestate is or was a director, officer or employee of the corporation, or any predecessor of the corporation, or serves or served at any other enterprise as a director, officer or employee at the request of the corporation or any predecessor to the corporation.

3. Amendments. Neither any amendment nor repeal of this Article VIII,

nor the adoption of any provision of the corporation's Certificate of Incorporation inconsistent with this Article VIII, shall eliminate or reduce the effect of this Article VIII, in respect of any matter occurring, or any action or proceeding accruing or arising or that, but for this Article VIII, would accrue or arise, prior to such amendment, repeal, or adoption of an inconsistent provision.

ARTICLE X

In the event any shares of Preferred shall be redeemed or converted pursuant to the terms hereof, the shares so converted or redeemed shall not revert to the status of authorized but unissued shares, but instead shall be canceled and shall not be re-issuable by the corporation.

ARTICLE XI

Holders of stock of any class or series of this corporation shall not be entitled to cumulate their votes for the election of directors or any other matter submitted to a vote of the stockholders, unless such cumulative voting is required pursuant to Sections 2115 and/or 301.5 of the California Corporations Code, in which event each such holder shall be entitled to as many votes as shall equal the number of votes which (except for this provision as to cumulative voting) such holder would be entitled to cast for the election of directors with respect to his shares of stock multiplied by the number of directors to be elected by him, and the holder may cast all of such votes for a single director or may distribute them among the number of directors to be voted for, or for any two or more of them as such holder may see fit, so long as the name of the candidate for director shall have been placed in nomination prior to the voting and the stockholder, or any other holder of the same class or series of stock, has given notice at the meeting prior to the voting of the intention to cumulate votes.

ARTICLE XII

1. Number of Directors. The board of directors shall consist of not less than five (5) and not more than nine (9) members.

2. Election of Directors. Elections of directors need not be by written ballot unless a stockholder demands election by written ballot at any stockholder meeting and before voting begins, or unless the Bylaws of the corporation shall so provide. Elections of directors shall be in accordance with Article V, Section 4, of this Certificate of Incorporation.

ARTICLE XIII

In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, alter, amend or repeal the Bylaws of the corporation.

ARTICLE XIV

Immediately upon the closing of a public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, covering any of the corporation's securities (as that term is defined under the Securities Act of 1933, as then in effect), no action shall be taken by the stockholders of the corporation except at an annual or special meeting of the stockholders called in accordance with the Bylaws of the corporation and no action shall be taken by the stockholders by written consent.

ARTICLE XV

Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the statutes) outside of the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

ARTICLE XVI

The name and mailing address of the incorporator is:

Jason M. Brady, Esq.
Wilson, Sonsini, Goodrich & Rosati
650 Page Mill Road
Palo Alto, California 94304-1050

* * *

The undersigned incorporator hereby acknowledges that the above Certificate of Incorporation of Applied Imaging Corp. is his act and deed and that the facts stated therein are true.

Jason M. Brady

Dated: July 17, 1996

EXHIBIT 3.3

[This Restated Certificate of Incorporation Will Be Filed after Closing the Applied Imaging Corp. Initial Public Offering]

RESTATED CERTIFICATE OF INCORPORATION

OF

APPLIED IMAGING CORP.

The following Restated Certificate of Incorporation of Applied Imaging Corp. (i) restates the provisions of the Certificate of Incorporation of Applied Imaging Corp. filed with the Secretary of State of the State of Delaware on June __, 1996, and (ii) supersedes the original Certificate of Incorporation and all prior restatements thereof and amendments thereto in their entirety.

ARTICLE I

The name of the corporation is Applied Imaging Corp. (the "Corporation").

ARTICLE II

The address of the Corporation's registered office in the State of Delaware is 1209 Orange Street, City of Wilmington, County of New Castle, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE III

The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

ARTICLE IV

The Corporation is authorized to issue two classes of shares of stock to be designated, respectively, Common Stock, $0.001 par value, and Preferred Stock, $0.001 par value. The total number of shares that the Corporation is authorized to issue is 25,000,000 shares. The number of shares of Common Stock authorized is 20,000,000. The number of shares of Preferred Stock authorized is 6,000,000.

The Preferred Stock may be issued from time to time in one or more series

pursuant to a resolution or resolutions providing for such issue duly adopted by the Board of Directors (authority to do so being hereby expressly vested in the board). The Board of Directors is further authorized to determine or alter the rights, preferences, privileges and restrictions granted to or imposed upon any

wholly unissued series of Preferred Stock and to fix the number of shares of any series of Preferred Stock and the designation of any such series of Preferred Stock. The Board of Directors, within the limits and restrictions stated in any resolution or resolutions of the Board of Directors originally fixing the number of shares constituting any series, may increase or decrease (but not below the number of shares in any such series then outstanding) the number of shares of any series subsequent to the issue of shares of that series.

The authority of the Board of Directors with respect to each such class or series shall include, without limitation of the foregoing, the right to determine and fix:

(a) the distinctive designation of such class or series and the number of shares to constitute such class or series;

(b) the rate at which dividends on the shares of such class or series shall be declared and paid, or set aside for payment, whether dividends at the rate so determined shall be cumulative or accruing, and whether the shares of such class or series shall be entitled to any participating or other dividends in addition to dividends at the rate so determined, and if so, on what terms;

(c) the right or obligation, if any, of the corporation to redeem shares of the particular class or series of Preferred Stock and, if redeemable, the price, terms and manner of such redemption;

(d) the special and relative rights and preferences, if any, and the amount or amounts per share, which the shares of such class or series of Preferred Stock shall be entitled to receive upon any voluntary or involuntary liquidation, dissolution or winding up of the Corporation;

(e) the terms and conditions, if any, upon which shares of such class or series shall be convertible into, or exchangeable for, shares of capital stock of any other class or series, including the price or prices or the rate or rates of conversion or exchange and the terms of adjustment, if any;

(f) the obligation, if any, of the corporation to retire, redeem or purchase shares of such class or series pursuant to a sinking fund or fund of a similar nature or otherwise, and the terms and conditions of such obligation;

(g) voting rights, if any, on the issuance of additional shares of such class or series or any shares of any other class or series of Preferred Stock;

(h) limitations, if any, on the issuance of additional shares of such class or series or any shares of any other class or series of Preferred Stock; and

(i) such other preferences, powers, qualifications, special or relative rights and privileges thereof as the Board of Directors of the corporation, acting in accordance with this Restated Certificate of Incorporation, may deem advisable and are not inconsistent with law and the provisions of this Restated Certificate of Incorporation.

ARTICLE V

The Corporation reserves the right to amend, alter, change, or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon the stockholders herein are granted subject to this right.

ARTICLE VI

The Corporation is to have perpetual existence.

ARTICLE VII

1. Limitation of Liability. To the fullest extent permitted by the General Corporation Law of the State of Delaware as the same exists or as may hereafter be amended, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director.

2. Indemnification. The Corporation may indemnify to the fullest extent permitted by law any person made or threatened to be made a party to an action or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact that such person or his or her testator or intestate is or was a director, officer or employee of the Corporation, or any predecessor of the Corporation, or serves or served at any other enterprise as a director, officer or employee at the request of the Corporation or any predecessor to the Corporation.

3. Amendments. Neither any amendment nor repeal of this Article VII, nor the adoption of any provision of the Corporation's Certificate of Incorporation inconsistent with this Article VII, shall eliminate or reduce the effect of this Article VII, in respect of any matter occurring, or any action or proceeding accruing or arising or that, but for this Article VII, would accrue or arise, prior to such amendment, repeal, or adoption of an inconsistent provision.

ARTICLE VIII

In the event any shares of Preferred Stock shall be redeemed or converted pursuant to the terms hereof, the shares so converted or redeemed shall not revert to the status of authorized but unissued shares, but instead shall be canceled and shall not be re-issuable by the Corporation.

ARTICLE IX

Holders of stock of any class or series of this corporation shall not be entitled to cumulate their votes for the election of directors or any other matter submitted to a vote of the stockholders, unless such cumulative voting is required pursuant to Sections 2115 and/or 301.5 of the California Corporations Code, in which event each such holder shall be entitled to as many votes as shall equal the number of votes which (except for this provision as to cumulative voting) such holder would be entitled to cast for the election of directors with respect to his shares of stock multiplied by the number of directors to be elected by him, and the holder may cast all of such votes for a single director or may distribute them among the number of directors to be voted for, or for any two or more of them as such holder may see fit, so long as the name of the candidate for director shall have been placed in nomination prior to the voting and the stockholder, or any other holder of the same class or series of stock, has given notice at the meeting prior to the voting of the intention to cumulate votes.

ARTICLE X

1. Number of Directors. The number of directors which constitutes the whole Board of Directors of the corporation shall be designated in the Bylaws of the corporation. The directors shall be divided into three classes with the term of office of the first class (Class I) to expire at the annual meeting of stockholders held in 1997; the term of office of the second class (Class II) to expire at the annual meeting of stockholders held in 1998; the term of office of the third class (Class III) to expire at the annual meeting of stockholders held in 1999; and thereafter for each such term to expire at each third succeeding annual meeting of stockholders after such election.

2. Election of Directors. Elections of directors need not be by written ballot unless the Bylaws of the corporation shall so provide.

ARTICLE XI

In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, alter, amend or repeal the Bylaws of the corporation.

ARTICLE XII

No action shall be taken by the stockholders of the corporation except at an annual or special meeting of the stockholders called in accordance with the Bylaws and no action shall be taken by the stockholders by written consent. The affirmative vote of sixty-six and two-thirds percent (66 2/3%) of the then outstanding voting securities of the corporation, voting together as a single class, shall be required for the amendment, repeal or modification of the provisions of Article IX, Article X or Article XII of this Restated Certificate of Incorporation or Sections 2.4, 2.5, 2.10 or 3.2 of the Corporation's Bylaws.

ARTICLE XIII

Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the statutes) outside of the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

This Restated Certificate of Incorporation has been duly adopted by the Board of Directors of the Corporation in accordance with the provisions of Sections 242 and 245 of the General Corporation Law of the State of Delaware, as amended.

The Restated Certificate of Incorporation only restates and integrates and does not further amend the provisions of the Corporation's Certificate of Incorporation, as amended and corrected, and there is no discrepancy between those provisions and the provisions of this Restated Certificate of Incorporation.

IN WITNESS WHEREOF, Applied Imaging Corp. has caused this certificate to be signed by Neil E. Woodruff, its Chief Financial Officer and Secretary, this _____ day of June, 1996.

Neil E. Woodruff,
Chief Financial Officer and Secretary

Exhibit 3.5

BYLAWS

OF

APPLIED IMAGING CORP.

(a Delaware corporation)

BYLAWS OF

APPLIED IMAGING CORP.
(a Delaware corporation)

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BYLAWS

OF

APPLIED IMAGING CORP.

(a Delaware corporation)

ARTICLE I

CORPORATE OFFICES

1.1 REGISTERED OFFICE

The registered office of the corporation shall be fixed in the certificate of incorporation of the corporation.

1.2 OTHER OFFICES

The board of directors may at any time establish branch or subordinate offices at any place or places where the corporation is qualified to do business.

ARTICLE II

MEETINGS OF STOCKHOLDERS

2.1 PLACE OF MEETINGS

Meetings of stockholders shall be held at any place within or outside the State of Delaware designated by the board of directors. In the absence of any such designation, stockholders' meetings shall be held at the principal executive office of the corporation.

2.2 ANNUAL MEETING

The annual meeting of stockholders shall be held each year on a date and at a time designated by the board of directors. In the absence of such designation, the annual meeting of stockholders shall be held on the second Tuesday of May in each year at 10:00 a.m. However, if such day falls on a legal

holiday, then the meeting shall be held at the same time and place on the next succeeding full business day. At the meeting, directors shall be elected, and any other proper business may be transacted.

2.3 SPECIAL MEETING

A special meeting of the stockholders may be called at any time by the board of directors, or by the chairman of the board, or by the president, or by one or more stockholders holding shares in the

aggregate entitled to cast not less than ten percent (10%) of the votes at that meeting. No other person or persons are permitted to call a special meeting.

If a special meeting is called by any person or persons other than the board of directors, then the request shall be in writing, specifying the time of such meeting and the general nature of the business proposed to be transacted, and shall be delivered personally or sent by registered mail or by telegraphic or other facsimile transmission to the chairman of the board, the president, or the secretary of the corporation. The officer receiving the request shall cause notice to be promptly given to the stockholders entitled to vote, in accordance with the provisions of Sections 2.4 and 2.6 of these bylaws, that a meeting will be held at the time requested by the person or persons calling the meeting, so long as that time is not less than thirty-five (35) nor more than sixty (60) days after the receipt of the request. If the notice is not given within twenty (20) days after receipt of the request, then the person or persons requesting the meeting may give the notice. Nothing contained in this paragraph of this Section 2.3 shall be construed as limiting, fixing or affecting the time when a meeting of stockholders called by action of the board of directors may be held.

2.4 NOTICE OF STOCKHOLDERS' MEETINGS

All notices of meetings of stockholders shall be sent or otherwise given in accordance with Section 2.6 of these bylaws not less than ten (10) nor more than sixty (60) days before the date of the meeting. The notice shall specify the place, date and hour of the meeting and (i) in the case of a special meeting, the purpose or purposes for which the meeting is called (no business other than that specified in the notice may be transacted) or (ii) in the case of the annual meeting, those matters which the board of directors, at the time of giving the notice, intends to present for action by the stockholders (but any proper matter may be presented at the meeting for such action). The notice of any meeting at which directors are to be elected shall include the name of any nominee or nominees who, at the time of the notice, the board intends to present for election.

2.5 ADVANCE NOTICE OF STOCKHOLDER NOMINEES AND STOCKHOLDER BUSINESS

Subject to the rights of holders of any class or series of stock having a

preference over the Common Stock as to dividends or upon liquidation,

(a) nominations for the election of directors, and

(b) business proposed to be brought before any stockholder meeting

may be made by the board of directors or proxy committee appointed by the board of directors or by any stockholder entitled to vote in the election of directors generally if such nomination or business proposed is otherwise proper business before such meeting. However, any such stockholder may nominate one or more persons for election as directors at a meeting or propose business to be brought before a meeting, or both, only if such stockholder has given timely notice in proper written form of their intent to make such nomination or nominations or to propose such business. To be timely, such stockholder's notice

must be delivered to or mailed and received at the principal executive offices of the corporation not less than one hundred twenty (120) calendar days in advance of the date specified in the corporation's proxy statement released to stockholders in connection with the previous year's annual meeting of stockholders; provided, however, that in the event that no annual meeting was held in the previous year or the date of the annual meeting has been changed by more than thirty (30) days from the date contemplated at the time of the previous year's proxy statement, notice by the stockholder to be timely must be so received a reasonable time before the solicitation is made. To be in proper form, a stockholder's notice to the secretary shall set forth:

(i) the name and address of the stockholder who intends to make the nominations or propose the business and, as the case may be, of the person or persons to be nominated or of the business to be proposed;

(ii) a representation that the stockholder is a holder of record of stock of the corporation entitled to vote at such meeting and, if applicable, intends to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice;

(iii) if applicable, a description of all arrangements or understandings between the stockholder and each nominee and any other person or persons (naming such person or persons) pursuant to which the nomination or nominations are to be made by the stockholder;

(iv) such other information regarding each nominee or each matter of business to be proposed by such stockholder as would be required to be included in a proxy statement filed pursuant to the proxy rules of the Securities and Exchange Commission had the nominee been nominated, or intended to be nominated, or the matter been proposed, or intended to be proposed by the board of directors; and

(v) if applicable, the consent of each nominee to serve as director of

the corporation if so elected.

The chairman of the meeting shall refuse to acknowledge the nomination of any person or the proposal of any business not made in compliance with the foregoing procedure.

2.6 MANNER OF GIVING NOTICE; AFFIDAVIT OF NOTICE

Written notice of any meeting of stockholders shall be given either personally or by first-class mail or by telegraphic or other written communication. Notices not personally delivered shall be sent charges prepaid and shall be addressed to the stockholder at the address of that stockholder appearing on the books of the corporation or given by the stockholder to the corporation for the purpose of notice. Notice shall be deemed to have been given at the time when delivered personally or deposited in the mail or sent by telegram or other means of written communication.

An affidavit of the mailing or other means of giving any notice of any stockholders' meeting, executed by the secretary, assistant secretary or any transfer agent of the corporation giving the notice, shall be prima facie evidence of the giving of such notice.

2.7 QUORUM

The holders of a majority in voting power of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by statute or by the certificate of incorporation. If, however, such quorum is not present or represented at any meeting of the stockholders, then either (i) the chairman of the meeting or (ii) the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting in accordance with Section 2.7 of these bylaws.

When a quorum is present at any meeting, the vote of the holders of a majority of the stock having voting power present in person or represented by proxy shall decide any question brought before such meeting, unless the question is one upon which, by express provision of the laws of the State of Delaware or of the certificate of incorporation or these bylaws, a different vote is required, in which case such express provision shall govern and control the decision of the question.

If a quorum be initially present, the stockholders may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum, if any action taken is approved by a majority of the stockholders initially constituting the quorum.

2.8 ADJOURNED MEETING; NOTICE

When a meeting is adjourned to another time and place, unless these bylaws otherwise require, notice need not be given of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting the corporation may transact any business that might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

2.9 VOTING

The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of Section 2.11 of these bylaws, subject to the provisions of Sections 217 and 218 of the General Corporation Law of Delaware (relating to voting rights of fiduciaries, pledgors and joint owners, and to voting trusts and other voting agreements).

Except as may be otherwise provided in the certificate of incorporation or these bylaws, each stockholder shall be entitled to one vote for each share of capital stock held by such stockholder and stockholders shall not be entitled to cumulate their votes in the election of directors or with respect to any matter submitted to a vote of the stockholders.

Notwithstanding the foregoing, if the stockholders of the corporation are entitled, pursuant to Sections 2115 and 301.5 of the California Corporations Code, to cumulate their votes in the election of directors, each such stockholder shall be entitled to cumulate votes (i.e., cast for any candidate a number of votes greater than the number of votes that such stockholder normally is entitled to cast) only if the candidates' names have been properly placed in nomination (in accordance with these bylaws) prior to commencement of the voting, and the stockholder requesting cumulative voting has given notice prior to commencement of the voting of the stockholder's intention to cumulate votes. If cumulative voting is properly requested, each holder of stock, or of any class or classes or of a series or series thereof, who elects to cumulate votes shall be entitled to as many votes as equals the number of votes that (absent this provision as to cumulative voting) he or she would be entitled to cast for the election of directors with respect to his or her shares of stock multiplied by the number of directors to be elected by him, and he or she may cast all of such votes for a single director or may distribute them among the number to be voted for, or for any two or more of them, as he or she may see fit.

2.10 RECORD DATE FOR STOCKHOLDER NOTICE; VOTING

For purposes of determining the stockholders entitled to notice of any meeting or to vote thereat, the board of directors may fix, in advance, a record date, which shall not precede the date upon which the resolution fixing the record date is adopted by the board of directors and which shall not be more than sixty (60) days nor less than ten (10) days before the date of any such meeting, and in such event only stockholders of record on the date so fixed are entitled to notice and to vote, notwithstanding any transfer of any shares on the books of the corporation after the record date.

If the board of directors does not so fix a record date, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the business day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the business day next preceding the day on which the meeting is held.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting unless the board of directors fixes a new record date for the adjourned meeting, but the board of directors shall fix a new record date if the meeting is adjourned for more than thirty (30) days from the date set for the original meeting.

The record date for any other purpose shall be as provided in Section 8.1 of these bylaws.

2.11 PROXIES

Every person entitled to vote for directors, or on any other matter, shall have the right to do so either in person or by one or more agents authorized by a written proxy signed by the person and filed with the secretary of the corporation, but no such proxy shall be voted or acted upon after three (3) years from its date, unless the proxy provides for a longer period. A proxy shall be deemed signed if the stockholder's name is placed on the proxy (whether by manual signature, typewriting, telegraphic transmission, telefacsimile or otherwise) by the stockholder or the stockholder's attorney-in-fact. The

revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212(e) of the General Corporation Law of Delaware.

2.12 ORGANIZATION

The president, or in the absence of the president, the chairman of the board, or, in the absence of the president and the chairman of the board, one of

the corporation's vice presidents, shall call the meeting of the stockholders to order, and shall act as chairman of the meeting. In the absence of the president, the chairman of the board, and all of the vice presidents, the stockholders shall appoint a chairman for such meeting. The chairman of any meeting of stockholders shall determine the order of business and the procedures at the meeting, including such matters as the regulation of the manner of voting and the conduct of business. The secretary of the corporation shall act as secretary of all meetings of the stockholders, but in the absence of the secretary at any meeting of the stockholders, the chairman of the meeting may appoint any person to act as secretary of the meeting.

2.13 LIST OF STOCKHOLDERS ENTITLED TO VOTE

The officer who has charge of the stock ledger of the corporation shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten (10) days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

2.14 WAIVER OF NOTICE

Whenever notice is required to be given under any provision of the General Corporation Law of Delaware or of the certificate of incorporation or these bylaws, a written waiver thereof, signed by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice unless so required by the certificate of incorporation or these bylaws.

ARTICLE III

DIRECTORS

3.1 POWERS

Subject to the provisions of the General Corporation Law of Delaware and to any limitations in the certificate of incorporation or these bylaws relating to action required to be approved by the stockholders or by the outstanding shares, the business and affairs of the corporation shall be managed and all corporate powers shall be exercised by or under the direction of the board of directors.

3.2 NUMBER OF DIRECTORS

The board of directors shall not be less than five (5) nor more than nine(9) members. The exact number of directors shall be eight (8) until changed, within the limits specified above by a bylaw amending this Section 3.2 duly adopted by the board of directors or the stockholders. The indefinite number of directors may be changed, or a definite number may be fixed without provision for an indefinite number, by an amendment to this bylaw, duly adopted by the board of directors or by the stockholders, or by a duly adopted amendment to the certificate of incorporation. No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

Upon the closing of the first sale of the corporation's common stock pursuant to a firmly underwritten registered public offering (the "IPO"), the directors shall be divided into three classes, with the term of office of the first class, which class shall initially consist of three directors, to expire at the first annual meeting of stockholders held after the IPO; the term of office of the second class, which class shall initially consist of three directors, to expire at the second annual meeting of stockholders held after the IPO; the term of office of the third class, which class shall initially consist of two directors, to expire at the third annual meeting of stockholders held after the IPO; and thereafter for each such term to expire at each third succeeding annual meeting of stockholders held after such election.

3.3 ELECTION AND TERM OF OFFICE OF DIRECTORS

Except as provided in Section 3.4 of these bylaws, directors shall be elected at each annual meeting of stockholders to hold office until the next annual meeting. Each director, including a director elected or appointed to fill a vacancy, shall hold office until the expiration of the term for which elected and until a successor has been elected and qualified.

3.4 RESIGNATION AND VACANCIES

Any director may resign effective on giving written notice to the chairman of the board, the president, the secretary or the board of directors, unless the notice specifies a later time for that resignation to become effective. If the

resignation of a director is effective at a future time, the board of directors may elect a successor to take office when the resignation becomes effective.

Vacancies in the board of directors may be filled by a majority of the remaining directors, even if less than a quorum, or by a sole remaining director; however, a vacancy created by the removal of a director by the vote of the stockholders or by court order may be filled only by the affirmative vote of a majority of the shares represented and voting at a duly held meeting at which a quorum is present (which shares voting affirmatively also constitute a majority of the required quorum). Each director so elected shall hold office until the next annual meeting of the stockholders and until a successor has been elected and qualified.

Unless otherwise provided in the certificate of incorporation or these bylaws:

(i) Vacancies and newly created directorships resulting from any increase in the authorized number of directors elected by all of the stockholders having the right to vote as a single class may be filled by a majority of the directors then in office, although less than a quorum, or by a sole remaining director.

(ii) Whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the certificate of incorporation, vacancies and newly created directorships of such class or classes or series may be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected.

If at any time, by reason of death or resignation or other cause, the corporation should have no directors in office, then any officer or any stockholder or an executor, administrator, trustee or guardian of a stockholder, or other fiduciary entrusted with like responsibility for the person or estate of a stockholder, may call a special meeting of stockholders in accordance with the provisions of the certificate of incorporation or these bylaws, or may apply to the Court of Chancery for a decree summarily ordering an election as provided in Section 211 of the General Corporation Law of Delaware.

If, at the time of filling any vacancy or any newly created directorship, the directors then in office constitute less than a majority of the whole board (as constituted immediately prior to any such increase), then the Court of Chancery may, upon application of any stockholder or stockholders holding at least ten (10) percent of the total number of the shares at the time outstanding having the right to vote for such directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office as aforesaid, which election shall be governed by the provisions of Section 211 of the General Corporation Law of Delaware as far as applicable.

3.5 REMOVAL OF DIRECTORS

Unless otherwise restricted by statute, by the certificate of incorporation or by these bylaws, any director or the entire board of directors may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote at an election of directors; provided, however, that, if and so long as stockholders of the corporation are entitled to cumulative voting, if less than the entire board is to be removed, no director may be removed without cause if the votes cast against his removal would be sufficient to elect him if then cumulatively voted at an election of the entire board of directors.

3.6 PLACE OF MEETINGS; MEETINGS BY TELEPHONE

Regular meetings of the board of directors may be held at any place within or outside the State of Delaware that has been designated from time to time by resolution of the board. In the absence of such a designation, regular meetings shall be held at the principal executive office of the corporation. Special meetings of the board may be held at any place within or outside the State of Delaware that has been designated in the notice of the meeting or, if not stated in the notice or if there is no notice, at the principal executive office of the corporation.

Any meeting of the board, regular or special, may be held by conference telephone or similar communication equipment, so long as all directors participating in the meeting can hear one another; and all such participating directors shall be deemed to be present in person at the meeting.

3.7 REGULAR MEETINGS

Regular meetings of the board of directors may be held without notice at such time as shall from time to time be determined by the board of directors. If any regular meeting day shall fall on a legal holiday, then the meeting shall be held at the same time and place on the next succeeding full business day.

3.8 SPECIAL MEETINGS; NOTICE

Special meetings of the board of directors for any purpose or purposes may be called at any time by the chairman of the board, the president, any vice president, the secretary or any two directors.

Notice of the time and place of special meetings shall be delivered personally or by telephone to each director or sent by first-class mail,

telecopy or telegram, charges prepaid, addressed to each director at that director's address as it is shown on the records of the corporation. If the notice is mailed, it shall be deposited in the United States mail at least four (4) days before the time of the holding of the meeting. If the notice is delivered personally or by telephone, telecopy or telegram, it shall be delivered personally or by telephone or to the telegraph company at least forty-eight (48) hours before the time of the holding of the meeting. Any oral notice given personally or by telephone may be communicated either to the director or to a person at the office of the director who the person giving the notice has reason to believe will promptly communicate it to the director. The notice need not specify the purpose or the place of the meeting, if the meeting is to be held at the principal executive office of the corporation.

3.9 QUORUM

A majority of the authorized number of directors shall constitute a quorum for the transaction of business, except to adjourn as provided in Section 3.12 of these bylaws. Every act or decision done or made by a majority of the directors present at a duly held meeting at which a quorum is present shall be regarded as the act of the board of directors, subject to the provisions of the certificate of incorporation and applicable law.

A meeting at which a quorum is initially present may continue to transact business notwithstanding the withdrawal of directors, if any action taken is approved by at least a majority of the quorum for that meeting.

3.10 WAIVER OF NOTICE

Notice of a meeting need not be given to any director (i) who signs a waiver of notice, whether before or after the meeting, or (ii) who attends the meeting other than for the express purposed of objecting at the beginning of the meeting to the transaction of any business because the meeting is not lawfully called or convened. All such waivers shall be filed with the corporate records or made part of the minutes of the meeting. A waiver of notice need not specify the purpose of any regular or special meeting of the board of directors.

3.11 ADJOURNMENT

A majority of the directors present, whether or not constituting a quorum, may adjourn any meeting of the board to another time and place.

3.12 NOTICE OF ADJOURNMENT

Notice of the time and place of holding an adjourned meeting of the board need not be given unless the meeting is adjourned for more than twenty-four (24) hours. If the meeting is adjourned for more than twenty-four (24) hours, then notice of the time and place of the adjourned meeting shall be given before the adjourned meeting takes place, in the manner specified in Section 3.9 of these bylaws, to the directors who were not present at the time of the adjournment.

3.13 BOARD ACTION BY WRITTEN CONSENT WITHOUT A MEETING

Any action required or permitted to be taken by the board of directors may be taken without a meeting, provided that all members of the board individually or collectively consent in writing to that action. Such action by written consent shall have the same force and effect as a unanimous vote of the board of directors. Such written consent and any counterparts thereof shall be filed with the minutes of the proceedings of the board of directors.

3.14 FEES AND COMPENSATION OF DIRECTORS

Directors and members of committees may receive such compensation, if any, for their services and such reimbursement of expenses as may be fixed or determined by resolution of the board of directors. This Section 3.15 shall not be construed to preclude any director from serving the corporation in any other capacity as an officer, agent, employee or otherwise and receiving compensation for those services.

3.15 APPROVAL OF LOANS TO OFFICERS

The corporation may lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the corporation or any of its subsidiaries, including any officer or employee who is a director of the corporation or any of its subsidiaries, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the corporation. The loan, guaranty or other assistance may be with or without interest and may be unsecured, or secured in such manner as the board of directors shall approve, including, without limitation, a pledge of shares of stock of the corporation. Nothing contained in this section shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the corporation at common law or under any statute.

ARTICLE IV

COMMITTEES

4.1 COMMITTEES OF DIRECTORS

The board of directors may, by resolution adopted by a majority of the authorized number of directors, designate one (1) or more committees, each consisting of two or more directors, to serve at the pleasure of the board. The board may designate one (1) or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. The appointment of members or alternate members of a committee requires the vote of a majority of the authorized number of directors. Any committee, to the extent provided in the resolution of the board, shall have and may exercise all the powers and authority of the board, but no such committee shall have the power or authority to (i) amend the certificate of incorporation (except that a committee may, to the extent authorized in the resolution or resolutions providing for the issuance of shares of stock adopted by the board of directors as provided in Section 151(a) of the General Corporation Law of Delaware, fix the designations and any of the preferences or rights of such shares relating to dividends, redemption, dissolution, any distribution of assets of the corporation or the conversion into, or the exchange of such shares for, shares of any other class or classes or any other series of the same or any other class or classes of stock of the corporation), (ii) adopt an agreement of merger or consolidation under Sections 251 or 252 of the General Corporation Law of Delaware, (iii) recommend to the stockholders the sale, lease or exchange of all or substantially all of the corporation's property and assets, (iv) recommend to the stockholders a dissolution of the corporation or a revocation of a dissolution or (v) amend the bylaws of the corporation; and, unless the board resolution establishing the committee, the bylaws or the certificate of incorporation expressly so provide, no such committee shall have the power or authority to declare a dividend, to authorize the issuance of stock, or to adopt a certificate of ownership and merger pursuant to Section 253 of the General Corporation Law of Delaware.

4.2 MEETINGS AND ACTION OF COMMITTEES

Meetings and actions of committees shall be governed by, and held and taken in accordance with, the following provisions of Article III of these bylaws: Section 3.6 (place of meetings; meetings by telephone), Section 3.8 (regular meetings), Section 3.9 (special meetings; notice), Section 3.10 (quorum), Section 3.11 (waiver of notice), Section 3.12 (adjournment), Section 3.13 (notice of adjournment) and Section 3.14 (board action by written consent without meeting), with such changes in the context of those bylaws as are necessary to substitute the committee and its members for the board of directors and its members; provided, however, that the time of regular meetings of committees may be determined either by resolution of the board of directors or by resolution of the committee, that special meetings of committees may also be called by resolution of the board of directors, and that notice of special meetings of committees shall also be given to all alternate members, who shall

have the right to attend all meetings of the committee. The board of directors may adopt rules for the government of any committee not inconsistent with the provisions of these bylaws.

4.3 COMMITTEE MINUTES

Each committee shall keep regular minutes of its meetings and report the same to the board of directors when required.

ARTICLE V

OFFICERS

5.1 OFFICERS

The Corporate Officers of the corporation shall be a president, a secretary and a chief financial officer. The corporation may also have, at the discretion of the board of directors, a chairman of the board, one or more vice presidents (however denominated), one or more assistant secretaries, a treasurer and one or more assistant treasurers, and such other officers as may be appointed in accordance with the provisions of Section 5.3 of these bylaws. Any number of offices may be held by the same person.

In addition to the Corporate Officers of the Company described above, there may also be such Administrative Officers of the corporation as may be designated and appointed from time to time by the president of the corporation in accordance with the provisions of Section 5.12 of these bylaws.

5.2 ELECTION OF OFFICERS

The Corporate Officers of the corporation, except such officers as may be appointed in accordance with the provisions of Section 5.3 or Section 5.5 of these bylaws, shall be chosen by the board of directors, subject to the rights, if any, of an officer under any contract of employment, and shall hold their respective offices for such terms as the board of directors may from time to time determine.

5.3 SUBORDINATE OFFICERS

The board of directors may appoint, or may empower the president to appoint, such other Corporate Officers as the business of the corporation may require, each of whom shall hold office for such period, have such power and

authority, and perform such duties as are provided in these bylaws or as the board of directors may from time to time determine.

The president may from time to time designate and appoint Administrative Officers of the corporation in accordance with the provisions of Section 5.12 of these bylaws.

5.4 REMOVAL AND RESIGNATION OF OFFICERS

Subject to the rights, if any, of a Corporate Officer under any contract of employment, any Corporate Officer may be removed, either with or without cause, by the board of directors at any regular or special meeting of the board or, except in case of a Corporate Officer chosen by the board of directors, by any Corporate Officer upon whom such power of removal may be conferred by the board of directors.

Any Corporate Officer may resign at any time by giving written notice to the corporation. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice; and, unless otherwise specified in that notice, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the corporation under any contract to which the Corporate Officer is a party.

Any Administrative Officer designated and appointed by the president may be removed, either with or without cause, at any time by the president. Any Administrative Officer may resign at any time by giving written notice to the president or to the secretary of the corporation.

5.5 VACANCIES IN OFFICES

A vacancy in any office because of death, resignation, removal, disqualification or any other cause shall be filled in the manner prescribed in these bylaws for regular appointments to that office.

5.6 CHAIRMAN OF THE BOARD

The chairman of the board, if such an officer be elected, shall, if present, preside at meetings of the board of directors and exercise such other powers and perform such other duties as may from time to time be assigned to him by the board of directors or as may be prescribed by these bylaws. If there is no president, then the chairman of the board shall also be the chief executive officer of the corporation and shall have the powers and duties prescribed in Section 5.7 of these bylaws.

5.7 PRESIDENT

Subject to such supervisory powers, if any, as may be given by the board of directors to the chairman of the board, if there be such an officer, the president shall be the chief executive officer of the

corporation and shall, subject to the control of the board of directors, have general supervision, direction and control of the business and the officers of the corporation. He or she shall preside at all meetings of the stockholders and, in the absence or nonexistence of a chairman of the board, at all meetings of the board of directors. He or she shall have the general powers and duties of management usually vested in the office of president of a corporation, and shall have such other powers and perform such other duties as may be prescribed by the board of directors or these bylaws.

5.8 VICE PRESIDENTS

In the absence or disability of the president, and if there is no chairman of the board, the vice presidents, if any, in order of their rank as fixed by the board of directors or, if not ranked, a vice president designated by the board of directors, shall perform all the duties of the president and when so acting shall have all the powers of, and be subject to all the restrictions upon, the president. The vice presidents shall have such other powers and perform such other duties as from time to time may be prescribed for them respectively by the board of directors, these bylaws, the president or the chairman of the board.

5.9 SECRETARY

The secretary shall keep or cause to be kept, at the principal executive office of the corporation or such other place as the board of directors may direct, a book of minutes of all meetings and actions of the board of directors, committees of directors and stockholders. The minutes shall show the time and place of each meeting, whether regular or special (and, if special, how authorized and the notice given), the names of those present at directors' meetings or committee meetings, the number of shares present or represented at stockholders' meetings and the proceedings thereof.

The secretary shall keep, or cause to be kept, at the principal executive office of the corporation or at the office of the corporation's transfer agent or registrar, as determined by resolution of the board of directors, a share register or a duplicate share register, showing the names of all stockholders and their addresses, the number and classes of shares held by each, the number and date of certificates evidencing such shares and the number and date of cancellation of every certificate surrendered for cancellation.

The secretary shall give, or cause to be given, notice of all meetings of the stockholders and of the board of directors required to be given by law or by

these bylaws. He or she shall keep the seal of the corporation, if one be adopted, in safe custody and shall have such other powers and perform such other duties as may be prescribed by the board of directors or by these bylaws.

5.10 CHIEF FINANCIAL OFFICER

The chief financial officer shall keep and maintain, or cause to be kept and maintained, adequate and correct books and records of accounts of the properties and business transactions of the corporation, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital, retained earnings and shares. The books of account shall at all reasonable times be open to inspection by any director for a purpose reasonably related to his position as a director.

The chief financial officer shall deposit all money and other valuables in the name and to the credit of the corporation with such depositaries as may be designated by the board of directors. He or she shall disburse the funds of the corporation as may be ordered by the board of directors, shall render to the president and directors, whenever they request it, an account of all of his or her transactions as chief financial officer and of the financial condition of the corporation, and shall have such other powers and perform such other duties as may be prescribed by the board of directors or these bylaws.

5.11 ASSISTANT SECRETARY

The assistant secretary, if any, or, if there is more than one, the assistant secretaries in the order determined by the board of directors (or if there be no such determination, then in the order of their election) shall, in the absence of the secretary or in the event of his or her inability or refusal to act, perform the duties and exercise the powers of the secretary and shall perform such other duties and have such other powers as the board of directors may from time to time prescribe.

5.12 ADMINISTRATIVE OFFICERS

In addition to the Corporate Officers of the corporation as provided in Section 5.1 of these bylaws and such subordinate Corporate Officers as may be appointed in accordance with Section 5.3 of these bylaws, there may also be such Administrative Officers of the corporation as may be designated and appointed from time to time by the president of the corporation. Administrative Officers shall perform such duties and have such powers as from time to time may be determined by the president or the board of directors in order to assist the Corporate Officers in the furtherance of their duties. In the performance of such duties and the exercise of such powers, however, such Administrative Officers shall have limited authority to act on behalf of the corporation as the

board of directors shall establish, including but not limited to limitations on the dollar amount and on the scope of agreements or commitments that may be made by such Administrative Officers on behalf of the corporation, which limitations may not be exceeded by such individuals or altered by the president without further approval by the board of directors.

5.13 AUTHORITY AND DUTIES OF OFFICERS

In addition to the foregoing powers, authority and duties, all officers of the corporation shall respectively have such authority and powers and perform such duties in the management of the business of the corporation as may be designated from time to time by the board of directors.

ARTICLE VI

INDEMNIFICATION OF DIRECTORS, OFFICERS, EMPLOYEES AND OTHER AGENTS

6.1 INDEMNIFICATION OF DIRECTORS AND OFFICERS

The corporation shall, to the maximum extent and in the manner permitted by the General Corporation Law of Delaware as the same now exists or may hereafter be amended, indemnify any person against expenses (including attorneys' fees), judgments, fines, and amounts paid in settlement actually and reasonably incurred in connection with any threatened, pending or completed action, suit, or proceeding in which such person was or is a party or is threatened to be made a party by reason of the fact that such person is or was a director or officer of the corporation. For purposes of this Section 6.1, a "director" or "officer" of the corporation shall mean any person (i) who is or was a director or officer of the corporation, (ii) who is or was serving at the request of the corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, or (iii) who was a director or officer of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation.

The corporation shall be required to indemnify a director or officer in connection with an action, suit, or proceeding (or part thereof) initiated by such director or officer only if the initiation of such action, suit, or proceeding (or part thereof) by the director or officer was authorized by the Board of Directors of the corporation.

The corporation shall pay the expenses (including attorney's fees) incurred by a director or officer of the corporation entitled to indemnification

hereunder in defending any action, suit or proceeding referred to in this Section 6.1 in advance of its final disposition; provided, however, that payment of expenses incurred by a director or officer of the corporation in advance of the final disposition of such action, suit or proceeding shall be made only upon receipt of an undertaking by the director or officer to repay all amounts advanced if it should ultimately be determined that the director of officer is not entitled to be indemnified under this Section 6.1 or otherwise.

The rights conferred on any person by this Article shall not be exclusive of any other rights which such person may have or hereafter acquire under any statute, provision of the corporation's Certificate of Incorporation, these bylaws, agreement, vote of the stockholders or disinterested directors or otherwise.

Any repeal or modification of the foregoing provisions of this Article shall not adversely affect any right or protection hereunder of any person in respect of any act or omission occurring prior to the time of such repeal or modification.

6.2 INDEMNIFICATION OF OTHERS

The corporation shall have the power, to the maximum extent and in the manner permitted by the General Corporation Law of Delaware as the same now exists or may hereafter be amended, to indemnify any person (other than directors and officers) against expenses (including attorneys' fees), judgments, fines, and amounts paid in settlement actually and reasonably incurred in connection with any threatened, pending or completed action, suit, or proceeding, in which such person was or is a party or is threatened to be made a party by reason of the fact that such person is or was an employee or agent of the corporation. For purposes of this Section 6.2, an "employee" or "agent" of the corporation (other than a director or officer) shall mean any person (i) who is or was an employee or agent of the corporation, (ii) who is or was serving at the request of the corporation as an employee or agent of another corporation, partnership, joint venture, trust or other enterprise, or (iii) who was an employee or agent of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation.

6.3 INSURANCE

The corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him or her and incurred by him or her in any such capacity, or arising out of his or her status as such,

whether or not the corporation would have the power to indemnify him or her against such liability under the provisions of the General Corporation Law of Delaware.

ARTICLE VII

RECORDS AND REPORTS

7.1 MAINTENANCE AND INSPECTION OF RECORDS

The corporation shall, either at its principal executive office or at such place or places as designated by the board of directors, keep a record of its stockholders listing their names and addresses and the number and class of shares held by each stockholder, a copy of these bylaws as amended to date, accounting books and other records of its business and properties.

Any stockholder of record, in person or by attorney or other agent, shall, upon written demand under oath stating the purpose thereof, have the right during the usual hours for business to inspect for any proper purpose the corporation's stock ledger, a list of its stockholders, and its other books and records and to make copies or extracts therefrom. A proper purpose shall mean a purpose reasonably related to such person's interest as a stockholder. In every instance where an attorney or other agent is the person who seeks the right to inspection, the demand under oath shall be accompanied by a power of attorney or such other writing that authorizes the attorney or other agent to so act on behalf of the

stockholder. The demand under oath shall be directed to the corporation at its registered office in Delaware or at its principal place of business.

7.2 INSPECTION BY DIRECTORS

Any director shall have the right to examine (and to make copies of) the corporation's stock ledger, a list of its stockholders and its other books and records for a purpose reasonably related to his or her position as a director.

7.3 ANNUAL STATEMENT TO STOCKHOLDERS

The board of directors shall present at each annual meeting, and at any special meeting of the stockholders when called for by vote of the stockholders, a full and clear statement of the business and condition of the corporation.

7.4 REPRESENTATION OF SHARES OF OTHER CORPORATIONS

The chairman of the board, if any, the president, any vice president, the chief financial officer, the secretary or any assistant secretary of this corporation, or any other person authorized by the board of directors or the president or a vice president, is authorized to vote, represent and exercise on behalf of this corporation all rights incident to any and all shares of the stock of any other corporation or corporations standing in the name of this corporation. The authority herein granted may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

7.5 CERTIFICATION AND INSPECTION OF BYLAWS

The original or a copy of these bylaws, as amended or otherwise altered to date, certified by the secretary, shall be kept at the corporation's principal executive office and shall be open to inspection by the stockholders of the corporation, at all reasonable times during office hours.

ARTICLE VIII

GENERAL MATTERS

8.1 RECORD DATE FOR PURPOSES OTHER THAN NOTICE AND VOTING

For purposes of determining the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the board of directors may fix, in advance, a record date, which shall not precede the date upon which the resolution fixing the record date is adopted and which shall not be more than sixty (60) days before any such action. In that case, only stockholders of record at the close of business on the date so fixed are entitled to

receive the dividend, distribution or allotment of rights, or to exercise such rights, as the case may be, notwithstanding any transfer of any shares on the books of the corporation after the record date so fixed, except as otherwise provided by law.

If the board of directors does not so fix a record date, then the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the board of directors adopts the applicable resolution.

8.2 CHECKS; DRAFTS; EVIDENCES OF INDEBTEDNESS

From time to time, the board of directors shall determine by resolution which person or persons may sign or endorse all checks, drafts, other orders for payment of money, notes or other evidences of indebtedness that are issued in the name of or payable to the corporation, and only the persons so authorized shall sign or endorse those instruments.

8.3 CORPORATE CONTRACTS AND INSTRUMENTS: HOW EXECUTED

The board of directors, except as otherwise provided in these bylaws, may authorize and empower any officer or officers, or agent or agents, to enter into any contract or execute any instrument in the name of and on behalf of the corporation; such power and authority may be general or confined to specific instances. Unless so authorized or ratified by the board of directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

8.4 STOCK CERTIFICATES; TRANSFER; PARTLY PAID SHARES

The shares of the corporation shall be represented by certificates, provided that the board of directors of the corporation may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the corporation. Notwithstanding the adoption of such a resolution by the board of directors, every holder of stock represented by certificates and, upon request, every holder of uncertificated shares, shall be entitled to have a certificate signed by, or in the name of the corporation by, the chairman or vice-chairman of the board of directors, or the president or vice-president, and by the treasurer or an assistant treasurer, or the secretary or an assistant secretary of such corporation representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if he or she were such officer, transfer agent or registrar at the date of issue.

Certificates for shares shall be of such form and device as the board of directors may designate and shall state the name of the record holder of the shares represented thereby; its number; date of issuance; the number of shares for which it is issued; a summary statement or reference to the powers,

designations, preferences or other special rights of such stock and the qualifications, limitations or restrictions of such preferences and/or rights, if any; a statement or summary of liens, if any; a conspicuous notice of restrictions upon transfer or registration of transfer, if any; a statement as to any applicable voting trust agreement; if the shares be assessable, or, if assessments are collectible by personal action, a plain statement of such facts.

Upon surrender to the secretary or transfer agent of the corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignment or authority to transfer, it shall be the duty of the corporation to issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its books.

The corporation may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly paid shares, or upon the books and records of the corporation in the case of uncertificated partly paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully paid shares, the corporation shall declare a dividend upon partly paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

8.5 SPECIAL DESIGNATION ON CERTIFICATES

If the corporation is authorized to issue more than one class of stock or more than one series of any class, then the powers, the designations, the preferences and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate that the corporation shall issue to represent such class or series of stock; provided, however, that, except as otherwise provided in Section 202 of the General Corporation Law of Delaware, in lieu of the foregoing requirements there may be set forth on the face or back of the certificate that the corporation shall issue to represent such class or series of stock a statement that the corporation will furnish without charge to each stockholder who so requests the powers, the designations, the preferences and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

8.6 LOST CERTIFICATES

Except as provided in this Section 8.6, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the corporation and cancelled at the same time. The board of directors may, in case any share certificate or certificate for any other security is lost, stolen or destroyed, authorize the issuance of replacement

certificates on such terms and conditions as the board may require; the board may require indemnification of the corporation secured by a bond or other adequate security sufficient to protect the corporation against any claim that may be made against it, including any expense or liability, on account of the alleged loss, theft or destruction of the certificate or the issuance of the replacement certificate.

8.7 TRANSFER AGENTS AND REGISTRARS

The board of directors may appoint one or more transfer agents or transfer clerks, and one or more registrars, each of which shall be an incorporated bank or trust company -- either domestic or foreign, who shall be appointed at such times and places as the requirements of the corporation may necessitate and the board of directors may designate.

8.8 CONSTRUCTION; DEFINITIONS

Unless the context requires otherwise, the general provisions, rules of construction and definitions in the General Corporation Law of Delaware shall govern the construction of these bylaws. Without limiting the generality of this provision, as used in these bylaws, the singular number includes the plural, the plural number includes the singular, and the term "person" includes both an entity and a natural person.

ARTICLE IX

AMENDMENTS

The original or other bylaws of the corporation may be adopted, amended or repealed by the stockholders entitled to vote or by the board of directors of the corporation. The fact that such power has been so conferred upon the directors shall not divest the stockholders of the power, nor limit their power to adopt, amend or repeal bylaws.

Whenever an amendment or new bylaw is adopted, it shall be copied in the book of bylaws with the original bylaws, in the appropriate place. If any bylaw is repealed, the fact of repeal with the date of the meeting at which the repeal was enacted or the filing of the operative written consent(s) shall be stated in said book.

CERTIFICATE OF ADOPTION OF BYLAWS

OF

APPLIED IMAGING CORP.

ADOPTION BY INCORPORATOR

The undersigned person appointed in the Certificate of Incorporation to act as the Incorporator of Applied Imaging Corp. hereby adopts the foregoing bylaws, comprising twenty-one (21) pages, as the Bylaws of the corporation.

Effective as of _____, 1996.

Jason M. Brady
Incorporator

Certificate by Secretary of Adoption by Incorporator

The undersigned hereby certifies that he is the duly elected, qualified, and acting Secretary of Applied Imaging Corp. and that the foregoing Bylaws, comprising twenty-one (21) pages, were adopted as the Bylaws of the corporation effective as of _____, 1996, by the person appointed in the Certificate of Incorporation to act as the Incorporator of the corporation.

IN WITNESS WHEREOF, the undersigned has hereunto set his hand and affixed the corporate seal this ____ day of _____ 1996.

Neil E. Woodruff
Secretary

EXHIBIT 10.1

APPLIED IMAGING CORP.

INDEMNIFICATION AGREEMENT

This Indemnification Agreement ("Agreement") is effective as of _____, 1996 by and between Applied Imaging Corp., a Delaware corporation (the "Company"), and _____, ("Indemnitee").

WHEREAS, effective as of the date hereof, Applied Imaging Corp., a California corporation, is reincorporating into Delaware;

WHEREAS, the Company desires to attract and retain the services of highly qualified individuals, such as Indemnitee, to serve the Company and its related entities;

WHEREAS, in order to induce Indemnitee to continue to provide services to the Company, the Company wishes to provide for the indemnification of, and the advancement of expenses to, Indemnitee to the maximum extent permitted by law;

WHEREAS, the Company and Indemnitee recognize the continued difficulty in obtaining liability insurance for the Company's directors, officers, employees, agents and fiduciaries, the significant increases in the cost of such insurance and the general reductions in the coverage of such insurance;

WHEREAS, the Company and Indemnitee further recognize the substantial increase in corporate litigation in general, subjecting directors, officers, employees, agents and fiduciaries to expensive litigation risks at the same time as the availability and coverage of liability insurance has been severely limited; and

WHEREAS, in connection with the Company's reincorporation, the Company and Indemnitee desire to continue to have in place the additional protection provided by an indemnification agreement to provide indemnification and advancement of expenses to the Indemnitee to the maximum extent permitted by Delaware law;

WHEREAS, in view of the considerations set forth above, the Company desires that Indemnitee shall be indemnified and advanced expenses by the Company as set forth herein;

NOW, THEREFORE, the Company and Indemnitee hereby agree as set forth below.

1. Certain Definitions.

(a) "Change in Control" shall mean, and shall be deemed to have

occurred if, on or after the date of this Agreement, (i) any "person" (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended) or group acting in concert, other than a trustee

or other fiduciary holding securities under an employee benefit plan of the Company acting in such capacity or a corporation owned directly or indirectly by the stockholders of the Company in substantially the same proportions as their ownership of stock of the Company, becomes the "beneficial owner" (as defined in Rule 13d-3 under said Act), directly or indirectly, of securities of the Company representing more than 50% of the total voting power represented by the Company's then outstanding Voting Securities, (ii) during any period of two consecutive years, individuals who at the beginning of such period constitute the Board of Directors of the Company and any new director whose election by the Board of Directors or nomination for election by the Company's stockholders was approved by a vote of at least two thirds (2/3) of the directors then still in office who either were directors at the beginning of the period or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority thereof, (iii) the stockholders of the Company approve a merger or consolidation of the Company with any other corporation other than a merger or consolidation which would result in the Voting Securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into Voting Securities of the surviving entity) at least 80% of the total voting power represented by the Voting Securities of the Company or such surviving entity outstanding immediately after such merger or consolidation, or (iv) the stockholders of the Company approve a plan of complete liquidation of the Company or an agreement for the sale or disposition by the Company of (in one transaction or a series of related transactions) all or substantially all of the Company's assets.

(b) "Claim" shall mean with respect to a Covered Event: any threatened, pending or completed action, suit, proceeding or alternative dispute resolution mechanism, or any hearing, inquiry or investigation that Indemnitee in good faith believes might lead to the institution of any such action, suit, proceeding or alternative dispute resolution mechanism, whether civil, criminal, administrative, investigative or other.

(c) References to the "Company" shall include, in addition to Applied Imaging Corp., any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger to which Applied Imaging Corp. (or any of its wholly owned subsidiaries) is a party which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, employees, agents or fiduciaries, so that if Indemnitee is or was a director, officer, employee, agent or fiduciary of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee, agent or fiduciary of another corporation, partnership, joint venture, employee benefit plan, trust or other enterprise, Indemnitee shall stand in the same position under the provisions of this Agreement with respect to the resulting or surviving corporation as Indemnitee would have with respect to such constituent corporation if its separate existence had continued.

(d) "Covered Event" shall mean any event or occurrence related to the fact that Indemnitee is or was a director, officer, employee, agent or fiduciary of the Company, or any subsidiary of the Company, or is or was serving at the request of the Company as a director, officer, employee, agent or fiduciary of another corporation, partnership, joint venture, trust or other

enterprise, or by reason of any action or inaction on the part of Indemnitee while serving in such capacity.

(e) "Expenses" shall mean any and all expenses (including attorneys' fees and all other costs, expenses and obligations incurred in connection with investigating, defending, being a witness in or participating in (including on appeal), or preparing to defend, to be a witness in or to participate in, any action, suit, proceeding, alternative dispute resolution mechanism, hearing, inquiry or investigation), judgments, fines, penalties and amounts paid in settlement (if such settlement is approved in advance by the Company, which approval shall not be unreasonably withheld) of any Claim and any federal, state, local or foreign taxes imposed on the Indemnitee as a result of the actual or deemed receipt of any payments under this Agreement.

(f) "Expense Advance" shall mean a payment to Indemnitee pursuant to Section 3 of Expenses in advance of the settlement of or final judgement in any action, suit, proceeding or alternative dispute resolution mechanism, hearing, inquiry or investigation which constitutes a Claim.

(g) "Independent Legal Counsel" shall mean an attorney or firm of attorneys, selected in accordance with the provisions of Section 2(d) hereof, who shall not have otherwise performed services for the Company or Indemnitee within the last three years (other than with respect to matters concerning the rights of Indemnitee under this Agreement, or of other Indemnitees under similar indemnity agreements).

(h) References to "other enterprises" shall include employee benefit plans; references to "fines" shall include any excise taxes assessed on Indemnitee with respect to an employee benefit plan; and references to "serving at the request of the Company" shall include any service as a director, officer, employee, agent or fiduciary of the Company which imposes duties on, or involves services by, such director, officer, employee, agent or fiduciary with respect to an employee benefit plan, its participants or its beneficiaries; and if Indemnitee acted in good faith and in a manner Indemnitee reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan, Indemnitee shall be deemed to have acted in a manner "not opposed to the best interests of the Company" as referred to in this Agreement.

(i) "Reviewing Party" shall mean, subject to the provisions of Section 2(d), any person or body appointed by the Board of Directors in accordance with applicable law to review the Company's obligations hereunder and under

applicable law, which may include a member or members of the Company's Board of Directors, Independent Legal Counsel or any other person or body not a party to the particular Claim for which Indemnitee is seeking indemnification.

(j) "Section" refers to a section of this Agreement unless otherwise indicated.

(k) "Voting Securities" shall mean any securities of the Company that vote generally in the election of directors.

2. Indemnification.

(a) Indemnification of Expenses. Subject to the provisions of Section 2(b) below, the Company shall indemnify Indemnitee for Expenses to the fullest extent permitted by law if Indemnitee was or is or becomes a party to or witness or other participant in, or is threatened to be made a party to or witness or other participant in, any Claim (whether by reason of or arising in part out of a Covered Event), including all interest, assessments and other charges paid or payable in connection with or in respect of such Expenses.

(b) Review of Indemnification Obligations. Notwithstanding the foregoing, in the event any Reviewing Party shall have determined (in a written opinion, in any case in which Independent Legal Counsel is the Reviewing Party) that Indemnitee is not entitled to be indemnified hereunder under applicable law, (i) the Company shall have no further obligation under Section 2(a) to make any payments to Indemnitee not made prior to such determination by such Reviewing Party, and (ii) the Company shall be entitled to be reimbursed by Indemnitee (who hereby agrees to reimburse the Company) for all Expenses theretofore paid to Indemnitee to which Indemnitee is not entitled hereunder under applicable law; provided, however, that if Indemnitee has commenced or thereafter commences legal proceedings in a court of competent jurisdiction to secure a determination that Indemnitee is entitled to be indemnified hereunder under applicable law, any determination made by any Reviewing Party that Indemnitee is not entitled to be indemnified hereunder under applicable law shall not be binding and Indemnitee shall not be required to reimburse the Company for any Expenses theretofore paid in indemnifying Indemnitee until a final judicial determination is made with respect thereto (as to which all rights of appeal therefrom have been exhausted or lapsed). Indemnitee's obligation to reimburse the Company for any Expenses shall be unsecured and no interest shall be charged thereon.

(c) Indemnitee Rights on Unfavorable Determination; Binding Effect. If any Reviewing Party determines that Indemnitee substantively is not entitled to

be indemnified hereunder in whole or in part under applicable law, Indemnitee shall have the right to commence litigation seeking an initial determination by the court or challenging any such determination by such Reviewing Party or any aspect thereof, including the legal or factual bases therefor, and, subject to the provisions of Section 15, the Company hereby consents to service of process and to appear in any such proceeding. Absent such litigation, any determination by any Reviewing Party shall be conclusive and binding on the Company and Indemnitee.

(d) Selection of Reviewing Party; Change in Control. If there has not been a Change in Control, any Reviewing Party shall be selected by the Board of Directors, and if there has been such a Change in Control (other than a Change in Control which has been approved by a majority of the Company's Board of Directors who were directors immediately prior to such Change in Control), any Reviewing Party with respect to all matters thereafter arising concerning the rights of Indemnitee to indemnification of Expenses under this Agreement or any other agreement or under the Company's Certificate of Incorporation or Bylaws as now or hereafter in effect, or under any other applicable law, if desired by Indemnitee, shall be Independent Legal Counsel selected by

Indemnitee and approved by the Company (which approval shall not be unreasonably withheld). Such counsel, among other things, shall render its written opinion to the Company and Indemnitee as to whether and to what extent Indemnitee would be entitled to be indemnified hereunder under applicable law and the Company agrees to abide by such opinion. The Company agrees to pay the reasonable fees of the Independent Legal Counsel referred to above and to indemnify fully such counsel against any and all expenses (including attorneys' fees), claims, liabilities and damages arising out of or relating to this Agreement or its engagement pursuant hereto. Notwithstanding any other provision of this Agreement, the Company shall not be required to pay Expenses of more than one Independent Legal Counsel in connection with all matters concerning a single Indemnitee, and such Independent Legal Counsel shall be the Independent Legal Counsel for any or all other Indemnitees unless (i) the employment of separate counsel by one or more Indemnitees has been previously authorized by the Company in writing, or (ii) an Indemnitee shall have provided to the Company a written statement that such Indemnitee has reasonably concluded that there may be a conflict of interest between such Indemnitee and the other Indemnitees with respect to the matters arising under this Agreement.

(e) Mandatory Payment of Expenses. Notwithstanding any other provision of this Agreement other than Section 10 hereof, to the extent that Indemnitee has been successful on the merits or otherwise, including, without limitation, the dismissal of an action without prejudice, in defense of any Claim, Indemnitee shall be indemnified against all Expenses incurred by Indemnitee in connection therewith.

3. Expense Advances.

(a) Obligation to Make Expense Advances. Upon receipt of a written undertaking by or on behalf of the Indemnitee to repay such amounts if it shall ultimately be determined that the Indemnitee is not entitled to be indemnified therefore by the Company hereunder under applicable law, the Company shall make Expense Advances to Indemnitee.

(b) Form of Undertaking. Any obligation to repay any Expense Advances hereunder pursuant to a written undertaking by the Indemnitee shall be unsecured and no interest shall be charged thereon.

(c) Determination of Reasonable Expense Advances. The parties agree that for the purposes of any Expense Advance for which Indemnitee has made written demand to the Company in accordance with this Agreement, all Expenses included in such Expense Advance that are certified by affidavit of Indemnitees' counsel as being reasonable shall be presumed conclusively to be reasonable.

4. Procedures for Indemnification and Expense Advances.

(a) Timing of Payments. All payments of Expenses (including without limitation Expense Advances) by the Company to the Indemnitee pursuant to this Agreement shall be made to the fullest extent permitted by law as soon as practicable after written demand by Indemnitee therefor is presented to the Company, but in no event later than thirty (30) business days after such written demand by Indemnitee is presented to the Company, except in the case of Expense Advances, which shall be made no later than ten (10) business days after such written demand by Indemnitee is presented to the Company.

(b) Notice/Cooperation by Indemnitee. Indemnitee shall, as a condition precedent to Indemnitee's right to be indemnified or Indemnitee's right to receive Expense Advances under this Agreement, give the Company notice in writing as soon as practicable of any Claim made against Indemnitee for which indemnification will or could be sought under this Agreement. Notice to the Company shall be directed to the Chief Executive Officer of the Company at the address shown on the signature page of this Agreement (or such other address as the Company shall designate in writing to Indemnitee). In addition, Indemnitee shall give the Company such information and cooperation as it may reasonably require and as shall be within Indemnitee's power.

(c) No Presumptions; Burden of Proof. For purposes of this Agreement,

the termination of any Claim by judgment, order, settlement (whether with or without court approval) or conviction, or upon a plea of nolo contendere, or its equivalent, shall not create a presumption that Indemnitee did not meet any particular standard of conduct or have any particular belief or that a court has determined that indemnification is not permitted by this Agreement or applicable law. In addition, neither the failure of any Reviewing Party to have made a determination as to whether Indemnitee has met any particular standard of conduct or had any particular belief, nor an actual determination by any Reviewing Party that Indemnitee has not met such standard of conduct or did not have such belief, prior to the commencement of legal proceedings by Indemnitee to secure a judicial determination that Indemnitee should be indemnified under this Agreement under applicable law, shall be a defense to Indemnitee's claim or create a presumption that Indemnitee has not met any particular standard of conduct or did not have any particular belief. In connection with any determination by any Reviewing Party or otherwise as to whether the Indemnitee is entitled to be indemnified hereunder under applicable law, the burden of proof shall be on the Company to establish that Indemnitee is not so entitled.

(d) Notice to Insurers. If, at the time of the receipt by the Company of a notice of a Claim pursuant to Section 4(b) hereof, the Company has liability insurance in effect which may cover such Claim, the Company shall give prompt notice of the commencement of such Claim to the insurers in accordance with the procedures set forth in the respective policies. The Company shall thereafter take all necessary or desirable action to cause such insurers to pay, on behalf of the Indemnitee, all amounts payable as a result of such Claim in accordance with the terms of such policies.

(e) Selection of Counsel. In the event the Company shall be obligated hereunder to provide indemnification for or make any Expense Advances with respect to the Expenses of any Claim, the Company, if appropriate, shall be entitled to assume the defense of such Claim with counsel approved by Indemnitee (which approval shall not be unreasonably withheld) upon the delivery to Indemnitee of written notice of the Company's election to do so. After delivery of such notice, approval of such counsel by Indemnitee and the retention of such counsel by the Company, the Company will not be liable to Indemnitee under this Agreement for any fees or expenses of separate counsel subsequently retained by or on behalf of Indemnitee with respect to the same Claim; provided that, (i) Indemnitee shall have the right to employ Indemnitee's separate counsel in any such Claim at Indemnitee's expense and (ii) if (A) the employment of separate counsel by Indemnitee has been previously authorized by the Company, (B) Indemnitee shall have reasonably concluded that there may be a conflict of interest between the Company and Indemnitee in the conduct of any such defense, or (C) the Company shall not continue to retain such counsel to defend such Claim, then the fees and expenses of Indemnitee's separate counsel shall be

Expenses for which Indemnitee may receive indemnification or Expense Advances hereunder.

5. Additional Indemnification Rights; Nonexclusivity.

(a) Scope. The Company hereby agrees to indemnify the Indemnitee to the fullest extent permitted by law, notwithstanding that such indemnification is not specifically authorized by the other provisions of this Agreement, the Company's Certificate of Incorporation, the Company's Bylaws or by statute. In the event of any change after the date of this Agreement in any applicable law, statute or rule which expands the right of a Delaware corporation to indemnify a member of its board of directors or an officer, employee, agent or fiduciary, it is the intent of the parties hereto that Indemnitee shall enjoy by this Agreement the greater benefits afforded by such change. In the event of any change in any applicable law, statute or rule which narrows the right of a Delaware corporation to indemnify a member of its board of directors or an officer, employee, agent or fiduciary, such change, to the extent not otherwise required by such law, statute or rule to be applied to this Agreement, shall have no effect on this Agreement or the parties' rights and obligations hereunder except as set forth in Section 10(a) hereof.

(b) Nonexclusivity. The indemnification and the payment of Expense Advances provided by this Agreement shall be in addition to any rights to which Indemnitee may be entitled under the Company's Certificate of Incorporation, its Bylaws, any other agreement, any vote of stockholders or disinterested directors, the General Corporation Law of the State of Delaware, or otherwise. The indemnification and the payment of Expense Advances provided under this Agreement shall continue as to Indemnitee for any action taken or not taken while serving in an indemnified capacity even though subsequent thereto Indemnitee may have ceased to serve in such capacity.

6. No Duplication of Payments. The Company shall not be liable under this Agreement to make any payment in connection with any Claim made against Indemnitee to the extent Indemnitee has otherwise actually received payment (under any insurance policy, provision of the Company's Certificate of Incorporation, Bylaws or otherwise) of the amounts otherwise payable hereunder.

7. Partial Indemnification. If Indemnitee is entitled under any provision of this Agreement to indemnification by the Company for some or a portion of Expenses incurred in connection with any Claim, but not, however, for all of the total amount thereof, the Company shall nevertheless indemnify Indemnitee for the portion of such Expenses to which Indemnitee is entitled.

8. Mutual Acknowledgment. Both the Company and Indemnitee acknowledge that in certain instances, federal law or applicable public policy may prohibit the Company from indemnifying its directors, officers, employees, agents or fiduciaries under this Agreement or otherwise. Indemnitee understands and acknowledges that the Company has undertaken or may be required in the future to undertake with the Securities and Exchange Commission to submit the question of indemnification to a court in certain circumstances for a determination of the Company's right under public policy to indemnify Indemnitee.

9. Liability Insurance. To the extent the Company maintains liability insurance applicable to directors, officers, employees, agents or fiduciaries, Indemnitee shall be covered by such policies in such a manner as to provide Indemnitee the same rights and benefits as are provided to the most favorably insured of the Company's directors, if Indemnitee is a director; or of the Company's officers, if Indemnitee is not a director of the Company but is an officer; or of the Company's key employees, agents or fiduciaries, if Indemnitee is not an officer or director but is a key employee, agent or fiduciary.

10. Exceptions. Notwithstanding any other provision of this Agreement, the Company shall not be obligated pursuant to the terms of this Agreement:

(a) Excluded Action or Omissions. To indemnify or make Expense Advances to Indemnitee with respect to Claims arising out of acts, omissions or transactions for which Indemnitee is prohibited from receiving indemnification under applicable law.

(b) Claims Initiated by Indemnitee. To indemnify or make Expense Advances to Indemnitee with respect to Claims initiated or brought voluntarily by Indemnitee and not by way of defense, counterclaim or crossclaim, except (i) with respect to actions or proceedings brought to establish or enforce a right to indemnification under this Agreement or any other agreement or insurance policy or under the Company's Certificate of Incorporation or Bylaws now or hereafter in effect relating to Claims for Covered Events, (ii) in specific cases if the Board of Directors has approved the initiation or bringing of such Claim, or (iii) as otherwise required under Section 145 of the Delaware General Corporation Law, regardless of whether Indemnitee ultimately is determined to be entitled to such indemnification, Expense Advances, or insurance recovery, as the case may be.

(c) Lack of Good Faith. To indemnify Indemnitee for any Expenses incurred by the Indemnitee with respect to any action instituted (i) by Indemnitee to enforce or interpret this Agreement, if a court having

jurisdiction over such action determines as provided in Section 13 that each of the material assertions made by the Indemnitee as a basis for such action was not made in good faith or was frivolous, or (ii) by or in the name of the Company to enforce or interpret this Agreement, if a court having jurisdiction over such action determines as provided in Section 13 that each of the material defenses asserted by Indemnitee in such action was made in bad faith or was frivolous.

(d) Claims Under Section 16(b). To indemnify Indemnitee for Expenses
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and the payment of profits arising from the purchase and sale by Indemnitee of securities in violation of Section 16(b) of the Securities Exchange Act of 1934, as amended, or any similar successor statute.

11. Counterparts. This Agreement may be executed in one or more
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counterparts, each of which shall constitute an original.

12. Binding Effect; Successors and Assigns. This Agreement shall be
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binding upon and inure to the benefit of and be enforceable by the parties hereto and their respective successors, assigns (including any direct or indirect successor by purchase, merger, consolidation or otherwise to all or substantially all of the business or assets of the Company), spouses, heirs and personal and legal representatives. The Company shall require and cause any successor (whether direct or indirect, and whether by purchase, merger, consolidation or otherwise) to all, substantially all, or a substantial part, of the business or assets of the Company, by written agreement in form and substance satisfactory to Indemnitee, expressly to assume and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform if no such succession had taken place. This Agreement shall continue in effect regardless of whether Indemnitee continues to serve as a director, officer, employee, agent or fiduciary (as applicable) of the Company or of any other enterprise at the Company's request.

13. Expenses Incurred in Action Relating to Enforcement or

Interpretation. In the event that any action is instituted by Indemnitee under
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this Agreement or under any liability insurance policies maintained by the Company to enforce or interpret any of the terms hereof or thereof, Indemnitee shall be entitled to be indemnified for all Expenses incurred by Indemnitee with respect to such action (including without limitation attorneys' fees), regardless of whether Indemnitee is ultimately successful in such action, unless as a part of such action a court having jurisdiction over such action makes a final judicial determination (as to which all rights of appeal therefrom have been exhausted or lapsed) that each of the material assertions made by Indemnitee as a basis for such action was not made in good faith or was frivolous; provided, however, that until such final judicial determination is made, Indemnitee shall be entitled under Section 3 to receive payment of Expense Advances hereunder with respect to such action. In the event of an action

instituted by or in the name of the Company under this Agreement to enforce or interpret any of the terms of this Agreement, Indemnitee shall be entitled to be indemnified for all Expenses incurred by Indemnitee in defense of such action (including without limitation costs and expenses incurred with respect to Indemnitee's

counterclaims and cross-claims made in such action), unless as a part of such action a court having jurisdiction over such action makes a final judicial determination (as to which all rights of appeal therefrom have been exhausted or lapsed) that each of the material defenses asserted by Indemnitee in such action was made in bad faith or was frivolous; provided, however, that until such final judicial determination is made, Indemnitee shall be entitled under Section 3 to receive payment of Expense Advances hereunder with respect to such action.

14. Period of Limitations. No legal action shall be brought and no cause of action shall be asserted by or in the right of the Company against Indemnitee, Indemnitee's estate, spouse, heirs, executors or personal or legal representatives after the expiration of two years from the date of accrual of such cause of action, and any claim or cause of action of the Company shall be extinguished and deemed released unless asserted by the timely filing of a legal action within such two year period; provided, however, that if any shorter period of limitations is otherwise applicable to any such cause of action, such shorter period shall govern.

15. Notice. All notices, requests, demands and other communications under this Agreement shall be in writing and shall be deemed duly given (i) if delivered by hand and signed for by the party addressed, on the date of such delivery, or (ii) if mailed by domestic certified or registered mail with postage prepaid, on the third business day after the date postmarked. Addresses for notice to either party are as shown on the signature page of this Agreement, or as subsequently modified by written notice.

16. Consent to Jurisdiction. The Company and Indemnitee each hereby irrevocably consent to the jurisdiction of the courts of the State of Delaware for all purposes in connection with any action or proceeding which arises out of or relates to this Agreement and agree that any action instituted under this Agreement shall be commenced, prosecuted and continued only in the Court of Chancery of the State of Delaware in and for New Castle County, which shall be the exclusive and only proper forum for adjudicating such a claim.

17. Severability. The provisions of this Agreement shall be severable in the event that any of the provisions hereof (including any provision within a single section, paragraph or sentence) are held by a court of competent

jurisdiction to be invalid, void or otherwise unenforceable, and the remaining provisions shall remain enforceable to the fullest extent permitted by law. Furthermore, to the fullest extent possible, the provisions of this Agreement (including without limitation each portion of this Agreement containing any provision held to be invalid, void or otherwise unenforceable, that is not itself invalid, void or unenforceable) shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal or unenforceable.

18. Choice of Law. This Agreement, and all rights, remedies, liabilities, powers and duties of the parties to this Agreement, shall be governed by and construed in accordance with the laws of the State of Delaware as applied to contracts between Delaware residents entered into and to be performed entirely in the State of Delaware without regard to principles of conflicts of laws.

19. Subrogation. In the event of payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the rights of recovery of Indemnitee, who shall execute all documents required and shall do all acts that may be necessary to secure such rights and to enable the Company effectively to bring suit to enforce such rights.

20. Amendment and Termination. No amendment, modification, termination or cancellation of this Agreement shall be effective unless it is in writing signed by both the parties hereto. No waiver of any of the provisions of this Agreement shall be deemed to be or shall constitute a waiver of any other provisions hereof (whether or not similar), nor shall such waiver constitute a continuing waiver.

21. Integration and Entire Agreement. This Agreement sets forth the entire understanding between the parties hereto and supersedes and merges all previous written and oral negotiations, commitments, understandings and agreements relating to the subject matter hereof between the parties hereto.

22. No Construction as Employment Agreement. Nothing contained in this Agreement shall be construed as giving Indemnitee any right to be retained in the employ of the Company or any of its subsidiaries or affiliated entities.

IN WITNESS WHEREOF, the parties hereto have executed this Indemnification Agreement as of the date first above written.

APPLIED IMAGING CORP.

By: _____

Print Name: _____

Title: _____

Address: 1820 Embarcadero Road
Palo Alto, California 94303

AGREED TO AND ACCEPTED

INDEMNITEE:

_____
(signature)

Print Name:_____

Address:_____

EXHIBIT 10.5

AMENDED AND RESTATED REGISTRATION RIGHTS AGREEMENT

This Agreement is made as of July 28, 1995 by and between Applied Imaging Corp., a California corporation ("Applied Imaging" or the "Company"), and the purchasers of Series C Preferred Stock, Series D Preferred Stock, Series F Preferred Stock, Series G Preferred Stock, Series H Preferred Stock, Series I Preferred Stock and Series J Preferred Stock of the Company pursuant to the Investment Agreements (as defined below).

WHEREAS, the Company intends to enter into a Series J Preferred Stock and Warrant Purchase Agreement. In connection with this transaction, the Company wishes to amend and restate the Registration Rights Agreement dated August 24, 1993 to include the Common Stock issuable upon conversion of the Series J Preferred Stock and the Common Stock issuable upon exercise or conversion of the warrants issued pursuant to the Series J Preferred Stock and Warrant Purchase Agreement as registrable securities.

NOW, THEREFORE, the parties hereto hereby agree as follows:

a. Definitions. In addition to the terms defined above, the following terms shall have the meanings ascribed below for purposes of this Agreement:

i. "Commission" means the Securities and Exchange Commission or any other federal agency at the time administering the Securities Act and the Exchange Act.

ii. "Exchange Act" means the 1934 Act or any similar federal statute, and the rules of the Commission thereunder, all as the same shall be in effect at the time.

iii. "Holder" means any holder of record of shares of Registrable Securities or the securities convertible into Registrable Securities who is an Investor or an Affiliated Assignee as those terms are defined under the Series C Preferred Stock Purchase Agreement dated May 13, 1988, the Series D Preferred Stock Purchase Agreement dated February 22, 1989, Series F Preferred Stock Purchase Agreement dated as of September 4, 1990, the Series G Preferred Stock Purchase Agreement dated as of March 21, 1991, the Series H Preferred Stock and Common Stock Purchase Agreement dated as of September 4, 1992, the Series I Preferred Stock Purchase Agreement dated as of August 24, 1993 or the Series J Preferred Stock and Warrant Purchase Agreement dated July 28, 1995 (the "Investment Agreements").

iv. The term "person" includes an individual, a legal entity such as a corporation, partnership, joint venture, associate, or joint stock company, a trust, an unincorporated organization, and a government or political subdivision thereof or other governmental agency.

v. The terms "register", "registered" and "registration" refer to a registration effected by preparing and filing a registration statement in compliance with the Securities Act, and the declaration or ordering of the effectiveness of such registration statement.

vi. "Registrable Securities" means (i) the Common Stock of Applied Imaging, issued or issuable with respect to the Stock or the Conversion Stock as those terms are defined under the Investment Agreements, (ii) up to 15,000 shares of Common Stock issued pursuant to the Series H Preferred Stock and Common Stock Purchase Agreement dated as of September 4, 1992, (iii) up to 140,000 shares of Common Stock issuable upon exercise of a warrant issued to Allen & Company Incorporated and (iv) up to 392,156 shares of Common Stock issuable upon exercise or conversion of warrants issued pursuant to the Series J Preferred Stock and Warrant Purchase Agreement dated as of July 28, 1995.

vii. "Registration Expenses" means all expenses (except Selling Expenses as defined below) incurred by Applied Imaging in complying with Sections 1.2 and 1.3, including without limitation all registration, qualification and filing fees, printing expenses, escrow fees, fees and disbursements of counsel for Applied Imaging, Blue Sky fees and expenses, and, the expenses of any special audits incident to or required by any such registration (but excluding the compensation of regular employees of Applied Imaging which shall be paid in any event by Applied Imaging).

viii. "Securities Act" means the Act or any similar federal statute, and the rules of the Commission thereunder, all as the same shall be in effect at the time.

ix. "Selling Expenses" means all underwriting discounts and selling commissions applicable to the sale of Registrable Securities and all fees and disbursements of counsel for any Holder(s).

b. Company Registration.
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i. Except as provided elsewhere in this Section 1, if, at any time or from time to time, Applied Imaging shall determine to

register any of its securities for its own account, other than (i) a registration relating to employee benefit

plans, or (ii) a registration relating to a Commission Rule 145 transaction, Applied Imaging will:

(1) promptly give notice thereof to each Holder; and

(2) include in such registration (and any related qualification or other compliance under Blue Sky laws), and in any underwriting involved therein, except as set forth in Section 1.2.2 below, all the Registrable Securities held of record (or issuable upon conversion of securities held of record) by, and specified in a written notice or notices from, any Holder or Holders received by Applied Imaging within thirty (30) days after the date of such written notice from Applied Imaging.

ii. If the registration of which Applied Imaging gives notice is for a registered public offering involving an underwriting, Applied Imaging shall so advise the Holder(s) as a part of the written notice from Applied Imaging given pursuant to Section 1.2.1(i). In such event the right of any Holder to registration pursuant to this Section 1.2 shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall (together with Applied Imaging and the other Holders distributing their securities through such underwriting) enter into an underwriting agreement in customary form with the underwriter or underwriters selected for such underwriting by Applied Imaging. Notwithstanding any other provision of this Section 1.2, if the managing underwriter determines that marketing factors require a limitation of the number of shares to be underwritten, the managing underwriter may in its discretion exclude some or all of the Registrable Securities from such registration and underwriting; provided, however, that the number of shares of Registrable Securities to be included in such underwriting shall not be reduced unless all securities held by other holders are first entirely excluded from such underwriting. In the event of any such reduction, Applied Imaging shall so advise all Holders, and the number of shares of Registrable Securities which may be included in the registration and underwriting shall be allocated by Applied Imaging among all of the Holders thereof at the time of filing the registration statement in proportion, as nearly as practicable, to the respective amounts of Registrable Securities held by such Holders at the time of filing the Registration Statement and no Registrable Securities excluded from the underwriting by reason of the underwriter's marketing limitation

shall be included in such registration. If any Holder dis approves of the terms of any such underwriting, it may elect to withdraw therefrom by notice to Applied Imaging and the managing underwriter. Any securities excluded or withdrawn from such underwriting shall be withdrawn from such registration.

c. Request for Registration. If at any time after the earlier of (i) August 31, 1996 or (ii) the date which is six (6) months from the closing of Applied Imaging's initial underwritten registered public offering (pursuant to a registration statement on Form S-1 or any successor form), Applied Imaging shall receive a written request (specifying that such request is being made pursuant to this Section 1.3) from the Holders of a majority of the Registrable Securities ("Initiating Holders") that Applied Imaging file a registration statement under the Securities Act (and any related qualification or other compliance under Blue Sky laws) covering the registration of Registrable Securities held of record (or issuable upon conversion of securities held of record) by such Holders equal to the greater of (i) fifty percent (50%) or more of the total Registrable Securities (assuming conversion of all securities convertible into Registrable Securities), or (ii) an amount of Registrable Securities which would be valued at $3,500,000 or more based on the expected price to the public in the offering being registered, then Applied Imaging shall promptly notify all other Holders of such request and, as soon as practicable, use its best efforts to effect such registration, qualification or compliance (including, without limitation, appropriate qualification under applicable regulations issued under the Securities Act and any other governmental requirements or regulations) as may be so requested and as would permit or facilitate the sale and distribution of all or such portion of such Registrable Securities as are specified in such request, together with all or such portion of the Registrable Securities of any Holder or Holders joining in such request as are specified in a written request received by Applied Imaging within twenty (20) days after receipt of such written notice from Applied Imaging; provided, however, that Applied Imaging shall not be obligated to take any action to effect any such registration, qualification or compliance pursuant to this Section 1.3 in any particular jurisdiction in which Applied Imaging would be required to execute a general consent to service of process in effecting such registration, qualification or compliance unless Applied Imaging is already generally subject to service in such jurisdiction and except as may be required by the Securities Act.

i. Notwithstanding the foregoing, (i) Applied Imaging shall not be obligated to effect a registration pursuant to this Section 1.3 during the period starting with the date ninety (90) days prior to Applied Imaging's estimated date of filing of, and ending on a date six (6) months following the effective date of, a registration statement pertaining to an underwritten public

offering of its securities (other than a registration relating to employee benefit plans or to a Commission Rule 145 transaction), provided that Applied Imaging is actively employing in good faith all reasonable efforts to cause such registration statement to become effective and that Applied Imaging's estimate of the date of filing such registration statement is made in good faith; and (ii) if Applied Imaging shall furnish to such Holders a certificate signed by the President or the Chairman of the Board of Applied Imaging stating that in the good faith judgment of the Board of Directors it would be seriously

detrimental to Applied Imaging or its shareholders for a registration statement to be filed in the near future, then Applied Imaging's obligation to use its best efforts to file a registration statement shall be deferred for a period not to exceed six (6) months.

ii. Applied Imaging shall be obligated to effect only one registration pursuant to this Section 1.3.

iii. In the event that a registration requested pursuant to this Section 1.3 is for a registered public offering involving an underwriting, Applied Imaging shall so advise the Holders as part of the notice given pursuant to this Section 1.3. In such event, the right of any Holder to registration pursuant to this Section 1.3 shall be conditioned upon such Holder's participation in the underwriting arrangements required by this Section 1.3, and the inclusion of such Holder's Registrable Securities in the underwriting to the extent requested shall be limited to the extent provided herein. Applied Imaging shall (together with all Holders proposing to distribute their securities through such underwriting) enter into an underwriting agreement in customary form with a managing underwriter selected for such underwriting by a majority in interest of the Initiating Holders, but the managing underwriter and the underwriting agreement shall be subject to Applied Imaging's reasonable approval. Notwithstanding any other provision of this Section 1.3, if the managing underwriter advises the Initiating Holders and Applied Imaging in writing that marketing factors require a limitation of the number of shares to be underwritten, then Applied Imaging shall so advise all Holders electing to participate in the registration and underwriting and the number of shares of Registrable Securities that may be included in the registration and underwriting shall be allocated among all such Holders by Applied Imaging in proportion, as nearly as practicable, to the respective amounts of Registrable Securities held by such Holders at the time of filing the registration statement. To the extent any of such Holders elects not to sell the full number of shares it is entitled to sell pursuant to the preceding sentence, the

other such Holders' respective rights to participate in the registration and underwriting shall be increased pro rata by a corresponding number of shares. No Registrable Securities excluded from the underwriting by reason of the managing underwriter's marketing limitation shall be included in such registration. To facilitate the allocation of shares in accordance with the above provision, Applied Imaging may round the number of shares allocated to any Holder to the nearest 100 shares. If any Holder of Registrable Securities disapproves of the terms of the underwriting, it may elect to withdraw therefrom by written notice to Applied Imaging, the managing underwriter and the initiating Holders. In the event that such underwriting represents the initial under written public offering of Applied Imaging's securities, any securities excluded or withdrawn from such under-

writing shall be withdrawn from such registration and shall not be transferred in a public distribution prior to four (4) months after the effective date of such registration statement, or such other shorter period of time as the managing underwriter may permit in writing, but, however, subject to any longer period that may be required pursuant to Section 1.10.

d. Registration on Form S-3.

i. If any Holder or Holders holding in the aggregate not less than 5% of the then outstanding Registrable Securities request that Applied Imaging file a registration statement on Form S-3 (or any successor form to Form S-3) for a public offering of shares of the Registrable Securities the reasonably anticipated aggregate price to the public of which, net of underwriting dis counts and commissions, would exceed $1,000,000 and Applied Imaging is a registrant entitled to use Form S-3 to register the Registrable Securities for such an offering, Applied Imaging shall use its best efforts to cause such Registrable Securities to be registered for the offering on such form and to cause such Registrable Securities to be qualified in such jurisdictions as the Holder or Holders may reasonably request; provided, however, that Applied Imaging shall not be required to effect more than one registration pursuant to this Section 1.4 in any twelve month period or in excess of two registrations under this Section 1.4. The substantive provisions of Section 1.3.3 shall be applicable to each registration initiated under this Section 1.4.

ii. Notwithstanding the foregoing, Applied Imaging shall not be obligated to take any action pursuant to this Section 1.4: (i) in any particular jurisdiction in which Applied Imaging would be required to execute a general consent to service of process in effecting such registration, qualification or compliance unless

Applied Imaging is already subject to service in such jurisdiction and except as may be required by the Securities Act; (ii) if Applied Imaging, within ten (10) days of the receipt of the request of the initiating Holders, gives notice of its bona fide intention to effect the filing of a registration statement with the Commission within ninety (90) days of receipt of such request (other than with respect to a registration statement relating to a Rule 145 transaction, an offering solely to employees or any other registration which is not appropriate for the registration of Registrable Securities); (iii) during the period starting with the date sixty (60) days prior to Applied Imaging's estimated date of filing of, and ending on the date six (6) months immediately following, the effective date of any registration statement pertain ing to securities of Applied Imaging (other than a registration of securities in a Rule 145 transaction or with respect to an employee benefit plan), provided that Applied Imaging is actively employing in good faith all reasonable efforts to cause such registration statement to become effective; or (iv) if Applied Imaging shall furnish to such

Holder a certificate signed by the President of Applied Imaging stating that in the good faith judgment of the Board of Directors it would be detrimental to Applied Imaging or its shareholders for registration statements to be filed at such time, then Applied Imaging's obligation to use its best efforts to file a registration statement shall be deferred for a period not to exceed 120 days from the receipt of the request to file such registration by such Holder.

e. Expenses of Registration.
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i. All Registration Expenses incurred in connection with any registration, qualification or compliance pursuant to Section 1.2 above shall be borne by Applied Imaging; and all Selling Expenses related to securities registered by the Holder(s) shall be borne by the Holder(s) of such securities pro rata on the basis of the number of shares so registered; provided, however, that (anything in this Section 1 to the contrary notwithstanding with respect to the bearing of expenses) if any jurisdiction in which the securities shall be qualified shall require that expenses incurred in connection with the qualification of the securities in that jurisdiction be borne by selling shareholders, then such expenses shall be payable by the selling shareholders pro rata, to the extent required by such jurisdiction.

ii. All Registration Expenses incurred in connection with one registration pursuant to Section 1.3 shall be paid by Applied Imaging and all Selling Expenses shall be paid by the Holders pro

rata in accordance with the number of Registrable Securities included in such registration.

iii. All Registration Expenses incurred in connection with two registrations pursuant to Section 1.4 shall be paid by Applied Imaging and all Selling Expenses shall be paid by the Holders pro rata in accordance with the number of Registrable Securities included in such registration.

f. Registration Procedures. In the case of each registration, qualification or compliance effected pursuant to this Section 1, Applied Imaging will keep each Holder advised in writing as to the initiation of each registration, qualification and compliance and as to the completion thereof. At its expense, Applied Imaging will with all deliberate speed:

i. Prepare and file with the Commission a registration statement with respect to the Registrable Securities to be registered and use its best efforts to cause such registration statement to become and remain effective for at least ninety (90) days;

ii. Furnish to the Holders participating in such registration and to the underwriters of the Registrable Securities being registered such reasonable number of copies of the registration statement, preliminary prospectus, final prospectus and such other documents as such underwriters may reasonably request in order to facilitate the public offering of such securities;

iii. Prepare and file with the Commission such amendments and supplements to such registration statement and the prospectus used in connection with such registration statement as may be necessary to comply with the provisions of the Securities Act with respect to the disposition of all securities covered by such registration statement.

g. Indemnification.

i. To the extent permitted by law, Applied Imaging will indemnify and hold harmless each Holder, each of its officers and directors and partners and such Holder's legal counsel and independent accountants, and each person controlling such Holder within the meaning of Section 15 of the Securities Act, and each underwriter, if any, and each person who controls any underwriter within the meaning of Section 15 of the Securities Act, against all expenses, claims, losses, damages and liabilities (or actions in respect thereof), including any of the foregoing incurred in settlement of any litigation, commenced or threatened, with

respect to registration, qualification or compliance which has been effected pursuant to this Section 1, (i) arising out of or based on any untrue statement (or alleged untrue statement) of a material fact contained in any registration statement, prospectus, offering circular or other document (including any related registration statement, notification and the like) or any amendment or supplement thereto, incident to any such registration, qualification or compliance, or (ii) based on any omission (or alleged omission) to state therein a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances in which they were made, not misleading, or (iii) any violation by Applied Imaging of any rule or regulation promulgated under the Securities Act applicable to Applied Imaging and relating to action or inaction required of Applied Imaging in connection with any such registration, qualification or compliance. Applied Imaging will reimburse such Holder, each of its officers, directors and partners and such Holder's legal counsel and independent accountants, and each person controlling such Holder within the meaning of Section 15 of the Securities Act, each such underwriter and each such person who controls any such underwriter within the meaning of Section 15 of the Securities Act, for any legal and any other expenses reasonably incurred in connection with investigating, preparing or defending any such claim, loss, damage, liability or action; provided that Applied Imaging will not be liable under this Section 1.7.1 to the

extent that any such claim, loss, damage, liability or expense arises out of, or is based on, any untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with written information furnished to Applied Imaging by any such Holder or underwriter.

ii. Notwithstanding any other provision of this Section 1, the obligation of the Applied Imaging to include the Registrable Securities of any Holder in any registration, and any related qualification or compliance, shall be conditioned upon such Holder entering into an indemnification agreement in customary form with Applied Imaging and any underwriter(s) for the securities to be registered, satisfactory to Applied Imaging and such under writer(s), which shall provide for indemnification by such Holder, to the extent permitted by law, of Applied Imaging, each of its directors and officers and its legal counsel and independent accountants, each underwriter, if any, of Applied Imaging's securities covered by such a registration statement, each person who controls Applied Imaging or such underwriter within the meaning of Section 15 of the Securities Act, and each other such Holder, each of its officers and directors and partners and such other Holder's legal counsel and independent accountants, and each person controlling such other Holder within

the meaning of Section 15 of the Securities Act, against all claims, losses, damages and liabilities (or actions in respect thereof) arising out of or based on any untrue statement (or alleged untrue statement) of a material fact contained in any such registration statement, prospectus, offering circular and other document (including any registration statement, notification and the like), or any omission (or alleged omission) to state therein a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances in which they were made, not misleading, in each case to the extent, but only to the extent, that such untrue statement (or alleged untrue statement) or omission (or alleged omission) is made in such registration statement, prospectus, offering circular or other document in reliance upon and in conformity with written information furnished to Applied Imaging by an instrument duly executed by such Holder and stated to be specifically for use therein. Notwithstanding the foregoing, the liability of the Holders under this Section 1.7.2 shall be limited to an amount equal to the gross offering proceeds of the registration.

iii. Each party entitled to indemnification under Section 1.7.1 (the "Indemnified Party") shall give notice to Applied Imaging promptly after such Indemnified Party has actual knowledge of any claim as to which indemnity may be sought, and shall permit Applied Imaging to assume the defense of any such claim or any litigation resulting therefrom, provided that counsel for Applied Imaging, who shall conduct the defense of such claim or litigation, shall be approved of by the Indemnified Party (which approval shall not be

unreasonably withheld), and the Indemnified Party may participate in such defense at such party's expense, and provided further that the failure of any Indemnified Party to give notice as provided herein shall not relieve Applied Imaging of its obligations under this Section 1. In the defense of any such claim or litigation, Applied Imaging shall not, except with the consent of each Indemnified Party, consent to entry of any judgment or enter into any settlement which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party of a release from all liability in respect to such claim or litigation.

h. Information by Holder. The Holder(s) of Registrable Securities
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included in any registration shall furnish to Applied Imaging such information regarding such Holder(s) and the distribution proposed by such Holder(s) as Applied Imaging may reasonably request in writing and as shall be required in connection with any registration, qualification or compliance referred to in this Section 1.

i. Termination of Applied Imaging's Obligations. Applied Imaging shall have no obligation pursuant to Sections 1.2, 1.3 and 1.4 with respect to any request or requests made by any Holder more than five (5) years after the effective date of Applied Imaging's first registered and underwritten public offering of securities for its own account or for the account of Holders pursuant to Section 1.3.

j. "Lock-Up" Agreement. Until termination of Applied Imaging's obligation as provided under Section 1.9 above, each Holder hereby agrees that it shall not

(1) during the first six (6) months following the effective date of the registration statement filed under the Securities Act covering Applied Imaging's initial underwritten offering of its securities to the general public for its own account, nor

(2) following the effective date of any registration statement filed by Applied Imaging under the Securities Act (including the one covering its initial underwritten offering of its securities to the general public for its own account), to the extent and for the period consented to in writing by Holders holding a majority of the Registrable Securities (assuming, for this purpose, conversion of all outstanding shares of the Stock) held by all Holders, sell, make any short sale of, loan, grant any option for the purchase of, or otherwise transfer or dispose of (other than to donees who agree to be similarly bound) any Applied Imaging securities, without the prior written consent of Applied Imaging or the managing underwriter in such offering, as the case may be. Applied Imaging may place an appropriate legend on all certificates for Registrable Securities and the securities convertible into Registrable

Securities referring to the restrictions on transfer set forth in this Section 1.

The obligations of the Holders under this Section 1.10 are subject to the agreement by each officer and director of Applied Imaging that owns stock of Applied Imaging and each holder of at least one percent (1%) of Applied Imaging's outstanding voting equity securities to abide by the foregoing restrictions.

1. Amendment to Prior Agreement. The Registration Rights Agreement dated August 24, 1993 (the "Prior Agreement") is hereby amended and restated in

its entirety to read as set forth herein. The foregoing amendment shall be effective upon execution of this Agreement by the Company and the holders of a majority of the Registrable Securities (as such term is defined in the Prior Agreement).

2. Miscellaneous.

a. Waivers and Amendments. With the written consent of Applied Imaging and the Holders of more than 50% of the Registrable Securities, the obligations of Applied Imaging and the rights of the Holders under this Agreement may be waived (either generally or in a particular instance, either retroactively or prospectively and either for a specified period of time or indefinitely), and with the same consent Applied Imaging, when authorized by resolution of its Board of Directors, may enter into a supplementary agreement for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of this Agreement; provided, however, that no such waiver or supplemental agreement shall reduce the aforesaid percentage of Registrable Securities, the Holders of which are required to consent to any waiver or supplemental agreement without the consent of the Holders of all of the Registrable Securities. Neither this Agreement nor any provisions hereof may be changed, waived, discharged or terminated orally, but only by a signed statement in writing. Any amendment, waiver or supplementary agreement effected in accordance with this paragraph shall be binding upon each Holder of any Registrable Securities then outstanding, each future Holder of all such Registrable Securities and Applied Imaging.

b. Governing Law. This Agreement shall be governed in all respects by the laws of the State of California as such laws are applied to agreements between California residents entered into and to be performed entirely within California.

c. Successors and Assigns. Except as otherwise expressly provided herein, the provisions hereof shall inure to the benefit of, and be binding upon, the successors, assigns, heirs, executors and administrators of the parties hereto.

d. Entire Agreement. This Agreement constitutes the full and entire understanding and agreement between the parties with regard to the subjects hereof and thereof.

e. Notices. All notices and other communications required or permitted hereunder shall be in writing and may be delivered in

person, by telecopy, overnight delivery service or U.S. mail, in which event it may be mailed by first-class, certified or registered, postage prepaid, addressed (a) if to a Holder, at such address as such Holder shall have furnished the Company in writing, or, until any such Holder so furnishes an address to the Company, then to and at the address of the last holder of such securities who has so furnished an address to the Company, or (b) if to the Company, at 2340A Walsh Avenue, Building F, Santa Clara, CA 95051, or at such other address as the Company shall have furnished to the Holders in writing.

Each such notice or other communication shall for all purposes of this Agreement be treated as effective or having been given when delivered if delivered personally, or, if sent by mail, at the earlier of its receipt or 72 hours after the same has been deposited in a regularly maintained receptacle for the deposit of the United States mail, addressed and mailed as aforesaid, or if sent by telecopier with written confirmation, at the earlier of (i) 24 hours after confirmation of transmission by the sending telecopier machine or (ii) delivery of written confirmation.

f. Titles and Subtitles. The titles of the paragraphs and subparagraphs of this Agreement are for convenience of reference only and are not to be considered in construing this Agreement.

g. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.

h. Nominees. Securities registered in the name of a nominee for a Holder shall, for purposes of this Agreement, be treated as being owned by such Holder.

The foregoing Amended and Restated Registration Rights Agreement is hereby executed as of the date first above written.

"COMPANY"

APPLIED IMAGING CORP.

By: /s/ Abraham I. Coriat

Abraham I. Coriat,
Chairman and Chief
Executive Officer

"HOLDERS"

Name of Holder	Number and Class/ Series of Shares
ALLEN & COMPANY INCORPORATED	77,900 Series I
By:/s/ Eugene Protash _____ Title: AVP _____	
/s/ Bruce Allen _____ Bruce Allen	114,000 Series I
_____ Herbert Allen	47,600 Series I
ALLEN VALUE LIMITED	20,273 Series I
By:/s/ Philip Scaturro _____ Title:_____	
ALLEN VALUE PARTNERS, L.P.	169,727 Series I
By:/s/ Philip Scaturro _____ Title:_____	
HERBERT ALLEN, HERBERT A. ALLEN AND SUSAN K. WILSON, TRUSTEES OF HERBERT ALLEN TRUST U/A DATED 12/1/84	23,800 Series I

By:/s/ Herbert A. Allen
_____

Title:_____

ARABALCO SA 5,982 Series I

By:/s/ Illegible
_____

Title: President
_____

/s/ John F. Blakemore, Jr.
_____ 6,112 Series D
John F. Blakemore, Jr.

BROWN UNIVERSITY THIRD CENTURY FUND 110,000 Series I

By:/s/ Robert J. Kolger, Jr.
_____

Title: Treasurer
_____

_____ 4,700 Series I
Marvyn Carton

/s/ Mary Cullen
_____ 19,000 Series I
Mary Cullen

/s/ J. Michael Egan
_____ 3,800 Series I

J. Michael Egan

EGGER & CO. (GT BIOTECHNOLOGY AND HEALTH FUND) — 110,063 Series C; 12,500 Series G

By:

Title:

7,500 Series I

Paul A. Gould

HABER PARTNERS II — 4,700 Series I

By:

Title:

19,102 Series I

George Hayim

INTERBAER NOMINEES LIMITED — 66,321 Series I

By:

Title:

	19,000 Series I

Donald R. Keough	
TERRY ALLEN KRAMER & IRWIN H. KRAMER, JOINT TENANTS WITH RIGHT OF SURVIVORSHIP	19,000 Series I
By: ----------	
Title: ----------	
TERRY ALLEN KRAMER TRUST	19,000 Series I
By: ----------	
Title: ----------	
/s/ Dan W. Lufkin	38,000 Series I

Dan W. Lufkin	
MIDLAND BANK TRUSTEE (JERSEY) LIMITED	77,044 Series C 136,111 Series D 61,764 Series F 43,750 Series G
By: /s/ Illegible /s/ Illegible ----------	88,217 Series H 6,667 Series I 5,293 Common
Title: Authorized Signatories ----------	
NEW ENTERPRISE ASSOCIATES V,	223,530 Series F

LIMITED PARTNERSHIP	62,500 Series G 82,450 Series H 57,158 Series I
By: NEA Partners V, a Limited Partnership, its General Partner	4,947 Common
By: /s/ Thomas C. McConnell --- General Partner	
	3,800 Series I
--- Bradley Allen Roberts	
	47,600 Series I
--- Stanley S. Shuman	
THE SILVERADO FUND I, LIMITED PARTNERSHIP	11,765 Series F
By: NEA Silverado Fund I, a Limited Partnership, its General Partner	
By: /s/ C. Richard Kramlich --- General Partner	
--- John Simon	14,200 Series I
C.V. SOFINOVA VENTURE PARTNERS II	150,000 Series G 41,525 Series H 28,580 Series I
By: /s/ Alix Mardual, M.D. --- Title: Vice President ---	2,492 Common

THOMPSON CLIVE INVESTMENTS PLC 22,013A Series C

By: /s/ Illegible /s/ Illegible

Title: Director Director

38,889 Series D
17,647 Series F
12,500 Series G
25,205 Series H
1,512 Common

THOMPSON CLIVE INVESTMENTS PLC
THOMPSON CLIVE & PARTNERS LIMITED

By: /s/ Illegible /s/ Illegible

Title: Director Director

11,006 Series C
19,445 Series D
8,824 Series F
6,250 Series G
12,603 Series H
952 Series I
756 Common

THOMPSON CLIVE INVESTMENTS PLC 1,905A Series I
A UK PRIVATE LLC

By: /s/ Illegible /s/ Illegible

Title: Director Director

_____
Patricia Twohill-Lown

22,158 Series I

WILLIAM J. VANDEN HEUVEL SELF-EMPLOYED
RETIREMENT PLAN & TRUST

By:

Title:

4,700 Series I

WESTPAC SECURITIES (JERSEY) LIMITED 5,982 Series I

By: /s/ Illegible

Title: Director

23,800 Series I

Susan K. Wilson

/s/ Harold M. Wit 9,500 Series I

Harold M. Wit

WS INVESTMENT COMPANY 90B 4,412 Series F

By: /s/ J. Casey McGlynn

Title: General Partner

SERIES J INVESTORS:

If and Individual:

By:/s/ Herbert Allen

Herbert Allen

Title:

If a Partnership, Trust or other Entity:

Name of Entity:

By:

Title:

SERIES J INVESTORS:

If and Individual:

By: /s/ Susan Allen

Susan Allen

Title:

If a Partnership, Trust or other Entity:

Name of Entity:

By:

Title:

SERIES J INVESTORS:

If and Individual:

By:/s/ Samuel Baker

Samuel Baker

Title:

If a Partnership, Trust or other Entity:

Name of Entity:
_____

_____

By:
_____

Title:
_____

SERIES J INVESTORS:

If and Individual:

By:/s/ Barry Bergman
_____
Barry Bergman

Title:
_____

If a Partnership, Trust or other Entity:

Name of Entity:
_____

_____

By:
_____

Title:
_____

SERIES J INVESTORS:

If and Individual:

By: /s/ John P. Birkelund
_____
John P. Birkelund

Title: Chairman
_____

If a Partnership, Trust or other Entity:

Name of Entity:
_____

_____

By:
_____

Title:
_____

SERIES J INVESTORS:

If and Individual:

By: /s/ Marvyn Carton
_____
Marvyn Carton

Title:
_____

If a Partnership, Trust or other Entity:

Name of Entity:
_____

_____

By:
_____

Title:
_____

SERIES J INVESTORS:

If and Individual:

By:
_____

Title:

If a Partnership, Trust or other Entity:

Name of Entity:

The Cornerhouse Limited Partnership

By: /s/ Illegible

Title: General Partner

SERIES J INVESTORS:

If and Individual:

By:/s/ Philip DiLeo

Philip DiLeo

Title:

If a Partnership, Trust or other Entity:

Name of Entity:

By:

Title:

SERIES J INVESTORS:

If and Individual:

By:/s/ Paul A. Gould

       Paul A. Gould

Title:

If a Partnership, Trust or other Entity:

Name of Entity:

By:

Title:

SERIES J INVESTORS:

If and Individual:

By:

Title:

If a Partnership, Trust or other Entity:

Name of Entity: Haber Partners II

By:/s/ Warren Haber

Title: General Partner

SERIES J INVESTORS:

If and Individual:

By:

Title:

If a Partnership, Trust or other Entity:

Name of Entity: HAGC PARTNERS

By:/s/ Herbert Allen

Title:

SERIES J INVESTORS:

If and Individual:

By: /s/ Donald R. Keough

Donald R. Keough

Title: Chairman, DMK International, Inc.

If a Partnership, Trust or other Entity:

Name of Entity:

By:

Title:

SERIES J INVESTORS:

If and Individual:

By: /s/ Dan W. Lufkin

Dan W. Lufkin

Title:

If a Partnership, Trust or other Entity:

Name of Entity:

By:

Title:

SERIES J INVESTORS:

If and Individual:

By:

Title:

If a Partnership, Trust or other Entity:

Name of Entity: MARION FAMILY TRUST

U/T DTD 12/28/89

By: /s/ Andre Marion /s/ Linda Marbury Marion

Title: Trustees

SERIES J INVESTORS:

If and Individual:

By:/s/ Robert C. Miller

Robert C. Miller

Title:

If a Partnership, Trust or other Entity:

Name of Entity:

By:

Title:

SERIES J INVESTORS:

If and Individual:

By:

Title:

If a Partnership, Trust or other Entity:

Name of Entity: Parquet Legend Inc.
---

c/o Thomas P. Harrison, Kassler & Feuer,

By: /s/ Illegible

Title:

SERIES J INVESTORS:

If and Individual:

By:

Title:

If a Partnership, Trust or other Entity:

Name of Entity: Gary William Ross Trust

By: /s/ Illegible

Title: TRUSTEE

SERIES J INVESTORS:

If and Individual:

By:/s/ Stanley S. Shuman

Stanley S. Shuman

Title:

If a Partnership, Trust or other Entity:

Name of Entity:

By:

Title:

SERIES J INVESTORS:

If and Individual:

By:/s/ John Simon

       John Simon

Title:

If a Partnership, Trust or other Entity:

Name of Entity:

By:

Title:

SERIES J INVESTORS:

If and Individual:

By:/s/ C. Fred Toney

C. Fred Toney

Title: Managing Director, Pacific Growth Equitites

If a Partnership, Trust or other Entity:

Name of Entity:

By:

Title:

SERIES J INVESTORS:

If and Individual:

By:/s/ William J. Vanden Heuval

William J. Vanden Heuval

Title:

If a Partnership, Trust or other Entity:

Name of Entity: William J. Vanden Heuval

Retirement Plan

By: /s/ William J. Vanden Heuval

Title: Trustee
