VITAL IMAGES INC
Form 10-K/A
March 02, 2004

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K/A

(Amendment No. 2)

**ý ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES
EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2002

**o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES
EXCHANGE ACT OF 1934**

For the transition period from to

Commission File Number 0-22229

VITAL IMAGES, INC.

(Exact name of Registrant as specified in its charter)

Minnesota	**42-1321776**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
3300 Fernbrook Lane, N., Suite 200 Plymouth, Minnesota	**55447**
(Address of principal executive offices)	(Zip Code)

(763) 852-4100
(Registrant s telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act: **None**

Securities registered pursuant to Section 12(g) of the Act:

Common Stock, $.01 par value
Preferred Stock Purchase Rights

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ý No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to the Form 10-K. o

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the act). Yes o No ý

The aggregate market value of the common stock held by non-affiliates of the registrant computed by reference to the price at which the common stock was last sold as of June 28, 2002, the last business day of the registrant s most recently completed second fiscal quarter, was $49,012,000. The common stock is the registrant s only class of voting stock.

The number of shares outstanding of the issuer s classes of common stock as of February 28, 2003: Common stock, $.01 Par Value 9,039,714.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of registrant s definitive Proxy Statement in connection with the Annual Meeting of Shareholders to be held May 7, 2003 (2003 Proxy Statement) are incorporated by reference into Part III.

EXPLANATORY NOTE

Vital Images, Inc. (the Company) is filing this Amendment No. 2 to its Annual Report on Form 10-K for the year ended December 31, 2002, which was originally filed March 28, 2003 and amended by Amendment No. 1 filed on September 23, 2003 (collectively, the Form 10-K), principally to amend specific items of the Form 10-K to reflect: (1) the change in classification of certain customer support costs, which had previously been reported as a sales and marketing expense rather than as cost of revenue maintenance and services, and (2) the change in classification of amortization expense related to technology licensed from a third party, which had, prior to the third quarter of 2003, been reported as research and development expense rather than as cost of revenue- license fees. In addition, the Company has enhanced certain previously included disclosures regarding accounting policies related to revenue recognition. The changes in classification had no effect on the Company s previously reported revenue, operating income, net income (loss) or net income (loss) per share, nor did the changes in classifications affect the Company s balance sheets or statements of shareholders equity and cash flows. This Amendment No. 2 amends only the portions of the Form 10-K set forth herein; the remainder of the Form 10-K is unchanged and is not reproduced in this Amendment No. 2. This Amendment No. 2 does not reflect events occurring after the original filing of the Form 10-K.

This Amendment No. 2 contains changes to the following disclosures:

Part I Item 1. Business
Maintenance and Support
Employees

Part II - Item 6. Selected Financial Data

Part II - Item 7. Management s Discussion and Analysis of Financial Condition and Results of Operations

Part II - Item 8. Financial Statements and Supplementary Data Vital Images, Inc. Statements of Operations

Part II- Item 8. Financial Statements and Supplementary Data- Notes to Financial Statements
Note 2- Summary of Significant Accounting Policies- Revenue Recognition
Note 10- Licensed Technology
Note 14 Quarterly Financial Data (Unaudited)

Part IV - Item 15. Exhibits, Financial Statements Schedules and Reports on Form 8-K

VITAL IMAGES, INC.

FORM 10-K/A

Amendment No. 2

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Item 1. BUSINESS

Vital Images, Inc. (Vital Images or the Company) was incorporated in Iowa in September 1988. In March 1997, the Company re-incorporated under the laws of the state of Minnesota. The Company s principal executive offices are located at 3300 Fernbrook Lane N., Suite 200, Plymouth, MN 55447 (telephone (763) 852-4100, facsimile (763) 852-4110, e-mail info@vitalimages.com). From May 24, 1994 through May 11, 1997, the Company was a wholly-owned subsidiary of Bio-Vascular, Inc. (Bio-Vascular), now known as Synovis Life Technologies, Inc..

The Company files annual reports, quarterly reports, proxy statements, and other documents with the Securities and Exchange Commission (SEC) under the Securities Exchange Act of 1934 (Exchange Act). The public may read and copy any materials that the company files with the SEC at the SEC s Public Reference Room at 450 Fifth Street N.W., Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. Also, the SEC maintains an Internet website that contains reports, proxy and information statements, and other information regarding issuers, including the company, that file electronically with the SEC. The public can obtain any documents that the company files with the SEC at http://www.sec.gov.

The Company also makes available free of charge through its Internet website (http://www.vitalimages.com) the Company s Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and, if applicable, amendments to those reports filed or furnished pursuant to the Exchange Act as soon as reasonably practicable after the Company electronically files such material with, or furnishes it to, the SEC.

Business Description

Vital Images develops, markets and supports 3D medical imaging software for use primarily in disease screening, clinical diagnosis and therapy planning. The Company s software applies proprietary computer graphics and image processing technologies to a wide variety of data supplied by computed tomography (CT) scanners and magnetic resonance (MR) imaging devices. Vital Images products allow clinicians to create both two- and three-dimensional views of human anatomy and to non-invasively navigate within these images to better visualize and understand internal structures and pathologies. The Company believes that its high-speed visualization technology and customized protocols cost-effectively bring 3D visualization and analysis into the routine, day-to-day practice of medicine. The Company, which operates in a single business segment, markets its products to healthcare providers and to manufacturers of diagnostic imaging systems through a direct sales force in the United States and independent distributors in international markets.

Vitrea®, Vital Images advanced 3D medical imaging product for radiological and surgical applications, received FDA clearance in November 1996 and was released for sale in October 1997. Due to its speed and ease-of-use, management believes that *Vitrea* was the first 3D medical imaging product with the ability to appeal primarily to the clinical market. Historically, 3D medical imaging software was slow, difficult to use, and operated only on expensive workstations. Consequently, the functionality of such software was appealing only for research applications. The Company s *Vitrea* software combined speed with ease-of-use to enable a physician to access, manipulate and analyze 3D images, typically in less than five to ten minutes. The Company has released several updates to *Vitrea* each year, and in February 2003 released *Vitrea 2 Version 3.2*, which has improved quality, reliability and usability features to meet the diagnostic and treatment planning needs of busy radiology departments. The Company offers *Vitrea 2* both

as an integrated software and hardware system, consisting of *Vitrea 2* software installed on a computer workstation, and as a stand-alone software package. To date, the Company has licensed over 850 copies of *Vitrea* and *Vitrea 2* to hospitals, clinics, imaging centers and other sites, including 14 of the nation s top 17 hospitals.

The Company believes that growing acceptance of 3D medical imaging offers Vital Images numerous market expansion opportunities. Research and development efforts are currently focused on using the Company s base of visualization technology to expand to other imaging modalities, such as x-ray angiography, as well as

expanding the features and functions in the current modalities. Vital Images is also developing 3D medical imaging software tools for less-invasive screening applications, such as CT colonography for colon cancer screening, surgical planning, intra-operative visualization and real-time interventional 3D visualization.

The Company has a marketing and distribution agreement with Toshiba Corporation, Medical Systems Company (Toshiba), which names *Vitrea 2* as Toshiba s primary 3D software for use with their CT scanners in the United States and in more than 50 countries in North and South America, Europe, the Middle East, Africa, Australia and Asia, except Japan. The agreement runs through September 30, 2003. Sales by the Company to Toshiba accounted for approximately 34%, 27% and 27% of the Company s total revenue for the years ended December 31, 2002, 2001 and 2000, respectively. See Business Marketing and Distribution and Dependence on Major Customers.

The diagnostic medical imaging market continues to expand both its geographic boundaries and its definitive boundaries. Long defined as the market for CT, MR, ultrasound and other imaging modalities, the diagnostic imaging market has grown to include both picture archive and communications systems (PACS) and 3D imaging systems, which have become integral technologies for many radiology practices around the world.

According to Frost & Sullivan, the estimated U.S. market for 3D diagnostic imaging was $398 million in 2002 and will grow to over $1 billion by 2008, a compound annual growth rate of approximately 20%. Today, only a minority of hospitals, clinics and imaging centers use 3D medical imaging products in diagnostic imaging. Recent technological advances in both computer hardware and software development have dramatically improved the cost-to-performance ratio, bringing the prices for 3D medical imaging products into the reach of most healthcare providers. In addition, increasing clinical awareness, improving utility of applications and an exponential increase in CT slice volumes are driving demand for 3D medical imaging products.

Based on an increasing number of 3D procedures being performed as a result of the growing use of imaging technology, new 3D screening procedures and broader acceptance of 3D applications, Vital Images estimates that the potential worldwide market for 3D medical imaging software and workstations, including the U.S. market, will grow to $2 billion in less than five years.

Technology

The two core technologies underlying the Company s products are customized protocols, which make *Vitrea 2* simple to use, and a visualization technique known as volume rendering. A feature critical to *Vitrea 2 s* speed and ease-of-use are its customized protocols, which provide automated 2D and 3D renderings of scanner data, optimized for individual clinical applications. Vital Images engineers and clinical collaborators have selected specific views for each type of exam *Vitrea 2* supports in order to provide immediate, useful 2D and 3D views for the user. After the selected patient data has been retrieved, *Vitrea 2* provides the clinician with up to six views with all visualization parameters pre-set for the specific type of clinical exam. The visualization settings for these views are stored in *Vitrea 2 s* software and are automatically and adaptively applied to each patient study, optimizing the views displayed. By applying this proprietary protocol technique, the system anticipates the clinician s needs and provides immediately useful views of the patient data. The use of customized protocols automates the complex and time-consuming approaches inherent in many competing 3D medical imaging products and eliminates the need for the user to be proficient in operating complex graphics programs. The Company has been issued Patent No. 5,986,662 from the U.S. Patent and Trademark Office for its mechanism for automated protocol selection, Patent No. 6,130,671 for the mechanism to calculate simulated lighting in 3D images and Patent No. 6,219,059 for the user interface and mechanism used to control the relative transparency of 3D data in volume renderings of medical images.

Volume rendering is an advanced technique for displaying three-dimensional views on a computer monitor that the Company believes has significant advantages over the alternative technique, known as surface rendering. Volume rendering permits the direct display of all of the imaging data without mathematical modeling and allows interactive control of the level of transparency of the data. By comparison, surface

rendering requires the creation of artificial surfaces based on selected imaging data, and the usefulness of the resulting visual image is largely dependent on where these surfaces are set by the clinical technician. Volume rendering is not dependent on the creation of artificial surfaces and allows visualization of varying components that might otherwise be eliminated from a surface rendered image due to surface approximation. Because volume rendering uses all of the data and information collected by the imaging equipment, the Company believes visualization processes that use volume rendering provide clinicians with better images to define and display pathology and anatomy in a more useful manner.

Until the last several years, most medical imaging companies largely overlooked volume rendering because the computer power necessary to perform volume rendering was significantly more expensive and intensive than the requirements for surface rendering. The Company s experience with volume rendering has its basis in the efforts of Vincent J. Argiro, Ph.D., the founder of the Company, who developed three-dimensional visualization software using volume rendering as an aid in his research in developmental neuroscience. Dr. Argiro focused on accelerating the performance of volume rendering on standard computer platforms. As a result of his work, he developed expertise in accelerated volume rendering, which forms the core of the Company s volume rendering technology. Because the performance of standard computer platforms has increased while the relative cost of such performance has decreased, the Company believes that volume rendering has become a more accessible imaging solution for routine clinical applications.

The Company believes the combination of customized protocols and accelerated volume rendering offered by *Vitrea 2,* together with improved computer performance, allows it to deliver a simple, fast and affordable 3D medical imaging product.

Industry Background

Medical practices in the areas of diagnostic imaging, surgery and cancer treatment have changed dramatically over the past 20 years, due in part to the introduction of a variety of new imaging, visualization, analysis, computer, networking, catheter and navigation technologies. The result has been the rapid adoption and increased use of CT and MR scanners and the incorporation of new physician-care practices based on the imaging information provided by these devices.

Both of these imaging technologies capture data that provide a physician with a graphical representation of the inside of the human body. These images have traditionally been viewed as a series of two-dimensional, cross-sectional slices on x-ray-type film. As computer processing speed increased, software performance improved and networking technologies developed, manufacturers of scanning equipment began offering integrated systems that allowed clinicians to view, analyze and manipulate these medical images in a digital environment. These systems first visualized individual slices, or pictures, on a computer monitor and later provided views of multiple slices. More recently, medical imaging systems began to permit viewing and manipulation of large, multiple slice data sets as a single, three-dimensional image on a computer workstation. Today, the 3D medical imaging industry involves the creation, visualization, manipulation, analysis and communication of medical images in two, three and four dimensions.

Initially, the 3D medical imaging industry and the markets for 3D medical imaging products lagged the market for imaging devices due to the lack of industry standards for the generation, transmission and storage of medical imaging data and due to computer costs and performance considerations. After a time, many of the technical and cost barriers to growth in the 3D medical imaging industry and the PACS industry began to erode. In particular, the medical industry embraced an image transmission and archiving standard called DICOM, promulgated by the American College of Radiology and the National Electronic Manufacturer s Association. This standard permits imaging, visualization, networking and archiving systems from different vendors to work cooperatively within a single network. In addition, the cost-to-performance ratio of computer products used in visualization and PACS has improved dramatically, bringing the prices for 3D medical imaging capabilities and PACS within the grasp of most healthcare providers. The Company believes that the

acceptance of industry standards such as DICOM and the improvements in the cost-to-performance ratio for clinical workstations will support continued market growth in the 3D medical imaging and PACS industries.

Vital Images also expects that a number of other advantages of 3D medical imaging products will support growth in the 3D medical imaging industry:

Recent technology improvements in CT and MR scanners enable them to generate an increasing number of slices per exam, resulting in over 2,000 images, which is more than 15 times as many images as the same study less than five years ago. This makes the viewing of printed images on x-ray film, rather than in a medical imaging system, logistically impractical and expensive.

The number of planning procedures is growing. Physicians are increasingly recognizing the clinical value of 3D imaging. In addition, the Baby Boom generation has a strong interest in screening procedures for the early detection of cancer and heart disease. Accordingly, these factors are driving a demand for an increased number of scanning procedures.

Driven by a shortage of radiologists, hospital radiology departments are under pressure to perform as efficiently as possible. Thus an increased workload must be completed with the same or fewer people. Speed in interpreting images is essential for increasing workflow productivity. Thus, there is a clear need for a fast and efficient integrated 2D, 3D and 4D visualization tool. 4D is defined as 3D images showing changes over time such as images of a beating heart.

Diagnoses based on 2D images, or slices, require the clinician to assemble a 3D view mentally to understand the true anatomy and pathology. Given the industry pressure to produce cost-effective outcomes, 3D imaging is a valuable tool for accelerating diagnoses, potentially eliminating unnecessary tests and treatment, optimizing the use of minimally invasive surgery and therapies, and gaining additional insight needed for clinical decisions.

Spatial relationships are of paramount importance in surgery, and 3D views displaying anatomy and pathology can greatly aid in surgical planning. 3D medical imaging has the potential to promote improved surgical outcomes by giving surgeons a better road map from which to plan their operative procedures. Interactive navigation of volume data from scanners may also have the capability to spare patients from invasive procedures like endoscopy or conventional angiography.

Increased use of 3D medical imaging technology has the potential to enhance radiologists ability to communicate their findings to fellow clinicians, referring physicians and patients. In addition, the integration of these clinical disciplines through electronic visualization, networking and the Internet has the potential to provide the opportunity for greater cross-discipline coordination due to increased speed, access to information and the resulting ability to perform consultative, interactive planning and examination on computer workstations.

Markets

The Company participates in the rapidly growing 3D medical imaging market. The 3D medical imaging market also interrelates with a number of other markets such as the diagnostic imaging equipment market, the PACS market and the hospital and clinical information systems markets. 3D medical imaging software and systems have application and/or potential in diagnostic screening and radiology, remote diagnosis and consultation (e.g., telemedicine), surgical assessment, planning, navigation and follow-up, and radiation and chemotherapy treatment planning and medical education. The customers for these applications include radiology, surgery and oncology departments, as well as other clinical specialists, of hospitals and research centers, diagnostic imaging and screening centers, outpatient surgery centers, clinics and physician groups.

The diagnostic medical imaging market continues to expand its boundaries. Long defined as the market for CT, MR, ultrasound and other imaging modalities, the diagnostic imaging market has grown to include both PACS and 3D imaging systems, which have become integral technologies for many radiology practices around the world.

According to Frost & Sullivan, the estimated U.S. market for 3D diagnostic imaging was $398 million in 2002 and will grow to over $1 billion by 2008, a compound annual growth rate of approximately 20%. Today, only a minority of hospitals, clinics and imaging centers use 3D medical imaging products in diagnostic imaging. Recent technological advances in both computer hardware and software development have dramatically improved the cost-to-performance ratio, bringing the prices for 3D medical imaging products into the reach of most healthcare providers. In addition, increasing clinical awareness, improving utility of applications and an exponential increase in CT slice volumes are driving demand for 3D medical imaging products.

Based on an increasing number of 3D procedures being performed as a result of the growing use of imaging technology, new 3D screening procedures and broader acceptance of 3D applications, Vital Images estimates that the potential worldwide market for 3D medical imaging software and workstations, including the U.S. market, will grow to $2 billion in less than five years.

As discussed above, the overall market for 3D medical imaging software and systems is developing rapidly, as the related technology and products that define this market are relatively new and undergoing rapid change. Medical imaging software and system solutions for diagnostic radiology have existed for the last several years. The use of medical imaging software and systems to assist in surgical planning and navigation has only begun to emerge in clinical practice in the last few years. While medical imaging software and systems have been used in these applications and to support cancer treatment planning in the past, the Company believes that perspective, three-dimensional volume rendering represents an underutilized resource to practitioners for diagnostic screening and radiology, surgical planning and navigation and cancer treatment planning.

Strategy

The Company s goal is to be a leading provider of 3D medical imaging software that improves clinical outcomes and reduces costs. To achieve this goal, Vital Images intends to implement the following key strategies:

Develop and maintain leading-edge technology. The Company intends to continue its overall strategy of developing and marketing leading-edge medical 3D medical imaging software for a variety of medical applications. As part of this strategy, the Company will continue to improve the speed and performance of its *Vitrea 2* software. In particular, the Company will be focused on developing additional protocols that enhance the ease-of-use of *Vitrea 2*, as well as increasing the number of platforms on which *Vitrea 2* will operate.

Further develop applications for the Company s 3D medical imaging technology. The Company intends to leverage its core competencies in volume rendering, computer graphics and clinical applications. The Company plans to develop and offer a full range of 3D medical imaging software tools for disease screening, radiological diagnosis, therapy planning and intra-operative visualization. The Company believes that significant new opportunities exist for

the application of its innovative technologies for the diagnosis and treatment of cardiovascular disease, cancer and orthopedics.

Further penetrate the 3D medical imaging market. The Company intends to expand its sales and marketing staff and increase its marketing efforts in order to continue building momentum for the acceptance and purchase of *Vitrea 2* and its other products. A key challenge for the Company involves reaching and educating physicians and clinicians as to the benefits of the *Vitrea 2* software. By convincing the ultimate users of the benefits of its system, the Company

believes that it can successfully influence purchasing decisions for medical institutions purchasing or upgrading their imaging technology. In addition, the Company will work to expand its appeal by implementing additional 2D capability as well as ensuring that its technology will easily integrate into hospital networks.

Continue to seek collaborative partnerships with leading medical institutions. The Company has historically sought out and developed collaborative relationships with several prestigious medical institutions to develop and test the Company s visualization tools. The Company will continue to pursue collaborations to focus on developing products that will improve clinical outcomes and reduce costs for the practices of medical imaging and surgery.

Continue to seek collaborative partnerships with leading medical technology companies. In addition to collaborations with medical institutions, the Company intends to selectively pursue relationships with leading medical technology companies to expand the Company s clinical, distribution, financial and/or technical capability for its 3D medical imaging software products. Examples of such relationships include the Company s development, marketing and/or distribution agreements with Toshiba Corporation, Medical Systems Group (Toshiba); the Surgical Navigation Technologies division of Medtronic, Inc.; E-Z-EM, Inc.; and R2 Technology, Inc. (R2). See Business-Marketing and Distribution, Intellectual Property and Manufacturing and Service.

Products and Product Development

Vitrea. In December 1995, the Company assessed its business strategy and determined that to optimize its dedicated participation in the medical field, it needed to create a new product for direct clinical application. The objective for this new product effort was to produce an easy-to-use clinical software tool to allow radiologists and other clinicians to use two- and three-dimensional visualization in their routine clinical processes. Unlike its predecessor software, *VoxelView*®, the Company set out to design this new software product for users with clinical knowledge rather than computer graphics expertise. Specifications for this new product, called *Vitrea,* were developed in early 1996, with software development beginning in late spring of that year. The Company submitted 510(k) documentation in September 1996 for *Vitrea* and was granted marketing clearance by the U.S. Food and Drug Administration (the FDA) in November 1996 for use as a clinical diagnostic and surgical planning device when used with CT and MR medical imaging data. *Vitrea* was first released for sale to customers in October 1997. In December 1999, the Company released *Vitrea 2*, a Microsoft® Windows NT compatible version of its *Vitrea* software for 2D/3D visualization and analysis of medical image data. *Vitrea 2* was Vital Images first 3D-volume medical imaging software product available for the Microsoft Windows operating system and provides the speed and ease-of-use the medical community demands for diagnosis and treatment planning in a clinical environment. In February 2003, the Company released *Vitrea 2 Version 3.2*, which has improved quality, reliability and usability features to meet the diagnostic and treatment planning needs of busy radiology departments and operates on the Microsoft Windows XP operating system.

Vitrea 2 capitalizes on the Company s experience in 3D medical imaging and provides clinicians with an easy-to-use tool for disease screening, radiological diagnosis and therapy planning. It represents the Company s most important step to date as a provider of a range of clinical tools for broad distribution to the 3D medical imaging market. *Vitrea 2 s* primary features are its high-speed rendering capability and the ability to provide two- and three-dimensional viewing for routine diagnosis and therapy planning, without requiring the user to be trained in computer graphics techniques. The Company believes that both of these features - speed and ease-of-use - now make it possible to use three-dimensional medical imaging in daily clinical routines. A *Vitrea 2* user, following a built-in clinical workflow, can view the image data in two, three or four dimensions using visualization settings based on specific clinical applications stored within the system as dedicated visualization protocols. The user may then interactively navigate around, or fly through, the image to view clinically relevant anatomies and pathologies. *Vitrea 2* software also allows the user to capture views by

taking snapshots, which can be integrated into customized reports for electronic transmission and archiving through a DICOM network or sent to another location via the Internet.

Vitrea 2 software conforms to the latest medical imaging and computer industry standards, such as *OpenGL* computer graphics application programming interface (API) and DICOM.

The Company offers *Vitrea 2* primarily as an integrated software and hardware system, consisting of *Vitrea 2* software installed on a personal computer (PC). Pursuant to purchasing arrangements between the Company and computer resellers, the Company purchases personal computers at a nominal discount, installs its *Vitrea 2* software, and markets the package as an integrated 3D medical imaging solution, thereby implementing the Company s strategy to develop, market, sell and support an integrated 3D medical imaging workstation. Currently, *Vitrea 2* operates on PC workstations from Omni Tech, Inc., Hewlett-Packard Company and Dell Computer Corporation. The Company also sells software licenses without the related workstation hardware. The list price for a base model integrated workstation and software package is approximately $99,000, and the list price for the *Vitrea 2* software without a workstation is approximately $81,000.

In addition to its immediate clinical applications, *Vitrea 2* software incorporates a number of additional technological advances, thereby making it adaptable to routine clinical use in surgical navigation and cancer treatment planning and for integration into diagnostic imaging equipment manufactured by other companies. In particular, *Vitrea 2* software was written using advanced programming techniques, a modular, object-oriented design, C++ programming language, and a shared messaging structure. The Company believes these characteristics make it practical to modify *Vitrea 2* software to suit the clinical needs of surgical navigation and oncology, as well as allowing diagnostic equipment manufacturers to integrate *Vitrea 2* software or its components into imaging system consoles and off-line review stations, thereby providing the Company with the opportunity to leverage the *Vitrea 2* software development investment into new commercial areas.

Software options. In addition to *Vitrea 2*, the Company has developed a number of value-added software options that work with the base *Vitrea 2* software platform. These options provide a variety of clinical information and have list prices ranging from $20,000 to $50,000 each.

VScore . In August 1999, the Company introduced its *VScore* software for coronary artery calcium scoring. The *VScore* software product was the Company s first add-on option to the Company s *Vitrea 2* 3D medical imaging software product. The *VScore* option adds the functionality to non-invasively quantify calcium in the four major coronary arteries using CT image data. In August 2000, the Company introduced *VScore with EKG Gate*™, which allows physicians and technologists to select the images with the least amount of motion by matching the EKG signal with the images. In February 2001, the Company introduced *VScore with AutoGate*™, which allows users to create high quality cardiac images using existing helical CT scanners without the use of EKG recording devices.

CT Brain Perfusion. In October 2001, the Company introduced its CT Brain Perfusion software option to assist radiologists in analyzing blood flow of stroke victims where the speed of diagnosis and treatment is often the primary factor in determining the extent of recovery.

CT Colonography. In October 2001, the Company introduced its CT Colonography software option, which generates two- and three-dimensional images of the entire colon, increasing the speed and ease of locating and analyzing polyps. The option provides a less invasive, more comfortable diagnostic procedure than previously possible, improving patient compliance for screening

Automated Vessel Measurements. In October 2001, the Company introduced its Automated Vessel Measurements software option to assist physicians in characterizing the course and dimensions of diseased blood vessels. The Automated Vessel Measurements option is designed to support activities such as pre-surgical diagnosis, evaluation and stent planning in the abdominal aorta, carotid arteries, coronary arteries and renal arteries.

CT Cardiac. In February 2003, the Company introduced its CT Cardiac software option, which defines the coronary anatomy and the degree of luminal obstruction of the coronary arteries. It is commonly used to determine the extent of obstructive coronary artery disease and to assess the feasibility and appropriateness of various forms of therapy or surgical interventions.

Maintenance and Support. In addition to its system and software products, the Company also offers maintenance and support services to its customers, as well as certain other services such as installation and training. In connection with the licensing of *Vitrea 2* software, the Company markets annual maintenance services for both *Vitrea 2* software and the integrated *Vitrea 2* system, pursuant to which the Company provides software updates, minor feature enhancements, error correction, telephone support and general maintenance services for an annual fee of approximately $7,000. Outside of these maintenance services, the Company is required by FDA regulations to provide certain levels of support to end users as a result of the use of its products as medical devices. Maintenance services currently marketed by the Company do not include installation, training and other services, whether on- or off-site, as such services are charged separately by the Company.

License fees accounted for 67%, 66% and 66% of total revenue in each of the fiscal years ended December 31, 2002, 2001 and 2000, respectively. Maintenance and services comprised 19%, 16% and 13% of total revenue for the years ended December 31, 2002, 2001 and 2000, respectively, while hardware sales accounted for 14%, 18% and 21% of total revenue for the years ended December 31, 2002, 2001 and 2000, respectively.

The Company expensed $4,143,000, $3,359,000 and $3,036,000 incurred in its research and development efforts in each of the fiscal years ended December 31, 2002, 2001 and 2000, respectively.

Collaborative Relationships

Vital Images has formed collaboration relationships with some of the leading universities and physicians in medicine and medical imaging to develop what it believes to be the most innovative and clinically relevant medical imaging solutions. Vital Images has entered into clinical collaboration agreements with universities and physicians to:

Identify new clinical applications where 3D medical imaging can improve clinical outcomes and reduce costs;

Develop clinical routines that incorporate Vital Images 3D medical imaging software in normal diagnostic, screening and therapy planning practices;

Develop new features that facilitate and improve diagnosis and therapy planning for Vital Images future products;

Assess the clinical value of Vital Images 3D medical imaging software for given applications; and

Develop automated rendering protocols for 3D CT or MR data.

The following universities and institutions have entered into agreements with Vital Images for the purpose of forming collaborative relationships:

UCLA Medical Center

Duke University Medical Center

University of Iowa Hospital and Clinics

Mallinckrodt Institute of Radiology at the Washington University School of Medicine

University of Minnesota-Fairview University Medical Center

Northwestern University Medical Center

Massachusetts General Hospital

Stanford University Medical Center

Yale University School of Medicine

The Company s agreements with its collaborative partners do not provide such collaborators with any ownership of technology developed by the Company in connection with the collaboration and, with one exception, do not provide for the payment of any fees or royalties to such collaborators. The Company was obligated to pay a royalty to the Stanford University Medical Center equal to 0.5% of the Company s software license revenue from the sale of *Vitrea* and *Vitrea 2* through September 2000.

Competition

The 3D medical imaging market is developing and growing rapidly. It is intensely competitive, subject to rapid change and significantly affected by new product introductions and other market activities of industry participants. The Company s primary competitors are the various diagnostic imaging system suppliers, which are typically large, multinational companies, having far greater financial and technical resources than the Company. They also have well-established sales and distribution networks for their products. These companies, including GE Medical Systems, Siemens Medical Systems, Inc. and Philips Medical Systems, are engaged in the business of developing and marketing medical imaging systems, such as CT and MR equipment. These competitors offer 3D medical imaging capabilities integrated with their products in addition to the 2D medical imaging capabilities typically provided as a part of the operator s console on the imaging equipment itself. This medical imaging capability may be internally developed by these companies, or it may be licensed from independent vendors. In order to compete effectively with these companies, Vital Images must convince customers to separate their purchasing decisions regarding the imaging equipment itself from the selection and purchase of the 3D medical imaging workstations instead of purchasing an entire integrated system manufactured by one entity. To a lesser extent, the Company also faces competition from other medical imaging systems and software suppliers, PACS vendors, hospital, radiology and clinical system suppliers, and internal development projects sponsored by hospital radiology departments.

Other medical imaging systems and software suppliers compete on the basis of volume rendering or other visualization technologies, specific applications or market niches. Most of these suppliers, including Voxar Ltd., Viatronix, Inc. and TeraRecon, Inc., are smaller companies than Vital Images. PACS companies sometimes provide medical imaging capability in addition to their image archiving and networking products. Vendors of hospital, clinical and radiology information systems have also diversified into the PACS and medical imaging product lines, either through internal development or business development. These companies, which may be large or small, attempt to offer an integrated system covering a full range of administrative, clinical and radiology information management capabilities to healthcare providers. Finally, some

research and university healthcare institutions may attempt to develop their own 3D medical imaging systems. These institutions have in the past, and may in the future, attempt to secure FDA clearance for such systems and to license such systems or technology for general commercial sale.

The Company s competitive strength is based on its ability to do the following:

Provide differentiated 3D medical imaging products that operate in multi-vendor network and image source environments.

Provide clinical quality, three-dimensional images, volume rendered at high speed with interactive navigation on a relatively low-cost standard computer.

Integrate clinical knowledge from its collaborative clinical partners into its products.

Leverage its visualization technology across multiple clinical disciplines, including disease screening, clinical diagnosis and therapy planning.

Offer a DICOM client product, which can operate on any DICOM network, independent of the imaging system and network provider.

Serve both original equipment manufacturers (OEM) and end-user customers through the development of a modular end-user product that can easily be segmented for OEM customers.

The Company believes that product quality, performance, functionality and features, quality of support and service, reputation and price are also important competitive factors. The Company believes that customers will prefer *Vitrea 2* because it is simple, fast and affordable. While price has been less significant than other factors, increasing competition in the 3D medical imaging market may result in price reductions and reduced gross margins. In particular, should one or more of the diagnostic imaging system suppliers choose to provide or distribute more competitive medical imaging products than those offered by the Company, the Company s business, financial condition and results of operations could be materially adversely affected.

Marketing and Distribution

The Company markets *Vitrea 2* both as a software package and as part of an integrated software and hardware system to radiologists, surgeons, primary care physicians and medical researchers. The Company markets its products directly to end-user customers, such as hospitals and clinics, as well as to select diagnostic imaging companies, digital imaging equipment manufacturers and PACS companies for resale as a Vital Images branded product. In November 2001, the Company signed a joint venture agreement to work collaboratively on products and services in image-guided surgery and surgical planning with the Surgical Navigation Technologies (SNT) division of Medtronic, Inc. Under this agreement, the Company s advanced visualization technology will be integrated into Medtronic SNT s image-guided surgery products, and the two companies will collaborate on new surgical planning software and service offerings. In October 2001, the Company signed an exclusive agreement with E-Z-EM, Inc. to develop and distribute a dedicated CT colonography product. In September 2000, the Company signed a marketing and distribution agreement with Toshiba America Medical Systems (TAMS), which named *Vitrea 2* as TAMS primary 3D software for use with their CT scanners in the United States. In February 2002, the Company announced that it had entered into a marketing and distribution agreement with Toshiba Corporation, Medical Systems Company to offer *Vitrea 2* to its subsidiaries and distributors, including TAMS, in more than 50 countries in North and South America, Europe, the Middle East, Africa, Australia and Asia, except Japan. The agreement ran through September 30, 2002. In January 2003, the Company announced that it had renewed the agreement through September 30, 2003. See Business Dependence on Major Customers.

In addition, the Company markets its products directly to select OEMs on either a standard basis or, in the case of Medtronic SNT, a customized basis. In connection with its OEM opportunities, the Company will either provide complete systems for resale by such OEMs or will provide elements of its technology for incorporation into the products and systems of such OEMs.

The Company markets its products both domestically and internationally. In the United States, the Company markets its products through its direct sales force as well as through OEMs and resellers. Internationally, the Company markets its products through OEMs and resellers. See Note 8 to the Financial Statements - Major Customers and Geographic Data for information regarding the Company s export sales. As of December 31, 2002, the Company had 20 direct salespeople in the U.S., one international reseller salesperson, one OEM customer and nine international resellers.

Customers and Customer Support

Through December 31, 2002, the Company has sold over 850 separate software licenses for *Vitrea*, *Vitrea 2* and InnerviewGI for use in over 700 different sites, including hospitals, clinics, imaging centers and other

sites. The Company s customers include America s most renowned hospitals, including the following 14 of the top 17 hospitals listed in *U.S. News and World Report s* honor roll of top hospitals:

Johns Hopkins Hospital

Mayo Clinic

Cleveland Clinic

Massachusetts General Hospital

UCLA Medical Center

Duke University Medical Center

UCSF Medical Center

Barnes-Jewish Hospital

Brigham & Women s Hospital

University of Washington Medical Center

New York Presbyterian Hospital

Hospital of the University of Pennsylvania

Stanford University Hospital

University of Chicago Hospitals

In addition, the advantages of *Vitrea 2* software simple, fast and affordable have also appealed to hospitals and clinics in smaller population areas.

The Company is committed to rapid response to customer service requests. Customer support representatives are available during the Company s business hours to answer questions about the operation, maintenance and repair of the Company s products.

Intellectual Property

Although the Company has filed patent applications with respect to certain aspects of its technology, it generally does not rely on patent protection with respect to its products and technologies. Instead, the Company relies primarily on a combination of trade secret and copyright law, employee and third-party nondisclosure agreements and other protective measures to protect intellectual property rights pertaining to its products and technologies. Because of the rapid pace of technological change in the 3D medical imaging industry, the Company believes that patent, trade secret and copyright protection are less significant to its competitive position than factors such as the knowledge, ability and experience of its personnel; new product developments and enhancements; and ongoing, reliable product maintenance and support.

The Company has been issued Patent No. 5,986,662 from the U.S. Patent and Trademark Office for its mechanism for automated protocol selection. The use of automated protocol selection within *Vitrea 2* allows the user to view image data in two or three dimensions using visualization settings based on specific clinical applications stored within the software. This unique technology adds significantly to the simplicity of use of the software a key advantage over competing technologies. The Company has been issued Patent No. 6,130,671 for the mechanism to calculate simulated lighting in 3D images. The mechanism for calculating simulated lighting in 3D images permits two-sided lighting in volume-rendered images, which is crucial for viewing image data that represents edges of bright as well as dark regions. These include producing simulated endoscopic images of contrast-filled blood vessels, the gastrointestinal tract and the urinary system. The Company has been issued Patent No. 6,219,059 for the user interface and mechanism used to control the relative transparency of 3D data in volume renderings of medical images. Volume rendering is an advanced technique for displaying two- or three-dimensional views on a computer screen. It permits the direct display of all of the imaging data without mathematical modeling and allows interactive control of the level of transparency of the data. All of the patents listed above are utilized in the *Vitrea 2* software.

The Company does not own all of the software and other technologies used in its products, but it has the licenses from third parties that the Company believes are necessary for using that technology in its current products. It may be necessary to renegotiate with such third parties for any new versions of current products or any new products. Such third party licenses may not be available on reasonable terms, or at all.

Manufacturing and Service

The Company s manufacturing efforts are limited to the production, quality assurance and distribution of its software, which is distributed on CD-ROM. The software is sent to the customer site and loaded into a

personal computer. The software for *Vitrea 2* is loaded into the computer by Company personnel, as part of the Company s installation services, which are priced and billed incrementally to the software license billing, or by an authorized reseller s personnel as part of their installation services. In addition to the loading of software into the computer, installation services generally include integrating *Vitrea 2* workstations into customers computer networks, configuring the network requirements and verifying software operability on site.

The Company relies primarily on its own software development as its core competence. The Company sources certain application and utility software from third parties, see Intellectual Property above, and the operating system for integrated computer workstations from other parties. In addition, the Company sources systems components, computers and computer peripherals from third party suppliers.

The Company has also signed reseller distribution agreements that allow it to distribute products from certain third parties. The Company currently has agreements with R2 Technology, Inc. for R2 s ImageChecker® CT software applications for the detection of lung nodules and Mindways Software, Inc. for Mindways QCT PRO BMD software for measuring bone density.

Governmental Regulation

As medical devices, the Company s 3D medical imaging software products are subject to extensive and rigorous regulation by numerous governmental authorities, principally the FDA and corresponding foreign agencies. In the United States, the FDA administers the Federal Food, Drug and Cosmetic Act and its amendments. These regulations classify medical devices as either Class I, II or III devices, which are subject to general controls, special controls or pre-market approval requirements, respectively. Most Class I and II devices, as well as some Class III devices, can be cleared for marketing pursuant to a 510(k) pre-market notification. The process of obtaining a 510(k) clearance typically can take several months to a year or longer.

Class III devices generally require more stringent clinical investigation and pre-market clearance requirements. In such cases, the FDA will require that the manufacturer submit a pre-market approval (PMA) application that must be reviewed and approved by the FDA prior to the sale and marketing of the device in the United States. The process of obtaining a PMA can be expensive, uncertain and lengthy, frequently requiring anywhere from one to several years from the date of FDA submission, if approval is obtained at all. Moreover, a PMA, if granted, may include significant limitations on the indicated uses for which a product may be marketed.

Vitrea 2 is classified as a Class II medical device and has received marketing clearance from the FDA as the result of a 510(k) submission. Specifically, *Vitrea 2* has been cleared to be marketed for use with CT and MR scanners, the Company s *VScore* software options have been cleared for use in coronary artery calcium scoring and the Company s CT Brain Perfusion option has been cleared for analyzing the blood flow of stroke victims. Future products, add-on options to existing software, and expanded claims of efficacy will likely require additional 510(k) applications.

In the early 1990s, the review time by the FDA to clear medical devices for commercial release lengthened and the number of clearances, both of 510(k) submissions and PMAs, decreased. In response to public and congressional concern, the FDA Modernization Act of 1997 was adopted with the intent of bringing better definition to the clearance process. Although this Act has resulted in improved cycle times for product clearance, there can be no assurance that the FDA review process will not involve delays or that certain clearances will be granted on a timely basis.

The Company is also increasingly becoming subject to regulation in those foreign countries in which it sells its products. Many of the regulations applicable to the Company s products in such countries are similar to those of the FDA. The Company s ability to successfully market and sell its products internationally depends in large part on its ability to comply with such foreign regulatory requirements. *Vitrea 2* software has been

Conformitee Europeene (CE) marked, indicating conformance with applicable sections of the Medical Device Directive 93/42/EEC, which allows the product to be marketed in the member countries of the European Communities.

The Company is also subject to periodic inspections by the FDA, whose primary purpose is to audit the Company s compliance with quality system regulations established by the FDA and other applicable government standards. Regulatory action may be initiated in response to audit deficiencies or to product performance problems. The Company believes that its manufacturing and quality control procedures are in essential compliance with the requirements of the FDA regulations.

In January 2001, the Company announced that it had received ISO 9001 Certification and an upgraded Class I Measurement CE Mark for its medical imaging software products.

The financial arrangements through which the Company markets, sells and distributes its products may be subject to certain federal and state laws and regulations in the United States with respect to the provision of services or products to patients who are Medicare or Medicaid beneficiaries. Violations of these laws and regulations may result in civil and criminal penalties, including substantial fines and imprisonment. In a number of states, the scope of these laws and regulations have been extended to include the provision of services or products to all patients, regardless of the source of payment, although there is variation from state to state as to the exact provisions of such laws or regulations. In other states and, on a national level, several health care reform initiatives have been proposed which would have a similar impact. The Company believes that its operations and its marketing, sales and distribution practices currently comply with all current fraud and abuse and physician anti-referral laws and regulations, to the extent they are applicable.

Third Party Reimbursement and Cost Containment

The Company s products are purchased primarily by hospitals, clinics, imaging centers and other users that bill various third party payers for the services provided to the patients. These payers, which include Medicare, Medicaid, private insurance companies and managed care organizations, reimburse part or all of the costs and fees associated with the procedures utilizing the Company s products. The medical imaging services performed using the Company s software are covered by current CPT codes (Current Procedural Terminology, as defined by the Centers for Medicare & Medicaid Services). As such, hospitals providing services on the Company s 3D medical imaging workstations can seek reimbursement by using existing, approved CPT codes. Medicare and Medicaid reimbursement for hospitals is based on a fixed amount for admitting a patient with a specific diagnosis. Because of this fixed reimbursement method, hospitals have incentives to use less costly methods in treating Medicare and Medicaid patients, and will frequently make capital expenditures to take advantage of less costly treatment technologies. Frequently, reimbursement is reduced to reflect the availability of a new procedure or technique and, as a result, hospitals are generally willing to implement new cost-saving technologies before these downward adjustments take effect. Likewise, because the rate of reimbursement for certain physicians who perform certain procedures has been, and may in the future, be reduced in the event of changes in the resource-based relative value scale method of payment calculation, physicians may seek greater cost efficiency in treatment to minimize any negative impact of reduced reimbursement. Any amendments to existing reimbursement rules and regulations which restrict or terminate the reimbursement eligibility (or the extent or amount of coverage) of medical procedures using the Company s products or the eligibility (or the extent or amount of coverage) of the Company s products could have a material adverse impact on business.

In response to the focus of national attention on rising health care costs, a number of changes to reduce costs have been proposed or have begun to emerge. There have been, and may continue to be, proposals by legislators and regulators and third party payers to reduce these costs. There has also been a significant increase in the number of Americans enrolling in some form of managed care plan and, in addition, many hospitals participate in or have agreements with HMOs. It has become a typical practice for hospitals to affiliate themselves with as many managed care plans as possible. Higher managed care penetration typically

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drives down the prices of healthcare procedures, which in turn places pressure on medical supply prices. This causes hospitals to implement tighter vendor selection and certification processes by reducing the number of vendors used, purchasing more products from fewer vendors and trading discounts on price for guaranteed higher volumes to vendors. Hospitals have also sought to control and reduce costs over the last decade by joining group purchasing organizations or purchasing alliances. The Company cannot predict what continuing or future impact these practices, the existing or proposed legislation, or such third party payer measures may have on its future business.

Health Insurance Portability and Accountability Act of 1996 (HIPAA)

The HIPAA regulations are causing customers of the Company to request that the Company sign business associate agreements with them. A business associate is a person or entity that performs certain functions or activities that involve the use or disclosure of protected health information on behalf of, or provides services to, a covered entity. By law, the HIPAA Privacy Rule applies only to covered entities health plans, health care clearinghouses, and certain health care providers. However, most health care providers do not carry out all of their health care activities and functions by themselves. Instead, they often use the services of a variety of other persons or businesses. The Privacy Rule allows covered providers and health plans to disclose protected health information to these business associates if the providers or plans obtain satisfactory assurances that the business associate will use the information only for the purposes for which it was engaged by the covered entity, will safeguard the information from misuse, and will help the covered entity comply with some of the covered entity s duties under the Privacy Rule. Covered entities may disclose protected health information to an entity in its role as a business associate *only* to help the covered entity carry out its health care functions not for the business associate s independent use or purposes, except as needed for the proper management and administration of the business associate.

Employees

As of February 28, 2003, the Company had 105 full-time employees, with 35 involved in research and development, 33 in sales and marketing, 18 in technical support functions for maintenance and services and 19 in administrative functions. The Company is not a party to any collective bargaining agreement involving its employees and believes its relationship with its employees is good.

Important Factors

The following factors are important and should be considered carefully in connection with any evaluation of the Company s business, financial condition, results of operations and prospects. Additionally, the following factors could cause the Company s actual results to materially differ from those reflected in any forward-looking statements of the Company.

Historical Operating Losses

For the year ended December 31, 2002 the Company had operating income of $677,000. The Company had operating losses of $1,055,000 and $2,787,000 for the years ended December 31, 2001 and 2000, respectively, and, with the exceptions of the fiscal years ended December 31, 2002 and October 31, 1995, has incurred operating losses each year since 1990. As of December 31, 2002, the Company s accumulated deficit was $20,088,000. The Company s ability to maintain annual profitability will depend on, among other things, its ability to successfully market its

products, make new product offerings, respond to competitive developments and attract and retain qualified sales, technical and management employees. There can be no assurance that the Company will continue to achieve profitable operations on an annual basis. See Item 7. Management s Discussion and Analysis of Financial Condition and Results of Operations.

New Product Acceptance

The Company s success depends on its ability to successfully market its *Vitrea 2* software for clinical use, and the ability and willingness of physicians to use two- and three-dimensional medical imaging software in disease screening, clinical diagnosis and therapy planning and other diagnosis, surgical, and treatment protocols. The three-dimensional medical imaging software offered by *Vitrea 2* represents a new alternative to the conventional methods traditionally used for viewing medical images in the clinical setting. The acceptance of *Vitrea 2* by physicians and other clinicians will depend on the Company s ability to educate those users as to the speed, ease-of-use and other benefits offered by the *Vitrea 2* system, as well as the timely introduction of new features and functions by the Company. There can be no assurance that users will prefer three-dimensional medical imaging software over less expensive two-dimensional medical imaging software, or that the Company will succeed in its efforts to further develop, commercialize, and achieve market acceptance for its *Vitrea 2* product or for any other product in the clinical setting. See Business Technology, Industry Background, Markets and Competition.

Substantial Reliance on a Single Product

Revenue from sales of the *Vitrea 2* system constituted 98% of the Company s total revenue for the year ended December 31, 2002, 96% of the Company s total revenue for the year ended December 31, 2001 and 96% of the Company s total revenue for the year ended December 31, 2000. Further, the Company anticipates that revenue from the sale of *Vitrea 2* will continue to account for a substantial portion of the Company s revenue for the foreseeable future. As such, the failure of physicians to accept *Vitrea 2* would have a material adverse impact on the Company s results of operations and financial condition.

Dependence on Market Growth

The 3D medical imaging industry in which the Company markets its products is still developing due to the fairly recent availability of high performance computers at reduced prices, the recent adoption of industry standards for the generation, transmission and storage of medical imaging data, and changing medical practices. Historically, there has been a perception that three-dimensional imaging was too slow or difficult for clinical use. This perception was due largely to the relatively slower processing speed of workstations available in the past. Although the Company believes that the recent advances in the affordability of high performance computers and in the development of industry standards for the generation, transmission, and storage of imaging data will provide opportunities for growth in the 3D medical imaging industry, given the uncertainties associated with the developing stage of this industry, there can be no assurance that it will continue to develop in the manner anticipated by the Company. Accordingly, there can be no assurance that the 3D medical imaging industry will provide growth opportunities for the Company and its software products or that the Company s business strategies will be successful as the 3D medical imaging industry continues to evolve. Ultimately, if the 3D medical imaging industry fails to develop as the Company expects, the Company s business, results of operations and financial condition will be materially and adversely affected.

Need for Additional Capital

If the Company s operations progress as anticipated, of which there can be no assurance, the Company believes that its existing cash balances, together with cash flows from operations, should be sufficient to satisfy its cash requirements for at least the next 12 months.

The timing of the Company s future capital requirements will depend on a number of factors, including, but not limited to, the ability of Vital Images to successfully market its products; the ability and willingness of physicians to use two- and three-dimensional medical imaging software in disease screening, clinical diagnosis and therapy planning and other diagnosis, surgical, and treatment protocols; the impact of competition in the 3D medical imaging business; the ability of the Company to differentiate its products from competing products; the capital equipment budget constraints of some potential purchasers; the ability of the Company to

build an effective sales and distribution force; and the ability to enhance existing products and develop new products on a timely basis. To the extent that the Company s operations do not progress as anticipated, additional capital may be required. There can be no assurance that any required additional capital will be available on acceptable terms, or at all, and the failure to obtain any such required capital would have a material adverse effect on Vital Images business. The issuance of additional equity securities may result in dilution of current shareholder voting and ownership interests. See Item 7. Management s Discussion and Analysis of Financial Condition and Results of Operations.

Highly Competitive Industry

The Company faces intense competition in the 3D medical imaging industry. The Company expects technology to continue to develop rapidly, and the Company s success will depend to a large extent on its ability to maintain a competitive position with its products. Companies competing with the Company in the 3D medical imaging industry include large, established manufacturers of CT and MR imaging equipment. Companies such as GE Medical Systems, Siemens Medical Systems, Inc. and Philips Medical Systems typically offer their own medical imaging software and workstations as part of their integrated imaging and scanner systems. The Company s ability to successfully market and sell its current 3D medical imaging products to prospective customers depends, in part, on its ability to persuade such customers to separate the purchase of CT or MR equipment from the selection and purchase of 3D medical imaging workstations. In addition to having significantly greater capital and staffing resources for research and development that are critical to success in the rapidly changing 3D medical imaging industry, such companies also have well-established marketing and distribution networks and have a competitive advantage in marketing 3D medical imaging tools as an integrated part of their imaging products. While price has been less significant than other factors, increasing competition may result in price reductions and reduced gross margins. Additionally, the Company faces competition from other entities, such as other software suppliers, information storage and retrieval vendors, hospital, radiology and clinical systems suppliers and internal development projects sponsored by hospital radiology departments. There can be no assurance that the Company will be able to compete effectively with such manufacturers or competing entities. See Business Technology, Industry Background and Competition.

Risk of Technological Obsolescence

The 3D medical imaging market is characterized by rapid innovation and technological change. There can be no assurance that the Company will be able to compete effectively in the marketplace or that products developed by its competitors will not render its products obsolete or non-competitive. Similarly, there can be no assurance that the Company s competitors will not succeed in developing or marketing products that are viewed as providing superior clinical performance or are less expensive than the Company s products currently marketed or to be developed.

Dependence on Major Customers

One of the Company s principal distribution channels is to sell its *Vitrea 2* medical imaging software for inclusion with the delivery of medical imaging equipment being sold by Toshiba Corporation, Medical Systems Company (Toshiba). Sales by the Company to Toshiba accounted for approximately 34%, 27% and 27% of the Company s total revenue for the years ended December 31, 2002, 2001 and 2000, respectively. Management believes a limited number of large customers may continue to account for a significant portion of the Company s revenue during any given period for the foreseeable future. Except for its marketing and distribution agreements with Toshiba, Medtronic SNT and E-Z-EM, Inc., the Company currently has no long-term purchase or other agreements with any of its customers and sales are generally made pursuant to purchase orders. A reduction, delay, or cancellation of orders from one or more of its significant customers likely would have a material adverse effect on the Company s operating results. See Business-Marketing and Distribution.

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Impact of Purchase Commitments

In November 2002, the Company entered into an agreement with R2 Technology, Inc. (R2) to distribute R2 s lung nodule CAD software product (lung CAD Product) in conjunction with the Company s products. Upon the later of either the date on which R2 is able to meet CE certification requirements and produce a Declaration of Conformance for the lung CAD product or the completion of the milestones in the development plan with respect to the lung CAD product that will be distributed in Europe, the Company is required to begin purchasing the lung CAD product over the next three years. The total purchase commitment will be to a maximum of $5.6 million worth of product over the three-year commitment period. The purchase commitment price the Company has to pay will be reduced if the selling price of the lung CAD product when sold directly to end-users by R2 falls below a specified price.

Fluctuations in Operating Results

The Company may experience significant fluctuations in future annual and quarterly operating results. If these fluctuations occur, they may result in volatility in the price of the Company s common stock. Quarterly revenue and operating results may fluctuate as a result of a variety of factors including, but not limited to, the timing of significant orders, the timing of product enhancements and new product introductions by the Company, its competitors and its customers, the pricing of the Company s products, changes in customers budgets, and competitive conditions, many of which are beyond the control of the Company.

Government Regulation

The Company s products are subject to regulation by the FDA and by comparable agencies in foreign countries. In the United States, the FDA regulates the development, introduction, manufacturing, labeling and record keeping procedures for medical devices, including 3D medical imaging software and systems. The process of obtaining marketing clearance from the FDA for new products and new applications for existing products can be time-consuming and expensive. All of the current products actively marketed by the Company have received marketing clearance from the FDA pursuant to 510(k) pre-market notifications. *Vitrea 2* has been approved to be marketed for use with CT and MR scanners, the Company s *VScore* options have been approved for use in coronary artery calcium scoring and the Company s CT Brain Perfusion option has been cleared for analyzing the blood flow of stroke victims. There can be no assurance, however, that clearance will be granted with respect to future products or enhancements, or that FDA review will not involve delays that would adversely affect the Company s ability to market such future products or enhancements. In addition, there can be no assurance that future products or enhancements will not be subject to the more lengthy and expensive pre-market approval process with the FDA.

Even if regulatory approvals to market a product are obtained from the FDA, these approvals may entail limitations on the indicated uses of the product. Product approvals by the FDA can also be withdrawn due to failure to comply with regulatory standards or the occurrence of unforeseen problems following initial approval. The FDA could also limit or prevent the distribution of the Company s products and has the power to require the recall of such products. FDA regulations depend heavily on administrative interpretation, and there can be no assurance that future interpretations made by the FDA or other regulatory bodies will not adversely affect the Company. The FDA may inspect the Company and its facilities from time to time to determine whether the Company is in compliance with various regulations relating to specification, development, documentation, validation, testing, quality control and product labeling. A determination that the Company is in violation of such regulations could lead to imposition of civil penalties, including fines, product recalls or product seizures and, in extreme cases, criminal sanctions.

The Company markets its products both domestically and internationally. International regulatory bodies have established varying regulations governing product standards, packaging requirements, labeling requirements, import restrictions, tariff regulations, duties and tax requirements. The inability or failure of the Company to comply with the varying regulations or the imposition of new regulations could restrict its ability to sell its

products internationally and could thereby adversely affect the Company s business. See Business Governmental Regulation.

Health Insurance Portability and Accountability Act of 1996 (HIPAA)

The HIPAA regulations are causing customers of the Company to request that the Company sign business associate agreements with them. A business associate is a person or entity that performs certain functions or activities that involve the use or disclosure of protected health information on behalf of, or provides services to, a covered entity. By law, the HIPAA Privacy Rule applies only to covered entities health plans, health care clearinghouses, and certain health care providers. However, most health care providers do not carry out all of their health care activities and functions by themselves. Instead, they often use the services of a variety of other persons or businesses. The Privacy Rule allows covered providers and health plans to disclose protected health information to these business associates if the providers or plans obtain satisfactory assurances that the business associate will use the information only for the purposes for which it was engaged by the covered entity, will safeguard the information from misuse, and will help the covered entity comply with some of the covered entity s duties under the Privacy Rule. Covered entities may disclose protected health information to an entity in its role as a business associate *only* to help the covered entity carry out its health care functions not for the business associate s independent use or purposes, except as needed for the proper management and administration of the business associate. If the Company is not willing to or is unable to enter into a business associate agreement with current and potential customers, the customer may not purchase products and services from the Company and this would have a material adverse impact on the Company s results of operations and financial condition.

Uncertain Protection for Intellectual Property; Possible Claims of Others

Although the Company has filed patent applications with respect to certain aspects of its technology, it generally does not rely on patent protection with respect to its products and technologies. Instead, the Company relies primarily on a combination of trade secret and copyright law, employee and third-party nondisclosure agreements and other protective measures to protect intellectual property rights pertaining to its products and technologies. There can be no assurance that these measures will provide meaningful protection of the Company s trade secrets, know-how or other intellectual property in the event of any unauthorized use, misappropriation or disclosure or that others will not independently develop similar technologies or duplicate any technology developed by the Company. In addition, to the extent that any patents are applied for, there can be no assurance that such applications will result in issued patents or, if issued, that such patents will be held to be valid or will otherwise be of value. While the Company does not believe that its products and technologies infringe any existing patents or intellectual property rights of third parties, there can be no assurance that such infringement does not exist. The costs of prosecuting or defending an intellectual property claim could be substantial and could adversely affect the Company, even if it was ultimately successful in prosecuting or defending any such claims. If the Company s products or technologies were found to infringe the rights of a third party, the Company could be required to pay significant damages or license fees or cease production, any of which could have a material adverse effect on the Company s business. See Business Intellectual Property.

Product Liability Risk; Limited Insurance Coverage

The manufacture and sale of products used in the practice of medicine entail significant risk of product liability claims. While the Company currently maintains product liability insurance in the amount of $11,000,000 per occurrence and $12,000,000 in total and also maintains errors and omissions coverage in the amount of $11,000,000 per occurrence and in total, there can be no assurance that its coverage limits will be adequate to protect the Company from any liabilities it might incur in connection with the sale of its products, or that the Company will be able to maintain this level of coverage in the future. The Company also may require increased product liability

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coverage as additional products and updates are released. Such insurance is expensive and in the future may not be available on acceptable terms, if at all. A successful product liability claim or series of such claims against the Company in excess of the Company s insurance coverage could have a material adverse effect on its business.

Dependence on Key Employee; Need to Hire Additional Personnel

The Company depends upon the continued active participation of Dr. Vincent J. Argiro, its Chief Technology Officer and Founder. Loss of the services of Dr. Argiro could have a material adverse effect on the Company s future business. Dr. Argiro does not have an employment agreement with the Company, but he does have a confidentiality and non-competition agreement with the Company. The Company maintains key person life insurance coverage on Dr. Argiro s life in the amount of $500,000.

The Company s ability to enhance and develop markets for its current products as well as to introduce new products to the marketplace also depends on its ability to attract and retain qualified scientific and management personnel. The Company competes for such personnel with other companies, academic institutions, government entities and organizations, many of which have substantially greater capital resources, name recognition, and research and development capabilities than the Company. There can be no assurance that the Company will be successful in recruiting or retaining such personnel. The inability of the Company to recruit and retain such personnel would have a material adverse effect on the Company s business.

Management of Growth

The execution of the Company s business plan will place increasing demands on the Company s existing management and resources. There can be no assurance that the Company will be able to effectively manage any expansion of its business, which could have a material adverse effect on the Company s business, financial condition and results of operations.

Dependence on Third-Party Reimbursement

The Company s products are purchased by hospitals, clinics, imaging centers and other users, which bill various third party payers, such as government health programs, private health insurance plans, managed care organizations and other similar programs, for the health care goods and services provided to their patients. There is currently a Current Procedural Terminology (CPT) reimbursement code for procedures that utilize the Company s products. However, the amount of such reimbursement varies by location and is subject to change. Payers may deny reimbursement if they determine that a product used in a procedure was not used in accordance with established payer protocol regarding cost-effective treatment methods or was used for an unapproved indication. Third party payers are increasingly challenging the prices charged for medical services and, in some instances, have put pressure on service providers to lower their prices or reduce their services. The Company is unable to predict what changes will be made in the reimbursement methods used by third party healthcare payers. There can be no assurance that procedures in which the Company s products are used will be considered cost effective by third party payers, that reimbursement for such procedures will be available or, if available, that payers reimbursement levels will not adversely affect the Company s ability to sell its products on a profitable basis. In addition, there have been and may continue to be proposals by legislators, regulators and third party payers to curb further these costs in the future. Failure by hospitals and other users of the Company s products to obtain reimbursement from third party payers, changes in third party payers policies toward reimbursement for procedures using the Company s products or legislative action could have a material adverse effect on the Company s business. See Business Third Party Reimbursement and Cost Containment.

Uncertainty of Health Care Reform

The levels of revenue and profitability of medical technology companies may be affected by the efforts of government and third party payers 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,

state, and private proposals to control health care costs. These proposals may contain measures intended to control public and private spending on health care as well as to provide universal public access to the health care system. If enacted, these proposals may result in a substantial restructuring of the health care delivery system. Significant changes in the nation s health care system could have a substantial impact on the manner in which the Company conducts its business and could have a material adverse effect on the Company s business, financial condition and results of operations.

Possible Issuances of Preferred Stock; Certain Anti-Takeover Considerations

The Company s Articles of Incorporation authorize the Company s Board of Directors, without any action by its shareholders, to establish the rights and preferences of up to 5,000,000 shares of currently undesignated preferred stock. Such shares of preferred stock could possess voting and conversion rights, which could adversely affect the voting power of the holders of the common stock and may have the effect of delaying, deferring or preventing a change in control of the Company. No shares of preferred stock or other senior equity securities are currently designated and currently there is no plan to designate or to issue any such securities. The Company is also subject to certain anti-takeover provisions of the Minnesota Business Corporation Act. In addition, the Company has adopted a Shareholder Rights Plan (the Rights Agreement) designed to protect the Company and its shareholders from unsolicited attempts to acquire the Company. These measures may, in certain circumstances, deter or discourage takeover attempts and other changes in control of the Company not approved by its Board of Directors and may have a depressive effect on any market for the Company s stock. As a result, the Company s shareholders may lose opportunities to dispose of their shares at the higher prices typically available in takeover attempts or that may be available under a merger proposal. In addition, these measures may have the effect of permitting the Company s current directors to retain their positions and place them in a better position to resist changes that the Company s shareholders may wish to make if they are dissatisfied with the conduct of the Company s business.

No Dividends

The Company has not paid cash dividends on its common stock in the past and does not intend to do so in the foreseeable future.

Limitations on Director Liability

As permitted by Minnesota law, the Company s Articles of Incorporation provide that a director of the Company shall not be personally liable to the Company or its shareholders for monetary damages for breach of fiduciary duty as a director, with certain exceptions. These provisions may discourage shareholders from bringing suit against a director for breach of fiduciary duty and may reduce the likelihood of derivative litigation brought by shareholders on behalf of the Company against a director. In addition, the Company s Bylaws provide for mandatory indemnification of directors and officers to the fullest extent permitted by Minnesota law.

PART II

Item 6. SELECTED FINANCIAL DATA

The following selected financial data for each of the fiscal years in the five-year period ended December 31, 2002 is derived from the audited financial statements of the Company and the notes thereto. The information set forth below should be read in conjunction with the Company s financial statements, including the notes thereto, and Item 7. Management s Discussion and Analysis of Financial Condition and Results of Operations, which are included elsewhere in this Annual Report on Form 10-K.

(In thousands, except per share data)

	For the Years Ended or As of December 31,				
	2002	**2001**	**2000**	**1999**	**1998**
	Restated (1)	**Restated (1)**	**Restated (1)**	**Restated (1)**	**Restated (1)**
Statement of Operations Data:					
Revenue	$ 21,116	$ 15,196	$ 10,628	$ 6,623	$ 4,527
Gross margin	14,808	10,723	7,168	4,303	2,628
Operating expenses:					
Selling, general and administrative	9,988	8,420	6,919	5,081	4,280
Research and development	4,143	3,358	3,036	2,525	1,815
Operating income (loss)	677	(1,055)	(2,787)	(3,303)	(3,467)
Net income (loss)	$ 790	$ (1,012)	$ (2,637)	$ (3,218)	$ (3,209)
Net income (loss) per share-basic	$ 0.09	$ (0.14)	$ (0.39)	$ (0.64)	$ (0.66)
Weighted average common shares outstanding basic	8,861	7,075	6,760	5,046	4,841
Net income (loss) per share-diluted	$ 0.08	$ (0.14)	$ (0.39)	$ (0.64)	$ (0.66)
Weighted average common shares outstanding diluted	9,822	7,075	6,760	5,046	4,841
Balance Sheet Data:					
Working capital	$ 9,219	$ 6,094	$ 2,344	$ 5,409	$ 3,360
Total assets	18,827	13,269	7,287	8,666	5,938
Long-term debt					
Total shareholders equity	11,721	8,051	3,765	6,098	4,134

(1) The Company has restated its financial statements to (1) change the classification of certain customer support costs, which had previously been reported as a sales and marketing expense rather than as cost of revenue maintenance and services, and (2) change the classification of amortization expense related to technology licensed from a third party, which had, prior to the third quarter of 2003, been reported as research and development expense rather than as cost of revenue - license fees. The changes in these classifications: (1) increased cost of revenue - maintenance and services and reduced sales and marketing expense by corresponding amounts and (2) increased cost of revenue- license fees and reduced research and development expense by corresponding amounts. These changes in classifications had no effect on the Company s previously reported revenue, operating income, net income (loss) or net income (loss) per share, nor did the changes in classifications affect the Company s balance sheets or statements of shareholders equity and cash flows. See Note 13 to the financial statements.

Item 7. MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview

Vital Images develops, markets and supports 3D medical imaging software for use primarily in disease screening, clinical diagnosis and therapy planning. The Company s software applies proprietary computer graphics and image processing technologies to a wide variety of data supplied by computed tomography (CT) scanners and magnetic resonance (MR) imaging devices. Vital Images products allow clinicians to create both two- and three-dimensional views of human anatomy and to non-invasively navigate within these images to better visualize and understand internal structures and pathologies. The Company believes that its high-speed visualization technology and customized protocols cost-effectively bring 3D visualization and analysis into the routine, day-to-day practice of medicine. The Company, which operates in a single business segment, markets its products to healthcare providers and to manufacturers of diagnostic imaging systems through a direct sales force in the United States and independent distributors in international markets.

On October 28, 1996, the Board of Directors of Bio-Vascular, Inc. (Bio-Vascular), now known as Synovis Life Technologies, Inc., the former parent company of Vital Images, approved a plan to spin off and establish Vital Images as an independent, publicly-owned company. On May 12, 1997, Bio-Vascular distributed all of the shares of Vital Images to the shareholders of Bio-Vascular, and on that date Vital Images began operating as an independent public company. All Bio-Vascular shareholders of record as of May 5, 1997 received one share of Vital Images common stock for each two shares of Bio-Vascular stock held on that date, and cash in lieu of fractional shares. Vital Images common stock is currently traded on The Nasdaq SmallCap Market under the symbol VTAL.

Critical Accounting Policies and Estimates

Management s discussion and analysis of its financial position and results of operations are based upon the Company s consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenue and expenses during the reporting periods. Actual results could differ from those estimates. The following represents those critical accounting policies and estimates where materially different amounts could be reported under different conditions or using different assumptions.

Allowance for doubtful accounts. The Company maintains an allowance for doubtful accounts that reflects the Company s estimate of losses that may result from the uncollectibility of accounts receivable. The allowance for doubtful accounts is based primarily on an analysis of individual accounts for which the Company has information indicating the customer may not be able to pay amounts owed to the Company. In these cases, based on the available facts and circumstances, the Company estimates the amount that will be collected from such customers. The Company also evaluates the collectibility of our accounts receivable in the aggregate based on factors such as the aging of receivable amounts, customer concentrations, historical experience, and current economic trends and conditions. The allowance for doubtful accounts is adjusted when additional information is received that impacts the amount reserved. If circumstances change, the Company s estimates of the recoverability of accounts receivable could be reduced or increased by a material amount. Such a change in estimated recoverability would be accounted for in the period in which the facts that give rise to the change become known. As of December 31, 2002, the Company had an allowance for doubtful accounts of $240,000.

Deferred tax asset. The Company records a valuation allowance to reduce its deferred tax asset to the amount that is more likely than not to be realized. Presently the Company maintains a valuation allowance to offset all of its net deferred tax asset. While the Company has considered future taxable income in assessing the need for the valuation allowance, in the event the Company were to determine that it would be able to realize its deferred tax asset in the future in excess of its net recorded amount, an adjustment to the deferred tax asset

would increase income in the period such a determination was made and such a determination will become more likely if the Company continues to generate income. Likewise, should the Company determine that it would not be able to realize all or part of its net deferred tax asset in the future, an adjustment to the deferred tax asset would be charged to income in the period such a determination was made. As of December 31, 2002, the Company has recorded a valuation allowance against the deferred tax assets of $8,598,000. Despite the full valuation allowance, the income tax benefits related to these deferred tax assets will remain available to offset future taxable income.

Long-Lived Assets. The Company periodically reviews the carrying amounts of property and equipment and intangible assets purchased in the normal course of business to determine whether current events or circumstances, as defined in Statement of Financial Accounting Standard No 144, Accounting for the Impairment or Disposal of Long-Lived Assets, warrant adjustments to such carrying amounts. In reviewing the carrying values of property and equipment and intangible assets purchased in the normal course of business, the Company considers, among other things, the future cash flows expected from the use of the asset. To the extent these estimated cash flows significantly change, an impairment would be identified.

Revenue Recognition. The Company licenses its software and sells products and services to end-users and also indirectly through OEMs and independent distributors. Terms offered by the Company do not differ based on whether the customer is an end-user, OEM or independent distributor. The Company offers terms that require payment within 30 to 90 days after product delivery. The Company does not offer rights of return, acceptance clauses or price protection to its customers.

License fees revenue is derived from the licensing of computer software. Hardware revenue is derived from the sale of system hardware, including peripheral equipment. Maintenance and service revenue is derived from hardware and software maintenance and from services consisting of installation, training and engineering services. The Company s software licenses are always sold as part of an arrangement that includes a maintenance arrangement and often installation and training services. The Company generally sells hardware as part of a system sale, which includes a software license and often installation and training services. Occasionally, the Company sells hardware as part of a system upgrade or additional product sale. Engineering services consist of software modification or development services that are sold separately to OEMs.

The Company recognizes revenue in accordance with AICPA Statement of Position (SOP) 97-2, Software Revenue Recognition, as amended by SOP 98-4 and SOP 98-9, as well as Technical Practice Aids issued from time to time by the American Institute of Certified Public Accountants and Staff Accounting Bulletin (SAB) No. 101. The Company recognizes revenue when it is realized or realizable and earned. The Company considers revenue realized or realizable and earned when it has persuasive evidence of an arrangement, the product has been shipped or the services have been provided to the customer, the sales price is fixed or determinable and collectibility is probable.

The Company evaluates the credit worthiness of all customers. In circumstances where the Company does not have experience selling to a customer and lacks adequate credit information to conclude collection is probable, revenue is deferred until the arrangement fees are collected and all other revenue recognition criteria in the arrangement have been met.

In addition to the aforementioned general policy, the following are the specific revenue recognition policies for services and multiple-element arrangements.

Software and Hardware

Revenue from license fees and hardware is recognized when shipment of the product has occurred, no significant Company obligations with regard to implementation remain and the Company s services are not considered essential to the functionality of other elements of the arrangement. See also Multiple Element Arrangements below for further information.

Services

Revenue from maintenance arrangements is deferred and recognized ratably over the term of the maintenance arrangements.

Revenue from training and installation services is recognized as the services are provided to customers.

Revenue from engineering services, where the Company is performing significant customization or modification of software, is recognized using contract accounting on a percentage-of-completion basis. The Company records revenue by reference to actual hours incurred to date and the estimated hours remaining to complete the services.

Multiple-Element Arrangements

The Company enters into arrangements with customers that include a combination of software products, system hardware, specified upgrades, maintenance or installation and training services. For such arrangements, the Company recognizes revenue using the residual value method. The Company allocates the total arrangement fee among each deliverable element of the arrangement based on the relative fair value of each of the deliverable elements determined based on vendor-specific objective evidence. The fair value of maintenance services is based upon the renewal rate for continued service arrangements. The fair value of installation and training services is established based upon separate pricing for the services. In software arrangements for which the Company does not have vendor-specific objective evidence of fair value for all elements, revenue is deferred until the earlier of when vendor-specific objective evidence is determined for the undelivered elements (residual method) or when all elements have been delivered.

Expense Restatement Change in Classifications

Vital Images has restated its financial statements to (1) change the classification of certain customer support costs, which had previously been reported as a sales and marketing expense rather than as a cost of revenue maintenance and services, and (2) change the classification of amortization expense related to technology licensed from a third party, which had, prior to the third quarter of 2003, been reported as research and development expense rather than as cost of revenue - license fees. The Company has made the appropriate modifications to the statements of operations to give effect to these changes in classification. The changes in these classifications: (1) increased cost of revenue - maintenance and services and reduced sales and marketing expense by corresponding amounts and (2) increased cost of revenue - license fees and reduced research and development expense by corresponding amounts. The changes in classifications had no effect on the Company s previously reported revenue, operating income, net income (loss) or net income (loss) per share, nor did the changes in classifications affect the Company s balance sheets or statements of shareholders equity and cash flows. See Note 13 of the accompanying notes to the financial statements for the amounts of these changes in classifications.

Revenue

Total revenue increased 39% to $21,116,000 in 2002 from total revenue of $15,196,000 in 2001. Total revenue increased 43% to $15,196,000 in 2001 compared with $10,628,000 in 2000. The revenue growth was driven by the increase in the Company s core revenue components of software license fees and maintenance and service revenue. License fee revenue increased 41% to $14,212,000 in 2002 from $10,083,000 in 2001. The increase in software license fee revenue was driven primarily by an increase in the number of Vitrea® *2* licenses sold and an

increase in the number of *Vitrea* add-on options sold. License fee revenue increased 43% to $10,083,000 in 2001 from $7,037,000 in 2000. The increase in software license fee revenue was driven by an increase in the number of Vitrea® *2* licenses sold as well as an increase in the number of *Vitrea* add-on options sold.

Maintenance and services revenue increased 64% to $4,019,000 in 2002 from $2,450,000 in 2001 and increased 74% to $2,450,000 in 2001 from $1,412,000 in 2000. The increases were primarily due to increases

in maintenance revenue as the Company added new customers to the installed base and increases in training revenue due to an increase in the number of training sessions sold with customer purchases of software and add-on options. The Company recorded an additional $400,000 in service revenue in 2002 to integrate certain Company technology into image-guided surgery products for Surgical Navigation Technologies, Inc., a division of Medtronic, Inc. and $60,000 from Toshiba Corporation, Medical Systems Group (Toshiba) for the development of a 3D Angiography option. The Company recorded an additional $348,000 in service revenue in 2001 for the development of a CT colonography product, InnerviewGI , for E-Z-EM, Inc.

Hardware revenue increased 8% to $2,885,000 in 2002 from $2,663,000 in 2001 and increased 22% to $2,663,000 in 2001 from $2,179,000 in 2000. The increase in hardware revenue was primarily due to an increase in the number of hardware systems sold with the *Vitrea* software licenses. The hardware revenue growth was lower in 2002 than in 2001 due to a change in the sales model with Toshiba America Medical Systems, Inc. (TAMS). Prior to the third quarter of 2001, all of the Company s sales to TAMS were complete systems sales. Beginning in the third quarter of 2001, most of the revenue resulting from sales to TAMS was derived from software-only sales, which generate higher margins than complete system sales.

The Company had a license agreement with Paradigm Geophysical Corporation (Paradigm), which expired in January 2001. Revenue received under the license agreement with Paradigm was $106,000 and $210,000 in 2001 and 2000, respectively.

Gross Margin

The Company s gross margin percentage was 70% in 2002, down slightly from 71% in 2001. The gross margin percentage was 67% in 2000. The decrease in margin in 2002 compared to 2001 was due to increasing costs for customer support resulting from the Company s growth, which was partially offset by the favorable impact of sales mix. Revenue in 2002 included more of higher margin software license fee revenue and less of lower margin hardware revenue than in 2001. The number of customer support employees increased from 11 at December 31, 2001 to 17 at December 31, 2002. The increase in margin in 2001 compared to 2000 was due to the favorable impact of sales mix, which included more of higher margin software license fee revenue than in 2000.

The *Vitrea 2* system, consisting of *Vitrea 2* software and third-party hardware and peripherals, is designed to offer end users an integrated 3D medical imaging system. The Company receives a nominal discount in purchasing the third-party hardware and peripheral components of the *Vitrea 2* system, and the Company s gross margin on the resale of these system components approximates its discount. The Company anticipates that software license fee revenue as a percentage of the Company s total revenue will increase modestly in future periods and, therefore, management believes the overall gross margin percentage will increase modestly in future periods.

Sales and Marketing

Sales and marketing expenses were $6,795,000, or 32% of total revenue, $5,761,000, or 38% of total revenue and $4,709,000, or 44% of total revenue, for 2002, 2001 and 2000, respectively. The increases in sales and marketing expenses from 2001 to 2002 and 2000 to 2001 were primarily due to increased compensation costs as a result of additional personnel and increased sales commissions as a result of increased revenue. Tradeshow and marketing costs increased from 2001 to 2002, primarily due to the Company purchasing more space at tradeshows and attending additional tradeshows. Depreciation expense increased in 2001 as compared with 2000, primarily due to equipment purchases used for the additional personnel, upgrades of computer equipment and equipment for tradeshows. During these periods, sales and marketing expenses as

a percentage of revenue declined primarily due to the Company s ability to generate revenue growth without proportionately increasing sales and marketing costs. The Company expects sales and marketing costs to

increase in future periods primarily as a result of the cost of additional sales and marketing personnel and management expects sales and marketing expenses to increase as a percentage of total revenue in 2003.

Research and Development

Research and development expenses were up 23% to $4,143,000, or 20% of total revenue in 2002, from $3,359,000, or 22% of total revenue, in 2001. In addition, $211,000 of expenses were classified in cost of revenue during 2002 in connection with engineering services provided to others under various product development agreements. The increase in expenses from 2001 to 2002 was primarily due to increased compensation costs resulting from additional personnel supporting the development of *Vitrea 2*. Research and development expenses were up 13% to $3,359,000, or 22% of total revenue in 2001, from $3,036,000, or 29% of total revenue, in 2000. The increase was primarily due to increased compensation costs resulting from additional personnel supporting the development of *Vitrea 2* and increases in expenses to support clinical collaboration sites. There were also consecutive increases in annual depreciation expense between 2000 and 2002, primarily as the result of equipment purchases to support the additional personnel and to upgrade computer equipment. The decreases in research and development expenses as a percentage of revenue during these periods reflect the Company s ability to generate increased revenue more rapidly than it increases its product development costs. The Company anticipates that research and development costs will increase in future periods as the Company develops software tools for applications with large potential markets, such as cardiovascular disease, disease screening applications such as colon cancer, and surgical and therapy planning. However, management expects research and development costs to decline as a percentage of total revenue in 2003.

General and Administrative

General and administrative expenses were $3,193,000, or 15% of total revenue, $2,658,000, or 17% of total revenue and $2,210,000, or 21% of total revenue, in 2002, 2001 and 2000, respectively. The increase from 2001 to 2002 was primarily due to severance costs of $230,000 for the Company s former chief executive officer, higher insurance costs due to the growth of the Company as well as premium rate increases, an increase in consulting fees and increased travel costs related to investor relations and business development. The increase from 2000 to 2001 was primarily due to compensation costs increasing due to additional personnel and increases in professional fees incurred in establishing partnering agreements. The decreases in general and administrative expenses as a percentage of revenue during these periods reflect the Company s ability to limit operating costs while increasing revenue. The Company believes that general and administrative expenses will increase in future periods due to increased infrastructure costs as the business grows, but that they will continue to decrease as a percentage of total revenue in 2003.

Operating Income (Loss)

The increasing revenue from *Vitrea 2* and add-on software options and related service revenues, net of the increased expenses attributable to the development of the Company s infrastructure and the development and promotion of the *Vitrea 2* product, resulted in an operating income of $677,000 for 2002 compared with an operating loss of $1,055,000 for 2001 and an operating loss of $2,787,000 for 2000.

Interest Income

There was $135,000 of interest income for 2002, compared with $55,000 in 2001 and $162,000 in 2000. The increase in interest income from 2001 to 2002 was primarily due to an increase in cash, cash equivalents and marketable securities. The increase in cash, cash equivalents and marketable securities was primarily due to the exercise of warrants for the purchase of common stock, which generated approximately $1,725,000 and $4,490,000 in proceeds for the years ended December 31, 2002 and 2001, respectively. The decrease in interest income from 2000 to 2001 was primarily due to a lower balance of cash and cash equivalents throughout the year as a result of the use of cash to fund the Company s operations.

Income Taxes

The income tax provisions for 2002, 2001 and 2000 consist solely of certain state minimum fees. As a result of the Company s history of generating net operating losses, the Company has established a valuation allowance to completely reserve for the deferred tax asset of the Company. The Company continues to monitor realizability of the benefits related to its net deferred tax asset. To the extent management estimates that realization of this benefit is more likely than not based upon expected future taxable income, part or all of the valuation will be reversed. Such a reversal would result in an income tax benefit in the period of reversal.

Liquidity and Capital Resources

As of December 31, 2002, the Company had $8,123,000 in cash and cash equivalents, working capital of $9,219,000 and no borrowings.

Cash provided by operations was $2,437,000 for 2002 compared with cash provided by operations of $771,000 for 2001 and cash used in operations of $1,961,000 for 2000. The primary sources of cash from operations for 2002 were net income, an increase in deferred revenue and non-cash expenses for depreciation and amortization. The primary sources of cash from operations for 2001 was an increase in deferred revenue and accrued payroll and other liabilities and non-cash expenses for depreciation and amortization, which was partially offset by cash flow usages to fund operating losses. Cash flow usages for 2000 were primarily to fund operating losses, which were partially offset by non-cash expenses for depreciation and amortization. Increases in accounts receivable reduced cash flows in each of the years 2002, 2001 and 2000. Increases in deferred revenue and accrued expenses and other liabilities resulted in increased cash flows in 2002, 2001 and 2000.

The increases in deferred revenue for 2002, 2001 and 2000 were primarily due to volume increases in *Vitrea 2* sales and renewals of annual maintenance. The increases in accounts receivable for 2002, 2001 and 2000 were due primarily to volume increases in *Vitrea 2* sales. The increases in accrued payroll and other liabilities in 2002 and 2001 were primarily due to increases in incentive bonuses and sales commissions directly related to increased revenue and profitability. The increases in accrued payroll and other liabilities in 2000 were primarily due to increases in accrued vacation due to increases in headcount and in sales commissions as a result of increased revenue.

The Company used $4,008,000 of cash in investing activities in 2002, of which $1,500,000 was used for purchases of property and equipment, primarily for new computer equipment. The purchases were primarily to upgrade computer equipment and to purchase computer equipment for new personnel. Capital expenditures in 2002 also included leasehold improvements for a new training facility. The Company spent $8,047,000 to purchase investments in marketable securities and received $5,539,000 of proceeds from maturities of marketable securities during 2002. The marketable securities are invested in U.S. government obligations, U.S. government agency obligations, corporate commercial obligations and certificates of deposits. The Company used $1,519,000 of cash in investing activities in 2001, of which $769,000 was used for purchases of property and equipment, primarily for new computer equipment. In addition, the Company entered into an agreement during 2001 to license technology from a third party and paid $750,000 to the licensor. The Company used $1,384,000 of cash in investing activities in 2000 to purchase property and equipment primarily related to the move to new office facilities in 2000 and equipment for additional personnel.

Cash provided by financing activities totaled $2,862,000, $5,288,000 and $303,000 in 2002, 2001 and 2000, respectively. In December 2001, the Company called the outstanding warrants issued as part of a private placement of common stock in December 1999. All of the warrant holders elected to exercise the warrants rather than allowing the Company to redeem them. Purchases of common stock resulting from the exercise of these stock warrants generated approximately $1,725,000 and $4,491,000 in 2002 and 2001, respectively. During October 2001, the

Company sold 82,332 shares of newly issued common stock of Vital Images, Inc. to

E-Z-EM, Inc. for approximately $552,000. During 2002, 2001 and 2000, net cash of $1,137,000, $245,000 and $303,000, respectively, was provided by proceeds from the exercise of stock options.

The Company has never paid or declared any cash dividends and does not intend to pay dividends in the near future.

The following summarizes our contractual obligations, including purchase commitments at December 31, 2002, and the effect such obligations are expected to have on our liquidity and cash flow in future periods.

	2003	2004	2005	2006
Operating leases	$ 385,000	$ 388,000	$ 227,000	$
Purchase commitment(1)	$ 840,000	$ 1,750,000	$ 1,960,000	$ 1,050,000

(1) Assumes the R2 Technologies, Inc. s lung nodule CAD software product will be available for sale beginning in the third quarter of 2003.

Management believes that its cash and cash equivalents should be sufficient to satisfy the Company s cash requirements for at least the next 12 months.

Foreign Currency Transactions

Substantially all of the Company s foreign transactions are negotiated, invoiced and paid in U.S. dollars.

Inflation

Management believes inflation has not had a material effect on the Company s operations or on its financial condition.

Recent Accounting Pronouncements

In June 2001, the Financial Accounting Standards Board approved Statements of Financial Accounting Standards (SFAS) No. 141, Business Combinations, and No. 142, Goodwill and Other Intangible Assets. The statements eliminate the pooling-of-interests method of accounting for business combinations and require that goodwill and certain intangible assets not be amortized. Instead, these assets will be reviewed for impairment at least annually with any related losses recognized when incurred. SFAS No. 141 was generally effective for business combinations completed after June 30, 2001. SFAS No. 142 was adopted by the Company on January 1, 2002. The adoption of SFAS No. 141 and No. 142 had no impact on the Company s financial position or results of operations.

In October 2001, the Financial Accounting Standards Board issued SFAS No. 144, Accounting for the Impairment or Disposal of Long-Lived Assets. This statement addresses financial accounting and reporting for the impairment of long-lived assets and for long-lived assets to be disposed of and supersedes SFAS No. 121 and APB Opinion No. 30. SFAS No. 144 was effective for the Company beginning January 1, 2002. The adoption of SFAS No. 144 had no impact on the Company s financial position or results of operations.

In June 2002, the FASB issued SFAS No. 146, Accounting for Costs Associated with Exit or Disposal Activities, which replaces Emerging Issues Task Force (EITF) Issue No. 94-3, Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring). SFAS No. 146 requires companies to recognize costs associated with exit or disposal activities when they are incurred rather than at the date of a commitment to an exit or disposal plan. SFAS No. 146 is effective for exit or disposal activities that are initiated after December 31, 2002. The Company will apply this standard to exit and disposal activities initiated after December 31, 2002.

In December 2002, the FASB issued SFAS No. 148, Accounting for Stock-Based Compensation Transition Disclosure an amendment of SFAS No. 123. This Statement amends SFAS 123, Accounting for Stock-Based Compensation , to provide alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based compensation. In addition, SFAS 148 amends the disclosure requirements of SFAS 123 to require prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based compensation and the effect of the method used on reported results. SFAS 148 is effective for fiscal years ending after December 15, 2002, and disclosure requirements are effective for interim periods beginning after December 15, 2002. Disclosures required by SFAS 148 are included in the financial statements for the year ended December 31, 2002. The Company will begin making the additional disclosures required by SFAS 148 in the first quarter of 2003. The Company intends to continue to account for stock-based compensation using the intrinsic value method prescribed by APB Opinion No. 25 and related interpretations. Accordingly, the adoption of SFAS 148 will not impact the Company s financial position or results of operations.

In November 2002, the FASB issued Interpretation No. 45, Guarantor s Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others. This interpretation elaborates on the disclosures required in financial statements concerning obligations under certain guarantees. It also clarifies the requirements related to the recognition of liabilities by a guarantor at the inception of certain guarantees. The disclosure requirements of this interpretation were effective for the Company on December 31, 2002 and, accordingly, are reflected in the Company s financial statements. The recognition provisions of the interpretation are effective for the Company in 2003 and are applicable only to guarantees issued or modified after December 31, 2002. The Company does not expect the adoption of this interpretation to have a material impact on its financial position or results of operations.

In January 2003, the Financial Accounting Standards Board issued FASB Interpretation No. 46, Consolidation of Variable Interest Entities. This interpretation addresses the requirements for business enterprises to consolidate related entities in which they are determined to be the primary economic beneficiary as a result of their variable economic interests. The interpretation is intended to provide guidance in judging multiple economic interests in an entity and in determining the primary beneficiary. The interpretation outlines disclosure requirements for VIEs in existence prior to January 31, 2003, and outlines consolidation requirements for VIEs created after January 31, 2003. The Company does not expect the adoption of this interpretation to have a material impact on its financial position or results of operations.

Forward-Looking Statements

This Annual Report on Form 10-K/A contains certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and information that is based on management s beliefs as well as on assumptions made by, and upon information currently available to, management. When used in this Annual Report on Form 10-K/A, the words expect, anticipate, intend, plan, believe, seek, and estim similar expressions are intended to identify such forward-looking statements. However, this Annual Report on Form 10-K/A also contains other forward-looking statements. Forward-looking statements are not guarantees of future performance and are subject to certain risks, uncertainties and assumptions, including, but not limited to, the following factors, which could cause the Company s future results and shareholder values to differ materially from those expressed in any forward-looking statements made by or on behalf of the Company: the dependence on market growth of the industry in which the Company operates; the extent to which the Company s products gain market acceptance; the need for and availability of additional capital; the potential for litigation regarding patent and other intellectual property rights; the introduction of competitive products by others; dependence on major customers; fluctuations in quarterly results; the progress of product development; the availability of third party reimbursement; and the receipt and timing of regulatory approvals and other factors detailed from time to time in the Company s filings with the Securities and Exchange Commission, including those set forth under the heading Important Factors included in Item 1 of this Annual Report on Form 10-K/A.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The Company s financial statements, supplemental schedule and Report of Independent Auditors thereon, all of which are included in this Annual Report on Form 10-K/A, are listed in Item 15 (a) (1) of this Form 10-K/A.

PART IV

Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K

(a) (1) The following financial statements and supplemental schedule of Vital Images, Inc. and Report of Independent Auditors thereon are included herein:

Report of Independent Auditors
Balance Sheets as of December 31, 2002 and 2001
Statements of Operations for the years ended December 31, 2002, 2001 and 2000 (Restated)
Statements of Shareholders Equity for the years ended December 31, 2002, 2001 and 2000
Statements of Cash Flows for the years ended December 31, 2002, 2001 and 2000
Notes to Financial Statements

Schedule II. Valuation and Qualifying Accounts

(a) (2) Included in Item 15 (a) (1) above

All other schedules to the financial statements required by Article 12 of Regulation S-X are not required under the related instructions or are inapplicable and therefore have been omitted.

(a) (3) LISTING OF EXHIBITS

The Exhibits required to be a part of this Report are listed in the Index to Exhibits, which follows the Financial Statement Schedule on page 58.

(b) REPORTS ON FORM 8-K

The Company had no Current Reports on Form 8-K during the year ended December 31, 2002 or during the period from December 31, 2002 to the date of the filing of the original Annual Report on Form 10-K.

(c) EXHIBITS

Included in Item 15 (a) (3) above.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Amendment to the Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized, in Minneapolis, Minnesota, on the 2nd day of March 2004.

VITAL IMAGES, INC.

By: /s/Gregory S. Furness
Gregory S. Furness
Chief Financial Officer and
Vice President-Finance
(Chief Accounting Officer)

REPORT OF INDEPENDENT AUDITORS

To the Board of Directors and Shareholders of
Vital Images, Inc.:

In our opinion, the financial statements listed in the index appearing under Item 15(a)(1) present fairly, in all material respects, the financial position of Vital Images, Inc. (the Company) at December 31, 2002 and 2001, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2002 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the index appearing under Item 15(a)(1) presents fairly, in all material respects, the information set forth therein when read in conjunction with the related financial statements. These financial statements and financial statement schedule are the responsibility of the Company s management; our responsibility is to express an opinion on these financial statements and financial statement schedule based on our audits. We conducted our audits of these statements in accordance with auditing standards generally accepted in the United States of America, which 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, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As discussed in Note 13 to the financial statements, the Company has restated its statements of operations for each of the three years in the period ended December 31, 2002, to reflect a change in the classification of certain customer support expenses and has restated its statements of operations for the years ended December 31, 2002 and 2001 to reflect a change in classification of certain amortization expense.

/s/ PricewaterhouseCoopers LLP

Minneapolis, Minnesota
February 6, 2003, except Note 13 as to which the date is February 10, 2004

VITAL IMAGES, INC.
BALANCE SHEETS

	As of December 31,	
	2002	**2001**
ASSETS		
Current assets:		
Cash and cash equivalents	$ 8,122,547	$ 6,830,906
Marketable securities	2,508,113	
Accounts receivable, net of allowance for doubtful accounts of $240,000 and $185,000 as of December 31, 2002 and 2001, respectively	4,971,079	3,637,954
Prepaid expenses and other current assets	498,692	557,833
Total current assets	16,100,431	11,026,693
Property and equipment, net	2,156,835	1,552,116
Licensed technology, net	570,000	690,000
TOTAL ASSETS	$ 18,827,266	$ 13,268,809
LIABILITIES AND SHAREHOLDERS EQUITY		
Current liabilities:		
Accounts payable	$ 757,715	$ 864,385
Accrued payroll	1,486,654	1,326,214
Deferred revenue	3,870,958	2,199,465
Accrued royalties	546,593	362,637
Other current liabilities	219,036	179,610
Total current liabilities	6,880,956	4,932,311
Deferred revenue	225,539	285,709
Total liabilities	7,106,495	5,218,020
Commitments (Notes 5 and 12)		
Shareholders equity:		
Preferred stock: $0.01 par value; 5,000,000 shares authorized; none issued or outstanding as of December 31, 2002 and 2001		
Common stock: $0.01 par value; 20,000,000 shares authorized; 8,987,009 and 8,186,092 shares issued and outstanding as of December 31, 2002 and 2001, respectively	89,870	81,861
Additional paid-in capital	31,719,371	28,846,906
Accumulated deficit	(20,088,470)	(20,877,978)
Total shareholders equity	11,720,771	8,050,789
TOTAL LIABILITIES AND SHAREHOLDERS EQUITY	$ 18,827,266	$ 13,268,809

(The accompanying notes are an integral part of the financial statements.)

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VITAL IMAGES, INC.

STATEMENTS OF OPERATIONS

	For the Years Ended December 31,		
	2002	**2001**	**2000**
	Restated (Note 13)	**Restated (Note 13)**	**Restated (Note 13)**
Revenue:			
License fees	$ 14,211,640	$ 10,082,897	$ 7,037,227
Maintenance and services	4,019,639	2,450,037	1,411,583
Hardware	2,884,795	2,662,702	2,179,381
Total revenue	21,116,074	15,195,636	10,628,191
Cost of revenue:			
License fees	1,250,426	703,593	238,775
Maintenance and services	2,862,459	1,656,207	1,328,679
Hardware	2,195,182	2,112,982	1,893,075
Total cost of revenue	6,308,067	4,472,782	3,460,529
Gross margin	14,808,007	10,722,854	7,167,662
Operating expenses:			
Sales and marketing	6,795,377	5,761,416	4,708,604
Research and development	4,143,257	3,358,506	3,036,016
General and administrative	3,192,735	2,657,998	2,209,999
Total operating expenses	14,131,369	11,777,920	9,954,619
Operating income (loss)	676,638	(1,055,066)	(2,786,957)
Interest income, net	134,870	55,089	161,726
Income (loss) before income taxes	811,508	(999,977)	(2,625,231)
Income taxes	22,000	12,000	12,000
Net income (loss)	$ 789,508	$ (1,011,977)	$ (2,637,231)
Net income (loss) per share basic	$ 0.09	$ (0.14)	$ (0.39)
Weighted average common shares outstanding basic	8,861,132	7,074,906	6,760,233
Net income (loss) per share diluted	$ 0.08	$ (0.14)	$ (0.39)
Weighted average common shares outstanding diluted	9,821,798	7,074,906	6,760,233

(The accompanying notes are an integral part of the financial statements.)

VITAL IMAGES, INC.

STATEMENTS OF SHAREHOLDERS EQUITY

	Common Stock		Additional Paid-In	Accumulated	Total Shareholders
	Shares	Amount	Capital	Deficit	Equity
Balances as of December 31, 1999	6,695,867	$ 66,959	$ 23,260,227	$ (17,228,770)	$ 6,098,416
Issuance of common stock upon exercise of stock options	105,650	1,056	216,468		217,524
Issuance of common stock under Employee Stock Purchase Plan	21,589	216	85,749		85,965
Net and comprehensive loss				(2,637,231)	(2,637,231)
Balances as of December 31, 2000	6,823,106	68,231	23,562,444	(19,866,001)	3,764,674
Stock-based compensation			10,447		10,447
Issuance of common stock upon exercise of stock options	49,520	495	153,073		153,568
Issuance of common stock under Employee Stock Purchase Plan	25,487	255	91,397		91,652
Issuance of common stock upon exercise of stock warrants	1,205,647	12,057	4,478,744		4,490,801
Issuance of common stock (Note 11)	82,332	823	550,801		551,624
Net and comprehensive loss				(1,011,977)	(1,011,977)
Balances as of December 31, 2001	8,186,092	81,861	28,846,906	(20,877,978)	8,050,789
Stock-based compensation			18,279		18,279
Issuance of common stock upon exercise of stock options	288,008	2,880	1,003,321		1,006,201
Issuance of common stock under Employee Stock Purchase Plan	24,539	245	130,363		130,608
Issuance of common stock upon exercise of stock warrants	488,370	4,884	1,720,502		1,725,386
Net and comprehensive income				789,508	789,508
Balances as of December 31, 2002	8,987,009	$ 89,870	$ 31,719,371	$ (20,088,470)	$ 11,720,771

(The accompanying notes are an integral part of the financial statements.)

VITAL IMAGES, INC.

STATEMENTS OF CASH FLOWS

	For the Years Ended December 31,		
	2002	**2001**	**2000**
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net income (loss)	$ 789,508	($1,011,977)	($2,637,231)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation	894,814	746,727	718,978
Stock-based compensation	18,279	10,447	
Provision for uncollectible accounts receivable	64,000	114,000	122,000
Amortization of licensed technology	120,000	60,000	
Changes in operating assets and liabilities:			
Accounts receivable	(1,397,125)	(727,655)	(1,141,185)
Prepaid expenses and other current assets	59,141	(116,333)	21,809
Accounts payable	(106,670)	(155,513)	188,157
Deferred revenue	1,611,323	1,137,477	414,227
Accrued expenses and other current liabilities	383,822	714,136	352,165
Net cash provided by (used in) operating activities	2,437,092	771,309	(1,961,080)
CASH FLOWS FROM INVESTING ACTIVITIES:			
Additions to property and equipment	(1,499,533)	(769,155)	(1,384,187)
Payment for licensed technology		(750,000)	
Purchases of marketable securities	(8,047,536)		
Sale of marketable securities	5,539,423		
Net cash used in investing activities	(4,007,646)	(1,519,155)	(1,384,187)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from sale of common stock		551,624	
Proceeds from sale of common stock under stock plans	1,136,809	245,220	303,489
Proceeds from sale of common stock under stock warrants	1,725,386	4,490,801	
Net cash provided by financing activities	2,862,195	5,287,645	303,489
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	1,291,641	4,539,799	(3,041,778)
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	6,830,906	2,291,107	5,332,885
CASH AND CASH EQUIVALENTS, END OF YEAR	$ 8,122,547	$ 6,830,906	$ 2,291,107
SUPPLEMENTAL CASH FLOW INFORMATION:			
Cash paid during the year for interest	$	$ 17,730	$ 5,204

(The accompanying notes are an integral part of the financial statements.)

VITAL IMAGES, INC.

NOTES TO FINANCIAL STATEMENTS

(1) Business Description and Background

Business Description

Vital Images develops, markets and supports 3D medical imaging software for use primarily in disease screening, clinical diagnosis and therapy planning. The Company s software applies proprietary computer graphics and image processing technologies to a wide variety of data supplied by computed tomography (CT) scanners and magnetic resonance (MR) imaging devices. Vital Images products allow clinicians to create both two- and three-dimensional views of human anatomy and to non-invasively navigate within these images to better visualize and understand internal structures and pathologies. The Company believes that its high-speed visualization technology and customized protocols cost-effectively bring 3D visualization and analysis into the routine, day-to-day practice of medicine. The Company, which operates in a single business segment, markets its products to healthcare providers and to manufacturers of diagnostic imaging systems through a direct sales force in the United States and independent distributors in international markets.

Background

On October 28, 1996, the Board of Directors of Bio-Vascular, Inc. (Bio-Vascular), now known as Synovis Life Technologies, Inc., the former parent company of Vital Images, approved a plan to spin off and establish Vital Images as an independent, publicly owned company. On May 12, 1997 (the Distribution Date), Bio-Vascular distributed all of the shares of Vital Images to the shareholders of Bio-Vascular (the Distribution), and on that date Vital Images began operating as an independent public company. All Bio-Vascular shareholders of record as of May 5, 1997 received one share of Vital Images common stock for each two shares of Bio-Vascular stock held on that date, and cash in lieu of fractional shares.

(2) Summary of Significant Accounting Policies

Use of Estimates

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

Cash Equivalents and Marketable Securities

Cash equivalents consist principally of money market funds as well as corporate bonds and certificates of deposits with original maturities of three months or less at the date of purchase. Marketable securities consist of U.S. government agency securities and certificates of deposit.

Management determines the appropriate classification of marketable securities at the time of purchase and reevaluates such designation at each balance sheet date. Marketable securities as of December 31, 2002 are classified as available-for-sale. Available-for-sale securities are carried at fair value, with the unrealized gains and losses reported in a separate component of stockholders equity. As of December 31, 2002, the Company has recorded no unrealized gains and losses. The cost of debt securities in this category is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization and accretion is included in interest income. Realized gains and losses and declines in value judged to be other-than-temporary on available-for-sale securities are included in net income. The cost of securities sold is based on the specific identification method. Interest and dividends on securities classified as available-for-sale are included in interest income.

Concentration of Credit Risk

Cash and cash equivalents are primarily maintained with one financial institution. Deposits with the bank may exceed the amount of insurance provided on such deposits. Generally, these deposits may be redeemed upon demand and, therefore, bear minimal risk. Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of marketable securities. Marketable securities consist of U.S. government agency notes and certificates of deposits. The Company s investment policy, approved by the Board of Directors, limits the amount the Company may invest in any one type of investment, thereby reducing credit risk concentrations. The Company s customer base is generally concentrated with a small base of customers. The Company reviews the creditworthiness of its customers prior to product shipment and generally does not require collateral.

Trade Accounts Receivable

Trade accounts receivable are initially recorded at fair value upon the sale of goods or services to customers. They are stated net of allowances for uncollectible accounts, which represent estimated losses resulting from the inability of customers to make the required payments. When determining the allowances for uncollectible accounts, management takes several factors into consideration including the overall composition of accounts receivable aging, prior history of accounts receivable write-offs, the type of customer and day-to-day knowledge of specific customers. Changes in the allowances for uncollectible accounts are recorded as bad debt expense and are included in general and administrative expense in the statements of operations.

Property and Equipment

Property and equipment are stated at cost. Depreciation is computed using the straight-line method over the related asset s estimated useful life, generally three to seven years. Depreciation expense was $895,000, $747,000 and $719,000 for each of the years ended December 31, 2002, 2001, and 2000, respectively. Leasehold improvements are amortized over the shorter of their estimated useful lives or the remaining terms of the related leases. The asset cost and related accumulated depreciation or amortization are adjusted for asset retirement or disposal with the resulting gain or loss, if any, credited or charged to results of operations.

Impairment of Long-Lived Assets

The Company periodically reviews the carrying amounts of property and equipment and intangible assets purchased in the normal course of business, to determine whether current events or circumstances, as defined in Statement of Financial Accounting Standard No 144, Accounting for the Impairment or Disposal of Long-Lived Assets, warrant adjustments to such carrying amounts. In reviewing the carrying values of property and equipment and intangible assets, the Company considers, among other things, the future cash flows expected from the use of the asset. The Company reviews its intangible assets purchased in the normal course of business and other long-lived assets for impairment whenever an event or change in circumstances indicates that the carrying value of an asset may not be recoverable. If such an event or change in circumstances occurs and potential impairment is indicated because the carrying values exceed the estimated future undiscounted cash flows, the Company would measure the impairment loss as the amount by which the carrying value of the asset exceeds its fair value.

Revenue Recognition.

The Company licenses its software and sells products and services to end-users and also indirectly through OEMs and independent distributors. Terms offered by the Company do not differ based on whether the customer is an end-user, OEM or independent distributor. The Company offers terms that require payment within 30 to 90 days after product delivery. The Company does not offer rights of return, acceptance clauses or price protection to its customers.

License fees revenue is derived from the licensing of computer software. Hardware revenue is derived from the sale of system hardware, including peripheral equipment. Maintenance and service revenue is derived from hardware and software maintenance and from services consisting of installation, training and engineering services. The Company s software licenses are always sold as part of an arrangement that includes a maintenance arrangement and often installation and training services. The Company generally sells hardware as part of a system sale, which includes a software license and often installation and training services. Occasionally, the Company sells hardware as part of a system upgrade or additional product sale. Engineering services consist of software modification or development services that are sold separately to OEMs.

The Company recognizes revenue in accordance with AICPA Statement of Position (SOP) 97-2, Software Revenue Recognition, as amended by SOP 98-4 and SOP 98-9, as well as Technical Practice Aids issued from time to time by the American Institute of Certified Public Accountants and Staff Accounting Bulletin (SAB) No. 101. The Company recognizes revenue when it is realized or realizable and earned. The Company considers revenue realized or realizable and earned when it has persuasive evidence of an arrangement, the product has been shipped or the services have been provided to the customer, the sales price is fixed or determinable and collectibility is probable.

The Company evaluates the credit worthiness of all customers. In circumstances where the Company does not have experience selling to a customer and lacks adequate credit information to conclude collection is probable, revenue is deferred until the arrangement fees are collected and all other revenue recognition criteria in the arrangement have been met.

In addition to the aforementioned general policy, the following are the specific revenue recognition policies for services and multiple-element arrangements.

Software and Hardware

Revenue from license fees and hardware is recognized when shipment of the product has occurred, no significant Company obligations with regard to implementation remain and the Company s services are not considered essential to the functionality of other elements of the arrangement. See also Multiple Element Arrangements below for further information.

Services

Revenue from maintenance arrangements is deferred and recognized ratably over the term of the maintenance arrangements.

Revenue from training and installation services is recognized as the services are provided to customers.

Revenue from engineering services, where the Company is performing significant customization or modification of software, is recognized using contract accounting on a percentage-of-completion basis. The Company records revenue by reference to actual hours incurred to date and the estimated hours remaining to complete the services.

Multiple-Element Arrangements

The Company enters into arrangements with customers that include a combination of software products, system hardware, specified upgrades, maintenance or installation and training services. For such arrangements, the Company recognizes revenue using the residual value method. The Company allocates the total arrangement fee among each deliverable element of the arrangement based on the relative fair value of each of the deliverable elements determined based on vendor-specific objective evidence. The fair value of maintenance services is based upon the renewal rate for continued service arrangements. The fair value of installation and training services is established based upon separate pricing for the services. In software arrangements for which the Company does not have vendor-specific objective evidence of fair value for all

elements, revenue is deferred until the earlier of when vendor-specific objective evidence is determined for the undelivered elements (residual method) or when all elements have been delivered.

Research and Development Costs

Costs related to research, design and development of products are charged to research and development expense as incurred. Software development costs are capitalized beginning when a product s technological feasibility has been established and ending when a product is available for general release to customers. The Company uses the working model approach to determine technological feasibility. Generally, the Company s products are released soon after technological feasibility has been established. As a result, the Company has not capitalized any software development costs, since such costs have not been significant.

Income Taxes

The Company accounts for income taxes using the asset and liability method. Deferred income tax assets and liabilities are determined based on differences between financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts expected to be realized.

Computation of Net Income (Loss) Per Share

Net income (loss) per share - basic is computed using the weighted average common shares outstanding during the period. Net income (loss) per share diluted is computed using the weighted average common shares outstanding and common share equivalents shares outstanding during the period. Common share equivalents are not included in the net income (loss) per share calculations if they are anti-dilutive. Common share equivalents consist of warrants and options.

The computations for basic and diluted net income (loss) per share for each year are as follows:

	For the Years Ended December 31,		
	2002	2001	2000
Numerator:			
Net income (loss)	$ 789,508	$ (1,011,977)	$ (2,637,231)
Denominator:			
Denominator for weighted average common shares outstanding basic	8,861,132	7,074,906	6,760,233
Dilution associated with common stock warrants	59,984		
Dilution associated with the company s stock based compensation plans	900,682		
Denominator:			
Denominator for weighted average common shares outstanding diluted	9,821,798	7,074,906	6,760,233
Net income (loss) per share basic	$ 0.09	$ (0.14)	$ (0.39)
Net income (loss) per share diluted	$ 0.08	$ (0.14)	$ (0.39)

Options to purchase 81,100 shares in 2002, options and warrants to purchase approximately 2,892,000 shares in 2001 and options and warrants to purchase approximately 3,890,000 shares in 2000 were not included in the computation of earnings per share assuming dilution because their effect on earnings per share would have been antidilutive. The decrease in number of shares excluded in 2002 is the result of all shares being antidilutive in net loss years, such as 2001 and 2000.

Stock-Based Compensation

The Company has stock-based employee and director compensation plans, which are described more fully in Note 6. The Company accounts for these plans under the recognition and measurement principles of APB Opinion No. 25, *Accounting for Stock Issued to Employees,* and related Interpretations. No stock-based employee and director compensation cost is reflected in net income (loss), as all options granted under those plans had an exercise price equal to the market value of the underlying common stock on the date of grant. The following table illustrates the effect on net income (loss) and net income (loss) per share if the Company had applied the fair value recognition provisions of FASB Statement No. 123, *Accounting for Stock-Based Compensation,* to stock-based employee and director compensation.

		For the Years Ended December 31,		
		2002	2001	2000
Net income (loss), as reported		$ 789,508	$ (1,011,977)	$ (2,637,231)
Deduct: Total stock-based employee compensation expense determined under fair value method for all awards, net of related tax effects		(1,560,508)	(1,210,023)	(932,769)
Pro forma net (loss)		$ (771,000)	$ (2,222,000)	$ (3,570,000)
Net income (loss) per share basic	As reported	$ 0.09	$ (0.14)	$ (0.39)
	Pro forma	$ (0.09)	$ (0.31)	$ (0.53)
Net income (loss) per share diluted	As reported	$ 0.08	$ (0.14)	$ (0.39)
	Pro forma	$ (0.09)	$ (0.31)	$ (0.53)

The pro forma effects on the net income (loss) for 2002, 2001 and 2000 are not necessarily representative of the pro forma effect that may occur on the net income (loss) in future periods.

Recent Accounting Pronouncements

In June 2001, the Financial Accounting Standards Board approved Statements of Financial Accounting Standards (SFAS) No. 141, Business Combinations, and No. 142, Goodwill and Other Intangible Assets. The statements eliminate the pooling-of-interests method of accounting for business combinations and require that goodwill and certain intangible assets not be amortized. Instead, these assets will be reviewed for impairment at least annually with any related losses recognized when incurred. SFAS No. 141 was generally effective for business combinations completed after June 30, 2001. SFAS No. 142 was adopted by the Company on January 1, 2002. The adoption of SFAS No. 141 and No. 142 had no impact on the Company s financial position or results of operations.

In October 2001, the Financial Accounting Standards Board issued SFAS No. 144, Accounting for the Impairment or Disposal of Long-Lived Assets. This statement addresses financial accounting and reporting for the impairment of long-lived assets and for long-lived assets to be disposed of and supersedes SFAS No. 121 and APB Opinion No. 30. SFAS No. 144 was effective for the Company beginning January 1, 2002. The adoption of SFAS No. 144 had no impact on the Company s financial position or results of operations.

In June 2002, the FASB issued SFAS No. 146, Accounting for Costs Associated with Exit or Disposal Activities, which replaces Emerging Issues Task Force (EITF) Issue No. 94-3, Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring). SFAS No. 146 requires companies to recognize costs associated with exit or disposal activities when they are incurred rather than at the date of a commitment to an exit or disposal plan. SFAS No. 146 is effective for exit or disposal activities that are initiated after December 31, 2002. The Company will apply this standard to exit and disposal activities initiated after December 31, 2002.

In December 2002, the FASB issued SFAS No. 148, Accounting for Stock-Based Compensation Transition Disclosure an amendment of SFAS No. 123. This Statement amends SFAS 123, Accounting for Stock-Based Compensation , to provide alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based compensation. In addition, SFAS 148 amends the disclosure requirements of SFAS 123 to require prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based compensation and the effect of the method used on reported results. SFAS 148 is effective for fiscal years ending after December 15, 2002, and disclosure requirements are effective for interim periods beginning after December 15, 2002. Disclosures required by SFAS 148 are included in the financial statements for the year ended December 31, 2002. The Company will begin making the additional disclosures required by SFAS 148 in the first quarter of 2003. The Company intends to continue to account for stock-based compensation using the intrinsic value method prescribed by APB Opinion No. 25 and related interpretations. Accordingly, the adoption of SFAS 148 will not impact the Company s financial position or results of operations.

In November 2002, the FASB issued Interpretation No. 45, Guarantor s Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others. This interpretation elaborates on the disclosures required in financial statements concerning obligations under certain guarantees. It also clarifies the requirements related to the recognition of liabilities by a guarantor at the inception of certain guarantees. The disclosure requirements of this interpretation were effective for the Company on December 31, 2002 and, accordingly, are reflected in the Company s financial statements. The recognition provisions of the interpretation are effective for the Company in 2003 and are applicable only to guarantees issued or modified after December 31, 2002. The Company does not expect the adoption of this interpretation to have a material impact on its financial position or results of operations.

In January 2003, the Financial Accounting Standards Board issued FASB Interpretation No. 46, Consolidation of Variable Interest Entities. This interpretation addresses the requirements for business enterprises to consolidate related entities in which they are determined to be the primary economic beneficiary as a result of their variable economic interests. The interpretation is intended to provide guidance in judging multiple economic interests in an entity and in determining the primary beneficiary. The interpretation outlines disclosure requirements for VIEs in existence prior to January 31, 2003, and outlines consolidation requirements for VIEs created after January 31, 2003. The Company does not expect the adoption of this interpretation to have a material impact on its financial position or results of operations.

(3) Property and Equipment, net

Property and Equipment consisted of the following at December 31:

	2002	2001
Equipment	$ 4,361,806	$ 3,262,566
Furniture and fixtures	1,034,641	869,920
Computer software	680,190	540,910
Leasehold improvements	172,323	79,861
Total property and equipment	6,248,960	4,753,257
Less accumulated depreciation and amortization	(4,092,125)	(3,201,141)
Property and equipment, net	$ 2,156,835	$ 1,552,116

(4) Deferred Revenue

Deferred revenue consists primarily of service revenue, which is recognized as the services are performed, and maintenance revenue, which is recognized on a straight-line basis over the term of the arrangement.

(5) Operating Lease Commitments

The Company leases its office facilities in Plymouth, Minnesota pursuant to terms of a non-cancelable operating lease, as amended, that expires on July 31, 2005. Under the terms of the lease, the Company is required to pay a portion of the lessor s operating costs.

Total rent expense, including an allocation of the lessor s operating costs, was $596,000, $554,000 and $476,000 for the years ended December 31, 2002, 2001 and 2000, respectively.

Scheduled minimum lease payments for the next five years are approximately as follows:

Year Ending December 31,		
2003	$	385,000
2004		388,000
2005		227,000
Total	$	1,000,000

(6) Shareholders Equity

Stock Option Plans

In connection with the Distribution, Bio-Vascular, as the sole shareholder of the Company, approved and adopted several option plans and stand-alone option grants, which covered employees of both Vital Images and Bio-Vascular. The adopted plans include the Incentive Stock Option Adjustment Plan, the 1990 Management Incentive Stock Option Plan, the 1992 Director Stock Option Adjustment Plan, the 1992 Stock Option Plan, and the 1995 Stock Incentive Adjustment Plan (collectively, the Mirror Plans). Each of these plans is intended to mirror the provisions of a corresponding Bio-Vascular plan that was in effect at the time of the Distribution. As each Bio-Vascular option plan generally provided for the termination of options following termination of employment, each of the Mirror Plans, as well as each of the stand-alone option grants (the Mirror Grants), were approved and adopted to provide that the Distribution would not cause a termination of any Vital Images employee for the purposes of such plans or option grant, and that Bio-Vascular options held by Vital Images employees following the Distribution would remain exercisable following the Distribution, so long as such employees remain employed by Vital Images or any subsidiary. Similar provisions were also adopted with respect to Vital Images options held by Bio-Vascular employees. On the Distribution Date, 608,534 options were issued in connection with the Mirror Plans and the Mirror Grants (collectively, the Mirror Options). These options had vesting periods ranging from less than one year up to four years and terms ranging from less than one year up to ten years. No additional grants may be made pursuant to any of the Mirror Plans.

In May 1997, Bio-Vascular, as the sole shareholder of the Company, approved and adopted the Vital Images, Inc. 1997 Stock Option and Incentive Plan (the Stock Option Plan), which became effective on the Distribution Date. Under the terms of the plan, the Board of Directors

may grant options and other stock-based awards to key employees to purchase shares of the Company s common stock at an option exercise price equal to or greater than 85% of the fair market value on the date of grant. The options are exercisable at such times, in installments or otherwise, as the Board of Directors may determine. Generally, these options are incentive stock options with a term of eight years and are exercisable as to 28% of the total grant one year after the date of grant and 2% per month thereafter. In May 2002, the shareholders of the Company approved an increase of 500,000 common shares, bringing the total number of shares of common stock that may be issued or awarded under the Stock Option Plan to 3,000,000. As of December 31, 2002, there were 901,801 shares available for the grant of awards under the Stock Option Plan.

Also in May 1997, Bio-Vascular, as the sole shareholder of the Company, approved and adopted the Vital Images, Inc. 1997 Director Stock Option Plan (the Director Plan) (together with the Stock Option Plan, the 1997 Plans), which became effective on the Distribution Date. The Director Plan provides non-employee directors with automatic grants of stock options and allows the Board of Directors to make additional discretionary option grants to any or all directors. Options that are granted under the Director Plan are generally granted with an option price equal to the fair market value on the date of grant, with a term of eight years, are non-qualified options and become exercisable in three equal annual installments beginning on the first occurring December 31 after the date of grant. In May 2002, the shareholders of the Company approved an increase of 90,000 common shares, bringing the total number of shares of common stock that may be issued or awarded under the Director Plan to 300,000. As of December 31, 2002, there were 115,000 shares available for the grant of awards under the Director Plan.

Certain non-plan options were granted to certain officers of the Company in 1998, 1999 and 2002. In February 1998, the Company reserved and granted 300,000 non-qualified, non-plan options to an officer of the Company. These non-plan options have a term of eight years, vest over a two year period and were granted at exercise prices at least equal to fair market value of the Company s common stock on the date of grant. In December 1999, 100,000 of these non-plan options were canceled. As of December 31, 2002, the remaining 200,000 are still outstanding. In December 1999, the Company granted 175,000 non-qualified, non-plan options to another officer of the Company. These non-plan options had a term of eight years, were exercisable as to 28% of the total grant one year after the date of grant and 2% per month thereafter and were granted at exercise prices at least equal to fair market value of the Company s common stock on the date of grant. In February 2002, 80,500 of these non-plan options were canceled and the remaining 94,500 options were exercised in 2002. In March 2002, the Company granted an additional 165,000 non-qualified, non-plan options to another officer of the Company. These non-plan options have a term of eight years, are exercisable as to 28% of the total grant one year after the date of grant and 2% per month thereafter and were granted at exercise prices at least equal to fair market value of the Company s common stock on the date of grant. As of December 31, 2002, these options are still outstanding.

Non-Employee Options

In December 2000, the Company granted 10,000 options to a non-employee consultant. Options to purchase 5,000 shares vest over a four-year period and the remaining options will vest immediately when a specified milestone is achieved. In December 2001, the Company granted a total of 4,000 options to two non-employee consultants and in December 2002, the Company granted another 4,000 options to two non-employee consultants. These options vest over a four-year period. All of the non-plan options have a term of eight years and were granted at exercise prices at least equal to fair market value of the Company s common stock on the date of grant. The Company records compensation expense related to these arrangements based upon the fair values of the options during the periods the consultants provide services. Such fair values are measured using the Black-Scholes option-pricing model. The fair value of these options was approximately $98,000 at December 31, 2002. The Company recorded approximately $18,000, $10,000 and $0 of compensation expense related to these options for each of the years ended December 31, 2002, 2001 and 2000, respectively.

The following table summarizes stock option activity for 2002, 2001 and 2000:

	Shares Under Option	Weighted-Average Exercise Price Per Share
Total outstanding as of December 31, 1999	1,810,910	$ 3.02
Options granted	482,750	6.83
Options exercised	(105,650)	2.06
Options canceled	(111,986)	4.56
Total outstanding as of December 31, 2000	2,076,024	3.87
Options granted	323,250	5.43
Options exercised	(50,013)	3.07
Options canceled	(60,805)	4.93
Total outstanding as of December 31, 2001	2,288,456	4.08
Options granted	677,750	7.21
Options exercised	(288,008)	3.49
Options canceled	(216,354)	4.44
Total outstanding as of December 31, 2002	2,461,844	$ 4.98
Options exercisable as of:		
December 31, 2000	1,125,409	$ 2.87
December 31, 2001	1,462,761	$ 2.41
December 31, 2002	1,505,069	$ 3.83

Various price ranges and weighted average information for options outstanding and exercisable as of December 31, 2002 are as follows:

Range of Exercise Prices		Options Outstanding Number Outstanding as of Dec 31, 2002	Options Outstanding Weighted Average Remaining Contractual Life	Options Outstanding Weighted Average Exercise Price	Options Exercisable Number Exercisable as of Dec 31, 2002	Options Exercisable Weighted Average Exercise Price
$ 1.13	2.25	321,405	3.10 years	$ 1.57	321,405	$ 1.57
2.31	2.75	412,204	2.67 years	2.41	412,204	2.41
3.51	4.75	462,898	4.19 years	4.60	412,578	4.61
5.13	7.00	365,717	6.22 years	5.50	155,717	5.45

7.25	7.25	554,250	7.19 years		7.25			
7.34	9.24	345,370	5.80 years		7.56	203,165		7.43
		2,461,844	5.00 years	$	4.98	1,505,069	$	3.83

Employee Stock Purchase Plan

The 1997 Employee Stock Purchase Plan (the ESPP) was approved and adopted by Bio-Vascular, as the sole shareholder of the Company, in May 1997. The ESPP, which became effective on July 1, 1997, enables eligible employees to purchase the Company s common stock at 85% of the fair market value of the stock on the date an offering commences or on the date an offering terminates, whichever is lower. The ESPP covers an aggregate of up to 250,000 shares of common stock that can be issued and sold to participating employees of the Company through a series of three-month offerings, beginning July 1, 1997. The ESPP covers

substantially all employees, subject to certain limitations. Each employee may elect to have up to 10% of his or her base pay withheld and applied toward the purchase of shares in each such offering. Purchases under the ESPP for 2002 were 24,539 shares, generating proceeds to the Company of $130,608 at an average purchase price of $5.32; for 2001, there were 25,487 shares, generating proceeds to the Company of $91,652 at an average purchase price of $3.60; and for 2000, there were 21,589 shares, generating proceeds to the Company of $85,965 at an average purchase price of $3.99. As of December 31, 2002, there are 114,448 shares of common stock reserved for purchases under the ESPP.

Stock-Based Compensation

For purposes of calculating the fair value of FASB Statement No. 123, the weighted average fair values of options granted were:

	For the Years Ended December 31,		
	2002	**2001**	**2000**
Options under the 1997 Plans	$ 5.03	$ 4.19	$ 5.43
Options under ESPP	$ 0.94	$ 0.64	$ 0.70
Non-plan options	$ 5.13	$ 6.02	$ 3.66

The weighted average fair values for the 1997 Plans and the non-plan options were based on the fair values on the dates of grant. The fair values of options under the ESPP were based on the 15 percent purchase discount. The fair values for the 1997 Plans and the non-plan options were calculated using the Black-Scholes option-pricing model with the following assumptions:

	For the Years Ended December 31,		
	2002	**2001**	**2000**
Expected option life	5.0 years	6.0 years	6.0 years
Expected volatility factor	85.9%	90.8%	92.6%
Expected dividend yield	0%	0%	0%
Risk-free interest rate	4.69%	4.93%	6.40%

The fair values for the non-employee options were calculated using the Black-Scholes option-pricing model with the following assumptions:

	For the Years Ended December 31,		
	2002	**2001**	**2000**
Expected option life	8.0 years	8.0 years	8.0 years