VITAL IMAGES INC
Form 10-K
March 29, 2002

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2001

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

The aggregate market value of the voting stock held by non-affiliates of the registrant as of February 28, 2002 was $54,543,000.

The number of shares outstanding of the issuer s classes of common stock as of February 28, 2002: Common stock, $.01 Par Value - 8,706,113.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of registrant s definitive Proxy Statement in connection with the Annual Meeting of Shareholders to be held May 8, 2002 (2002 Proxy Statement) are incorporated by reference into Part III.

VITAL IMAGES, INC.

FORM 10-K

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FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. For this purpose, any statements contained in this Form 10-K that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, words such as may, will, expect, believe, anticipate, estimate, or continue negative or other variations thereof or comparable terminology are intended to identify forward-looking statements. These statements by their nature involve substantial risks and uncertainties, and actual results may differ materially depending on a variety of factors, including those set forth in the section below entitled Important Factors.

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).

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 minutes. The Company has released several updates to *Vitrea* each year, and in December 2001 released *Vitrea 2 Version 2.6*, 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 approximately 550 copies of *Vitrea* and *Vitrea 2* to hospitals, clinics, imaging centers and other sites, including 12 of the nation s top 16 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 non-invasive screening applications, such as CT colonography for colon cancer screening, surgical planning, intra-operative visualization and real-time interventional 3D visualization.

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 $382 million in 2001 and will grow to approximately $1 billion by 2006, a compound annual growth rate of over 21%. Today, only a minority of hospitals, clinics and imaging centers has purchased 3D medical imaging products for use 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 will grow to $2 billion in 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 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 two- or 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 recently, 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 and three dimensions.

The 3D medical imaging industry and the markets for 3D medical imaging products have historically 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. Over the past several years, a number of technical and cost barriers to growth in the 3D medical imaging industry and the PACS industry have begun to erode. In particular, the medical industry has 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 increasing 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:

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 on 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.

Recent technology improvements in CT and MR scanners enable them to generate an increasing number of slices per exam, resulting in over 1500 images, which is more than 10 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.

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 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 $382 million in 2001 and will grow to approximately $1 billion by 2006, a compound annual growth rate of over 21%. Today, only a minority of hospitals, clinics and imaging centers has purchased 3D medical imaging products for use 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 will grow to $2 billion in 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 America Medical Systems (TAMS), the Surgical Navigation Technologies division of Medtronic, Inc., E-Z-EM, Inc. and A.L.I. Technologies, Inc. (ALI). See Business-Marketing and Distribution.

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 Windows NT and provides the speed and ease-of-use the medical community demands for diagnosis and treatment planning in a clinical environment. In December 2001, the Company released *Vitrea 2 Version 2.6*, which has improved quality, reliability and usability features to meet the diagnostic and treatment planning needs of busy radiology departments.

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 or three 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 also 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 also 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 $40,000 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.

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 66%, 66% and 63% of total revenue in each of the fiscal years ended December 31, 2001, 2000 and 1999, respectively. Maintenance and services comprised 16%, 13% and 13% of total revenue for the years ended December 31, 2001, 2000 and 1999, respectively, while hardware accounted for 18%, 21% and 24% of total revenue for the years ended December 31, 2001, 2000 and 1999, respectively.

The Company expensed $3,419,000, $3,036,000 and $2,525,000 incurred in its research and development efforts in each of the fiscal years ended December 31, 2001, 2000 and 1999, 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 physicians 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

In general, 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 do not provide for the payment of any fees or royalties to such collaborators. However, the Company was obligated to pay a royalty to the Stanford University Medical Center equal to one-half of one percent 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, and which 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 into 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 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. These suppliers, including Voxar Ltd., Viatronix, Inc. and TeraRecon, Inc., are generally 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: (i) provide differentiated 3D medical imaging products that operate in multi-vendor network and image source environments; (ii) provide clinical quality, three-dimensional images, volume rendered at high speed with interactive navigation on a relatively low-cost standard computer; (iii) integrate clinical knowledge from its collaborative clinical partners into its products; (iv) leverage its visualization technology across multiple clinical disciplines, including disease screening, clinical diagnosis and therapy planning; (v) offer a DICOM client product which can operate on any DICOM network, independent of the imaging system and network provider; and (vi) 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 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 new agreement runs through September 30, 2002. In December 1999, the Company established a strategic marketing alliance with ALI, a leader in the management of clinical data. Both Vital Images and ALI can now offer an integrated solution for the data management requirements of the new generation of CT and MR scanners. 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 9 to the Financial Statements - Major Customers and Geographic Data for information regarding the Company s export sales. As of December 31, 2001, the Company had 18 direct salespeople in the U.S., one international reseller salesperson, one OEM customer and 13 international resellers.

Customers and Customer Support

Through December 31, 2001, the Company has sold approximately 550 separate software licenses for *Vitrea* and *Vitrea 2* for use in approximately 450 different sites, including hospitals, clinics, imaging centers and other sites. The Company s customers include America s most renowned hospitals, including the following 12 of the top 16 hospitals listed in *U.S. News and World Report s* honor roll of top hospitals:

Mayo Clinic	Barnes-Jewish Hospital
Massachusetts General Hospital	Stanford University Hospital
Cleveland Clinic	Hospital of the University of Pennsylvania
UCLA Medical Center	UCSF Medical Center
Duke University Medical Center	University of Washington Medical Center
Johns Hopkins Hospital	New York Presbyterian Hospital

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

Hays Medical Center - Hays, Kansas

Antelope Valley Hospital - Lancaster, California

Olean Medical Group - Olean, New York

Memorial Hospital of Union County - Marysville, Ohio

Sumner Regional Hospital - Gallatin, Tennessee

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 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 inclusion in any new versions of the Company s 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 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.

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 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 PMA s, 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 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.

Employees

As of February 28, 2002, the Company had 79 full-time employees, with 26 involved in research and development, 26 in sales and marketing, 12 in technical support functions and 15 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.

EXECUTIVE OFFICERS OF THE REGISTRANT

Set forth below are the names of the executive officers of the Company as of March 1, 2002, their ages, the year first elected as an executive officer of the Company and employment for the past five years.

NAME	AGE	TITLE
Jay D. Miller	42	President, Chief Executive Officer and Director
Vincent J. Argiro, Ph.D.	46	Chief Technology Officer, Founder and Director
Steven P. Canakes	46	Vice President - Sales
David M. Frazee	41	Vice President - Engineering
Gregory S. Furness	47	Vice President - Finance, Chief Financial Officer, Treasurer and Secretary

Jay D. Miller. Mr. Miller was named President & CEO in February 2002 and served as the Company s General Manager and Vice President - Business Development from August 1998 to February 2002 and as its Vice President - Marketing and Business Development from February 1997 to August 1998. From 1989 until his employment by the Company, Mr. Miller was employed by GE Medical Systems, Inc. in positions of increasing responsibility in the marketing area, including serving as product manager and global product line strategy for MR imaging products and marketing manager for the cardiology market segment. Prior to 1989, Mr. Miller was employed by Siemens Medical Systems in technical marketing.

Vincent J. Argiro, Ph.D. Dr. Argiro, the Founder of the Company, was named Chief Technology Officer of Vital Images in October 1995. From May 1994 until May 1997, Dr. Argiro also served as a Vice President of Bio-Vascular, the former parent company of Vital Images. Dr. Argiro served as a director of Bio-Vascular from May 1994 until March 1996. Following the acquisition of the Company by Bio-Vascular in May 1994, Dr. Argiro served as President of the Company until October 1995. Dr. Argiro served as Chairman of the Board of the Company from 1988 until May 1994. From 1988 to 1990 and from September 1991 to June 1992, Dr. Argiro also served as President of the Company.

Steven P. Canakes. Mr. Canakes was named Vice President - Sales in March 2000. Prior to that he was the Company s Vice President - U.S. Sales from August 1998 to March 2000 and its Director of U.S. Sales from March 1998 to August 1998. From July 1996 to March 1998, Mr. Canakes was Vice President of Business Development for MedManagement, LLC in Plymouth, Minnesota. From February 1994 to July 1996, Mr. Canakes served as Vice President of Sales for Medintell Systems and Value Health Corporation, a Medintell Systems Division. Prior to February 1994, Mr. Canakes was a CT Product Sales Manager for Picker International, Inc.

David M. Frazee. Mr. Frazee was named Vice President - Engineering in March 1999. From July 1998 to March 1999, Mr. Frazee served as a Manager in the Solution Strategies Practice of Whittman-Hart, Inc. From April 1997 to July 1998, Mr. Frazee was Director of Program Management and Internet Products at LodgeNet Entertainment, Inc. Prior to April 1997, Mr. Frazee held several systems and software development and management positions at GE Medical Systems, Inc., most recently as Manager of the Global Software Applications Operation.

Gregory S. Furness. Mr. Furness was named Vice President Finance, Chief Financial Officer, Treasurer and Secretary of Vital Images in February 1997. From December 1987 to December 1996, Mr. Furness served as Executive Vice President and Chief Financial Officer of CAMAX Manufacturing Technologies, Inc., a computer-aided manufacturing software developer, which was acquired by Structural Dynamics Research Corporation in June 1996. Prior to December 1987, Mr. Furness was employed as Vice President, Finance and Chief Financial Officer of Mizar, Inc., and as an audit manager at Deloitte and Touche LLP. Mr. Furness is a Certified Public Accountant.

ITEM 1A - 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

The Company had operating losses of $1,055,000, $2,787,000 and $3,303,000 for the years ended December 31, 2001, 2000 and 1999, respectively, and, with the exception of the fiscal year ended October 31, 1995, has incurred operating losses each year since 1990. As of December 31, 2001, the Company s accumulated deficit was $20,878,000. The Company s ability to attain and 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 achieve profitable operations on an annual basis. See 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 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 96% of the Company s total revenue for the year ended December 31, 2001, 96% of the Company s total revenue for the year ended December 31, 2000 and 85% of the Company s total revenue for the year ended December 31, 1999. 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 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 27%, 27% and 21% of the Company s total revenue for the years ended December 31, 2001, 2000 and 1999, 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.

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 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.

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 defending an intellectual property claim could be substantial and could adversely affect the Company, even if it was ultimately successful in 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 $6,000,000 per occurrence and $7,000,000 in total and also maintains errors and omissions coverage in the amount of $6,000,000 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 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 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, which 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.

Item 2. PROPERTIES

The Company s principal office is located in Plymouth, Minnesota, where the Company currently occupies approximately 24,000 square feet under a lease that expires July 31, 2005. Under certain conditions contained in the lease, the Company has the option to expand its facilities.

The Company considers its current facilities adequate for its current needs and believes that suitable additional space will be available as and if needed.

Item 3. LEGAL PROCEEDINGS

The Company is not engaged in any legal proceedings at this time.

Item 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

There was no matter submitted to the vote of security holders during the fourth quarter of 2001.

PART II

Item 5. MARKET FOR REGISTRANT S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

Effective September 29, 2000 the Company s common stock began trading on the Nasdaq SmallCap Market under the symbol VTAL. Prior to September 29, 2000, the Company s common stock traded on the OTC Bulletin Board under the symbol VTAL. The table below reflects the high and low per share closing sale prices of the Company s common stock as reported by The Nasdaq Stock Market for the fourth quarter 2000 and all of 2001, and for each of the periods indicated prior to the fourth quarter of 2000, the high and low closing bid quotations for the Company s common stock as reported by the OTC Bulletin Board. Such prices reflect inter-dealer prices, do not include adjustments for retail mark-ups, markdowns or commissions and may not necessarily represent actual transactions.

	High	Low
2001		
Fourth Quarter	$ 10.32	$ 5.00
Third Quarter	7.35	4.40
Second Quarter	6.95	3.63
First Quarter	5.25	3.25
2000		
Fourth Quarter	$ 5.94	$ 3.44
Third Quarter	6.88	4.94
Second Quarter	8.63	5.38
First Quarter	10.94	4.63

The Company has never paid or declared any cash dividends on its common stock and does not intend to pay dividends on its common stock in the near future. To date, the Company has incurred losses and presently expects to retain its future anticipated earnings to finance development and expansion of its business. As of February 28, 2002, there were approximately 4,000 beneficial owners and approximately 1,100 registered holders of record of the Company s common stock.

Item 6. SELECTED FINANCIAL DATA

The following selected financial data for each of the fiscal years in the five-year period ended December 31, 2001 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 Management s Discussion and Analysis of Financial Condition and Results of Operations, which are included elsewhere in this Annual Report on Form 10-K.

	For the Years Ended or As of December 31,				
	2001	2000	1999	1998	1997(1)
	(In thousands, except per share data)				
Statement of Operations Data:					
Revenue	$ 15,196	$ 10,628	$ 6,623	$ 4,527	$ 1,218
Gross margin	11,886	8,110	5,080	3,302	915
Operating expenses:					
Selling, general and administrative	9,523	7,861	5,858	4,954	3,871
Research and development	3,418	3,036	2,525	1,815	2,255
Operating loss	(1,055)	(2,787)	(3,303)	(3,467)	(5,211)
Net loss	$ (1,012)	$ (2,637)	$ (3,218)	$ (3,209)	$ (4,774)
Net loss per share - basic and diluted (2)	$ (0.14)	$ (0.39)	$ (0.64)	$ (0.66)	$ (1.00)
Weighted average common sharesoutstanding - basic and diluted(2)	7,075	6,760	5,046	4,841	4,772
Balance Sheet Data:					
Working capital	$ 6,094	$ 2,344	$ 5,409	$ 3,360	$ 6,415
Total assets	13,269	7,287	8,666	5,938	8,296
Long-term debt					
Total shareholders equity	8,051	3,765	6,098	4,134	7,253

(1) Includes Vital Images results as a wholly-owned subsidiary of Bio-Vascular from January 1, 1997 through May 12, 1997. Vital Images was merged with Bio-Vascular in May 1994 in a transaction accounted for as a pooling-of-interests and subsequently spun-off as an independent, publicly-owned company in May 1997. Results of operations during the period from January 1, 1997 through May 12, 1997 include allocations of certain general corporate expenses of Bio-Vascular.

(2) For periods after and including May 12, 1997, basic and diluted net loss per share is computed using the weighted average common shares outstanding during the period. Common share equivalents are not included in the net loss per share calculations since they are

anti-dilutive.

For periods prior to May 12, 1997, the weighted average common shares outstanding used in the net loss per share calculation is one-half of the weighted average of Bio-Vascular common shares outstanding based on the distribution of one share of the Company s common stock for each two shares of Bio-Vascular s common stock.

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), 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 would be reported under different conditions or using different assumptions.

Allowance for doubtful accounts. The Company maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. If the financial condition of the Company s customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required.

Deferred tax asset. The Company records a valuation allowance to reduce its deferred tax assets to the amount that is more likely than not to be realized. While the Company has considered future taxable income and ongoing prudent and feasible tax planning strategies 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 assets in the future in excess of its net recorded amount, an adjustment to the deferred tax asset would increase income in the period such determination was made. 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 determination was made.

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 121, Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of, 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.

Revenue Recognition. 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. 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.

In software arrangements that include the rights to multiple software products, system hardware, specified upgrades, maintenance or services, the Company allocates the total arrangement fee among each deliverable based on the relative fair value of each of the deliverables determined based on vendor-specific objective evidence. In software arrangements in which the Company does not have vendor-specific objective evidence, 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.

Revenue from license fees is recognized when persuasive evidence of an agreement exists, shipment of the product has occurred, no significant Company obligations with regard to implementation remain, the fee is fixed and determinable and collection is probable. Revenue allocable to maintenance is recognized on a straight-line basis over the periods in which it is provided. The Company evaluates arrangements that include services to determine whether those services are essential to the functionality of other elements of the arrangement. Generally, the Company s services are not considered essential to the functionality of other elements, and accordingly, revenue allocable to services is recognized as the services are performed. In arrangements where the Company is performing significant customization or modification of software, revenue from the arrangements are recognized using contract accounting, generally on a percentage-of-completion basis. Hardware revenue is recognized upon shipment when all other revenue recognition criteria in the arrangement have been met.

Revenue

Total revenue increased 43% to $15,196,000 in 2001 from total revenue of $10,628,000 in 2000. Total revenue increased 60% to $10,628,000 in 2000 compared with $6,623,000 in 1999. 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 43% to $10,083,000 in 2001 from $7,037,000 in 2000. The increase in software license fee revenue was driven primarily 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. License fee revenue increased 68% to $7,037,000 in 2000 from $4,182,000 in 1999. The increase in software license fee revenue from 1999 to 2000 was primarily due to an increase in the number of Vitrea licenses sold.

Maintenance and services revenue increased 74% to $2,450,000 in 2001 from $1,412,000 in 2000 and increased 70% to $1,412,000 in 2000 from $831,000 in 1999. 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. 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 22% to $2,663,000 in 2001 from $2,179,000 in 2000 and increased 35% to $2,179,000 in 2000 from $1,610,000 in 1999. The increase in hardware revenue was due to an increase in the number of hardware systems sold with the *Vitrea* software licenses. The

hardware revenue growth was lower in 2001 than in 2000 due to a change in the sales model with Toshiba America Medical Systems, Inc. (TAMS). Previously, all of the Company s sales to TAMS were complete systems sales. During the third quarter and fourth quarter 2001, most of the revenue resulting from sales to TAMS was derived from software-only sales, which generate higher margins than complete system sales.

Royalties received from the Company s license agreement with Paradigm Geophysical Corporation (Paradigm) decreased in 2001 as compared to 2000 and decreased in 2000 compared to 1999 due to a decrease in the royalty percentage received. Revenue received under the license agreement with Paradigm was $106,000, $210,000 and $462,000 in 2001, 2000 and 1999, respectively. The agreement expired in January 2001.

As a result of the Company focusing its efforts on its *Vitrea 2* software, revenue from *VoxelView*® software, the Company s predecessor software product to *Vitrea*, decreased from $269,000 in 1999 to $89,000 in 2000 and $25,000 in 2001.

Gross Margin

The Company s gross margin percentage was 78% in 2001, up from 76% in 2000. The gross margin percentage was 77% in 1999. The increase in gross margin for 2001 was primarily attributable to a change in the sales model with TAMS as discussed above.

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 only 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, the overall gross margin percentage will increase modestly in future periods.

Sales and Marketing

Sales and marketing expenses were $6,865,000, or 45% of total revenue, $5,651,000, or 53% of total revenue, and $3,886,000, or 59% of total revenue, for 2001, 2000 and 1999, respectively. The increase in expenses from 2000 to 2001 was primarily due to increased compensation costs as a result of additional personnel and increased sales commissions as a result of increased revenue. The increase in expenses from 1999 to 2000 was primarily due to additional personnel, increased compensation costs as a result of increased sales commissions and increased travel expenses related to selling and promoting the *Vitrea 2* product. There were also advertising and promotional costs during 2000 that increased the marketing expenses over 1999. Depreciation expense also increased in 2001 as compared with 2000 and in 2000 as compared with 1999, primarily due to equipment purchases used for the additional personnel, upgrades of computer equipment and equipment for tradeshows and, in 2000, the addition of furniture and fixtures at the Company s new leased facilities. 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 customer support personnel, but decline as a percentage of total revenue.

Research and Development

Research and development expenses were up 13% to $3,419,000 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*, the amortization of licensed technology and increases in expenses to support clinical collaboration sites. Research and development expenses were $2,525,000, or 38% of total revenue, in 1999. The increase from 1999 to 2000 was primarily due to increased compensation costs as a

result of additional personnel. There were also consecutive increases in annual depreciation expense between 1999 and 2001, 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 increasing revenue resulting from its product development efforts. 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, but decline as a percentage of total revenue.

General and Administrative

General and administrative expenses were $2,658,000, or 17% of total revenue, $2,210,000, or 21% of total revenue and $1,971,000, or 30% of total revenue, in 2001, 2000 and 1999, respectively. 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 increase from 1999 to 2000 was primarily due to increases in compensation costs, legal fees for patent work and additional SEC filings, and shareholder communication costs and, in 2000, higher depreciation expense due to the addition of furniture and equipment at the Company s new leased facilities. 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.

Results of Operations

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 loss of $1,055,000 for 2001 compared with an operating loss of $2,787,000 for 2000 and an operating loss of $3,303,000 for 1999.

Interest Income

There was $55,000 of interest income for 2001, compared with $162,000 in 2000 and $91,000 in 1999. 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. The increase in interest income from 1999 to 2000 was primarily due to an increase in cash from the Company s private placement of securities in December 1999.

Income Taxes

The income tax provisions for 2001, 2000 and 1999 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 assets of the Company.

Liquidity and Capital Resources

As of December 31, 2001, the Company had $6,831,000 in cash and cash equivalents, working capital of $6,094,000 and no borrowings. The Company s line of credit agreement with a bank expired on September 30, 2001. The Company is in the process of reviewing various options for working capital borrowings.

Cash provided by operations was $771,000 for 2001 compared with cash used in operations of $1,961,000 for 2000 and $3,064,000 for 1999. The primary provider 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 the years 2000 and 1999 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 2001, 2000 and 1999. Increases in deferred revenue and accrued payroll and other liabilities resulted in increased cash flows in 2001, 2000 and 1999.

The increases in deferred revenue in 2001 were primarily due to volume increases in *Vitrea 2* sales and renewals of annual maintenance. The increases in accounts receivable were due primarily to volume increases in *Vitrea 2* sales. The increases in accrued payroll and other liabilities in 2001 were primarily due to increases in incentive bonuses and sales commissions from increased revenue. The increases in accrued payroll and other liabilities in 2000 and 1999 were primarily due to increases in accrued vacation due to increases in headcount and in sales commissions as a result of increased revenue.

Net investing activities used $1,519,000 of cash in 2001, of which $769,000 was used for purchases of property and equipment, primarily for new computer equipment. In July 2001, the Company entered into an agreement to license technology from a third party and paid $500,000 to the licensor and was obligated to pay an additional $250,000 plus interest at 8%. The $250,000 plus interest was paid in full in December 2001. Net investing activities used $1,384,000 of cash in 2000 due to additions of property and equipment primarily from the move to new office facilities in 2000 and equipment for additional headcount. Net investing activities provided $1,474,000 of cash in 1999 primarily due to the conversion of marketable securities into cash. The Company added property and equipment of $512,000 in 1999 primarily for computer equipment to accommodate the increases in employee headcount.

Cash provided by financing activities totaled $5,288,000, $303,000 and $5,171,000 in 2001, 2000 and 1999, respectively. In December 2001, the Company called the outstanding warrants issued as part of the private placement in December 1999 and 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 $4,491,000 in 2001. 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. A private placement of the Company s common stock and warrants completed by the Company in December 1999 was primarily responsible for the cash provided by financing activities in 1999. During 2001, 2000 and 1999, net cash of $245,000, $303,000 and $426,000, 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, 2001, and the effect such obligations are expected to have on our liquidity and cash flow in future periods.

	2002	2003	2004	2005	2006
Operating leases	$ 330,000	$ 347,000	$ 349,000	$ 203,000	$

Management believes that its cash and cash equivalents should be sufficient to satisfy its cash requirements for at least the next twelve 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 is generally effective for business combinations completed after June 30, 2001. SFAS No. 142 is effective January 1, 2002 for existing goodwill and intangible assets and July 1, 2001 for business combinations completed after June 30, 2001. The Company is currently evaluating the impact of these standards on its financial position and 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 is effective for the Company beginning January 1, 2002. The Company is currently evaluating the impact of this standard on its financial position and results of operations.

Market Risk

The Company is exposed to market risk related to changes in the fair value of its financial instruments due to changes in interest rates. The Company does not have any foreign subsidiaries and substantially all of the Company s transactions are denominated in U.S. dollars.

Forward-Looking Statements

This Annual Report on Form 10-K 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, the words expect, anticipate, intend, plan, believe, seek, and estimate similar expressions are intended to identify such forward-looking statements. However, this Annual Report on Form 10-K 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 1A of this Annual Report on Form 10-K.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The Company s financial statements, supplemental schedule and Report of Independent Accountants thereon, all of which are included in this Annual Report on Form 10-K, are listed in Item 14 (a) (1) of this Form 10-K.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND

FINANCIAL DISCLOSURE

None.

PART III

Item 10. DIRECTORS AND EXECUTIVE OFFICERS OF REGISTRANT

(a) Directors of the Registrant.

The information under the caption Election of Directors in the Company s 2002 Proxy Statement is incorporated herein by reference.

(b) Executive Officers of the Registrant.

Information concerning Executive Officers of the Company is included in this Report under Item 1, Executive Officers of the Registrant.

(c) Compliance with 16(a) of the Securities Exchange Act of 1934.

The information under the caption Compliance with Section 16 (a) in the Company s 2002 Proxy Statement is incorporated herein by reference.

Item 11. EXECUTIVE COMPENSATION

The information under the caption Executive Compensation and Director Compensation in the Company s 2002 Proxy Statement is incorporated herein by reference.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information under the caption Beneficial Ownership of Common Stock in the Company s 2002 Proxy Statement is incorporated herein by reference.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

There are no reportable transactions.

PART IV

Item 14. 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 Accountants thereon are included herein:

Report of Independent Accountants
Balance Sheets as of December 31, 2001 and 2000
Statements of Operations for the years ended December 31, 2001, 2000 and 1999
Statements of Shareholders Equity for the years ended December 31, 2001, 2000 and 1999
Statements of Cash Flows for the years ended December 31, 2001, 2000 and 1999
Notes to Financial Statements

Schedule II. Valuation and Qualifying Accounts

(a) (2) Included in Item 14 (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 53.

(b) REPORTS ON FORM 8-K

The Company had no Current Reports on Form 8-K during the year ended December 31, 2001 or during the period from December 31, 2001 to the date of this Annual Report on Form 10-K.

(c) EXHIBITS

Included in Item 14 (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 Report to be signed on its behalf by the undersigned, thereunto duly authorized, in Minneapolis, Minnesota, on the 29th day of March 2002.

VITAL IMAGES, INC.

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

Pursuant to the requirement of the Securities Exchange Act of 1934, this Report has been signed by the following persons in the capacities and on the dates indicated.

Signature	**Title**	**Date**
/s/ Jay D. Miller Jay D. Miller	President, Chief Executive Officer and Director (Principal Executive Officer)	March 29, 2002
/s/ Gregory S. Furness Gregory S. Furness	Chief Financial Officer, Vice President-Finance, Treasurer and Secretary (Chief Accounting Officer)	March 29, 2002
/s/ Douglas M. Pihl Douglas M. Pihl	Chairman of the Board and Director	March 29, 2002
/s/ Vincent J. Argiro Vincent J. Argiro	Chief Technology Officer, Founder and Director	March 29, 2002
/s/ James B. Hickey, Jr. James B. Hickey, Jr.	Director	March 29, 2002
/s/ Richard W. Perkins Richard W. Perkins	Director	March 29, 2002
/s/ Michael W. Vannier Michael W. Vannier	Director	March 29, 2002
/s/ Sven A. Wehrwein	Director	March 29, 2002

Sven A. Wehrwein

REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and Shareholders of

Vital Images, Inc.:

In our opinion, the financial statements listed in the index appearing under Item 14(a)(1) present fairly, in all material respects, the financial position of Vital Images, Inc. (the Company) at December 31, 2001 and 2000, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2001 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 14(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.

PricewaterhouseCoopers LLP

Minneapolis, Minnesota

February 6, 2002

VITAL IMAGES, INC.

BALANCE SHEETS

	As of December 31,	
	2001	**2000**
ASSETS		
Current assets:		
Cash and cash equivalents	$ 6,830,906	$ 2,291,107
Accounts receivable, net of allowance for doubtful accounts of $185,000 and $215,000 as of December 31, 2001 and 2000, respectively	3,637,954	3,024,299
Prepaid expenses and other current assets	557,833	441,500
Total current assets	11,026,693	5,756,906
Property and equipment, net	1,552,116	1,529,688
Licensed technology, net	690,000	
TOTAL ASSETS	$ 13,268,809	$ 7,286,594
LIABILITIES AND SHAREHOLDERS EQUITY		
Current liabilities:		
Accounts payable	$ 864,385	$ 1,019,898
Accrued payroll	1,326,214	799,975
Deferred revenue	2,199,465	1,238,344
Accrued royalties	362,637	80,557
Other current liabilities	179,610	273,793
Total current liabilities	4,932,311	3,412,567
Deferred revenue	285,709	109,353
Total liabilities	5,218,020	3,521,920
Commitments (Note 6)		
Shareholders equity:		
Preferred stock: $0.01 par value; 5,000,000 shares authorized; none issued or outstanding as of December 31, 2001 and 2000		
Common stock: $0.01 par value; 20,000,000 shares authorized; 8,186,092 and 6,823,106 shares issued and outstanding as of December 31, 2001 and 2000,respectively	81,861	68,231
Additional paid-in capital	28,846,906	23,562,444
Accumulated deficit	(20,877,978)	(19,866,001)
Total shareholders equity	8,050,789	3,764,674
TOTAL LIABILITIES AND SHAREHOLDERS EQUITY	$ 13,268,809	$ 7,286,594

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

VITAL IMAGES, INC.

STATEMENTS OF OPERATIONS

	For the Years Ended December 31,		
	2001	**2000**	**1999**
Revenue:			
License fees	$ 10,082,897	$ 7,037,227	$ 4,181,750
Maintenance and services	2,450,037	1,411,583	831,196
Hardware	2,662,702	2,179,381	1,610,414
Total revenue	15,195,636	10,628,191	6,623,360
Cost of revenue:			
License fees	643,593	238,775	139,025
Maintenance and services	552,861	385,950	197,705
Hardware	2,112,982	1,893,075	1,206,846
Total cost of revenue	3,309,436	2,517,800	1,543,576
Gross margin	11,886,200	8,110,391	5,079,784
Operating expenses:			
Sales and marketing	6,864,762	5,651,333	3,886,295
Research and development	3,418,506	3,036,016	2,524,670
General and administrative	2,657,998	2,209,999	1,971,435
Total operating expenses	12,941,266	10,897,348	8,382,400
Operating loss	(1,055,066)	(2,786,957)	(3,302,616)
Interest income, net	55,089	161,726	90,991
Loss before income taxes	(999,977)	(2,625,231)	(3,211,625)
Income taxes	12,000	12,000	6,000
Net loss	$ (1,011,977)	$ (2,637,231)	$ (3,217,625)
Net loss per share - basic and diluted	$ (0.14)	$ (0.39)	$ (0.64)
Weighted average common shares outstanding -basic and diluted	7,074,906	6,760,233	5,045,530

(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 Shareholder's
	Shares	Amount	Capital	Deficit	Equity
Balances as of December 31, 1998	4,870,497	$ 48,705	$ 18,096,707	$ (14,011,145)	$ 4,134,267
Cancellation of restricted stock	(1,881)	(19)	19		
Stock-based compensation			10,781		10,781
Issuance of common stock upon exercise of stock options	153,484	1,535	358,306		359,841
Issuance of common stock under Employee Stock Purchase Plan	23,767	238	66,407		66,645
Issuance of common stock in connection with private placement, net of offering costs	1,650,000	16,500	4,728,007		4,744,507
Net and comprehensive loss				(3,217,625)	(3,217,625)
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 12)	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

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

VITAL IMAGES, INC.

STATEMENTS OF CASH FLOWS

	For the Years Ended December 31,		
	2001	**2000**	**1999**
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net loss	$ (1,011,977)	$ (2,637,231)	$ (3,217,625)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:			
Depreciation and amortization	746,727	718,978	563,420
Stock-based compensation	10,447		10,781
Provision for uncollectible accounts receivable	114,000	122,000	15,000
Amortization of licensed technology	60,000		
Changes in operating assets and liabilities:			
Accounts receivable	(727,655)	(1,141,185)	(871,005)
Prepaid expenses and other current assets	(116,333)	21,809	(328,192)
Accounts payable	(155,513)	188,157	326,481
Deferred revenue	1,137,477	414,227	411,004
Accrued expenses and other current liabilities	714,136	352,165	26,518
Net cash provided by (used in) operating activities	771,309	(1,961,080)	(3,063,618)
CASH FLOWS FROM INVESTING ACTIVITIES:			
Additions to property and equipment	(769,155)	(1,384,187)	(511,661)
Payment for licensed technology	(750,000)		
Investments in marketable securities			(1,014,444)
Maturities of marketable securities			3,000,000
Net cash (used in) provided by investing activities	(1,519,155)	(1,384,187)	1,473,895
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from sale of common stock	551,624		4,744,507
Proceeds from sale of common stock under stock plans	245,220	303,489	426,486
Proceeds from sale of common stock under stock warrants	4,490,801		
Net cash provided by financing activities	5,287,645	303,489	5,170,993
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	4,539,799	(3,041,778)	3,581,270
CASH AND CASH EQUIVALENTS, BEGINNING OFYEAR	2,291,107	5,332,885	1,751,615
CASH AND CASH EQUIVALENTS, END OF YEAR	$ 6,830,906	$ 2,291,107	$ 5,332,885
SUPPLEMENTAL CASH FLOW INFORMATION:			
Cash paid during the year for interest	$ 17,730	$ 5,204	$ 12,526

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

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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), 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.

Financial Instruments

The Company considers all highly liquid investments acquired with an original maturity of three months or less to be cash equivalents. Investments having original maturities in excess of three months are classified as marketable securities. Investments are classified as short-term or long-term on the balance sheet based on their maturity date. All of the Company s marketable securities are classified as available-for-sale and all mature in one year or less. Available-for-sale investments are recorded at market value, which is based on quoted market prices, with unrealized holding gains and losses included as a separate component of shareholders equity. The Company uses a specific identification cost method to determine the gross realized gains and losses on the sale of its securities.

Concentration of Credit Risk

Cash is held primarily by one financial institution. Cash equivalents and marketable securities are invested in money market accounts. Carrying values approximate market values for all money market funds, accounts receivable and accounts payable because of their short maturities and liquidity. Realized gains and losses on marketable securities were not significant for the years ended December 31, 2001 and 2000. 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.

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. 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 121, Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of, 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.

Revenue Recognition

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. 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.

In software arrangements that include the rights to multiple software products, system hardware, specified upgrades, maintenance or services, the Company allocates the total arrangement fee among each deliverable based on the relative fair value of each of the deliverables determined based on vendor-specific objective evidence. In software arrangements in which the Company does not have vendor-specific objective evidence, 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.

Revenue from license fees is recognized when persuasive evidence of an agreement exists, shipment of the product has occurred, no significant Company obligations with regard to implementation remain, the fee is fixed and determinable and collection is probable. Revenue allocable to maintenance is recognized on a straight-line basis over the periods in which it is provided. The Company evaluates arrangements that include services to determine whether those services are essential to the functionality of other elements of the arrangement. Generally, the Company s services are not considered essential to the functionality of other elements, and accordingly, revenue allocable to services is recognized as the services are performed. In arrangements where the Company is performing significant customization or modification of software (i.e. development agreements Note 12), revenue from the arrangements are recognized using contract accounting,

generally on a percentage-of-completion basis. Hardware revenue is recognized upon shipment when all other revenue recognition criteria in the arrangement have been met.

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.

Net Loss Per Share

Net loss per share is computed using the weighted average common shares outstanding during the period. Common share equivalents are not included in the net loss per share calculations since they are anti-dilutive. Warrants and options to purchase 2,891,604 shares, 3,889,675 shares and 3,624,561 shares of the Company s common stock were outstanding as of December 31, 2001, 2000 and 1999, respectively, and could potentially dilute basic earnings per share in future periods, if the Company generates net income.

Stock-Based Compensation

The Company has chosen to continue to account for stock options granted to employees and directors using the intrinsic value method prescribed by APB Opinion No. 25, *Accounting for Stock Issued to Employees,* and related interpretations. Accordingly, compensation cost for stock options granted is measured as the excess, if any, of the value of the Company s stock as of the date of the grant over option exercise price. Such compensation cost is amortized on a straight-line basis over the underlying vesting term of the option.

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 is generally effective for business combinations completed after June 30, 2001. SFAS No. 142 is effective January 1, 2002 for existing goodwill and intangible assets and July 1, 2001 for business combinations completed after June 30, 2001. The Company is currently evaluating the impact of these standards on its financial position and 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 is effective for the Company beginning January 1, 2002. The Company is currently evaluating the impact of this standard on its financial position and results of operations.

(3) Supplemental Financial Statement Information

Cash and Cash Equivalents

	December 31,	
	2001	2000
Cash and cash equivalents:		
Cash	$ 265,291	$ 1,192,633
Money market funds	6,565,615	1,098,474
Cash and cash equivalents	$ 6,830,906	$ 2,291,107

Property and Equipment

	December 31,	
	2001	2000
Equipment	$ 3,262,566	$ 2,730,272
Furniture and fixtures	869,920	795,726
Computer software	540,910	393,260
Leasehold improvements	79,861	79,861
Total property and equipment	4,753,257	3,999,119
Less accumulated depreciation and amortization	(3,201,141)	(2,469,431)
Property and equipment, net	$ 1,552,116	$ 1,529,688

(4) Line of Credit

The Company s line of credit agreement for short-term line of credit borrowings of up to $1,000,000 expired on September 30, 2001. There were no amounts outstanding under the credit agreement as of December 31, 2001.

(5) 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.

(6) Operating Lease Commitments

In October 1999, the Company entered into a non-cancelable office facilities lease in Plymouth, Minnesota commencing on February 1, 2000 and expiring on July 31, 2005. Under the terms of the lease the Company is also required to pay a portion of the lessor s operating costs.

Total rent expense, including an allocation of operating costs, was $554,000, $476,000 and $417,000 for the years ended December 31, 2001, 2000 and 1999, respectively.

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

Year Ending December 31,		
2002	$	330,000
2003		347,000
2004		349,000
2005		203,000
Total	$	1,229,000

(7) 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 to 28% of the total grant one year after the date of grant and 2% per month thereafter. In May 2001, the shareholders of the Company approved an increase of 575,000 common shares, bringing the total number of shares of common stock that may be issued or awarded under the Stock Option Plan to 2,500,000. As of December 31, 2001, there were 778,821 shares available for grant 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 1999, the shareholders of the Company approved an increase of 105,000 common shares, bringing the total number of shares of common stock that may be issued or awarded under the Director Plan to 210,000. In May 2000, the shareholders of the Company approved an increase to the number of shares subject to automatic option grant to current and future non-employee directors from 15,000 shares to 18,000 shares. As of December 31, 2001, there were 25,000 shares available for grant under the Director Plan.

Certain non-plan options were granted to certain officers of the Company in 1998 and 1999. 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. In December 1999, the Company granted an additional 175,000 non-qualified, non-plan options to another officer of the Company. These non-plan options have a term of eight years, are exercisable 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.

Non-Employee Options

In December 2000, the Company granted 10,000 options to a non-employee consultant. These 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. 5,000 of the options vest over a four-year period and the remaining 5,000 options will vest immediately when a specified milestone is achieved. The Company records compensation expense related to this arrangement based upon the fair values of the options during the periods the consultant provides services. Such fair values are measured using the Black-Scholes option-pricing model. The fair value of the options was approximately $42,000 at December 31, 2001. The Company recorded $10,000 of compensation expense related to these options for the year ended December 31, 2001.

In December 2001, the Company granted a total of 4,000 options to two non-employee consultants. These 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 options vest over a four-year period. The Company records compensation expense related to this arrangement 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 the options was approximately $31,000 at December 31, 2001.

The following table summarizes stock option activity for 2001, 2000 and 1999:

	Shares Under Option	Weighted-Average Exercise Price Per Share
Total outstanding as of December 31, 1998	1,440,318	$ 2.44
Options granted	693,750	4.22
Options exercised	(153,484)	2.34
Options canceled	(169,674)	3.60
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 exercisable as of:		
December 31, 1999	847,640	$ 2.41
December 31, 2000	1,125,409	$ 2.87
December 31, 2001	1,462,761	$ 3.41

Various price ranges and weighted average information for options outstanding as of December 31, 2001 are as follows:

	Outstanding Options			Exercisable Options	
Range of Exercise Prices	Number Outstanding as of Dec 31, 2001	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number Exercisable as of Dec 31, 2001	Weighted Average Exercise Price
$1.13 - 2.25	399,050	3.85 years	$ 1.57	386,130	$ 1.57
2.31 - 2.75	414,497	3.67 years	2.41	400,797	2.41
3.50 - 3.56	276,702	5.99 years	3.56	143,982	3.56
3.87 - 4.75	495,536	5.18 years	4.61	348,436	4.61
5.13 - 5.81	334,399	6.89 years	5.25	33,069	5.55
6.22 - 8.70	368,272	6.51 years	7.31	150,347	7.36
	2,288,456	5.23 years	$ 4.08	1,462,761	$ 3.41

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 2001 were 25,487 shares generating proceeds to the Company of $91,652 at an average purchase price of $3.60; for 2000 there were 21,589 shares purchased, generating proceeds to the Company of $85,965 at an average purchase price of $3.99; and for 1999 there were 23,767 shares purchased, generating proceeds to the Company of $66,645 at an average purchase price of $2.80. As of December 31, 2001, there are 138,987 shares of common stock reserved for purchases under the ESPP.

Stock-Based Compensation

If compensation cost for the ESPP, the Stock Option Plan, the Director Plan and the non-plan options granted to employees had been determined based on the fair values on the grant dates for awards in 2001, 2000 and 1999 consistent with the provisions of SFAS No. 123, Accounting for Stock-Based Compensation, the Company s net loss and net loss per share for 2001, 2000 and 1999 would have been increased to the pro forma amounts indicated below:

		For the Years Ended December 31,		
		2001	2000	1999
Net loss	As reported	$ (1,011,977)	$ (2,637,231)	$ (3,217,625)
	Pro forma	$ (2,222,000)	$ (3,570,000)	$ (3,745,000)
Net loss per share - basic and diluted	As reported	$ (0.14)	$ (0.39)	$ (0.64)
	Pro forma	$ (0.31)	$ (0.53)	$ (0.74)
The weighted average fair values of options granted were:				
Options under the 1997 Plans		$ 4.19	$ 5.43	$ 3.47
Options under ESPP		$ 0.64	$ 0.70	$ 0.50
Non-plan options		$ 6.02	$ 3.66	$ 2.80

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 weighted average assumptions:

For the Years Ended December 31,		
2001	2000	1999

Expected option life	6.0 years	6.0 years	6.0 years
Expected volatility factor	90.8%	92.6%	91.7%
Expected dividend yield	0%	0%	0%
Risk-free interest rate	4.93%	6.40%	5.97%

The pro forma effects on the net losses for 2001, 2000 and 1999 are not necessarily representative of the pro forma effect that may occur on the net income (loss) in future periods.

Warrants

In December 1999, the Company completed a private placement of 1,650,000 units at $3.25 per unit. Each unit consisted of one share of the Company s common stock and a redeemable, five-year warrant to purchase an additional share of common stock at $3.75 per share. The warrants were immediately exercisable and expired in December 2004. The warrants could have been redeemed by the Company at any time before December 2004 at a redemption price of $.01 per warrant, upon notice of such redemption, provided that (i) the closing bid price of the Company s common stock exceeded $5.75 per share for any thirty consecutive trading days prior to such notice and (ii) a registration statement covering the resale of the warrant shares had been filed by the Company with the Securities and Exchange Commission and was effective as of the date of such notice. The Company satisfied the conditions for redemption of the warrants as of December 7, 2000. In December 2001, the Company called for redemption of all outstanding warrants. As of December 31, 2001, approximately 1,192,000 warrants had been exercised generating approximately $4,468,000 in proceeds. All remaining warrants were exercised in January 2002 generating approximately $1,719,000 in proceeds. None of the warrants were exercised prior to 2001.

The Company also issued warrants to the underwriter in the private placement to purchase 163,651 shares of the Company s common stock at $3.25 per share. The warrants were immediately exercisable and expire in December 2004. As of December 31, 2001, 18,940 of these warrants have been exercised and converted to 14,084 shares of common stock. 4,856 shares were forfeited as part of cashless exercises. None of the warrants were exercised prior to 2001.

Restricted Stock

Under certain compensation agreements, an arrangement which provides for awards of restricted common stock to key management was adopted by Bio-Vascular in 1992. Pursuant to the agreement governing the Company s spin-off from Bio-Vascular (the Distribution Agreement), Vital Images assumed its proportionate share of obligations represented by such restricted shares such that the Company issued 25,375 restricted shares on the Distribution Date in connection with the spin-off from Bio-Vascular. As of December 31, 2001, no shares of restricted stock remain unearned by certain key Bio-Vascular employees.

Rights Plan

In April 1997, the Company declared a dividend distribution of one Preferred Stock Purchase Right for each outstanding share of the Company s common stock (the Rights). With certain exceptions, the Rights become exercisable only in the event that (i) an acquiring party accumulates 15% or more of the Company s common stock, (ii) a party announces an offer to acquire 15% or more of the Company s common stock, or (iii) the acquisition of a substantial amount of the Company s common stock by a person whom the Board of Directors has determined is an Adverse Person as defined in the underlying Rights Agreement. Each Right entitles the holder to purchase one-thousandth of a share of the Company s Series A Junior Preferred Stock at a price of $20.00 (the Exercise Price). If a person or group becomes the beneficial owner of 15% or more of the Company s common stock or the Board of Directors determines that a person is an Adverse Person, each holder of a Right shall thereafter have the right to receive preferred stock having a fair market value equal to two times the Exercise Price. Upon the occurrence of certain mergers, combinations or acquisitions of the Company s assets, each holder of a Right shall thereafter have the right to receive that number of

shares of common stock of the acquiring company which equals the Exercise Price of the Right divided by one-half of the current market price of such common stock as of the date of the occurrence of the event. The Company is

generally entitled to redeem the Right at $.001 per Right at any time until ten days following the acquisition of 15% or more of the Company s common stock or ten days after the point at which the Company s Board of Directors determines that a person is an Adverse Person, as defined by the Rights Agreement. The Rights expire on April 30, 2007, if not previously redeemed or exercised.

(8) Income Taxes

The income tax provision for each of the periods presented represents state minimum taxes. As of December 31, 2001, the Company has net operating loss carryforwards of approximately $17,300,000 for federal income tax reporting purposes and unused research and development credits of approximately $809,000, which expire in varying amounts from 2004 to 2021. For financial reporting purposes, a valuation allowance has been established to completely reserve for the Company s deferred tax assets related to those carryforwards. The utilization of these carryforwards may be subject to limitations based on future changes in ownership of the Company, pursuant to Internal Revenue Code Section 382 (the Code).

As a result of Bio-Vascular s acquisition of the Company in May 1994, the Company experienced an ownership change as defined by Section 382 of the Code. Under the Code, the amount of pre-acquisition net operating loss carryforwards and research and development credits that can be used to offset future taxable income and income taxes will be limited. As of the date of the Company s acquisition by Bio-Vascular, the Company had approximately $1,600,000 of net operating loss carryforwards and approximately $137,000 of research and experimentation credits, both of which will be subject to limitation under the Code.

The significant components of the Company s tax-effected net deferred tax assets, based on an assumed effective tax rate of 40%, are:

	December 31,	
	2001	2000
Net operating loss carryforwards	$ 6,920,000	$ 6,600,000
Research and development tax credit carryforwards	809,000	662,000
Deferred compensation	230,000	230,000
Depreciation	284,000	229,000
Other, net	197,000	153,000
Net deferred tax assets before valuation allowance	8,440,000	7,874,000
Less valuation allowance	(8,440,000)	(7,874,000)
Net deferred tax assets	$	$

(9) Major Customers and Geographic Data

Customers accounting for more than 10 percent of the Company s total revenue are as follows:

	Significant Customer		Revenue	Percentage of Total Revenue
Year ended December 31, 2001	Toshiba Corporation, Medical Systems Company	$	4,163,000	27%
Year ended December 31, 2000	Toshiba Corporation, Medical Systems Company	$	2,819,000	27%
Year ended December 31, 1999	Toshiba Corporation, Medical Systems Company	$	1,377,000	21%

The Company s accounts receivable are generally concentrated with a small base of customers. As of December 31, 2001, there was one customer accounting for 18% of accounts receivable, while as of December 31, 2000, two customers, each accounting for more than 10% of accounts receivable, accounted for 27% of accounts receivable.

Export revenue accounted for 8%, 7% and 8% of total revenue for the years ended December 31, 2001, 2000 and 1999, respectively. Substantially all of the Company s export sales are negotiated, invoiced and paid in U.S. dollars.

Export sales by geographic area are summarized as follows:

	For the Years Ended December 31,		
	2001	2000	1999
Europe	$ 706,000	$ 389,000	$ 312,000
Asia-Pacific	300,000	195,000	133,000
Canada	207,000	26,000	22,000
Latin America	14,000	108,000	42,000
Other		36,000	

(10) Employee Benefit Plan

The Company maintains the Vital Images, Inc. Salary Savings Plan (the Plan), which is intended to qualify under Section 401(k) of the Internal Revenue Code, as amended. The Plan covers substantially all employees. Each employee may elect to contribute to the Plan through payroll deductions of up to 25% of his or her salary, subject to certain limitations. At the discretion of the Board of Directors, the Company may make matching contributions equal to a percentage of the salary reduction contributions or other discretionary amounts. There were no contributions to the Plan by the Company in 2001, 2000 and 1999.

(11) Licensed Technology

In July 2001, the Company entered into an agreement to license technology from a third party. The Company paid $500,000 to the licensor and was obligated to pay an additional $250,000 in two installments of $125,000 plus interest at 8% on each of the first two anniversary dates of the agreement. The $250,000 plus interest was paid in full in December 2001. The Company recorded this $750,000 purchase as licensed technology and is amortizing it over the estimated useful life of the technology of 75 months. As part of this agreement, the Company is also obligated to pay the licensor royalties on the sales of certain products as defined in the agreement. During 2001, $211,000 of such royalties was incurred.

(12) Development Agreements

During the fourth quarter of 2001, the Company entered into an agreement with E-Z-EM, Inc. Under the agreement, the Company developed a single application CT Colonography product called InnerviewGI , which will be marketed and sold through E-Z-EM, Inc. During 2001, the Company recorded service revenue totaling $348,000 under this agreement. In addition, E-Z-EM, Inc. purchased 82,332 shares of newly issued common stock of Vital Images, Inc. for approximately $552,000 cash.

In November 2001, the Company entered into a development and license agreement with Surgical Navigation Technologies, Inc., a division of Medtronic, Inc. (MSNT), to integrate certain Company technology into MSNT s image-guided surgery products and to develop products and services for surgical planning which will be marketed and sold through MSNT. The Company received $250,000 upon execution of the agreement, which is included in deferred revenue in the current liabilities section of the balance sheet as of December 31, 2001.

(13) Quarterly Financial Data

The following summarized unaudited quarterly financial data has been prepared using the consolidated financial statements of Vital Images, Inc.

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2001:				
Total revenue	$ 3,331,000	$ 3,682,000	$ 3,633,000	$ 4,550,000
Gross margin	2,529,000	2,769,000	2,899,000	3,689,000
Net income (loss)	(622,000)	(402,000)	(132,000)	144,000
Earnings (loss) per share - basic and diluted	(0.09)	(0.06)	(0.02)	0.02
2000:				
Total revenue	$ 2,270,000	$ 2,513,000	$ 2,829,000	$ 3,016,000
Gross margin	1,744,000	1,984,000	2,191,000	2,191,000
Net loss	(665,000)	(802,000)	(525,000)	(645,000)
Loss per share - basic and diluted	(0.10)	(0.12)	(0.08)	(0.09)

SCHEDULE II

VITAL IMAGES, INC.

VALUATION AND QUALIFYING ACCOUNTS

Description	Balance as of Beginning of Period	Charges to Cost and Expenses	Deductions/ Write-Offs	Balance as of End of Period
Allowance for doubtful accounts:				
Year ended December 31, 2001	$ 215,000	$ 114,000	$ 144,000	$ 185,000
Year ended December 31, 2000	$ 93,000	$ 122,000	$	$ 215,000
Year ended December 31, 1999	$ 78,000	$ 15,000	$	$ 93,000

VITAL IMAGES, INC.

FORM 10-K

INDEX TO EXHIBITS

Item No.	Description
3.1	Articles of Incorporation of the Company (incorporated by reference to Exhibit 3.1 to the Company s registration statement on Form 10 (File No. 0-22229)).
3.2	By-laws of the Company (incorporated by reference to Exhibit 3.2 to the Company s registration statement on Form 10 (File No. 0-22229)).
4.1	Form of common stock Certificate of the Company (incorporated by reference to Exhibit 4.3 to the Company s registration statement on Form 10 (File No. 0-22229)).
4.2	Rights Agreement, dated effective as of May 1, 1997 between the Company and American Stock Transfer and Trust Company, which includes as Exhibit B the form of Rights Certificate (incorporated by reference to Exhibit 4.4 to the Company s registration statement on Form 10 (File No. 0-22229)).
4.3	Certificate of Designation, Preferences and Rights of Series A Junior Preferred Stock of the Company (incorporated by reference to Exhibit 4.5 to the Company s registration statement on Form 10 (File No. 0-22229)).
10.1	Form of Distribution Agreement, effective as of May 2, 1997 between Bio-Vascular, Inc. and the Company (incorporated by reference to Exhibit 10.1 to the Company s registration statement on Form 10 (File No. 0-22229)).
10.2	Form of Employee Benefits Agreement, effective as of May 2, 1997, between Bio-Vascular, Inc. and the Company** (incorporated by reference to Exhibit 10.2 to the Company s registration statement on Form 10 (File No. 0-22229)).

10.3	Form of Tax Sharing Agreement, effective as of May 2, 1997, between Bio-Vascular, Inc. and the Company (incorporated by reference to Exhibit 10.3 to the Company s registration statement on Form 10 (File No. 0-22229)).
10.4	Form of Transition Services Agreement, effective as of May 2, 1997 between Bio-Vascular, Inc. and the Company (incorporated by reference to Exhibit 10.4 to the Company s registration statement on Form 10 (File No. 0-22229)).
10.5	Incentive Stock Option Adjustment Plan** (incorporated by reference to Exhibit 10.5 to the Company s registration statement on Form 10 (File No. 0-22229)).
10.6	1990 Stock Option Plan** (incorporated by reference to Exhibit 10.6 to the Company s registration statement on Form 10 (File No. 0-22229)).
10.7	1992 Stock Option Plan** (incorporated by reference to Exhibit 10.7 to the Company s registration statement on Form 10 (File No. 0-22229)).
10.8	1992 Director Stock Option Adjustment Plan** (incorporated by reference to Exhibit 10.8 to the Company s registration statement on Form 10 (File No. 0-22229)).
10.9	1995 Stock Incentive Adjustment Plan** (incorporated by reference to Exhibit 10.9 to the Company s registration statement on Form 10 (File No. 0-22229)).
10.10	Employee Stock Purchase Plan** (incorporated by reference to Exhibit 10.10 to the Company s registration statement on Form 10 (File No. 0-22229)).
10.11	1997 Stock Option and Incentive Plan** (incorporated by reference to Exhibit 10.11 to the Company s registration statement on Form 10 (File No. 0-22229)).
10.12	1997 Director Stock Option Plan** (incorporated by reference to Exhibit 10.12 to the Company s registration statement on Form 10 (File No. 0-22229)).
10.13	License Agreement dated August 25, 1995 between the Company and Paradigm Geophysical Corporation (formerly CogniSeis Development, Inc.) (incorporated by reference to Exhibit 10.14 to the Company s registration statement on Form 10 (File No. 0-22229)).

10.14	Lease agreement dated May 14, 1993, as amended April 15, 1997, between Vital Images, Inc. and Douglas Green IRA Trust (incorporated by reference to Exhibit 10.15 to the Company s registration statement on Form 10 (File No. 0-22229)).
10.15	Lease Agreement dated January 31, 1997 between ACKY -s 3100 Lake Limited Partnership and the Company (incorporated by reference to Exhibit 10.16 to the Company s registration statement on Form 10 (File No. 0-22229)).
10.16	Form of Change in Control Agreement between the Company and Andrew M. Weiss, Vincent J. Argiro, Ph.D., David A. Davis, Gregory S. Furness and Jay D. Miller** (incorporated by reference to Exhibit 10.17 to the Company s registration statement on Form 10 (File No. 0-22229)).
10.17	Joint Development Agreement dated August 14, 1996 between the Company and ATL Ultrasound, Inc.* (incorporated by reference to Exhibit 10.18 to the Company s registration statement on Form 10 (File No. 0-22229)).
10.18	Sales and Marketing Agreement dated August 14, 1996 between the Company and ATL Ultrasound, Inc.* (incorporated by reference to Exhibit 10.19 to the Company s registration statement on Form 10 (File No. 0-22229)).
10.19	Software License Agreement dated August 1, 1997 between the Company and Duke University (incorporated by reference to Exhibit 10.20 to the Company s Annual Report on Form 10-K for the year ended December 31, 1997 (File No. 0-22229)).
10.20	Severance Agreement dated February 13, 1998 between the Company and Mr. Weiss** (incorporated by reference to Exhibit 10.21 to the Company s Annual Report on Form 10-K for the year ended December 31, 1997 (File No. 0-22229)).
10.21	Employment Agreement dated February 1, 1998 between the Company and Douglas M. Pihl** (incorporated by reference to Exhibit 10.22 to the Company s Annual Report on Form 10-K for the year ended December 31, 1997 (File No. 0-22229)).
10.22	Non-qualified Stock Option Agreement dated February 24, 1998 between the Company and Douglas M. Pihl** (incorporated by reference to Exhibit 10.23 to the Company s Annual Report on Form 10-K for the year ended December 31, 1997 (File No. 0-22229)).
10.23	Loan Agreement dated March 19, 1999 between the Company and Riverside Bank (incorporated by reference to Exhibit 10.24 to the Company s Form 10-Q for the quarter ended March 31, 1999 (File No. 0-22229)).

10.24 Promissory Note dated March 19, 1999 between the Company and Riverside Bank (incorporated by reference to Exhibit 10.25 to the Company s Form 10-Q for the quarter ended March 31, 1999 (File No. 0-22229)).

10.25 Commercial Security Agreement dated March 19, 1999 between the Company and Riverside Bank (incorporated by reference to Exhibit 10.26 to the Company s Form 10-Q for the quarter ended March 31, 1999 (File No. 0-22229)).

10.26 Lease agreement dated October 19, 1999 between St. Paul Properties, Inc. and the Company (incorporated by reference to Exhibit 10.27 to the Company s Form 10-Q for the quarter ended September 30, 1999 (File No. 0-22229)).

10.27 Vital Images, Inc. and Toshiba America Medical Systems, Inc. Reseller Agreement * (incorporated by reference to Exhibit 10.27 to the Company s Form 10-Q for the quarter ended September 30, 2000 (File No. 0-22229)).

10.28 Employment Agreement dated December 27, 1999 between the Company and Albert Emola (incorporated by reference to Exhibit 10.28 to the Company s Annual Report on Form 10-K for the year ended December 31, 2000 (File No. 0-22229)).**

10.29 Non-qualified Stock Option Agreement dated December 28, 1999 between the Company and Albert Emola** (incorporated by reference to Exhibit 10.29 to the Company s Annual Report on Form 10-K for the year ended December 31, 2000 (File No. 0-22229)).

10.30 Form of Change in Control Agreement between the Company and Albert Emola and Gregory S. Furness** (incorporated by reference to Exhibit 10.30 to the Company s Annual Report on Form 10-K for the year ended December 31, 2000 (File No. 0-22229)).

10.31 Form of Change in Control Agreement between the Company and Vincent J. Argiro, Ph.D., Steven P. Canakes, David M. Frazee, Jay D. Miller and Robert C. Samec (incorporated by reference to Exhibit 10.31 to the Company s Annual Report on Form 10-K for the year ended December 31, 2000 (File No. 0-22229)).**

10.32 Technology License Agreement between PointDX, Inc. and Vital Images, Inc.* (incorporated by reference to Exhibit 10.32 to the Company s Form 10-Q for the quarter ended September 30, 2001 (File No. 0-22229)).

10.33 **Development, Supply, Marketing and Distribution Agreement between Vital Images, Inc. and E-Z-EM, Inc.* (incorporated by reference to Exhibit 10.33 to the Company s Form 10-Q for the quarter ended September 30, 2001 (File No. 0-22229)).**

10.34 **Development and License Agreement between Vital Images, Inc. and Surgical Navigation Technologies, Inc. (filed herewith electronically).**

23.1 Consent of PricewaterhouseCoopers LLP (filed herewith electronically).

* Portions of such exhibit are subject to a request for confidential treatment filed with the Commission by the Registrant.

** Indicates a management contract or compensatory plan or arrangement.