UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-K

Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the Fiscal Year ended December 31, 2012

Commission File Number 0-13839

CAS MEDICAL SYSTEMS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**06-1123096**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

44 East Industrial Road, Branford, Connecticut 06405
(Address of principal executive offices, including zip code)

(203) 488-6056
(Registrant's telephone number, including area code)

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

Title of Each Class	**Name of Each Exchange on Which Registered**
Common Stock, $.004 par value	The NASDAQ Global Market

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes o No x

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes o No x

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 x No o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x 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 this Form 10-K. x

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of “large accelerated filer”, “accelerated filer” and “smaller reporting company” in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer o	Accelerated filer o
Non-accelerated filer o	Smaller reporting company x
(Do not check if a smaller reporting company)	

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes o No x

As of June 30, 2012, which is the last business day of the registrant’s most recently completed second fiscal quarter, the aggregate market value of the registrant’s common stock held by non-affiliates of the registrant was $16,249,000 based on the closing price as reported on the NASDAQ Global Market. This calculation does not reflect a determination that persons are affiliates for any other purpose.

As of March 15, 2013, there were 13,681,192 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Proxy Statement for its Annual Meeting of Stockholders to be held on June 20, 2013, are incorporated by reference in Part III of this Report. Except as expressly incorporated by reference, the Registrant's Proxy Statement shall not be deemed to be part of this Form 10-K.

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PART I

This report may contain information that includes or is based on forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that are subject to risks and uncertainties. These statements may be identified by the use of words such as "anticipates," "expects," "estimates," "projects," "intends" and "believes" and variations thereof and other terms of similar meaning. Factors that could cause the Company's actual results and financial condition to differ from the Company's expectations include, but are not limited to: potential liquidity constraints; price and product competition; rapid technological changes; dependence on new product development; failure to introduce new products effectively or on a timely basis; the mix of products sold; supply and prices of raw materials and products; customer demand for the Company's products; regulatory actions; changes in reimbursement levels from third-party payors; product liability or other litigation claims; changes in economic conditions that adversely affect the level of demand for the Company's products; changes in foreign exchange markets; changes in financial markets; changes in the competitive environment; and other risks described in Item 1A "Risk Factors" and Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in this Annual Report on Form 10-K. While the Company believes that the assumptions underlying such forward-looking statements are reasonable, there can be no assurance that future events or developments will not cause such statements to be inaccurate. All forward-looking statements contained in this report are qualified in their entirety by this cautionary statement.

The Company cautions you not to place undue reliance on these forward-looking statements, which speak only as of their respective dates. The Company undertakes no obligation to publicly update or revise forward-looking statements to reflect events or circumstances after the date of this Annual Report on Form 10-K or to reflect the occurrence of unanticipated events, except as required by law.

Unless the context indicates otherwise, as used in this report, the terms "CAS," "CASMED," the "Company," "we," "us" and "our" refer to CAS Medical Systems, Inc.

Item 1. Business

Overview

We are a medical technology company that develops, manufactures and markets non-invasive patient monitoring products that are vital to patient care. Our products include the FORE-SIGHT® Absolute Tissue Oximeter and sensors, and our Traditional Monitoring products which include MAXNIBP® blood pressure measurement technology, bedside monitoring products, and neonatal vital signs supplies. These products are designed to provide accurate, non-invasive, biologic measurements that guide clinicians to provide better patient care.

We believe that our FORE-SIGHT Absolute Tissue Oximeter places CASMED in a unique position to expand the clinical application for monitoring tissue oxygenation. Standard non-invasive parameters such as pulse oximetry and blood pressure only provide surrogate markers of tissue oxygen delivery. The indirect nature of these parameters forces clinicians to infer the adequacy of oxygenation in vital organs. However, data convincingly show that clinician estimation of cerebral oxygenation during medical procedures often does not correlate with actual tissue oxygenation levels and that potentially dangerous cerebral hypoxia often goes unrecognized. Therefore, direct monitoring of cerebral oxygenation provides a unique and powerful tool that allows clinicians to recognize and treat potentially dangerous tissue hypoxia to avoid adverse clinical outcomes.

As clinician education and experience demonstrates that use of cerebral and tissue oximetry improves patient care, we believe that the market for these monitors will continue to expand at attractive rates. We believe the FORE-SIGHT Absolute Tissue Oximeter provides the most accurate and reliable readings and is well-positioned to compete in that expanding market. In 2012, worldwide revenues of FORE-SIGHT products grew 23% over the prior year to $6.3 million, driven by a 46% increase in the sale of FORE-SIGHT sensors in the U.S.

Strategy

Over the past two years, the company has successfully revitalized its business and transitioned back to growth recording net revenue gains of 6% in the third quarter compared to the prior year quarter, and 12% growth in the fourth quarter. The Company has taken significant steps to capitalize on the opportunity for the growth of its FORE-SIGHT cerebral oximetry franchise and to refresh and rebuild its Traditional Monitoring product lines.

Specifically, our strategy consists of three primary elements:

- Invest in FORE-SIGHT – Given the unique clinical value of FORE-SIGHT and its position as a best-in-class cerebral oximeter in an expanding market, we believe that substantial investment in the FORE-SIGHT opportunity is warranted. Therefore, over the past two years we have committed significant resources to expand, upgrade and revitalize our FORE-SIGHT selling organization, to increase our marketing and clinical support and to support research that demonstrates the clinical value of cerebral oximetry. We also engaged in a major research and development initiative to launch a second generation FORE-SIGHT product that will improve the functionality of the monitor, lower manufacturing costs, and meet the evolving needs of our customers. We anticipate that this monitor will be introduced to the market in the second half of 2013.

- Rejuvenate our Traditional Monitoring Products - We also commenced significant efforts to refresh and rebuild our offerings within our Traditional Monitoring product lines where we enjoy strong brand loyalty and long-term customers who value the high quality products and service we provide. We have revamped our selling organizations for each of our Traditional Monitoring products and have engaged in significant development efforts to design both a new non-invasive blood pressure suite of products and an upgraded and refreshed vital signs monitor. We anticipate that these new product offerings will be introduced to the market in the second half of 2013.

- Rationalize our Business Lines - Early in the transition we rationalized our product offerings to concentrate on those products mentioned above that provide the best opportunities for growth. In 2010 we divested our Statcorp blood pressure cuff business unit and transitioned out of our sleep apnea product line.

Over the past few years, specific accomplishments included:

- The Company appointed Thomas M. Patton as President and CEO and as a Director of the Company in August 2010. Mr. Patton is a seasoned executive in the medical products field with a broad range of operational and strategic experience from start-ups to growth companies, both public and private.

- In November 2010, the Company sold its non-strategic Statcorp business unit which included its blood pressure cuff and rapid infusor cuff product lines.

- The Company successfully rebuilt and reorganized its executive management team. New appointments were made to the following positions: the head of Research and Development (December 2010); V.P. of Global Sales and Marketing (January 2011); Director of U.S. FORE-SIGHT Sales (July 2011); Director of Marketing (October 2011); Director of Monitoring Solutions (December 2011) and Chief Medical Officer (January 2012).

- In June 2011, the Company completed a financing transaction by selling convertible preferred stock to Thomas, McNerney and Partners. That transaction netted the Company approximately $13.8 million and provided substantial working capital to allow the business to invest in its growth strategy. Coincident with that transaction, the Company replaced two of its long serving Board members with representatives from Thomas, McNerney.that transaction, the Company replaced two of its long serving Board members with representatives from Thomas McNerney.

- Throughout this past year, the Company continued to upgrade its FORE-SIGHT domestic field selling organization of direct sales representatives, manufacturer’s reps, and clinical specialists.

- The worldwide installed base of FORE-SIGHT monitors increased 35% during 2012 to 741 as of December 31, 2012.
- Throughout 2012, the Company introduced FORE-SIGHT into many of the top academic and cardiac hospitals. Our FORE-SIGHT customers now include eight of the top 25 adult cardiac hospitals in the U.S. as ranked by *US News and World Report* and five of the top ten pediatric cardiac hospitals.
- The Company recorded its best growth rate in more than three years with a 6% net revenue growth rate in the third quarter over the prior year period and increased that growth rate to 12% in the fourth quarter.
- Total FORE-SIGHT revenues increased 23% led by a 43% growth in U.S. FORE-SIGHT sales.
- Total FORE-SIGHT disposable sensor revenues increased 37% led by a 46% growth in the U.S.
- Gross profit in 2012 improved over 2011 levels by 2.1% to 40.2%.
- In July 2012, the Company secured a term loan of $3.5 million from East West Bank and a revolver of up to $2.5 million. As of December 31, 2012, the revolver remained undrawn.
- The Company recorded a cash balance of $10.5 million as of December 31, 2012.
- The Company continued to build on the base of clinical evidence for FORE-SIGHT. By August 2012, the Company surpassed the milestone of recording more than 200 publications referencing the performance of FORE-SIGHT monitoring.

Description of Products and Services

The Company reports two categories of revenue within one reportable business unit.

- ***Tissue Oximetry Monitoring*** – includes sales of the Company's FORE-SIGHT Absolute Tissue Oximeter monitors, sensors and accessories.
- ***Traditional Monitoring –*** includes sales of the Company's traditional vital signs products and services including: (i) sales to Original Equipment Manufacturers ("OEM") of the Company's proprietary non-invasive blood pressure technology (MAXNIBP®) for inclusion in the OEM customer's own multi-parameter monitors; (ii) bedside vital signs monitors and accessories incorporating various combinations of measurement parameters for both human and veterinary use such as MAXNIBP non-invasive blood pressure, pulse oximetry, electrocardiography (ECG), temperature, and capnography (CO^2 measurements); (iii) neonatal intensive care vital signs supplies including electrodes and skin temperature probes; and (iv) service repair.

Tissue Oximetry Monitoring

CASMED's FORE-SIGHT Absolute Tissue Oximeter technology provides a simple, noninvasive, quantitative measurement of oxygenation in cerebral tissue. The percentage saturation of cerebral hemoglobin with oxygen is obtained by placing a sensor on both the right and the left side of the patient's forehead. The FORE-SIGHT sensors emit four different wavelengths of light that harmlessly penetrate into the cerebral tissue and are reflected back to photo-detectors in the same sensor. An exclusive algorithm then determines the percentage of hemoglobin that is saturated with oxygen in the blood of the brain tissue underlying each sensor. Through these proprietary and patented processes, FORE-SIGHT provides clinicians with an accurate, absolute numerical measure of tissue oxygenation. FORE-SIGHT can also be used to monitor the oxygenation of other tissues such as muscle and abdominal tissues in newborns weighing less than 4 kilograms.

By non-invasively and continuously measuring absolute cerebral tissue oxygen levels, our FORE-SIGHT Absolute Tissue Oximeter enables clinicians to identify and quickly react to dangerously low brain oxygen levels and provide better care.

We believe that FORE-SIGHT incorporates a combination of features that permit oxygenation values obtained to be more reliable and more accurate, and therefore more actionable by clinicians in critical care environments.

- CASMED's FORE-SIGHT monitors emit four wavelengths of light, permitting an increased level of signal acquisition and thereby providing sufficient data to solve for other optical variables in the tissue sample, such as melanin in the skin, that would otherwise interfere with hemoglobin signals.

- CASMED's FORE-SIGHT sensors are designed with a preferred geometry, maximizing the distance between the light source and the farthest photo-detector, thereby providing a light pathway that penetrates deeper into the tissue giving a greater tissue sample for interrogation.

- CASMED's FORE-SIGHT monitors permit the clinician to enter age and weight parameters of the patients. These factors are considered by our algorithm when interpreting signal variables that are affected by those parameters such as skull shape and composition.

- CASMED's FORE-SIGHT patented algorithm utilizes a combination of patented and other methods to sort out optical signals created by non-critical background tissue.

Monitors that predominantly provide trend-based values differ significantly from the FORE-SIGHT oximeter which provides absolute values. Trend-based monitors rely upon a baseline measurement from which a declination of some percentage is then considered to be an actionable "desaturation" event. However, the baseline presumes the patient's oxygenation levels are not already compromised by the introduction of anesthesia, inspired oxygen, existing cardiovascular disease, compromised physiology or other confounding factors. Therefore, in those instances where a patient is already ill, is already being treated, or for which a single "spot check" value is sought, a valid baseline measurement may not be available.

With FORE-SIGHT's absolute tissue oxygenation measurement, clinicians can have confidence that the value displayed is a more accurate value of the actual tissue oxygenation and can signal clinical interventions once a predetermined absolute threshold is reached (for example if the oxygen saturation levels drop below an absolute value of 60%).

We believe our FORE-SIGHT oximeter helps clinicians solve a serious deficit in the care of many critical care patients. Unrecognized and dangerous desaturation events occur with much greater frequency than previously known, and can only be identified with the direct measurement that tissue oximeters provide. Given this evidence, we believe our best-in-class FORE-SIGHT technology continues to gain clinical adoption and is well-positioned in the market for significant future growth.

The Need for Tissue Oxygenation Monitoring

Oxygen is necessary to keep cells viable. The brain has a very high metabolic rate, consuming approximately 20% of the body's oxygen at rest. It is thus the organ that is least resistant to oxygen deprivation. Lack of sufficient oxygenation in the brain causes neurologic injury such as cognitive impairment, stroke, paralysis, coma and/or hypoxic encephalopathy. Frequently these injuries result in severe morbidity or even death. Dangerous deficits in brain hemoglobin saturation (reflecting decreased brain oxygen levels) are termed "desaturation events" because the hemoglobin of the blood is no longer sufficiently "saturated" with oxygen molecules. Desaturations can be caused by many factors. The brain responds to insufficient levels of oxygen by increasing ventilation, cardiac output, and blood pressure in order to increase oxygen delivery. It also vasodilates to increase brain blood flow. This biologic process is called "auto-regulation." However, auto-regulation is compromised by illness, surgical intervention, trauma, and anesthesia, and neonates and children have immature auto-regulation capabilities.

Inadequate oxygen delivery to the brain can be caused by:

- Hypoxemia: a decrease of hemoglobin oxygen saturation in arterial blood (inadequate oxygenation of the supply).
- Ischemia: a decrease in blood flow to the brain caused by inadequate cardiac output, occlusion of cerebral vessels, or increased intracranial pressure (inadequate volume of supply).
- Anemia: a decrease in the concentration of red blood cells in the blood (inadequate oxygen carrying capacity).

Oxygen delivery must also match oxygen consumption related to the metabolic rate of the brain.

Most conventional monitoring is ultimately employed to assure an adequate balance between oxygen supply and demand. Reliably measuring the impact of complicated interactions among factors affecting cerebral oxygenation requires unacceptably invasive techniques. Standard parameters such as pulse oximetry, heart rate and blood pressure determinations, capnometry and cardiac output assessment, each provide only indirect predictions of cerebral oxygenation. From that information a clinician can only infer that a patient's brain inadequately oxygenated. Data from cerebral oximetry convincingly shows that the estimations clinicians make about cerebral oxygenation based solely on these indirect measures are frequently wrong, and that threatening cerebral desaturation events occur without recognition. Thus, in many acute care settings such as surgery, intensive care and other critical care environments, patients are exposed to potentially damaging cerebral hypoxia that could likely be prevented if recognized.

Following is a table that details various observational studies that show the percentage of patients who suffered from cerebral desaturation events (CDEs) as variously defined in each publication:

Incidence Of CDEs	**Procedure**	**Citation**
73%	Aortic arch surgery	Fischer GW, et.al. **Noninvasive cerebral oxygenation may predict outcome in patients undergoing aortic arch surgery.** J Thorac Cardiovasc Surg. 2011;141(3):815-21.
60%	Cardiac Surgery	Fedorow C, Grocott HP. **Cerebral monitoring to optimize outcomes after cardiac surgery.** Curr Opin Anaesthesiol. 2010 Feb;23(1):89-94.
25% with shunts 3.9% without	Carotid Endarterectomy	DeNaeyer S, et.al. **Non-invasive absolute cerebral oximetry and intraluminal shunting during carotid endarterectomy.** Presented at American Society of Anesthesiologists Annual Meeting 2010 # A398.
45.9± 134 (min-%)	EP Lab	Miller MA, et.al. **Activation and entrainment mapping of hemodynamically unstable ventricular tachycardia using a percutaneous left ventricular assist device.** J Am Coll Cardiol. 2011; 58(13):1363-71.
26%	General Abdominal Surgery, Elderly	Casati A, et.al. **Monitoring cerebral oxygen saturation in elderly patients undergoing general abdominal surgery: a prospective cohort study.** Eur J Anaesthesiol. 2007 Jan;24(1):59-65. Epub 2006 Jul 7.
50%	ICU, Post-cardiac surgery	Greenberg SB, et.al**. The Incidence of cerebral oxygen desaturation event in the intensive care unit (ICU) following cardiac surgery.** Presented at American Society of Anesthesiologists Annual Meeting 2011 #A1454.
18%	Craniotomy from acute intracerebral bleeding	Dylst D, et.al.**Monitoring of absolute cerebral oxygen saturation during craniotomy for acute intracerebral bleeding.** Eur J Anaesthesiol 2009; 26 (Suppl 45): 7AP5-6.
80%	Shoulder surgery- beach chair position	Murphy GS, et.al. **Cerebral oxygen desaturation events assessed by near-infrared spectroscopy during shoulder arthroscopy in the beach chair and lateral decubitus positions.** Anesth Analg 2010; 111(20: 496-5.
36%	Spine surgery in prone position	Hemmerling, Thomas M, et.al. **Decrease of Cerebral Oxygen Saturation in Prone Position During Spine Surgery Measured by Absolute Cerebral Oximetry** Presented at American Society of Anesthesiologists Annual Meeting 2010 #LB07.
56%≤65%StO2 10% < 55%StO2	Thoracic Surgery	Kazan R, et.al. **Reduced cerebral oxygen saturation measured by absolute cerebral oximetry during thoracic surgery correlates with postoperative complications.** Br J Anaesth. 2009; 103(6):811-16.

This growing body of clinical evidence substantiates the premise that cerebral oximetry with FORE-SIGHT® offers valuable insight to clinicians during the management of critical care patients which could permit them to increase safety and improve clinical outcomes.

The Market for Tissue Oximetry

Cerebral desaturation events occur with much greater frequency than previously believed. Desaturation events have been recorded during abdominal surgery, open heart procedures, orthopedic procedures and heart catheterization procedures, among others. This list will certainly grow as more patient groups are evaluated. In the U.S. alone, cerebral monitoring could safeguard millions of patients undergoing surgical procedures each year. Desaturation events have also been recorded during monitoring of neonates, pediatric patients, and adults in the ICU, expanding the market opportunity even further.

While we believe the eventual addressable market for tissue oximetry could someday be as large as $1 billion, we estimate current total world-wide annual revenues from the sale of tissue oximetry to be approximately $75 million to $90 million. Given the broad potential applicability of this parameter, and the small current rate of market penetration, we also believe that market rates of growth will continue to be attractive into the foreseeable future.

The growing body of published literature in support of tissue oximetry will play an increasingly important role in the expansion of the tissue oximetry market as clinicians continue to be educated regarding the potential benefits of this parameter. Therefore, a significant part of our longer term strategy is to continue to encourage and support research related to the need for cerebral oximetry and its efficacy in improving care. FORE-SIGHT® has already been referenced in over 200 clinical papers, abstracts, and posters. Key among the studies published in support of FORE-SIGHT® over the past year were the following:

- Rifai L, Winters J, Friedman E, Silver MA. Initial description of cerebral oximetry measurement in heart failure patients. *Congest Heart Fail* 2012;18(2):85-90.
  This observational study included 30 patients with chronic heart failure (HF) where cerebral oxygenation levels were compared to pulse oximetry readings which have historically served as the primary diagnostic tool to monitor the well-being of HF patients and to guide therapy. Cerebral oximetry readings were found to be an “important biomarker for HF patients” and superior to pulse oximetry as a marker of target organ perfusion.

- Tang L, Kazan R, Taddei R, Zaouter C, Cyr S, Hemmerling TM. Reduced cerebral oxygen saturation during thoracic surgery predicts early post-operative cognitive dysfunction. *Br J Anaesth* 2012;108(4):623-9.
  This observational study of 75 patients that underwent thoracic surgery requiring single lung ventilation (SLV) showed that early post-surgical cognitive dysfunction correlated to intraoperative cerebral desaturations.

- Greenberg SB, Murphy G, Alexander J, Fasanella R, Garcia A, Vender J. Cerebral desaturation events in the intensive care unit following cardiac surgery. *J Crit Care* 2012 Nov 14. [Epub ahead of print]
  This was the first paper in the medical literature to describe an incidence and associated outcomes of cerebral desaturation events (CDEs) during the immediate post-operative care of cardiac surgery patients. In this study, 53% of the patients experienced otherwise unrecognized cerebral desaturation event, many lasting more than an hour, and the mortality rate amongst those in the desaturation group was 25% while no one in the non-desaturation group died, thereby demonstrating the utility of FORE-SIGHT® monitoring in the management of ICU patients.

- Quinn CT, Dowling MM. Cerebral tissue hemoglobin saturation in children with sickle cell disease. *Pediatr Blood Cancer* 2012;59 (5):881-7.
  Use of the FORE-SIGHT® monitor as a spot check device proved a useful tool in managing children with sickle cell disease (SCD) in that it improved identification of high risk SCD children from low cerebral saturation values, and served as guide to track the impact on cerebral oxygenation levels from blood infusion therapy. The authors believed that the accuracy of the FORE-SIGHT monitor compared with a competitive monitor used in earlier studies permitted them to find correlations that had previously been undetermined.

- Dewhirst E, Winch P, Naguib A, Galantowica M, Tobias JD. Cerebral oximetry monitoring during pre-operative phlebotomy to limit allogeneic blood use in patients undergoing cardiac surgery. *Pediatr Cardiol* 2013;34(1):75-80.
  Unlike standard hemodynamic measurements of blood pressure and heart rate, use of FORE-SIGHT® cerebral monitoring proved to be an important tool to manage the pre-operative removal of children’s blood that would later be re-infused during the course of the surgery (autologous phlebotomy.) Cerebral oximetry values taken during the procedure guided the clinicians in measuring the appropriate volume to remove without causing cerebral oxygenation levels to fall to dangerous levels. Children are at greater risk for CDEs than adults for autologous phlebotomy, providing further evidence that monitoring children with FORE-SIGHT® is important.

These studies, and the existing body of clinical evidence, continue to provide a solid academic and data-driven support for the expanded use of the product in critical care settings.

Traditional Monitoring

In addition to Tissue Oximetry products, CASMED provides a series of traditional vital signs monitoring products and services to clinicians around the world. Those include:

- Sales to Original Equipment Manufacturers ("OEM") of the Company's proprietary non-invasive blood pressure technology (MAXNIBP) for inclusion in the OEM customers' own multi-parameter monitors;
- Vital signs monitors and accessories incorporating various combinations of measurement parameters for both human and veterinary use such as MAXNIBP non-invasive blood pressure, pulse oximetry, electro-cardiography (ECG), temperature, and capnography (CO_2 measurements); and
- Supplies and service including neonatal intensive care vital signs supplies (such as electrodes and skin temperature probes).

Blood Pressure Measurement Technology

The Company has developed a proprietary non-invasive blood pressure measurement technology that it sells under the MAXNIBP brand. The Company believes this technology is more accurate, reliable, and able to produce a measurement result faster than its competitors in high motion environments. These advantages are important, especially in the most challenging clinical situations where measurements can be difficult to obtain such as emergency care and when caring for pediatric patients. The Company has entered into OEM agreements to supply its MAXNIBP technology to various companies throughout the world. This technology is used in other monitoring systems where non-invasive blood pressure is one of many measurement parameters. The Company's OEM agreements are typically multi-year arrangements.

Bedside Monitoring

The Company offers a full line of non-invasive vital signs monitoring products for a variety of general care settings such as hospital wards, outpatient medical surgical units, recovery rooms, procedure labs, physician offices, long term care facilities and emergency response settings. The monitors are small, lightweight, portable, and easy to use.

The Company manufactures two platforms of vital signs monitors based around its proprietary MAXNIBP non-invasive blood pressure technology and incorporating various combinations of other measurement parameters including pulse oximetry, electro-cardiography, temperature, and capnography. CASMED monitors are ideal for a range of clinical settings both human and veterinary. The Company has a blanket agreement with the U.S. Department of Veterans Affairs (the "VA") for purchase of its vital signs monitors through February 2015. Over the past eight years, the Company has sold more than 15,000 vital signs monitors to the VA hospitals and clinics throughout the U.S. Collective sales to VA hospitals accounted for approximately 18% of the Company's overall sales for both 2012 and 2011.

Supplies and Service

CASMED supplies a line of specialty neonatal supplies including Klear-Trace® ECG Electrodes, NeoGuard® skin temperature probes and adhesive reflectors. These high quality single-patient-use products are designed specifically to meet the unique needs of neonatal intensive care. The Company also provides various repair services to its customers for monitors already in the field.

Sales and Marketing

The Company markets its products globally, through hospital, surgery center and outpatient facility, homecare, veterinary and emergency medical distribution channels. A number of different sales channels are utilized to maximize opportunities for the various product lines we offer.

Tissue Oximetry Monitoring

The Company's critical care FORE-SIGHT Absolute Tissue Oximeters are sold via a direct sales force and key manufacturer's representatives groups within the U.S. and via stocking distribution partners outside the U.S.

As of December 31, 2012, the Company utilized a team of 31 sales and clinical support specialists dedicated to the FORE-SIGHT product line in the U.S. including six direct sales representatives, six clinical specialists, and 17 sales professionals in nine manufacturer representative organizations.

Outside the U.S., as of December 31, 2012, the Company had five exclusive or non-exclusive FORE-SIGHT sales consultants located in Europe, the Middle East, and the Pacific Rim all managing FORE-SIGHT sales via our distribution partners.

The Company continues to invest significant resources in hiring, engaging, educating and supporting its FORE-SIGHT field selling organization.

Traditional Vital Signs Monitoring

The Company sells its non-invasive blood pressure technology in the form of sub-assemblies to be assembled into other OEM companies' multi-parameter monitors. The Company sells this product line on a direct basis utilizing headquarters-based employees to solicit companies operating in both the domestic and international markets.

The Company's vital signs monitoring products are sold within the U.S. via manufacturer's representatives and distributors. Outside of the U.S., sales are conducted through exclusive distributors in Europe, Africa, the Middle East, Pacific Rim, Latin America, and Canada.

Sales of the Company's neonatal supplies are primarily sold via key stocking distribution partners in the U.S.

	Financial Information Relating to Sales Year Ended December 31	
	2012	**2011**
Domestic Sales	$ 17,511,029	$ 16,809,617
International Sales	5,158,036	5,640,950
Total	$ 22,669,065	$ 22,450,567

Competition

The Company competes in the broader medical equipment market for patient monitoring equipment and supplies. We believe our products maintain a high professional standard of accuracy and quality in demanding environments. We believe that our reputation for producing innovative, accurate, and reliable products that are user-friendly, manufactured in the U.S., and contain best-in-class technology are key factors in our ability to successfully compete with larger organizations in the medical equipment market.

We believe that the principal competitive factors that we and other companies competing in our markets face are:

- FDA clearance;
- The accuracy, reliability, and repeatability of measurements;
- Publication of peer reviewed clinical studies;
- Acceptance by thought-leaders in anesthesia, surgery, perfusion, and other key clinical roles for new technologies such as cerebral oxygenation monitoring;
- Documented improved patient outcomes;
- The cost effectiveness of monitoring solutions and overall pricing;
- Interfacing with multi-parameter patient monitoring and data solutions;
- The overall ease of use and product quality;
- Sales and marketing capability and established sales distribution channels;
- Contractual arrangements with hospitals, hospital systems, buying groups, and professional service providers; and,
- IP protection and timing and acceptance of product innovation.

Competitors for our Tissue Oximetry products include Covidien, Hutchinson Technology Inc., Nonin Medical Inc., and Hamamatsu Corp. A number of smaller competitors have also recently introduced or have made plans to introduce competitive tissue oxygenation monitors into the marketplace.

Competitors for our Traditional Vital Signs Monitoring products are myriad and include large corporations such as Philips, General Electric, Mindray Medical International Ltd., and Welch Allyn Inc., among others in the vital signs monitor market and companies such as SunTech Medical Inc., Omron Corp. and Mindray in the OEM NIBP market. Many of the major patient monitoring solutions companies also have their own proprietary NIBP technology.

Research and Development

As of December 31, 2012, our Research and Development (R&D) organization consisted of a staff of 21 engineers and scientists (20 full-time and one part-time) focused on the following primary areas:

- Advanced algorithm research;
- Sensor and optical development;
- Hardware development and support; and
- Clinical research.

Our R&D efforts in 2012 were primarily focused on developing a new FORE-SIGHT monitor with improved functionality and lower manufacturing costs, advancing the design and the performance of our MAXNIBP non-invasive blood pressure technology, and updating our vital signs monitoring product offering.

During 2012 and 2011, the Company incurred R&D expenses of approximately $4,464,000 and $3,892,000, or 20% and 17% of revenues, respectively. After consideration of reimbursements of $296,000 received from the National Institutes of Health ("NIH"), as discussed under Grant Awards below, and state tax credits exchanged for payments in cash of $148,000 during 2012, net R&D expenses for 2012 and 2011 were approximately $4,020,000 and $3,525,000, or 18% and 16% of revenues. Funding provided to the Company is recorded as a reduction in R&D expenses.

Grant Awards

On September 17, 2007, the Company was awarded a grant totaling $2.8 million by the National Institute of Neurological Disorders and Stroke ("NINDS") of the NIH, under its Small Business Innovative Research Program. The grant was awarded primarily to support advanced clinical outcome studies that focus on the Company's FORE-SIGHT cerebral oximeter. As of December 31, 2012, no further reimbursements remained under the 2007 grant award.

Reimbursements from the NIH were approximately $296,000 for 2012 and $367,000 for 2011. The funding provided to the Company is recorded as a reduction in R&D expenses.

Trademarks, Patents and Copyrights

Certificates of Registration have been issued to the Company by the United States Department of Commerce Patent and Trademark Office for the following marks: CAS , CASMED®, COOL-LIGHT®, For Every Life and Breath Situation®, For What's Vital®, FORE-SIGHT®, HOLD-TIGHT®, Klear-Trace , LASER-SIGHT®, Limboard®, MAXNIBP , Mother/baby®, NeoGuard , the heart shaped mark for use as a thermal reflector, and the Company's corporate logo.

The Company holds six U.S. patents and five international patents for its FORE-SIGHT technologies which it believes provide it with a competitive market advantage. The Company believes the design concepts covered in its current patent applications and provisional patent applications are important to providing a tissue oximeter capable of absolute brain tissue oxygen saturation measurements with FORE-SIGHT's level of accuracy. Although the Company holds such patents and has patents pending related to certain of its products, it does not believe that its business as a whole is significantly dependent upon patent protection. The Company also relies on trade secret, copyright and other laws and on confidentiality agreements to protect its technology. The Company has copyright protection for the software used in its blood pressure and tissue oximeter monitors.

The Company will continue to seek patent, trademark and copyright protections as it deems advisable to protect the markets for its products and its R&D efforts. We believe that neither our patents nor our other legal rights will necessarily prevent third parties from developing or using a similar or a related technology to compete against our products.

Employees

As of December 31, 2012, the Company had 106 employees of which 104 were full-time. The Company has no collective bargaining agreements and believes that relations with its employees are good.

Government Regulation

Medical products of the type currently being marketed and under development by the Company are subject to regulation under the Food, Drug and Cosmetic Act (the "FD&C Act") and numerous acts and amendments such as the Quality System Regulations (“QSR”), often referred to as Good Manufacturing Practices (“GMP's”).

In addition, depending upon product type, the Company must also comply with those regulations governing the Conduct of Human Investigations, Pre-Market Notification Regulations and other requirements, as promulgated by the FDA. The FDA is authorized to inspect a device, its labeling and advertising, and the facilities in which it is manufactured in order to ensure that the device is not manufactured or labeled in a manner which could cause it to be in violation of the FD&C Act.

The FDA has adopted regulations which classify medical devices based upon the degree of regulation believed necessary to assure safety and efficacy. A device is classified as a Class I, II, or III device. Class I devices are subject only to general controls. Class II devices, in addition to general controls, are or will be subject to "performance standards." Most devices are also subject to the 510(k) pre-market notification provision. In addition, some Class III devices require FDA pre-market approval before they may be marketed commercially because their safety and effectiveness cannot be assured by the general controls and performance standards of Class I or II devices.

The Company's products are primarily Class I and II devices and most of them have required FDA notification under Section 510(k) of the FD&C Act.

In the last factory inspection of the Company by the FDA during March 2013, no material non-conformities were found.

International Regulatory Compliance

CASMED maintains certification to ISO 13485:2003 by the notified body, BSI Inc., in its manufacturing facility. These certifications and compliance with the Medical Device Directive allow CASMED to use the "CE" mark on its products. The CE mark is required for medical devices to gain access to the European Union (“EU”) common market and other non-EU markets as well. The FDA, recognizing the value of this universally accepted quality system, has patterned its Quality System Regulations after ISO 9001 and ISO 13485. CASMED maintains full compliance with ISO 13485:2003 and the EU’s Medical Device Directive, as evaluated by periodic assessment. In 2012 the FORE-SIGHT oximeter was brought into compliance with the latest electro-mechanical safety standard.

Manufacturing and Quality Assurance

The Company assembles its products at its facility in Branford, Connecticut. The various components for the products, which include plastic moldings, wire, printed circuit boards, semi-conductor circuits, electronic and pneumatic components, power supplies, proprietary software and many other parts and sub-assemblies are obtained from outside vendors. The Company has not experienced any sustained interruption in production or the supply of components and does not anticipate any difficulties in obtaining the components necessary to manufacture its products.

Quality assurance procedures are performed by the Company at its Branford, Connecticut facility and occasionally at its suppliers' facilities to standards set forth in the FDA's "Quality System Regulations." These procedures include the inspection of components and full testing of finished goods. The Company has a controlled environment where the final assembly of single-patient-use products is conducted.

Customers

Our five largest customers accounted for approximately 36% and 41% of revenues in 2012 and 2011, respectively. Among these customers, Physio-Control, Inc. accounted for 11% of revenues during both 2012 and 2011. Also included above are sales to the U.S. Department of Veterans Affairs ("V.A."). When aggregating sales to the individual V.A. hospitals, those sales accounted for 18% of overall sales for both 2012 and 2011. The Company has a blanket agreement with the V.A. for the purchase of its vital signs monitors through February 2015. The loss of any significant customer could have a material adverse effect on our financial position and results of operations.

Backlog

The Company's backlog includes orders pursuant to long-term OEM agreements as well as orders for products shippable on a current basis. Total backlog, therefore, is not a meaningful indicator of the Company's future sales.

Corporate Information

CAS Medical Systems, Inc. is a Delaware corporation organized in 1984. Our corporate offices are located at 44 East Industrial Road, Branford, CT 06405, and our telephone number is (203) 488-6056. Our website address is www.casmed.com. The information on or that can be accessed through our website is not a part of this Annual Report on Form 10-K.

Item 1A. Risk Factors

Our business faces many risks. If any of the events or circumstances described in the following risk factors actually occurs, our business, financial condition or results of operations could suffer, and the trading price of our common stock could decline. The risks described below may not be the only risks we face. Additional risks that we do not yet know of or that we currently believe are immaterial may also impair our business operations. You should consider the following risks, as well as the other information included or incorporated by reference in this Form 10-K before deciding to invest in our common stock.

We have a recent history of net losses and are subject to risks regarding future liquidity.

We have experienced operating losses during our last five fiscal years. The net loss applicable to common stockholders was $8,432,000 for the 2012 calendar year and the accumulated deficit was $13,066,000 as of December 31, 2012. The Company does not anticipate a return to operating profits in the near term and there can be no assurance that we will be able to improve our results of operations in the near term or at all.

The Company's ordinary short-term capital needs are expected to be met from our current cash on hand and amounts available under our Loan Agreement with East West Bank. Cash flows may be impacted by a number of factors, including changing market conditions, market acceptance of the FORE-SIGHT system, and the loss of one or more key customers. The Company may seek additional capital; however, there can be no assurance that we will be successful in raising additional capital if the need arises. The failure to raise any necessary additional capital on acceptable terms, or at all, could have a material adverse effect on our business and results of operations.

We are a small company in a highly competitive industry.

Competition from other medical device companies, diversified healthcare companies and research and academic institutions is intense and expected to increase. Many companies engaged in the medical device sector have substantially greater financial and other resources and development capabilities than we do, and have substantially greater experience in testing products, obtaining regulatory approvals and manufacturing, marketing, and distributing medical devices.

Other companies may succeed in developing and commercializing products earlier than we do. In addition to competing with universities and other research institutions in the development of products, technologies and processes, the Company may compete with other companies in acquiring rights to products or technologies from universities. Also, the medical device market is experiencing increasing customer concentration, due to the emergence of large purchasing groups and hospital systems. We cannot assure you that we will develop products that are more effective or achieve greater market acceptance than competitive products, or that our competitors will not succeed in developing products and technologies that are more effective than those being developed by us or that would render our products and technologies less competitive or obsolete. Moreover, there can be no assurance that we will be able to successfully sell to large purchasing groups, which are increasingly looking to suppliers that can provide a broader range of products than we currently offer.

Our business is impacted by customer concentration.

Our five largest customers accounted for approximately 36% and 41% of revenues in 2012 and 2011, respectively. Among these customers, Physio-Control, Inc. accounted for 11% of revenues during both 2012 and 2011. Also included above are sales to the U.S. Department of Veterans Affairs ("V.A."). When aggregating sales to the individual V.A. hospitals, those sales accounted for 18% of overall sales for both 2012 and 2011. The Company has a blanket agreement with the V.A. for the purchase of its vital signs monitors through February 2015. The loss of any significant customer could have a material adverse effect on our financial position and results of operations.

We are devoting substantial resources to the development and marketing of our tissue oximetry products.

We expect to devote a significant amount of resources to continue the development and marketing of our FORE-SIGHT tissue oximetry products. We believe that substantial additional resources are required to further penetrate the markets for these products. Such investments include further research and development, including significant expenditures for clinical studies, equipment for placements at customer sites, further expansion of our selling organization, marketing expenditures and general working capital requirements. There can be no assurance that we will be successful in these endeavors. In addition, since we have limited financial resources, our emphasis on FORE-SIGHT tissue oximetry products may result in a lack of sufficient resources for our other product lines, which may negatively impact our overall financial results.

The sale of our products may result in significant product liability exposure.

As a manufacturer of medical diagnostic equipment, we face product liability claims. We maintain product liability insurance in an aggregate amount of $5 million. We cannot assure you that this insurance coverage will be adequate to cover any product liability claims that occur in the future or that product liability insurance will continue to be available at reasonable prices. Any product liability judgments or settlements in excess of insurance coverage could have a material adverse effect on our business and results of operations.

Our business could be adversely affected if we cannot protect our proprietary technology or if we infringe on the proprietary technology of others.

Our proprietary technology aids our ability to compete effectively with other companies in certain markets in which we compete. Although we have been awarded, have filed applications for, or have been licensed under numerous patents, these patents may not fully protect our technology or competitive position. Further, our competitors may apply for and obtain patents that will restrict our ability to make and sell our products.

Our competitors may intentionally infringe our patents. Third parties may also assert infringement claims against us. Litigation may be necessary to enforce patents issued to us, to protect our trade secrets or know-how, to defend ourselves against claimed infringement of the rights of others or to determine the scope and validity of the proprietary rights of others. The defense and prosecution of patent suits are both costly and time-consuming, even if the outcome is favorable to us. Such proceedings can be extremely expensive and their outcome very unpredictable.

An adverse outcome in the defense of a patent suit could cause us to lose proprietary rights, subject us to significant liabilities to third parties or require us to license rights from third parties or to cease selling our products. Any of these events could have a material adverse effect on our business, operating results and financial condition. We also rely on unpatented proprietary technology that others may independently develop or otherwise obtain access to.

Our inability to maintain the proprietary nature of our technologies could negatively affect our revenues and earnings.

We are subject to significant government regulation.

Our business is subject to varying degrees of governmental regulation in the countries in which we operate. In the United States, our products are subject to regulation as medical devices by the FDA, and by other federal and state agencies. These regulations pertain to the manufacturing, labeling, development and testing of our devices as well as to the maintenance of required records. An FDA regulation also requires prompt reporting by all medical device manufacturers of an event or malfunction involving a medical device where the device caused or contributed to death or serious injury or is likely to do so.

Federal law provides for several routes by which the FDA reviews medical devices before their entry into the marketplace. Medical products of the type currently being marketed and under development by us are subject to regulation under the FD&C Act and numerous acts and amendments such as the Quality System Regulations which replaced the regulations formerly called Good Manufacturing Practices. In addition, depending upon product type, we must also comply with those regulations governing the Conduct of Human Investigations, Pre-Market Regulations and other requirements, as promulgated by the FDA. The FDA is authorized to inspect a device, its labeling and advertising, and the facilities in which it is manufactured in order to ensure that the device is not manufactured or labeled in a manner which could cause it to be injurious to health.

The FDA has adopted regulations which classify medical devices based upon the degree of regulation believed necessary to assure safety and efficacy. A device is classified as a Class I, II, or III device. Class I devices are subject only to general controls. Class II devices, in addition to general controls, are or will be subject to "performance standards." Most devices are also subject to the 510(k) pre-market notification provision. In addition, some Class III devices require FDA pre-market approval before they may be marketed commercially because their safety and effectiveness cannot be assured by the general controls and performance standards of Class I or II devices. Our products are primarily Class I and II devices and several of them have required FDA notification under Section 510(k) of the FD&C Act.

Satisfaction of clearance or approval requirements may take up to several years or more and may vary substantially based upon the type, complexity and novelty of the product. The effect of government regulation may be to delay marketing of new products for a considerable or indefinite period of time, to impose costly procedures upon our activities and to furnish a competitive advantage to larger companies that compete with us. We cannot assure you that FDA or other regulatory clearance or approval for any products we develop will be granted on a timely basis, if at all, or, once granted, that clearances or approvals will not be withdrawn or other regulatory action taken which might limit our ability to market our proposed products. Any delay in obtaining or failure to obtain these clearances or approvals would adversely affect the manufacturing and marketing of our products and the ability to generate additional product revenue. The FDA also has the authority to, among other things, deny marketing approval until all regulatory protocols are deemed acceptable, halt the shipment of defective products, and seize defective products sold to customers. Adverse action or publicity from the FDA, if any, could have a negative impact upon our results from operations.

Federal regulatory reforms may adversely affect our ability to successfully market our products and impact our financial condition.

Recent federal efforts to reform the U.S. health care industry have resulted in legislation such as the Patient Protection and Affordable Care Act (“Affordable Care Act”) and other measures which will effect changes in healthcare delivery and coverage, and public and private reimbursements for services performed. Federal initiatives may also affect state programs. Legislative changes may affect hospital market expenditures for medical devices, the type and volume of procedures performed, and the demand for new and innovative products. These changes could be significant and may adversely affect the demand for our products, our results of operations, cash flows and our overall financial condition.

The Affordable Care Act provisions are funded by a variety of taxes including a medical device excise tax of 2.3% imposed on manufacturers and importers of certain medical devices. The Company is subject to the medical device excise tax effective January 1, 2013. The Company estimates that had the tax been in effect since January 1, 2012, the Company would have paid approximately $315,000 in taxes for the 2012 fiscal year.

Outside of the U.S., healthcare delivery and reimbursement systems vary by country. Efforts to control rising healthcare costs, changes in government sponsored programs and participation and various other economic factors may impact our ability to successfully market our products outside of the U.S.

Our products may become rapidly obsolete.

The areas in which we are developing, distributing, and/or licensing products involve rapidly developing technology. Others may develop products that might cause products being developed, distributed or licensed by us to become obsolete or uneconomical or result in products superior to our products.

We are subject to currency and related risks.

Our international sales subject us to currency and related risks. We expect that international sales will continue to constitute a significant portion of our business. Although we sell our products in United States dollars and are not subject to significant currency risks, an increase in the value of the United States dollar relative to foreign currencies in our international markets could make our products less price competitive in these markets. Our international sales accounted for 23% and 25% of our total net sales for the 2012 and 2011 fiscal years, respectively.

An acquisition of the company may be hindered.

Our Board of Directors is authorized to issue from time to time, without stockholder authorization, shares of preferred stock, in one or more designated series or classes. We are also subject to a Delaware statute regulating business combinations. These provisions could discourage, hinder or preclude an unsolicited acquisition of the Company and could make it less likely that stockholders receive a premium for their shares as a result of any takeover attempt.

We have issued outstanding shares of preferred stock with rights and preferences superior to those of our common stock.

The issued and outstanding shares of Series A Convertible Preferred Stock and Series A Exchangeable Preferred Stock grant the holders of such preferred stock anti-dilution, voting, accretion, dividend and liquidation rights that are superior to those held by the holders of our common stock. In addition, should we issue, or be deemed to issue, certain additional shares of common stock for a price below $2.82 per share, the conversion price of the Series A Convertible Preferred Stock and Series A Exchangeable Preferred Stock shall be lowered based on a weighted average formula, which will have the effect of immediately diluting the holders of our common stock.

Ownership of our shares is concentrated in the hands of a few investors which could limit the ability of our other stockholders to influence the direction of the company.

As calculated by SEC rules of beneficial ownership, Thomas, McNerney & Partners and their affiliates, and BMI Capital Corporation each beneficially owned approximately 30.3% and 14.9%, respectively, of our common stock on an as converted basis as of the dates of their most recent public filings with the SEC. Accordingly, although they are not affiliated with one another, they collectively may have the ability to significantly influence or determine the election of all of our directors or the outcome of most corporate actions requiring stockholder approval. They may exercise this ability in a manner that advances their best interests and not necessarily those of our other stockholders.

Sales of a substantial number of shares of our common stock in the public market originally issued through the conversion of preferred stock, exercise of options or warrants, or additional financing transactions could adversely affect the market price of our common stock and would have a dilutive effect upon our shareholders.

Historically, our common stock has been thinly traded. This low trading volume may have had a significant effect on the market price of our common stock, which may not be indicative of the market price in a more liquid market. As of December 31, 2012, options and warrants for the purchase of 3,029,859 shares of our common stock were outstanding and 5,941,270 shares of common stock were issuable upon conversion of our outstanding Series A Convertible Preferred Stock and Series A Exchangeable Preferred Stock.

We depend highly on certain key management personnel.

We believe that our future success will depend to a significant extent on the efforts and abilities of our senior management, in particular, Thomas Patton, our President and Chief Executive Officer, Matthew Herwig, our Vice President of Sales and Marketing, Dr. Paul Benni, our Chief Scientific Officer, Dr. John Gamelin, our Vice President of Research and Development, and Jeffery Baird, our Chief Financial Officer. The loss of the services of these executives could have a material adverse effect on our business and results of operations.

We do not expect to pay cash dividends.

We have not paid cash dividends on our common stock since inception, and at this time we do not anticipate that we will pay cash dividends on our common stock in the foreseeable future. Furthermore, we are currently precluded from issuing dividends on our common stock unless we receive the consent of holders of a majority of our outstanding Series A Convertible Preferred Stock and Series A Exchangeable Preferred Stock.

With regard to dividends issuable on our Series A Preferred Stock and Series A Exchangeable Preferred Stock, a holder must issue a written request to the Company by June 15th of 2011, 2012, or 2013 to receive cash dividends for the applicable succeeding four fiscal quarters ending June 30th, September 30th, December 31st, and March 31st. The holders have elected in writing not to receive cash dividends for the fiscal quarters through June 30, 2013. Further, the holders have irrevocably waived their cash dividend rights for the four fiscal quarters ended June 30, 2014, in accordance with the Company's agreement with East West Bank executed on July 31, 2012. The bank agreement prohibits the payment of cash dividends. The holders' waiver of their cash dividend rights for the four fiscal quarters ended June 30, 2014, may be revoked if the Company's obligations to East West Bank are terminated at any time prior to June 30, 2014. As of December 31, 2012, $1,754,381 in accretion had accumulated on the Series A Preferred Stock and the Series A Exchangeable Preferred Stock.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

The Company currently leases three separate operating facilities as described in further detail below.

On September 6, 2007, the Company closed the sale and leaseback of its headquarters and manufacturing facility in Branford, Connecticut (the "Property") which comprises approximately 24,000 square feet of office and manufacturing space. Net proceeds from the sale were $2,791,529 of which $928,872 was used to retire the related outstanding mortgage debt. The gain of $1,346,373 realized on the sale was deferred and is being recognized in operations against rent expense over the initial term of the lease. The lease has an initial term of ten years expiring on September 6, 2017, and contains an option for two additional five-year periods. The lease provides for an annual base rent in years one through five of $244,800 and $268,800 in years six through ten. The Company is recognizing rent expense on a straight-line basis over the ten years. Under the lease, the Company is responsible for the costs of utilities, insurance, taxes, and maintenance expenses. Further, the Company is required to maintain at least $600,000 in cash and cash equivalents (increasing at 3% per annum) and net current assets of not less than $3,600,000.

In addition, the Company has a right of first offer to lease any additional space or building built by the lessor on the Property, subject to certain restrictions. The Company also has the right to require the lessor to build an addition or additional building ("Expansion Premises"), subject to certain restrictions. Upon the delivery of any Expansion Premises, the term of the Lease would extend for a ten year term. The base rent for the Expansion Premises would be the greater of the then prevailing market rent or an amount equal to a return on actual costs of construction of the greater of 250 basis points over the rate on ten year U.S. Treasury Notes, or 8%. Upon delivery of the Expansion Premises, the lessor would assume obligations under the Company's leases of its two adjacent properties, in exchange for a payment equal to three months' rent and certain unamortized costs incurred in these facilities.

The Company is leasing two properties adjacent to its corporate facilities. Approximately 8,300 square feet of office and limited warehouse space is being leased under an agreement effective June 1, 2006, as amended, and expiring on May 31, 2014. Minimum annual rental expense is approximately $85,000 excluding apportioned real estate taxes and certain utility costs. Approximately 9,600 square feet of office and warehouse space is being leased under an agreement effective July 1, 2007, as amended and expiring June 30, 2015. Minimum annual rental expense is approximately $91,000 excluding apportioned real estate taxes and certain common area maintenance charges.

The Company believes that its premises meet its current and expected operating needs and are adequately insured.

Item 3. Legal Proceedings

The manufacture and sale of our products exposes us to product liability claims and product recalls, including those which may arise from misuse or malfunction of, or design flaws in, our products or use of our products with components or systems not manufactured or sold by us. Product liability claims or product recalls, regardless of their ultimate outcome, could require us to spend significant time and money in litigation or to pay significant damages. We maintain product liability insurance; however, we cannot assure you that this insurance coverage will be adequate to cover any product liability claims. Furthermore, we may not be able to obtain insurance in the future at satisfactory rates or in adequate amounts. In addition, publicity pertaining to the misuse or malfunction of, or design flaws in, our products could impair our ability to successfully market and sell our products and could lead to product recalls.

In addition, we may become in the normal course of our business operations, a party to other legal proceedings in addition to those described in the paragraph above. None of these other proceedings would be expected to have a material adverse impact on our results of operations, financial condition, or cash flows.

On August 7, 2009, the Somanetics Corporation filed an action against the Company in the United States District Court for the Eastern District of Michigan alleging patent infringement, false advertising, and common law unfair competition and libel. The complaint requested injunctive relief and unspecified monetary damages, including treble damages and reasonable attorneys' fees. On October 19, 2009, the Company answered the complaint, denying all allegations against it. In addition, the Company asserted counterclaims against Somanetics for violation of the antitrust laws and for a declaration that the patents sued upon were invalid, unenforceable, and/or were not infringed by the Company.

On October 27, 2010, a settlement was reached with Nellcor Puritan Bennett, LLC ("Nellcor"), as successor in interest to Somanetics Corporation, on Somanetics' action for patent infringement and other claims against the Company. The terms of the confidential settlement (the "Settlement") resolved all matters between the two parties as of the initiation of the lawsuit and caused the dismissal of the action with prejudice in a manner by which no payments were made to either party.

On December 29, 2011, Nellcor filed an action against the Company in the United States District Court for the Eastern District of Michigan alleging (i) breach of the settlement agreement with respect to a prior litigation matter between the parties, (ii) violation of the Lanham Act, (iii) common law unfair competition, and (iv) trade libel. The complaint requested injunctive relief and unspecified monetary damages, including compensatory damages and reasonable attorneys' fees. On February 24, 2012, the Company answered the complaint and denied substantially all of the claims and set forth certain affirmative defenses. On July 20, 2012, Nellcor filed a partial motion for summary judgment asking the Court to determine that the Company breached the settlement agreement. On December 19, 2012, the Court denied Nellcor's motion for summary judgment, finding that the Company did not breach the settlement agreement. On January 2, 2013, Nellcor moved to have that ruling reconsidered. On January 3, 2013, the Company moved for summary judgment in its favor on the breach of contract claim based upon the court's finding. The matter remains pending, and while there can be no assurance as to the ultimate outcome, the Company does not believe at this time that its disposition would result in a material adverse effect on the Company.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

The common stock of the Company trades on the NASDAQ Global Market, under the symbol "CASM." The following table shows the high and low sales prices for the Company's common stock during each quarterly period for the last two years.

Quarter Ended	High	Low
March 31, 2011	$ 3.31	$ 2.75
June 30, 2011	$ 3.14	$ 2.40
September 30, 2011	$ 3.00	$ 1.75
December 31, 2011	$ 1.99	$ 1.50
March 31, 2012	$ 2.98	$ 1.62
June 30, 2012	$ 2.75	$ 1.60
September 30, 2012	$ 2.25	$ 1.65
December 31, 2012	$ 2.29	$ 1.66

The following table sets forth the approximate number of beneficial owners of common stock of the Company on December 31, 2012.

Title of Class	Number of Shareholders
Common stock, $.004 par value	1,711

To date, no cash dividends have been declared on the Company's common stock. The Company does not currently intend to pay a cash dividend on its common stock in the near future. Furthermore, we are currently precluded from issuing dividends on our common stock unless we receive the consent of holders of a majority of our outstanding Series A Convertible Preferred Stock and Series A Exchangeable Preferred Stock.

The holders of our Series A Convertible Preferred Stock and our Series A Exchangeable Preferred Stock may elect on each of June 15th 2011, 2012, and 2013, to receive quarterly dividends in cash of 7% per annum for a period of twelve months from the date of election. The holders have elected in writing not to receive cash dividends for the fiscal quarters through June 30, 2013. Further, the holders have irrevocably waived their cash dividend rights for the four fiscal quarters ended June 30, 2014, in accordance with the Company's agreement with East West Bank executed on July 31, 2012. The bank agreement prohibits the payment of cash dividends. The holders' waiver of their cash dividend rights for the four fiscal quarters ended June 30, 2014, may be revoked if the Company's obligations to East West Bank are terminated at any time prior to June 30, 2014. As of December 31, 2012, $1,754,381 in dividend accretion had accumulated on the Series A Convertible Preferred Stock and the Series A Exchangeable Preferred Stock.

The Company did not issue any shares of common stock during the fourth quarter of 2012 that were not registered under the Securities Act of 1933, as amended. In addition, the Company did not repurchase any of its common stock during the fourth quarter of 2012.

Item 6. Selected Financial Data

Information is not required for smaller reporting company filers.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Certain statements included in this report, including without limitation statements in the Management's Discussion and Analysis of Financial Condition and Results of Operations, which are not historical facts, are "forward looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements represent the Company's current expectations regarding future events. The Company cautions that such statements are qualified by important factors that could cause actual results to differ materially from expected results which may be contained in the forward-looking statements. All forward-looking statements involve risks and uncertainties, including, but not limited to, the following: potential liquidity constraints; price and product competition; rapid technological changes; dependence on new product development; failure to introduce new products effectively or on a timely basis; the mix of products sold; supply and prices of raw materials and products; customer demand for the Company's products; regulatory actions; changes in reimbursement levels from third-party payors; product liability or other litigation claims; changes in economic conditions that adversely affect the level of demand for the Company's products; changes in foreign exchange markets; changes in financial markets; changes in the competitive environment; and other risks described in Item 1A of this filing.

Overview

Over the last 12 months, specific accomplishments included:

- In July 2012, the Company secured a term loan of $3.5 million from East West Bank and a revolver of up to $2.5 million. As of December 31, 2012, the revolver remained undrawn.
- The Company recorded its best growth rate in more than three years with a 6% net revenue growth rate in the third quarter over the prior year period and increased that growth rate to 12% in the fourth quarter.
- The worldwide installed base of FORE-SIGHT monitors increased 35% during 2012 to 741 as of December 31, 2012.
- Total FORE-SIGHT revenues increased 23% led by a 43% growth in U.S. FORE-SIGHT sales.
- The Company continued to build on the base of clinical evidence for FORE-SIGHT. By August 2012, the Company surpassed the milestone of recording more than 200 publications referencing the performance of FORE-SIGHT monitoring.

The following discussion and analysis should be read together with our consolidated financial statements and related notes appearing elsewhere in this Annual Report on Form 10-K.

Year Ended December 31, 2012 Compared to Year Ended December 31, 2011

As a result of the sale of the Company's Statcorp business unit on November 5, 2010, those operations are classified as discontinued operations for all reported periods.

The Company recorded a net loss applicable to common stockholders of $8,432,000 for 2012 or ($0.63) per basic and diluted common share compared to a net loss applicable to common stockholders of $6,714,000, or ($0.51) per basic and diluted common share, for 2011. The loss from continuing operations for 2012 was $7,308,000, or ($0.63) per basic and diluted common share, compared to a loss from continuing operations for 2011 of $6,325,000, or ($0.53) per basic and diluted common share. The additional losses from continuing operations of $983,000 for 2012 were primarily due to $1,514,000 of increased operating expenses partially offset by $546,000 of additional gross profit from both slightly increased sales and improved gross profit rates. During 2011, the Company recorded a gain from discontinued operations of $242,000, or $0.02 per basic and diluted common share, net of income tax expenses of $125,000.

Overall, net worldwide sales for 2012 increased $218,000, or 1%, to $22,669,000 from $22,451,000 in 2011. The following table provides comparative results of net sales by product and geographic category:

($000's)	**Year Ended December 31, 2012**	**Year Ended December 31, 2011**	**Increase / (Decrease)**
Tissue Oximetry Monitoring	$ 7,776	$ 6,327	$ 1,449
Traditional Vital Signs Monitoring	14,893	16,124	(1,231)
	$ 22,669	$ 22,451	$ 218
Domestic Sales	$ 17,511	$ 16,810	$ 701
International Sales	5,158	5,641	(483)
	$ 22,669	$ 22,451	$ 218

Worldwide tissue oximetry product sales for 2012 of $7,776,000 increased $1,449,000 or 23% over the $6,327,000 reported for 2011 led by increased sensor sales.

Traditional vital signs monitoring sales decreased $1,231,000 or 8% to $14,893,000 for 2012 from $16,124,000 for 2011. The decrease was primarily associated with reductions in sales of the Company's vital signs monitors to the U.S. Government and to veterinary customers and lower sales of neonatal intensive care supplies.

Total domestic sales increased $701,000 or 4% to $17,511,000 or 77% of total revenues for 2012 from $16,810,000 for 2011. Tissue oximetry sales increased 43% and were partially offset by decreases in vital signs monitoring product sales and neonatal intensive care supplies.

International sales declined $483,000 or 9% to $5,158,000 or 23% of total revenues for 2012 from $5,641,000 or 25% of total revenues for 2011. Increases in sales of vital signs monitors and accessories were offset by lower sales of tissue oximetry products and OEM technology products.

The following table provides information with respect to tissue oximetry revenues:

($000's)	**Year Ended December 31, 2012**	**Year Ended December 31, 2011**	**Increase / (Decrease)**
Sensor Sales	$ 6,567	$ 4,786	$ 1,781
Monitor and Accessories Sales	1,209	1,541	(332)
	$ 7,776	$ 6,327	$ 1,449
Domestic Sales	$ 6,063	$ 4,234	$ 1,829
International Sales	1,713	2,093	(380)
	$ 7,776	$ 6,327	$ 1,449

Worldwide tissue oximetry sensor sales for 2012 were $6,567,000, an increase of $1,781,000 or 37% over 2011 sales of $4,786,000. Worldwide sales of monitors and accessories for 2012 decreased $332,000 or 22% to $1,209,000 from 2011 sales of $1,541,000. As of December 31, 2012, the Company's worldwide installed base of oximetry monitors was 741 units, an increase of 35% above the installed base of 549 as of December 31, 2011.

Cost of sales as a percentage of net sales was 60% for 2012 and 62% for 2011. Lower manufacturing variances, improved factory productivity, and reduced warranty costs accounted for the improvement in cost of sales as a percentage of sales. Cost of sales for 2011 included warranty expense of $259,000 related to the Company's OEM technology products.

R&D expenses increased $495,000, or 14%, to $4,020,000 for 2012 from $3,525,000 for 2011. The increase resulted primarily from additional employee costs due to personnel additions and increased clinical evaluations offset by reduced engineering project costs.

R&D expenses are reported net of reimbursements received from the National Institutes of Health ("NIH") pertaining to the Company's development of its Near-Infrared Spectroscopy ("NIRS") technology. Amounts reimbursed from the NIH, including accruals, for 2012 and 2011 were $296,000 and $367,000, respectively. The Company's most recent grant of $2,800,000 awarded during September 2007 has been fully utilized and no further reimbursements remained under the award as of December 31, 2012. In addition, the Company received $148,000 in state tax credits during 2012 which it also credited to R&D expenses. R&D expenses are expected to increase for 2013 primarily due to various planned product validation costs and expanded clinical research expenditures.

Selling, general, and administrative ("S,G&A") expenses increased $1,019,000, or 9%, to $12,529,000 for 2012 from $11,510,000 for 2011. The increases in S,G&A expenses were primarily related to field sales expenses and legal expenses which were partially offset by reduced meeting and convention costs. S, G&A expenses are expected to increase during 2013 primarily from increases in field-based sales spending, additional marketing promotional expenditures, and medical device excise taxes associated with the Affordable Care Act of 2010.

Interest expense for 2012 reflects the Company's term debt agreement with its bank lender executed July 31, 2012 as described below.

The income tax benefit for continuing operations for 2012 and 2011 was $211,000 and $125,000, respectively. The income tax benefit for 2012 pertains to uncertain state income tax positions which have been derecognized as a result of net operating losses incurred over the past six years, the availability of net operating loss carry backs in certain jurisdictions and administrative practices in jurisdictions which gave rise to the original accrual. The income tax benefit for 2011 was offset by related income tax expense for discontinued operations. The Company does not expect to record taxable income during its 2013 fiscal year. Income tax benefits that may be generated during 2013 would be offset by a deferred income tax asset valuation allowance. Management established the valuation allowance as of December 31, 2009, as a result of then recent cumulative pre-tax losses and its estimates of future taxable income. Management has continued to perform the required analysis regarding the realization of our deferred income tax assets concluding that a full valuation allowance is warranted. As of December 31, 2012, the deferred income tax asset valuation allowance balance was $6,061,000.

Financial Condition, Liquidity, and Capital Resources

On June 8, 2011, the Company entered into an investment agreement (the "Agreement") pursuant to which the Company issued on June 9, 2011, (i) 95,500 shares of a newly created series of preferred stock, designated "Series A Convertible Preferred Stock," par value $0.001 per share (the "Series A Preferred Stock"), which are convertible into authorized but unissued shares of common stock, par value $0.004 per share, of the Company and (ii) 54,500 shares of a newly created series of preferred stock, designated "Series A Exchangeable Preferred Stock," par value $0.001 per share (the "Series A Exchangeable Preferred Stock") which are now convertible, following stockholder approval, into authorized but unissued shares of common stock, par value $0.004 per share, of the Company. The Company received an aggregate cash purchase price of $15.0 million representing a per-share purchase price of $100 for each of the Series A Preferred Stock and the Series A Exchangeable Preferred Stock. The Company utilized a placement agent to assist in the transaction which was paid a fee of $900,000 plus certain expenses. The Company received net proceeds, after transaction costs and expenses, of $13,825,000.

The Company's cash, cash equivalents, and short-term investments were $10,496,000 at December 31, 2012, compared to $13,878,000 at December 31, 2011. Working capital decreased $4,587,000 to $12,619,000 at December 31, 2012, from $17,206,000 at December 31, 2011.

The Company's continuing operations used $5,110,000 in cash for 2012. Losses from continuing operations of $7,308,000 were affected by $1,961,000 of depreciation, amortization, and stock compensation expenses and $237,000 of changes in various working capital accounts. During 2011, $3,604,000 of net cash was used by operating activities of continuing operations. Losses from continuing operations of $6,325,000 were affected by $1,758,000 of depreciation, amortization, and stock compensation expenses and $963,000 of working capital items primarily related to reductions in inventory.

Net cash used by investing activities of continuing operations was $437,000 for 2012 compared to cash used of $3,752,000 for 2011. The Company incurred $1,565,000 of capital expenditures during 2012 compared to $1,112,000 for 2011. For both periods, the expenditures were primarily related to placements of FORE-SIGHT oximeter monitors at customer locations. During 2011, the Company invested $2,491,000 in short-term certificates of deposit with varying maturities. In 2012, $1,240,000 related to these certificates of deposit had matured and were transferred to operating cash accounts. During 2013, the Company expects to further increase its capital expenditures for continuing equipment placements at customer sites and for its operating needs to support new product introductions.

The Company also expended $111,000 and $150,000 during 2012 and 2011, respectively, to purchase intangible assets which were primarily related to patent costs and product translations.

Net cash provided by financing activities of continuing operations was $3,405,000 for 2012 compared to cash provided of $13,884,000 for 2011.

On July 31, 2012, the Company entered into a Loan and Security Agreement (the "Loan Agreement") with East West Bank (the "Bank"). Pursuant to the Loan Agreement, the Bank provided the Company with a secured $3,500,000 term loan (the "Term Loan") which bears interest at 5.5% and is scheduled to mature on July 31, 2015. The Term Loan contains a 12-month interest-only feature with principal payable in 24 equal installments of approximately $154,000 commencing in August 2013.

The Loan Agreement also provides for a maximum of $2,500,000 revolving line-of-credit which expires on January 31, 2014 (the "Revolver"). Under the Loan Agreement, advances under the Revolver bear interest at a floating rate equal to 2.00% above the Bank's prime rate, with a 3.25% floor on the prime rate, representing an effective rate of 5.25%, as of December 31, 2012. Interest on the loans is payable monthly. Under the terms of the Loan Agreement, the Company is permitted to borrow against eligible accounts receivable as defined under the Loan Agreement according to pre-established criteria. The amount available for borrowing under the Revolver as of December 31, 2012, was $1,177,000. There were no borrowings under the Revolver as of December 31, 2012.

The Loan Agreement contains customary negative covenants limiting the ability of the Company and its subsidiaries, among other things, to grant liens on the pledged collateral, pay cash dividends, make certain investments and acquisitions and dispose of assets outside the ordinary course of business. The Loan Agreement also contains financial covenants, measured quarterly, providing minimum levels of the Company's tangible net worth and non-financial covenants with respect to the timing of certain new product approvals. As of December 31, 2012, the Company was in compliance with the Loan Agreement covenants.

Net cash provided by financing activities of continuing operations for 2011 included $13,825,000 from the private placement of shares of our Series A Convertible Preferred Stock and Series A Exchangeable Preferred Stock.

The Company currently leases three facilities and certain equipment under non-cancellable operating leases. The following table sets forth a summary of the Company's cash commitments under contractual obligations as of December 31, 2012.

Contractual Obligations	Total	Less than One Year	2 - 3 Years	4 - 5 Years	More Than Five Years
Operating leases	$ 1,695,000	$ 485,000	$ 761,000	$ 449,000	$ —

The Company's 2013 business plans call for increased operating expenditures primarily to develop and market our FORE-SIGHT® technology and our other product lines. Our ordinary short-term capital needs are expected to be met from our current cash on hand and amounts available under our Loan Agreement with East West Bank. However, we may, from time to time, seek additional funding through a combination of equity and debt financings or from other sources.

Cash flows may be impacted by a number of factors, including changing market conditions, market acceptance of the FORE-SIGHT system, and the loss of one or more key customers.

The Company's results of operations were not affected by inflation during 2012.

Off-Balance Sheet Arrangements

The Company has no off-balance sheet arrangements other than operating leases for office and warehouse space.

Critical Accounting Policies

The Company's financial statements have been prepared in accordance with generally accepted accounting principles in the United States. In preparing the financial statements, the Company is required to make estimated judgments. Such judgments are based upon historical experience and certain assumptions that are believed to be reasonable in the particular circumstances. Those judgments affect both balance sheet and income statement accounts and disclosures. The Company evaluates its assumptions on an ongoing basis by comparing actual results with its estimates. Actual results may differ from the original estimates. The following accounting policies are those that the Company believes to be most critical to the preparation of its financial statements.

Inventory Valuation – The Company's inventories are stated at the lower of cost or market. The Company provides allowances on inventories for any material that has become obsolete or may become unsalable based on estimates of future demand and the sale price in the market. Judgments with respect to salability and usage of inventories, estimated market value, and recoverability upon sale are complex and subjective. Such assumptions are reviewed periodically and adjustments are made, as necessary, to reflect changed conditions. There were no significant write-offs for any period presented with the exception of the discontinued infant sleep apnea product line.

Deferred Income Tax Assets – The Company has recorded deferred income tax assets for the estimated benefit of future tax deductions on inventories, property and equipment and other accruals, as well as net operating loss carry forwards and tax credits. Based on recent cumulative pre-tax losses and the Company's estimates of future taxable income, management has established a deferred tax asset valuation allowance.

Accrued Warranty Costs – The Company warranties its products for up to three years and records the estimated cost of such product warranties at the time the sale is recorded. Estimated warranty costs are based upon actual past experience of product returns and the related estimated cost of labor and material to make the necessary repairs. Warranty costs have not been historically material to operating results. However, if actual future product return rates or the actual costs of material and labor differ from the estimates, adjustments to the accrued warranty liability would be made.

Stock-based Compensation – The Company records the fair value of stock-based compensation awards as expenses in its consolidated statement of operations. In order to determine the fair value of stock options on the date of grant, we apply the Black-Scholes option-pricing model. Inherent in this model are assumptions related to expected dividend yield, risk-free interest rate, expected stock-price volatility, expected term, and forfeiture rate. Restricted stock awards are generally valued upon the closing price of the common stock on the date of the grant. Amortization of stock-based awards takes place over the vesting period associated with the award.

Revenue and Accounts Receivable Recognition – Revenue from sales and accounts receivable are recognized when evidence of an arrangement exists, delivery has occurred based upon shipping terms, the selling price is fixed and determinable, and collectability is reasonably assured. Terms of sale for most domestic sales are FOB origin and for most international sales are EX-Works reflecting that ownership and risk of loss are assumed by the buyer at the shipping point. In addition, the Company has certain agreements with its customers to ship FOB destination reflecting that ownership and risk of loss are assumed by the buyer upon delivery. While the Company accepts returns of products from its customers from time to time for various reasons including defective goods, order entry, shipping or other errors, the Company's business practices do not include providing right of return at the time of sale. Historically, such returns have not been significant. The Company has entered into agreements with several customers to provide them with price rebates based upon their level of purchases. Rebates are accrued by the Company as a reduction in net sales as they are earned by customers. Payment terms range from prepayment to net sixty days depending upon certain factors including customer credit worthiness, geographic location and customer type (i.e., end-user, distributor, government or private entity) and also includes irrevocable letters of credit for certain international shipments. Price discounts that may be taken by customers under contractual arrangements for payment of invoices within specified periods are recorded as reductions to net sales. Further, the Company accrues expected payment discounts based upon specific customer accounts receivable balances. The Company does not incur post-shipment obligations with the exception of product warranties which are generally fulfilled from the Company's corporate facilities and which costs are not material relative to the sale of the product. Accounts receivable are charged to the allowance for doubtful accounts when deemed uncollectible.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

The Company holds no derivative securities for trading purposes and is not subject in any material respect to currency or other commodity risk.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

Shareholders and Board of Directors
CAS Medical Systems, Inc.

We have audited the accompanying consolidated balance sheets of CAS Medical Systems, Inc. (the "Company") as of December 31, 2012 and 2011, and the related consolidated statements of operations, changes in shareholders' equity and cash flows for the years then ended. The Company's management is responsible for these financial statements. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of the Company's internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal controls over financial reporting. Accordingly, we express no such opinion. An audit also 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, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2012 and 2011, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

/s / CohnReznick LLP

Glastonbury, Connecticut
March 26, 2013

CAS Medical Systems, Inc.
Consolidated Balance Sheets
As of December 31, 2012 and 2011

ASSETS	**2012**	**2011**
CURRENT ASSETS:		
Cash and cash equivalents	$ 9,245,094	$ 11,387,300
Short-term investments	1,250,794	2,490,587
Accounts receivable, less allowance of $175,000 in 2012 and 2011	2,197,513	2,535,331
Inventories	3,543,325	3,276,568
Other current assets	612,082	299,620
Total current assets	16,848,808	19,989,406
PROPERTY AND EQUIPMENT:		
Leasehold improvements	311,320	304,396
Equipment at customers	3,407,836	2,374,302
Machinery and equipment	5,439,521	5,034,300
	9,158,677	7,712,998
Accumulated depreciation and amortization	(6,443,303)	(5,583,358)
Property and equipment, net	2,715,374	2,129,640
Intangible and other assets, net	830,245	704,648
Total assets	$ 20,394,427	$ 22,823,694

CAS Medical Systems, Inc.
Consolidated Balance Sheets
As of December 31, 2012 and 2011

LIABILITIES AND STOCKHOLDERS' EQUITY	2012	2011
CURRENT LIABILITIES:		
Accounts payable	$ 1,906,327	$ 1,340,488
Accrued expenses	1,625,923	1,443,367
Current portion of long-term debt	697,834	—
Total current liabilities	4,230,084	2,783,855
Deferred gain on sale and leaseback of property	630,152	764,789
Income taxes payable	—	211,159
Long-term debt, less current portion	2,685,560	—
Commitments and contingencies (Note 13)	—	—
Total liabilities	7,545,796	3,759,803
STOCKHOLDERS' EQUITY:		
Preferred stock, $.001 par value per share, 1,000,000 shares authorized		
Series A convertible preferred stock, 95,500 shares issued and outstanding, liquidation value of $10,666,956 at December 31, 2012	8,802,000	8,802,000
Series A exchangeable preferred stock, 54,500 shares issued and outstanding, liquidation value of $6,087,425 at December 31, 2012	5,135,640	5,135,640
Common stock, $.004 par value per share, 40,000,000 shares authorized, 13,767,192 and 13,701,273 shares issued as of December 31, 2012 and 2011, respectively, including shares held in treasury	55,069	54,805
Common stock held in treasury, at cost - 86,000 shares	(101,480)	(101,480)
Additional paid-in capital	12,023,721	10,930,927
Accumulated deficit	(13,066,319)	(5,758,001)
Total stockholders' equity	12,848,631	19,063,891
Total liabilities and stockholders' equity	$ 20,394,427	$ 22,823,694

See accompanying notes.

CAS Medical Systems, Inc.
Consolidated Statements of Operations
For the Years Ended December 31, 2012 and 2011

	2012	2011
NET SALES	$ 22,669,065	$ 22,450,567
COST OF SALES	13,565,148	13,892,572
Gross profit	9,103,917	8,557,995
OPERATING EXPENSES:		
Research and development	4,019,896	3,525,078
Selling, general and administrative	12,528,686	11,509,670
	16,548,582	15,034,748
OPERATING LOSS FROM CONTINUING OPERATIONS	(7,444,665)	(6,476,753)
Interest expense	113,941	—
Other income	(39,129)	(26,738)
LOSS FROM CONTINUING OPERATIONS BEFORE INCOME TAXES	(7,519,477)	(6,450,015)
Income tax benefit	(211,159)	(124,763)
LOSS FROM CONTINUING OPERATIONS	(7,308,318)	(6,325,252)
INCOME FROM DISCONTINUED OPERATIONS, NET OF INCOME TAXES	—	242,188
NET LOSS	(7,308,318)	(6,083,064)
Preferred stock dividend accretion	1,123,239	631,143
NET LOSS APPLICABLE TO COMMON STOCKHOLDERS	$ (8,431,557)	$ (6,714,207)
PER SHARE BASIC AND DILUTED INCOME (LOSS) APPLICABLE TO COMMON STOCKHOLDERS		
Continuing operations	$ (0.63)	$ (0.53)
Discontinued operations	—	0.02
Net loss	$ (0.63)	$ (0.51)
WEIGHTED AVERAGE NUMBER OF COMMON SHARES OUTSTANDING - basic and diluted	13,286,553	13,104,245

See accompanying notes.

CAS MEDICAL SYSTEMS, INC.
Consolidated Statements of Changes in Shareholders' Equity
For the Years Ended December 31, 2012 and 2011

	Preferred Stock		Common Stock Issued		Held in Treasury		Additional Paid-in	Accumulated	
	Shares	Amount	Shares	Amount	Shares	Amount	Capital	Deficit	Total
BALANCE, December 31, 2010	—	$ —	13,575,401	$ 54,302	86,000	$(101,480)	$10,002,600	$ 437,572	$10,392,994
Net Loss								(6,083,064)	(6,083,064)
Common Stock issued upon exercise of stock options			48,450	194			45,281		45,475
Common Stock issued under stock purchase plan			4,705	19			13,237		13,256
Restricted stock issued, net of cancellations			72,717	290			(290)		—
Sale of Series A Convertible Preferred Stock, net of transaction costs and expenses	95,500	8,802,000							8,802,000
Reclassification of Series A Exchangeable Preferred Stock, net of transaction costs	54,500	5,135,640							5,135,640
Accretion on Exchangeable Preferred Stock prior to reclassification								(112,509)	(112,509)
Stock compensation							870,099		870,099
BALANCE, December 31, 2011	150,000	13,937,640	13,701,273	54,805	86,000	(101,480)	10,930,927	(5,758,001)	19,063,891
Net Loss								(7,308,318)	(7,308,318)
Common Stock issued upon exercise of stock options			20,300	81			30,368		30,449
Common Stock issued under stock purchase plan			13,668	55			22,109		22,164
Warrants issued to bank							145,732		145,732
Restricted stock issued, net of cancellations			31,951	128			(128)		
Stock compensation							894,713		894,713
BALANCE, December 31, 2012	**150,000**	**$13,937,640**	**13,767,192**	**$ 55,069**	**86,000**	**$(101,480)**	**$12,023,721**	**$ (13,066,319)**	**$12,848,631**

See accompanying notes.

CAS Medical Systems, Inc.
Condensed Consolidated Statements of Cash Flows
For the Years Ended December 31, 2012 and 2011

	2012	2011
OPERATING ACTIVITIES:		
Cash flows from operating activities		
Net loss	$ (7,308,318)	$ (6,083,064)
Less income from discontinued operations	—	242,188
Loss from continuing operations	(7,308,318)	(6,325,252)
Adjustments to reconcile net loss from continuing operations to net cash used in operating activities:		
Depreciation and amortization	1,066,743	888,261
Amortization of debt discount	29,126	—
Deferred income taxes	—	(124,763)
Provision for doubtful accounts	52,953	—
Stock compensation	894,713	870,099
Impaired capitalized patent costs	46,271	—
Amortization of gain on sale and leaseback of property	(134,637)	(134,637)
Changes in operating assets and liabilities:		
Accounts receivable	284,865	71,285
Income taxes payable/receivable	(211,159)	13,655
Inventories	(266,757)	1,536,397
Other current assets	(312,462)	10,567
Accounts payable and accrued expenses	748,395	(409,382)
Net cash used in operating activities of continuing operations	(5,110,267)	(3,603,770)
INVESTING ACTIVITIES:		
Expenditures for property and equipment	(1,565,333)	(1,111,732)
Short-term investments	1,239,793	(2,490,587)
Purchase of patents and intangible assets	(111,081)	(150,114)
Net cash used in investing activities of continuing operations	(436,621)	(3,752,433)
FINANCING ACTIVITIES:		
Proceeds from long-term debt and warrants	3,500,000	—
Deferred financing costs	(147,931)	—
Proceeds from sale of preferred stock	—	13,825,131
Proceeds from issuance of common stock	52,613	58,731
Net cash provided by financing activities of continuing operations	3,404,682	13,883,862
Net cash (used in) provided by continuing operations	(2,142,206)	6,527,659
Cash flows from discontinued operations		
Cash provided by operating activities of discontinued operations	—	366,951
Net cash provided by discontinued operations	—	366,951
Net change in cash and cash equivalents	(2,142,206)	6,894,610
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	11,387,300	4,492,690
CASH AND CASH EQUIVALENTS, END OF YEAR	$ 9,245,094	$ 11,387,300
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:		
Cash paid during the year for interest	$ 68,239	$ 1,356
Cash paid during the year for income taxes	$ —	$ —

See accompanying notes.

(1) THE COMPANY

CAS Medical Systems, Inc. ("CASMED" or the "Company") develops, manufactures and distributes non-invasive vital signs monitoring equipment and products for use in the healthcare industry. These products are sold by the Company through its own sales force, via distributors and manufacturers representatives under contract, and pursuant to original equipment manufacturer ("OEM") agreements both internationally and in the United States. The Company's operations and manufacturing facilities are located in the United States. During both 2012 and 2011, one customer accounted for approximately 11% of net sales. The Company generated international sales of approximately $5.2 million in 2012 and $5.6 million in 2011. In the normal course of business, the Company grants credit to its customers and does not require collateral. Credit losses are provided for in the period the related sales are recognized based upon experience and an evaluation of the likelihood of collection. Credit losses have been within management's expectations.

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Use of estimates

The preparation of 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 at the date of the financial statements and the reported amounts of sales and expenses during the reporting period. Estimates that are particularly sensitive to change in the near-term are inventory valuation allowances, deferred income tax asset valuation allowances, allowance for doubtful accounts and warranty accrual. Actual results could differ from those estimates.

Principles of consolidation

Through November 4, 2010, the consolidated financial statements included the accounts of CASMED and its wholly-owned subsidiary, Statcorp, Inc. ("Statcorp"). On November 5, 2010, the assets related to Statcorp were sold under an asset purchase agreement. Accordingly, the consolidated financial statements for all periods reported reflect the results of that operation as discontinued.

Cash and cash equivalents and short-term investments

The Company considers all highly liquid investments with a maturity of three months or less when purchased to be cash equivalents. The Company has deposits in a limited number of financial institutions with federally insured limits. Cash (including cash equivalents) at these institutions is normally in excess of the insured limits. However, the Company believes that the institutions are financially sound and there is only nominal risk of loss.

The Company's short-term investments are held in certificates of deposit with maturities greater than three months. These investments are recorded at amortized cost.

Inventories

Inventories are stated at the lower of cost, determined by the first-in, first-out method, or market.

Property and equipment

Property and equipment, including leasehold improvements, are stated at cost. Depreciation is computed using the straight-line method based on the estimated useful lives of the assets, which range from two to five years for machinery and equipment. Leasehold improvements are amortized over the life of the improvement or the lease term, whichever is shorter. Maintenance and repairs are charged to expense when incurred.

The Company owns certain FORE-SIGHT tissue oximetry monitors located at customer sites. Such equipment is held under a no cost program whereby customers purchase disposable sensors for use with the Company's equipment. The Company retains title to the monitors shipped to its customers under this program. The monitors are depreciated on a straight-line basis over five years to cost of sales.

Depreciation and amortization expense on property and equipment was in $979,599 in 2012 and $791,170 in 2011.

Intangible and other assets

The Company reviews its intangible and other long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. During 2012, the Company wrote off $46,271 of capitalized patent costs related to certain abandoned patents. The Company believes that the carrying amounts of its long-lived assets are fully recoverable.

Intangible and other assets at December 31, 2012 and 2011 consist of:

	2012	2011
Patents and other assets	$ 714,810	$ 682,321
Patents pending	348,256	315,935
Purchased technology	46,026	46,026
Deferred financing costs	147,931	—
	1,257,023	1,044,282
Accumulated amortization	(426,778)	(339,634)
	$ 830,245	$ 704,648

Intangible and other assets are stated at cost. Patents are amortized over their estimated useful lives which range from 1 to 20 years. Purchased technology is amortized over five years. Deferred financing costs are amortized over the term of the related debt. Amortization expense was $87,144 in 2012 and $97,091 in 2011.

Expected amortization expense of intangible assets as of December 31, 2012, over the next five years follows:

2013	$ 103,000
2014	76,000
2015	45,000
2016	15,000
2017	15,000
	$ 254,000

Revenue and accounts receivable recognition

Revenue from sales and accounts receivable are recognized when evidence of an arrangement exists, delivery has occurred based upon shipping terms, the selling price is fixed and determinable, and collectability is reasonably assured. Terms of sale for most domestic sales are FOB origin and for most international sales are

EX-Works, reflecting that ownership and risk of loss are assumed by the buyer at the shipping point. In addition, the Company has certain agreements with its customers to ship FOB destination reflecting that ownership and risk of loss are assumed by the buyer upon delivery. While the Company accepts returns of products from its customers from time to time for various reasons including defective goods, order entry, shipping or other errors, the Company's business practices do not include providing right of return at the time of sale. Historically, such returns have not been significant. The Company has entered into agreements with several customers to provide them with price rebates based upon their level of purchases. Rebates are accrued by the Company as a reduction in net sales as they are earned by customers. Payment terms range from prepayment to net sixty days depending upon certain factors including customer credit worthiness, geographic location and customer type (i.e., end-user, distributor, government or private entity) and also includes irrevocable letters of credit for certain international shipments. Price discounts that may be taken by customers under contractual arrangements for payment of invoices within specified periods are recorded as reductions to net sales. Further, the Company accrues expected payment discounts based upon specific customer accounts receivable balances. The Company does not incur post shipment obligations with the exception of product warranties which are generally fulfilled from the Company's corporate facilities and which costs are not material relative to the sale of the product. Accounts receivable are charged to the allowance for doubtful accounts when deemed uncollectible.

The Company's five largest customers accounted for approximately 36% and 41% of revenues in 2012 and 2011, respectively. Among these customers, Physio-Control, Inc. accounted for 11% of revenues during both 2012 and 2011. Also included above are sales to the U.S. Department of Veterans Affairs ("V.A."). When aggregating sales to the individual V.A. hospitals, those sales accounted for 18% of overall sales for both 2012 and 2011. The Company has a blanket agreement with the V.A. for the purchase of its vital signs monitors through February 2015. The loss of any significant customer could have a material adverse effect on our financial position and results of operations.

Income taxes

The Company recognizes deferred income tax assets and liabilities for future tax consequences resulting from differences between the book and tax bases of existing assets and liabilities as well as for loss carry forwards. A valuation allowance is provided for that portion of deferred income tax assets which may not be realized.

The Company has accrued for uncertain tax positions in accordance with accounting standards which prescribes a more likely-than-not threshold for financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return.

The Company files U.S. Federal and multiple state income tax returns. The Company's U.S. Federal and state income tax returns prior to 2009 are closed. Interest and penalties related to uncertain tax positions are classified with income taxes.

Warranty costs

The Company warrants some of its products against defects and failures for up to three years and records the estimated cost of such warranties at the time the sale is recorded. Estimated warranty costs are based upon actual past experiences of product returns and the related estimated cost of labor and material to make the necessary repairs. The warranty provision for 2011 includes an accrual for a potential payment to a key customer for OEM products sold in a prior year period. Such amount was paid in 2012.

A summary of the changes in the Company's warranty accrual follows:

	2012	2011
Beginning balance	$ 369,171	$ 50,000
Provision	42,014	424,915
Warranty costs incurred	(311,185)	(105,744)
Ending balance	$ 100,000	$ 369,171

Research and development costs

The Company expenses all research and development costs as incurred. Research and development ("R&D") includes, among other expenses, direct costs for salaries, employee benefits, professional services, materials and facility related expenses.

The Company has received various grants which support its R&D efforts. In accordance with the terms of these grants, the Company is being reimbursed for certain qualifying expenditures. Funding provided to the Company is being recorded as a reduction of R&D expenses. The Company recognizes the reimbursement on an accrual basis as the qualifying costs are incurred.

Advertising costs

Non-direct response advertising costs are expensed as incurred and include product promotion, samples, meetings and conventions, and print media. Advertising expense was $868,000 in 2012 and $895,000 in 2011.

Income (loss) per common share applicable to common stockholders

Basic earnings per share is calculated by dividing net income (loss) applicable to common stockholders by the weighted average number of common shares outstanding for the period. Diluted earnings (loss) per share reflects the potential dilution that could occur if common stock equivalents such as unvested restricted common shares, outstanding warrants and options or convertible preferred stock were exercised or converted into common stock. For all periods reported, the Company incurred net losses from continuing operations. Therefore, for each period reported, diluted loss per share is equal to basic loss per share because the effect of including such common stock equivalents or other securities would have been anti-dilutive.

At December 31, 2012, stock options and warrants to purchase 2,007,125 and 1,022,734 shares of common stock, respectively, were excluded from the diluted earnings per share calculation as they would have been anti-dilutive. On an as-converted basis, 5,941,270 shares of common stock pertaining to the private placement of 150,000 shares of Series A convertible and exchangeable preferred stock issued on June 9, 2011, were also excluded as they would have been anti-dilutive.

The following table presents a reconciliation of the numerators and denominators of basic and diluted loss per share for 2012 and 2011:

	2012	2011
Loss from continuing operations	$ (7,308,318)	$ (6,325,252)
Preferred stock accretion	1,123,239	631,143
Loss from continuing operations applicable to common stockholders	(8,431,557)	(6,956,395)
Income from discontinued operations	—	242,188
Net loss applicable to common stockholders	$ (8,431,557)	$ (6,714,207)
Weighted average shares outstanding, net of unvested restricted common shares - used to compute basic and diluted income (loss) per share applicable to common stockholders	13,286,553	13,104,245

(3) DISCONTINUED OPERATIONS

On November 5, 2010, the Company sold certain assets and liabilities related to its Statcorp business unit. The purchase agreement contained a feature under which the Company earned an additional $250,000 as of June 30, 2011, as a result of the buyer reaching certain net revenue thresholds in the six-month period following the closing. Further, the Company performed certain post-closing functions for the buyer for which it received $116,951 of related fees resulting in income from discontinued operations for 2011 of $242,188, net of income tax expense of $124,763.

(4) ALLOWANCE FOR DOUBTFUL ACCOUNTS

Changes in the allowance for doubtful accounts during the years ended December 31, 2012 and 2011 follow:

	2012	2011
Balance at beginning of year	$ 175,000	$ 175,000
Provision	52,953	—
Accounts written off	(52,953)	—
Balance at end of year	$ 175,000	$ 175,000

(5) INVENTORIES

Inventories at December 31, 2012 and 2011 consist of:

	2012	2011
Raw materials	$ 2,489,750	$ 2,504,526
Work in process	34,384	25,331
Finished goods	1,019,191	746,711
	$ 3,543,325	$ 3,276,568

(6) FINANCING ARRANGEMENTS

Private Placement of Preferred Stock

On June 8, 2011, the Company entered into an investment agreement pursuant to which the Company issued on June 9, 2011, (i) 95,500 shares of a newly created series of preferred stock, designated "Series A Convertible Preferred Stock," par value $0.001 per share which are convertible into authorized but unissued shares of common stock, par value $0.004 per share, of the Company and (ii) 54,500 shares of a newly created series of preferred stock, designated "Series A Exchangeable Preferred Stock," par value $0.001 per share which are convertible, following stockholder approval, into authorized but unissued shares of common stock, par value $0.004 per share, of the Company. A special meeting of the Company's stockholders took place on August 22, 2011 at which time the stockholders approved proposals that resulted in the modification of the Series A Exchangeable Preferred Stock such that the Series A Exchangeable Preferred Stock now has substantially identical terms to the Series A Convertible Preferred Stock.

The Company received an aggregate cash purchase price of $15,000,000 representing a per-share purchase price of $100 for the Series A Convertible Preferred Stock and $100 for the Series A Exchangeable Preferred Stock. The Company utilized a placement agent to assist in the transaction which was paid a fee of $900,000 plus certain expenses. The Company received net proceeds, after transaction costs and expenses, of $13,825,000.

Series A Convertible Preferred Stock

The shares of Series A Convertible Preferred Stock (the "Series A Preferred Stock") are convertible at the option of the holder into common stock at a conversion price of $2.82 (the "Conversion Price"). The Conversion Price is subject to standard weighted average anti-dilution adjustments.

Following the date of issuance, the stated value ($100.00 per share) of the Series A Preferred Stock accretes at an annual rate of 7% compounded quarterly. On an annual basis prior to the third anniversary of the original date of issuance, the holders may elect, pursuant to certain requirements, to receive the following twelve months of accretion in the form of a dividend of 7% per annum, payable quarterly in cash at the holder's option. After the third anniversary of the closing, such accretion may be made in cash at the Company's option. The Series A Preferred Stock is subject to certain default provisions whereby the dividend rate would be increased by an additional 5% per annum.

After the third anniversary of the original date of issuance, the Company can force conversion of all, and not less than all, of the outstanding Series A Preferred Stock into Company common stock as long as the closing price of its common stock is at least 250% of the Conversion Price, or $7.05 per common share, for at least 20 of the 30 consecutive trading days immediately prior to the conversion and the average daily trading volume is greater than 50,000 shares per day over the 30 consecutive trading days immediately prior to such conversion. The Company's ability to cause a conversion is subject to certain other conditions as provided pursuant to the terms of the Series A Preferred Stock described above.

The Series A Preferred Stock is entitled to a liquidation preference equal to the greater of 100% of the accreted value for each share of Series A Preferred Stock outstanding on the date of a liquidation plus all accrued and unpaid dividends or the amount a holder would have been entitled to had the holder converted the shares of Series A Preferred Stock into common stock immediately prior to the liquidation. The Series A Preferred Stock will vote together with the common stock as-if-converted on the original date of issuance. Holders of Series A Preferred Stock are entitled to purchase their pro rata share of additional stock issuances in certain future financings.

Series A Exchangeable Preferred Stock

Prior to approval by the stockholders of the Company at the Special Meeting of Stockholders on August 22, 2011, holders of the Series A Exchangeable Preferred Stock did not have any voting rights and the stated value of the Series A Exchangeable Preferred Stock of $100.00 per share accreted at an annual rate of 10%, compounded quarterly. The Series A Preferred Stock was initially recorded as temporary equity as holders had the right to redeem their shares for cash five years from the issuance date. The redemption right terminated upon stockholders approval at which time the Company reclassified the Series A Exchangeable Preferred Stock, including accretion of $112,509, to permanent equity. Following approval by the stockholders of the Company, the Series A Exchangeable Preferred Stock now has substantially identical terms to the Series A Preferred Stock.

Pursuant to the terms of the Series A Preferred Stock and Series A Exchangeable Preferred Stock, a holder must issue a written request to the Company by June 15th of 2011, 2012, or 2013 to receive cash dividends for the applicable succeeding four fiscal quarters ending June 30th, September 30th, December 31st, and March 31st. The holders have elected in writing not to receive cash dividends for the fiscal quarters through June 30, 2013. Further, the holders have irrevocably waived their cash dividend rights for the four fiscal quarters ending June 30, 2014, in accordance with the Company's agreement with East West Bank executed on July 31, 2012. The bank agreement prohibits the payment of cash dividends. The holders' waiver of their cash dividend rights for the four fiscal quarters ending June 30, 2014, may be revoked if the Company's obligations to East West Bank are terminated at any time prior to June 30, 2014. As of December 31, 2012, $1,754,381 in dividend accretion has accumulated on the Series A Preferred Stock and the Series A Exchangeable Preferred Stock.

Bank Financing

On July 31, 2012, the Company entered into a Loan and Security Agreement (the "Loan Agreement") with East West Bank (the "Bank"). Pursuant to the Loan Agreement, the Bank provided the Company with a secured $3,500,000 term loan (the "Term Loan") which bears interest at 5.5% and is scheduled to mature on July 31, 2015. The Term Loan contains a twelve month interest-only feature, with principal payable in 24 equal installments of approximately $154,000 commencing in August 2013.

The Loan Agreement also provides for a maximum of $2,500,000 revolving line-of-credit which expires on January 31, 2014 (the "Revolver"). Under the Loan Agreement, advances under the Revolver bear interest at a floating rate equal to 2.00% above the Bank's prime rate, with a 3.25% floor on the prime rate, representing an effective rate of 5.25%, as of December 31, 2012. Interest on the loans is payable monthly. Under the terms of the Loan Agreement, the Company is permitted to borrow against eligible accounts receivable as defined under the Loan Agreement according to pre-established criteria. The amount available for borrowing under the Revolver as of December 31, 2012, was $1,177,000. There were no borrowings under the Revolver as of December 31, 2012.

The obligations under the Loan Agreement are secured by a lien on substantially all assets of the Company, excluding intellectual property, provided that following an event of default, such security interest would also include intellectual property.

The Loan Agreement contains customary negative covenants limiting the ability of the Company and its subsidiaries, among other things, to grant liens on the pledged collateral, pay cash dividends, make certain investments and acquisitions and dispose of assets outside the ordinary course of business. The Loan Agreement also contains financial covenants, measured quarterly, providing a minimum level of the Company's tangible net worth, and non-financial covenants with respect to the timing of certain new product approvals. As of December 31, 2012, the Company was in compliance with the Loan covenants.

In connection with the Loan Agreement, on July 31, 2012, the Company issued to the Bank a warrant to purchase 133,333 shares of Company common stock for a five-year period expiring on July 31, 2017, at an exercise price of $1.80 per share which approximated the market value of the common stock at the grant date. The warrant was valued at $145,732 using the Black-Scholes option pricing model using the following assumptions: fair value of the underlying common stock of $1.80, a weighted average expected stock price volatility of 75.5%, an expected warrant life of five years, an average risk-free interest rate of 0.62% and a 0.0% average dividend yield. The warrant was fully vested at time of issuance. The warrant cost was recorded as a debt discount and is being recognized as interest expense over the three-year period of the Term Loan using the effective interest method.

The outstanding balance of the bank term loan at December 31, 2012, is as follows:

Balance of bank term loan	$	3,500,000
Debt discount		(116,606)
		3,383,394
Current portion		697,834
Long-term portion	$	2,685,560

(7) ACCRUED EXPENSES

Accrued expenses at December 31, 2012 and 2011 consist of:

	2012	2011
Payroll	$ 537,798	$ 457,973
Professional fees	462,147	245,963
Warranty	100,000	369,171
Travel and entertainment	56,781	23,809
Other	469,197	346,451
	$ 1,625,923	$ 1,443,367

(8) SHARE-BASED PAYMENT PLANS

On June 8, 2011, at the Company's annual meeting of stockholders, the CAS Medical Systems, Inc. 2011 Equity Incentive Plan, (the "Incentive Plan") was approved by its stockholders. The Incentive Plan was intended to replace the CAS Medical Systems, Inc. 2003 Equity Incentive Plan (the "2003 Plan") which is nearly fully distributed. The Incentive Plan provides for the availability of a maximum of 1,000,000 shares of the Company's common stock, with a maximum of 500,000 shares available for issuance with respect to awards of restricted stock and restricted stock units. As of December 31, 2012, 131,884 shares remain available for issuance under the 2011 and 2003 Plans.

Awards that may be granted under the Incentive Plan include options, restricted stock, restricted stock units, and other stock-based awards. The purposes of the Incentive Plan are to make available to key employees and directors, certain compensatory arrangements related to growth in the value of the Company's stock so as to generate an increased incentive to contribute to the Company's financial success and prosperity; to enhance the Company's ability to attract and retain exceptionally qualified individuals whose efforts can affect the Company's financial growth and profitability; and align in general the interests of employees and directors with the interests of stockholders. The Incentive Plan is administered by the Compensation Committee of the Board of Directors, which in turn determines the employees, officers and directors to receive awards and the terms and conditions of these awards.

During 2012, stock options for 482,500 shares of common stock were granted to our employees, officers, a sales consultant and members of the board of directors. Stock options granted to officers of the Company totaled 240,000 shares. Grants of 242,500 shares were issued to senior and middle level managers, other employees, and a sales consultant both in recognition of performance and to attract and retain key employees. The stock options contain various vesting formulas however they generally vest over a three- to four-year period. As of December 31, 2012, options to purchase 2,007,125 shares remain outstanding of which 644,000 pertain to options granted under the Incentive Plan, 863,125 pertain to stock options granted under the 2003 Plan and 500,000 were issued as non-plan inducement grants to officers commensurate with the start of their employment with the Company.

The unamortized stock compensation expense associated with the stock options at December 31, 2012, was $1,760,000 and will be recognized through the fourth quarter of 2016.

A summary of the Company's stock options and changes during the years follow:

	2012			2011		
	Option Shares	Weighted-Average Exercise Price	Aggregate Intrinsic Value	Option Shares	Weighted-Average Exercise Price	Aggregate Intrinsic Value
Outstanding at beginning of year	1,697,425	$ 2.30		935,875	$ 2.29	
Granted	482,500	2.15		857,500	2.23	
Exercised	(20,300)	1.50		(48,450)	0.94	
Cancelled	(152,500)	2.56		(47,500)	2.34	
Outstanding at end of year	2,007,125	$ 2.25	$ 307,406	1,697,425	$ 2.30	$ 57,232
Exercisable at end of year	747,500	$ 2.36	$ 127,423	472,256	$ 2.40	$ 30,517
Vested and expected to vest at end of year	1,969,381	$ 2.25	$ 302,013	1,660,686	$ 2.30	$ 56,432
Weighted average grant-date fair value of options granted during the year		$ 1.52			$ 1.58	

The total intrinsic value of stock options exercised was $7,991 in 2012 and $95,335 in 2011. The intrinsic value of a stock option is the amount by which the current market value of the underlying stock exceeds the option exercise price.

The fair value of each option is estimated on the date of grant using the Black-Scholes option pricing model. Similar to other option pricing models, the Black-Scholes model requires the input of highly subjective assumptions which may materially affect the estimated fair value of the Company's stock options.

The fair value of each option granted during 2012 was estimated on the date of grant using the Black-Scholes option-pricing model assuming a weighted average expected stock volatility of 83.7%, a weighted average expected option life of 6.1 years, an average risk-free interest rate of 0.99% and a 0.0% dividend yield. The fair value of each option granted during 2011 was estimated on the date of the grant using the Black-Scholes option-pricing model assuming a weighted average expected stock price volatility of 85.6%, a weighted average expected option life of 5.8 years, an average risk-free interest rate of 1.82% and a 0.0% average dividend yield. Risk-free interest rates approximate U.S. Treasury yields in effect at the time of the grant. The expected lives of the stock options are determined using historical data adjusted for the estimated exercise dates of unexercised options. Volatility is determined using both current and historical implied volatilities of the underlying stock which is obtained from public data sources.

Additional information about stock options outstanding and exercisable at December 31, 2012, follows:

Range of Exercise Prices	Number Outstanding	Weighted Remaining Contractual Life in Years	Average Exercise Price	Number Exercisable	Average Exercise Price
$1.42 - $1.70	561,625	7.8	$ 1.66	197,875	$ 1.59
1.90 - 2.30	910,000	8.7	2.14	268,333	2.10
2.50 - 3.16	500,500	7.4	3.00	246,292	3.02
3.59 - 4.50	35,000	2.6	3.98	35,000	3.98
$1.42 - $4.50	2,007,125	8.0	$ 2.25	747,500	$ 2.36

During 2012, 34,284 shares of restricted stock were granted to non-employee members of the board of directors. As of December 31, 2012, 320,476 restricted shares issued to employees and members of the board of directors remain issued and non-vested.

During 2012, 2,333 shares of restricted stock were cancelled. Stock compensation expense of $2,098,000 has been recognized to December 31, 2012, related to restricted shares granted in 2012 and in prior years. The unamortized stock compensation expense associated with the restricted shares at December 31, 2012, was $332,000 and will be recognized through the first quarter of 2015.

The fair value of the restricted common shares was calculated based upon the market value of the common stock on the date of issuance. Restricted stock granted to employees typically vests over a period of not less than three years while restricted stock granted to members of the board of directors vests ratably over 12 months from date of grant.

A summary of the restricted shares outstanding and changes for the years follow:

	2012	2011
Outstanding at beginning of year	436,150	484,070
Granted	34,284	83,718
Cancelled	(2,333)	(11,001)
Vested	(147,625)	(120,637)
Outstanding at end of year	320,476	436,150

Total stock compensation expense was $894,713 and $870,099 for 2012 and 2011, respectively.

Warrants to purchase 1,022,734 shares of common stock at a weighted average exercise price of $0.61 per share were outstanding at December 31, 2012. The warrants have an exercise price range of $0.30 to $1.80 per share and with the exception of the 133,333 shares referred to below have no expiration date. During 2012, warrants to purchase 133,333 shares of common stock were granted in conjunction with a loan agreement executed by the Company with East West Bank. The warrants have a five-year life, expiring on July 31, 2017, and are exercisable at $1.80 per share. There were no warrants exercised during 2012 and none granted or exercised during 2011.

The Company maintains an employee stock purchase plan. The CAS Medical Systems, Inc. Employee Stock Purchase Plan (the “Stock Purchase Plan”) was approved by shareholders on June 10, 2009, and accordingly, 150,000 shares of common stock were reserved for issuance under the Stock Purchase Plan. The initial offering period began on July 1, 2009. As of December 31, 2012, 30,678 shares were issued under the Stock Purchase Plan, and certain amounts had been withheld from employees’ compensation to purchase an additional 5,763 shares which were issued during January 2013. The Stock Purchase Plan offers the Company’s employees an opportunity to participate in a payroll-deduction based program designed to incentivize them to contribute to the Company’s success. The Stock Purchase Plan replaced an employee stock purchase plan that had been in effect since June 2004.

(9) BENEFIT PLANS

The Company maintains a 401(k) benefit plan for its employees, which generally allows participants to make contributions via salary deductions up to allowable Internal Revenue Service limits on a tax-deferred basis. Such deductions may be matched in part by discretionary contributions by the Company. The Company suspended its discretionary matches during March 2009, and as such, there were no matching contributions by the Company during 2010 and 2011. The Company reinstated the matching contributions as of February 1, 2012. The matching contributions for 2012 were $47,293.

(10) INCOME TAXES

The components of current and deferred federal and state income tax benefit for the years ended December 31, 2012 and 2011 consist of:

	2012	2011
Current benefit	$ —	$ —
Federal	(211,159)	—
State	(211,159)	—
Deferred benefit	—	(124,763)
Federal	—	—
State	—	(124,763)
Income tax benefit from continuing operations	$ (211,159)	$ (124,763)

A reconciliation of U.S. Federal income taxes computed at the statutory rate to income taxes shown in operations for the years ended December 31, 2012 and 2011 follows:

	2012	2011
Income tax benefit from continuing operations at the statutory rate	$ (2,557,646)	$ (2,193,005)
State income taxes, net of federal effect	(29,735)	(49,846)
R&D and other tax credits	15,918	(105,322)
De-recognition of uncertain tax position	(211,159)	—
Change in valuation allowance	2,542,337	2,237,294
Other	29,126	(13,884)
Income tax benefit from continuing operations	$ (211,159)	$ (124,763)

Deferred income tax assets and (liabilities) at December 31 relate to:

	2012	2011
Inventories	$ 220,742	$ 238,476
Warranty accrual	34,990	129,173
Allowance for doubtful accounts	61,233	61,233
Tax credits	410,530	426,448
Deferred gain on sale and leaseback	220,491	267,600
Restricted stock	448,817	236,892
Net operating loss carry forwards	5,004,965	2,623,079
Other	461,830	169,759
	6,863,598	4,152,660
Prepaid expenses	(165,586)	(104,836)
Fixed assets	(637,300)	(529,450)
Deferred income tax assets and liabilities	6,060,712	3,518,374
Valuation allowance	(6,060,712)	(3,518,374)
Net deferred income tax assets and liabilities	$ —	$ —

The Company has performed the required analysis of both positive and negative evidence regarding the realization of our deferred income tax assets, including our past results of operations, recent cumulative losses and our forecast for future taxable income. The assessment required the use of assumptions about future revenues and pre-tax income making allowance for uncertainties surrounding the rate of adoption of our products in the market place, competitive influences and the investments required to increase our market share in certain markets for our products. As of December 31, 2012, we have concluded that it is more likely than not that such deferred income tax assets will not be realized and, accordingly, have established a deferred income tax asset valuation allowance in the amount of $6,060,712.

The Company's federal net operating loss carry-forward of $14,435,564 is scheduled to expire beginning in 2030. State net operating loss carry-forwards of $1,865,515 are scheduled to expire between 2026 and 2032.

A reconciliation of unrecognized income tax benefits for 2012 and 2011 follows:

	2012	2011
Balance at beginning of year	$ 211,159	$ 211,159
Tax positions taken during a prior year	—	—
Increase for tax positions taken in current year	(211,159)	—
Balance at end of year	$ —	$ 211,159

During 2012, the Company determined that the reserve for uncertain tax positions should be derecognized as a result of net operating losses incurred over the past six years, the availability of net operating loss carry backs in certain jurisdictions and administrative practices in jurisdictions which gave rise to the original accrual. Currently, the Company does not believe that the unrecognized income tax benefits will significantly change in 2013.

(11) GRANT AWARDS

The Company has been awarded various grants by the National Institutes of Neurological Disorders and Stroke of the NIH under its Small Business Innovative Research Program. Grants under this program have been used to support the development of the Company's Near-Infrared Spectroscopy ("NIRS") technology which non-invasively measures the brain oxygenation level of a patient. In accordance with the terms of these grants, the Company has been reimbursed for certain qualifying expenditures. On September 17, 2007, the Company was awarded a three year grant, which was subsequently extended, totaling $2,800,000 to support its NIRS research.

Qualifying R&D costs of $296,000 in 2012 and $367,000 in 2011 were reimbursed under grants. Such reimbursements are recorded as a reduction in R&D expenses. The Company recognizes these reimbursements on an accrual basis as the qualifying costs are incurred. As of December 31, 2012, no additional reimbursements remained available under the 2007 grant.

(12) SALE AND LEASEBACK OF PROPERTY

On September 6, 2007, the Company closed the sale and leaseback of its headquarters and manufacturing facility (the "Property"). Net proceeds from the sale were $2,791,529 of which $928,872 was used to retire the related outstanding mortgage debt. The gain of $1,346,373 realized on the sale has been deferred and is being recognized in operations as a reduction in rent expense over the term of the lease. The lease has an initial term of ten years expiring on September 6, 2017 and an option for two additional five-year periods. The lease provides for an annual base rent in years one through five of $244,800 and $268,800 in years six through ten. The Company recognizes rent expense on a straight-line basis over the ten years. Under the lease, the Company is responsible for the costs of utilities, insurance, taxes and maintenance expenses. Further, the Company is required to maintain at least $600,000 in cash and cash equivalents (increasing at 3% per annum) and net current assets of not less than $3,600,000.

In addition, the Company has a right of first offer to lease any additional space or building built by the lessor on the Property, subject to certain restrictions. The Company also has the right to require the lessor to build an addition or additional building ("Expansion Premises"), subject to certain restrictions. Upon the delivery of any Expansion Premises, the term of the Lease would extend for a ten year term. The base rent for the Expansion Premises would be the greater of the then prevailing market rent or an amount equal to a return on actual costs of construction of the greater of 250 basis points over the rate on ten year U.S. Treasury Notes, or 8%. Upon delivery of the Expansion Premises, the lessor would assume obligations under the Company's existing leases of its two adjacent properties, in exchange for a payment equal to three months' rent and certain unamortized costs incurred with respect to these two facilities.

(13) COMMITMENTS AND CONTINGENCIES

Litigation

The manufacture and sale of our products exposes us to product liability claims and product recalls, including those which may arise from misuse or malfunction of, or design flaws in, our products or use of our products with components or systems not manufactured or sold by us. Product liability claims or product recalls, regardless of their ultimate outcome, could require us to spend significant time and money in litigation or to pay significant damages.

On August 7, 2009, Somanetics Corporation filed an action against the Company in the United States District Court for the Eastern District of Michigan alleging patent infringement, false advertising, and common law unfair competition and libel. The complaint requested injunctive relief and unspecified monetary damages, including treble damages and reasonable attorneys' fees. On October 19, 2009, the Company answered the complaint, denying all allegations against it. In addition, the Company asserted counterclaims against Somanetics for violation of the antitrust laws and for a declaration that the patents sued upon were invalid, unenforceable, and/or not infringed by the Company.

On October 27, 2010, a settlement was reached with Nellcor Puritan Bennett, LLC ("Nellcor"), as successor in interest to Somanetics Corporation, on Somanetics' action for patent infringement and other claims against the Company. The terms of the confidential settlement (the "Settlement") resolved all matters between the two parties as of the initiation of the lawsuit and caused the dismissal of the action with prejudice in a manner by which no payments were made to either party.

On December 29, 2011, Nellcor filed an action against the Company in the United States District Court for the Eastern District of Michigan alleging (i) breach of the settlement agreement with respect to a prior litigation matter between the parties, (ii) violation of the Lanham Act, (iii) common law unfair competition, and (iv) trade libel. The complaint requested injunctive relief and unspecified monetary damages, including compensatory damages and reasonable attorneys' fees. On February 24, 2012, the Company answered the complaint and denied substantially all of the claims and set forth certain affirmative defenses. On July 20, 2012, Nellcor filed a partial motion for summary judgment asking the Court to determine that the Company breached the settlement agreement. On December 19, 2012, the Court denied Nellcor's motion for summary judgment, finding that the Company did not breach the settlement agreement. On January 2, 2013, Nellcor moved to have that ruling reconsidered. On January 3, 2013, the Company moved for summary judgment in its favor on the breach of contract claim based upon the court's finding. The matter remains pending, and while there can be no assurance as to the ultimate outcome, the Company does not believe at this time that its disposition would result in a material adverse effect on the Company.

Operating Leases

The Company currently leases three separate operating facilities and certain equipment under non-cancellable operating leases. Rent expense under these leases was $463,000 in 2012 and $432,000 in 2011. Future annual minimum rental payments as of December 31, 2012, to the expiration of the leases follow:

2013	$	485,000
2014		431,000
2015		331,000
2016		269,000
2017		179,000
Total	$	1,695,000

(14) UNAUDITED QUARTERLY INFORMATION

Unaudited quarterly financial information follows. The quarterly financial information disclosed below for 2011 reflects the Statcorp business unit results as discontinued operations.

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
Year ended December 31, 2012					
Net sales	$ 5,408,819	$ 5,198,300	$ 6,110,813	$ 5,951,133	$22,669,065
Cost of sales	3,373,745	3,015,656	3,596,056	3,579,691	13,565,148
Gross profit	2,035,074	2,182,644	2,514,757	2,371,442	9,103,917
Loss from operations	(1,946,092)	(1,649,609)	(1,564,752)	(2,147,865)	(7,308,318)
Net loss	(1,946,092)	(1,649,609)	(1,564,752)	(2,147,865)	(7,308,318)
Preferred stock accretion	273,545	278,332	283,203	288,159	1,123,239
Net loss applicable to common stockholders	$(2,219,637)	$(1,927,941)	$(1,847,955)	$(2,436,024)	$ (8,431,557)
Basic and diluted loss applicable to common stockholders:					
Net loss (1)	$ (0.17)	$ (0.15)	$ (0.14)	$ (0.18)	$ (0.63)
Year ended December 31, 2011					
Net sales	$ 5,643,124	$ 5,717,179	$ 5,785,832	$ 5,304,432	$22,450,567
Cost of sales	3,508,570	3,591,538	3,590,253	3,202,211	13,892,572
Gross profit	2,134,554	2,125,641	2,195,579	2,102,221	8,557,995
Loss from continuing operations	(1,245,623)	(1,547,902)	(1,839,564)	(1,692,163)	(6,325,252)
Income (loss) from discontinued operations, net of income taxes	39,692	207,896	(15,833)	10,433	242,188
Net loss	(1,205,931)	(1,340,006)	(1,855,397)	(1,681,730)	(6,083,064)
Preferred stock accretion	—	74,158	288,145	268,840	631,143
Net loss applicable to common stockholders	$(1,205,931)	$(1,414,164)	$(2,143,542)	$(1,950,570)	$ (6,714,207)
Basic and diluted income (loss) applicable to common stockholders:					
Continuing operations	$ (0.10)	$ (0.12)	$ (0.16)	$ (0.15)	$ (0.53)
Discontinued operations	0.01	0.01	(0.00)	0.00	0.02
Net loss (1)	$ (0.09)	$ (0.11)	$ (0.16)	$ (0.15)	$ (0.51)

(1) The sum of quarterly per share amounts may not equal per share amounts reported for year-to-date or full-year periods due to changes in the number of weighted average shares outstanding and the effects of rounding.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

The Company maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed in the Company's Exchange Act reports is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to the Company's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure based on the definition of “disclosure controls and procedures" in Rule 13a-15(e) of the Exchange Act. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management necessarily is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

The Company carried out an evaluation, under the supervision and with the participation of the Company's management, including the Company's Chief Executive Officer and the Company's Chief Financial Officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures as of December 31, 2012. Based upon the foregoing evaluation, the Chief Executive Officer and the Chief Financial Officer have concluded that the Company’s disclosure controls and procedures were effective as of that date.

There have been no changes in the Company’s internal control over financial reporting during the quarter ended December 31, 2012, that have materially affected, or are reasonably likely to materially affect the Company’s internal control over financial reporting.

Management’s Annual Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of the Company’s management, including its Chief Executive Officer and Chief Financial Officer, an evaluation was conducted to determine the effectiveness of internal control over financial reporting based on the framework in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on the Company’s evaluation under the framework in *Internal Control — Integrated Framework,* the Company’s management concluded that its internal control over financial reporting was effective as of December 31, 2012.

Reference is made to the Certifications of the Chief Executive Officer and the Chief Financial Officer about these and other matters attached as Exhibits 31.1, 31.2 and 32.1 to this report.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Reference is made to the disclosure required by Items 401, 405, 406 and 407(c)(3), (d)(4) and (d)(5) of Regulation S-K to be contained in the Registrant's definitive proxy statement to be mailed to shareholders on or about April 25, 2013, and to be filed with the Securities and Exchange Commission.

Item 11. Executive Compensation

Reference is made to the disclosure required by Item 402 of Regulation S-K to be contained in the Registrant's definitive proxy statement to be mailed to shareholders on or about April 25, 2013, and to be filed with the Securities and Exchange Commission.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Reference is made to the disclosure required by Item 403 of Regulation S-K to be contained in the Registrant's definitive proxy statement to be mailed to shareholders on or about April 25, 2013, and to be filed with the Securities Exchange Commission.

The following table provides information regarding the Company's equity compensation plans as of December 31, 2012:

Plan Category	Number of securities to be issued upon exercise of outstanding options and warrants	Weighted-average exercise price of outstanding options and warrants	Number of securities remaining available for future issuance under equity compensation plans
Equity compensation plans approved by security holders	1,507,125	$2.19	131,884
Equity compensation plans not approved by security holders	1,389,401	1.14	—
Total	2,896,526	$1.69	131,884

Securities remaining available for issuance under equity compensation plans approved by security holders are primarily from the CAS Medical Systems, Inc. 2011 Equity Incentive Plan. The equity compensation plans not approved by security holders consist of warrants to purchase 889,401 shares granted to both current and former directors of the Company as compensation for services rendered which have no expiration date and 500,000 shares under inducement stock options granted to certain officers of the Company commensurate with their employment with the Company. See Note 8 "Share-Based Payment Plans" to the Company's Financial Statements.

Item 13. Certain Relationships and Related Transactions, and Director Independence

Reference is made to the disclosure required by Items 404 and 407(a) of Regulation S-K to be contained in the Registrant's definitive proxy statement to be mailed to shareholders on or about April 25, 2013, and to be filed with the Securities and Exchange Commission.

Item 14. Principal Accountant Fees and Services

Reference is made to the proposal regarding the approval of the Registrant's independent registered public accounting firm to be contained in the Registrant's definitive proxy statement to be mailed to shareholders on or about April 25, 2013, and to be filed with the Securities and Exchange Commission.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a)(1) Financial Statements

The Company's financial statements are included in response to Item 8 of this report.

Report of Independent Registered Public Accounting Firm

Financial Statements
Consolidated Balance Sheets as of December 31, 2012 and 2011
Consolidated Statements of Operations for the Years Ended December 31, 2012 and 2011
Consolidated Statements of Changes in Shareholders' Equity for the Years Ended December 31, 2012 and 2011
Consolidated Statements of Cash Flows for the Years Ended December 31, 2012 and 2011
Notes to Consolidated Financial Statements

(2) Financial Statement Schedules

None.

(3) Exhibits

The Exhibits to this report are as set forth in the "Exhibit Index" beginning on Page 29 of this report. Management contracts or compensatory plans or arrangements filed as an exhibit to this report are identified in the "Index to Exhibits" with an asterisk after the exhibit number.

EXHIBIT INDEX

2.1	Stock Purchase Agreement dated May 15, 2005 among CAS Medical Systems, Inc., Statcorp, Inc., and the Stockholders of Statcorp, Inc. (1)
3.1	Certificate of Incorporation of Registrant (2)
3.2	Amended and Restated Bylaws of Registrant (9)
10.1*	1994 Employees' Incentive Stock Option Plan (4)
10.2*	CAS Medical Systems, Inc. Employee Stock Purchase Plan (5)
10.3*	CAS Medical Systems, Inc. 2003 Equity Incentive Plan (6)
10.4*	Form of Option Agreement (3)
10.5	Purchase and Sale Agreement between CAS Medical Systems, Inc. and Davis Marcus Partners, Inc. dated June 18, 2007 (7)
10.6	Lease Agreement between CAS Medical Systems, Inc. and DMP New Branford, LLC dated September 6, 2007 (7)
10.7	Subscription Agreement dated May 9, 2008 with jVen Capital, LLC (10)
10.8	Amendment to the CAS Medical Systems, Inc. 2003 Equity Incentive Plan (11)
10.9*	Employment Agreement with Jeffery A. Baird dated August 10, 2009 (12)
10.10	Subscription Agreement dated June 16, 2010 with several Subscribers (13)
10.11*	Employment Agreement between Thomas M. Patton dated August 27, 2010 (14)
10.12*	Inducement Non-Qualified Stock Option Agreement with Thomas M. Patton dated August 27, 2010 (14)
10.13*	Inducement Restricted Stock Agreement between Thomas M. Patton dated August 27, 2010 (14)
10.14*	Inducement Restricted Stock Agreement between Thomas M. Patton dated August 27, 2010 (14)
10.15	Asset Purchase Agreement dated November 5, 2010 by and among CAS Medical Systems, Inc., Statcorp, Inc. and OSI Optoelectronics, Inc. (15)
10.16*	Employment Agreement with Matthew J. Herwig dated January 7, 2011 (16)
10.17*	Inducement Non-Qualified Stock Option Agreement with Matthew J. Herwig dated January 7, 2011 (16)
10.18*	Inducement Restricted Stock Agreement with Matthew J. Herwig dated January 7, 2011 (16)
10.19	Investment Agreement, dated June 8, 2011, among CAS Medical Systems, Inc. and several Purchasers named therein (17)
10.20	Registration Rights Agreement, dated June 9, 2011, among CAS Medical Systems, Inc. and the several Purchasers named therein (17)
10.21	Form of Indemnification Agreement, dated June 9, 2011, between CAS Medical Systems, Inc. and the individual members of the Board of Directors of CAS Medical Systems, Inc. (17)
10.22*	CAS Medical Systems, Inc. 2011 Equity Incentive Plan (18)
10.23	Loan and Security Agreement, dated July 31, 2012, by and between the Company and East West Bank (19)
10.24	Warrant to Purchase Stock, dated July 31, 2012, issued by the Company to East West Bank (19)
21.1	Subsidiaries of the Registrant
23.1	Consent of Independent Registered Public Accounting Firm
31.1	Certification of CEO Pursuant to Rule 13a-14
31.2	Certification of CFO Pursuant to Rule 13a-14
32.1	Certification of CEO and CFO Pursuant to 18 U.S.C. 1350
101	Interactive data files pursuant to Rule 405 of Regulation S-T

(1) Incorporated by reference to the Company's Form 8-K/A filed July 29, 2005
(2) Incorporated by reference to the Company's Form 10-Q filed August 12, 2011
(3) Incorporated by reference to the Company's Form 10-KSB filed March 31, 2005
(4) Incorporated by reference to the Company's Form S-8 filed October 4, 2000
(5) Incorporated by reference to the Company's Form S-8 filed June 10, 2004, (333-116348)
(6) Incorporated by reference to the Company's Form S-8 filed June 10, 2004, (333-116349)
(7) Incorporated by reference to the Company's Form 8-K filed September 10, 2007
(8) Incorporated by reference to the Company's Form 8-K filed November 30, 2007
(9) Incorporated by reference to the Company's Form 8-K filed February 14, 2008
(10) Incorporated by reference to the Company's Form 8-K filed May 14, 2008
(11) Incorporated by reference to the Company's Form 8-K filed December 31, 2008
(12) Incorporated by reference to the Company's Form 10-Q filed August 12, 2009
(13) Incorporated by reference to the Company's Form 8-K filed June 16, 2010
(14) Incorporated by reference to the Company's Form 8-K filed August 27, 2010
(15) Incorporated by reference to the Company's Form 10-Q filed November 10, 2010
(16) Incorporated by reference to the Company's Form 8-K filed January 10, 2011
(17) Incorporated by reference to the Company's Form 8-K filed June 13, 2011
(18) Incorporated by reference to the Company's Proxy Statement filed April 26, 2011
(19) Incorporated by reference to the Company's Form 8-K filed August 2, 2012

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

CAS MEDICAL SYSTEMS, INC.
(Registrant)

/s/ Thomas M. Patton Date: March 26, 2013
By: Thomas M. Patton
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

/s/ Lawrence Burstein Date: March 26, 2013
Lawrence Burstein, Director

/s/ Evan Jones Date: March 26, 2013
Evan Jones, Director

/s/ Gregory P. Rainey Date: March 26, 2013
Gregory P. Rainey, Director

/s/ James E. Thomas Date: March 26, 2013
James E. Thomas, Director

/s/ Kathleen A. Tune Date: March 26, 2013
Kathleen A. Tune, Director

/s/ Kenneth R. Weisshaar Date: March 26, 2013
Kenneth R. Weisshaar, Director

/s/ Thomas M. Patton Date: March 26, 2013
Thomas M. Patton, President, Chief Executive Officer and Director

/s/ Jeffery A. Baird Date: March 26, 2013
Jeffery A. Baird, Chief Financial Officer
(Principal Financial and Accounting Officer)

EXHIBIT 21.1

SUBSIDIARIES OF THE REGISTRANT

Statcorp, Inc., a Delaware corporation

EXHIBIT 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statements on Forms S-3 (Nos. 333-135158, 333-168585 and 333-176560) and Forms S-8 (Nos. 333-90512, 333-47258, 333-116348, 333-116349, 333-160346, 333-160347 and 333-176528) of CAS Medical Systems, Inc. of our report dated March 26, 2013, relating to the financial statements of CAS Medical Systems, Inc. as of and for the years ended December 31, 2012 and 2011 which report appears in the December 31, 2012, Annual Report on Form 10-K of CAS Medical Systems, Inc.

/s / CohnReznick LLP
Glastonbury, Connecticut
March 26, 2013

EXHIBIT 31.1

CERTIFICATION

I, Thomas M. Patton, certify that:

1. I have reviewed this annual report on Form 10-K of CAS Medical Systems, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s / Thomas M. Patton
Thomas M. Patton
President and Chief Executive Officer

Date: March 26, 2013

EXHIBIT 31.2

CERTIFICATION

I, Jeffery A. Baird, certify that:

1. I have reviewed this annual report on Form 10-K of CAS Medical Systems, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s / Jeffery A. Baird
Jeffery A. Baird
Chief Financial Officer

Date: March 26, 2013

EXHIBIT 32.1

Section 906 Certifications

Pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned, Thomas M. Patton, the President and Chief Executive Officer and Jeffery A. Baird, the Chief Financial Officer of CAS Medical Systems, Inc. (the "Issuer"), do hereby certify that the report on Form 10-K accompanying this certification (the "Report") fully complies with the requirements of Section 13(a) or 15 (d) of the Securities Exchange Act of 1934, as amended ((15 U.S.C. 78m or 78o(d)) and that information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Issuer.

/s / Thomas M. Patton
Thomas M. Patton
President and Chief Executive Officer
CAS Medical Systems, Inc.
March 26, 2013

/s / Jeffery A. Baird
Jeffery A. Baird
Chief Financial Officer
CAS Medical Systems, Inc.
March 26, 2013