



CardioDynamics International Corp.

(CDIC - \$0.60)

ICG Leader on the Rebound

Initiating Coverage with a Buy Rating and Price Target of \$3.50

EPS						Revenue			
Fiscal Year:	2007A	2008E	08/07 Change	2009E	09/08 Change	Fiscal Year:	2008E	2009E	09/08 Change
November						November			
Q1	(0.24)	(0.21)	-	(0.11)	-	Q1	5.8	5.9	2.7%
Q2	(1.86)	(0.10)	-	(0.06)	-	Q2	6.2	6.5	5.8%
Q3	(0.12)	(0.06)	-	(0.05)	-	Q3	6.1	6.6	8.8%
Q4	(0.16)	(0.09)	-	(0.03)	-	Q4	6.2	6.8	9.7%
Year	(2.38)	(0.46)	-	(0.26)	-	Year	24.2	25.9	7.0%
P/E	-	-		-		xRev	0.18x	0.17x	

TRADING DATA		VALUATION DATA	
52-Week Range:	\$3.08—0.50	EBITDA (MM) FY08E:	(\$0.8)
Market Cap. (MM):	\$4.3	Enterprise Value (MM):	\$3.4
Shares Outstanding (MM):	7.2	EV/EBITDA FY08E	NM
Estimated Float (MM):	5.7	Cash Per Share:	\$0.88
Insider Ownership	12.4%	Book Value Per Share:	\$0.99
Average Volume	25,000	Total Debt (MM):	\$5.3

Company Description: CardioDynamics markets noninvasive ICG diagnostic and monitoring devices and proprietary sensors. ICG technology noninvasively monitors the heart's ability to deliver blood to the body and the amount of fluid in the chest.

- **CardioDynamics sales continue to rebound.** We believe the company is on track to post its eighth consecutive quarter of y-o-y sales improvement in 4Q08. We believe FY08 revenue will improve to \$24.2MM, up from \$21.8MM in FY07, and rise to \$25.9MM in FY09.
- **Cost cutting initiatives paying off.** 3Q08 gross margins rose to a record 75% while management has steadily lowered fixed overhead. Thus, we believe the company has lowered its quarterly breakeven run-rate to approximately \$7.15MM.
- **Renewed focus on sales and marketing.** With more than 40% annual turnover of its sales force we believe there is an opportunity to improve retention and market uptime with new initiatives such as C3, a new certification program and implementation of Salesforce.com.
- **Favorable patient demographics.** The aging baby boomer population and increasing focus on early diagnosis of congestive heart failure (CHF) positions ICG for long-term growth.

- **Important clinical studies of ICG underway in hypertension and CHF.** We believe there are presently 20 studies being conducted to investigate the use of ICG including PREVENT-HF and BETTER Hypertension. We believe these studies are critical to inclusion in medical society guidelines, expanding reimbursement coverage and increasing adoption of ICG.
- **CDIC shares trading with a broken valuation.** We believe investors are skeptical CardioDynamics will be able to refinance a \$5.25MM convertible note that carries a potential for repayment on April 11, 2009. We disagree and believe options to manage this outcome are available in whole or combination including participation of private investors, bank debt and cash on hand.
- **A compelling privatization/merger candidate.** Currently EBITDA positive, we expect the company to be cash flow positive in FY09 and generate positive EPS in FY10. CardioDynamics combined with a similar margin/market device company could yield strong efficiencies and cash flow.
- **Initiating coverage with a Buy rating and price target of \$3.50.** We believe the company is substantially undervalued based on its growing franchise in ICG, renewed revenue growth, positive market demographics, and pending resolution of the note overhang. Our valuation of \$3.50 is based on a low-end medical device multiple of 1x our FY09 revenue estimate of \$25.9MM.

Investment Overview

CardioDynamics has effectively completed a round trip in the market. Following dramatic growth that took annual revenue from \$2.1MM in FY98 to \$41.0MM in FY04, the company was derailed by a 2004 CMS policy clarification restricting the availability of Medicare reimbursement for hypertension patients, a primary driver of ICG procedures. A 2006 company request to broaden national reimbursement was rejected and ICG revenue cratered to a low of \$19.8MM in FY06. Since that period, operations have markedly improved as management has refocused sales efforts to target CHF and shortness of breath patients while expanding its footprint internationally. CardioDynamics has posted seven consecutive quarters of improving revenue growth through 3Q08 and we believe the company will generate positive cash flow in FY09. Despite the return of growth, the company's share price has plunged to new lows as economic uncertainty and a potential note repayment has spooked investors. However, we believe the company's note overhang will be successfully resolved and current share prices offer substantial appreciation potential.

CardioDynamics' business has rebounded. We estimate FY08 revenue will rise to \$24.2MM from \$21.8MM in FY07 while the company's net loss will fall to \$3.3MM from \$6.1MM. We believe FY09 revenue will grow to \$25.9MM and the company will be cash flow positive. The backbone of this improvement has been a refocused approach to sales and marketing and cost cuts across the enterprise. CardioDynamics recently implemented several initiatives to drive growth into FY09 and beyond which includes its Comprehensive Customer Care (C3) program to drive sensor revenue, the BioZ ICG Certified program to improve ICG utilization, and plans to expand its sales force by 10-12%.

In addition, **management is working to reduce high levels of sales force turnover**, currently running above 40% of its 35 person team. We believe the company plans to add an outside OEM product in 1Q09 to increase the overall sales opportunity and has adopted Salesforce.com to increase communication with its sales team. Based on a 2-3 month training period for a new salesperson and an additional three month average market downtime, we believe lost revenue following the departure of a salesperson is \$250,000 to \$300,000. Thus, we believe each percentage point improvement in turnover translates into revenue of approximately \$100,000.

Market demographics strongly favor ICG. We estimate the number of patients suffering heart failure in the U.S. to be 5.2MM and the number of patients suffering from hypertension to be 65.0MM. As baby boomers age, these numbers will increase sharply boosting the total available market for ICG procedures. In addition, costs associated with treating cardiovascular disease are expected to rise by more than 50% by 2025. We believe patient population growth, healthcare cost containment pressure and demand for minimally invasive (or noninvasive) procedures by physicians will be important catalysts driving long-term adoption of ICG.

CardioDynamics has increasingly sought to validate the use of ICG in the clinic. We believe there are 20 ICG studies underway investigating the diagnosis and optimum treatment regimen of cardiovascular indications such as CHF, hypertension and Dyspnea. Key among these are BETTER-Hypertension, a study of ICG to characterize hemodynamic abnormalities in hypertensive patients and predict response to medications, and PREVENT-HF, a study led by Dr. Milton Packer to evaluate ICG in the prevention of heart failure. **We believe these studies could materially drive adoption of ICG** via inclusion in national treatment guidelines and, in the case of BETTER-Hypertension, provide relevant data for the company to regain national Medicare reimbursement in hypertension.

Despite clear operational improvement at CardioDynamics, the company's market capitalization is at distressed levels reflecting what we believe are expectations of default on its \$5.25MM note. The company currently has \$6.3MM in cash and is burning approximately \$250,000 per quarter. The \$5.25MM subordinated note pays an 8% coupon and is convertible into common at \$8.05 per share. The holder of the note, Balyasny Asset Management, is a current owner of 248,800 shares and has until January 11, 2009 to inform the company if it plans to exercise a put option to receive proceeds in April otherwise the note resets to mature on April 11, 2011. **We believe the company has multiple options to refinance the note** through a combination of private investors, bank debt and cash on hand.

We believe CardioDynamics is a highly compelling privatization or M&A candidate. We estimate the company will generate FY09 EBITDAS of \$316,000. In addition, the company has approximately \$1.0MM in annual expense related to being public. With negligible Capex, **we believe the company could generate FY09 free cash of \$1.3MM to an acquirer.** Additionally, we believe there are strong business and cost synergies in combination with another cardiovascular diagnostics or device company leveraging its sales force and managerial and back office functions.

We are initiating coverage of CardioDynamics with a Buy rating and \$3.50 price target. We believe the current market turmoil and sour appetite for companies that are losing money has left these shares at a level that reflect failure. We believe the company can successfully refinance its note, achieve positive cash flow in FY09 and grow revenue at a compounded 8% annual rate. There is also potential to recapture former reimbursement levels via studies such as BETTER Hypertension. Our price target of \$3.50 assumes a baseline med device multiple of 1x our FY09 revenue estimate of \$25.9MM.

Business Overview

ICG technology allows physicians to assess and diagnose underlying cardiovascular disorders, customize and target treatment, monitor the effectiveness of prescribed medications and identify potential complications.

Cardiodynamics develops, manufactures and markets noninvasive ICG (impedance cardiography) diagnostic and monitoring devices and proprietary ICG sensors. ICG technology noninvasively monitors the heart's ability to deliver blood to the body and the amount of fluid in the chest. It provides medical professionals with data on mechanical cardiac activity, such as contraction strength and pumping capability. Physicians can use this cardiac data to assess, diagnose and treat patients with heart failure, high blood pressure, and shortness of breath.

The company has approximately 8,500 ICG devices in clinical use. Primary customers include outpatient facilities and physician practices and, to a lesser extent, hospitals. Currently, more than 90% of the ICG devices in the market are used in the outpatient, predominantly in cardiology, internal medicine, and family practice setting. The company's primary products include BioZ Dx ICG Diagnostics, BioZ ICG Monitor, BioZ ICG Module, and associated BioZ Advasense Sensors and Cables (Exhibit 1).

BioZ Dx is the latest generation ICG monitor co-developed by CDIC and Philips Medical Systems, a division of Royal Philips Electronics. In addition to ICG, BioZ Dx also has (ECG) electrocardiography capabilities integrated into the product platform, providing the ability to assess mechanical cardiovascular function with ICG and electrical cardiovascular function with ECG. The BioZ Dx is EMR (Electronic Medical Records) ready. It features an integrated printer, color display screen, and a comparison status report (Exhibit 2) that allows physicians to automatically compare a patient's last ICG report to a current report. This is used to identify whether a patient responded to therapy or heart function has worsened or improved. Commercial shipments of the BioZ Dx commenced in 1Q05 and the product currently sells with an ASP of \$34,000.

BioZ ICG Monitor is the predecessor to BioZ Dx. The company continues to sell 5-10 systems per quarter providing a low cost alternative for smaller physician offices with an ASP of \$15,000.

BioZ ICG Module is a custom plug-in ICG device that integrates into GE Healthcare's Solar and Dash series of bedside monitors. The product was launched in June 2001 and extends the capabilities of the GE Healthcare Solar product family to provide all of the hemodynamic parameters of the BioZ to GE Healthcare's installed customer base of more than 50,000 units. The BioZ ICG OEM Module kit is also available to other medical device companies to incorporate ICG measurements as an option in the sale of their existing devices. Mindray, a manufacturer of patient monitoring products in China, currently uses the OEM kit. ICG modules sell to end users for between \$2,500 and \$3,500 per system.

BioZ Advasense Sensors and Cables: A set of four sensors are used when performing an ICG procedure. The company has shipped over 6.9 million ICG sensor sets to customers since introducing the BioZ ICG Monitor in 1998. For 2007, 31% of the company's revenue came from ICG sensors, and that percentage has increased in each of the prior six years from approximately 6% in 2000, to 9% in 2001, 12% in 2002, 17% in 2003, 19% in 2004, 24% in 2005 and 31% in 2006. Sensor revenue as a percentage of total sales has fallen to approximately 28% of sales in FY08 as a result of higher capital equipment sales and a reduction in utilization levels.

Next generation monitor: CardioDynamics is developing a next generation ICG/ECG combination monitor. The product will feature improved network connectivity and lower cost due to in-house production. The product is currently in design output phase for 510(k) submission in 1Q09 and we expect initial market release in 4Q09.

Exhibit 1

CDIC: Impedance Cardiography Products



Source: California Equity Research, LLC and company reports

Technology Overview

We believe that the company's non-invasive ICG technology delivers cardiac output monitoring in clinical areas where PAC, a more invasive method, cannot be utilized.

Cardiac output is assessed by measuring the volume of blood pumped by the heart in one minute. Measurements of cardiac output by the thermodilution technique have been available since the 1970's. However, this method is highly invasive, utilizing a flow-directed, pulmonary artery catheter (PAC), also referred to as right heart catheter or Swan-Ganz catheter, which exposes the patient to risk of complications. In addition, this technique is costly and requires a skilled physician and a sterile environment for catheter insertion. As a result, PAC has been used only in a very narrow subset of critically ill and high-risk patients where the necessity of a hemodynamic measurement outweighs the risk of the procedure. It is estimated that more than one million PAC procedures are performed annually in the US. Use of invasive techniques to assess non-hospitalized patients with chronic cardiovascular conditions is not considered practical or appropriate.

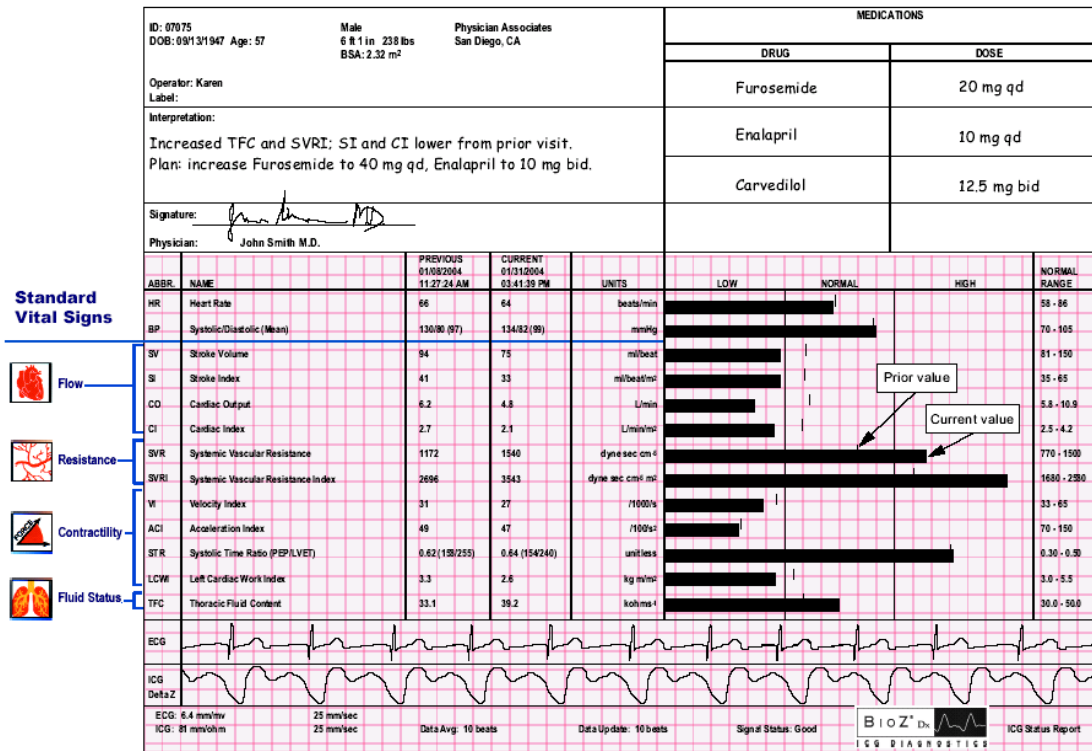
ICG (Impedance Cardiography) is a noninvasive means of providing continuous assessment of cardiac output and other hemodynamic parameters in a physician's office, outpatient clinic or hospital. Whereas ECG noninvasively measures the heart's electrical function, ICG makes it possible to noninvasively measure the heart's mechanical function. The company's ICG devices measure 12 hemodynamic (blood flow) parameters, which describe the blood flow the heart pumps, the resistance from the blood vessels that the heart is pumping against, the strength of heart contraction, and the amount of fluid in the chest. ICG technology complements ECG and supplements information obtained through the five vital signs – heart rate, respiration rate, body temperature, blood pressure and oxygen saturation.

ICG is based on the premise that the resistance to electrical current in the chest varies in relation to blood in the aorta (large artery leaving the heart). By measuring the resistance (impedance), it is possible to obtain measurements of the fluid status and blood flow. During ICG monitoring using BioZ Dx, a small electrical signal is sent through sensors placed on the patient's neck and chest. Electrical and impedance signals are automatically processed to determine ECG and ICG waveform characteristics. These waveforms are used to measure and calculate hemodynamic parameters (including cardiac output, stroke volume, systemic vascular resistance, velocity index, thoracic fluid content, and systolic time ratio). The BioZ Dx features a comparison status report (Exhibit 2) that allows physicians to automatically compare a patient's last ICG report to the current ICG report to easily identify whether a patient responded to therapy or whether their heart function has worsened or improved. We believe that ICG data provided by the company's technology allows physicians to quickly and safely assess and diagnose the underlying cardiovascular disorder, customize and target treatment, monitor the effectiveness of prescribed medications and more accurately identify potential complications.

The company continues to develop new technology and supplement its product offerings. In 2001, CardioDynamics launched the BioZ ICG Module for the GE bedside monitoring systems. In 1H05, the company received FDA 510(k) clearance for BioZ Dx and later received 510(k) clearance for 12 lead diagnostic ECG capabilities on the Dx platform. In July 2006, the company announced an OEM agreement with Mindray, a manufacturer of patient monitoring products in China. Mindray has integrated the BioZ ICG module into its patient monitoring products and the company receives a licensing fee for each BioZ ICG OEM kit purchased by Mindray.

CardioDynamics is actively targeting new market opportunities through acquisitions. In 2004, the company acquired Medis (a German ICG device design and manufacturer). The Medis acquisition strengthened core ICG capabilities and provided the company with a European partner for market expansion. The company also continues to focus on new applications of its core ICG technology. Advances in ICG technology are applied in the areas of sensor technologies, pacemaker optimization, dialysis fluid management, high-risk obstetric patients, oncology, and pharmaceutical development and testing. Pharmaceutical companies such as GlaxoSmithKline, Eli Lilly and Pfizer are currently using the company's ICG technology to document cardiovascular effects of their pharmaceutical agents in both animals and humans.

Exhibit 2
CDIC: ICG Status Report



An ICG status report allows physicians to compare patient visits using ICG to identify whether a patient responded to therapy or heart function had worsened or improved.

Source: California Equity Research, LLC and company reports

Market Overview and Opportunity

The company’s current penetration of the U.S. physician office market is less than 6% and we believe there is significant potential to grow its ICG installed base.

Cardiovascular disease is the leading cause of death in the world, and is the number-one disease in terms of health care spending in nearly every country. Cardiac output data enables physicians to better assess, diagnose, and treat patients with heart failure, high blood pressure, and shortness of breath. We believe that there is a significant market for ICG systems as objective, noninvasive tools for measuring cardiac output data. This belief is based on our estimate that in the U.S. there are more than five million patients suffering from heart failure, more than 20 million patients with sudden onset of shortness of breath, and 65 million patients with high blood pressure.

The ICG market consists of two segments: the outpatient (physician) market and the hospital market. We estimate that there are approximately 85,000 U.S. physician offices that are potential customers of ICG devices yielding a total market opportunity of \$1.4 billion based on a weighted ASP of \$16,000. We believe there is an opportunity for 100,000 ICG module placements in the worldwide hospital market at an ASP of \$3,000 and multiple opportunities per hospital for stand-alone systems. We estimate a total hospital sales opportunity worldwide of \$700 million putting the total market opportunity for the BioZ product line at \$2.1 billion. The estimated U.S. and international annual recurring revenue from ICG sensors is approximately \$700 million annually based on approximately 88.5 million BioZ tests conducted per year. Each test utilizes four sensors at \$2 per sensor and the average physician office conducts four tests per day.

*Exhibit 3***CDIC: Estimated Market Size**

Current Market Opportunity	Market Size (million)
Outpatient ICG devices	\$1,400
WW Hospital ICG devices	\$700
Disposable Sensors	\$700
Total Market Opportunity	\$2,800

Source: California Equity Research, LLC and company reports

The aging of the worldwide population and baby boomers in the U.S., continued cost containment pressures on healthcare systems, and the desire of physicians to use minimally invasive (or noninvasive) procedures are key trends that will likely continue to expand the company's total market opportunity over the next several years.

Sales and Marketing

We believe that the company's customer-oriented programs are conducive to strengthening customer loyalty and increasing device and sensor revenue over the long-term.

The company currently employs 35 direct sales representatives in the U.S., as well as four regional sales managers, and a vice president of sales. In addition, the company has 24 clinical application specialists ("CAS"), three regional clinical managers and a national clinical applications director to supplement its field sales team. CAS's are responsible for interacting with and training customers on the use of the BioZ ICG system. CAS's play an important role in customer satisfaction and enhance ICG utilization through education and implementation of system protocols. We believe this level of service is vital to driving overall utilization of existing systems and corresponding sensor revenue.

In 4Q08, the company introduced two strategic programs: Comprehensive Customer Care (C3) and BioZ Certified, designed to further improve customer satisfaction, ICG education and utilization. The C3 program is focused on customer care, satisfaction, and usage from the time that the customer buys an ICG system to the end of product-life or upgrade. BioZ Certified is a comprehensive approach toward ICG education directed toward all individuals in a physician office that deal directly with patients of heart failure, shortness of breath, or hypertension. CardioDynamics recently received approval for the educational program to provide continuing medical education (CME) units so that physicians, assistants, and nurses could be trained on ICG and receive requisite professional licensing credits. We believe that these customer-oriented programs are conducive to strengthening customer loyalty and promoting ICG utilization.

The ICG selling effort is segmented into the outpatient (physician) market and the hospital market. In the outpatient market, the company targets physician offices and hospital-based and freestanding outpatient facilities through its direct sales force. In contrast to the hospital market, there are few formal capital equipment budget processes in the outpatient market and purchasing decisions are usually more rapid. The U.S. hospital is targeted primarily through OEM partners.

Internationally, the company sells its products through local medical distributors with partners and end-users in more than 30 countries. In addition, we believe the company's focus on strategic relationships with major patient monitoring and diagnostic cardiology companies such as GE Medical and Mindray has accelerated market penetration of BioZ ICG technology and provided access to large installed bases of patient monitoring, cardiology, and other complementary medical equipment.

Reimbursement

We believe 20% of the company's overall \$2.8 billion potential market is addressable based on current reimbursement coverage.

A major portion of the company's revenue is derived from Medicare and coverage is critical in the marketing of its systems to physicians.

In November 1998, The Centers for Medicare and Medicaid Services (CMS) mandated national Medicare reimbursement for the company's BioZ ICG procedures and, in January 2001, implemented national uniform pricing throughout the U.S. However, in a 2003 decision memorandum CMS reconsidered their 1998 decision to cover ICG devices from "noninvasive diagnosis or monitoring of hemodynamics in patients with suspected cardiovascular disease." CMS issued a policy clarification in 2004 that restricted the availability of Medicare reimbursement for hypertension patients and left the decision of whether to cover ICG for resistant high blood pressure (medically referred to as hypertension) to the CMS contractors that administer the CMS program in each state. Drug-resistant hypertension is defined by CMS to include patients with uncontrolled blood pressure (greater than or equal to 140 mm Hg systolic blood pressure and/or 90 mm Hg diastolic blood pressure) on three or more anti-hypertensive medications, including a diuretic. This change severely restricted the number of hypertensive patients eligible for CMS reimbursement using ICG monitoring. Of the six indications previously indicated, the other five were substantially unchanged.

In November 2006, in response to a request by the Company for national coverage of ICG for hypertension, CMS announced that their hypertension reimbursement policy for ICG would remain unchanged and CMS local contractors would continue to have discretion on whether to cover ICG for hypertension.

Leading private insurers cover the BioZ ICG test, including Aetna, Humana, Blue Cross Blue Shield and others in select states (see Exhibit 4 on following page). The company is continuing active discussions with CMS and private insurers to maintain and expand reimbursement indications for ICG.

Published Clinical Studies

A significant amount of literature substantiating ICG's validity and clinical application is available and the company continues to support clinical trials to further expand this evidence.

A summary of key clinical studies follows:

ICG compared to Thermodilution (TD) measurement:

Yung et al. (2004) compared the accuracy of ICG to that of TD and direct Fick in the measurement of cardiac output and cardiac index in pulmonary-artery hypertension patients. The study analyzed 39 enrolled patients: 44% male, average age 50.8 years. This study suggested that ICG provides an accurate method for determining cardiac output in pulmonary hypertension patients and serves as a tool for following responses to therapeutic interventions.

In a prospective study, Van DeWater et al. (2003) compared the accuracy of ICG to PAC in postoperative coronary artery bypass graft (CABG) patients. The study included 53 post-CABG patients. The ICG cardiac output was determined simultaneously with the TD cardiac output. The authors reported that when comparing ICG to TD, they found that the bias, precision, correlation slope, and intercept were equivalent to TD. The authors stated that in those circumstances in which intracardiac pressures and mixed venous blood samples are not necessary, ICG is preferable to TD via PAC in determining cardiac output. The authors stated that the ICG monitor allows for quick and easy cardiac output monitoring and SVR in clinical areas where the PAC is not typically utilized (e.g., emergency department, subacute care, and outpatient hypertension and heart failure clinics). The authors reported that the advancements with the BioZ ICG monitor with ZMARC equation allowed equivalence to TD that was not found with the older ICG monitors and equations.

*Exhibit 4***Reimbursement - Payor Summary**

General Indication	Heart Failure	Dyspnea	Pacing Optimization	Resistant Hypertension
Medicare	Yes	Yes	Yes	Plan Dependent
Medicaid	Plan Dependent	Plan Dependent	Plan Dependent	Plan Dependent
Aetna	Yes	Yes	Yes	Yes
Tricare	Yes	Yes	Yes	Yes
Humana	Yes	Yes	Yes	No
BC/BS	Plan Dependent	Plan Dependent	Plan Dependent	No
CIGNA	No	No	No	No
United	No	No	No	No

Source: California Equity Research, LLC and company reports

Hypertension:

There is evidence in the peer-reviewed literature to suggest that determination of hemodynamic parameters by ICG may improve blood pressure (BP) control in patients with hypertension.

In a randomized controlled trial, the investigators for the Consideration of Noninvasive Hemodynamic Monitoring to Target Reduction of Blood Pressure Levels (CONTROL) study group (Smith, et al., 2006), studied whether ICG-guided treatment could aid physicians in reducing BP more effectively than standard care in a population of uncontrolled hypertensive patients receiving 1–3 medications in a primary care setting. Between November 2002 and November 2004, eleven primary care centers screened 262 patients with a diagnosis of essential hypertension, ages 18–75, on 1–3 antihypertensive medications with systolic BP 140–179 millimeters of mercury (mm Hg) and/or diastolic BP 90–109 mm Hg.

One hundred eighty-four patients were randomized in a 3:2 ratio to either standard care or ICG-guided care. At baseline, standard care patients' BP (in mm Hg) was $147 \pm 9/87 \pm 10$ and ICG-guided care patients' BP was $148 \pm 12/89 \pm 8$. After washout, standard care BP was $156 \pm 13/92 \pm 9$ and ICG-guided care was $155 \pm 13/94 \pm 9$. The final BP for patients in the standard care group was $136 \pm 15/82 \pm 10$, and for the ICG-guided care group the final BP was $129 \pm 14/76 \pm 11$ ($p < 0.01$). The results of the

study demonstrated that use of BioZ ICG achieved greater reductions in blood pressure (8 mm Hg systolic and 7 mm Hg diastolic) **more than two times better than standard care for achievement of blood pressure control to 130/85 mm Hg.**

In May 2002, the results of a significant Mayo Clinic study by Taler et al. (2002) were published in the peer-review journal, Hypertension. This was a three-month treatment program that initially included 117 patients. Patients participating in the study were assigned randomly to treatment based on serial hemodynamic measurements by ICG and a predefined algorithm of medication changes used by the lead investigator who is a hypertension specialist, or to treatment guided by a hypertension specialist without either ICG or a predefined treatment plan. At the end of the study, mean systolic BP in the hemodynamic-guided treatment group was reduced from 169 to 139 \pm 2; in the specialist care group, it was reduced from 173 to 147 \pm 2; and the mean diastolic BP was reduced from 87 to 72 \pm 1 and from 91 to 79 \pm 1 for each group, respectively. **The results of the study demonstrated 70% superiority** in effectively treating previously uncontrolled hypertension patients when high blood pressure specialist physicians used BioZ ICG as compared to traditional management.

In 2Q08, the company released a significant ICG study **demonstrating nearly three times national average blood pressure control rates** at the American Society for Hypertension Annual Scientific Meeting. The Pri-Med study was an independent ICG clinical study from a 65-physician primary care and cardiology group. Over 76,000 patient visits were included in the analysis. The group demonstrated 102% improvement in blood pressure control rates and took their control rates from a baseline of 42% to over 88%. The hypertension control rates are in the 31% to 34% range; so Pri-Med's 88% to 90% control rate represented nearly three times the national average.

Heart Failure:

In June 2006, the results of the PREDICT trial (Prospective Evaluation and Identification of Cardiac Decompensation in Patients with Heart Failure by Impedance Cardiography Test) were published in a peer-reviewed journal, the Journal of the American College of Cardiology. PREDICT was led by principal investigator, Dr. Milton Packer, and 21 top U.S. heart failure centers participated in the study. The study was designed to investigate whether ICG parameters could predict short-term risk, defined as death or emergency department (ED) visit or hospitalization due to worsening heart failure. The results showed that of all the variables measured in the study, **ICG was the most powerful predictor of death or hospitalization.** A patient with a high risk ICG test was over 8 times more likely to die or be hospitalized in the short-term (2 weeks) than a patient with a low risk ICG test.

Shortness of breath (Dyspnea):

Shortness of breath can be caused by a cardiac cause or non-cardiac cause. In March 2006, the results of the ED-IMPACT trial (Impedance Cardiography-Aided Assessment Changes Therapy in Emergent Dyspnea) were published in the peer-reviewed journal, Academic Emergency Medicine. Peacock et al. (2006) studied the rate of change in diagnosis and therapy resulting from the availability of ICG data during the initial evaluation of ED patients 65 years of age or older presenting with dyspnea. Eighty-nine patients were enrolled. Congestive heart failure (CHF) and chronic obstructive pulmonary disease (COPD) were the most common final diagnoses, occurring in 43 (48%), and 20 (22%), respectively. **ICG data changed the working diagnosis in 12 (13%) and medications administered in 35 (39%).** The study demonstrated the impact of ICG data upon diagnosis and treatment in patients short of breath in the emergency department.

Multiple other ICG studies have been published in journals such as Chest, American Journal of Cardiology, and Congestive Heart Failure. While a significant amount of evidence substantiating ICG's validity and clinical application is now available, the company continues to invest in supporting clinical trials to further expand this evidence and provide prospective customers with data regarding the efficacy of ICG.

In-Progress Clinical Studies

We believe that expanding evidence of ICG validity and clinical application will help the company change physician habits and positively impact market penetration.

Hypertension:

The company is conducting a study to evaluate the ability of ICG to characterize hemodynamic abnormalities in hypertensive patients and predict therapeutic response to antihypertensive medications. The study is called BETTER-HTN (Bioimpedance Evaluation of Therapeutic Titration in Essential, Refractory Hypertension). We expect completion of this study in 2010.

We believe the company's earlier hypertension study (CONTROL) provided only generalized information about the use of hemodynamic data. Specific information regarding how a particular measurement was used to change patient treatment was not provided. For example, the authors reported that, "in the hemodynamic arm, the initial selection of medications appears to have been influenced by the hemodynamic data, because these patients were more likely to be prescribed a vasodilating agent to reduce SVR index," and "the hemodynamic treatment strategy influenced medication use when SVR index was considered high, because patients in the hemodynamic arm were more likely to have received an angiotensin converting enzyme inhibitors (ACEI), angiotensin II receptor blocker (ARB), or calcium channel blocker (CCB), as was suggested" (Smith, et al., 2006). We believe one of the primary concerns of CMS when considering hypertension coverage for ICG in 2006 was the lack of specific information as to how hemodynamic care leads to a larger drop in BP levels.

We believe that BETTER-HTN was designed specifically to address CMS concerns. The primary objective of the study is to determine the ability of ICG parameters to predict the BP response to specific drugs. For example, the study will determine whether patients with an elevated cardiac index will lower BP faster and to a greater degree when receiving drugs that reduce heart rate or blood volume such as beta blockers and other agents that are known to reduce cardiac index. The secondary objectives of the study include determining normal ranges of ICG parameters and whether abnormal parameters are associated with presence of albuminuria independent of systolic BP.

Heart Failure:

In March of 2007, a team of physicians led by Dr. Milton Packer, one of the world's leading experts in the treatment of heart failure, began a multinational, randomized controlled multi-center trial in heart failure patients to evaluate the predictive power of ICG as demonstrated in the PREDICT study. The study is designed to evaluate ICG in the prevention of heart failure to reduce hospitalization as compared to standard care without the use of ICG. The study is called PREVENT-HF – Prevention of Heart Failure Events with Impedance Cardiography Testing.

The primary objective of the PREVENT-HF study is to determine whether heart failure patients recently discharged from hospitalization can expect a longer duration between incidents using ICG as compared to standard-care. This objective is based on the reasoning that in the ICG care arm, the clinician may be able to identify patients at greater risk for a heart failure (based on the results of PREDICT trial), allowing earlier and more aggressive treatment. Earlier and more aggressive treatment may attenuate future heart failure events, such as hospitalization or an emergency department visit.

The study will be conducted at 25 to 50 clinical sites throughout the US, Canada and Europe. A total sample size of 496 patients (248 per study arm) will be needed for the study. We expect the completion of this study in late 2010. We believe positive results of this study could provide a strong catalyst for physician adoption of ICG systems in the diagnosis of heart failure.

We believe ICG is in a strong position for inclusion in JNC 8 guidelines (8th Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure). JNC guidelines are aimed at developing an evidence-based, comprehensive, integrated set of clinical guidelines for cardiovascular risk reduction directed principally at primary care practitioners to reduce the risk of heart disease. We believe JNC guidelines influence physician behavior as well as CMS reimbursement decisions and we expect the release of JNC 8 in 2Q10.

Competition

We believe that the company's BioZ products provide the most advanced ICG monitoring at competitive pricing.

Direct competition

CardioDynamics has very limited direct competition. Analogic Corporation manufactures a stand-alone ICG device for Philips as well as an Analogic-manufactured device, the LifeGard Monitor. The Philips stand-alone device is primarily sold into the hospital market where the company has not traditionally focused. The LifeGard Monitor is primarily sold in the physician office market and is priced lower than BioZ ICG Monitors. However, since its introduction in 2004, CardioDynamics has maintained greater than 95% market share for ICG device sales in the U.S. market losing very few unit sales in head-to-head competition. Through its German subsidiary, Medis, the company inherited a licensing agreement and relationship with Analogic Corporation and it receives a licensing fee on every sale of Analogic ICG devices.

There are other ICG devices including: IQ system Cardiac Output Monitor (Renaissance Technologies Inc., Newtown, PA); BoMed NCCOM3-R7 (BoMed Medical Manufacturing, Ltd., Irvine, CA); Hotman System and TEBCO OEM Module (Hemo Sapiens, Inc., Irvine, CA); CIC-1000 and Steorra (Sorba Medical Systems, Inc., Brookfield, WI). None of these companies have direct sales or clinical teams, and thus far, have generated little visibility in the market.

Indirect competition:

The following are products and procedures that compete indirectly with BioZ ICG.

INDIRECT COMPETITIVE PRODUCTS		
Thermodilution (PAC)	Cardiac output measured by invasive thermodilution technique using a catheter	ICG eliminates PAC-caused complications, lower costs, reduces procedure time, expands clinical applications and offers immediate availability of vital, real-time, continuous hemodynamic data.
Echocardiography ("echo")	Utilizes ultrasound frequency waves to detect anatomical abnormalities of the heart and blood vessels	Echo cannot be routinely used to measure cardiac output because of its technological limitations, cost, time, and lack of reimbursement for this purpose.
Trans-esophageal echo	Performed with the ultrasound transducer placed in the esophagus through the mouth	Non-invasiveness of ICG provides significant advantage over this method's invasive nature, increased patient discomfort and complications.
Direct and Indirect Fick	Based on calculating the oxygen difference between the arterial and venous blood. A variation of the direct Fick method is called CO ₂ Re-breathing, or Indirect Fick.	The direct Fick method is seldom used because it is time consuming, costly and complicated. Indirect method is limited to patients who are mechanically ventilated.

Management

Mike Perry, CEO, Director. Mr. Perry has been CEO and Director of CardioDynamics since April 1998. From 1994 to 1997, Mr. Perry was Vice President of Operations at Pyxis Corporation. Prior to joining Pyxis, Mr. Perry served in several increasingly responsible management assignments with Hewlett-Packard Company's Medical Products Group in manufacturing and finance. Additionally, he was Director of Quality for a division of Hewlett-Packard's DeskJet Printer Group. Mr. Perry holds a Master's degree in Business Administration from Harvard University and a Bachelor's degree in Mechanical Engineering from General Motors Institute. Mr. Perry serves on the Advisory Board of the University of California San Diego Cardiovascular Center and the Board of Directors for Junior Achievement of San Diego.

Rhonda Rhyne, President. Ms. Rhyne has served as President of the company since June 1997, previously serving as COO from 1996 to 1997 and as Vice President of Operations from 1995 to 1996. From 1992 until 1995, Ms. Rhyne was President, CEO and Vice President of Sales and Marketing for Culture Technology, Inc. Ms. Rhyne has also held sales positions at GE Medical Systems and Quinton Instrument Company, both medical device subsidiaries of publicly held companies. Ms. Rhyne holds a Bachelor's degree in Pharmacy from Washington State University and a Master's degree in Business Administration, executive program, from University of California Los Angeles, Anderson School of Business.

Steve Loomis, CFO. Mr. Loomis joined CardioDynamics in September 1996 as Vice President of Finance and has held the positions of CFO and Corporate Secretary since April 1997. From 1993 until 1996, he served as Director of Financial Reporting at Kinko's Inc. From 1988 to 1993, Mr. Loomis was CFO for Terminal Data Corporation, a publicly traded company. He earned his Bachelor's degree in Business Administration from California State University at Northridge. Mr. Loomis is a certified public accountant and a member of the American Institute of Certified Public Accountants.

Richard Trayler, Vice President of International Operations. Mr. Trayler served as COO from July 1997 to January 2003. From 1982 to 1997, Mr. Trayler held sales management positions at Quinton Instrument Company. He has also held positions at the Heart Institute for CARE, the University of Washington and the Boeing Company. Mr. Trayler earned a Bachelor's degree from Texas A&M University and a Master's degree from the University of Washington and a Master's degree from Western Conservative Baptist Seminary.

Donald Brooks, CTO, Vice President of Product Development. Mr. Brooks was appointed CTO in January 2006. From 2003 to 2004, Mr. Brooks served as Director of Product Development and VP of Operations at Zargis Medical (a Siemens start-up venture). From 2001 to 2003, Mr. Brooks served as a Senior Systems Design Engineer at Walnut Technologies, Inc. Prior to 2001, Mr. Brooks held other various managerial positions, including Vice President of Operations for Boston Medical Technologies and Engineering Manager for Siemens Medical Systems. Mr. Brooks earned his BSEE and MSEE degrees in Electrical Engineering at North Carolina State University with an emphasis on analog VLSI design and Digital Signal Processing.

Financial Analysis

3Q08 Results: 3Q08 revenue rose 8% y-o-y to \$6.07MM from \$5.59MM. Management reported that ten sales of ICG systems, a total of \$300,000 in revenue, fell out of the quarter due to financing related issues. By unit, the company reported sales of 110 BioZ Dx Systems, 7 BioZ Monitors, 16 Medis ICG Monitors, and 87 ICG Modules. Sensor revenue fell 5% in the quarter to \$1.69MM versus \$1.78MM last year. Sensor revenue slipped to 28% of total revenue versus 32% of total revenue in 3Q07. On a geographic basis, U.S. sales were \$5.38MM, or 89% of total revenue and international sales were \$690,000, or 11% of total revenue.

Gross margin rose to a record 75% of total revenue, or \$4.55MM versus 72.2%, or \$4.04MM, last year. The company's overall product ASP improved by 10% in the quarter and the company experienced lower sales return reserve requirements and a substantial decline in obsolescence expense to \$23,000 versus \$173,000 in 3Q07.

Among operating expenses, R&D decreased 8% y-o-y to \$386,000 as a result of reduced personnel. The company also continues to manage G&A expenses which fell 8% to \$714,000 due to lower accounting fees offset slightly by higher bad debt expense in the quarter. CardioDynamics continues to enhance its sales and marketing effort although the company was able to post a similar 8% reduction in expense to \$3.67MM via a decline bad debt expense write-off and lower shared services allocations which more than offset a \$124,000 increase in personnel expenses.

Amortization of intangible assets of \$32,000 as a result of its purchase of Medis was relatively flat y-o-y at \$32,000. Other expense of \$56,000 consists primarily of interest income offset by interest expense of \$243,000 on its \$5.25MM subordinated note.

Minority interest is related to its Medis subsidiary, representing the 20% minority share retained by the sellers, which did not generate any interest in 3Q08. Despite ongoing losses, the company's income tax provision of \$3,000 is based upon estimated foreign taxes and minimum U.S. income and franchise taxes. Discontinued operations from 3Q07 is a result of the write-down in goodwill following the sale of its Vermed subsidiary.

Stock-based compensation was \$115,000 in 3Q08 versus \$84,000 last year, depreciation and amortization of \$146,000 was relatively flat with last year and the company recorded nominal Capex of \$17,000 in the quarter.

Guidance: The company maintained guidance of positive operating cash flow in 4Q08 and positive operating cash flow for full-year FY09. The company also guided y-o-y top-line growth of 10% in FY09.

Our Estimates:

4Q08: We are looking for tempered 4Q08 sales growth of 1% to \$6.20MM. We believe the company is experiencing some fallout as a result of a more stringent credit environment but we do not expect the same level of revenue shortfall as experienced in 3Q08. We expect gross margins to fall q-o-q to 72.5% due to seasonal bonus accruals and product reserves. We believe sales and marketing and G&A will be up slightly q-o-q due to bonus accruals but the overall trend in G&A should continue to decrease into FY09. We are estimating a loss of \$649,000, or \$0.09 per share in 4Q08, up from a loss of \$0.06 in 3Q08 largely as a result of seasonal bonus accruals.

FY09: We are estimating 7% sales growth y-o-y in FY09, slightly lower than the company's guidance due to uncertainty over the economy and credit concerns. We believe FY09 revenue will rise to \$25.9MM from \$24.2MM based on additions to the company's sales force, new sales programs, a new OEM product to be introduced to the sales force in 1Q09, higher sensor revenue as a percent of total revenue versus FY08, and growing adoption in Europe. We expect FY09 sales of the company's next generation BioZ to be launched in 4Q09 to be negligible. We believe the company will continue to reduce losses through FY09 although we expect a more back-end loaded year in revenue, and for the company to generate \$316,000 in EBITDAS. We expect gross margins to rise slightly y-o-y to 72.2%. We believe the company will continue to invest in sales and marketing while continuing to reduce in G&A expense and hold the line on R&D. Stock-based comp is expected to be flat y-o-y.

Valuation

Growth-oriented medical device companies historically trade in a multiple range of 4-6x revenue. Large medical device companies currently trade at a mean multiple to revenue of 2.6x revenue (see Comp Analysis Table on page 19). Small medical device companies of similar size to CardioDynamics trade at a mean multiple to revenue of 2.2x revenue.

We are initiating coverage of CardioDynamics with a price target of \$3.50 on a base, below market revenue multiple of 1.0x our FY09 revenue estimate of \$25.9MM. We believe this multiple is highly reasonable considering our expectations for the company to resolve the overhang related to its \$5.25MM subordinated note and for revenue growth to track at 8% over the next two years.

Risks and Considerations

Subordinated Note: In 2006, the company issued a \$5.25MM subordinated note that pays an 8% coupon and is convertible into common at \$8.05 per share. The holder of the note, Balyasny Asset Management, is a current owner of 248,800 shares and has until January 11, 2009 to inform the company if it plans to exercise a put option to receive proceeds in April otherwise the note resets to mature on April 11, 2011. With \$6.2MM in cash, the company may be forced to seek additional financing if the put option is exercised.

CMS Reimbursement: The company relies on Medicare and private health insurer reimbursement coverage. In 2004, CMS issued a policy clarification restricting the availability of Medicare reimbursement for hypertension patients, a primary driver of ICG procedures. As a result of the change in reimbursement the company has experienced a significant decline in sales. Further negative changes to reimbursement could similarly impact the company's sales and our estimates.

Sales force turnover: CardioDynamics faces an above average industry turnover rate of its sales force of more than 40%. This high turnover places a heavy burden on management to hire, train and retain new sales people and results in substantial market downtime. Adverse economic conditions could potentially lead to a greater strain on the company's sales force to meet quotas leading to increased turnover. Our estimates assume improving turnover rates due to new sales initiatives and any increases in the turnover rate above current levels could negatively impact our estimates.

Continuing losses: We estimate that CardioDynamics will experience losses through FY10. The company may not be able to obtain necessary working capital should losses exceed our estimates over this period.

Credit conditions: The company reported that approximately ten sales did not close in 3Q08 as a result of physician inability to secure financing to purchase ICG monitors. While healthcare is typically less susceptible to weakening economic conditions in comparison to other industries, the unprecedented contraction of credit may negatively impact the ability of future customers to purchase ICG systems.

Publicly traded companies mentioned or referenced in this report:

Abbott Labs (NYSE: ABT, \$52.06, not rated)
American Medical Alert (NASDAQ: AMAC, \$5.10, not rated)
Analogic (NASDAQ: ALOG, \$27.26, not rated)
Aspect Medical Systems (NASDAQ: ASPT, \$3.72, not rated)
Cambridge Heart (NASDAQ: CAMH, \$0.10, not rated)
CAS Medical Systems (NYSE: CASM, \$2.89, not rated)
Edwards Lifesciences (NYSE: EW, \$52.44, not rated)
EP Medical Systems (NASDAQ: EPMD, \$3.00, not rated)
General Electric (NYSE: GE, \$17.39, not rated)
Johnson & Johnson (NYSE: JNJ, \$58.78, not rated)
Koninklijke Philips Electronics NV (NYSE: PHG, \$20.15, not rated)
Medtronic (NYSE: MDT, \$31.36, not rated)
Mindray Medical Intl. (NYSE: MR, \$18.54, not rated)
St. Jude Medical (NYSE: STJ, \$32.41, not rated)
Salesforce.com (NYSE: CRM, \$33.18, not rated)
Somanetics (NASDAQ: SMTS, \$17.35, not rated)

CardioDynamics Intl. (CDIC)

Income Statement

(\$ in thousands, except per share data)

Fiscal Year: November	1Q06A	2Q06A	3Q06A	4Q06A	FY06A	1Q07A	2Q07A	3Q07A	4Q07A	FY07A	1Q08A	2Q08A	3Q08A	4Q08E	FY08E	1Q09E	2Q09E	3Q09E	4Q09E	FY09E	FY10E	
Net Sales																						
ICG Device	2,450	3,001	3,467	4,016	12,934	3,110	3,484	3,678	4,261	14,533	4,156	4,292	4,168	4,293	16,909	4,100	4,400	4,445	4,530	17,475	18,873	
Sensor	1,506	1,630	1,540	1,522	6,198	1,488	1,691	1,775	1,718	6,672	1,501	1,711	1,690	1,736	6,638	1,690	1,965	1,980	2,075	7,710	8,400	
Extended Warranty, Parts, Repair	147	179	155	170	651	129	205	138	173	645	105	177	208	175	665	125	175	175	200	675	690	
Total Net Sales	4,103	4,810	5,162	5,708	19,783	4,727	5,380	5,591	6,152	21,850	5,762	6,180	6,066	6,204	24,212	5,915	6,540	6,600	6,805	25,860	27,963	
Cost of Sales	1,313	2,269	1,988	2,025	7,595	1,220	1,966	1,554	2,157	6,897	1,775	1,772	1,519	1,706	6,772	1,686	1,831	1,828	1,837	7,183	7,830	
Gross Profit	2,790	2,541	3,174	3,683	12,188	3,507	3,414	4,037	3,995	14,953	3,987	4,408	4,547	4,498	17,440	4,229	4,709	4,772	4,968	18,677	20,133	
Gross Margin %	68.0%	52.8%	61.5%	64.5%	61.6%	74.2%	63.5%	72.2%	64.9%	68.4%	69.2%	71.3%	75.0%	72.5%	72.0%	71.5%	72.0%	72.3%	73.0%	72.2%	72.0%	
Expenses:																						
Research & Development	556	508	415	484	1,963	443	454	420	389	1,706	314	370	386	375	1,445	370	380	380	380	1,510	1,525	
Selling & Marketing	4,297	3,377	3,395	3,027	14,096	3,444	3,680	3,977	3,679	14,780	3,722	3,721	3,669	3,780	14,892	3,750	3,850	3,900	3,925	15,425	15,950	
General & Administrative	1,464	665	827	885	3,841	945	720	772	723	3,160	771	761	714	735	2,981	690	675	665	665	2,695	2,750	
Amortization of Intangibles	22	31	33	32	118	55	30	30	32	147	32	32	32	32	128	32	32	0	0	64	0	
Operating Income	(3,549)	(2,040)	(1,496)	(745)	(7,830)	(1,380)	(1,470)	(1,162)	(828)	(4,840)	(852)	(476)	(254)	(424)	(2,006)	(613)	(228)	(173)	(2)	(1,017)	(92)	
Other Expense, Net	82	222	202	250	756	207	241	232	166	846	166	192	175	175	708	175	175	175	175	700	700	
Net Income Before Taxes	(3,631)	(2,262)	(1,698)	(995)	(8,586)	(1,587)	(1,711)	(1,394)	(994)	(5,686)	(1,018)	(668)	(429)	(599)	(2,714)	(788)	(403)	(348)	(177)	(1,717)	(792)	
Provision for Income Taxes	29	62	23	60	174	54	196	(56)	127	321	134	53	3	50	240	25	50	50	75	200	200	
Minority Interest	(6)	(14)	1	(19)	(38)	(14)	(21)	(11)	(33)	(79)	(463)	(11)			(474)							
Discontinued Operations			227	218	445		(11,110)	496		(10,614)	127				127							
Tax Rate																						
Net Income	(3,666)	(2,338)	(1,493)	(856)	(8,353)	(1,655)	(13,038)	(853)	(1,154)	(16,700)	(1,488)	(732)	(432)	(649)	(3,301)	(813)	(453)	(398)	(252)	(1,917)	(992)	
Basic Earnings Per Share	(0.53)	(0.34)	(0.21)	(0.12)	(1.20)	(0.24)	(1.86)	(0.12)	(0.16)	(2.38)	(0.21)	(0.10)	(0.06)	(0.09)	(0.46)	(0.11)	(0.06)	(0.05)	(0.03)	(0.26)	(0.14)	
Diluted Earnings Per Share	(0.53)	(0.34)	(0.21)	(0.12)	(1.20)	(0.24)	(1.86)	(0.12)	(0.16)	(2.38)	(0.21)	(0.10)	(0.06)	(0.09)	(0.46)	(0.11)	(0.06)	(0.05)	(0.03)	(0.26)	(0.14)	
Basic Shares Outstanding	6,972	6,973	6,975	6,976	6,974	6,976	7,005	7,031	7,045	7,014	7,107	7,193	7,213	7,225	7,185	7,250	7,275	7,300	7,325	7,288	7,325	
Diluted Shares Outstanding	6,972	6,973	6,976	6,976	6,974	6,976	7,005	7,031	7,045	7,014	7,107	7,193	7,213	7,225	7,185	7,250	7,275	7,300	7,325	7,288	7,325	
Profitability Metrics																						
EBIT	(3,549)	(2,040)	(1,496)	(745)	(7,830)	(1,380)	(1,470)	(1,162)	(828)	(4,840)	(852)	(476)	(254)	(424)	(2,006)	(613)	(228)	(173)	(2)	(1,017)	(92)	
Depreciation & Amortization	149	149	149	119	566	144	107	150	150	551	158	150	146	150	604	145	145	140	145	575	550	
Share-Based Compensation	75	50	58	62	245	95	90	84	111	380	84	97	115	120	416	90	100	100	130	420	475	
EBITDAS	(3,325)	(1,841)	(1,289)	(564)	(7,019)	(1,141)	(1,273)	(928)	(567)	(3,909)	(610)	(229)	7	(154)	(986)	(378)	17	67	273	(22)	933	
Capex	12	12	12	24	60	27	10	7	4	48	21	14	17	20	72	25	25	20	20	90	85	
Free Cash Flow	(3,337)	(1,853)	(1,301)	(588)	(7,079)	(1,168)	(1,283)	(935)	(571)	(3,957)	(631)	(243)	(10)	(174)	(1,058)	(403)	(8)	47	253	(112)	848	
Percent of Revenues																						
Net Sales																						
ICG Device	59.7%	62.4%	67.2%	70.4%	65.4%	65.8%	64.8%	65.8%	69.3%	66.5%	72.1%	69.4%	68.7%	69.2%	69.8%	69.3%	67.3%	67.3%	66.6%	67.6%	67.5%	
Sensor	36.7%	33.9%	29.8%	26.7%	31.3%	31.5%	31.4%	31.7%	27.9%	30.5%	26.0%	27.7%	27.9%	28.0%	27.4%	28.6%	30.0%	30.0%	30.5%	29.8%	30.0%	
Extended Warranty, Parts, Repair	3.6%	3.7%	3.0%	3.0%	3.3%	2.7%	3.8%	2.5%	2.8%	3.0%	1.8%	2.9%	3.4%	2.8%	2.7%	2.1%	2.7%	2.7%	2.9%	2.6%	2.5%	
Total Net Sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
Cost of Sales	32.0%	47.2%	38.5%	35.5%	38.4%	25.8%	36.5%	27.8%	35.1%	31.6%	30.8%	28.7%	25.0%	27.5%	28.0%	28.5%	28.0%	27.7%	27.0%	27.8%	28.0%	
Gross Margin	68.0%	52.8%	61.5%	64.5%	61.6%	74.2%	63.5%	72.2%	64.9%	68.4%	69.2%	71.3%	75.0%	72.5%	72.0%	71.5%	72.0%	72.3%	73.0%	72.2%	72.0%	
Expenses:																						
Research & Development	13.6%	10.6%	8.0%	8.5%	9.9%	9.4%	8.4%	7.5%	6.3%	7.8%	5.4%	6.0%	6.4%	6.0%	6.0%	6.3%	5.8%	5.8%	5.6%	5.8%	5.5%	
Selling & Marketing	104.7%	70.2%	65.8%	53.0%	71.3%	72.9%	68.4%	71.1%	59.8%	67.6%	64.6%	60.2%	60.5%	60.9%	61.5%	63.4%	58.9%	59.1%	57.7%	59.6%	57.0%	
General & Administrative	35.7%	13.8%	16.0%	15.5%	19.4%	20.0%	13.4%	13.8%	11.8%	14.5%	13.4%	12.3%	11.8%	11.8%	12.3%	11.7%	10.3%	10.1%	9.8%	10.4%	9.8%	
Amortization of Intangibles	0.5%	0.6%	0.6%	0.6%	0.6%	1.2%	0.6%	0.5%	0.5%	0.7%	0.6%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.0%	0.0%	0.2%	0.0%	
Operating Income	-86.5%	-42.4%	-29.0%	-13.1%	-39.6%	-29.2%	-27.3%	-20.8%	-13.5%	-22.2%	-14.8%	-7.7%	-4.2%	-6.8%	-8.3%	-10.4%	-3.5%	-2.6%	0.0%	-3.7%	-0.3%	
Other Expense, Net	2.0%	4.6%	3.9%	4.4%	3.8%	4.4%	4.5%	4.1%	2.7%	3.9%	2.9%	3.1%	2.9%	2.9%	3.0%	2.7%	2.7%	2.7%	2.0%	2.9%	2.5%	
Net Income Before Taxes	-88.5%	-47.0%	-32.9%	-17.4%	-43.4%	-33.6%	-31.8%	-24.9%	-16.2%	-26.0%	-17.7%	-10.8%	-7.1%	-9.7%	-11.2%	-13.3%	-6.2%	-5.3%	-2.6%	-6.6%	-2.8%	
Provision for Income Taxes	0.7%	1.3%	0.4%	1.1%	0.9%	1.1%	3.6%	-1.0%	2.1%	1.5%	2.3%	0.9%	0.0%	0.8%	1.0%	0.4%	0.8%	0.8%	1.1%	0.8%	0.7%	
Minority Interest	-0.1%	-0.3%	0.0%	-0.3%	-0.2%	-0.3%	-0.4%	-0.2%	-0.5%	-0.4%	-8.0%	-0.2%	0.0%	0.0%	-2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Discontinued Operations	0.0%	0.0%	4.4%	3.8%	2.2%	0.0%	-206.5%	8.9%	0.0%	-48.6%	2.2%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Net Income	-89.3%	-48.6%	-28.9%	-15.0%	-42.2%	-35.0%	-242.3%	-15.3%	-18.8%	-76.4%	-25.8%	-11.8%	-7.1%	-10.5%	-13.6%	-13.7%	-6.9%	-6.0%	-3.7%	-7.4%	-3.5%	
Year-Over-Year Growth																						
ICG Device						26.9%	16.1%	6.1%	6.1%	12.4%	33.6%	23.2%	13.3%	0.8%	16.3%	-1.3%	2.5%	6.6%	5.5%	3.3%	8.0%	
Sensor						-1.2%	3.7%	15.3%	12.9%	7.6%	0.9%	1.2%	-4.8%	1.0%	-0.5%	12.6%	14.8%	17.2%	19.5%	16.1%	9.0%	
Extended Warranty, Parts, Repair						-12.2%	14.5%	-11.0%	1.8%	-0.9%	-18.6%	-13.7%	50.7%	1.2%	3.1%	19.0%	-1.1%	-15.9%	14.3%	1.5%	2.2%	
Total Net Sales						15.2%	11.9%	8.3%	7.8%	10.4%	21.9%	14.9%	8.5%	0.8%	10.8%	2.7%	5.8%	8.8%	9.7%	6.8%	8.1%	

CardioDynamics Intl. (CDIC)

Balance Sheet

(\$ in thousands)

<i>Assets</i>	<u>3Q08</u>	<u>FY07</u>	<u>FY06</u>
Cash and Cash Equivalents	6,079	7,896	3,878
Cash and Cash Equivalents - Restricted	249	466	
Accounts Receivables, Net	3,861	4,475	4,587
Inventory, Net	1,195	1,670	2,727
Current Portion of Long-Term and Installment Receivables	223	340	659
Other Current Assets	335	317	353
Current Assets Held for Sale			3,313
<i>Total Current Assets</i>	<i>11,942</i>	<i>15,164</i>	<i>15,517</i>
Long-Term Receivables, Net	241	309	570
Property, Plant and Equipment, Net	1,808	1,882	1,530
Intangible Assets, Net	86	179	280
Goodwill	2,286	2,303	2,052
Other Assets	30	30	34
Long-Term Assets Held for Sale			16,405
<i>Total Assets</i>	<i>16,393</i>	<i>19,867</i>	<i>36,388</i>
 <i>Liabilities and Stockholders' Equity</i>			
Revolving Line of Credit			1,000
Accounts Payable	1,298	1,330	1,313
Accrued Expenses and Other Current Liabilities	453	573	462
Accrued Compensation	1,467	1,532	1,464
Income Taxes Payable	372	164	128
Current Portion of Deferred Revenue	94	201	99
Current Portion of Deferred Rent	145	135	111
Current Portion of Deferred Acquisition Payments	213	210	169
Provision for Warranty Repairs	163	164	136
Current Portion of Long-Term Debt, Net of Discount	3,622	32	357
Customer Deposits	58	1,279	
Current Portion of Liabilities Held for Sale			645
<i>Total Current Liabilities</i>	<i>7,885</i>	<i>5,620</i>	<i>5,884</i>
Long-Term Portion of Deferred Revenue	173	51	119
Long-Term Portion of Deferred Rent	51	161	296
Long-Term Portion of Deferred Acquisition Payments	0	210	314
Provision for Warranty Repairs-Long-Term	282	277	266
Long-Term Debt, Less Current Portion, Net of Discount	373	3,619	3,500
Minority Interest	478	407	302
Long-Term Portion of Liabilities Held for Sale			301
Common Stock	64,930	64,634	64,254
Accumulated Other Comprehensive Income	689	704	269
Retained Earnings	(58,468)	(55,816)	(39,117)
<i>Total Stockholders' Equity</i>	<i>7,151</i>	<i>9,522</i>	<i>25,406</i>
<i>Total Liabilities and Stockholders' Equity</i>	<i>16,393</i>	<i>19,867</i>	<i>36,388</i>

CardioDynamics Intl. (CDIC)

Comparable Company Analysis

(\$ in millions)

Big Cap Medical Device Companies

(\$MM, except percentage and multiples)

Company	Ticker	Stock Price	Market Cap	Enterprise Value	LTM Results							Diluted Shares
					Market Cap/Sales	EV/Sales	EV/EBITDA	P/E	Rev	EBITDA	EPS	
Abbott Laboratories	ABT	\$52.06	80,693	87,570.0	2.8	3.0	11.6	17.9	28,800.0	7,570.0	2.91	1,550.0
Medtronic	MDT	\$31.36	35,123	40,630.0	2.4	2.8	7.6	16.1	14,540.0	5,330.0	1.95	1,120.0
St. Jude Medical	STJ	\$32.41	11,156	11,960.0	2.6	2.8	9.3	16.3	4,250.0	1,290.0	1.99	344.2
Johnson & Johnson	JNJ	\$58.78	162,821	162,930.0	2.5	2.5	8.4	13.3	64,520.0	19,300.0	4.42	2,770.0
Edwards Lifesciences	EW	\$52.44	2,921	2,910.0	2.4	2.4	11.9	29.0	1,220.0	244.0	1.81	55.7
Low		\$31.36	2,921	2,910.0	2.4	2.4	7.6	13.3	1,220.0	244.0	1.81	55.7
Mean		\$45.41	58,543	61,200.0	2.6	2.7	9.8	18.5	22,666.0	6,746.8	2.62	1,168.0
Median		\$52.06	35,123	40,630.0	2.5	2.8	9.3	16.3	14,540.0	5,330.0	1.99	1,120.0
High		\$58.78	162,821	162,930.0	2.8	3.0	11.9	29.0	64,520.0	19,300.0	4.42	2,770.0

Small Cap Medical Device Companies

(\$MM, except percentage and multiples)

Company	Ticker	Stock Price	Market Cap	Enterprise Value	LTM Results							Diluted Shares
					Market Cap/Sales	EV/Sales	EV/EBITDA	P/E	Rev	EBITDA	EPS	
Aspect Medical Systems	ASPM	\$3.72	64.4	79.4	0.7	0.8	(190.9)	20.7	98.3	(0.4)	0.18	17.3
Cambridge Heart	CAMH	\$0.10	6.5	(1.5)	1.2	(0.3)	0.2	(0.7)	5.4	(9.5)	(0.14)	65.0
CAS Medical Systems	CASM	\$2.89	32.7	37.4	0.8	0.9	37.4	(144.5)	41.5	1.0	(0.02)	11.3
American Medical Alert	AMAC	\$5.10	48.5	51.6	1.3	1.4	7.1	30.0	38.1	7.3	0.17	9.5
EP Medical Systems	EPMD	\$3.00	92.1	87.0	4.9	4.6	(19.3)	(16.7)	18.8	(4.5)	(0.18)	30.7
Somanetics	SMTS	\$17.35	208.2	163.2	4.6	3.6	12.1	24.1	45.1	13.5	0.72	12.0
Low		\$0.10	6.5	(1.5)	0.7	(0.3)	(190.9)	(144.5)	5.4	(9.5)	(0.2)	9.5
Mean		\$5.36	75.4	69.5	2.2	1.8	(25.6)	(14.5)	41.2	1.2	0.1	24.3
Median		\$3.00	48.5	51.6	1.2	0.9	0.2	(0.7)	38.1	(0.4)	(0.0)	17.3
High		\$5.10	208.2	163.2	4.9	4.6	37.4	30.0	98.3	13.5	0.7	65.0

CardioDynamics	CDIC	\$0.60	4.3	2.3	0.2	0.1	(1.6)	(1.3)	24.2	(1.4)	(0.46)	7.2
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