

Echo Therapeutics, Inc.
(ECTE.OB)

Rating/Risk: **Outperform/High**
Price: \$1.25
Target Price: \$3.00

Breakthrough technology, large market opportunities, positive clinical data and two key licensing agreements – Initiate coverage with Outperform.

Investment Conclusion:

In the next three years, Echo Therapeutics, Inc. has the potential of changing the way critical care physicians and nurses, endocrinologists and diabetics view glucose monitoring. In 2003, Echo Therapeutics completed its first glucose monitoring pilot study using its first generation skin permeation system and glucose flux sensor. Since that time, Echo Therapeutics has developed a smaller, more advanced skin permeation system, the Prelude™ SkinPrep system. If its clinical trials are as positive as its pilot studies, Echo Therapeutics has an opportunity to become the market leader in the continuous glucose monitoring market. Echo Therapeutics currently is trading at a 0.64x 2012 EV/S, and, based on the company's strong technology and the huge market potential, we believe the shares should trade at a premium. We initiate coverage on Echo Therapeutics, Inc. with an Outperform rating and a 12-month target price of \$3.00, which is a 2.5x 2012 EV/sales multiple, discounted at a rate of 34%.

Key Points:

- Market opportunities for continuous glucose monitoring systems are substantial and expanding.
- A growing body of clinical research demonstrates that continuous glucose monitoring can provide short- and long-term clinical benefits, both in ambulatory and hospital settings.
- In June, 2008, The Centers for Medicare and Medicaid Services (CMS) issued billing codes for continuous glucose monitoring systems. These three new billing codes can be used by public and private healthcare providers when processing this new, breakthrough technology.
- Two key licensing agreements -- with Ferndale Pharma Group and Handok Pharmaceuticals -- affirms the potential of the Echo Therapeutics' Prelude™ SkinPrep System.

Fundamental & Valuation Data

EPS & REVENUE (FY End: 12/31)								
	2008A		2009(FY)			2010E(FY)		
		<u>Current</u>	<u>Prior</u>	<u>Consensus</u>	<u>Current</u>	<u>Prior</u>	<u>Consensus</u>	
Q1 F	(\$0.22)	(\$0.07)		(\$0.07)	A	(\$0.06)		NA E
Q2 F	(\$0.12)	(\$0.34)		(\$0.34)	A	(\$0.06)		NA E
Q3 F	(\$0.15)	(\$0.05)		(\$0.08)	A	(\$0.06)		NA E
Q4 F	(\$0.08)	(\$0.05)		(\$0.08)	E	(\$0.04)		NA E
FY	(\$0.57)	(\$0.50)		(\$0.56)	E	(\$0.22)		(\$0.05) E
Revenue (\$T)	\$0	\$779				\$1,891		
Net Income (\$T)	(\$1,352)	(\$10,551)				(\$6,510)		

Sources: Baseline, company reports, and B&S estimates

MEDICAL TECHNOLOGY

December 15, 2009

Market Data

Recent Price:	\$1.25
52-Week Range:	\$2 - \$0.21
Market Cap. (M)	\$34
Shares Out. (M):	26.8
Float Shs. (M):	19.1
Inst. Ownership:	5%
Short Interest (Shs. M):	0.00
Avg. Daily Vol.:	24,000
Avg. Daily Vol.\$:	\$30,000

Valuation Data

EV/S 2009	76.7x
EV/S 2010	18.0x
EV/S 2010 (Group Avg)	3.5x

Capitalization

Book Value / Sh.:	\$0.24
Net Cash / Sh.	\$0.04
Long-Term Debt / Cap'l:	0.0%
Dividend Yield:	0.0%

Fundamental Summary

3-Yr. Hist. Rev CAGR:	0.0%
5-Yr. Fwd. EPS CAGR:	50.0%

Description

Echo Therapeutics, Inc. (ECTE) is a medical device and specialty pharmaceuticals company. The company is developing a non-invasive, wireless, transdermal continuous glucose monitoring (tCGM) system for use in clinical settings and for people with diabetes. Echo and Sontra Medical Corp merged in 2007; the company operates under the name, Echo Therapeutics, Inc.

Greg Chodaczek

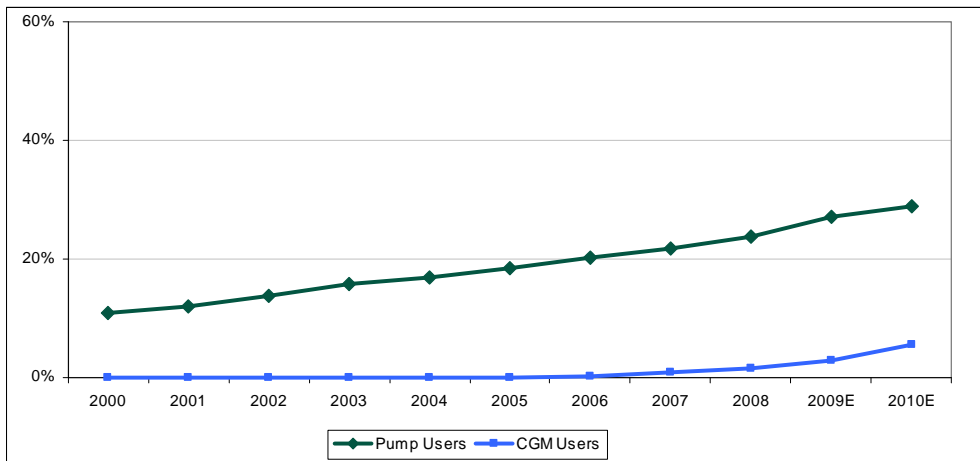
610.832.5246
gchodaczek@boenninginc.com

Key Points in Detail

- Market opportunities for continuous glucose monitoring systems are substantial and expanding.** The two primary markets for CGMs are diabetics and critical care facilities. There are approximately 1.3 million Type I diabetics, and 30 million annual critical care patient days in the United States, alone. While market penetration rates for CGMs are in their infancy, we feel these rates could go as high as 20% for both markets due to advancements in CGM technologies and new positive clinical studies.

According to our research, continuous glucose monitoring for Type I diabetics in the United States is estimated to reach 6% by the end of 2010. With close to 1.3 million Type I diabetics in the United States, each 1% of patients that migrates to continuous glucose monitoring results in 13,000 new CGM users. In the past, many Type I diabetics have been reluctant to use continuous glucose monitors due to limited technological offerings, the costs associated with CGMs and the lack of clinical data. Over the past several years, continuous glucose monitoring systems have become smaller, more reliable and much more user friendly. Some can be worn for up-to-seven days. Most continuous glucose monitors come with event markers, hypoglycemic alerts and alarms, easy calibrations, personal computer uploads and menu navigation in easy to understand terms. Combining these features in a smaller form, together with additional clinical evidence, will continue to drive increased CGM sales.

United States Insulin Pump & CGM Use – Type I Diabetics



Source: Company reports & Boenning & Scattergood estimates

Based on our research, there are approximately 84,000 critical care patients a day in U.S. hospitals. Critical care patients have life-threatening conditions, and require comprehensive care and constant monitoring, usually in intensive care units. Studies have shown that critical care patients with higher than normal blood glucose levels take longer to recover, and have higher risks of infection. A typical blood glucose testing schedule for high risk patients usually occurs every 30-60 minutes. Echo Therapeutics believes that a continuous glucose monitor could increase recovery times for at-risk patients, and ultimately lower critical care costs.

Estimated U.S. Critical Care tCGM Market

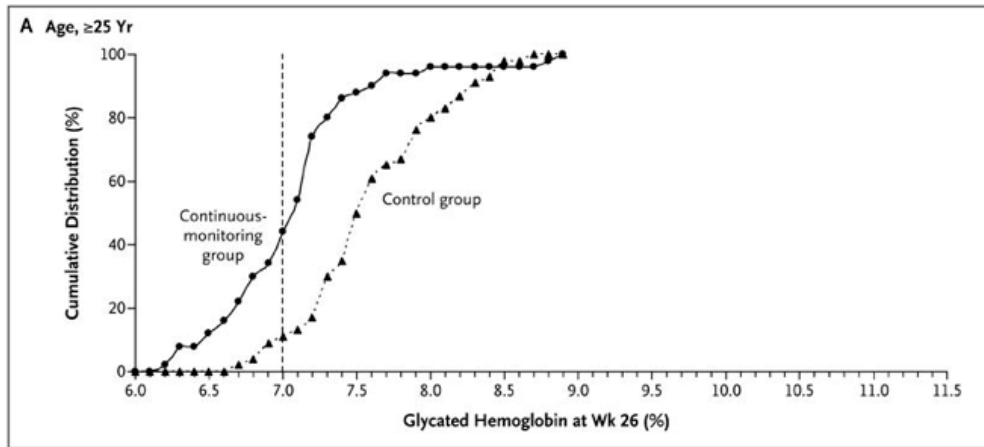
	Statistics	# Patients	tCGM %	tCGM Potential	tCGM Cost	Average Daily Cost	Annual Cost
Critical Care - U.S.							
- Hospitals		6,000					
- Beds/Hospital		20					
- % Occupancy		70%					
- Patients		84,000					
Tests per day							
- % Patients <4/Day	10%	8,400	0%	-	\$75	\$0	\$0
- % Patients 4/Day	75%	63,000	5%	3,150	\$75	\$236,250	\$86,231,250
- % Patients >4/Day	15%	12,600	100%	12,600	\$75	\$945,000	\$344,925,000
Potential U.S. Market							\$431,156,250

Source: Boenning & Scattergood Estimates

- **A growing body of clinical research demonstrates that continuous glucose monitoring can provide short- and long-term clinical benefits, both in ambulatory and hospital settings.** Until 1998, insulin pump usage by Type I diabetics in the United States was negligible, even though the technology was invented over 25 years earlier. Acceptance of insulin pumps was delayed but, in time, technology improvements, cost reductions and insurance reimbursement resulted in increased acceptance of insulin pumps. Insurance companies exist to assist their customers, and to provide positive returns for their shareholders. As more positive clinical data were presented, private insurance companies, followed by Medicare, decided that the cost benefit analysis of insulin pump reimbursement was positive. While 1998 was the inflection point for insulin pump acceptance, 2010 may turn out to be 1998 for continuous glucose monitoring systems.

There have been a number of trials involving glucose levels and continuous glucose monitors. Of those studies, the Juvenile Diabetes Research Foundation sponsored, *Continuous Glucose Monitoring and Intensive Treatment of Type 1 Diabetes* study probably has, and will have, the largest impact on the CGM market in terms of reimbursement and usage. This study was a multi-center clinical trial that randomly assigned 322 adults and children with Type I diabetes either a continuous glucose monitor or a traditional blood glucose meter. Patients were separated into three groups by age (>24 Yr, 15-24 Yr, 8-24 Yr) and all started with an A1C level of 7.0 to 10.0%. The primary outcome of the trial showed the change in A1C after 26 weeks of monitoring.

Cumulative Distribution of A1C (Glycated Hemoglobin) Levels



Source: Deiss D, Bolinder J, Riveline JP, et al. **Improved Glycemic Control in Poorly Controlled Patients with Type 1 Diabetes using Real-Time Continuous Glucose Monitoring.** *Diabetes Care.* 2006;29(12):2730-2732

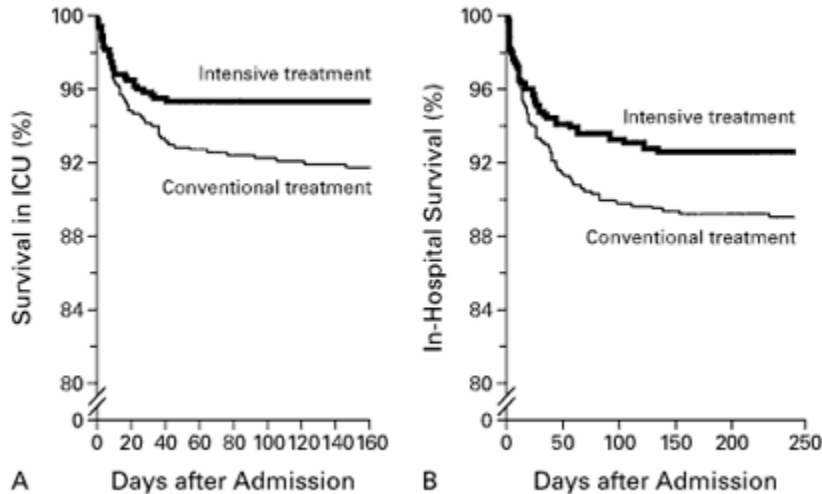
At the end of the trial, the researchers concluded:

“Continuous glucose monitoring can be associated with improved glycemic control in adults with Type I diabetes”

Data from the two younger age groups were not as significant due to compliance issues with the use of the CGM (average amount of time the group participants wore the CGM). While the numbers from the >24 age group speak for themselves, we feel this study is significant for the adoption of CGM usage because this study was not sponsored by a medical device company. The JDRF sponsored this trial to help Type I patients better treat this chronic disease. Another important fact from the trial is that all three FDA-approved continuous glucose monitors (Medtronic’s Paradigm Real-Time Insulin Pump and Continuous Glucose Monitoring System, DexCom’s SEVEN® and Abbott’s FreeStyle Navigator®) were used. All devices were purchased in bulk from the companies at a discounted price, and the manufacturers had no involvement in any parts of the study. The devices were assigned to the CGM arm of the study on the basis of device features and the patient’s preferences.

In the hospital setting, trials have proven that intensive insulin therapy for patients in critical care helps to lower recovery times and risks of infection. Of all studies, the Greet Van den Berghe led, *Intensive Insulin Therapy in Critically Ill Patients* is the study that has made the largest impact for guidelines for blood glucose levels of critical care patients. This study was a prospective, controlled clinical trial that randomly assigned 1,548 adults who were admitted into the intensive care unit. Patients were separated into two groups: intensive-treatment group (blood glucose maintained between 80-110mg/dl) and conventional-treatment (blood glucose level between 180-200 mg/dl). Results showed that intensive insulin therapy that maintained blood glucose levels at or below 100mg/dl reduced morbidity and mortality among critically ill patients in the surgical intensive care unit.

Cumulative Survival of Patients (Intensive vs. Conventional Insulin Treatment)



Source: NEJM

- **In June, 2008, The Centers for Medicare and Medicaid Services (CMS) issued billing codes for continuous glucose monitoring systems. These three new billing codes can be used by public and private healthcare providers when processing this new, breakthrough technology.** When Medtronic first introduced the first patient-use CGM in 2003, not one public or private insurance plan covered any pieces of the system. Medtronic had petitioned The Centers for Medicare and Medicaid Services to develop permanent Healthcare Common Procedure Coding System (HCPCS) codes for continuous glucose monitors (CGM) and its related supplies. The Juvenile Diabetes Research Foundation International (JDRF), the leading charitable funder and advocate of Type I diabetes research worldwide, wrote letters to CMS to persuade CMS to create HCPCS codes. CMS cited these reasons for not creating CGM-related reimbursement codes:

- Medtronic was the only provider of a continuous glucose monitor, and the technology was immature
- There was a lack of clinical evidence that showed patients had superior outcomes with a CGM as compared to traditional finger-stick testing
- The CGM technology did not fit in a Medicare benefit category

Over the past three years, these three arguments became mute as more clinical evidence confirmed the benefits of continuous glucose monitors, and competitors (DexCom & Abbott) developed CGMs. On November 5, 2007, The Centers for Medicare and Medicaid Services announced that they were issuing billing codes for continuous glucose monitoring technology. These billing codes, which became available on January 1, 2008, will be used by public and private health plans to facilitate claims processing and payment for CGM technology. Codes for this technology are:

- A9276 for the sensor
- A9277 for the transmitter
- A9278 for the receiver

These codes do not guarantee patient reimbursement for a continuous glucose monitoring system, but allows public and private insurance companies a definitive code if they elect to cover CGMs. As of today, Medicare does not reimburse for a CGM, but many private insurance companies have included CGMs in their coverage, when “medically necessary”. Among the larger private insurance companies that cover CGMs:

- Aetna
- CIGNA
- Humana
- UnitedHealthcare
- Wellpoint/Anthem

Most private insurance companies break their CGM coverage into short- and long-term use -- short-term being 72 hours or less. Insurance companies have stated policies regarding short- and long-term use to qualify for reimbursement. Aetna’s policy regarding CGM reimbursement, probably one of the most liberal in terms of ease of reimbursement:

Continuous Glucose Monitoring Devices:

Aetna considers the short-term (up-to-72 hour) diagnostic use of continuous glucose monitoring devices medically necessary for persons with type 1 diabetes who have either of the following problems in controlling blood glucose level, unresponsive to conventional insulin dose adjustment:

- *repeated hypo- and hyperglycemia at the same time each day; or*
- *hypoglycemia unawareness.*

For short-term (up-to-72 hours) diagnostic use, no more than two continuous glucose monitoring periods are considered medically necessary within a 12-month period.

Aetna considers the long-term (greater than 72-hour) therapeutic use of continuous glucose monitoring devices medically necessary as an adjunct to finger stick testing of blood glucose in adults age 25 years and older with type 1 diabetes, and for younger persons with type 1 diabetes who have had recurrent episodes of severe hypoglycemia (defined as hypoglycemia (blood glucose less than 50 mg/dL) with unawareness that required assistance from another person to administer oral carbohydrate, glucagon, or other resuscitative actions) despite appropriate modifications in insulin regimen and compliance with frequent self-monitoring (at least four finger sticks per day). Long-term use of continuous glucose monitoring devices is considered experimental and investigational for all other indications.

Positive Clinical Data → Insurance Reimbursement → Customer Usage

- **Two key licensing deals with Ferndale Pharma Group and Handok Pharmaceuticals, demonstrates the potential of the Echo Therapeutics' Prelude™ SkinPrep System.** On May 27, 2009, Echo Therapeutics announced that it had signed a licensing agreement for its Prelude™ SkinPrep system with Ferndale Pharma Group. Ferndale intends to market the use of the Prelude™ in conjunction with its new, fast acting topical anesthetic, LMX4. FDA approved LMX4, is a lidocaine-based anesthetic used to reduce the pain associated with medical needle procedures. While it does this by numbing the skin within 30 minutes of application, Ferndale believes that by incorporating the skin permeation control technology of Prelude™, the onset of anesthesia can occur within five minutes. As part of the agreement, Ferndale paid Echo Therapeutics an upfront payment of \$750,000, will be responsible for all associated trials and 510(k) filings and guarantees Echo a minimum annual royalty payment once the product is on the market.

On June 17, 2009, Echo Therapeutics announced that it had signed a license agreement with Handok Pharmaceuticals Co., Ltd., the largest diabetes care-focused company in South Korea. This agreement grants Handok right to develop, market, sell and distribute Echo's Symphony™ tCGM System in South Korea. As part of the agreement, Handok will pay Echo Therapeutics a \$600,000 upfront license payment, followed by substantial milestone payments upon key development, regulatory, and commercial milestones, including the FDA clearance of the Symphony™ tCGM system.

Company Overview

Echo Therapeutics, Inc.

Company Snapshot

Equity Summary:		Financial Summary:	
Ticker-Exchange:	ECTE.OB	* Revenue:	\$779,027
Price (12/14/09):	\$1.25	3-yr CAGR (Rev):	NA
Daily Volume (Shares):	24,000	* Operating Income:	-\$4,287,906
Daily Volume (\$USD)	\$30,000	* Net Income:	-\$10,550,924
Market Capitalization:	\$34,250,000	Total Assets (BV):	\$10,515,475
Dividend Yield:	0.0%	L-T Debt:	\$421,499

* - 2009 Annual Estimates

Source: Baseline and Boenning & Scattergood estimates

Echo Therapeutics, Inc. (ECTE.OB) is a Franklin, Massachusetts-based medical device company that is designing the Symphony™ tCGM system, a next-generation, non-invasive (needle-free), wireless transdermal continuous glucose monitoring system. This system is designed to provide reliable, on-

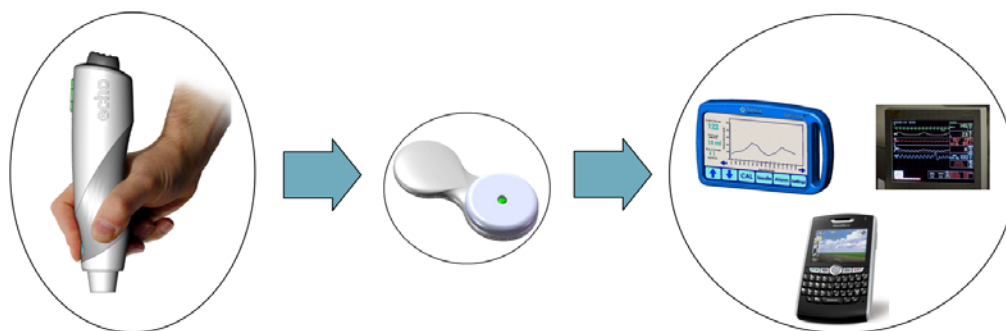
demand blood glucose data conveniently, continuously and cost-effectively. Symphony™ incorporates Echo's patented Prelude™ feedback mechanism for optimal skin permeation control and its continuous transdermal sensor to detect glucose trends. All existing FDA-approved continuous glucose monitoring systems are needle-based, requiring insertion of a glucose sensor into the patient's skin. Echo Therapeutics has performed several home and hospital use pilot studies that have been successful. Echo Therapeutics' Prelude™ system also has been licensed to Ferndale Pharma for use with Ferndale's topical lidocaine anesthetic, LMX4. Ferndale currently is working on its Prelude™/LMX4 trial and hopes to receive FDA approval in mid-2010. Echo Therapeutics is targeting mid-2010 for its PMA submission for Symphony™ tCGM to the FDA

What makes up the Symphony™ tCGM?

The Symphony™ transdermal continuous glucose monitoring system is made up of four separate parts: the Prelude™ skin permeation system, transdermal sensor, wireless transmitter and wireless remote monitor.

The Prelude™ SkinPrep permeation system is an easy-to-use and low-cost transdermal permeation device. This hand-held device safely, effectively and painlessly removes the stratum corneum (the outermost layer of the epidermis), which enhances the flow of interstitial fluids and molecules to the Symphony transdermal sensor. The key to the Prelude™ SkinPrep system is its proprietary feedback control mechanism, which consists of software, microprocessor controlled circuit and measuring electrodes. While the system is in operation, it measures the real-time electrical conductivity under the skin, and automatically turns off the system when a certain measurement is reached. As a result, the system removes only the outermost layer of the skin.

Symphony™ tCGM System



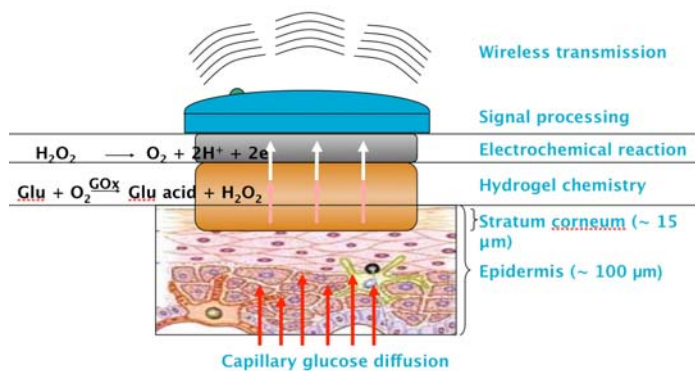
Source: Echo Therapeutics, Inc.

Once the skin has been prepared, the user will apply the transdermal glucose sensor. This sensor consists of an electrochemical glucose sensor, a hydrogel layer, a potentiostat and a short-range RF

transmitter. Sensor readings are taken every 20 seconds, and a three-reading average is sent to the monitor every minute, where it is displayed to the user. The sensor can be worn up-to-24 hours.

The wireless transmitter digitizes, stores and transmits a discrete, coded signal via a wireless link to the Symphony™ receiving monitor. Once the sensor and the transmitter are adhered to the skin, the transmitter automatically starts to send data to the monitor, once every minute. During the prototype stage the transmitter was a separate piece that could be reused several times, but the final version incorporates the sensor and transmitter into one disposable module.

Symphony™ tCGM sensor and transmitter



Source: Echo Therapeutics, Inc.

The Symphony™ monitor receives digital signals from the transmitter and decodes and displays them every minute. The monitor will display the date, time of day, sensor current, blood glucose reading and rate of increase or decrease, amount of time the transmitter has been switched on, battery status and any alarm or error modes. Echo Therapeutics is also developing its data transmission so that any portable device can receive, decode and display its data.

What is diabetes?

Diabetes or “diabetes mellitus” refers to a group of diseases that affect how a person’s body uses blood glucose. Blood glucose, or blood sugar, is the body’s main source of energy for cells that make up muscles and tissues. In persons who suffer from diabetes, blood slowly accumulates too much glucose, which can lead to major health issues. The blood sugar levels escalate due to their inability to manufacture or efficiently utilize insulin. Insulin is a hormone that is produced in the beta cells of the pancreas, and is responsible for enabling the body’s cells to absorb glucose from the bloodstream. Without insulin, glucose accumulates in the blood leading to short- and long-term complications. Some of the short- and long-term complications that arise from diabetes:

Short-term complications

1. High blood sugar (hyperglycemia)
2. Low blood sugar (hypoglycemia)
3. Increased ketones in urine (diabetic ketoacidosis)
4. Vision disturbances

Long-term complications

1. Nerve damage (neuropathy)
2. Cardiovascular disease
3. Kidney damage (nephropathy)
4. Eye damage (retinopathy)
5. Foot damage
6. Bone and joint problems

There are two basic forms of diabetes: Type I and Type II. Type I diabetes, formerly known as juvenile diabetes, is a chronic disease that usually becomes apparent in childhood or adolescence. The pancreas of a Type I diabetic lacks the ability to produce insulin. This inability to produce insulin usually stems from a progressive autoimmune disease, in which the insulin producing beta cells are destroyed by the body's own immune system. This autoimmune disease is usually a genetic predisposition, but evidence suggests that environmental factors, such as viral infections, could also play a role. In the United States, there are approximately 1.3 million Type I diabetics. Roughly 15,000 new patients are diagnosed each year. On a worldwide basis, there are approximately 5.0 million diagnosed Type I diabetics.

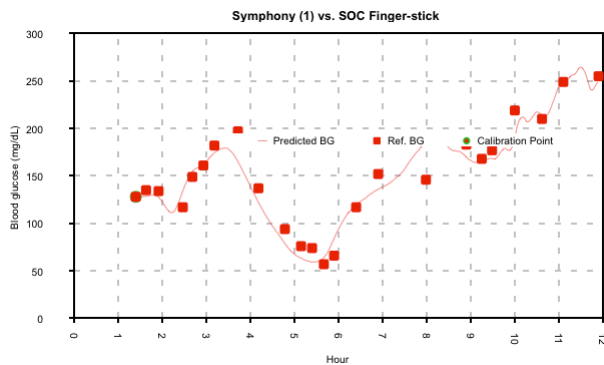
Type II diabetes is similar to Type I diabetes in terms of symptoms and complications, but Type II diabetes is different in terms of causes. Type II diabetes occurs when the patient's pancreas does not produce enough insulin to keep blood glucose levels normal. Another form of Type II diabetes occurs when the pancreas produces a sufficient amount of insulin, but the body's cells do not respond correctly to this hormone. In either case, blood glucose levels increase in the body, which causes a hyperglycemic state in the patient. Type II diabetes usually occurs in adulthood, but this has been changing as lifestyles have become more sedentary, diets have become more caloric and obesity levels have increased. Type II diabetics are usually prescribed oral medications and are put on strict diets to treat their condition. In some cases, insulin is prescribed. There are approximately 18 million diagnosed Type II diabetics living in the United States, and this number is increasing by 6% annually due to the aging of the population and the increasing levels of obesity.

Type I diabetes, and some Type II diabetes, are chronic diseases that are currently incurable. These diseases must be strictly managed in order to stem off long-term complications. The main treatment for Type I patients is the use of insulin, which takes the place of the amount the patient's body has not produced. As stated, the body uses insulin to convert glucose in the blood into an energy source for cells in muscles and tissues. Blood glucose levels in the body are very dynamic and change for many different reasons, including: food intake (especially carbohydrates & fats), exercise, illness, stress and hormone release. As one or all of these events occur during the day, the blood glucose level in the body can be affected. In a person without diabetes, their pancreas secretes insulin to adjust for the constantly changing blood glucose levels. For a person with diabetes, he or she must constantly monitor his or her blood glucose level. Once this level is determined, the person will inject insulin, if blood glucose levels are elevated.

What is a continuous glucose monitor?

A continuous glucose monitoring system is small, computerized medical device that measures the patient's glucose levels in real time, day and night. These real-time monitors allow patients to examine how their blood glucose levels react to insulin, exercise, food and other factors. A traditional blood glucose monitor is a small electronic device that can measure the patient's blood glucose level by using a single drop of blood. The blood, usually taken from a finger tip, is placed on a disposable test strip which interfaces with a digital glucose meter. Most modern meters can now calculate a blood glucose level in less than 15 seconds. While these meters have become more technologically advanced, they still only take a snapshot of the patient's blood glucose levels and cannot determine if the patient's BG levels are trending up or down. On the other hand, the Echo Therapeutics Symphony™ tCGM system takes a glucose measurement every 20 seconds and displays 1,440 measurements a day. Having more measurements gives the patient more information to better manage his or her disease.

Comparing CGM to finger Stick Meters



Source: Echo Therapeutics, Inc.

Another benefit that CGMs have over traditional finger stick meters is the ability to monitor blood glucose levels during periods when levels are usually not checked (e.g. during sleep). Patients who use insulin pumps or long-acting insulin can sometimes suffer from hypoglycemia while they sleep. Having a continuous glucose monitor would wake the patient with an audible alarm as blood glucose levels reach dangerously low levels.

Investment Risks

The realization of any or all of the following risk factors, among others, may adversely affect the company and prohibit the shares from reaching our target price: Reimbursement, Regulatory, Business, Manufacturing, and Competition.

Positive clinical trial outcomes are never assured. To date, Echo Therapeutics has run three small pilot studies comparing its transdermal Continuous Glucose Monitoring system with standard blood glucose meters and hospital grade blood gas and serum glucose meters. In the three studies, the Echo Therapeutics' tCGM performed within current FDA guidelines for mean absolute relative difference (MARD).

Pilot Studies

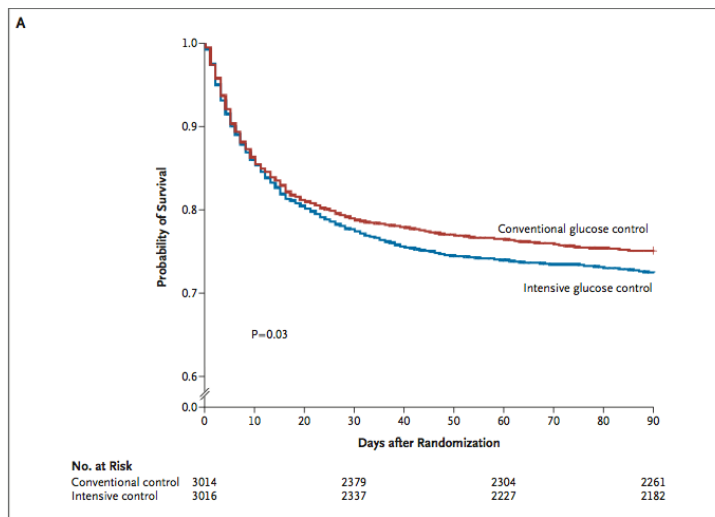
	Study 1	Study 2	Study 3	
			Prelude	SonoPrep
Critical Care				
- # of patients		7	6	6
- # of sensor data points		222	183	195
- MARD		11.6%	9.0%	10.8%
- R ²		0.83	0.70	0.79
Diabetes				
- # of patients	10			
- # of sensor data points	222			
- MARD	12.4%			
- R ²	0.77			

Source: Echo Therapeutics, Inc.

Echo Therapeutics is currently finalizing the design for both its Prelude™ skin permeation device and transdermal biosensor/transmitter. Echo Therapeutics plans to conduct one additional pilot study before starting its pivotal trial. This trial probably will include 350 patients in a hospital ICU setting. While we believe the trial should be successful, there are many factors that can cause it to fail.

The NICE-SUGAR study created more questions than answers. The NICE-SUGAR study, *Intensive versus Conventional Glucose Control in Critically Ill Patients*, was a study designed to determine the optimal range of blood glucose in critically ill adults in an intensive care unit. Those conducting the study randomly assigned patients to undergo either intensive glucose control, with a target blood glucose control range of 81 to 108 mg per deciliter, or conventional glucose control, with a target of 180mg or less per deciliter. The primary end point of the trial was death from any cause within 90 days after randomization.

NICE-SUGAR Study



Source: NEJM

The study found that intensive glucose control increased mortality among adults in the ICU, as compared to the control arm. These results contradict the findings of the previously mentioned, Greet Van den Berghe led, *Intensive Insulin Therapy in Critically Ill Patients* study. Many doctors point to the occurrences of hypoglycemia between the intensive glycemc management arm (6.8%) and the conventional glucose control arm (0.5%) in the NICE-SUGAR study as the primary reason behind the conflicting results.

Another reaction to the NICE-SUGAR study was a letter, in June, 2009, from FDA Commissioner, Dr. Margaret Hamberg to the American Association of Clinical Endocrinologists. In her letter, she hinted that the FDA would re-examine the accuracy of glucose meters used in hospitals, especially in critical care situations. Self-monitoring of blood glucose (SMBG) devices have been approved by the FDA for home use, and must have a MACD no greater than 20%. While these devices were not intended for use in the ICU, many hospitals use them to due to their convenience. An excerpt from Dr. Hamberg's letter to the AACE:

More recent data, however, including the termination of two large European trials due to an increased risk of severe hypoglycemia and the findings of the Normoglycemia in Intensive Care Evaluation — Survival Using Glucose Algorithm Regulation (NICE-SUGAR) study of increased mortality in the group with tight glycemc control (81 to 108 mg/dL), are clearly leading professional organizations such as yours to take a more measured stand. FDA is concerned that hospitals have been implementing protocols for tight glycemc control using SMBG devices.

While the FDA is not suggesting that tight glucose levels are detrimental to the health of patients in the ICU, it is worried that hospital staffs are relying too heavily on meters that may not be sufficiently accurate. On a positive note, Dr. Hamberg stated that the FDA is looking for new technologies to help solve this problem.

In addition, FDA is exploring mechanisms for working with the community and encouraging advancements in technology so that greater levels of accuracy and reproducibility can be achieved. The agency is also encouraged that there are new technologies such as continuous glucose sensors and the artificial pancreas that have the promise of making some of the issues addressed in this letter obsolete. For example, several companies are exploring the use of continuous sensors in hospitals to use in intensive insulin therapy.

One of the greatest unknowns for medical device companies today is the U.S. Food and Drug Administration. To date, all CGM systems have been approved by the FDA via the PMA process. This approval process is usually more costly and time consuming than the 510(k) clearing process. The FDA can change its approval process at any time, so the process of today may not exist tomorrow. The FDA is currently reviewing its 510(k) process due to an approval of a medical device in December 2008, which may not have been thoroughly reviewed. Echo Therapeutics, like other medical device companies, has to report to the FDA if any of its products cause an adverse event or if there is some sort of malfunction that could cause an adverse event. If this were to happen, the company would likely have to perform costly and time consuming safety studies in order to prove to the FDA that their product is safe.

Below is a brief description of the approval process and the difference between a 510(k) clearance and a PMA approval.

Any company or manufacturer wanting to market its medical device in the United States must first have it approved by the U.S. Food and Drug Administration (FDA). To gain approval, a company first must register a pre-market notification, also called a PMN, with the FDA at least 90 days in advance of its scheduled marketing date. As of 2007, the FDA has implemented a process that classifies all potential device approvals into three categories:

- Class I - Devices that do not require pre-market approval, but still must follow FDA rules
- Class II - Devices that are cleared of the approval process using the 510(k) method
- Class III - Devices that are approved by the pre-market process, PMA

Most device manufacturers aim to have their devices reach the market via the 510(k) process. In order for a company's PMN to be accepted as a 510(k) submission, its device must be "substantially equivalent" to a device that was on or currently on the market prior to May 28, 1976. The FDA's Center of Devices and Radiological Health (CDRH) is the group within the FDA that makes the recommendations that determines whether or not a device is substantially equivalent (SE) or not substantially equivalent (NSE) to an approved product. If the CDRH deems a device SE, this device is not considered "approved", but "cleared" by the FDA and can be marketed and sold in the United States.

If a device has been considered to be not substantially equivalent (NSE), the device manufacturer will then have to follow the PMA approval process. This process requires proof of safety and effectiveness and is considerably more costly and time consuming. A typical PMA approval can take between one to three years. A company seeking approval must submit comprehensive trial data along with information about the device, its components, labeling, manufacturing and design.

“ObamaCare” - what does it entail and when, if ever, will it be implemented? In May, 2009, President Obama met with medical industry groups representing hospitals, doctors, drug makers, and health insurers to discuss ways to slash nearly \$2 trillion from the nation's medical bills over the next 10 years. While all of the participants came away from the meeting agreeing that something needs to be done about rising healthcare costs, there was no agreement on how to get there. In June, President Obama gave a speech to the American Medical Association promoting his healthcare reform plan. While his plan lacked key details on how it will be implemented and paid for, he did specifically mention that he wants any new healthcare legislation to include a government-run entity for health insurance coverage. This “public option” has become a very contentious issue, with at least 100 House Democrats saying that they will not push any bill through Congress without it, and Republicans stating that they will not vote for any bill that contains it. President Obama stated that he would have liked to have signed a healthcare reform bill into law by mid-October, but based on the current Congressional impasse, we do not see any new healthcare reform bill being voted on until at least January 2010.

Competition in the continuous glucose mentoring market is small, but should increase with time.

When the first ambulatory continuous glucose monitor was approved by the FDA in 1999, it was approved for use in a physician's office. The device was large and not very accurate. With the advances in medical technologies and micro-processors, these continuous glucose monitors have been shrunk down to the size of cell phones. Today's portable CGMs come in many shapes, sizes and colors. These devices contain software that provides quick and easy viewing of 1-hour, 3-hour, 6-hour, 12-hour, and 24-hour glucose trends and current glucose readings. The major players in this CGM market are: Medtronic MiniMed, DexCom, Inc. and Abbott Diabetes Care. The three FDA approved products work by measuring glucose levels of the patient's interstitial fluid. To measure these levels, the patient must insert a metal sensor probe under the skin. Echo Therapeutics' Symphony™ tCGM differs from the traditional CGM systems, as it measures blood glucose levels transdermally.

Current Competitors

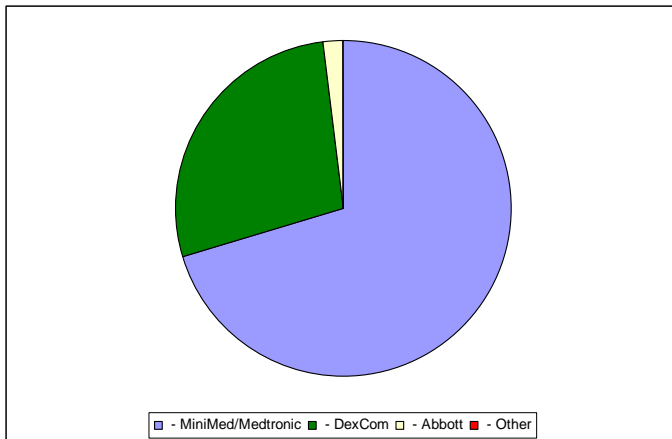


Brand	Echo Therapeutics	DexCom	Medtronic MiniMed	Medtronic MiniMed	Abbott
Model	Symphony	SEVEN PLUS	Guardian REAL-Time	Paradigm REAL-Time System	FreeStyle Navigator
Price	TBD	\$700	\$1,200	\$999, plus cost of the pump	\$1,000
Weight [oz]	2.0 oz	3.5 oz	2.8 oz	4 oz	3.5 oz
Screen Size	3"x2"	1.875"x1.5"	1.8"x0.75"	522/722 screen	1.8"x1.25"
Receiver Size	4"x3"	4.5"x2.3"x0.85"	3"x2"x.77"	Displays on pump	3.24"x2.5"x0.88"
Transmitter/Sensor Size	1.0"x1.0"x0.4"	1.5"x0.9"x0.4"	1.65"x1.4"x0.37"	1.65"x1.4"x0.37"	2.05"x1.23"x0.43"
Sensor Life	2 Days	7 days	3 days	3 days	5 days
Sensor Canula Size	Needle-free	13mm	14mm	14mm	5mm
Calibration	every 12 hours	every 12 hours	2, 6, then every 12 hours	2, 6, then every 12 hours	10, 12, 24 & 72 hours
Displays Glucose #	Every 1 minute	Every 5 minutes	Every 5 minutes	Every 5 minutes	Every 1-2 minutes
Range	10 feet	5 feet	6 feet	6 feet	10 feet
BG Monitor	any	any	any	any	built in Freestyle Monitor
Warranty	TBD	1 year	1 year for receiver	6 months on transmitter	1 year

Source: www.diabetesnet.com

Medtronic (MiniMed) holds the dominant position in the U.S. and worldwide continuous glucose monitoring markets, holding at least a 75% market share for the last four years. DexCom has become the Number 2 provider of CGMs ever since introducing the STS® product in 2006. DexCom is followed by Abbott Diabetes Care, which first introduced its FreeStyle Navigator® in 2008.

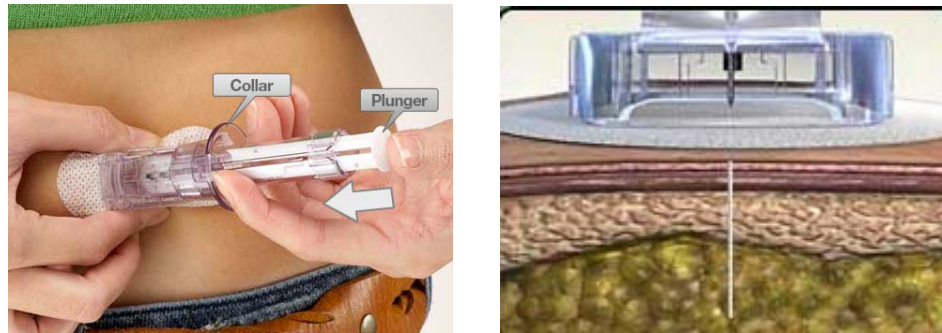
Estimated 2010 U.S. Continuous Glucose Monitoring Market Share



Source: Boenning & Scattergood estimates

The three continuous glucose monitoring manufacturers have similar offerings. Each requires the patient to insert the sensor probe under the skin.

Insertion and sensor profile of the DexCom SEVEN® PLUS CGM



Source: DexCom

One differentiator among the three is that Medtronic offers a continuous glucose monitoring system with its Paradigm insulin pump. Animas and Insulet are currently working on integrating their insulin pumps with DexCom's SEVEN® PLUS, so Medtronic's advantage should disappear within the next 12 months. Also, Abbott is working with Insulet to incorporate its FreeStyle Navigator® with Insulet's OmniPod System. Another differentiator is the length of time the sensor can be worn. Currently, DexCom's FDA approved SEVEN® PLUS can be worn the longest - seven days, followed by the Abbott FreeStyle Navigator® - five days and the Medtronic MiniMed Guardian REAL-Time - three days.

Currently, only one continuous glucose monitor has been approved in the U.S. for use in a hospital setting - Via Medical's Real-Time Blood Glucose Analyzer. The Real-Time Blood Glucose Analyzer is a bedside monitor that is large, very invasive and used only for critically ill patients.

Via Medical's Real-Time Blood Glucose Analyzer



Source: Via Medical

Another potential entrant to the hospital CGM market is an offering from DexCom & Edwards Lifesciences Corporation. In November, 2008, DexCom and Edwards signed a development agreement that will grant Edwards an exclusive license to all of DexCom's applicable intellectual property in developing a continuous glucose monitoring system for hospitalized patients. On November 2, 2009, Edwards announced that it had received CE Mark for its automatic glucose monitoring system. Edwards has stated that it expects to ship first generation product to a limited number of European customers by January 2010.

Valuation

Over the past four years, the use of continuous glucose monitoring systems has gone from just over 2,000 patients, to an estimated 50,000 customers in 2009, and with the potential of growing to over 115,000 by 2011. This rapid growth is due to technological advancements and the new insurance reimbursement codes. The three marketed CGM systems work by inserting a sensor probe under the patient's skin. Echo Therapeutics looks to expand upon this growth by introducing the first non-invasive, transdermal continuous glucose monitoring system. Echo Therapeutics is on schedule to file its FDA application for approval for its Symphony™ tCGM in the first half of 2010. Because Echo Therapeutics is currently operating at a loss, we are using an Enterprise Value/Sales methodology to value Echo Therapeutics and arrive at a 12-month target price of \$3.00.

The average 2012 enterprise value to sales multiple, EV/S, of fast growing medical technology companies is 1.3x, which is a premium to Echo Therapeutics' current EV/S of 0.64x. We think Echo Therapeutics deserves a premium EV/S price target due to its long-term forward revenue growth rate of 50% and gross margins increasing to the mid 70%'s range. We can anticipate Echo Therapeutics to earn a profit in the fourth quarter of 2011. Also, Echo Therapeutics will be the only company on the market that offers a non-invasive CGM system, and has the potential of being acquired. While we do not recommend purchasing stock based on potential acquisition, Echo Therapeutics is the largest independent/pure play developer of transdermal continuous glucose monitoring systems. In 2005, Johnson & Johnson purchased insulin pump maker Animas for \$518 million in cash, which was a 35% premium over Animas' market capitalization of \$385M. At the time, Animas had approximately a 9% market share of the domestic insulin pump market.

Comparative Valuation Table

Company	Tick.	Rtg.	Price			M.Cap. (\$M)	Shares (M)	EPS			P/E			EV/S			PEG		
			12/14/09	Hi	Lo			CY08A	CY09E	CY10E	CY08A	CY09E	CY10E	CY08A	CY09E	CY10E	CY08A	CY09E	CY10E
Intuitive Surgical	ISRG	NR	\$292.91	296	- 85	\$11,112	37.9	5.13	5.69	6.97	57.1	51.5	42.0	12.1	10.4	8.6	2.5	2.2	1.8
Edwards Lifesciences	EW	NR	\$86.02	88	- 48	\$4,853	56.4	2.59	3.05	3.53	33.2	28.2	24.4	3.8	3.5	3.3	2.1	1.8	1.5
Masimo	MASI	N	\$27.82	31	- 21	\$1,603	57.6	0.76	0.88	1.05	36.6	31.6	26.5	4.7	4.1	3.6	1.8	1.6	1.3
Cepheid	CPHD	NR	\$12.64	16	- 5	\$741	58.6	-0.36	-0.43	-0.22	-35.1	-29.4	-57.5	4.1	4.2	3.4	NA	NA	NA
Volcano Corporation	VOLC	OP	\$16.71	17	- 11	\$814	48.7	0.03	-0.39	0.08	557.0	-42.8	208.9	4.0	3.1	2.5	30.9	-2.4	11.6
SonoSite	SONO	N	\$23.27	29	- 15	\$404	17.3	0.66	0.29	0.77	35.3	80.2	30.2	1.0	1.1	1.0	1.6	3.6	1.4
Zoll Medical	ZOLL	NR	\$27.01	27	- 11	\$570	21.1	1.09	0.45	0.80	24.8	60.0	33.8	1.3	1.3	1.2	1.2	2.9	1.6
DexCom, Inc.	DXCM	OP	\$7.66	9	- 2	\$353	46.0	-1.87	-1.24	-0.94	-4.1	-6.2	-8.1	36.6	12.8	7.5	NA	NA	NA
Insulet Corporation	PODD	OP	\$12.54	13	- 3	\$461	36.8	-3.03	-2.80	-1.59	-4.1	-4.5	-7.9	13.6	7.5	5.2	NA	NA	NA
Somanetics	SMTS	N	\$15.65	18	- 10	\$189	12.1	0.76	0.59	0.68	20.6	26.5	23.0	2.9	2.8	2.3	1.1	1.5	1.3
Electro-Optical	MELA	OP	\$9.96	12	- 2	\$222	22.2	-1.08	-0.93	-1.10	-9.2	-10.7	-9.0	NA	NA	NA	NA	NA	NA
CARDIONET	BEAT	N	\$5.16	30	- 4	\$123	23.9	0.37	-0.11	-0.30	13.9	-46.9	-17.2	0.7	0.6	0.6	1.0	-3.4	-1.2
Echo Therapeutics	ECTE	OP	\$1.25	2	- 0.21	\$34	26.8	-0.57	-0.50	-0.22	-2.2	-2.5	-5.7	NA	NA	NA	NA	NA	NA
Average											55.7	10.4	21.8	7.7	4.7	3.6	5.3	1.0	2.4
S&P 500	SPX		\$1,114	1119	- 667			69	58	74	16.2	19.1	15.0				2.0	2.4	1.9
NASDAQ	COMPQ		\$2,212	2214	- 1266			93	101	140	23.8	22.0	15.8				1.4	1.3	0.9
Russell 2000	RUTZ		\$610	625	- 343			19	10	28	32.3	63.2	21.9				2.5	4.9	1.7

Source: Baseline and Boenning & Scattergood estimates

Guidance

Echo Therapeutics does not supply guidance on a future basis. We, however, expect total year 2009 revenues to be around \$779,000, and 2010 revenues to be \$1,891 million - both below consensus estimates. Our 2010 revenue estimates are based on Ferndale Pharma Group receiving FDA clearance for the use of the Prelude™ SkinPrep system in the second half of 2010. Our model also incorporates our belief that Echo Therapeutics will receive FDA approval for its Symphony™ tCGM system for use in a hospital setting in early 2011.

Comparative Estimates

Echo Therapeutics, Inc.	Est.				Est.			
	Q1 Mar	Q2 Jun	Q3 Sep	Q4 Dec	FY 2009	FY 2010	FY 2011	FY 2012
Estimates								
Revenues	\$0	\$121	\$497	\$161	\$779	\$1,891	\$18,594	\$54,184
EPS	-\$0.07	-\$0.34	-\$0.05	-\$0.05	-\$0.50	-\$0.22	-\$0.17	\$0.46
Consensus								
Revenues			\$315	\$315	\$750	\$6,750	\$32,600	\$62,600
EPS			-\$0.08	-\$0.08	-\$0.49	-\$0.05	\$0.27	\$0.54
Relative								
Revenues			\$182	-\$154	\$29	-\$4,860	-\$14,006	-\$8,416
EPS			\$0.03	\$0.03	-\$0.01	-\$0.17	-\$0.44	-\$0.08
Guidance								
Revenues								
EPS								

Source: Baseline and Boenning & Scattergood estimates

REVENUE ANALYSIS (2009-2012E)

Echo Therapeutics, Inc.												
	Est.	Est.	Est.	Est.	Est.	Est.	Est.	Est.	Est.	Est.	Est.	Est.
Domestic	Q1	Q2	Q3	Q4	FY	Q1	Q2	Q3	Q4	FY	FY	FY
	Mar	Jun	Sep	Dec	2009	Mar	Jun	Sep	Dec	2010	2011	2012
Penetration												
- Type I - U.S	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,315,000	1,315,000	1,315,000	1,315,000	1,315,000	1,330,000	1,345,000
- Market Share	0.00%	0.00%	0.00%	0.00%	0.00%	0.25%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%
Customers												
- New	-	-	-	-	-	-	-	-	-	-	-	13,450
- Attrition Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
- Total	-	-	-	-	-	-	-	-	-	-	-	13,450
- Starter Kit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250
- Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,450
Sensors												
- # per Qtr per user	20	20	20	20	80	20	20	20	20	80	80	80
- Total	-	-	-	-	-	-	-	-	-	-	-	269,000
- Rev per unit	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
- Total Sensor Rev	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,035,000
Diabetes Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,035,000
Critical Care - U.S.												
- Hospitals	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
- Beds/Hospital	20	20	20	20	20	20	20	20	20	20	20	20
- %Occupancy	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
- Patients	84,000	84,000	84,000	84,000	84,000	84,000	84,000	84,000	84,000	84,000	84,000	84,000
Sensors												
- Days	90	90	90	90	360	90	90	90	90	360	360	360
- Total	7,560,000	7,560,000	7,560,000	7,560,000	30,240,000	7,560,000	7,560,000	7,560,000	7,560,000	30,240,000	30,240,000	30,240,000
- Penetration	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	5.0%
- Rev per unit	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00
- Avg Days worn	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.5
- Total Sensor Rev	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,600,000	\$36,540,000
Critical Care Rev	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,600,000	\$36,540,000
Ferndale Revenue												
- Upfront/Milestone	\$0	\$121,032	\$160,750	\$160,750	\$442,532	\$160,750	\$160,750	\$0	\$750,000	\$1,071,500	\$1,250,000	\$2,000,000
Cosmetic												
- Botox	1,250,000	1,250,000	1,250,000	1,250,000	5,000,000	1,250,000	1,250,000	1,250,000	1,250,000	5,000,000	5,000,000	5,000,000
- %usage	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	2.0%
- Derm filler	400,000	400,000	400,000	400,000	1,600,000	400,000	400,000	400,000	400,000	1,600,000	1,600,000	1,600,000
- %usage	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	5.0%
- # Procedures	-	-	-	-	-	-	-	-	-	-	14,250	131,000
- Price	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40
- Royalty	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
- Total Cosmetic Rev	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$114,000	\$1,048,000
Local Analgesia												
- ER	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000
- %usage	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.2%	0.4%	1.0%
- Pre-Surgery	6,000,000	6,000,000	6,000,000	6,000,000	24,000,000	6,000,000	6,000,000	6,000,000	6,000,000	24,000,000	24,000,000	24,000,000
- %usage	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.2%	0.8%	1.8%
- # Procedures	-	-	-	-	-	-	-	21,000	42,000	63,000	304,500	762,000
- Price	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40
- Royalty	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
- Total ER/Pre Rev	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$168,000	\$336,000	\$504,000	\$2,436,000	\$6,096,000
Disposable Rev	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$105,000	\$210,000	\$315,000	\$1,593,750	\$4,465,000
Ferndale Rev	\$0	\$121,032	\$497,245	\$160,750	\$779,027	\$160,750	\$160,750	\$273,000	\$1,296,000	\$1,890,500	\$5,393,750	\$13,609,000
Handok Revenue												
- Upfront/Milestone	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600,000	\$0
- Royalty	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Revenue	\$0	\$121,032	\$497,245	\$160,750	\$779,027	\$160,750	\$160,750	\$273,000	\$1,296,000	\$1,890,500	\$18,593,750	\$54,184,000

INCOME STATEMENT ANALYSIS (2009-2012E)

Echo Therapeutics, Inc.												
	Est.				Est.	Est.				Est.	Est.	Est.
	Q1	Q2	Q3	Q4	FY	Q1	Q2	Q3	Q4	FY	FY	FY
	Mar	Jun	Sep	Dec	2009	Mar	Jun	Sep	Dec	2010	2011	2012
Revenue	-	121	497	161	779	161	161	273	1,296	1,891	18,594	54,184
COGS	-	-	-	-	-	-	-	-	-	-	10,000	20,000
Gross Profit	-	121	497	161	779	161	161	273	1,296	1,891	8,594	34,184
Research & development	288	406	816	450	1,961	500	500	1,000	1,200	3,200	4,000	5,000
G&A	573	848	835	850	3,106	900	900	900	1,100	3,800	4,000	4,500
Sales & Marketing	-	-	-	-	-	-	-	-	-	-	4,800	7,000
Other	-	-	-	-	-	-	-	-	-	-	-	-
Operating Income	(862)	(1,134)	(1,153)	(1,139)	(4,288)	(1,239)	(1,239)	(1,627)	(1,004)	(5,110)	(4,206)	17,684
Interest income	0	1	0	1	2	-	-	-	-	-	-	-
Interest expense	(179)	(74)	(17)	(150)	(419)	(150)	(150)	(150)	(150)	(600)	(600)	(700)
Other	(254)	(5,568)	(13)	(10)	(5,846)	(200)	(200)	(200)	(200)	(800)	(1,000)	(1,000)
Pretax Income	(1,294)	(6,775)	(1,183)	(1,299)	(10,551)	(1,589)	(1,589)	(1,777)	(1,154)	(6,510)	(5,806)	15,984
Income taxes	-	-	-	-	-	-	-	-	-	-	-	-
Net Income	(1,294)	(6,775)	(1,183)	(1,299)	(10,551)	(1,589)	(1,589)	(1,777)	(1,154)	(6,510)	(5,806)	15,984
Accretion of preferred stock	(58)	(2,496)	-	-	-	-	-	-	-	-	-	-
Net Income attributable to common	(1,352)	(9,271)	(1,183)	(1,299)	(10,551)	(1,589)	(1,589)	(1,777)	(1,154)	(6,510)	(5,806)	15,984
Diluted Earnings Per Share	-0.07	-0.34	-0.05	-0.05	-0.50	-0.06	-0.06	-0.06	-0.04	-0.22	-0.17	0.46
Pro Forma EPS	-0.07	-0.46	-0.05	-0.05	-0.63							
Diluted shares	19,380	20,067	24,049	26,800	26,800	27,000	27,500	28,000	29,000	29,000	32,000	35,000
Margin Analysis												
Gross Profit		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	46.2%	63.1%
Research & development		335.8%	164.1%	279.9%	251.7%	311.0%	311.0%	366.3%	92.6%	169.3%	21.5%	9.2%
G&A		700.8%	167.9%	528.8%	398.7%	559.9%	559.9%	329.7%	84.9%	201.0%	21.5%	8.3%
Operating Income		-936.6%	-232.0%	-708.7%	-550.4%	-770.9%	-770.9%	-596.0%	-77.5%	-270.3%	-22.6%	32.6%
Pretax Income		-5597.6%	-237.9%	-807.9%	-1354.4%	-988.6%	-988.6%	-650.9%	-89.0%	-344.3%	-31.2%	29.5%
Tax Rate		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Net earnings		-5597.6%	-237.9%	-807.9%	-1354.4%	-988.6%	-988.6%	-650.9%	-89.0%	-344.3%	-31.2%	29.5%
Year-Over-Year % Change												
Net Sales							32.8%	-45.1%	706.2%	142.7%	883.5%	2607.8%
Gross Profit							32.8%	-45.1%	706.2%	142.7%	354.6%	-6950.5%
R&D							73.5%	23.0%	22.6%	166.7%	63.2%	400.0%
SG&A							57.0%	6.1%	7.8%	29.4%	5.3%	350.0%
Operating Income							43.8%	9.3%	41.1%	-11.9%	19.2%	-605.4%
Net earnings							22.8%	-76.5%	50.2%	-11.1%	-38.3%	-510.0%
Earnings Per Share							-11.9%	-82.9%	29.0%	-17.9%	-56.2%	-474.8%
Weighted average shares outstanding							39.3%	37.0%	16.4%	8.2%	10.3%	9.4%

BALANCE SHEET ANALYSIS (2007-2009E)

Echo Therapeutics, Inc.							Est.
	FY 2007	FY 2008	Q1 Mar	Q2 Jun	Q3 Sep	FY 2009	
CURRENT ASSETS:							
Cash and cash equivalents	1,193,163	242,867	55,721	907,537	437,377	1,000,000	
Short-term investments	0	0	0	0	0	0	
Accounts receivable	0	0	0	0	0	0	
Inventory	0	0	0	0	0	0	
Other current assets	25,263	17,132	22,970	18,537	165,042	165,042	
Total current assets	1,218,426	259,999	78,691	926,074	602,419	1,165,042	
Property and equipment	111,881	67,570	55,370	46,587	68,974	68,974	
Restricted Cash	10,250	10,250	9,749	9,749	9,749	9,749	
Goodwill	0	0	0	0	0	0	
Deferred income taxes	0	0	0	0	0	0	
Intangible assets	9,945,486	9,827,154	9,797,571	9,767,988	9,738,405	9,730,000	
Other assets, net	2,000	143,373	106,393	101,394	95,928	95,928	
Total assets	11,288,043	10,308,346	10,047,774	10,851,792	10,515,475	11,069,693	
CURRENT LIABILITIES:							
Accounts payable	382,308	1,177,719	1,300,584	1,173,004	1,414,489	1,414,489	
Accrued expenses	451,136	174,768	193,370	463,894	764,748	500,000	
Derivative warrant liability	0	0	1,331,551	2,238,887	2,047,412	2,047,412	
Current portion of LT Debt	386,458	2,054,062	2,183,699	0	0	0	
Deferred revenue	0	0	0	966,806	843,556	625,000	
Total current liabilities	1,219,902	3,406,549	5,009,204	4,842,591	5,070,205	4,586,901	
LT Debt	0	300,467	310,667	321,071	421,499	421,499	
Other liabilities	0	0	0	162,162	0	0	
Total Liabilities	1,219,902	3,707,016	5,319,871	5,325,824	5,491,704	5,008,400	
STOCKHOLDERS' EQUITY							
Preferred stock	0	23,483	25,957	45	45	45	
Common stock	178,710	190,960	197,421	234,174	242,796	235,000	
Treasury stock	0	0	0	0	0	0	
Paid-in Capital	57,575,593	64,668,550	62,231,334	69,793,408	70,465,703	72,000,000	
Accumulated other comprehensive loss	(47,686,162)	(58,281,663)	(57,726,809)	(64,501,659)	(65,684,773)	(66,640,296)	
Other	0	0	0	0	0	0	
Total stockholders' equity	10,068,141	6,601,330	4,727,903	5,525,968	5,023,771	5,594,749	
Total liabilities and stockholders' equity	11,288,043	10,308,346	10,047,774	10,851,792	10,515,475	10,603,149	

Disclosure Appendix

Rating and Price Target History:



Associated Risk Factors:

The realization of any or all of the following risk factors, among others, may adversely affect the company and prohibit the shares from reaching our target price: Reimbursement, Regulatory, Business, Manufacturing, and Competition.

Analyst Certification:

The research analysts whose names appears on this research report certify that: (1) all of the views expressed in this research report accurately reflect their personal views about the subject security or issuer, and (2) no part of the research analysts' compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analysts in this research report.

Important Disclosures:

Analyst compensation is based on, in part, Boenning & Scattergood, Inc.'s profitability, which includes revenues from investment banking. Boenning & Scattergood, Inc. managed or co-managed a public offering of securities for the subject company in the past 12 months. Boenning & Scattergood, Inc. received compensation for investment banking services from the subject company in the past 12 months. Boenning & Scattergood, Inc. expects to receive or intends to seek compensation for investment banking services from the subject company in the next three months.

Boenning & Scattergood's Ratings System:

Our three-tier investment ratings are based on a stock's return potential relative to a broad market index:

- **Outperform (Buy):** The security's total return over the year or longer is expected to exceed the total return of the S&P 500™ over the identical period.
- **Neutral (Hold):** The security's total return over the next year or longer is expected to be roughly equivalent to the total return of the S&P 500™ over the identical period.
- **Underperform (Sell):** The security's total return over the next year or longer is expected to be less than the total return of the S&P 500™ over the identical period.

Our four-tier risk ratings are based on a mix of price volatility and fundamental factors relative to the market and peer group.

- **Low:** The security has higher-than-average fundamental predictability and/or lower-than-average price volatility.
- **Moderate:** The security has average fundamental predictability and/or average price volatility.
- **High:** The security has lower-than-average fundamental predictability and/or higher-than-average price volatility.
- **Speculative:** The security has very inconsistent fundamental predictability and/or very high relative price volatility.

Ratings Distribution (9/30/09):

<u>Coverage Universe</u>	<u>% of Universe</u>	<u>Investment Banking Clients (a)</u>	<u>% of Rating Group</u>
Outperform (Buy)	51%	Outperform (Buy)	7%
Neutral (Hold)	49%	Neutral (Hold)	0%
Underperform (Sell)	0%	Underperform (Sell)	0%

(a) Related to services provided within the past 12 months.

Additional information on companies in a research report, including financial models, is available on request. Boenning & Scattergood, Inc. does and seeks to do business with companies covered in its research reports. As a result, Investors should be aware that they firm may have a conflict of interest that could affect the objectivity of this report. This report is not a complete analysis of every material fact representing company, industry or security mentioned herein. The information has been obtained from sources believed reliable, but is not necessarily complete and is not guaranteed. The reports are prepared for general information only and do not have regard to the specific investment objectives, financial situation or the particular needs of any specific person who may receive this report. The information is not to be relied upon in substitution for the exercise of independent judgment. It is recommended that Investors seek financial advice regarding the appropriateness of investing in any securities or investment strategies discussed in any report and should understand that statements regarding future prospects, earnings estimates and forecasts may not be realized. This communication shall not be deemed to constitute an offer, or solicitation on our part with respect to the sale or purchase of any securities. Securities and financial instruments mentioned herein may not be qualified for sale in all states. Opinions are subject to change without notice and reflect the opinion at its original date of publication. Boenning & Scattergood may have issued a trading opinion that may have identified a short term trading opportunity that may differ from the analyst's stock rating which is based on the expected return over a 12-month period. Boenning & Scattergood may trade for their own accounts as market maker, may have a long or short position in any securities of this issuer or related investments, and/or may be the opposite side of public orders. This firm or its officers, directors, stockholders, employees and clients, in the normal course of business, may have, acquire or sell a position including options, if any, in the securities mentioned. Boenning & Scattergood may also act as underwriter, placement agent, advisor, or lender to an issuer mentioned herein.

BOENNING & SCATTERGOOD INSTITUTIONAL CONTACTS

Dir. of Equities & Research	Nancy Zeller-Landau	nzlandau@boenninginc.com	610.832.5319
RESEARCH ANALYSTS			
Aerospace and Defense/ Technology	Michael Ciarmoli	mciarmoli@boenninginc.com	610.684.5413
Biotechnology	Derek Jellinek, Ph.D	djellinek@boenninginc.com	610.832.5274
Business Services	William Sutherland	wsutherland@boenninginc.com	610.862.5353
Energy	Michael Schmitz, CFA	mschmitz@boenninginc.com	610.832.5257
Financial Services	Jason O'Donnell	jodonnell@boenninginc.com	610.832.5258
Financial Services	Matthew Schultheis, CFA	mschultheis@boenninginc.com	610.832.5290
Industrials	Ryan Connors	rconnors@boenninginc.com	610.832.5217
Medical Technology	Gregory Chodaczek	gchodaczek@boenninginc.com	610.684.5246
Retail	Holly Guthrie	hguthrie@boenninginc.com	610.684.5412
Technology	Steve Salberta, CFA	ssalberta@boenninginc.com	610.832.5212
RESEARCH ASSOCIATES			
	Kevin Ciabattoni	kciabattoni@boenninginc.com	610.684.5414
	William DiTullio	wditullio@boenninginc.com	610.684.5407
	Michael Roomberg	mroomberg@boenninginc.com	601.862.5337
INSTITUTIONAL SALES			
Northeast	Eugene Bodo	ebodo@boenninginc.com	610.862.5368
Northeast	Rick Johnson	rjohnson@boenninginc.com	610.832.5306
Northeast	Dan McGlinchey	dmcglinchey@boenninginc.com	610.832.5264
Northeast	Bobby Clark	rclark@boenninginc.com	212.922.1459
Northeast/Southeast	Rich Farr	rfarr@boenninginc.com	610.684.5423
Pittsburgh	Robert Wagner	rwagner@boenninginc.com	412-254-2209
Pittsburgh	William Wagner	wwagner@boenninginc.com	412-254-2210
West/Europe	Jeff LaBrot	jlabrot@boenninginc.com	610.832.5309
Mid-West	Matt Oliver	moliver@boenninginc.com	610.684.5420
AGENCY TRADING			
Mark Dengler		mdengler@boenninginc.com	610.862.5330
Harry Himes		hhimes@boenninginc.com	610.862.5330
Brendan Kenny		bkenny@boenninginc.com	212.209.3903
Michael Kinsella		mkinsella@boenninginc.com	610.832.5330
Melissa Donahue		mdonahue@boenninginc.com	610.862.5330
Rob Canning		rcanning@boenninginc.com	610.862.5330
MARKET MAKING			
Joseph Morrissey		jmorrissey@boenninginc.com	610.862.5360
Sean Clair		sclair@boenninginc.com	610.862.5360
Jeff McMurray		jmcmurray@boenninginc.com	610.862.5360
Eric Axelson		eaxelson@boenninginc.com	610.862.5360
Adam Booth		a booth@boenninginc.com	610.832.5325
DERIVATIVE STRATEGY			
Louis DePaul		ldepaul@boenninginc.com	610.832.5275

4 TOWER BRIDGE * 200 BARR HARBOR DRIVE * SUITE 300 * W. CONSHOHOCKEN, PA 19428-2979

WWW.BOENNINGINC.COM

MEMBER FINRA/SIPC