10:25am EST 21-Nov-01 Deutsche Banc Alex. Brown Inc. (S. Zimmer/B. Jacobs/N.)
GDT: MADIT II - Just What The Doctor Ordered-Strong Buy-Part 1/2

Zimmer, Sheryl F. 212-469-5418
Jacobs, Bruce N. CFA 617-217-6262
Shah, Nimesh S. 212-469-7417
Deutsche Banc Alex. Brown Inc.

11/21/2001

GUIDANT CORPORATION (GDT) "STRONG BUY"
MADIT II - Just What The Doctor Ordered -Part 1/2

Date:	11/20/2001	EPS:	2000A	2001E	2002E
Price:	46.82	1Q	0.38	0.41	NE
52-Wk Range:	56 - 27	2Q	0.40	0.38	NE
Ann Dividend:	0.0	3Q	0.37	0.40A	NE
Ann Div Yld:	0.00%	4Q	0.41	0.46	NE
Mkt Cap (mm):	14,182	FY(Dec.)	1.55	1.65	1.93
3-Yr Growth:	18%	FY P/EPS	30.2X	28.4X	24.3X
		CY EPS	1.55	1.65	1.93
Est. Changed	No	CY P/EPS	30.2X	28.4X	24.3X

Industry: MEDICAL SUPPLIES & DEVICES
Shares Outstanding(Mil.): 302.9
Return On Equity (2000) : 43.0%

HIGHLIGHTS:

* Late Tuesday evening, Guidant announced that the MADIT II trial was suspended early due to the overwhelming positive benefit already experienced in trial follow-up so far. Specifically, those patients who received an ICD in the trial experienced a 30% reduction in mortality versus those randomized to medical therapy.

* While many have speculated (and hoped) that this trial could end early, it does come as a surprise (completion was not expected until the summer of 2003), and it is a significant positive for the worldwide ICD market, which had been suffering from moderating growth over the past several quarters. Moreover, while solely sponsored by Guidant, the study will serve to help all three cardiac rhythm management (CRM) companies.

* A key implication of MADIT II is a roughly 2-fold increase in the eligible ICD patient population in the U.S. alone (incremental 275,000 patients). But even more importantly, MADIT II proved that certain patients need not undergo an invasive, risky and costly EP study to qualify for an ICD implant. Not only is the elimination of an EP study better for the patient, but it frees up the electrophysiologist to perform other procedures (e.g. implants).

* ICD market growth has been sluggish and this study will be a much needed shot in the arm. While we are not changing our estimates at the moment, we think this enhances visibility and creates potential upside for the companies leveraged to this area, namely GDT, MDT and STJ. We have included table that assesses the impact at a range of estimates.
* We reiterate our STRONG BUY ratings on both Guidant and Medtronic($42 1/4) and our BUY rating on St. Jude($69 3/32).

DETAILS:

Overview & Conclusion
Late Tuesday evening, Guidant announced that the MADIT II trial was suspended early due to the overwhelming positive benefit already experienced in trial follow-up so far. The study, which was expected to complete follow-up in the summer of 2003, showed a 30% reduction in mortality in ICD patients versus those randomized to medical therapy. A fuller data set is expected in the next few weeks.

This landmark trial should serve as a important "shot in the arm" for the ICD market, which has seen slowing growth to the low double digits (11% yr/yr through September) versus the 20%+ type rates experienced in years past. MADIT II could add an incremental 275,000 patients to the 300,000 patients that are currently indicated for an ICD in the U.S., essentially doubling the market opportunity for ICDs.

Additionally, as an important side benefit, MADIT II patients need not undergo an invasive, risky and costly EP study to qualify for an ICD implant. Not only is the elimination of an EP study better for the patient, but it frees up the electrophysiologist to perform other procedures (e.g. implants).

While the study was sponsored solely by Guidant, we fully expect all three ICDs players to benefit from the positive study results. That being said, Guidant is clearly in the pole position, as the company can use the MADIT II data to file with the FDA for a specific indication. However, similar to post-MADIT I, we would guess that the physicians will draw no distinction between the companies relative to the results of the study and that all three will benefit in line with their respective positions.

% of Total Revenues Derived from ICDs (Source DBAB estimates)

Medtronic	16%
Guidant	26%
St. Jude	15%

MADIT II: Key Implications

Market Opportunity Doubles: First and foremost, the results of the MADIT II trial should serve to revive growth in the ICD market. The primary reasons for the slowing market growth seem to be a combination of complacency among the companies and physicians, a lack of recent high profile studies supporting the case for ICDs, and physician distraction with time consuming new technologies (i.e., heart failure). MADIT II should add an incremental 275,000 patients to the 300,000 patients that are currently indicated for an ICD in the U.S., essentially doubling the market opportunity.

First "Unflawed" Prophylactic Study: Additionally, although there are a number of very positive studies published thus far to support the utility of ICDs, the data is not exactly flawless. For example, some have noted that the MADIT study was too small (only about 200 patients) to generate very meaningful data. Separately, it has been argued that the mortality benefit demonstrated in the MUSTT trial was not a prospective primary endpoint. The bottom-line seems to be that with the existing data, there is still some room for nay-sayers to question the utility of ICDs. MADIT II was a large, randomized, placebo controlled trial, with the primary endpoint being total and all-cause mortality. This trial should go a long way toward delivering a well-designed, "unflawed" case supporting the benefit of ICDs.

Invasive EP Study Eliminated For Certain Patients: Finally, we believe

that the most significant unrecognized value in the MADIT II study is that the study supports the case for an ICD without an EP study. Currently, those patients that could potentially receive an ICD must undergo an invasive, costly and risky procedure to determine the inducibility of the ventricular tachycardia (VT) through an EP study. If the test is successful (e.g. inducible VT), the patient receives an implant. MADIT II is the first study to demonstrate a mortality benefit in patients with non-inducible VT. Put another way, physicians need only identify those patients with low ejection fractions (< 30%) who have suffered from a prior MI. While the elimination of the EP study is a clear positive for the patient, it also frees the electrophysiologist to perform other procedures and potentially makes the referring physicians more inclined to refer patients to the electrophysiologist.

Sensitivity Analysis: We have attempted to take a back of the envelope look at the impact to earnings from incremental growth in the U.S. ICD market (we have considered the impact at 5%, 10% and 15%).

2002E Guidant Market Share	35.5%		
Revenue Growth - 2000E	8%		
Incremental US Growth	5.0%	10.0%	15.0%
Incremental Sales	26.3	52.6	78.9
Incremental EPS Upside	$0.03	$0.06	$0.08
2002E Medtronic Market Share	52.0%		
Revenue Growth - 2000E	19%		
Incremental US Growth	5.0%	10.0%	15.0%
Incremental Sales:	38.5	77.1	115.6
Incremental EPS Upside	$0.01	$0.02	$0.04
2002E St. Jude Market Share	12.1%		
Revenue Growth - 2000E	30%		
Incremental US Growth	5.0%	10.0%	15.0%
Incremental Sales:	8.9	17.9	26.8
Incremental EPS Upside	$0.02	$0.05	$0.07

Note: Revenue growth estimates include heart failure

MADIT II Background: MADIT II (Multicenter Automatic Defibrillator Implantation Trial II) is a large scale, prospective, randomized clinical trial designed to evaluate the prophylactic use of an ICD in a population of patients at high risk of sudden cardiac death with only a moderate impairment of left ventricular function. The 1,200 patients in the trial were fully enrolled by August 2000, with complete follow-up expected to last two years. Patients excluded from the trial included those that had experienced an myocardial infarction (MI) within the past month, coronary artery bypass graft (CABG) or percutaneous transluminal coronary angioplasty within the past two months, patients meeting MADIT I trial requirements, or any patients that were indicated for an ICD. The exclusion of MADIT I patients is an important distinction, as it suggests that the 275,000 patients that would fall under MADIT II criteria are fully incremental to those patients already indicated under MADIT I.

A Little History - Evolution of the ICD Indications: A good way to look at the current and future ICD population is in terms of the types of patients that receive an implant. To start, the population of patients which were originally indicated for an ICD are the "post-event" patients. Post-event patients can be defined as those that have either suffered from sudden cardiac arrest (and survived) or those that have symptomatic episodes of sustained VT (spontaneous VT episodes lasting longer than 30 seconds that result in clinical symptoms, such as fainting and/or dizziness). The significant benefit of implanting ICDs

(versus conventional drug treatment) into these two patient groups was established through the AVID, CASH and DIDS trials.

However, because of the very low survival rate of sudden cardiac arrest, the thesis was presented that certain patients should prophylactically be implanted with a device if they could be determined to be "at risk" for an event. These patients would be ones that had not experienced a clinical event nor had they experienced symptomatic VT, but that had a low ejection fraction and could have VT induced in a controlled environment. The benefit of an ICD in this group of patients was established through the MADIT and MUSTT trials.

How We Got To MADIT II? The MUSTT registry essentially followed patients from the MUSTT study, including those who were not implanted with an ICD because they were not inducible into VT. As it turned out, the non-inducible patients in the MUSTT registry actually had a higher mortality rate than those that were inducible and implanted with a device. So, the MADIT II study was designed to look at the mortality benefit of implanting a device in patients that solely had a very low ejection fraction and a prior heart attack, but that

Additional Information Available Upon Request

The following stock(s) is (are) optionable: Guidant Corporation.