The Top 30 Global Medical Device Companies

Gains Top Declines

The success of the medical device industry is never more apparent than when you examine the numbers being produced by manufacturers in this market. Year by year, today's top companies show that dedication to the bottom line can help amass steady growth, with most of the top 30 companies posting healthy double-digit gains over the prior fiscal year.

Of course, with all the competition and consolidation occurring in daily business, some companies showed signs of weakness with flat or, even worse, declining sales and profits—however, they are in the minority.

While US companies tend to dominate the top 30, the proliferation of international giants shows that the industry is generating more and more profits from global outreach efforts, particularly in China, Japan and Europe. The dollar's fluctuating worth will surely continue to impact sales over time, though.

As the following in-depth company examinations show, new product innovation usually plays the most prominent role in determining success and sustainability year after year.

At least one of the companies on this list will disappear in 2006. Guidant will probably go down in history as one of the top newsmakers of 2005 due to Boston Scientific's aggressive acquisition of the cardiovascular product maker—not to mention Guidant's mounting legal troubles stemming from a slew of product recalls and reports of improper handling of related problems with its ICDs and pacemakers.

Parent company Kodak has also been weighing the merits of selling its longtime healthcare division and, by this time next year, that segment could be operating under another owner. Meanwhile, Tyco is transforming itself by breaking into three separate segments.

However, like the industry overall, this report includes a variety of success stories, most notably St. Jude. The industry's shining star in 2005 improved sales by more than 27%—an enviable accomplishment for any company in any industry. And Hospira, in its first full year as an independent company (it was formerly a division of Abbott), held its own in a crowded marketplace.

With all the myriad acquisitions occurring in the medical device sector, and the ever-new crop of small start-up companies, it's interesting to note that this year's list (in terms of ranking by sales) didn't differ much from last year. The lone entrant to the elite list is Varian Medical. In the current climate, however, it's anybody's guess as to who will be on this list next year.

One caveat about this list: Bausch & Lomb certainly fits into the fold of the top 30 medical device companies, but, unfortunately, the company did not have any firm 2005 numbers to report as of press time.

The MPO Staff

TOP MEDICAL DEVICE MANUFACTURERS

1.	Johnson and Johnson	$17.7B
2.	GE Healthcare	$12.1B
3.	Medtronic	$10.1B

4.	Baxter International	$9.8B
4.	Cardinal Health	$9.8B
6.	Tyco Healthcare	$9.5B
7.	Siemens Medical Solutions	$9.2B
8.	Philips Medical Systems	$7.5B
9.	Boston Scientific	$6.3B
10.	Stryker	$4.9B
11.	B. Braun	$3.9B
12.	Guidant Corp.	$3.6B
13.	3M Healthcare	$3.5B
14.	Zimmer Holdings	$3.3B
15.	Becton, Dickinson & Co.	$3B
16.	St. Jude Medical	$2.9B
17.	Kodak Health Group	$2.7B
18.	Hospira	$2.6B
19.	Fresenius	$2.5B
20.	Smith & Nephew	$2.4B
21.	Synthes	$2.1B
22.	Alcon	$2B
23.	Biomet	$1.9B
24.	C. R. Bard	$1.8B
24.	Terumo	$1.8B
26.	Dentsply International	$1.7B
27.	Invacare	$1.5B
28.	Gambro	$1.4B
29.	Dräger Medical	$1.3B
30.	Varian Medical	$1.2B

1. Johnson and Johnson

$17.7 Billion ($51B Total)

Key Executives:
William C. Weldon, Chairman and CEO
Robert J. Darretta, Vice Chairman and CFO
Michael J. Dormer, Worldwide Chairman, Medical Devices
Thomas M. Gorrie, VP, Government Affairs and Policy
Theodore J. Torphy, VP, Science and Technology
Nicholas J. Valeriani, Worldwide Chairman, Cardiovascular Devices and Diagnostics

No. of Employees: 115,600

World Headquarters: New Brunswick, NJ

For next few years, many will be asking “What if?” or “Why did it happen?” The talk is about Johnson &

Johnson's failure to purchase Indianapolis, IN-based Guidant. The New Brunswick, NJ-based medical device giant courted Guidant for more than a year, only to have Natick, MA-based Boston Scientific swoop in and grab Guidant for $27.2 million.

The company had originally made what was considered an attractive offer to Guidant, putting $25 billion on the table. Then, after Guidant's lengthy list of problems surfaced (see Guidant's report on page 78), J&J lowered its offer. However, it eventually had upped the sum to buy Guidant for $24.5 billion once Boston Scientific approached Guidant with its own lucrative offer. For two months, both companies battled back and forth for Guidant before the $80-per-share offer from Boston Scientific was just too enticing for Guidant.

"Unfortunately, a combination of adverse developments in Guidant's business and competition for the asset forced the price to a ping where we concluded it was no longer in the best interest of our shareholders to pursue this business opportunity," said J&J CEO William C. Weldon. "Nonetheless, we remain committed to strengthening our business in this important [cardiovascular] therapeutic category."

Only time will tell what effect—positive or negative—the turn of events will have on both Boston Scientific and J&J. Even months after the ink was dried on the contract to buy Guidant, the cardiovascular product manufacturer is still being plagued with problems with its implantable defibrillators and pacemakers.

In some respect, the move by Boston Scientific might have been a blessing in disguise for J&J, as the company will most likely continue its reign as the largest medical device company in the world and not have to worry about being burdened by Guidant's past.

If the deal had gone through, it would have placed the medical device sector on equal terms with the pharmaceutical division as the multi-faceted corporation continues to stress the more profitable medical device side.

Not only did J&J battle Boston Scientific in the boardroom, the two companies also faced off in the courtroom regarding several decisions on patent disputes involving J&J's balloon expandable stents and the Natick, MA-based manufacturer's Taxus and Liberte stents.

In the most recent move, J&J's Cordis Corp. unit filed an appeal last month (June) of a federal decision that upheld a previous ruling that its stent product infringed on a Boston Scientific patent. In 2005, the device segment outgrew the multi-faceted corporation with a double-digit rise in revenues at 13%, while the entire corporation as a whole grew a steady 7%.

Johnson and Johnson medical device franchise sales include the following divisions: Vision Care, Cordis, DePuy, Ethinco, Ethicon Endo-Surgery and LifeScan. Most of the divisions realized double-digit sales increases. Cordis led the pack with a robust 24% jump in revenues helped by its circulatory disease management products, driven by the Cypher Sirolimus-eluting Coronary Stent. Cypher is the worldwide leader of drug-eluting stents, which have been used to treat more than two million patients with coronary artery disease. The stent had excellent growth domestically as well as internationally, with the best increases coming from Japan.

Also contributing to the strong performance of the segment were the results from DePuy's orthopedic joint reconstruction and spinal products, LifeScan's blood glucose monitoring products, Vistakon's disposable contact lenses and Ortho-Clinical Diagnostics' professional diagnostic products.

While the mega-corporation did not capture Guidant, it did complete several other smaller—but significant—acquisitions.

Before the rejection of Guidant, J&J's unit Cordis purchased Redwood City, CA-based LuMend, a privately held company that makes chronic total occlusion (CTO) devices to treat peripheral vascular disease, in September 2005.

Right after Boston Scientific secured the deal for Guidant, J&J bought three more companies over the next few months. In January 2006, the company announced the acquisition of Hand Innovations of Miami, FL, a privately held manufacturer of implants used for the repair of wrist fractures. In February, J&J acquired West Chester, PA-based Animas Corporation, a leading manufacturer of insulin infusion pumps and related products. And in May, Ethicon, a unit of Johnson & Johnson, purchased privately held, San Juan Capistrano, CA-based Vascular Control Systems, which manufactures devices to control bleeding during obstetric and gynecologic procedures. Ethicon manufactures instruments for general surgery and other

surgical procedures.

“This represents a strong strategic fit with our gynecologic business,” said Sheri McCoy, a J&J executive responsible for the Ethicon business, about the purchase of Vascular Control Systems. “The technology and knowledge we’ll gain will enable us to expand our ability to create new therapies for women.”

One area that J&J is expected to make a splash in during the next few years is the artificial spine market. The company received a big boost from Medicare this May after it agreed to pay for artificial spinal disks implanted in beneficiaries under the age of 60.

In addition, J&J is expected to launch the Synthes disc in the United States in the second half of 2006.

DePuy, the company’s segment for joint reconstruction and other important orthopedic areas, is focusing on less invasive and more durable, motion-saving solutions.

As part of its Cordis franchise, Biosense Webster saw double-digit growth in 2005 and is expected to gain more in 2006 as it received FDA approval for the use of Celsius RMT diagnostic abalation steerable tip catheter.

While the revenues have grown for Cordis, the segment continues to work with the FDA (since April 2004) on warning letters regarding cGMP regulations and Good Clinical Practice regulations. J&J was hoping to get clearance this year after follow-up inspections in the first half of 2006.

After the Cordis segment showed the largest growth in 2005, DePuy and Lifescan reported 13% and 12% jumps in sales, respectively. Vision Care and Ethicon demonstrated 11% and 9% revenue increases, respectively, in fiscal 2005. Ethicon Endo-Surgery had a 9% rise in sales for 2005.

For LifeScan, the Onetouch Ultra product line boosted its sales to $1.9 billion. The continued success of the Acuvue Advance Brand contact lenses also helped boost the Vision Care franchise to $1.7 billion in revenue.

In the first quarter of 2006, medical devices and diagnostics sales rose 5% to $5 billion, with Cordis circulatory disease management products being a key contributor to the segment (the prime driver was the Cypher Sirolimus-eluting coronary stent). Also contributing to the sector were DePuy’s orthopedic joint reconstruction, sports medicine and trauma businesses, along with Ethicon Endo-Surgery’s minimally invasive products.

From left to right, GE CEO Jeffrey R. Immelt, GE Capital Services CEO Michael Neal and GE Healthcare Chairman William M. Castell.

2. GE Healthcare

$12.1 Billion ($150B Total)

Key Executives:
Jeffrey R. Immelt, Chairman and CEO

Joe M. Hogan, President and CEO, GE Healthcare
William M. Castell, Vice Chairman and Executive Officer
Bob Wright, Vice Chairman and Executive Officer
William R. Clarke, VP and Chief Technology & Medical Officer
Peter H. Loescher, President, CEO, Healthcare Bio-Sciences

No. of Employees: 316,000

World Headquarters: Fairfield, CT

One of GE's old slogans was "Bringing Good Things to Life," and that continues to be the case in healthcare as the company continues to stress its healthcare unit while decreasing some of its slower growing units of the conglomerate.

The GE Healthcare Technologies portion of the division rose a steady 7% in fiscal 2005 while, overall, the GE Healthcare division, which includes the biosciences segment, jumped 13% to $15.2 billion, achieving its goal of $15 billion in revenue last year.

In 2005, CEO Joe Hogan returned to the post of the division after William Castell, the former CEO of Amersham, was given a token year at the helm before becoming chairman of the company and retiring. In 2004, GE had purchased Buckinghamshire, UK-based Amersham. During the one-year period Hogan was president and CEO of GE Healthcare Technologies.

The entire healthcare unit was spurred by Amersham, which was purchased in the second half of 2004 and contributed $800 million of revenue in fiscal 2005. While it was a healthy increase, the numbers did not match the 32% rise in sales in 2004, when the division received a bigger bump from the Amersham purchase.

The GE Healthcare Technologies unit provides medical imaging and information technologies, patient monitoring systems and healthcare services. The technologies unit generated 80% of revenue for the entire division with the other sector, GE Healthcare Bio-Sciences, reporting the remaining share. For 2005, GE continued to generate strong orders in computed tomography (CT), ultrasound and magnetic resonance (MR) orders, and especially strong demand from its Imagination Breakthrough products.

One of the biggest success stories for GE Healthcare was the LightSpeed VCT. The company installed the 500th product in the line in November 2005, making it the fastest selling product in the company's history.

"The incredible success of GE's LightSpeed VCT and its rapid adoption by physicians around the world is changing the way physicians diagnose and treat heart disease," said Gene Saragnese, vice president and general manager of GE Healthcare's Molecular Imaging and CT business.

While being one of the more thriving units in GE's world, it is one of the more profitable ones for the conglomerate—realizing about 10% of the company's total profit for fiscal 2005.

After about a year of inactivity on the merger front, GE made two major purchases in the end of 2005 and halfway through 2006.

In the first part of 2006, the healthcare division continued to be viable with another double-digit rise in revenues of 10% to $3.7 billion with the quarter ending March 31. This year will also be the first full year of the reorganization, in which the conglomerate slashed the number of businesses from 11 to seven.

For fiscal 2006, GE Healthcare started with a bang by closing out the purchase of Burlington, VT-based IDX Systems Corporation in January for $1.2 billion. GE Healthcare officials said the purchase will accelerate efforts to seamlessly connect clinicians from physicians' offices to hospitals with comprehensive, enterprise-wide electronic health record (EHR) solutions. With the purchase of IDX, the GE Healthcare IT business was renamed GE Healthcare Integrated ITO Solutions.

"GE and IDX have a shared vision on how to accelerate the adoption of electronic health records across the globe," said Hogan. "We are extremely excited about joining with IDX and believe that our combined offerings are in line with where healthcare is headed and match the needs of our customers."

Last month, in June, the unit continued to grow with the purchase of Biacore, an Uppsala, Sweden-based

medical instruments maker, for $438 million.

GE Healthcare also had several collaborations in the last half of 2005 and first half of 2006, including a supply agreement with San Leandro, CA-based Alpha Innotech Corporation for imaging systems; Tirat Carmel, Israel-based inSightec for the ExAblate 2000, an ultrasound system that non-invasively treats uterine fibroids; and with St. Paul, MN-based St. Jude Medical on a project dealing with a cardiovascular ultrasound imaging system with fully integrated intracardiac echocardiography (ICE) imaging capabilities, intended for use in treating patients suffering from heart disease.

In addition to its acquisitions and collaborations, GE Healthcare released several new products after garnering several FDA approvals.

In October, the FDA okayed GE Healthcare's Lunar iDXA, a new bone mineral density system designed to help doctors detect, diagnose and monitor treatment of osteoporosis more accurately and earlier in the disease process. The system also enables clinicians to simultaneously assess body composition and ascertain fat distribution.

"The new iDXA provides both excellent image quality and precise bone density measurements to help clinicians diagnose osteoporosis," said Ken Faulkner, chief scientist for GE Healthcare's Lunar business.

In March 2006, the healthcare unit received FDA approval on a pair of products: Innova 3131 (IQ) and 2121 (IQ) digital flat panel Biplane Imaging Systems. The company boasted that these are the first systems available that will cover the full size of the patient's lateral and frontal anatomy simultaneously for a variety of cardiovascular and neurovascular image-guided interventional procedures.

The introduction of the systems is part of GE's move to double its compact ultrasound business, with the goal of delivering more than 5,000 compact ultrasound systems worldwide in 2006.

In April, GE Healthcare received the FDA's okay for the company's new wide bore computed tomography (CT) system, the 16-slice wide bore CT system. The new technology is available in the LightSpeed RT 16 and LightSpeed Xtra. In the same month, the FDA backed GE Healthcare's new mammography platform, the Senographe Essential, the next-generation of GE's Senographe full field digital mammography systems.

Looking ahead at the rest of 2006, GE CEO Jeffrey Immelt said that it would maintain its leadership role in molecular imaging and continue to build on its Electronic Medical Record (EMR) segment.

3. Medtronic

$10.1 Billion

Key Executives:
Art Collins, Chairman and CEO
William A. Hawkins, President and COO
Stephen Mahle, Exec. VP and President, CRM
Susan Alpert, MD, PhD, Sr. VP—Chief Quality and Regulatory Officer
Jean-Luc Butel, Sr. VP and President, Asia Pacific
Terrance Carlson, Sr. VP, General Counsel and Corp. Secretary
H. James Dallas, Sr. VP, Chief Information Officer

No. of Employees: 33,000

World Headquarters: Minneapolis, MN

Founded in 1949, Minneapolis, MN-based Medtronic is no stranger to capitalizing on opportunity while meeting challenges head on. Therefore, it's not surprising that the manufacturing giant managed to stay the course while increasing net sales to more than $10 billion (11%) in fiscal year 2005 (ended April 29, 2005). However, with the overall cardiology market seeing slower growth this year, Medtronic—along with its competitors—could face even more hurdles that may affect its revenues in coming months.

In the past year since 2005's earnings were reported, however, Medtronic hasn't shown any signs of losing momentum. Recently released FY 2006 numbers show another record for the company as net sales surpassed $11.3 billion (12% growth). Furthermore, net earnings were also up to $2.6 billion, representing a healthy 42% increase.

"Medtronic's strong annual and fourth-quarter performance reflects the balance of our portfolio and underscores the importance of maintaining a diversified business," said Chairman and CEO Art Collins. "We are encouraged by the strength of our new product pipeline and continue to make major investments to support growth in the coming fiscal year and beyond."

In 2005, six of the company's seven businesses were blessed with double-digit sales increases. The most newsworthy was the Spinal, ENT (ear/nose/throat) and Navigation division, which grew 20% to $2.1 billion. Neurological and Diabetes also saw double-digit gains with an 11% rise to $1.8 billion. Cardiac Rhythm Management came in third with 9%, reaching $4.6 billion. Already this year, all these divisions are posting healthy gains—most by double digits again.

With all this growth comes a continued strategy of investing more dollars in R&D—nearly $1 billion in 2005. Apparently this paid off that year, since as much as two thirds of corporate revenues stemmed from products introduced in the last two years. Some of the new products rolled out included the Intrinsic ICD and InSync Sentry cardiac resynchronization device with defibrillator backup (CRT-D); Paradigm 515 and 715 insulin pumps for diabetes; Verte-Stack Capstone PEEK (Capstone) Vertebral Body Spacer for spinal surgery; and Restore fully rechargeable neurostimulator for pain management. The company is continuing to introduce new products at a steady pace. Since February, Medtronic has received FDA approval for the AneuRx AAAdvantage, a minimally invasive abdominal aortic aneurysm stent graft with the Xcelerant delivery system; Micro-Driver coronary artery stent system; Minimed Paradigm REAL-time Insulin Pump and Continuous Glucose Monitoring System; Performer Cardiopulmonary Bypass System; Concerto CRT-D; and Virtuoso ICD.

After receiving FDA approval in December for the PROSTIVA RF Therapy system for treatment of benign prostatic hyperplasia, Medtronic kicked off its launch for commercial release of the product in May.

In the midst of all these introductions, the company is expecting to receive US clearance in 2007 to market its Endeavor stent, which is already being used in 85 countries. In June, Endeavor received reimbursement approval in France and regulatory approval in China.

With all this new business, Medtronic completed some major facility expansions in Tennessee (spinal business), Ireland (vascular) and Puerto Rico (diabetes and neurological). The cardiac rhythm management business is getting a major boost as well through new initiatives in Minnesota. To integrate all of Medtronic's global operations, which serve more than 120 countries, a new enterprise-wide information system was implemented.

Along the way, the news hasn't all been good for the company. In July 2005, Medtronic sent out a voluntary communication to its customers urging them to carefully inspect their hard-shell carry cases for the LIFEPAK CR Plus automated external defibrillator after it surfaced that some of them had problems with a blocked pressure vent.

Later that year, in November, Medtronic recalled some of its Sigma pacemakers due to a problem with a solvent used to clean the wires.

Litigation has also kept the company busy. In February, Medtronic Sofamor Danek announced that it filed suit against Biomet and its subsidiary, EBI Spine, L.P., for infringement on seven patents related to its spine products. Santa Rosa, CA-based Kyphon is another target of Medtronic, as the company filed suit alleging that Kyphon is infringing on at least four of Medtronic's patents related to balloon dilatation catheters and spinal treatment. Finally, a suit was filed against Guidant Corporation in Dublin, Ireland, charging that Guidant's MULTI-LINK Vision and Xience V coronary stents infringe patents under exclusive worldwide license to Medtronic Vascular from evYsio Medical Devices of Canada.

In spite of some of these problematic situations, nothing appears to stand in the way of Medtronic achieving its goals. In May, Medtronic announced that it projects 2007 revenue to keep climbing to as much as $13 billion, and 2008 projections are between $14 billion and $15 billion.


Baxter CEO Robert L. Parkinson, Jr.

4. Baxter International

$9.8 Billion

Key Executives:
Robert L. Parkinson Jr., Chairman and CEO
Peter Arduini, Corporate VP, President—Medication Delivery
Joy A. Amundson, Corporate VP, President—BioScience
John J. Greisch, Corporate VP and President, International
Robert M. Davis, Chief Financial Officer
Norbert G. Riedel, Sr. VP, Chief Scientific Officer
J. Michael Gatling, Corporate VP, Global Manufacturing Operations
Lawrence T. Gibbons, Corporate VP, Quality

No. of Employees: 47,000

World Headquarters: Deerfield, IL

While it appeared that Baxter was climbing out of its former financial and regulatory doldrums, the medical device company hit some snags as more regulatory problems developed, especially in its infusion systems business.

The medical device manufacturer has been rebuilding over the last year-and-a-half, after CEO Robert Parkinson took over for Harry Kraemer, who experienced several quarters of poor earning results and accounting irregularities. And the company was still reeling from deaths of 53 patients in 2002 due to contaminated dialysis filters made by a Baxter subsidiary.

In October 2005, regulators seized 6,000 Colleague infusion pumps and approximately 850 Syndeo PCA syringe pumps that Baxter had withheld from shipping earlier in 2005. In March that year, Baxter reported to customers that the there were problems with certain Syndeo models that could disrupt infusions of intravenous therapies. Later, in July, the FDA had classified the recall as Class I, the most serious of the three classes. In all, three deaths and six serious injuries may have been associated with the devices. For fiscal 2005, the company recorded a $77 million charge for remediation costs associated with correcting design issues for the infusion pump.

In the 2005 annual report, Parkinson (who came over from Abbott Labs in 2004) said that the company was working to resolve the issue with the FDA. “I believe we already have made substantial progress in addressing these challenges,” he noted. “This includes the establishment of a Device Center of Excellence focused on ensuring the quality of sophisticated, electromechanical devices like IV pumps.”

Despite the recall problems, the company was financially flourishing as its profit for 2005 almost tripled to

$956 million—it appears the company's reorganization plan to trim the fat from the corporation was working, since it reduced its debt by almost $1 billion. The company also registered a modest 4% rise in sales to $9.8 billion. It matched that in the first quarter of 2006, as it collected $2.4 billion in revenues.

"We made considerable progress during 2005, meeting or exceeding virtually all of our key financial objectives, despite the challenges with the Colleague Infusion Pump," said Parkinson, who additionally noted that the company added 20 new R&D alliances. "During 2005, we also increased our spending on R&D and accelerated the pace of business development initiatives, which reflects our commitment to reinvigorating innovation within our company."

Some of the more beneficial alliances include one with Nektar Therapeutics and Lioxen Technologies in developing longer-acting forms of Factor VIII and other blood-clotting proteins, as well as with Cangene Corporation to market and distribute WinRho SDE, an antibody therapy to treat immune thrombocytopenic pupura (an autoimmune disorder).

In addition to the problems with the Colleague, Baxter informed the FDA in November that it was withdrawing the 6060 Multi-Therapy Infusion pump because of problems occurring when the device was used to distribute pain and other critical medications. The pump delivers intravenous medications, commonly in home and non-hospital settings. According to Baxter, it had received reports of one death and two injuries that may have been linked with the pump. The company recorded a $49 million charge for fiscal 2005 for the costs of withdrawing the 6060.

The company has three major segments: BioScience, Medical Delivery and Renal. Although each unit sells products that also contain non-medical devices such as drugs, many of these are marketed in conjunction with devices. The company does not break out revenues by device and non-device products.

While the company's largest segment is its Medication Delivery segment, the recalls reduced its revenues by 1%. And with the BioScience division growing by 10%, it put the two units almost equally in the sales leadership position at Baxter.

While Baxter is hurting in its infusion systems business, the company received a boost from sales of its Advate Antihemophilic Factor, a recombinant for treatment of hemophilia A that doubled to more than $600 million as part of its BioSciences segment.

Regionally, more than half of the company's sales and earnings came from outside the United States. China is particularly lucrative, with some of Baxter's products for peritoneal dialysis (PD) doing quite well and poised to do even better, since that industry is growing at 25% annually. Baxter is focusing on growing PD as a therapy of choice for people with end-stage kidney failure. In 2005, the company surpassed 7,500 PD patients in China. Also in China, Baxter launched sevoflurane, an inhalation anesthetic.

In the first quarter of 2006, the company started a $60 million investment to expand production capacity at its four manufacturing facilities in China to accommodate the expected growth in its PD and intravenous solutions products.

In 2005, Baxter launched several new products, many of which stemmed from the renal division, including the release of Extraneal, Nutrineal and Physioneal, all specialty PD solutions. The BioSciences division released Gammagard liquid, a ready-to-use intravenous immunoglobulin for treating immune deficiencies. In addition, the medication delivery segment launched sevoflurane.

On a sad note, former CEO William B. Graham, who was the head of the company for 28 years (1953 to 1980), died in January 2006. Graham led Baxter through some of the bigger innovations in the field, including the first flexible intravenous container system, the first artificial kidney, the first plastic blood-collection system, the first clotting factor for people with hemophilia and the introduction of continuous ambulatory peritoneal dialysis.

4. Cardinal Health

$9.8 Billion ($74B Total)

Key Executives:
Robert D. Walter, Chairman
R. Kelly Clark, President and CEO
John Parker, President, Cardinal Health, Europe
Jody Davids, Executive Vice President and CIO
Jeffrey Henderson, Executive Vice President and CFO

No. of Employees: 55,000

World Headquarters: Dublin, OH

For fiscal year ended June 30, 2005, Cardinal Health was able to achieve a 15% gain in sales. However, the full picture shows troubled times as Cardinal actually experienced its first earnings decline in the company's 35-year history, sliding from $2.2 billion in 2004 to $1.6 billion in 2005.

Cardinal's Medical Products and Service business had mixed news, garnering a 7% increase to $9.8 billion while earnings declined 3% to $672 million. The earnings slide was attributed to competitive pricing pressures and significant increases in raw material and fuel costs.

During 2005, the company did make some moves to strengthen business. Cardinal opened a new plant in Las Piedras, Puerto Rico, where it will manufacture components for the Pyxis Products business. With this addition, Cardinal now operates six facilities employing nearly 1,000 people in Puerto Rico.

Cardinal also signed preferred provider agreements with MedAssets Supply Chain Systems, a major group purchasing organization representing 22,000 healthcare providers, for its Alaris infusion safety systems and Pyxis medication and supply automation solutions.

Overall, though, the company's top executives were disappointed with the final results of FY 2005, noting in their annual report, "Our financial performance was disappointing. We could have done better." As a result, Cardinal's primary strategy is to sell some of its assets and become a leaner, more focused company.

Changes are certainly in motion, as 2006 has seen major shifting within the company. Earlier this year, Cardinal Health appointed R. Kerry Clark, former vice chairman of the board of The Procter & Gamble Company, to president, chief executive officer and a member of the board of directors. Clark succeeded Robert D. Walter, the company's founder and long-time CEO. Since he is remaining with the company as the Cardinal's chairman, Walter will work closely with Clark to shape the company's future. Cardinal also announced that George L. Fotiades, president and chief operating officer, would leave the company following a transition period.

As the company adjusts to all the changes in motion, Cardinal is beginning to show a bit of rebound, but things are still somewhat unsteady. Third-quarter FY 2006 results for Cardinal Health continue to strengthen as revenues reached record levels. For the quarter ended March 31, revenue had increased 9% to $21 billion. Earnings before discontinued operations continued a downward trend, however, losing 5% over last year. In the Medical Products and Services business, revenue was slightly ahead of the prior year, including a 6% increase in revenue within the medical products manufacturing and distribution businesses. Sales growth in medical products manufacturing was helped by demand for Cardinal health's glove and respiratory products.

The third quarter also has been particularly active for Cardinal with announcements of divestitures and acquisitions. As part of a strategy to focus on core, market-leading products, Cardinal plans to divest certain businesses as part of Cardinal Health's specialty distribution business to OTN, a wholly owned subsidiary of Oncology Holdings, Inc.

Cardinal also has entered into discussions concerning the sale of its healthcare marketing services and UK-based Intercare pharmaceutical distribution businesses. Both businesses have been listed as discontinued operations.

During the quarter, Cardinal sold its pharmacy staffing business to Soliant Health, the healthcare staffing unit of MPS Group.

Furthermore, Cardinal Health signed a five-year agreement with Novation to distribute medical and surgical

products, essentially extending a long-term relationship between Novation and Cardinal Health. Under the agreement, Cardinal Health will provide medical and surgical products and logistics services to Novation members. The contract will go into effect September 1, 2006 and run through August 2011.

“This is a vote of confidence in our company and the value of our products and services for healthcare facilities nationwide,” said Jim Neubauer, Cardinal Health’s vice president of Health Systems. “We are pleased to continue building on our long-term relationship with such a valuable customer.”

Finally, in an effort to augment its line of medical product offerings, Cardinal also completed the acquisition of Golden, CO-based Denver Biomedical, Inc., a designer and manufacturer of the Pleurx Pleural Catheter System.

With operations becoming more focused on core technologies, Cardinal expects to grow revenues by 8% to 10% annually.

“After completing a thorough review of our businesses and global operations, we remain convinced of the tremendous potential Cardinal Health has to help improve productivity and the safety of health care worldwide,” said president and CEO Clark. “We have made progress during fiscal 2006 in transforming Cardinal Health and see continued momentum as we transition to fiscal 2007. In 2007, we will continue to focus on organic growth and using our scale to reduce costs across the enterprise, which we expect will result in strong revenue and earnings-per-share growth for the year.”

6. Tyco Healthcare

$9.5 Billion ($74B Total)

Key Executives:
Edward Breen Chairman and CEO
Richard J. Meelia, President, Tyco Healthcare
Christopher J. Coughlin, Executive VP and CFO
Eric M. Pillmore, Senior VP, Corporate Governance
Carol Anthony Davidson, Senior VP, Controller and Chief Accounting Officer

No. of Employees: 247,900

World Headquarters: Pembroke, Bermuda

This will be the last year that Tyco is one company, as CEO Ed Breen prepares to split the company into three publicly traded divisions—including Tyco Healthcare.

The move is just another step in the reconfiguration of Tyco after Breen took over the reigns of the company in 2002, after former CEO Dennis Kozlowski left under a cloud of well-publicized controversy. Kozlowski and former CFO Mark H. Swartz are currently serving time in prison after being convicted for stealing from Tyco.

The separation of Tyco into three units is expected to be finalized in the first quarter of 2007; along with the healthcare unit, the other two divisions are Tyco Electronics and Tyco Fire & Security and Engineered Products & Services. With the reorganization changes, current Tyco Healthcare President Rich Meelia will become the separate company’s CEO.

“After a thorough review of strategic options with our board of directors, we have determined that separating into three independent companies is the best approach to enable these businesses to achieve their full potential,” said Breen. “Healthcare, Electronics and TFS/TEPS [Tyco Fire & Security and Tyco Engineered Products & Services] will be able to move faster and more aggressively—and ultimately create more value for our shareholders—by pursuing their own growth strategies as independent companies.”

Tyco Healthcare products include advanced surgical instruments and supplies, respiratory care products, contrast media and diagnostic imaging products, needles and syringes, vascular therapies, sutures and wound care products.

In 2005, Tyco Healthcare rose 4% in revenues with the help of increased volumes in its international division, especially in Europe. The division experienced sales in its surgical segment due to increased contracting with group purchasing organizations (GPO) and the acceptance of its Laparoscopic Gastric By-Pass procedures and the increased adoption of LigaSure vessel occlusion system device.

Overall, Tyco corporate revenue increased only 3% to $39.7 billion. The small increase might be the result of what some analysts say was the company's past skimping on R&D—however, in the last two years the company has increased its R&D efforts. Last year, R&D expenditures for the Healthcare division rose 11% to $232 million, the second highest segment spending on R&D (the first being Tyco's electronics segment).

After being quiet in terms of company takeovers after the ouster of Kozlowski, Tyco has started to become more aggressive and made two purchases in the healthcare segment that especially bolstered its surgical product portfolio.

In July 2005, the company bought Mountain View, CA-based Vivant Medical, a manufacturer of microwave ablation technology, for $66 million with up to an additional $35 million to be paid in the future based on the achievement of certain milestones. The company expects the world ablation market to grow to between $700 million and $1.5 billion by 2015.

Later, in November, Tyco acquired a controlling interest in Floreane Medical Implants of Trévoux, France. The manufacturer of surgical mesh products was gotten for $142 million.

In the courts, Tyco Healthcare received a favorable verdict in an appeal in March this year, when a US district judge vacated a $420 million jury settlement to Irvine, CA-based Masimo. A jury in 2005 had ordered Tyco to pay Masimo the amount of damages dealing with an antitrust lawsuit dealing with Masimo's pulse oximetry. Masimo contends Tyco subsidiaries prevented hospitals from buying Masimo's products. The judge ordered a new trial on the issue.

While Tyco won the ordering of a retrial in that case, it was hit by two other longstanding lawsuits. Nellcor, a division of Tyco Healthcare, settled with Masimo and had to pay out $330 million to the Irvine, CA med-tech company for an antitrust lawsuit over its pulse oximetry monitors. In addition, Tyco had to pay out $64.5 million to Rancho Santa Margarita, CA-based Applied Medical Resources in another patent dispute over a device used in laparoscopic surgery.

In the second quarter of 2006 (ended in April), its overall healthcare segment recorded a flat increase due to several voluntary recalls in the respiratory and imaging segments. After an inspection of a Tyco Healthcare plant in the beginning of 2005, the FDA announced in October that there were problems with the company's tracheotomy tubes and a heart and blood monitoring device that are manufactured at the company's Pleasanton, CA plant.

Klaus Kleinfeld, CEO of Siemens AG in Germany

7. Siemens Medical

$9.2 Billion ($74B Total)

Key Executives:
Klaus Kleinfeld, President and CEO, Siemens AG
Heinz-Joachim Neuburger, CFO, Siemens AG
Erich R. Reinhardt, President of Siemens Medical Solutions
Thomas N. McCausland, President, US Operations (SMS)
Hermann Requardt, Executive Management Board Member (SMS)
Klaus Stegemann, Executive Management Board Member (SMS)

No. of Employees: 439,400

World Headquarters: Munich, Germany

Last year marked a time of transition for German electronics giant Siemens AG, as Klaus Kleinfeld took over for Heinrich von Pierer as CEO of the parent company in January 2005. In the end, the medical products arm of the company fared well amid these changes, seeing its sales rise a steady 6% in 2005 with the help of its molecular imaging field.

Siemens Medical was bolstered in fiscal 2005 with the purchase of Knoxville, TN-based CTI Molecular; the acquisition later pushed the company to form a new molecular imaging division as part of one of the world's largest medical imaging companies. Before the purchase of CTI Molecular, the current subsidiary of Siemens was the market leader in positron emission technology (PET) products and services.

Along with the vitalized new molecular imaging business, the company's diagnostics imaging solutions unit was a strong driver for Siemens with the help of new product releases.

Medical Solutions was also strengthened by the purchase of Sensant Corp. of San Leandro, CA for an undisclosed amount in the second half of 2005. The purchase allows Siemens to develop advanced Capacitive Microfabricated Ultrasound Transducer (CMUT) technology, and commercialize next-generation transducers based on this innovative technology.

While revenues were up, profits dropped 8% in 2005 to $1.2 billion. The drop was due to $145 million in gains for portfolio transactions early in fiscal 2004, primarily due to the sale of Medical Solutions LSS (Life-cycle Solution Service) business.

Overall, Siemens AG's revenues rose 5% to $90.9 billion. (Note: This number doesn't include the mobile device unit that was sold off in June 2005.)

Strategies employed in 2005 appear to be in use again this year. The medical unit of Siemens continued to buy companies in fiscal 2006 when it bought Los Angeles, CA-based Diagnostic Products Corporation (DPC) for $1.9 billion in April 2006. DPC is a manufacturer of immunodiagnostic kits to diagnose conditions including cancer, heart disease and pregnancy.

Siemens officials said the purchase of DPC complements the imaging and healthcare IT products. "We are impressed by DPC's track record in developing a globally leading immunodiagnostics business and by the quality of its people. The potential is huge to drive groundbreaking innovations by combining DPC's in-vitro diagnostics leadership with Siemens' leading position in medical imaging and healthcare IT solutions," said Erich R. Reinhardt, CEO of Siemens Medical Solutions. "Together, both companies will be empowered to continue to revolutionize the prevention, diagnosis, treatment and management of disease."

In the second quarter of 2006, the Medical segment grew 9% to $2.5 billion as the diagnostics imaging solutions segment contributed to sales and an 11% rise in profits to $312 million. Revenues also continued to increase in the Asia-Pacific region.

In 2005 and early 2006, Siemens introduced several new products, including Encompass II release for the ultra-premium Acuson Sequoia ultrasound platform and the Encompass III release on the Acuson Sequoia C512 ultrasound platform, along with the NaviVision, a new system that allows more room for the operating room team.

The company also had several collaborations, including one with Berlin, Germany-based Schering AG to explore the potential of Siemens Dual Source computed tomography (CT) technology implemented with the Somatom Definition in combination with Schering's CT imaging agent, Ultravist; with Hopkinton, MA-based EMC Corporation to offer the full range of EMC network storage systems for the healthcare market; and combining with BrainLAB of Munich, Germany on a surgical C-arm and an optical 2D/3D navigation unit into a common platform.

The company received FDA 510(k) clearance for the MVision Megavoltage Cone Beam (MVCB) imaging package, which makes it possible for the megavoltage source used for treatment to also create a 3D image of the patient, enabling clinicians to see inside the patient at the most appropriate moment. This past April, the company received PMA approval to market the Mammomat Novation (DR) for use in medical facilities with full field digital mammography system while mobile.

In the second quarter of 2006, Siemens Medical Solutions USA, a subsidiary of Siemens Medical Solutions, was included in an indictment on federal fraud charges relating to a $49 million radiology equipment contract that required minority business participation.

The contract was awarded during the construction of Cook County's (IL) new Stroger Hospital. According to the US Justice Department, the parties allegedly formed a sham joint venture with a minority business enterprise (MBE) to successfully bid on the public contract in 2000, and the employees allegedly schemed to cover up the initial fraud when the contract was challenged by a competitor in a federal court lawsuit.


Philips CEO Gerard Kleisterlee

8. Philips Medical Systems

$7.5 Billion ($74B Total)

Key Executives:
Gerard Kleisterlee, President, CEO and Chairman
Pierre-Jean Sivignon, Executive VP and CFO
Ad Huijser, Executive VP and Chief Technology Officer
Gottfried Dutine, Executive VP
Jouko Karvinen, CEO of Medical Systems

No. of Employees: 164,438

World Headquarters: Amsterdam, The Netherlands

Philips has come a long way since 1918, when it released one of the first X-ray machines. In the last few years since Gerard Kleisterlee took over as CEO, the mega billion-dollar company has been moving away from relying on its electronics area and increasing its presence in healthcare.

In a little over a year the company has spent more than a couple of billion dollars on acquisitions, including Melbourne, FL-based Witt Biomedical, Brisbane, CA-based Stentor, Latham, NY-based Intermagnetics and Lifeline Systems of Framingham, MA.

“We continued to focus our portfolio, exiting low-growth, low-margin activities, reducing our financial holdings and re-allocating resources to businesses that offer better prospects for growth and higher returns,” said Kleisterlee. “For example, we further expanded our presence in healthcare, both through strong organic growth and through the acquisition of the healthcare IT company Stentor.”

But the Amsterdam, Netherlands-based business was severely hurt by the strong dollar as Philips Medical revenues dropped 6% in fiscal 2005. In Euros, the medical division jumped 8% as one of the fastest growing parts of the overall company.

The investment in gobbling up medical systems companies appears to paying off, as first-quarter 2006 revenues rose 6% to $1.8 billion. Computed tomography, ultrasound, X-ray and healthcare IT product lines drove the Medical Systems division.

In addition, the division’s earnings rebounded to $804 million after a drop in 2004 to $48 million as the company suffered from impairment charges in 2004 for losses in the courtroom.

In addition to purchasing companies, Philips was bolstered in 2005 by its growth strategy in Asia, especially in China, with its joint venture with Shenyang, China-based Neusoft Medical Systems. Philips also inked a joint venture with German pharmaceutical company Schering to develop medical equipment for the emerging optical imaging market.

The $280 million purchase of Stentor in August 2005 increased Philips’ capabilities in healthcare IT with Stentor’s PACS (Picture Archiving and Communication Systems).

In the first quarter of 2006, Philips also acquired Witt Biomedical for $165 million and Lifeline Systems for $690 million. The purchase of Witt bolsters the company’s cardio/vascular X-ray business. Witt Biomedical is a supplier of hemodynamic monitoring and clinical reporting systems used in cardiology catheterization laboratories. And Lifeline is a company that provides personal emergency response services and has annual sales of about $150 million.

The most recent acquisition came as recently as last month (June) when Philips Medical Systems bought Latham, NY-based Intermagnetics for $1.3 billion to help its molecular imaging through MRI technology.

“Through this acquisition, we will greatly strengthen the overall performance and innovation capability of our MRI business,” said Jouko Karvinen, member of the Philips Board of Management and CEO of Medical Systems. “In the short term, we expect to gain equipment market share and to grow the installed base by expanding our product offerings with an accelerated innovation rate and a lower cost supply chain. Intermagnetics’ leading positions in the high-growth and high-value markets of RF coils and MRI patient monitoring will enable us to build unique solutions for our customers.”

In 2005, Philips was hurt by the ongoing investigation by the SEC on MedQuist. Philips owns 71% of the Mt. Laurel, NJ-based manufacturer of electronic medical transcription, health information and document management products. The SEC is looking into MedQuist’s billing practices.

The company also made news with its introduction of a home defibrillator, which can be bought on Amazon.com for approximately $1,200. The move is to release user-friendly medical device products that can be used at home by consumers. Another product released last year was Motiva, which allows patients to send medical information to doctors using a box hooked up to their television set. The company also launched the HD11 XE cardiology ultrasound system.

In addition, several products received FDA approval, including the HeartStart FR2+, an automated external defibrillator (AED) that advises the user whether to provide an immediate defibrillation shock or CPR followed by a shock to a victim of sudden cardiac arrest; the HeartStart MRx monitor/defibrillator, improving delivery of CPR by medical responders; and two disposable Sp02 pulse oximetry sensors used for infant and neonatal patients.

9. Boston Scientific

$6.3 Billion ($74B Total)

Key Executives:
Pete Nicholas, Chairman
Jim Tobin, President and CEO
Paul A. LaViolette, Chief Operating Officer
Mark Bartell, Co-leader of the Cardiac Rhythm Management Group
Lawrence C. Best, Exec. VP, Finance and Administration and CFO
Brian R. Burns, Sr. VP of Quality
Fredericus A. Colen, Exec. VP and Chief Technology Officer

No. of Employees: 28,000

World Headquarters: Natick, MA

Boston Scientific, the aggressor of the industry, doesn't ever seem to pause for breath. The double-digit (12%) gains in sales for 2005 would have been newsworthy enough on their own—but then the news got even bigger.

With a growth rate (35% over 26 years) unlike many other companies in the top 10 of this report, Boston Scientific made sure its name was heard last year when it went down in history as the company that edged out Johnson & Johnson in its quest to purchase Guidant Corporation. This shakeup now makes Boston Scientific the top maker of cardiovascular devices (Medtronic was formerly the leader in this category).

The strategic move to purchase Guidant for $27 billion shocked many, but those who have followed the company's aggressive acquisitions over the past few years may not be as surprised. This purchase was Boston Scientific's move to expand its reach in the lucrative cardiac rhythm management (CRM) market, an area experiencing double-digit growth. Moving forward, the Guidant brand name will be phased out over the next year, partially in a move to help decrease the burden of all the bad press Guidant has received over safety-related product recalls.

Although it had a reputation as a top innovator in the cardiology device sector, Guidant (as detailed in its own profile on page 78) was faced with dwindling consumer confidence and sliding sales after news surfaced that the company withheld information about faulty defibrillators—since June 2005, more than 80,000 of them have had safety warnings or recalls attached to their brands, and warnings were issued about 200,000 pacemakers. As a result of all these issues, Boston Scientific now must deal with the flood of product liability lawsuits that are likely to be filed. Boston Scientific will also keep busy as it spends the next few years removing Guidant from product packaging and the actual medical devices being used. Furthermore, it will reduce Guidant's Indianapolis, IN headquarters to a regional sales office.

The headaches haven't quieted down with the inheritance of Guidant's products, however. In May, Boston Scientific notified doctors that some of the acquired defibrillators, from the Vitality and Contak lines, may be at risk for early battery depletion; this move was followed up by a full-fledged recall in June.

"Clearly, Boston Scientific shareholders are going to be tested once again," Tao Levy, an analyst at Deutsche Bank Securities Inc., told Reuters news service. "On the outset, this problem could be very significant given the scope of the potential devices affected and leaves us wondering what type of mess Boston Scientific is left to fix."

While the news in the past year seemed to be all about the Guidant acquisition and resultant problems taken on, some other noteworthy activities were occurring. Boston Scientific inked a $6.4 billion deal with Abbott Laboratories to divest Guidant's vascular intervention and endovascular businesses while agreeing to share rights to Guidant's drug-eluting stent program.

In addition to all the acquisitions and sales news of the past year or so, Boston Scientific has been the subject of some other press regarding litigation. It was hit with some hard news in May when a federal judge upheld rulings that several of Boston Scientific's products had infringed on patents for Palmaz and Gray coronary stents made by Johnson & Johnson's Cordis unit. The ramifications could be a penalty of up to $1 billion—which certainly could affect the company's future revenues. However, the same judge also upheld a ruling that Cordis infringed on Boston's Jang patents (Cordis announced it would appeal the judgment). In

addition, it's unclear yet whether the judge will uphold a prior jury ruling that Cordis infringed on Boston's Ding patent. Depending how all of these situations shake out, Boston Scientific may be able to fare a little better than first speculated.

In May, Boston Scientific filed a lawsuit in Ireland against Conor Medsystems alleging that its Conor CoStar Paclitaxel-Eluting Coronary Stent System infringes a balloon catheter patent owned by Boston Scientific.

Problems with the company's quality systems have also plagued the manufacturer. In a warning letter from the FDA in January, three facilities were cited as having serious regulatory problems and the agency told the company in no uncertain terms that its corporate-wide corrective action plan stemming from earlier warning letters was inadequate. In the letter, officials expressed concern regarding six facilities, as well as recent product recalls.

The good news is that the FDA re-inspected the company's Galway, Ireland facility and found no problems. Last year, there were several problems related to the quality of manufacturing systems for the TAXUS, Liberte and Carotid Wallstent systems.

Boston Scientific's domination in the stent market has helped solidify its presence in the cardiovascular market. In 2005, first full-year US sales for the TAXUS Express drug-eluting stent largely contributed to the company's overall 12% growth in sales. With several new product launches expected this year, as well as more than 267 patents on hand, the company plans to capitalize on its success to fuel future growth. The company is currently awaiting approval for products such as the Carotid Wallstent Monorail Endoprosthesis. In June, the company received FDA approval for the Sterling Monorail Catheter.

However, competitors loom in the distance, and they could eventually cut into Boston Scientific's massive share of the cardiovascular and endovascular markets (among others for which the company makes products).

Cardiovascular sales accounted for nearly $5 billion of the company's total in 2005, with $2.7 billion stemming from stents. Endosurgery also grew 13% to $1.2 billion. While most of the company's total sales came from the United States, the company reported that international sales grew an impressive 15% last year.

In spite of all the changes occurring within the company, Boston Scientific is approaching its 2006 projections with optimism. Total revenue is expected to soar to $9 billion. First quarter sales were the best in the company's history, reaching $1.6 billion.


Stryker CEO Stephen MacMillan

10. Stryker

$4.9 Billion

Key Executives:

John W. Brown, Chairman
Stephen P. MacMillan, President and CEO
Luciano Cattani, Group President, International
Ron Lawson, Executive VP
Stephen S. Johnson, VP and Group President—MedSurg
James E. Kemler, VP and Group President—Biotech, Spine & Trauma Operations
James R. Lawson, VP and Group President—Orthopedics and International
Dean H. Bergy, VP and Chief Financial Officer

No. of Employees: 17,265

Corporate Headquarters: Kalamazoo, Michigan

With a new CEO firmly entrenched in the company, Stryker has transitioned pretty smoothly. After former president John Brown stepped down last year—marking the end of his 28-year tenure with the company—present CEO Stephen MacMillan has been positioning the company for growth amid a changing regulatory and reimbursement climate and sidestepping the various obstacles that are sure to challenge the company in coming years.

The company reported a 14% increase in sales, to $4.9 billion, in 2005, of which about two thirds stemmed from domestic revenues ($3.2 billion). Biotech, Instruments, Medical, Endoscopy, Spine and Trauma divisions were the stellar performers of the company, while Orthopedic faced some tougher times but still managed to post increases. Sales started picking up toward the end of 2005, and orthopedic implant sales increased 11% to $2.9 billion, partially due to the move to have a Stryker veteran head up the division. Mike Mogul, the new head, was previously called on to revamp the company's German business. The orthopedic implant sector boasted increases in everything from hips (4%), knees (14%), spinal (17%) and micro-implants (12%).

With 35% of Stryker's overall sales coming from abroad, areas such as Japan remain lucrative, as the company has positioned itself at the top of the trauma market there, with sales growing twice as fast as the market itself. Sales of the Scorpio NRG knee implant—designed specifically for Japanese patients—were also increased by twice the rate of the market.

The United Kingdom was another successful market. In 2005, based on long-term patient outcomes, Stryker received a 10A "gold standard" rating from the UK's Orthopaedic Data Evaluation Panel for the Exeter hip system. In addition, sales of Stryker's postoperative pain products tripled from 2004 to 2005.

In Australia, Stryker has maintained its top market share hold in areas such as total hip replacement, CMF and powered surgical instruments. The top-selling single product for the company is the OP-1 implant for bone fractures.

Back in the United States, Stryker saw its Medical division grow at two times the rate of the market. With all the gains in overall business, a new facility was opened in Dallas, TX for the Communications and Imaging divisions.

The MedSurg business, already successful in the United States, is expected to capture a larger share of the global market in time, particularly in China and the United Kingdom. In 2005, sales were $1.8 billion, an increase of 21%.

The Endoscopy division also remains a winner, as sales have more than doubled those of the entire company in 1990, when the division was created.

Poising itself in the competitive industry, Stryker formed or renewed alliances with prestigious institutions such as The Cleveland Clinic, the Mayo Clinic and Memorial Hermann Hospital.

Acquisitions continue to play a large role in the moving the company forward as a market leader. Earlier this year, Stryker continued its acquisition strategy by purchasing Sightline Technologies for $50 million (along with additional payments of up to $90 million, depending on factors such as performance). Sightline develops flexible endoscopes for the gastrointestinal and other market segments; it recently developed a technology that is expected to improve insertion and sterilization during colonoscopy procedures.

PlasmaSol Corp., which has a technology that offers Stryker the ability to provide sterilization equipment for

use with certain MedSurg Equipment products, was also acquired for $17.5 million in the fourth quarter of 2005.

In early 2005, the company's acquisition of eTrauma for $50 million helped position Stryker as the market leader in digital imaging for orthopedic clinics. The OfficePACS (Picture Archive and Communications System) is currently being used in only about 10% of US orthopedic practices, but the company believes the market will expand greatly over time. In the third quarter of 2005, OrthoPad was introduced as a complement to OfficePACS.

As seen with all the gains made in 2005, the company is continuing its winning streak in 2006, having already seen a 10% increase in net sales for the first quarter. In addition, orthopedic implant sales are up 7%, while MedSurg Equipment sales jumped nearly 16%. The overall revenue would have been higher had the company not needed to spend $53 million to write off purchased in-process R&D associated with the Sightline acquisition.

Looking ahead, projections for 2006 include a healthy continued growth of as much as 15%. The company will face some hurdles, though, as the potential remains for increased pricing pressure on implant products in the United States, Japan and other foreign markets. Also, positive currency gains seen in the past are forecasted to disappear.

However, the company is planning ahead for such potential downfalls by increasing its R&D efforts to churn out new products that will be anticipated to keep increasing profits over time.

The company was recently subpoenaed by the US Justice Department regarding possible anti-trust violations. This comes after Stryker was also subpoenaed by the US Attorney's Office in March 2005 with a request for documents related to consulting and service agreements with physicians.

B. Braun recently released its Duplex Drug Delivery System for use with CeFOXItin.

11. B. Braun

$3.9 Billion

Key Executives:
Ludwig Georg Braun, Chairman of Management Board
H.C. Michael Ungethum, Vice Chairman, Aesculap Division
Caroll Neubauer, head of North American Region
Wolfgang Feller, head of B. Braun Avitum Division
Meinrad Lugan, head of OPM and Hospital Care divisions
Heinz-Walter GroBe, head of finance, taxes and controlling, corporate services

No. of Employees: 30,973

World Headquarters: Melsungen, Germany

The lone privately held medical device manufacturer in the Top 30 managed a slight rise in fiscal 2005 sales at 3%, despite the strong dollar.

In terms of the strong dollar, for instance, the Melsungen, Germany-based company was hurt in the earnings department as earnings increased by 14% in Euros; in dollars, the company actually dropped 7%.

While many medical device companies are making a big push in the high-growth region of Asia, B. Braun also continues to build in its growth area in Europe. More than half of the company's 2005 sales came from Europe—including B. Braun's home turf of Germany, which produced 23% of the company's total sales.

And B. Braun is building on its stronghold in Europe after opening a state-of-the-art IV solution factory in Melsungen, Germany along with the expansion of a medical product manufacturing facility in Escholz-matt, Switzerland.

"Thanks to cutting edge technology and the contribution of our dedicated employees, with these two major investments, we have been able to create long-term competitive cost structures in Central Europe, particularly for basic hospital care products," said Ludwig Georg Braun, chairman of the management board, B. Braun.

While the company did well in Germany, it faces several hurdles there, including extensive talk on social and fiscal reform along with the trend toward hospital privatization.

While Central and South America are B. Braun's smallest regions, combined they offered the highest percentage of growth in 2005 with a 30% jump in revenues. The region benefited from the continued leadership from its core segments of surgical instruments and suture materials.

The North American region incorporates almost a quarter of the company's total sales, having reached $852 million in 2005. The biggest drivers in the region were its orthopedic products, safety products and the Duplex, a dual chamber system for intravenous medical care. In the United States, where B. Braun operates one of the largest contract manufacturing businesses in the world in Bethlehem, PA, the company has developed revenue from its partnership with Premier, the largest hospital group purchasing organization.

After Central and South America, B. Braun grew the fastest in its Asia and Australian regions, with a 14% jump. These areas are benefiting from new plants in the last few years in the company's surgical instruments sector. China is particularly noteworthy, as B. Braun opened the China Instruments Production plan in Suzhou, China in September 2005 and another plant, China Healthcare Infusions Elements Factory, is currently in development in Suzhou.

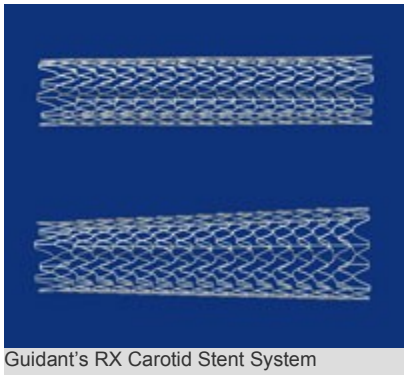
The company operates four major divisions: Hospital Care, Aesculap, Out Patient Market (OPM) and Avitum. The Avitum division was previously called the Medtech division, which manufactures dialysis machines.

The company's main core of business is its Hospital Care division, which was bolstered by a few areas including peripheral IV catheters. The company also improved on its IV pump product line with the expansion and further adaptation of the Fluid Management Generation Space to meet the needs of hospitals with new and improved software.

In the Aesculap division, which manufactures surgical products, Eastern Europe and the North and Latin American markets fueled much of its success. In 2005, the division launched several new products, including the Metha hip short shaft prosthesis. The company also launched, in 2006, the aktivL IVD (intervertebral disk) prosthesis, a second generation of intervertebral disk implants, and the Univation knee endoprosthesis system.

In spite of all these positive developments, Aesculap has been hurt in China as a result of regulatory restrictions.

B. Braun made two acquisitions in fiscal 2005 in Tetec AG of Reutlingen, Germany and Ascalon. Tetec is a manufacturer of biological tissue replacement, while Ascalon is a manufacturer of the hollow fiber membranes.


Guidant's RX Carotid Stent System

12. Guidant

$3.6 Billion

Key Executives:
James M. Cornelius, Chairman and CEO
Mark C. Bartell, President, US Sales Operations
William F. McConnell, Jr., VP, CIO and Co-president, CRM

No. of Employees: 12,000

Corporate Headquarters: Indianapolis, IN

This is the last time Guidant will be part of Medical Product Outsourcing's report on the top medical device companies, which is no surprise to most in the industry. Soon the Guidant name will fade away, now that the company has been acquired by Boston Scientific after one of the most heated battles the device industry has seen in its history.

To recap the well-publicized battle for Guidant, in April 2005, Guidant had agreed to a $25 billion acquisition by Johnson & Johnson. Once news of Guidant's recall-related problems emerged, however (more to follow on that), J&J reneged on the deal and offered billions of dollars less to complete the transaction. While Guidant was in the midst of accepting a $24 billion offer from J&J this past January, in a shocking move, Natick, MA-based Boston Scientific swooped in with its own aggressive bid to take over the struggling company and was victorious, purchasing Guidant for a record $27 billion.

With the deal complete, Boston Scientific recently announced it will phase out the use of Guidant on all its products in the next year—this is widely viewed as a measure to distance itself from Guidant's lengthy amount of bad press stemming from the defibrillator problems. In addition, Guidant's executive in charge of the cardiac rhythm device unit was replaced before the acquisition was even complete.

With all the problems generated by recalls and other myriad problems, Guidant's overall revenue had sharply declined last year by 6%. ICD sales were particularly hurt, with a 12% decrease in the United States and 6% worldwide. US pacemaker sales were also down 19%, with global sales also dwindling by 13%. Even the company's stent and angioplasty system sales took a hit. The only noteworthy positive development was that global sales for cardiac surgery and peripheral markets (including carotid and biliary systems) increased a healthy 28% to $373 million.

Preliminary first-quarter 2006 sales weren't looking much better, though they were sprinkled with some reason for optimism (for Boston Scientific, Guidant's new owner). Double-digit sales decreases in defibrillator sales persisted for the company, and overall sales were down 6% when compared with last year's first quarter. However, the bigger picture shows that sales actually increased 8% since the fourth quarter of 2005, marking a trend of recovery.

On a larger scale, Guidant's woes have helped spur some significant changes in the cardiac device industry. After Guidant's well-publicized recalls of tens of thousands of defibrillators due to electrical problems, the

FDA has paid more attention to strengthening its monitoring of medical devices in general. The recalled devices had been implanted in at least 50,000 people worldwide; several people implanted with the faulty units died. The defibrillators included products from the following product lines: Prizm 2 DR; Contak Renewal and Contak Renewal 2; Ventak Prizm AVT; Vitality AVT; and Renewal 3 AVT and Renewal 4 AVT. (Note: Some of the newer Contak products were approved and released to market last summer.)

In addition to the defibrillator problems, Guidant announced recalls of some of its pacemakers—Insignia and Nexus models—in September after faulty sealant (ie, leak) problems surfaced. This announcement came after previous warnings were released in July for about 28,000 pacemakers from various product lines of the following brands: Pulsar, Discovery, Meridian, Virtus, Intelis and Contak.

Along with the defibrillator and pacemaker issues, in March 2006 (before the acquisition was complete) the company announced plans to temporarily suspend sales of some of its XIENCE V drug-eluting stent system after manufacturing issues surfaced due to quality issues. This suspension is expected to affect 2006 first-quarter sales and delay the product's European launch to the third quarter this year.

With all these recalls and affected individuals, the Guidant name will remain in the news long after the brand is banished, since the company will be mired in legal woes, including those filed by affected patients. One major development just emerged in June, when newly released company documents showed that Guidant executives had drafted a document in early 2005 to inform doctors of problems with its defibrillators after reports surfaced in 2004; the document was never released to the public. This is significant because executives had defended their decision later last year to not tell doctors about the problems, citing concerns that revealing these problems could lead to unnecessary replacements of implanted devices. Since the letter was never sent by Guidant, patients continued receiving faulty devices, in spite of the company's knowledge they could be problematic. Legal experts have noted that the federal inquiry into this and other developments could eventually result in civil and criminal charges.

Guidant did receive some much-needed good news in March after an appeals court upheld a 2005 ruling that Guidant and Boston Scientific had not infringed on Medtronic cardiac stent patents. In addition, the court upheld a decision that disclaimed an assertion by Medtronic of theft of trade secrets.

Another beneficial development for the company resulted earlier, in September, when the FDA approved the Latitude Communicator, a secure data storage system that is a component of the Latitude Patient Management system (which can be used with the Contak ICD and Zoom Latitude Programmer). Furthermore, that month also saw approval for the Vitality HE defibrillator.

In March this year, the RX Herculink Elite Biliary Stent System was launched in the United States and, around the same time, the company announced it was expanding its facilities in Temecula, CA.

Also earlier this year, Abbott Laboratories acquired Guidant's vascular business. This was connected with Boston Scientific's acquisition of Guidant.

13. 3M Healthcare

$3.5 Billion

Key Executives:
George W. Buckley, Chairman, President and CEO
Patrick D. Campbell, Sr. VP and CFO
Jay V. Ihlenfeld, Sr. VP, Research and Development
James T. Mahan, Sr. VP, Corporate Supply Chain Operations
Brad T. Sauer, Executive VP, Health Care Business
Inge G. Thulin, Executive VP, International Operations
William G. Allen, VP, Latin America and Canada
Herman E. Nauwelaerts, VP, Europe, Middle East and Africa

No. of Employees: 69,315

World Headquarters: St. Paul, MN

3M Healthcare was relatively down in 2005, with only a 3% jump in sales because of competitive price pressures and raw material price increases, after experiencing double-digit jumps in revenues for the medical arm of the St. Paul, MN-based conglomerate during the previous couple of years.

While its net sales increased 3% to $3.5 billion, its operating income grew by 8% and operating profit margin jumped by 28%.

The strongest areas, wound care products and the dental products segment, continued to get stronger in fiscal 2005. In the wound care products division, the Tegaderm brand was a major driver. In the dental segment, the ESPE Lava crown and bridges system helped to maintain 3M Healthcare's honor of being the second largest supplier to the dental industry.

Last year, the company was going through a transition at the top of the executive wing. In December, the company named George W. Buckley as the new CEO; he succeeded interim CEO Robert S. Morrison, who had been at the job since July 2005. Morrison was called in to fill the top spot at 3M after former CEO W. James McNerney, Jr. left the company in June 2005 to take the top post at aerospace giant Boeing.

Buckley came to 3M from Brunswick Corporation, where he had served as CEO and chairman since June 2000. "George Buckley is a proven CEO with a terrific blend of strategic, business and analytical skills and an excellent record of driving both sales growth and operational efficiency in a wide range of global businesses," said then-interim CEO Morrison. "His strengths complement perfectly 3M's culture of innovation and operating effectiveness."

In the first full quarter of his tenure, the Healthcare business remained steady with a 2% increase to $966 million. At that time, the company introduced its Littmann Electronic Stethoscope Model 3000, which reduces ambient noise—allowing healthcare professionals to pick up sounds that other stethoscopes miss. Regionally, the healthcare portion of 3M expanded in many high-growth emerging markets, including China and India.

Overall, the Healthcare division (which includes pharmaceuticals) also rose 3% to $4.4 billion. All seven businesses as a whole rose grew by 6% to $21.2 billion in revenue. The corporation's profit was a healthy 7%, to $3.2 billion, in 2005.

The healthcare business is 21% of combined sales, the largest of the seven businesses and consistent with 2004 fiscal ratios with the other 3M businesses. Healthcare was just one of seven businesses in 2005; the remaining include Industrial; Display and Graphics; Consumer and Office; Electronics and Communications; Safety, Security and Protection Services; and Transportation.

In the dental area, 3M's resin and filter technology produced an advanced ESPE Filtek Supreme Plus Universal Restorative product. The nanocomposite enables dentists to restore teeth to their natural shape and function while matching existing tooth color so closely that the restoration is virtually undetectable to the naked eye.

Starting in the first quarter of 2006, 3M combined the Industrial and Transportation segments.

In April and May 2006, respectively, 3M added to its Healthcare business with a pair of acquisitions in the West Palm Beach, FL-based OMNII Oral Phar-maceuticals, a manufacturer of differentiated preventative dental products, and the SBG GmbH, a Berlin, Germany-based developer of diagnosis related groups software for hospitals.

14. Zimmer Holdings

$3.3 Billion ($41B Total)

Key Executives:
J. Raymond Elliott, Chairman, CEO and President

Sam R. Leno, CFO and Executive VP of Financial & Corporate Services
Sheryl L. Conley, President, Americas and Chief Marketing Officer
Cheryl Blanchard, Sr. VP, R&D and Chief Scientific Officer
Laura O'Donnell, Chief Compliance Officer

No. of Employees: 6,700

World Headquarters: Warsaw, IN

While the orthopedic industry has brought all the major players some heady challenges in 2005—and continues to do so—Zimmer still managed to grow its business by double digits in 2005, with a 10% increase from 2004, bringing the total net sales up to $3.3 billion. With its previous acquisitions of Centerpulse and Implex paid off, the company—with operations in 24+ countries and distribution to 100+ countries—even ended the year with net cash of $164 million.

Staying ahead of the curve has led Zimmer's top executives to carefully evaluate its corporate model and strategies in the past year. As a result, a new organizational structure was established, creating global businesses focused on markets and customers; this will be accomplished through both internal growth and acquisitions.

"It's time to move past the integration and build our future with a new organization structure," said Ray Elliott, chairman, president and CEO of Zimmer. "We are blessed with a great team in a great marketplace and we are making these changes from a position of strength."

In addition to its own internal initiatives, Zimmer announced in November that the state of Indiana would grant more than $5 million over the next 10 years in tax credits and other incentives to support the company's R&D endeavors. Along with expansion of its facilities, including a $24 million investment for an expanded R&D facility in Warsaw, IN, Zimmer expects to add about 275 new workers to its roster by 2010.

The company's product lines have been benefiting from aging populations—among other factors—needing more procedures and demanding top-notch products. Sales of Zimmer's Trabecular Metal Technology illustrate how the company has capitalized on this market, as the technology brought more than $100 million in sales in 2005, a 40% increase from 2004.

Most of the company's overall sales are still coming from the United States, as 2005 saw $1.9 billion from this region. European sales contributed 27% of total sales, and Asia added 14% (with Japan being the most lucrative Asian market).

The reconstructive market was the company's cash cow, contributing $2.7 billion in 2005—all categories (eg, knees, hips, extremities and dental) increased sales. The company's other markets, including trauma, spine and orthopedic surgical products, posted increases as well.

Zimmer's strategy of continuously rolling out new products has been paying off, too. In 2005, new products accounted for 21%, or $695 million, of all sales. This year, the company is looking forward to sales stemming from products incorporating Trabecular Metal Technology, the VerSys Epoch Composite Full Coat Hip Prosthesis, the NexGen MIS Tibial Plate, various trauma products (eg, Zimmer's Periarticular Locking Plates, the Sirus Intramedullary Nail System) and alternative bearing surfaces such as ceramic-on-ceramic and metal-on-metal.

In addition, Zimmer is broadening its portfolio by offering women the Gender Solutions Knee Implants, which were just approved by the FDA in May. And in December 2005, Zimmer received FDA approval for its Trilogy AB Ceramic-on-Ceramic Acetabular System, which is a spin-off from the company's Trilogy system, worth approximately $150 million in sales in 2005.

Some challenges remain, however. Since March 2005, the US Department of Justice has been investigating Zimmer, along with four other orthopedic companies, regarding its relationships with orthopedic surgeons as well as possible antitrust violations. If the company is found by the DOJ to be in violation of any laws, 2006 and beyond could be impacted.

15. Becton, Dickinson & Co.

$3 Billion ($41.3B Total)

Key Executives:
Edward J. Ludwig, Chairman, President and CEO
Geraldo Q. Barbosa, President, South Latin America
Richard K. Berman, VP and Treasurer
James R. Brown, VP, Quality Management
Gary M. Cohen, President, BD Medical

No. of Employees: 25,600

World Headquarters: Franklin Lakes, NJ

Becton, Dickinson and Co.'s medical device segment registered double-digit increases in revenues last year as its sales of safety-engineered products and blood glucose monitoring products were strong drivers in growth. The safety-engineered products leaped 28% outside of the United States while growing 7% domestically. Blood glucose monitoring products brought in $76 million in 2005.

In addition to those two product lines, BD Medical boosted its revenues by 11% with the help of pre-filled IV flush syringes, pen needles for insulin injection and pre-fillable syringes sold to pharmaceutical companies. BD Medical encompasses four units: Medical Surgical Systems, Diabetes Care, Pharmaceutical Systems and Ophthalmic Systems. The Diabetes Care unit had the biggest gain in 2005 with a 17% jump to $182 million that included double-digit increases both internationally and domestically. Medical Surgical Systems is the largest unit of the four with $429 million in sales, a 9% rise in 2005. BD Medical is just one third of the entire BD company, which also includes Diagnostics and Biosciences divisions. Overall, the company's sales rose 10% in 2005 along with the profit, which grew by 54% with the help of increased revenue and productivity.

"Our excellent results this year were driven, in particular, by our strong international performance, new product revenue growth and significant margin improvement," said CEO Edward J. Ludwig, whose company increased its spending on R&D by 13%. "Our Asia Pacific/Japan, Canada, Europe and Latin American regions contributed double-digit revenue growth, and the combination of higher margin products and increased operating effectiveness drove margin expansion."

The division was also helped by the launch in the United States and Europe of the BD Nexiva Closed IV Catheter System to improve the way infusion therapy is delivered and to enhance safety for both patients and healthcare workers.

In 2005, some of the more popular products in the BD Medical division were the BD Hypak prefilled syringe with the BD Preventis automatic needle shielding system, BD SoloMed syringe, BD PosiFlush Saline and Heparin Lock Flush Syringes and the BD Logic Blood Glucose Monitor.

The company did experience a recall in the first half of fiscal 2006. In February, BD Medical announced a voluntary recall for its blood glucose meters after a malfunction was reported that would affect the units of measure displayed on the meters. If the malfunction occurs and goes unnoticed, it is possible that users may misinterpret test results and change their diet or medication in a way that can result in temporary periods of high or low blood glucose and subsequently may require medical intervention.

In the most recent quarter, the second quarter of fiscal 2006, the Medical division continued its strong surge with a 9% rise in revenues to $795 million, while in the first six months of 2006 the Medical unit reported a 10% jump. The second quarter was bolstered by a strong showing in Diabetes Care and Pharmaceutical Systems units.

16. St. Jude Medical

$2.9 Billion ($41.3B Total)

Key Executives:
Daniel J. Starks, Chairman, President and CEO
John C. Heinmiller, Executive Vice President and CFO
Michael J. Coyle, President, Cardiac Rhythm Management Division
Joseph H. McCullough, President, International Division
Michael T. Rousseau, President, US Division

No. of Employees: 10,000

World Headquarters: St. Paul, MN

St. Jude Medical, a manufacturer of cardiac and neuromodulation devices, had an extremely enviable 2005, with the largest improvement in sales seen by any of the companies on this list. With a robust 27% increase in sales, which reached $2.9 billion (compared with $2.3 billion in 2004), the company was on a major winning streak.

Nearly three quarters (73%) of that growth achieved (approximately $451 million) was attributed to the Cardiac Rhythm Management (CRM) division, which contributed $1 billion in sales from its implantable cardioverter defibrillators (ICDs) alone—marking an impressive 72% gain over 2004. With only very few other major players in the ICD market, St. Jude expects the division to grow an additional 20% over the next few years, aided by the launch of an estimated 20 new products in 2006.

Acquisitions over the course of 2005 played a pivotal role in St. Jude's success. Believing that providing advanced atrial fibrillation products to electrophysiologists would help increase ICD sales, the company's Atrial Fibrillation Division acquired Endocardial Solutions, Inc., a St. Paul, MN-based manufacturer of diagnostic systems, in January 2005 for $272 million.

Later, in April, St. Jude's Cardiology Division acquired Maple Grove, MN-based Velocimed, LLC for $74 million. Founded in 2001, the company makes specialty interventional cardiology devices, with the following three product platforms: the Premere patent foramen ovale (PFO) closure system; the Proxis proximal embolic protection device; and the Venture guidewire control catheter for accessing difficult anatomy and crossing chronic total occlusions in interventional catheterization procedures.

With the $1 billion neuromodulation medical device market having experienced historic 20% growth over the last several years, the talk of the town in late 2005 was St. Jude's Neuromodulation Division move to acquire Advanced Neuromodulation Systems, Inc. (ANS) for $1.3 billion. This purchase is expected to generate future sales from new products for Parkinson's Disease, migraine headaches, angina and tinnitus. With ANS, the second largest manufacturer of spinal cord stimulation devices, St. Jude is poised to take on the $1 billion, under-penetrated market at full force.

The acquisition strategy appears to be continuing in 2006, as St. Jude paid $50 million in January to acquire Los Angeles, CA-based Savacor, Inc., a manufacturer of devices that help physicians detect and manage symptoms associated with progressive heart failure.

During the company's spending spree for its acquisitions, the company was benefiting from numerous product approvals and launches. The CRM division saw strong sales for the Altas+ HF and Epic HF cardiac resynchronization therapy defibrillators, as well as the launch of St. Jude Medical's first ICDs in Japan. FDA approval was also granted for the expanded capabilities of the Housecall Plus ICD remote monitoring system and the Frontier II low-voltage device for cardiac resynchronization therapy pacing. In addition, other launches included the QuickSite Bipolar CRT lead (United States and Europe) and the IsoFlex P (polyurethane) pacing lead. Most recently, St. Jude received European CE Mark approval for the Epic II ICD and the Epic II HF CRT-D.

St. Jude's Atrial Fibrillation Division achieved several milestones in 2005, including a limited launch of the Epicor Cardiac Ablation system. Also introduced to the market were the Ensite System Version 5.1 and the Ensite Verismo Segmentation Tool, as well as the high-power IBI-1500T6 Cardiac Ablation Generator.

The Cardiac Surgery Division strengthened its tissue and valve repair product lines with the SJMBiocor stented tissue valve and expects the launch to bolster growth of the stented valve business in 2006 and beyond.

St. Jude's numbers have been slightly tempered by ongoing litigation involving heart valves coated with Silzone, a coating that has lead to a small (but significant) increase in the incidence of explant due to paravalvular leak. As of February this year, 12 individual cases were pending in federal courts, with plaintiffs seeking damages of up to $120.5 million. Additionally, 24 suits involving 32 patients were filed in individual states.

Overall, with the success of numerous product launches and an upper management structure that has remained unchanged, St. Jude Medical is on track to experience additional growth. For the first quarter of 2006, the company already increased net sales by 18%, reaching $784 million versus $664 million last year. However, unfavorable foreign currency translation comparisons decreased those sales by about $22 million. ICD, atrial fibrillation and neuromodulation segments experienced the largest percentages of growth, with double-digit percentages of 27%, 25% and 31%, respectively.

17. Kodak Health Group

$2.7 Billion ($41.3B Total)

Key Executives:
Antonio M. Perez, Chairman and Chief Executive Officer
Robert H. Brust, Executive VP and Chief Financial Officer
Kevin J. Hobert, President, Kodak Health Group
Charles S. Brown Jr., Chief Administrative Officer
Michael W. Jackman, General Manager, Healthcare Information Systems, Kodak Health Group

No. of Employees: 51,100

World Headquarters: Rochester, NY

Over the last several years, parent company Kodak has been restructuring its divisions. As a result, various plants throughout the world have been closed, and the Health Group area might become the next victim as part of the overall restructuring.

In May 2006, the mega-imaging corporate giant retained Goldman, Sachs & Co. of New York, NY to investigate the possible sale of—or changes to—the unit.

Kodak CEO Antonio M. Perez said that it might be an opportune time because of the competitive marketplace environment for the healthcare imaging field.

"Our stated corporate goal is to be among the top three in each of the businesses in which we compete," Perez said. "While the Health Group is enjoying strong organic growth in elements of its digital portfolio, such as digital capture solutions and healthcare information solutions, we have been observing for some time consolidation in this industry. Given our valuable assets and the changing market landscape, we feel that now is the time to investigate strategic alternatives."

If the unit were sold by the Rochester, NY-based company, it would end a long history of healthcare dating back to the late 1800s, when George Eastman, the founder of Kodak, provided the first x-ray film for William Roentgen, the discoverer of the x-ray.

The Healthcare Group, like the rest of the Kodak units, has been transitioning in the last few years to the digital world.

Kodak Health Group suffered through revenue and earnings reductions in 2005 with flat sales and dwindling profits as the company faces stiffer competition and aggressive pricing tactics.

The company suffered from a 5% reduction in sales in its traditional strategic product groups, which include analog film and equipment, while digital product sales were only up 1%.

Overall, though, Kodak corporation sales increased 6% to $14.3 billion.

In the first quarter of 2006, Health Group sales dropped 7% to $585 million while earnings fell further, 41% to $46 million, as a result of reduced profits from traditional radiography film and digital output along with higher silver costs. Earnings in fiscal 2005 for the Health Group dropped 22% as the company was hit with higher prices for silver and rising competitive pressures.

In response to the drop in earnings, in March the Health Group announced worldwide double-digit increases in prices on all of its medical imaging films and related supplies.

“Staggering silver and petroleum costs began impacting our production expenses early last year,” said Kevin Hobert, president of Kodak’s Health Group.

While the Health Group as a whole resulted in flat sales in fiscal 2005, some bright spots in the group emerged from the PACS, RIS and departmental solutions of mammography and dental lines. Kodak’s Healthcare Information Solutions (HCIS) also jumped 39%, and the company inked its biggest-ever HCIS contract with National Services Scotland.

Digital x-ray revenues rose 15% with the help of the March 2005 acquisition of Yokneum, Israel-based OREX Computed Radiography for $51 million. And the field is expected to grow further in 2006 as the company released the DirectView DR 7500 system, which allows medical facilities to configure a digital X-ray solution that meets space, workflow and budget requirements.

The company also logged increased revenues from its CareStream product lines for digital medical imaging and information management systems and added to that with several orders in the first half of 2006.

18. Hospira

$2.6 Billion ($41.3B Total)

Key Executives:
David A. Jones, Chairman
Christopher B. Begley, Chief Executive Officer
Terrence C. Kearney, Chief Operating Officer
John Arnott, Sr. VP, Global Commercial Operations
Edward A. Ogunro, PhD, Sr. VP, R&D, Medical Affairs, CSO
Brian J. Smith, Sr. VP, General Counsel and Secretary

No. of Employees: 13,000

World Headquarters: Lake Forest, IL

As Hospira continues to evolve in its transition to reaching full independence from Abbott Laboratories—Hospira turned two in April—the company is on the upswing. With $2.6 billion in net sales in 2005, the company had some flat numbers compared with 2004; however, first-quarter 2006 numbers already show a rebound with a slight increase in earnings, and analysts are speculating that the company will probably see improving margins and better growth rates.

The global specialty pharmaceutical and medication delivery company views its progress with optimism as it hopes to steadily increase its pace in 2006 and beyond. Hospira CEO Christopher Begley described 2005 as a “transformative” year and added, “We continue our transformation from a position of strength,” he said. “Our success since the spin-off has been due to focus, hard work and, yes, a little luck.”

Last year, the company faced the huge task of transitioning from its separation from Abbott in 2004 while driving cultural change in-house and growing sales and revenue. To help solidify independence, Hospira built a 190,000-square-foot R&D facility in Lake Forest, IL, established three of four regional headquarters (Canada, Latin America and Europe) and created a standalone information technology infrastructure.

To improve cash flow along the way, in May 2005 Hospira sold its Salt Lake City, UT-based manufacturing

facility to California-based ICU Medical, which assumed responsibility for manufacturing some of Hospira's critical care products. Hospira also closed its Donegal, Ireland facility and plans to close facilities in Ashland, OH and Montreal sometime in 2007 and 2008, respectively. Furthermore, production will be phased out of the North Chicago facility (currently leased from Abbott) by the end of 2009, earlier than the 2014 lease expiration. Manufacturing operations at all these locations will be transferred to other Hospira facilities or outsourced to third-party suppliers.

While all these closings are occurring, some other new facilities have been added to the roster, including one in Clayton, NC and an expansion in an existing location in McPherson, KA. In all manufacturing locations, Hospira has been steadily implementing Lean manufacturing and Six Sigma programs to improve quality and productivity.

As the company invested 16% more in R&D funding in 2005—spending a total of $139 million—it helped push along items such as a wireless version of the Hospira MedNet safety software for the company's Plum A+ general infusion pump and Plum A+ 3 (triple-channel) pump. The original MedNet system was launched in December 2003 and, by the end of the 2005, was estimated by Hospira to have penetrated as much as 25% of the available market of the Plum A+ installed base.

Part of the company's long-term growth strategy involves acquisitions and alliances. One acquisition last year was Physiometrix, a non-invasive device developer, leading to the launch of the SEDLine brain-function monitor, which helps evaluate the effects of anesthesia and sedation.

In more recent activity, Hospira acquired LifeCare PCA, a patient controlled pain medication delivery system, in February. In keeping with its reputation as a leading manufacturer of flexible intravenous (IV) equipment, Hospira launched the VISIV flexible IV container in April and expects to introduce more products available in the VISIV container in coming years.

Another acquisition involved the generic drug foscarnet. Even though the company has a range of medical devices in its portfolio, the pharmaceutical business is a major part of its strategy moving forward. In fact, 46 products are in the pipeline, with a heavy focus on new generic injectables. Hospira provides third-party contract manufacturing for hospital injectable pharmaceutical manufacturing.

The company's US market remains the largest revenue generator, accounting for 83% of sales. Internationally, Hospira has a presence in 18 other countries and distribution relationships in 38 countries due to the completion of an agreement with Abbott regarding transfer of international operations. Hospira agreed to purchase the net operating assets of the hospital products international business for about $300 million over two years, and thus far, the company has paid about $250 million.

The recent launch of Hospira in the Netherlands in May served as a move to broaden the company's reach in the international marketplace. A marketing and distribution alliance was also formed with Taiyo Yakuhin, a Japanese generic pharmaceutical manufacturer.

Hospira is currently projecting a 4%-6% growth in net sales for 2006.

19. Fresenius

$2.5 Billion ($41.3B Total)

Key Executives:
Dr. Ben Lipps, Chairman and CEO
Dr. Emanuele Gatti, CEO, Europe, Latin America, Middle East and Africa
Roberto Fuste, CEO, Asia-Pacific
Rice Powell, Co-CEO, North America and President, Products and Hospital Group
Mats Wahlstrom, Co-CEO, North America and President, Medical Services

No. of Employees: 47,521

World Headquarters: Bad Homburg, Germany

Dialysis product giant Fresenius Medical Care continues to break its own records, having experienced $6.8 billion in sales in 2005, a 9% increase over 2004; net income also broke records with a 17% increase to $472 million. Further on the rise, dialysis product revenue, including sales to the company's own clinics, rose 10% to $2.5 billion, compared to $2.2 billion in 2004. It appears that the company's goal of reaching $8 billion by the end of 2006 is attainable.

Fresenius underwent an influential change to its structure in 2005 as it voluntarily converted Fresenius Medical Care preference shares into ordinary shares, and additionally changed the legal form of the company from AG to KGaA. (A Kommanditgesellschaft auf Aktien is a partnership limited by shares, an entity with its own legal identity with two groups of shareholders.) The moves are expected to improve the liquidity and financial flexibility to take advantage of future growth opportunities.

In line with its aforementioned 2005 success, Fresenius has had a good start in 2006. Net revenues for for the first quarter increased 9%, to $1.7 million, and net income grew 8% to $116 million. Dialysis Services and Product revenue grew by 9% and 6%, respectively.

Thus far this year, however, the company's biggest news was that it had completed its largest acquisition to date when it purchased the Renal Care Group (Nashville, TN) for $3.5 billion. As a stipulation of the deal, 105 dialysis centers were divested to DSI Holding Company, which garnered Fresenius $511 million in cash.

"We are very pleased to complete the acquisition of Renal Care Group, and this is a milestone for our company," said Ben Lipps, Fresenius CEO. "As we combine the best of both companies, we do so for the benefit of all—patients, employees, physicians, customers and shareholders."

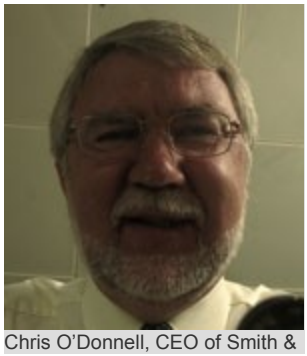
With this transaction, Fresenius now owns and operates approximately 1,500 dialysis clinics in North America, serving approximately 115,000 patients. Gary Brukardt, Renal Care Group's president and CEO, joined Fresenius and was appointed as a member of the management board of Fresenius Medical Care AG.

Nearly a year before the Renal Care Group acquisition, in April 2005 Fresenius purchased Haemotec, Inc., a Quebec, Canada-based manufacturer of hemodialysis concentrates. The company is a market leader in Canada, having captured more than 40% market share in the hemodialysis segment.

Much of the company's success achieved in 2005 was attributed to the introduction of the 5008-series dialyzer machines in Europe, Asia and the Middle East in the second half of the year. Designed as a replacement to the 4008 series, the 5008 will build on the previous model's market base and good reputation. With the 5008 series, the company expects to grow faster in the machine business than the dialysis market, which expands at an average of 7%. In January 2006, the 5008 beat 220 other company submissions to win the 26th German Business Innovation Award.

In its quest for continued growth, in March 2006 Fresenius Medical Care announced the expansion of its Ogden, Utah production facility to increase production capacity from 27 million to more than 33 million dialyzers annually.

Fresenius is looking to reach $10 billion in revenue by 2010, which corresponds with an annual growth rate of 8%. The company is looking to achieve growth organically (in dialysis care) and through acquisitions, horizontal expansion (dialysis medication) and home therapies.



Chris O'Donnell, CEO of Smith &

Nephew.

20. Smith & Nephew

$2.4 Billion ($41.3B Total)

Key Executives:
Dudley Eustace, Chairman
Chris O'Donnell, CEO
Peter Hooley, Finance Director
Peter Arnold, Group Director of Technology
Peter Huntley, Group Director, Indirect Market
Joe Woody, President, Wound Management
Jim Taylor, President, Endoscopy
David Illingworth, President, Orthopedics

No. of Employees: 8,618

World Headquarters: London, United Kingdom

From its humble beginnings as a small pharmaceutical chemist shop in Hull, England, Smith & Nephew has grown into one of the largest orthopedic device manufacturers in the world with 2005 revenues of $2.4 billion, a 12% increase over 2004. Not surprisingly, the largest growth in 2005 stemmed from the orthopedic segment, with revenues growing 18% to $1.28 billion.

Along with the rest of the orthopedic industry facing healthcare budget restraints in the United States and abroad, Smith & Nephew has been showing some signs of a slowdown this year, though. Gains for the first quarter of 2006 were only single-digit percentages—in fact, overall sales were flat with only a 2% increase over the first quarter of 2005. In early 2006, the company segmented its orthopedic business into two separate global units—orthopedic reconstruction and orthopedic trauma—to further enhance orthopedic segment growth. In addition to generalized industry trends, the company attributed the sales lag to the orthopedic sales force restructuring. However, Smith & Nephew expects numbers to turn around by the second half of 2006 with numerous product launches on tap.

In 2005, the double-digit growth was bolstered by numerous product launches. In November, the orthopedic segment launched the Legion Revision Knee System, which employs the company's exclusive Oxinium technology (a substance with the strength of metal and wear resistance of ceramic) and is expected to produce increased revenues in 2006.

Additionally, the PERI-LOC Periarticular Locked Plating System and Mobilab mobile surgical training facility for orthopedic surgeons were introduced.

Last year also saw two important approvals for Smith & Nephew, the most prominent of which later caused a relatively unknown man from Belleville, IL to go down in the annals of orthopedic history. On June 5, 2006, Rick Jones, 52, became the first recipient of Smith & Nephew's Birmingham Hip Resurfacing technology. Since then, 20 more patients have had the procedure, and now that the technology has been approved by the FDA for use in the United States, the company expects the number of procedures here to increase by as much as 80% in the next 25 years. This expectation is in line with a Goldman Sachs Global Investment market estimate of $400 million in the United States by 2010.

In other regions, the Stride Porous Hip Stern and Genesis II minimally invasive tibial base plates received approval in Japan, the second largest orthopedic market in the world. Additionally, the acquisition of Leading Kabushiki Kaisah ("Leading Medical"), an orthopedic distributor in Japan, is expected to enable Smith & Nephew to double its sales force in that market.

The Endoscopy segment also contributed gains to the company's bottom line. Posting revenues of $6 million, a 9% increase from 2004, this segment launched numerous products during 2005, most notably the 400 Series Camera system, the Dyonics 25 Fluid Management System and the Accu-pass Suture Shuttle. After a patent dispute with ArthroCare, Inc. was resolved, Smith & Nephew was able to resume selling its

Dyonics Electroblade Resector and the Saphyre Bipolar Ablation Probe products.

Regulatory approvals for the Endoscopy segment included the Calaxo absorbable osteoconductive interference screw, the Glider Articular Cartilage radio frequency probe and the Condor Controller, which centralizes control of medical and audio-visual equipment in the operating room.

The Advanced Wound Management segment, while not as productive as other units, still produced a 5% increase with $690 million. New product launches included an improved version of Allevyn hydrocellular dressings called the Allevyn Plus, Acticoat Moisture Control antimicrobial barrier dressings and Acticoat Absorbent in the European market.

After completing an acquisition in 2004 for Versajet, a fluid jet debridement system, the company was able to incorporate sales of the system into its 2005 accounting. With a new handpiece to allow faster debridement, Versajet is currently in 13 markets worldwide.

In step with Smith & Nephew's expansion in areas of products and acquisitions, the company has contracted in other areas to remain a lean and trim operation. In August 2005, the Advanced Wound Management group announced its intention to exit tissue-engineering operations due to delays in achieving "economic viability." Unable to find a purchaser for the operation, the operation was ceased during the first quarter of 2006 and a rationalization of $461 million was recorded in 2005.

Additionally, in August 2005, Smith & Nephew—in a joint venture with Beiersdorf AG—divested BSN Medical to Montagu Private Equity for the sum of $1.7 billion. The transaction was completed this February.

While the moves are not expected to affect revenues this year, it is noteworthy that James Taylor, president of the Endoscopy division, resigned in February and Advanced Wound Management President James Dick will retire this summer.

21. Synthes

$2.1 Billion ($41.3B Total)

Key Executives:
Hansjörg Wyss, Chairman and CEO
Michel Orsinger, President and COO
Ciro Romer, President, Europe and Latin America
Robert Donahue, Chief Financial Officer

No. of Employees: 7,600

World Headquarters: West Chester, PA

As a leading developer of instruments, implants and biomaterials for surgical fixation, correction and regeneration of the musculoskeletal system, Synthes has remained a leader by pushing forward with healthy sales, which jumped 16.8% in 2005. The good news doesn't end there—net earnings also were up 35%. The company has achieved consistent 10% sales growth every year since Synthes integrated with Stratec in 1999.

In North America, sales remained nearly the same as 2004, capturing nearly two thirds of the total. Europe saw a slight decrease, whereas Asia and the rest of the world offered slight increases.

The company, which ranks among the top three companies for spinal devices and is at the forefront of the cranio-maxillofacial market, strengthened its position in 2005 by concentrating many of its efforts on the Asian market—the end result was a 17.4% growth (pro forma local currency). In particular, Japan already has exceeded market growth projections, and Synthes now has the second largest market share in the trauma market. Hoping to maintain its foothold as a leader in China, Synthes has continued to invest in sales forces and training for previously acquired Mathys (2004).

Furthermore, Europe, the Middle East and Africa contributed 24% to Synthes' bottom line. Switzerland was a particularly lucrative area, as the US dollar held strong against the Swiss Franc and the Euro. Since the company acquired its ninth European manufacturing plant, in Raron, Switzerland, in October 2005, business should keep booming in this area. In the Middle East and Africa, Synthes signed long-term agreements with government authorities and key customers, and additionally had many distributors invest in dedicated sales consultants.

Finally, the company opened its fifth Latin American subsidiary in Peru during 2005; an exclusive distributor in El Salvador was added to the roster, marking the company's 12th distributor in Latin America. Synthes saw double-digit increases in this region.

Much of Synthes' overall success has been a direct result of the company's three-pronged strategy of focusing on product innovation, sales force expansion and education/training for employees, doctors and operating room personnel. Sales consulting staff were increased by 13% in 2005.

Many of the sales efforts focused on the trauma market, as various new products were rolled out for Synthes' Locking Compression Plate System, which now contains 28 product lines with more than 800 plates and hundreds of screw types/sizes. The company also introduced the Expert Intramedullary Nail System.

In the cervical plate market, the Vectra and Anterior Cervical Compression System were leveraged to tap into the overall $300 million market. In 2005, the company succeeded in significantly growing its sales with the Axon Screw System, Anterior Tension Band Plate and Thoracolumbar Locking Plate System.

While the cranio-maxillofacial market isn't as large as other markets Synthes deals with, the company currently exceeds 50% of market share. The introduction of the Low Profile Neuro System bolstered sales in this market globally quite a bit.

As the company released many new products to the market, the Synthes Inventory Management System was being simultaneously installed or upgraded in more than 2,100 hospitals to enable electronic inventory management and on-line ordering.

Perhaps part of the company's growth can be attributed to its own internal increases in personnel. Synthes grew its work force by nearly 14% in the past year.

In 2006, the company is looking to continue its double-digit growth pattern by expanding market share in all divisions. In the trauma market, the Locking Compression Plate System will introduce 12 new lines, and all three Expert Nailing Systems will roll out to all regions. Meanwhile, the spine sector will see the global launch of several products including the cervical Vectra Plate. In January 2006, the FDA also approved the ProDisc-L Total Disc Replacement for treatment of degenerative disc disease in the lumbar spine.

If the first quarter (January-March) is any indication, the company is off to a good start, with a 17% increase in sales to $576 million. Trauma, spine and cranio-maxillofacial markets each posted double-digit gains.

The company hopes to further strengthen its position by continuing its partnership with the AO Foundation, a non-profit surgeon-driven organization based in Switzerland that specializes in trauma surgery products.

Challenges will remain, however. Synthes received a subpoena from the US Department of Justice to hand over certain documents and information regarding the off-label sale, promotion and reimbursement of Norian XR bone cement. (Synthes announced it would fully cooperate with authorities, and the company has not sold this product or had any revenues related to it since 2004.)

22. Alcon

$2 Billion ($41.3B Total)

Key Executives:
Cary Rayment, Chairman, President and Chief Executive Officer

Andre Bens, PhD, Sr. VP, Global Manufacturing and Technical Operations
Gerald D. Cagle, PhD, Sr. VP, R&D and Chief Science Officer
Jacqualyn Fouse, Sr. VP, CFO and Corporate Strategy
Kevin J. Buehler, Sr. VP, Alcon United States and Chief Marketing Officer

No. of Employees: 12,700

Corporate Headquarters: Fort Worth, TX

Alcon, a subsidiary of Nestlé Company since 1977, boasts one of the most comprehensive product portfolios for the ophthalmic surgical industry, manufacturing and marketing products for virtually all ocular surgical procedures. As such, fueled largely by new product introductions and global expansion, 2005 sales of Alcon's surgical product line reached $2 billion, an increase of 11% over $1.8 billion in 2004.

Alcon's surgical division is comprised of three product lines: cataract, vitreoretinal and refractive.

The most prominent of Alcon's accomplishments in 2005 was the introduction of the AcrySof ReSTOR lens. Approved by the FDA in March that year, the product is the only apodized diffractive intraocular lens for cataract patients with and without presbyopia, providing patients with a full range of vision and greatly reducing their reliance on glasses. With clinical studies showing that 80% of patients did not require glasses after surgery, lens sales accelerated quickly in the United States, contributing to overall global sales of $54 million in 2005. Moreover, the US Centers for Medicare and Medicaid Services also offered patients the right to select this technology for cataract surgery, if needed.

Sales of cataract and vitreoretina equipment, procedure packs, solutions and accessories were beneficial to the company as well, growing 10% to $1.3 million in 2005; cataract equipment sales alone increased 26% on record sales of the company's Infiniti vision system. Sales of vitreoretinal surgical equipment also jumped 21%, while sales of related disposables were up 19%.

Additionally, Alcon introduced the OZil torsional handpiece for use with the Infiniti system.

During 2005, Alcon invested $422 million in new product development.

Although approximately 85% of Alcon's sales presently come from developed markets, sales in emerging markets grew more than twice as fast during 2005. Alcon has answered that calling by expanding its global infrastructure developed over the past 45 years to delve into new markets.

"Over the next 25 years, the number of people over the age of 65 in less developed countries will more than double to over one billion," said Cary Rayment, Alcon president, chairman and CEO. "These will be people who are most at risk for the majority of serious eye diseases, and Alcon intends to provide them with the best drugs and devices to preserve, restore and enhance their vision."

The big picture shows that not all segments performed equally well for Alcon. Due to decreases in global equipment sales and procedure fees, revenues for refractive surgical products declined 11% to $56.2 million and slightly offset the gains made in cataract and vitreoretinal segments.

Another conern is Alcon's involvement in a patent infringement lawsuit, filed by Advanced Medical Optics (AMO), challenging certain features of the Inifiniti vision system. A December ruling favored AMO and set damages at $213.9 million. This year, the court also awarded AMO interim damages, prejudgment interest and reasonable attorney's fees and costs. Alcon, however, is appealing the decision. Due to the court's final judgment, Alcon recorded a fourth-quarter provision of $240 million related to the litigation.

An unfortunate calamity developed after fires and explosions at an oil depot in Hemel Hempstead, England damaged Alcon's nearby office building and warehouse, as well as equipment and inventories housed in those facilities. The company had to shell out $8.7 million for repairs.

Some personnel changes have been occurring in Alcon as well. Alcon's management structure was shook up last year with the election of Cary Rayment, the company's CEO since October 2004, to chair the board of directors, replacing retiree Timothy R. G. Sear.

In December 2005, Wolfgang Reichenberger, director of Alcon since the company's initial public offering in 2002, stepped down from his post.

This year looks promising for Alcon as first-quarter 2006 global sales were $1.2 million, an increase of 8% over last year. The United States contributed half of total sales and grew 11% to $577 million.

Surgical sales were up 8% as well, accounting for 45% of total sales, and intraocular lenses increased 19%, primarily driven by the success with AcrySof ReSTOR intraocular lenses—especially in the United States, where the product was not available in the first quarter of 2005. Global sales of AcrySof ReSTOR lenses in the first quarter of 2006 were a huge victory, having jumped nearly $20 million to $23.3 million (compared to $3.2 million in the first quarter of 2005). Vitreoretinal surgical products, including equipment and disposables, continued to grow faster than the market as well.

“Our strong sales and profit results for the first quarter were consistent with our expectations and reflected the continued success of our brand building across many product lines and gross margin improvement due to favorable mix shift,” Rayment said. “The breadth of our product line as well as global new product introductions are integral to our consistent performance and will be important contributors to our performance in the future.”

23. Biomet

$1.9 Billion ($41.3B Total)

Key Executives:
Daniel P. Hann, Interim President and CEO
Niles L. Noblitt, Chairman
Jerry L. Ferguson, Vice Chairman
Garry L. England, Chief Operating Officer, Domestic
Charles E. Niemier, Chief Operating Officer, International
Gregory D. Hartman, Sr. VP, Finance, Treasurer and CFO
Joel P. Pratt, Senior VP

No. of Employees: 6,300

World Headquarters: Warsaw, IN

Biomet, an orthopedic reconstruction product manufacturer with operations in 50 locations and distributions in more than 100 countries, has seen some major changes in the past six months. Former CEO and founder Dane Miller, 60, abruptly resigned from his post in March, announcing his early retirement after serving as president, CEO and a director of the company since its formation in 1977. He will continue to serve as a director and consultant.

The board of directors named Daniel Hann as the interim president and CEO.

Mostly known as a “premier franchise,” Biomet has not been without struggle in competing against larger players Zimmer and Stryker. After all the recent reshuffling, Biomet confirmed in April that it hired investment banker Morgan Stanley to help explore future strategies, including a possible move to sell the company. Analysts have cited Medtronic and Smith & Nephew as potential buyers.

The asking price for Biomet, should it decide to sell, could be more than $10 billion, as the company’s third quarter 2006 and final numbers for fiscal year 2005 (ended May 31, 2005) have continued to post healthy gains—this year, the company moves up Medical Product Outsourcing’s list several notches as a reflection of Biomet’s continued growth.

In its 27th consecutive year of record revenues, Biomet was aided by a 16% increase in sales ($1.88 billion vs $1.62 billion in 2004), which is keeping in line with prior years. In addition, net income was up 8%, from $326 million to $352 million. In the past six fiscal years, Biomet has introduced more than 500 new products to the market. Continuing this product launch streak, 2006 will see many new additional introductions to the market. Biomet is hoping to make a splash with its C2a-Taper Acetabular ceramic-on-ceramic hip system and its Porous Plasma Spray technology, both approved by the FDA last December. In May, the FDA gave

Biomet another nod, this time for the Regenerex porous titanium artificial hip product; the expected launch date is December 2006 or early 2007. The company plans to use the Regenerex brand to introduce a series of products made from porous metal.

Other offerings on the horizon include the ExploR Modular Radial Head as well as the Cobalt Bone Cement, which offers high optical contrast in Biomet's Microplasty Minimally Invasive Programs.

In FY 2005, overall domestic sales grew 15%, while international numbers climbed 20%—many of these sales were positively impacted by currency translation; European sales, for example, were up 17%.

In the reconstructive device market, sales were up 19%, exceeding $1.25 billion total.

Spinal product sales increased 34%. Spinal hardware and orthobiological products used in spinal procedures grew a whopping 118%; however, spinal stimulation products decreased 9%. Biomet's first top-loading spinal product, the Array Degenerative System, launched in 2005 and has since become the company's best-selling spinal hardware system. Other spinal products introduced in 2005 include the ESL Spine Spacer System and the Interpore Nexus Curved Spacer System. In 2006, the company plans to roll out Interpore's Altius M-INI Spinal Fixation System, the Synergy Polaris, Ibex Spine System and SpF MINI Implantable Spinal Fusion Stimulator.

Biomet's EBI subsidiary faced some changes in 2005, as its sales force was divided into separate spine and fixation groups, all while the Interpore sales force was integrated with EBI's spine sales force. In addition, Bart Doedens, MD, former president of Biomet's 3i subsidiary, was promoted to president of EBI. Amid all these changes, fixation sales were flat.

The knee market saw healthy growth, with sales increasing 29% domestically and 25% worldwide. These percentages were partially achieved by Biomet's Vanguard Complete Knee System, as well as by the domestic introduction of the Oxford Unicompartmental Knee System, the only free-floating meniscal unicompartmental knee system available in the United States. The Vanguard line will see even more introductions in 2006 for open knee procedures.

The hip market also aided sales, as the company launched the M2a-Magnum Large Metal Articulation, the bone-conserving ReCap Femoral and Total Resurfacing Systems, and the second-generation ArComXL, a highly cross-linked polyethelene that was cleared by the FDA in 2005.

Other products (eg, arthroscopy, softgoods and bracing equipment, as well as operating room supplies) saw a combined increase of 7%. The dental reconstruction segment also strengthened the bottom line with the introduction of the Encode Restorative System (a series of custom abutments) and CAM StructSURE Precision Milled Bars (for overdentures).

Looking ahead, the company increased its R&D expenditure by 25% in 2005, as the company continues to focus its attention on new product development and enhancements to existing products. Biomet is currently also evaluating facility expansion plans, possibly in either Indiana or New Jersey.

Third-quarter 2006 results, ending February 28, show the company is continuing its successful strides in the orthopedic market. Net sales were up 5% for the quarter and net income increased 10%. Biomet executives attributed much of this success to its national branding campaign. Reconstructive device, hip, dental implants and extremities sales were all up by 10% or more, with knee sales not too far behind, at about 8%-9% in the United States and abroad.

Tempering all the good news reported earlier this year, former CEO Miller did caution before his retirement that the company estimates it will see a negative impact from the continued strength of the US dollar on fourth-quarter sales (by as much as $11 million). As a result, the company expects fourth-quarter earnings to be in the range of $530 million to $540 million.

24. C.R. Bard

$1.8 Billion ($41.3B Total)

Key Executives:
Timothy M. Ring, Chairman and CEO
John H. Weiland, President and COO
Todd C. Schermerhorn, Senior VP and CFO
Brian P. Kelly, Group VP
Amy S. Paul, Group VP
Brian R. Barry, VP—Regulatory and Clinical Affairs

No. of Employees: 8,900

World Headquarters: Murray Hill, NJ

Although net sales for C.R. Bard didn't match its double-digit gains seen in 2004, the company still managed to push ahead growth by 7% in 2005. The specialist in vascular, urology, oncology and surgical products only increased sales from $1.7 billion to $1.8 billion.

Since 2003, the company has nearly doubled its net income, however, achieving $337 million in 2005. That's not the only doubling occurring, either. C.R. Bard has more than doubled its R&D investments in the past four years to almost $115 million. Nearly 100 patent applications are pending in the United States, and the company is focusing heavily on product development. To ensure manufacturing of all these new initiatives goes smoothly, Bard executives have been focusing on honing Lean manufacturing concepts and hope to have all of Bard's plants operating under this system by 2008.

In keeping with these strategies, the company has invested heavily in its Global Product Launch initiative, which was hatched in late 2004. Since 2003, the company has added more than 150 new sales reps, with another 55 sales professionals brought on board in 2005.

Other personnel additions have occurred as well. The company's board of directors added former US Secretary of Health and Human Services Tommy Thompson to its roster in August 2005, and Bard President and COO John Weiland was named a director.

As various opportunities emerged in Bard's areas of experience, the company seized them by introducing an array of new products. The urology market, comprising 30% of Bard's net sales, increased 6% last year, thanks to some new products. In particular, the pelvic floor reconstruction market was aided by Bard's launch of its Pelvicol, PelviSoft and Pelvitex products. In late 2005, the Avaulta biosynthetic support system line of pelvic floor prolapse repair devices was unveiled as well.

Building on its vascular business, which grew 11% in 2005, Bard also released the first peripherally inserted central catheter (PICC) indicated for power injection, called the PowerPICC. A newer power version of the 5 French dual lumen PICC was also released and will be followed by a triple lumen PowerPICC catheter this year.

C.R. Bard has also steadily kept its pulse on the hernia market, which is currently worth more than $600 million globally and growing at 10% annually. To stake a share in this market, the company had acquired the Salute fixation system in 2004 and is putting the finishing touches on the next-generation Salute II disposable version. The company also introduced Soft Mesh in early 2006, and is seeking FDA approval for Collamend mesh.

Bard's surgical division didn't share in all the good news, though. In January 2006, the company voluntarily recalled its Composix Kugel Mesh X-Large Patch for ventral hernia repair. The recall was reported upon discovery that the device's plastic coil ring, designed to aid in deployment, may not withstand increased stress associated with certain surgical placement techniques. At the time of the announced recall, the company had received 24 reports of broken rings out of approximately 32,000 units sold since 2002. The product codes involved generated sales of approximately $11 million in 2005, and the company has since noted that it would have to readjust reported sales and revenue numbers.

Other divisions had better results. The oncology market, which includes implantable ports, various catheters and enteral feeding devices, posted 18% gains. The surgical market, spanning soft tissue reconstruction, performance irrigation and hemostasis (among other) products, also reaped a 6% gain.

Based on first-quarter 2006 results, the company will continue its winning streak. Already, sales were up 9%,

to $467.5 million.

Timothy M. Ring, chairman and CEO, commented, “Bard is off to a solid start for 2006. Our first quarter operating results were strong and we continue to be pleased with the direction of the company. We were especially productive in the business development area, entering into five transactions this quarter. We remain focused on our long-term growth strategy to enhance shareholder value.”

This year, the company also completed its $166 million acquisition of Venetec International (San Diego, CA) in April, which should increase Bard’s overall 2006 sales with the addition of the StatLock line of catheter securement products. Bard also acquired self-expanding nitinol stent technology from PST, LLC in Gainesville, FL for an undisclosed amount.

Looking ahead, Bard concluded enrollment a few months ago for a clinical trial of its respiratory infection control endotracheal tube, which the company hopes to launch in the first half of 2007.

25. Terumo

$1.8 Billion ($41.3B Total)

Key Executives:
Takashi Wachi, Chairman and CEO
Akira Takahashi, President and COO
Tsuneo Taida, Senior marketing Executive Officer
Takahiro Kugo, Senior Managing Executive Officer

No. of Employees: 9,624

World Headquarters: Tokyo, Japan

In light of broad healthcare reform recently enacted by the Japanese government, Terumo Corporation was able to post its 11th successive year of increased corporate sales. For the year ended March 31, 2005, medical device sales reached $1.8 billion, a 6% increase from the prior year. Already, 2006 numbers indicate the company’s progression is steady if not remarkable, as FY 2006 closed with 7.4% gain.

Terumo’s consistent growth is attributable to the company’s Cardiac and Vascular Business, comprised of Catheter, Cardiovascular and Vascular Grafts segments.

Net sales in the Cardiac and Vascular Business division grew 14% to $688 million, with the Catheter Systems segment producing an astounding 19% increase in net sales. Among the core sellers were the Tsunami coronary stent and the Interpass V, a CTO catheter. Sales were also bolstered by the launch of the Ryujin OTW-1 and RX-2 catheters.

The Cardiovascular Systems segment came in second with a 10% increase to $254 million. Sales of Speedpack, a combination oxygenator and blood circuit, grew in Japan and overseas. Further, with the acquisition of the cardiopulmonary business from Edwards Lifesciences Corp. in January 2005, Terumo occupies the top global share of the Cardiovascular market.

The Vascular Grafts segment and General Hospital Business division also grew, albeit by smaller single-digit percentages.

The Home Health Care Business division has been booming for the company as the number of Japanese citizens with diabetes keeps climbing. The company is poised to keep capitalizing on this trend.

While Japan is still a profitable area for the company, with $1.3 million in sales from that country, areas outside of Japan contributed $810 million to the bottom line, in large part because of increased demand for catheter systems and cardiopulmonary systems. Europe and the United States are on similar footing in terms of sales.

In 2006, Terumo has been continuing its upward momentum with numerous product launches and acquisitions. In February, Terumo entered into a definitive agreement to acquire Aliso Viejo, CA-based MicroVention Inc., a medical device company focused on endovascular coils and related products. With the worldwide market for endovascular treatment of cerebral aneurysms currently estimated at more than $200 million, Terumo is expecting to step up its growth in this segment over the next several years.

“As Terumo continues to expand its cardiac and vascular businesses, we believe that the acquisition of MicroVention provides a great strategic opportunity for Terumo to further strengthen our intervention business by entering the high growth area of endovascular coiling,” said Takashi Wachi, Terumo CEO. “The experience and capabilities Terumo expects to gain from this transaction can significantly contribute to Terumo’s sustained success in this key market segment.”

A key alliance created in April 2001 between Olympus Medical Systems Corporation and Terumo also resulted in the January 2005 launch of the VirtuoSaph endoscopic vein harvesting system in North America, Thailand, Singapore and Malaysia, with eventual planned introductions in Europe and Asia. In light of the successful alliance, the two companies formed a task force that spring to explore further opportunities for collaboration.

In November, Terumo launched Heartrail II, a PTCA guiding catheter used to treat angina and myocardial infarction, in Japan. The company has set a sales target of $13 million for the first year after launch.

In more recent activity, Terumo announced in March that it would establish a new production plant in Vietnam to meet increasing demand growth anticipated in mid- and long-term operations. Terumo plans to start production operations of disposable medical devices including closed infusion systems and infusion sets in mid-2007 for Japan and Asia.

26. Dentsply International

$1.7 Billion ($41.3B Total)

Key Executives:
Gary K. Kunkle, Jr, Chairman and CEO
Bret W. Wise, President and Chief Operating Officer
Christopher T. Clark, Senior Vice President
William R. Jellison, Senior VP and Chief Financial Officer

No. of Employees: 8,000

World Headquarters: York, PA

Dentsply, a dental manufacturer that distributes its products to more than 120 countries, faced some major challenges in 2005. Net sales were flat, with a 1.2% increase, and the company’s true financial picture becomes clearer when looking at net income, which decreased by 82%, from $253,000 to a mere $45,000. Amid this news was the retirement of Thomas L. Whiting, Dentsply’s president and chief operating officer, in late 2005.

The reimbursement climate in Germany, the third largest dental market globally, changed dramatically in 2005 as patients incurred more personal cost from dental work and laboratory-based dental work diminished. The impact of this shift greatly affected Dentsply’s bottom line, as this country bears responsibility for 21% of the company’s revenue.

However, Chairman and CEO Gary Kunkle reported, “We are pleased to see an improvement in the German market during the first quarter [of 2006]. While we do not expect 2006 will return to 2004 levels in Germany, we do expect our European growth to benefit from improvements in this important region throughout most of 2006.”

To counterbalance some of the difficulties, Dentsply is striking back by accelerating investment in product R&D, with a major focus on dental restoration. The company has partnered with the Georgia Institute of

Technology's Dental Technology Center for several research activities, and a long-term collaborative agreement was formed with IDMoS Dental Systems Ltd. for commercialization of its cavity detection and monitoring technology. Furthermore, Dentsply continued its joint development agreement with Japanese company Two Cells Co. Ltd. for research on using neurotrophin (BDNF) for periodontal disease.

In keeping with Dentsply's launch of 30+ products in 2005, the company continues to invest in other emerging technologies that are anticipated to pay off down the line. In one move, the company acquired rights to SATIF, an exclusive titanium-fluoride derivative from European pharmaceutical company Sanofi-Aventis. A dental varnish utilizing this technology may be available by 2008.

The company did have to make some tough strategic decisions last year. In a major move, Dentsply ended up shutting down its dental injectable anesthetic facility after considerably investing in this venture all throughout 2005 and the earlier part of 2006. The company reported that production of the injectable anesthetics would be outsourced after dealing with delays in regulatory approval for the facility. The closing of this facility is anticipated to help earnings in 2006 and slightly increase operating margin rates.

Another area in which the company made certain strides was the formation of a new sales organization, Dentsply North America, in late 2005 to combine field and sales management functions for six US distributor-based businesses.

Finally, the company has continued acquired three new orthodontic companies: GAC SA in Europe, and Raintree Essix and Glenroe Technologies in the United States. These companies contributed 1.4% to 2005 revenue and are expected to perform even better in 2006.

If first quarter 2006 results are any indication, all the changes and investments are slowly starting to pay off. As of March 31, net sales already increased 5.9% over the prior year, from $407 million to $431 million. In addition, net sales (excluding precious metal content) were up 3.9%. Much of this good news is attributable to stronger growth in the European market, though the stronger US dollar somewhat tempered momentum.

"We are also experiencing continued strong performance in the all-ceramic section of our prosthetics business, orthodontics and our implant businesses, as we continue to gain market share in these important categories," Kunkle said.

27. Invacare

$1.5 Billion ($41.3B Total)

Key Executives:
A. Malachi Mixon, III, Chairman and CEO
Gerald Blouch, President and COO
Gregory Thompson, CFO
Dale C. LaPorte, Senior Vice President, Business Development
Louis Slangan, Senior Vice President, Global Market Development

No. of Employees: 6,100

World Headquarters: Elyria, Ohio

With a multi-year global cost reduction initiative in effect, Invacare has been able to remain competitive in the face of competition abroad and changing Medicare reimbursement policies. In 2005, Invacare managed to increase net sales by 9% to $1.5 billion. The increased sales, however, belie net earnings of $49 million, down from $75 million in 2004.

Although the current state of Invacare may not characterized by double-digit growth, streamers and popping corks, the company is banking on future growth from its presence in the $1.7 billion sleep therapy market. With 20 million Americans suffering from obstructive sleep apnea, and only a small percentage actually diagnosed and treated, Invacare is now including clinical research data about its SoftX Technology with its Polaris EX Continuous Positive Airway Pressure system. SoftX, named after the soft exhalation sensation it

creates, has been shown to increase patient compliance.

During 2005, the company also looked to penetrate markets of interest through strategic purchases. In April that year, Invacare acquired Medical Support Systems Holdings Limited, a UK-based company that designs and manufactures high quality, foam pressure-reducing products for the healthcare market.

Additionally, in June 2005 Invacare acquired Altimate Medical, Inc., a US-based company (Morton, MN) that designs and manufactures standing frames and mobility aids for the rehabilitation market. Altimate's products fit well with Invacare's Helixx Group, which has a number of highly customized products for the rehab market.

"The addition of Altimate continues Invacare's goal of adding accretive acquisitions to our core markets of home and long term care," said A. Malachi Mixon, III, chairman and CEO of Invacare.

Product launches have continued to play a role in the company's strategies. In January 2006, Invacare launched the Top End Crossfire T6, an ultra-lightweight rigid wheelchair, one of the lightest-weight aluminum wheelchairs on the market making it easy to propel and transport. Also expected later this year is the launch of Invacare's MK series MK6i, an advanced electronics system for high-end custom power wheelchairs.

Invacare's first-quarter numbers for 2006 indicate that Medicare reimbursement issues could create some problems down the line. "The Administration's budget proposal to cut Medicare payments for home oxygen therapy would dramatically erode the quality of care for beneficiaries who rely upon home oxygen therapy. Home oxygen therapy sustains life for the approximately one million seniors who rely upon the therapy," said Mixon.

The first quarter produced many shrinking numbers. Net sales decreased 2% to $362 million versus $371 million last year. Further, net earnings were down to $9 million versus $20 million due to lower gross margins and restructuring costs. North American and European sales were down a bit, and Asia sales lowered 10%.

Sales of consumer power wheelchairs were flat, and projections are uncertain due to recently released (June 2006) CMS guidelines on power wheelchair eligibility. The guidelines affirm face-to-face physician examinations with required documentation provided by the physician to equipment providers within 45 days thereafter.

Not only is the Medicare issue causing unfavorable results, so is competition from low-cost, Asian imports. In light of these pressures, Invacare's strategy in 2006 is to remain focused on cost-cutting initiatives by rarifying its workforce, closing facilities, moving production to its China manufacturing facilities and discontinuing several product lines. Invacare hopes to achieve savings of $42 million by 2008, and has already recorded a savings of $7.3 million in 2005 with another $7 million expected in 2006.

One of the bright spots in Invacare's 2006 numbers comes from the Invacare Supply Group, which continued to grow with a 4% sales increase due to broadening its product offering and channels of distribution. Invacare Continuing Care Group sales increased by 3% for the quarter.

28. Gambro

$1.4 Billion ($41.3B Total)

Key Executives:
Soren Mellstig, President and CEO
David B. Perez, President, Gambro BCT
Lars Granlöf, Senior Vice President and CFO
Jon Risfelt, President, Gambro Renal Products
Maris Hartmanis, Senior Vice President
Åsa Hedin, Senior Vice President, Gambro Strategic Development
Kevin Smith, President, Gambro, Inc.

No. of Employees: 11,000

World Headquarters: Stockholm, Sweden

Blood dialysis giant Gambro Renal Products experienced a relatively flat 2005 against a strong dollar with a 5% increase—just slightly more than $1.4 billion as opposed to a total of $1.4 billion in 2004. In local currency (Swedish Krones), however, Gambro Renal posted an 8% increase due largely to healthy development in the key European markets and good growth in emerging markets.

Last year, and even earlier this year, have been periods of significant change for Gambro, Inc. Through an agreement with El Segunda, CA-based DaVita, Inc., the largest independent provider of dialysis services in the United States, Gambro divested its US dialysis clinics business (Gambro Healthcare US)—thereby reducing the size of the overall corporation by approximately half.

With revenues totaling $1.9 billion in 2004, Gambro Healthcare US represented just over half of total company revenues. When the deal was finalized in October, Gambro netted approximately $3.1 billion—of which $1.3 billion which was distributed to shareholders in accordance with a share redemption program.

Gambro also entered into a strategic partnership with DaVita for research and development of dialysis products. Furthermore, Gambro became DaVita's preferred supplier of renal products. However, trouble ensued when, in May 2006, DaVita terminated its alliance and supply agreement. The shift resulted after the FDA issued an Import Alert related to a January 2006 warning letter concerning quality issues at Gambro Dasco's Medolla, Italy manufacturing plant. The Import Alert called for the detention of Gambro's monitor products—Prisma, Prismaflex and Phoenix—shipped in the United States. Since Gambro Renal Products no longer has the ability to supply HD monitors, DaVita moved to terminate the alliance—however, as of press time, Gambro still has some time to rectify the issue.

At present, the Import Alert has not affected an additional distribution and promotion agreement with Deerfield, IL-based Baxter Healthcare. During 2005, Gambro strengthened its global HD business by granting Baxter exclusive distribution rights throughout Latin America. Following a decision by Baxter to phase out its production of HD monitors, the company chose Gambro to be its exclusive supplier of HD monitors and related disposables. This agreement could enable Gambro to significantly increase HD product sales and offer its product to new customers in the global dialysis market without any major investments.

Revenue growth for Gambro as a whole was healthy enough in 2005, reaching 7% (currency adjusted) gains to total $1.8 billion. This year, the company is looking to take advantage of the fast-growing synthetic dialyzer market as it moves to expand the manufacturing capacity of its Meyzieu plant in France and construct a new plant in Opelika, Alabama. The company also expects to capitalize on the February 510(k) approval by the FDA for the Polyflux 6H pediatric dialyzer, the first to be marketed in the United States.

"Gambro is very excited about bringing this new product to the pediatric market," said Helene Olefsky, Gambro Renal Products marketing manager. "It provides all of the benefits of Polyflux high-flux dialyzers for use in a pediatric application."

Gambro's recent accomplishments are global reaching as well. Last month (in June), Gambro announced it started operations in Lithuania by acquiring 11 clinics with approximately 300 patients. With this acquisition, Gambro will broaden its market presence in the Baltic States and operate in 15 countries, treating approximately 12,000 patients in 160 clinics.

Although Gambro's Renal Products revenue growth for 2006 is projected between 4% and 7%, the outlook is uncertain due to the FDA Import Alert issue. In March, Gambro submitted a comprehensive Compliance Action Plan (CAP) to the FDA, detailing the specific steps the company will take to resolve the agency's issues. Regardless, Gambro has assumed that the Import Alert will have a negative effect on future earnings.

Still, the company's current standing is good for now. First-quarter 2006 sales steadily grew by 7% (currency adjusted) to $481 million. Gambro Renal Products has slowed a bit but managed to climb 3% in spite of the FDA's Import Alert.

"The underlying business is in good shape and Gambro will continue the efforts to build future growth through development projects seeking acquisitions and cooperation agreements with external parties," said

Soren Mellstig, Gambro president and CEO.

29. Dräger Medical

$1.3 Billion ($41.3B Total)

Key Executives:
Stefan Dräger, Chairman and CEO of Dräger
Marcus Aben, President and CEO of Dräger Medical
Wolfgang Reim, Executive Board Chairman of Dräger Medical
Hans-Oskar Sulzer, CFO of Dräger
Roland Jaksch, CFO of Dräger Medical

No. of Employees: 5,859

World Headquarters: Lubeck, Germany

In its second year of operation, Dräger Medical, the joint venture of Drager and Siemens Medical, saw net sales climb to $1.3 billion, an 8% increase from $1.2 billion in 2004. The largest percentage of sales came from sales in Europe, with Germany and the Americas coming in second and third, respectively. Net revenues also increased by 15%, totaling $71 million.

The global focus of the German company was intensified in 2005 as 78% of total business and 87% of equipment orders were generated outside of Germany. The United States was particular strong for the company as it remained the largest regional market for equipment sales.

While the medical device industry continues to consolidate with a vast number of acquisitions, Dräger has remained steadfast in its goal of restructuring from within. This comes as no surprise, since the company received a grant of $9.2 million in December from German Finance Minister Dietrich Austermann, swaying Dräger to focus on its Lubeck, Germany-based headquarters in an attempt to revitalize the regional economic structure. As a result, Drager has recently relocated anesthesia device production from the US-based, Telford, PA plant to the Lubeck site, where the future corporate headquarters of Dräger Medical will reside. Dräger has invested $59 million in the new Lubeck headquarters and expects the project to be completed by 2007.

Through numerous product launches and partnerships announced in 2005, Dräger has been able to remain on the cutting edge of perioperative care. New products introduced in 2005 include the Stella OR light (developed in only two years), the Infinity Gateway Suite and the Zeus anesthesia system for infants and newborns.

Part of Dräger's success was due to its partnerships with leading OEMs. During 2005, Drager entered into an agreement with Irvine, CA-based Masimo Corporation, for which Dräger is now fitting the Infinity patient monitors with Masimo SET Sp02 SmartPod sensors.

"We strive to offer our customers the best technology available. Masimo SET pulse Oximetry has achieved strong market acceptance and we feel this technology is an excellent choice for our customers worldwide," said Marcus Aben, president and CEO of Dräger Medical Systems Inc.

Additional partnerships have augmented the Infinity line of patient monitors. During 2005, Dräger partnered with Munich, Germany-based Pulsion Medical Systems to incorporate Pulsion's less invasive PICCO-Technology for monitoring complete circulatory function.

"One of the major trends in healthcare today is toward less invasive care," said Aben. "As a result of our alliance with Pulsion, we are pleased to offer this less invasive approach to advanced hemodynamic monitoring to our customers."

Further enhancements to the Infinity line included the introduction of newer Neonatal Intensive Care Unit capabilities to the Infinity Kappa XLT patient monitor, which provides complete neonatal parameter support

facilitating easier assessment of apnea, bradycardia and desaturation.

In May 2005, Dräger announced another step toward perfecting the anesthesia workstation by unveiling IVenus, a dispenser of anesthesia drugs.

Although most of Dräger's products are not available in the United States or Canada, the Apollo anesthesia system was unveiled for the US market during 2005 and has proven very successful. Additionally, the FDA approved Dräger's SmartCare software solution, an automated ventilator-weaning module for the EvitaXL intensive care ventilator system.

Most of Dräger's fiscal 2005 was characterized by numerous business process improvements and restructurings, most notably the transfer of production of all patient monitoring and information systems from Danvers, MA (August 2005) and the entire Perinatal Care division from Hatboro, MA (January 2006) to Telford, PA.

Dräger also implemented improved business processes during 2005, most notably the "Management Installed Base" (MIB) process. Under the MIB process, operating service processes are defined for each country's organization, including the escalation processes and the global supply of replacement parts. The specific aim of MIB is to increase service efficiency by standardizing the company's global service activities.

Dräger also sought to improve its processes with the global implementation of a product lifecycle management (PLM) system.

In 2006, Dräger's internal improvement efforts are proving beneficial as the company achieved record first-quarter earnings. Revenues for the group grew 15% to $536 million, up from $465 million in 2005. Dräger Medical's contribution was $360 million, a 15% increase, with Germany contributing the greatest increase in revenues. Dräger Safety reported a 14% increase to $185 million.

Dräger expects revenue growth on the order of 5% to 7% for Dräger Medical and 3% to 5% for Dräger Safety.

30. Varian Medical

$1.2 Billion ($41.3B Total)

Key Executives:
Richard Levy, CEO
Timothy Guertin, President and COO
Elisha Finney, Senior Vice President and CFO
Robert Kluge, Vice President and President, X-Ray Products
Dow Wilson, Executive VP; President, Oncology Systems

No. of Employees: 3,600

World Headquarters: Palo Alto, California

As a leading manufacturer of X-ray tubes and digital image detectors for medical imaging, Varian Medical is doing quite well in the device industry and is the lone new joiner to make Medical Product Outsourcing's list of the top 30 companies.

It may be tough to pinpoint exactly who was responsible for the success, since former Varian Chairman and CEO Richard Levy decided to retire in 2005. This year, in February, Tim Guertin, president of the company since 2005, added the CEO title to his cache. Along with this major shuffling was the move of Dow Wilson, former CEO of GE Healthcare Information Technologies business, into the slot of president for Varian's Oncology Systems business.

All major players can be proud of Varian's performance in 2005, as the company realized 10% growth in sales to reach a total of $1.2 billion.

Revenues were climbing upward all over Varian's segments. Oncology Systems rose 10% to $1.1 billion, up from $1 billion in 2004, mainly due to strong international sales in Europe, Australia (along with New Zealand) and Japan. Giving a boost to the numbers was the launch of the ARIA Oncology Information System; a new version of the company's Eclipse software; and the Varian Trilogy Accelerator, a radiation delivery system.

Along with the booming medical imaging market, the company has been capitalizing on the current trend of minimally invasive surgery. As such, sales of the company's Brachytherapy (radioactive seeding) business increased 28% to $48 million.

Varian's X-ray Products business also saw record numbers for 2005 with an 18% increase in sales to $195 million, helped by the introduction of 11 new X-ray tubes and by sales of the PaxScan product line. In anticipation of further growth in the X-ray market, Varian is planning to expand its X-ray products manufacturing plant in Salt Lake City, UT.

Numerous FDA approvals and product launches have helped advance Varian's position in the market. In January 2005, Varian introduced the SG-1590 Tri-focus X-ray Tube, a direct replacement for use in special procedures equipment from Siemens Medical Solutions. Two months later, Varian received FDA 510(k) clearance for the Nasopharynx Applicator Set for Advanced Brachytherapy, designed for the delivery of localized radiation therapy in the upper throat area. In December, the company was cleared to launch its proton therapy eye dose calculation module, which has been made part of the company's Eclipse treatment planning system.

To meet increasing global demand for its medical linear accelerators, Varian broke ground in Beijing, China with a new manufacturing facility to be run as a foreign-owned enterprise. "This important project expands Varian's global manufacturing and service capability in the radiation therapy market with the greatest growth potential in the world," said Guertin. The 134,000-square-foot plant is expected to be completed in March 2007.

In the quest for global success, the company evaluated its acquisition strategy and, in January 2005, added to its portfolio Sigma Micro Informatique Conseil, a supplier of information management software for radiation and medical oncology in cancer clinics and hospitals in France and other European nations. This move offered Varian the opportunity to provide French-speaking and other international clinics with information management technology that can help manage electronic health records for cancer patients. Varian expects the acquisition to yield $7 million in revenue this year.

If this year's numbers are any indication, look for Varian to keep jumping up the list of top companies in coming years. Second-quarter 2006 net sales for the company reached an all-time record $414 million, up 18% from last year. Gains in the Oncology Systems segment increased by 18% as well, and the X-ray Products business bested all the numbers with a 21% increase.

"The second quarter was marked by strong revenue growth in our Oncology Systems and X-ray Products businesses, with solid contributions from some of our emerging businesses in brachytherapy and flat-panel digital image detectors for filmless X-rays," said Guertin.

The company's emerging business in digital image detectors nearly doubled during the quarter, which is on par for the demand in medical diagnostics and other scanning. X-ray tubes, particularly high-power anode-grounded CT tubes, are also adding greatly to Varian's bottom line.

Varian has been a little more conservative in its expectations for the next quarter and final total 2006 numbers. Still, growth projections are in the 14% range.