

# MARKETWATCH

Weekly News Bulletin– Issue No.10

April 6, 2018

## In this issue...

April 4 News

### GE divests healthcare technology unit for \$1.05bn

General Electric (GE) has entered into a definitive agreement to divest the Value-Based Care division under its Healthcare unit to private equity investment firm Veritas Capital for \$1.05bn.

An affiliate of Veritas will purchase the Enterprise Financial, Ambulatory Care and Workforce Management assets from GE.

GE expects that Veritas will support its current expertise in healthcare IT segment to bolster the scale and performance of its care division.

“GE Healthcare plans to continue pursuing various digital solutions, including smart diagnostics, connected devices, artificial intelligence and enterprise imaging to deliver precision healthcare.”

GE Healthcare Value-Based Care Solutions vice-president and general manager Jon Zimmerman said: “Our team has significant knowledge and expertise in the healthcare IT space, and by operating as a standalone business under Veritas’ ownership, we now have the opportunity to further revitalize our product portfolio and pursue complementary acquisitions to better serve patients, providers and payers.

“With Veritas’ support and resources, we are excited to continue deepening our commitment and capabilities to help healthcare providers manage their financial, clinical, and employee workflows across the continuum of care.”

In turn, Veritas intends to leverage the new opportunity and provide the means required to cater to a \$9bn market for digitalising healthcare.

Veritas Capital CEO and managing partner Ramzi Musallam said: “Similar to our previous healthcare technology investments, all of which have been corporate carve-outs, we will be deeply customer-focused, and invest significantly in people, technology and infrastructure to support the evolving requirements of the company’s diverse customer group.”

GE Healthcare plans to continue pursuing various digital solutions, including smart diagnostics, connected devices, artificial intelligence and enterprise imaging to deliver precision healthcare.

Furthermore, the firm will work on data analytics, command centers, advanced visualization and image management equipment in order to ensure good outcomes for both its customers and patients.



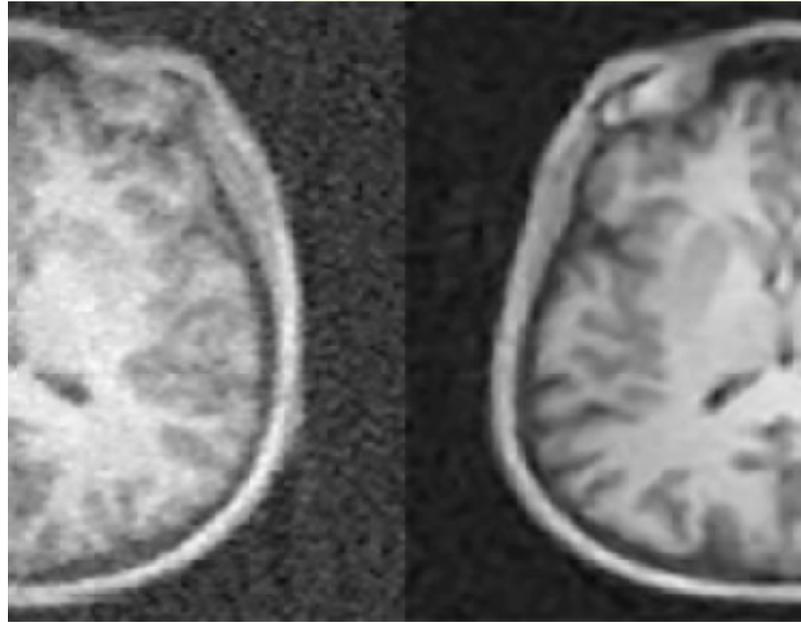
## In this issue...

### Portable device detects severe stroke in seconds with 92 percent accuracy

March 26, 2018

A new device worn like a visor can detect emergent large-vessel occlusion in patients with suspected stroke with 92 percent accuracy, report clinical investigators at the Medical University of South Carolina (MUSC), Mount Sinai, the University of Tennessee Health Sciences Center and elsewhere in an article published online on March 6, 2018, in the *Journal of Neurointerventional Surgery*. Patients with large-vessel occlusions can then be routed to a Comprehensive Stroke Center with endovascular capabilities. In contrast, a standard physical examination achieved only 40 to 89 percent accuracy in identifying patients with large-vessel occlusion who could benefit from endovascular therapy.

The researchers hope that the device will save valuable time -- especially important in stroke where time is brain -- when it is deployed with emergency medical personnel in the field. This is because the accuracy of the device simplifies the decision made by emergency personnel about where to take patients first, according to Raymond D. Turner, M.D., professor of neurosurgery and chief of the Neuroscience Integrated Center of Clinical Excellence at MUSC. Turner served as principal investigator for MUSC in the VIPS for the Non-Invasive Detection of Hemispheric Bioimpedance Asymmetry in Severe Brain Pathology (VITAL) study reported in the article.



### IBM takes on drug-resistant cancers

*(This is what I call an innovative mind)*



Computer giant IBM has a side business in the life sciences, and it's doing interesting work on cancer. In a recent paper published in the *Journal of the American Chemical Society (JACS)*, researchers at IBM Healthcare and Life Sciences outlined how new polymers can selectively destroy cancer cells by slicing them open. "They poke a bunch of holes in the membrane," said IBM researcher and first author on the paper Nathaniel Park in a phone interview. "It's hard for the cancer cells to stop this or develop resistance."

The technology arose from IBM's computer expertise. Around ten years ago, the company realized the polymers they had developed to make chips could be reapplied to the life sciences. The team, led by James Hedrick, has used these macromolecules against antibiotic-resistant bacteria, many of which have a negative charge. "Antimicrobial polymers get their efficacy from their cationic charge," said Park. "So, they're positively charged, and this allows them to selectively associate with the microbes over healthy human cells." The *JACS* study showed the same strategy can be effective against cancer cells, which can also be negatively charged. The macromolecules they've created take their cue from peptides and antibodies, which can also home in on cancer cells.

"These are more like biologics," said Park. "They are not proteins or peptides per se, but they do mimic their functions and are in a similar weight class." While the results are promising, this research is quite early stage, working in cell lines and animal models. The team is now looking for collaborators. "We would like to find a partner in industry to help take these systems forward," said Park, "to see if some of them can make their way to the clinic in an eight to ten-year timeframe."

## IDC Insights - Health

*IDC (International Data Corporation) Health Insights works with healthcare and life science organizations throughout the world on providing value-based healthcare and knowledge-based medicine.*

### IDC discusses medical device trends for 2018

#### 1. Which medical device sector has attracted the investors' attention in 2017 and will this trend carry on in 2018?

Capital investment in 2017 supported the development of devices for minimally invasive surgery, with the potential it brings as a tool for faster healing— this is certain to continue in 2018. Point of care testing is also a hot medical issue. There are many benefits to this approach such as a better experience for the patients, with greater understanding of the diagnosis, as well as reduced time and resource requirements for the hospital. Because of this, in-vitro diagnostic equipment will attract capital investment in 2018. There are currently many applications available, but investment will only be made in applications that can demonstrate real value to medical professionals.

#### 2. What medical sector do you think will expand in 2018 and why?

Point of care testing, in-vitro diagnostic (IVD) equipment and the Internet of Things (IoT) will continue to grow. There are more and more technologies emerging for IVD, but the major challenge facing designers is making them more cost effective, while still maintaining the highest quality standards.

#### 3. How will regulatory changes affect medical device development in 2018?

2018 will be about companies transitioning to new regulatory systems. Regulatory changes were made during 2017 to achieve better risk control, as demonstrated by the European Medical Devices Regulations (MDR) need for more detailed technical documentation and auditing. Over the next three years in Europe, the MDR will completely replace the current Medical Devices Directive (MDR) with stricter demands for clinical evaluation.

#### 4. The concept of intelligent hardware is very popular right now for domestic use, what is your point of view?

Intelligent hardware and devices take much longer to establish in the medical world than in the domestic environment because of the regulatory requirements. The companies that are fully up to speed in regulatory processes are the ones who will be able to develop these devices most effectively.

#### 5. 3D Printing has been popular in the last few years— will this continue to influence the precision, reliability and speed of medical developments?

3D Printing makes a great contribution to the design and development of medical devices, enabling quick model making or the most final prototypes for testing. Its high-cost, however, means that it is most suitable for supporting product development rather than mass medical applications.

### Industrial firm NN to buy medical device maker Paragon Medical

US-based industrial company NN has signed a definitive agreement to purchase medical device manufacturer Paragon Medical's parent organisation PMG Intermediate from private equity firm Beecken Petty O'Keefe (BPOC) for \$375m.

Paragon Medical develops medical devices for orthopaedic, case and tray, implant and instrument segments. It offers premier engineering, manufacturing and logistics services from the initiation through commercialisation of a project.

The firm has operations in the US, Asia and Europe, and focuses on meeting the demands of the global medical device market.

Paragon Medical president, CEO and founder Tobias Buck said: "Combining our great franchise with NN under their Life Sciences division is an exciting opportunity for Paragon's customers and associates.

"The combined company creates a dynamic portfolio that meets our customers' needs across a broad platform of end markets and product offerings."

## BRUNEI

### HEALTHCARE

(Good Opportunity?)

#### Brunei Statistics

- Capital: Bandar Seri Begawan
- Population: 436,620 (2016 est)
- GDP: USD \$10.46 Billion (2016 est.)
- Currency: Brunei Dollar
- Language: English, Malay, Chinese



Brunei has a small but growing medical industry. The country's Ministry of Health provides free health care services for its citizens. The Sultanate's two

major hospitals – Raja Isteri Pengiran Anak Saleha Hospital (RIPAS Hospital) and Jerudong Park Medical Center (JPMC) –are supplemented by eight medical centers. Basic health services are extended to rural areas through a network of 17 health centers and 20 health clinics, as well as travelling clinics and flying medical services.

Affluent Bruneians often seek advanced medical services outside of the country, Singapore and Thailand specifically. When public hospitals are unable to provide specific services, the government coordinates and pays for Brunei citizens to be sent overseas for treatment. As Brunei's population ages and requires medical care, the medical industry in Brunei will be an important longer-term growth sector. For the 2017-2018 fiscal year, the Ministry of Health received a budget of US \$230.4 million (7.5% lower than the previous fiscal year), including US \$ 5.5 million for development expenditure.

**Market Entry:** Brunei's population - largely clustered around the capital Bandar Seri Begawan, with other population centers connected by a well-maintained highway system - provides a ready destination for exports with low transit costs once goods arrive in country. It is important to build personal relationships with local representatives and customers through regular visits or by establishing resident representation.

**Current Market Trends:** In May 2015, the Ministry of Health launched the Master Plan for the Health System and Healthcare Infrastructure in Brunei Darussalam which set out the 20-year strategic plan for the Sultanate's healthcare system. The Plan identifies seven key strategies: service delivery, governance, human resources and workforce planning, finance, information technology and research, medical products, vaccines and technology, as well as healthcare infrastructure and facilities. The master plan outlined the building of a new outpatient hospital and upgrades to existing hospitals.

**Main Competitors:** Main competitors in Brunei for the medical industry are products from Germany and other first world medical device manufacturers.

**Current Demand:** Best Prospects for medical equipment and supplies manufacturing include: Manufacturing laboratory instruments, X-ray apparatus, electro medical apparatus (including electronic hearing aids), and thermometers (except medical)--are classified in Industry 33451, Navigational, Measuring, Electro medical, and Control Instruments Manufacturing; Manufacturing molded glass lens blanks--are classified in Industry 32721, Glass and Glass Product Manufacturing.

**Registration Process:** Even without a physical presence in Brunei, companies generally need a license to do business in the country. One does not need a Brunei citizen representative to do business commercially or when selling directly to the government.

For Tenders; <http://www.moh.gov.bn/SitePages/senaraitender.aspx>

BIÇAKCILAR, Corporate Marketing

## Product development: Good science alone does not lead to good healthcare products

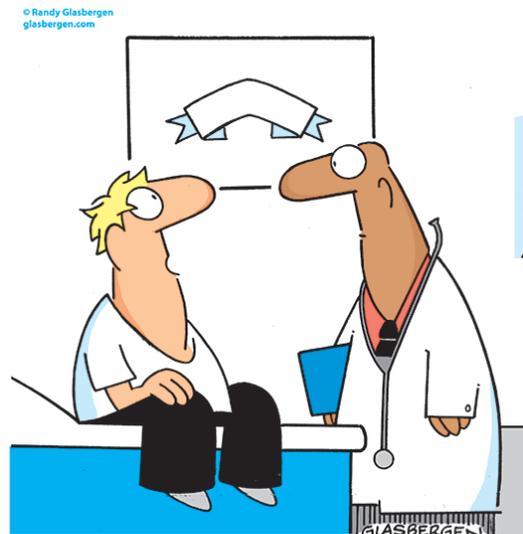
Development of healthcare products is highly regulated. It is a long and expensive undertaking. In addition to the good science in support of the quality, safety and effectiveness of the product, factors such as market research, regulatory issues, and reimbursement and pricing strategies need to be evaluated. Such an overall appraisal will provide important feedback for the product development program. It can yield important insights to steer the positioning as well as decisions related to product design, its intended use, and the clinical trial design or types of studies that need to be conducted.<sup>1</sup> In short, good science alone does not necessarily lead to a good product. **Scientific expertise needs to be leveraged within the context of market forces in order to achieve a successful and profitable product.**

Basic rules;

- Identify and segment markets for your technology.
- Define the product characteristics required to address market needs.
- Understand the pros and cons of other market players (which will help you define your competitive edge).
- Project sales revenues and profits.
- Determine appropriate pricing



"Please don't pray for healing. If it works, your insurance won't know who to reimburse and it messes up our accounting system."



"I already diagnosed myself on the Internet. I'm only here for a second opinion."



"Our hospital has the very best technology. I'll be using GPS to locate your appendix."

### Contact Us

If you have any specific area that you need information on, please contact Corporate Marketing so we can focus on the specific areas to research to speed up your efforts.

