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## GE Healthcare to Invest 1 Billion USD in Advanced Oncology Solutions



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GE Healthcare, the health business of General Electric (NYSE: GE), announced today its plans to dedicate \$1 billion of its total R&D budget over the next five years to expand its advanced cancer diagnostic and molecular imaging capabilities, as well as its world-class technologies for the manufacture of biopharmaceuticals and for cancer research.

Announced alongside a \$100m open innovation challenge in New York City, the \$1 billion investment crosses all lines of GE Healthcare's global business and is an example of the company's commitment to fighting cancer. The investment will enable the company to bring the most promising cancer ideas to market, unleashing technologies that improve accuracy of diagnosis to enable more effective treatment decisions and empower doctors and patients with better information.

"We are committed to tackling cancer. However, with a disease as complex and multifaceted as cancer, solutions need to be equally multifaceted and even more integrated, combining imaging, molecular diagnostics and healthcare IT," said John Dineen, president and CEO, GE Healthcare. "As one of the most relevant global cancer diagnostic companies, we are devoting an even greater share of our R&D budget to continue developing new oncology solutions."

Today, GE Healthcare already offers a wide portfolio for oncology and a strategy that combines cellular research, medical imaging, laboratory diagnostics, biopharmaceutical manufacturing technologies and information technology. These innovative technologies help researchers increase their understanding of the causes and progression of cancer and help physicians make more personalized cancer treatment and management decisions, while improving clinical outcomes and accelerating the delivery of care.

A key global healthcare challenge is the dramatic increase in cancer incidence around the world. According to World Health Organization data, cancer rates could increase by 50 percent, leading to 15 million new cases in 2020. From a clinical standpoint, the rapid increase in targeted and patient-specific cancer therapies is driving demand for molecular diagnostics.

### Building a 'Deeper Bench' of Oncology Expertise

GE Healthcare is seen as a leader in diagnostic imaging for the detection of cancer and as a leading provider of technologies for cancer research and biopharmaceutical manufacturing. In recent years, the company has significantly expanded its presence in the oncology arena through strategic acquisitions, including Amersham plc. (2004), Biacore International AB (2006), Wave Biotech LLC (2007), MicroCal LLC (2008), Clariant (2010) and Applied Precision (2011) and a joint venture Omnyx (2009).

A recognized pioneer of oncology invention for over 50 years, GE Healthcare continues to research and develop industry-defining technologies. This work is happening at a fast pace across the company, in close collaboration with GE Global Research and through a number of strategic partnerships and alliances.

Of the imaging tools available to help oncologists manage a patient's complete cancer pathway, there are few that offer as much clinical versatility and value as Positron Emission Tomography (PET)/Computed Tomography (CT). Combining functional and anatomical data in a single image, PET/CT excels in early diagnosis, uncovering valuable information on tumor location, size and metabolic activity. It assists physicians in differentiating between malignant and benign lesions, identifying recurrences and metastases, and guiding treatment selection and delivery. The GE Healthcare Discovery\* PET/CT systems are designed to optimize the full range of oncology applications, from diagnosis and staging to treatment planning and monitoring. Their versatility presents an ideal solution for multi-use and shared services, and across the patient care cycle.

GE Healthcare is introducing new tracers to the FASTlab\* multi-tracer platform, an advanced PET chemistry system on which the company is also developing PET proprietary agents. FASTlab\* offers a number of significant enhancements to address the ever-evolving challenges of tracer production.

### Investing in Invention

"The only way we can help clinicians beat cancer is to give them the tools to find it earlier, stage it better, and quantitatively measure response to therapy," said GE Vice President and GE Healthcare Chief Technology Officer Mike Harsh, who oversees GE Healthcare's global research and development efforts. "The integration of GE Healthcare's expertise in imaging, analytics, diagnostics, cellular analysis, and healthcare IT is helping create technologies and solutions that can be used in a rural developing country or in a modern urban hospital."

The investment will focus on developing new oncology solutions and build on advanced technologies and research already in progress.

- **New biomarkers:** A leader in the fast-growing in vitro molecular diagnostic sector, GE's Clariant business provides diagnostic tests that pathologists and oncologists use to understand the nature of a cancer.

Clariant is investigating a new biomarker, TLE3, to identify patients who will not respond to Taxane. The goal of this test is to help clinicians exclude those patients from this therapy who are least likely to benefit, thus saving them needless exposure to serious side effects. TLE3 is being developed for breast cancer, lung cancer and ovarian cancer by GE Clariant. This will potentially save healthcare systems millions of dollars each year, not to mention the benefits to patient care. Our hope is to have these tests ready for market launch in 2013.

- **Molecular pathology:** GE Global Research scientists are working on an exclusive cancer diagnostic technology that may give a clearer picture of pathways driving specific tumors. This may lead to more effective, personalized treatment recommendations. Called multiplexing, the technology could allow pathologists to conduct more than 50 different stains on a single tissue section.

- **Cancer research:** GE's innovative technologies for Life Science research are used in cancer research laboratories worldwide to advance understanding of the molecular mechanisms behind cancer. GE Healthcare's cellular and sub-cellular imaging technologies, such as the IN Cell 6000 and Applied Precision's super-resolution microscopes, are central to many areas of cancer research including drug discovery and biomarker research.

- **Biopharmaceutical manufacturing:** GE's world-class biotechnology products and services are used in the manufacture of the majority of FDA-approved biopharmaceuticals and are important for developing new and targeted cancer therapies.

- **Hyperpolarizer:** In collaboration with the University of California, San Francisco (UCSF), GE Healthcare and GE Global Research are developing new C13-based agents for metabolic imaging. University researchers have just announced groundbreaking results from a study of prostate cancer utilizing GE's C13 technology, where real-time metabolic imaging of a human patient was conducted for the first time. A member of the UCSF research team describes it as a groundbreaking approach to understanding the precise margins of a tumor, how fast the tumor is growing and how well it responds to treatment.

- **Connected oncology workflow:** MD Connect is a new, innovative thin-client solution designed for oncology that addresses the need for a seamless workflow from scan to plan through monitoring treatment effectiveness. MD Connect helps improve productivity across the cancer care continuum. Powered by the GE AW Server, it enables plug-and-play access via virtually any networked computer to the complete suite of oncology applications from any location or department. MD Connect integrates with the Eclipse™ treatment planning platform from Varian Medical Systems, all on one desktop and other DICOM-based treatment planning platforms.

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