

Healthcare Sector Imaging & IT Division

Study Offers Hope for Advancement in Cancer Diagnosis and Treatment

Siemens Announces Promising Results from Phase 0 Study of New PET Imaging Biomarker

Montreal, Canada, Sept. 23, 2009 – Siemens Healthcare announced today the initial findings of a new imaging biomarker developed by its molecular imaging biomarker research facility in collaboration with Dr. Jian Q. (Michael) Yu and Fox Chase Cancer Center in Philadelphia. The new imaging agent was designed to capture and quantify the cellular expression of CA-IX, an enzyme whose expression has been linked to tumor growth and invasion, as well as hypoxia. The results were presented today at the World Molecular Imaging Conference in Montreal.

“These are very exciting initial results,” said Jian Q. Yu, MD, of Fox Chase Cancer Center. “The potential ability to non-invasively determine the level of potency in malignant cancer cells might drastically change the treatment course in individual patients.”

CA-IX is an active enzyme, whose expression usually promotes tumor growth and invasion, and thus impairs prognosis. Noninvasive quantification of CA-IX expression may have the potential to characterize the biologic aggressiveness of malignant tumors in an individual, without the need for the invasive collection of tissue samples. The detection of CA-IX in patients may provide a novel approach to predict disease outcomes and efficacious responses to cancer therapy, and, ultimately, help physicians decide on the most effective treatment options for patients.

The results of the Phase 0 (exploratory), or “first-in-human,” study indicated that the bio-distribution of the new agent was recorded at safe levels for clinical use in Positron Emission Tomography (PET) studies. The agent was also found to be stable for imaging at 133-minutes post injection, which allows a sufficient window for acquiring the image, and that the agent safely clears the body through urinary elimination. The study included initial human data regarding bio-distribution of the new agent, radiation dosimetry levels in normal volunteers and optimal patient imaging parameters using PET. Further study with patients is currently in progress.

1 / 3

“Siemens is committed to investing in new scientific and technological methods to visualize disease so that, ultimately, patients can be diagnosed and treated earlier,” said Hartmuth Kolb, vice president, Siemens Biomarker Research, Molecular Imaging.

Carbonic anhydrase IX (CA-IX) is one subtype of transmembrane carbonic anhydrases, which catalyzes the reversible hydration of carbon dioxide into carbonic acid and is believed to be involved in pH regulation, which is linked to tissue invasion by tumors. The absence of CA-IX expression has been observed in many normal tissues. The abnormal expression of CA-IX has been detected in many carcinomas originating from CA-IX negative tissues including, the brain, kidney, lung, breast and uterine cervical tissues.

Phase 0 trials are conducted in accordance with the Food and Drug Administration’s (FDA) guidance on exploratory investigational new drug (IND) studies. These types of studies are intended to improve the development of promising drugs or imaging agents by determining at a very early stage if the drug or agent performs as expected, based on earlier results in pre-clinical trials.

Siemens Molecular Imaging Biomarker Research facility in Los Angeles is dedicated solely to the discovery and development of new imaging biomarkers to spur the growth of in vivo molecular diagnostics. In addition to the study mentioned above, Siemens also has four other agents in development, with the goal of bringing several new agents to the clinical market over the next five to 10 years. Research and development efforts conducted at the facility and with Siemens’ research partners focus largely on oncology and neurology, and include such agents as those that visualize angiogenesis, cell proliferation, hypoxia and amyloid plaque.

The **Siemens Healthcare Sector** is one of the world's largest suppliers to the healthcare industry and a trendsetter in medical imaging, laboratory diagnostics, medical information technology and hearing aids. Siemens is the only company to offer customers products and solutions for the entire range of patient care from a single source – from prevention and early detection to diagnosis, and on to treatment and aftercare. By optimizing clinical workflows for the most common diseases, Siemens also makes healthcare faster, better and more cost-effective. Siemens Healthcare employs some 49,000 employees worldwide and operates in over 130 countries. In fiscal year 2008 (to September 30), the Sector posted revenue of 11.2 billion euros and profit of 1.2 billion euros. For further information please visit:

www.siemens.com/healthcare.

The **Fox Chase Cancer Center** is a National Cancer Institute-designated Comprehensive Cancer Center research facility and hospital located in Philadelphia, Pennsylvania, United States. The center is an independent, non-profit institution which specializes in the treatment and prevention of cancer. The center was formed in 1974 by the merger of

2 / 3

Siemens AG
Communications and Government Affairs
Wittelsbacherplatz 2, 80333 Munich
Germany

Reference number: HYYJJJMM.###x xx

Media Relations: Tom Schaffner
Telephone: 1-610-448-1477
E-mail: thomas.schaffner@siemens.com
Siemens Medical Solutions USA, Inc.
Healthcare Sector – Imaging & IT Division
51 Valley Stream Parkway, H33, Malvern, PA 19355

the American Oncologic Hospital, which was founded in 1904 as the first cancer hospital in the United States, and the Institute for Cancer Research, founded in 1927. In 1995, Fox Chase also became a founding member of the National Comprehensive Cancer Network, an alliance of 21 of the nation's leading academic cancer centers. Fox Chase's 100-bed hospital is one of the few facilities in the country devoted entirely to cancer care. Involved in more than 170 clinical trials of new prevention, diagnostic, and treatment techniques, Fox Chase also participates in national and international trials testing new agents that may prevent cancer. Further information can be found by visiting <http://www.fccc.edu> .