

## Healthcare Sector

For the Trade press

Erlangen, 17th June 2008

### **Siemens Next Generation Technology May Bring New Hope to Cancer Patients**

First patients are treated with the new Artiste Solution Linear Accelerator in Germany, the Netherlands, and the United States

**The Artiste Solution from Siemens has recently gone clinical in three of the most prominent cancer centers around the world. Dozens of patients have been treated to date at MAASTRO Clinic in the Netherlands, German Cancer Research Center (DKFZ) in Heidelberg, Germany, and Baton Rouge General's Pennington Cancer Center in Louisiana.**

The Artiste Solution is a linear accelerator engineered specifically for Adaptive Radiation Therapy (ART). Unique in design, Artiste is an integrated imaging and workflow solution that offers a comprehensive portfolio of image-guided and advanced treatment delivery protocols, including in-room CT imaging capabilities and a new multileaf collimator, 160 MLC.

One of the first patients treated with Artiste was seen at DKFZ, where the linear accelerator was used to administer radiotherapy for an inoperable esophagus tumor. "Treatment for this type of tumor demands a very complicated radiotherapy approach," said Prof. Dr. Huber, head of the Radiation Oncology Clinical Cooperation

Unit at DKFZ. “Using Artiste’s 160 MLC Multileaf Collimator, we were able to significantly improve the precision of the dose delivery while protecting immediate surrounding healthy tissue.”

That same week, several patients at MAASTRO Clinic were also treated using Artiste. A couple of challenging clinical cases included a metastasized tumor in the abdominal region and a patient with two separate metastases: one in the head and neck region, and one in the knee cap.

“The advanced, high-end imaging capabilities of Artiste allow us to fully integrate all our Image-Guided Radiation Therapy (IGRT) and MAASTRO-developed Dose-Guided Radiation Therapy (DGRT) methods in one clinical workflow. Artiste’s imaging flexibility and simplified workflow help us to confidently treat proliferated tumors in a wide range of areas of the body,” said Bas Nijsten, medical radiotherapy physicist in the Maastricht Radiation Oncology Department.

More recently, the first U.S. patients were treated with Artiste Solution at the Baton Rouge General’s Pennington Cancer Center. The first two patients were treated for lung and prostate tumors, respectively, where Artiste’s 2D and 3D imaging allowed confirmation of tumor location and enabled more focused and aggressive treatment while helping spare organs at risk.

“With Artiste, Siemens is changing the way radiotherapy is delivered. As the first site in the U.S. with Artiste, our mission at Baton Rouge General’s Pennington Cancer Center is to combine our commitment to compassionate cancer care with the latest, most advanced treatment technology,” said Dr. William Russell, medical director of Radiation Oncology at Pennington Cancer Center.

“This exciting milestone has come to fruition thanks to the clinical collaboration between Siemens, MAASTRO, DKFZ, and Baton Rouge General,” said Holger Schmidt, CEO,

Oncology Care Systems, Siemens Medical Solutions USA, Inc. “Artiste’s unique integration of technologies and streamlined workflow allows clinicians to truly customize patient treatment by providing them the flexibility and means to confidently optimize treatment on a per-patient basis. It is an honor for us at Siemens to be part of this collaborative effort to help improve quality of care for cancer patients around the world. We are delighted to call 55 new Artiste orders since its introduction in the market last January.”

The goal of Adaptive Radiation Therapy (ART) is to ensure the therapeutic dose is delivered precisely to the target, and healthy tissue is spared as planned. To achieve this goal, it is necessary to image the patient just prior to treatment, verify that the patient position is correct, and adapt to any anatomical changes immediately before, or even during, treatment.

Several images accompany this press release and can be downloaded under:

<http://www.siemens.com/med-pictures/Artiste>

### **About Baton Rouge General’s Pennington Cancer Center**

Baton Rouge General’s Pennington Cancer Center has a rich history of bringing advanced cancer treatment solutions to South Louisiana through its comprehensive, multidisciplinary cancer program which includes inpatient, outpatient, surgical and medical oncology services; radiation treatment; and cancer research programs. In 2006, the Pennington family endowed Baton Rouge General’s cancer center, further expanding and increasing access to high quality cancer treatment for the people of this region. For further information, visit <http://www.brgeneral.org>

### **About DKFZ**

The task of the Deutsches Krebsforschungszentrum in Heidelberg (German Cancer Research Center, DKFZ) is to systematically investigate the mechanisms of cancer development and to identify cancer risk factors. The findings resulting from basic

research are expected to lead to new approaches in the prevention, diagnosis, and treatment of cancer. Funding is provided by the Federal Ministry of Education and Research (BMBF; 90 percent) and by the State of Baden-Wuerttemberg (10 percent). The German Cancer Research Center is a member of the Helmholtz Association of National Research Centers (Helmholtz-Gemeinschaft Deutscher Forschungszentren e.V.) Further information can be found at [www.dkfz.de](http://www.dkfz.de)

### **About MAASTRO CLINIC**

MAASTRO, Maastricht Radiation Oncology, is a co-operation between MAASTRO clinic, the University of Maastricht (UM) and the University Hospital Maastricht (azM).

MAASTRO clinic offers state-of-the-art radiotherapy to more than 3,500 cancer patients each year from the mid- and South Limburg area in the Netherlands. MAASTRO clinic currently has seven modern linear accelerators, all equipped with EPID and one with Megavolt Cone Beam CT, a PET-CT and a small and large bore multislice CT with 4D-CT option. For all patients, planning is done via virtual simulation and 3D planning software, using advanced dose calculation algorithms. Stereotactic and brachytherapy treatment are also offered by MAASTRO clinic. The department's ambitions focus on individualizing treatment using Computer Assisted Theragnostics (CAT), developing predictive models for lung cancer, implementing Dose Guided Radiation Therapy (DGRT) and fundamental biological research on tumor hypoxia. Long-term strategies are defined in the areas of ion therapy, smart drugs based on EGFR-AKT pathway, and stem cells and probabilistic voxel guided radiotherapy. Furthermore, MAASTRO is a world-wide research partner based reference site for Siemens OCS. For further information visit [www.maaastro.nl](http://www.maaastro.nl)

### **About Siemens Healthcare**

The **Siemens Healthcare Sector** is one of the world's largest suppliers to the healthcare industry. The company is a renowned medical solutions provider with core competence and innovative strength in diagnostic and therapeutic technologies as well as in knowledge engineering, including information technology and system integration. With its laboratory diagnostics acquisitions, Siemens Healthcare is the first fully integrated

diagnostics company, bringing together imaging and lab diagnostics, therapy, and healthcare information technology solutions, supplemented by consulting and support services. Siemens Healthcare delivers solutions across the entire continuum of care – from prevention and early detection, to diagnosis, therapy and care. Additionally, Siemens is the global market leader in innovative hearing instruments. The company employs more than 49,000 people worldwide and operates in 130 countries. In the fiscal year 2007 (Sept. 30), Siemens Healthcare reported sales of €9.85 billion, orders of €10.27 billion, and group profit of €1.32 billion. Further information can be found by visiting <http://www.siemens.com/healthcare>.