

## **Researchers Explore Use for Head, Neck, Prostate, Breast and Lung Tumors, as Well as More Complex Blood Cancer and Mesothelioma Treatments**

The Associated Press

<http://www.tomotherapy.com> () —

TomoTherapy Incorporated (<http://www.tomotherapy.com/>) (NASDAQ: TOMO), maker of advanced radiation therapy solutions for cancer care, today announced that 82 studies examining the use of the TomoTherapy@ treatment system to treat common, complex and rare tumors throughout the body will be showcased at ESTRO 29, September 12-16, 2010, in Barcelona ([http://www.tomotherapy.com/register/special/ESTRO\\_29](http://www.tomotherapy.com/register/special/ESTRO_29)) . The studies examine use of the TomoTherapy system on head and neck, prostate, breast and lung tumors, as well as for treating blood cancers, mesothelioma and pediatric patients.

In one of the most promising papers, researchers from San Raffaele Scientific Institute in Milan, Italy compared TomoTherapy to other radiation therapy solutions using Pareto front analysis to explore the ability of these treatment methods to improve target coverage without sacrificing organs at risk (OAR) or other constraints. Researchers reported that "for all simulations RapidArc@ met less of the optimization criteria, while TomoTherapy was able to produce the most homogeneous dose and have the capability to conform dose distributions better than RapidArc@."

**Head and Neck Cancers**Among the numerous studies on head and neck tumors, two studies compare arc therapy to helical TomoTherapy radiation delivery. Exploring the treatment of patients with oropharyngeal cancer, researchers in Belgium and the Netherlands concluded that in the treatment of head and neck cancer, helical TomoTherapy treatment times are less than both Smart Arc and step and shoot techniques. In fact, TomoTherapy treatment was fastest of all techniques examined, at 6.6 minutes, compared to 7.5 minutes for Smart Arc and longer times for other intensity-modulated radiation therapy (IMRT) techniques, while delivering the best homogeneity and equivalent or better OAR sparing.

Similarly researchers in Austria and Germany compared four different technologies for a parotid gland sparing head and neck treatment technique with simultaneous integrated boost (SIB). Their research showed that the TomoTherapy platform delivered the lowest doses to the parotids and spinal cord and achieved the shortest treatment time -- eight minutes versus nine to 24 minutes for the other solutions examined.

**Prostate Cancer**Eight studies focused on the use of TomoTherapy technology to

treat prostate cancer in more than 280 patients. The studies showed excellent outcome for these patient groups, extending up to more than four years post-treatment. TomoTherapy(SM) treatments resulted in very low toxicities and side effects, even with delivery of escalated doses.

**Breast Cancer**In a study of 30 stage III breast cancer patients, researchers at The Ottawa Hospital Regional Cancer Centre in Canada examined early results of loco regional breast radiation using IMRT delivery by the TomoTherapy system. The treatment area included the breast and chest wall, as well as supraclavicular, axillary and internal mammary nodal regions. The TomoTherapy system enabled conformal treatment that limited dosage to healthy surrounding tissue, including the heart, lungs, esophagus and thyroid. Researchers concluded that IMRT with the TomoTherapy system "for loco regional breast radiation is feasible and well tolerated with minimal acute and moderate-late skin effects."

**Lung Cancer**Research done at San Raffaele Scientific Institute was designed to assess the feasibility of the TomoTherapy platform to deliver hypofractionated treatments in 15 patients with inoperable locally advanced non-small cell lung cancer (NSCLC). After re-evaluating 12 patients in the study five months post-treatment, 42 percent of the patients had a complete metabolic response and 33 percent a partial response. The study also showed that these patients experienced less toxicity and were able to complete treatment in 13 treatment sessions rather than 20, as is the norm. The study concluded that hypofractionation in radical treatments for locally advanced NSCLC by means of helical TomoTherapy delivery is feasible and shortens the overall treatment time, and that the treatment allows an excellent toxicity profile.

**Complex Cases**Highlighting the effectiveness of TomoTherapy radiation therapy in complex cases, a study of TomoTherapy use for one-and-a-half years at Greater Poland Cancer Centre in Poznan, Poland noted, "TomoTherapy is a method by which we can often achieve the treatment impossible to obtain on the conventional linacs or the treatment with a significantly better dose distribution than for conventional linacs."

The ability of TomoTherapy technology to treat complex cases was also outlined in a number of studies, including:

To learn more about the TomoTherapy treatment system, visit TomoTherapy at ESTRO 29 in booth 60 ([http://www.tomotherapy.com/register/special/ESTRO\\_29](http://www.tomotherapy.com/register/special/ESTRO_29)) , September 12-16 in Barcelona.

About TomoTherapy Incorporated TomoTherapy Incorporated develops, markets and sells advanced radiation therapy solutions that can be used to treat a wide variety of cancers, from the most common to the most complex. The ring gantry-based TomoTherapy@ platform combines integrated CT imaging with conformal radiation therapy to deliver sophisticated radiation treatments with speed and precision while reducing radiation exposure to surrounding healthy tissue. TomoTherapy's suite of solutions include its flagship Hi-Art@ treatment system, which has been used to deliver more than three million CT-guided, helical intensity-

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modulated radiation therapy (IMRT) treatment fractions; the TomoHD treatment system, designed to enable cancer centers to treat a broader patient population with a single device; and the TomoMobile relocatable radiation therapy solution, designed to improve access and availability of state-of-the-art cancer care. TomoTherapy's stock is traded on the NASDAQ Global Select Market under the symbol TOMO. To learn more about TomoTherapy, please visit [TomoTherapy.com](http://TomoTherapy.com).

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