

ELECTRONIC BRACHYTHERAPY ACCURATELY DELIVERS NON-RADIOACTIVE THERAPY DIRECTLY TO BREAST AND ENDOCAVITARY CANCER SITES

Research Studies and Initial Clinical Experience Presented at the AAPM Validate That Electronic Brachytherapy Consistently Delivers Radiation Therapy as Planned

HOUSTON, July 28, 2008 – The ability of Electronic Brachytherapy to accurately and consistently deliver localized, non-radioactive radiation treatment directly to cancer sites is the focus of a symposium and multiple research papers accepted for presentation at the 50th American Association of Physicists in Medicine Meeting, July 27 – 31 in Houston. According to Xoft, Inc., developer of the Axxent[®] Electronic Brachytherapy System, positive clinical results from initial breast cancer treatment experience has generated significant momentum for adoption of Electronic Brachytherapy (eBx). It has also spurred much research validating eBx use in additional applications, including the treatment of endometrial and endocavitary cancers.

In conjunction with the AAPM Meeting, Xoft is hosting a luncheon symposium, titled “Clinical and Regulatory Considerations for Electronic Brachytherapy.” Featuring a panel of leading physicists and radiation biology experts, the panel discussion will focus on breast cancer treatment experience to date, the impact of broader implementation of Electronic Brachytherapy on physicist workflow, dosimetry and treatment planning, and the regulation and control of the use of radioactive material and radiation sources.

“As one of the early clinical sites to treat breast cancer patients with Electronic Brachytherapy, we see this as a rapidly emerging treatment technique that not only competes well with existing HDR options, but has a number of distinct benefits,” said Salahuddin Ahmad, PhD, DABR, professor and director of Medical Physics, Department of Radiation Oncology, University of Oklahoma Health Sciences Center. “This includes supporting a shorter, five day treatment regimen without the use of a radioactive isotope, giving treatment centers the flexibility to perform treatment in minimally shielded rooms and offering patients a better experience since they no longer have to be isolated in a shielded room.

“We have been encouraged by our experience with the treatment of breast cancer and look forward to offering this technique as it expands to new applications, such as the treatment of endometrial cancer,” Dr. Ahmad added.

Separately, in the presented paper, “An Enabling Technology for Creating Sculpted Brachytherapy Dose Patterns with the Xoft Axxent[®] System,” one of more than 10 studies about Electronic Brachytherapy accepted for presentation, Xoft scientists studied the ability to partially attenuate X-rays from the Axxent system over controlled spatial areas, while minimizing changes to depth-dose characteristics. This would be the basis of an enabling technology to sculpt brachytherapy dose patterns to spare nearby critical structures, such as skin in breast brachytherapy treatments or bladder and rectum in gynecological brachytherapy. Results demonstrated that it is possible to create predictable, directed shadows in dose around the 50 kVp X-ray source. In a simulated breast treatment plan, using a simple model of the attenuation, isodose lines were shifted by several mm.

A series of studies compared the dose delivered by the Electronic Brachytherapy system in endocavitary applications to the dose predicted through treatment planning. In the study, “Dosimetry of an X-ray Endocavitary Proctoscope Adapted for use with the Axxent® Electronic Brachytherapy System,” researchers from Washington University in St Louis and Xoft analyzed the dose rate and uniformity at the aperture of an Electro-Surgical Instrument (ESI) Proctoscope when used with an Axxent X-ray Source. Measurements of dose rate and uniformity at the aperture of a 24 mm diameter ESI proctoscope indicate that the Axxent X-ray source may be a suitable alternative to the Philips RT-50 Endocavitary Unit for treatment of anal-rectal lesions.

The studies involving Electronic Brachytherapy are detailed in the following posters and oral presentations:

Measurement of Skin Dose When Using FlexiShield® with the Axxent® Electronic Brachytherapy System

L. Kelley, S. Axelrod, A. Dutta, Xoft, Inc, Sunnyvale, Calif.

Moderated Poster: Therapy – Brachytherapy; Session SU-DD-A2-3

Sunday, July 27, 1:30 pm; Exhibit Hall – Area 2

An Enabling Technology for Creating Sculpted Brachytherapy Dose Patterns with the Xoft Axxent® System

S. Axelrod, D. Pettibone, Xoft Inc., Sunnyvale, Calif.

Presentation: Brachytherapy 1; Session MO-D-AUD B3

Monday, July 28, 1:30 pm; Auditorium B

A High Precision, High Throughput Fixture for Routine Spatial Characterization of the Xoft Axxent® Miniature X-Ray Source

L. Kelley, S. Axelrod, M. Powell, Xoft, Inc, Sunnyvale, Calif.

Presentation: Measurements – Calibration and QA; Session TH-D-352-9

Thursday, July 31, 12:30 pm; Room 352

Film Based Treatment Plan Validation for a new Vaginal Applicator Using the Xoft Axxent® 50 KVp Miniature X-Ray Source

S. Axelrod, L. Kelley, L. Mantese, T. Rusch, Xoft, Inc, Sunnyvale, Calif.

Poster SU-GG-T-36

Dosimetry of an X-Ray Endocavitary Proctoscope Adapted for Use with the Axxent® Electronic Brachytherapy System®

T. Rusch, E. Klein, L. Kelley, R. Myerson, S. Axelrod, Xoft, Inc. Sunnyvale, Calif. – Washington University, St. Louis, MO

Poster SU-GG-T-36

X-ray transmission of vaginal cylinders for use with the Axxent® Electronic Brachytherapy System

H. Hausen, L. Kelley, T. Lovoi, L. Mantese, T. Rusch Xoft, Inc., Sunnyvale, Calif.

Poster SU-GG-T-43

About Axxent Electronic Brachytherapy

The Axxent® Electronic Brachytherapy System has been developed to address a variety of oncological and non-oncological indications. The proprietary Axxent treatment platform is cleared for use in the treatment of cancers or conditions where radiation therapy is indicated. Specific applicators have been cleared for treatment of early stage breast cancer and endometrial and rectal indications. Designed to deliver electronic, X-ray-based radiation

treatment, the Axxent System can be used in virtually any clinical setting under the supervision of a radiation oncologist. It is designed to deliver non-radioactive therapy directly to cancer sites with minimal radiation exposure to surrounding healthy tissue. Eliminating the need for heavily shielded environments, it gives radiation oncologists the flexibility to deliver therapy in a broader range of clinical settings without the complex handling and resource logistics necessary when performing brachytherapy using radioactive isotopes. As a result, tens of thousands of patients annually will have greater access to therapy that is delivered more easily and conveniently.

About Xoft, Inc.

Founded in 1998, Xoft develops leading-edge technologies for the practice of radiation oncology through Electronic Brachytherapy, which utilizes proprietary miniaturized X-ray tube technology. The Axxent® Electronic Brachytherapy System, Xoft's first treatment system, is currently being used in Accelerated Partial Breast Irradiation (APBI) for the treatment of early-stage breast cancer and in the treatment of endometrial cancer. For more information, visit www.xoftinc.com

#

Axxent and FlexiShield are trademarks of Xoft, Inc.

Media Contact:

Chris K. Joseph
Xoft, Inc.
510/339-2293
chris@ckjcomm.com