

**RESEARCH PRESENTED AT AMERICAN BRACHYTHERAPY SOCIETY  
FURTHER VALIDATES USE OF ELECTRONIC BRACHYTHERAPY**

**Multiple Studies Support Use of Non Isotope-Based Therapy in Early Stage Breast Cancer  
and Explore Potential Cervical and Endometrial Applications**

**BOSTON, May 5, 2008** – The performance of Electronic Brachytherapy, a proprietary treatment platform designed to deliver non-radioactive therapy directly to cancer sites with minimal radiation exposure to surrounding healthy tissue, is the focus of a panel discussion and five research studies accepted for presentation at the 2008 World Congress of Brachytherapy hosted by the American Brachytherapy Society (ABS). According to Xoft, Inc., developer of the Axxent<sup>®</sup> Electronic Brachytherapy System, the studies by radiation oncologists, medical physicists, and researchers from McGill University, Rhode Island Hospital, Rush University, Little Company of Mary, and Xoft bolster a growing body of research supporting use of Electronic Brachytherapy in the treatment of early stage breast cancer and exploring potential cervical and endometrial applications in which non isotope-based brachytherapy could be used to precisely deliver dose to targeted tissue.

During the World Congress technical session, “Physics Paper Session 1,” devoted to the physics of Brachytherapy, Jessica Hiatt, MS, clinical physicist, of Rhode Island Hospital in Providence, RI, evaluated methods to tune the Electronic Brachytherapy source in order to carefully control dose distribution to mimic external beam radiation techniques. Research presented by Professor Frank Verhaegen, PhD, of McGill University, outlined a method to calculate the ability of radiation from the Electronic Brachytherapy source to kill cancer cells. In another study, Xoft principal scientist Steve Axelrod, PhD, analyzed methods to enhance and refine the application of Electronic Brachytherapy to treat breast cancer patients following a lumpectomy.

“The number of studies about Electronic Brachytherapy being presented at the Congress and the fact that several panel sessions about Electronic Brachytherapy were added to the official ABS program underscore the strong interest in the brachytherapy community for this new approach to delivering therapy,” said Professor Verhaegen. “While providing equivalent treatment, unlike brachytherapy sources containing radionuclides, the non-radioactive electronic source can be turned on and off at will, and may be operated at variable voltage to change the penetration properties. This gives radiation oncologists the ability to provide on-demand X-ray treatments with equivalent treatment parameters, but it can be delivered in virtually any clinical setting rather than in the heavily-shielded environments demanded by most radiation sources.”

A series of additional studies explored extending the application of Electronic Brachytherapy to the treatment of diseases other than breast cancer. In his study, “A Dosimetric Comparison of Xoft

Axxent EB and Ir-192 HDR Brachytherapy in the Treatment of Endometrial Cancer,” Adam Dickler, MD, radiation oncologist at Little Company of Mary in Chicago, compared treatment results using iridium-based brachytherapy and Electronic Brachytherapy. Results suggested equivalent target volume coverage for Electronic Brachytherapy while offering increased sparing of healthy bladder and rectum tissue. In studies led by Kathryn Huber, MD, of Rhode Island Hospital, and Professor Michael Kirk, PhD, of Rush University in Chicago, researchers examined the use of the Axxent System for treatment of cervical cancer. All three investigations found that calculated mean doses to the bladder and rectum were reduced by 25 to 40 percent when using Electronic Brachytherapy.

The studies involving Xofigo’s Electronic Brachytherapy system are detailed in the following posters and oral presentations:

**Physics Panel Session – Parallel Session #1**

**What is the Treatment Rationale for Each Modality of Partial Breast Brachytherapy Irradiation? Electronic Brachytherapy**

Michael Kirk

Sunday, May 4, 2-3:00 PM

**Physics Paper Session #1**

**Depth Dose Modulation of EBT;** Jessica Hiatt; OR-41

**Characterizations of a Novel Miniature EBT Source;** Frank Verhaegen; OR-42

**Theoretical and Bench Top Study of a Novel Means of Skin Sparing by Sculpting Dose with the Xofigo Axxent Source;** Steve Axelrod; OR-45

Monday, May 5, 10-11:00 AM

**A Dosimetric Comparison of Xofigo Axxent EBT and Ir-192 HDR Interstitial Brachytherapy in the Treatment of Cervical Cancer**

Michael Kirk et al

PO-44

**A Dosimetric Comparison of Xofigo Axxent EB and Ir-192 HDR Brachytherapy in the Treatment of Endometrial Cancer**

Adam Dickler et al

PO-46

**Dose Modeling of the Xofigo EBT Source for Tandem and Ovoid Application in Patients with Cervical Cancer**

Kathryn Huber et al

PO-50

**Isodose Contours and Depth-Dose Behavior of Multi-Catheter Breast Applicators**

Steve Axelrod et al

PO-111

## **About Electronic Brachytherapy**

Previously cleared for accelerated treatment of early stage breast cancer, the Axxent® Electronic Brachytherapy System is now cleared for use in the treatment of other cancers or conditions where radiation therapy is indicated. As a platform technology, the Electronic Brachytherapy System is designed to address a variety of oncological and non-oncological indications. Xoft is actively working to extend the use of Electronic Brachytherapy to endometrial and rectal indications, which are pending FDA clearance. Designed to deliver electronic, X-ray-based radiation treatment, the proprietary Axxent treatment platform can be used in virtually any clinical setting under the supervision of a radiation oncologist. The Axxent System 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. As a result, tens of thousands of patients will have greater access to therapy that is delivered more easily and conveniently.

## **About Xoft, Inc.**

Xoft is developing leading-edge new 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. This solution provides a therapeutic dose of intracavitary radiation directly to the region at risk without the complex handling and resource logistics necessary when performing brachytherapy using radioactive isotopes.

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