



FOR IMMEDIATE RELEASE

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ISORAY ANNOUNCES WORLD'S FIRST CESIUM-131 TREATMENT FOR GYNECOLOGICAL CANCER

Cesium-131 Internal Radiation Therapy Impacts Long Term Cancer Control and Survival

Richland, WA (August 15, 2011) - - **IsoRay**, Inc. (Amex: ISR) announced another milestone, today, in the use of its proprietary **Cesium-131 (Cs-131) brachytherapy seeds** (internal radiation therapy). **University of Kentucky Radiation Oncologist Dr. Marcus E. Randall performed the world's first Cesium-131 brachytherapy seed implant for gynecological cancer on a female patient whose cancer had reoccurred following previous radiation treatment. Dr. Randall, voted one of the nation's leading radiation oncologists by US News, performed the surgery at the University of Kentucky's Markey Cancer Center in Lexington, Kentucky where he is the Markey Foundation Endowed Chair of the Department of Radiation Medicine.**

Dr. Randall explains, "**Cesium-131 is an exciting new isotope** that I have begun to use for permanent interstitial implants (brachytherapy or internal radiation therapy). **In my gynecologic cancer radiation oncology practice, I often see patients with small recurrences or new primary tumors in the female genital tract in patients who have previously had radiation therapy. Although options have been historically limited to exenterative surgery (surgical removal of organs and tissue) or palliative chemotherapy (a therapy not used to cure, but to prolong life and improve cancer symptoms), I have found that permanent seed implants to these limited volumes are very safe and quite effective with good long term control and survival.**"

Dr. Randall notes that using Cesium-131 brachytherapy offers many benefits, "**Cesium-131 has multiple properties that make it an ideal isotope for these cases.** The short half-life gives a good initial dose rate, the low energy enhances radiation safety for the staff, and the dose distribution properties make it easy to calculate and use in the clinic. I have had good initial experiences with this isotope."

Radiation is one of the most important and potent weapons used in treating cancers. IsoRay's patented Cesium-131 brachytherapy seeds represent the biggest advancement in internal radiation therapy in twenty years, providing several advantages over other internal radiation therapies. Cesium-131 allows for the internal radiation treatment of many different cancers because of its unique combination of high energy (its distinctive tissue penetrating capability reaching just far enough to treat the cancer) and its 9.7 day half-life (its matchless speed in giving off therapeutic radiation). Doctors can vigorously treat a variety of cancers with reduced side effects and limited damage to healthy surrounding tissues and organs compared to other internal radiation therapies. **This pioneering treatment impacts longevity and cure rates, can be performed outside a hospital setting, and results in a patient's faster return to normal activities.** The treatment can be deployed using several delivery methods including single seed applicators, implantable strands and mesh, and several new implantable devices.

IsoRay CEO Dwight Babcock says Cesium-131 is becoming known as the ideal isotope to providing more options for doctors and cancer patients that didn't exist before, "The use of Cesium-131 brachytherapy to treat

gynecological cancers presents a vital advance in cancer treatment. As more doctors and patients become aware of the many advantages our isotope offers in patient care, we are seeing a growing number of doctors using Cesium-131 to address cancer sites throughout the body. It is repeatedly proving to be a solution for those difficult cases where other treatments have not proven successful as it continues to demonstrate its effectiveness in controlling cancers and improving survivability. "

Cesium-131 is FDA-cleared and has CMS codes for the treatment of prostate, lung, ocular melanoma, brain, colorectal, gynecological, and head and neck cancer and other cancers throughout the body.

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About IsoRay, Inc.

IsoRay, Inc., through its subsidiary, IsoRay Medical, Inc., is the sole producer of Cesium-131 brachytherapy seeds, which are expanding brachytherapy options throughout the body. Learn more about this innovative Richland, Washington company and explore the many benefits and uses of Cesium-131 by visiting www.isoray.com.

Safe Harbor Statement

Statements in this news release about IsoRay's future expectations, including: the advantages of our Cesium-131 seed, the advantages of Cesium-131, whether IsoRay's Cesium-131 seed will be used to treat additional cancers and malignant disease, whether the use of Cesium-131 to treat gynecologic cancers will be successful both long- and short-term in the initial and any future implants, and all other statements in this release, other than historical facts, are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 ("PSLRA"). This statement is included for the express purpose of availing IsoRay, Inc. of the protections of the safe harbor provisions of the PSLRA. It is important to note that actual results and ultimate corporate actions could differ materially from those in such forward-looking statements based on such factors as physician acceptance, training and use of our products, our ability to successfully manufacture, market and sell our products, our ability to manufacture our products in sufficient quantities to meet demand within required delivery time periods while meeting our quality control standards, our ability to enforce our intellectual property rights, whether additional studies are released and support the conclusions of early clinical studies, whether implants of Cesium-131 to treat gynecologic cancers result in favorable patient outcomes, patient results achieved when Cesium-131 is used for the treatment of cancers and malignant diseases beyond prostate cancer, successful completion of future research and development activities, and other risks detailed from time to time in IsoRay's reports filed with the SEC.