SOCIETY OF INTERVENTIONAL RADIOLOGY
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3975 Fair Ridge Drive
Suite 400 North
Fairfax, Virginia
22033
703.691.1805
703.691.1855 fax
www.SIRweb.org

CONTACT:
Maryann Verrillo 703-460-5572
Diane Shnitzler 703-460-5582
March 14, Don Murphy 212-453-2462
March 14, Neil Hochman 212-453-2067
March 15–March 20, 202-249-4016

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Treatment Gives Lung Cancer Patients With Inoperable Tumors Two Years or More

Interventional Radiologists' Outpatient Procedure Uses Heat to Destroy Lung Tumors

Washington, D.C. (March 17, 2008)—Radiofrequency ablation (RFA)—an interventional treatment that "cooks" and kills lung cancer tumors with heat—greatly improves survival time from primary or metastatic inoperable lung tumors, according to a study released today at the Society of Interventional Radiology's 33rd Annual Scientific Meeting. Of the 244 patients suffering from lung metastases (195 patients) or primary non-small cell lung cancer (49 patients), 70 percent were still alive at two years, including 72 percent for lung metastases and 64 percent for primary lung cancer. These survival results are similar to surgical results from other studies, but the interventional treatment is less invasive and has far fewer side effects and less recovery time. The researchers found that RFA often can completely destroy the primary tumor and, therefore, extend a patient's survival and greatly improve his or her quality of life. Survival thus becomes dependent on the extent of disease elsewhere in the body.

Of the 49 patients (ages 27–85) with non-small cell primary lung cancer who were treated with RFA, 85 percent had no viable lung tumors after one year on imaging, and 77 percent had no viable lung tumors after two years, which indicates a cure. This study was conducted in tumors four centimeters in diameter or smaller, and even better results were obtained for tumors smaller than two centimeters.

"About two-thirds of patients diagnosed with non-small cell lung cancer are ineligible for surgery and typically have less than 12 months to live. A subset of these patients ineligible for surgery can be treated with RFA with the intention of curing the primary tumor. Thus, 70 percent of my patients gained at least another two years. This new outpatient treatment is effective, allowing us to treat patients who historically have only palliative options, such as chemotherapy or radiation therapy," said Thierry de Baere, M.D., interventional radiologist with the Institut Gustave Roussy in Villejuif, France.

These results are similar to studies in the United States and add to the growing body of evidence for RFA in extending survival time.

RFA is effective for local control of lung cancer, providing an attractive option for patients who may not be ideal surgical candidates, who wish to avoid conventional surgery or who have failed conventional treatments. A trial is needed to define if RFA can replace surgery in a subset of patients.

By the time lung cancer becomes symptomatic, 85 percent of patients are incurable, often due to serious coexisting health conditions or poor respiratory function. Most patients who are diagnosed with non-small cell lung cancer are not surgical candidates at the time of diagnosis. For these patients, minimally invasive interventional radiology procedures can improve survival, reduce pain and improve quality of life. Interventional radiologists are uniquely skilled in using imaging guidance to deliver targeted cancer treatments throughout the body.

Radiofrequency energy can be given without affecting a patient's overall health, and most people can resume their usual activities in a few days. It is a safe, minimally invasive tool for local pulmonary tumor control with negligible mortality, little morbidity, short hospital stay and positive gain in quality of life. Lung function is generally better preserved after RFA than after surgical removal of a tumor. This is especially important for those whose ability to breathe is impaired, such as current or former cigarette smokers. It can also be repeated if necessary or combined with other treatment options.

Interventional radiologists work closely with the oncology and surgical specialists to plan the best treatment plan for cancer patients. The treatment is widely available in the United States at all major institutions and some smaller institutions as well. It is usually covered by health insurance. More information can be found at www.SIRweb.org.

Abstract 106, *"Long-term Follow-up After Percutaneous Pulmonary Radiofrequency Ablation,"* can be found at www.SIRmeeting.org.

About Lung Cancer
The lung is the most common site for primary cancer worldwide, and smoking tobacco is the leading risk factor. Last year, the American Cancer Society estimated that approximately 213,380 new cases of lung cancer were diagnosed, accounting for 15 percent of all new cancer cases. More Americans die each year from lung cancer than from breast, prostate and colorectal cancers combined.

About Radiofrequency Ablation (RFA)
During the procedure, an interventional radiologist guides a small needle through the skin into the tumor, generally by computed tomography (CT). Radiofrequency (electrical) energy is transmitted to the tip of the needle where it produces heat in the tissues. The dead tumor tissue shrinks and slowly forms a scar. At the same time, heat from radiofrequency energy closes small blood vessels and lessens the risk of bleeding. RFA usually causes little discomfort.

The Food and Drug Administration (FDA) has approved RFA for the treatment of tumors in soft tissue that includes the lung.

About the Society of Interventional Radiology
Interventional radiologists are physicians who specialize in minimally invasive, targeted treatments. They offer the most in-depth knowledge of the least invasive treatments available coupled with diagnostic and clinical experience across all specialties. They use X-rays, MRI and other imaging to advance a catheter in the body, usually in an artery, to treat at the source of the disease internally. As the inventors of angioplasty and the catheter-delivered stent, which were first used in the legs to treat peripheral arterial disease, interventional radiologists pioneered minimally invasive modern medicine. Interventional oncology is a growing specialty area of interventional radiology.

Today many conditions that once required surgery can be treated less invasively by interventional radiologists. Interventional radiology treatments offer less risk, less pain and less recovery time compared to open surgery. Visit www.SIRweb.org.

Local interviews and medical illustrations are available by contacting SIR's communications department at mverrillo@sirweb.org.

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