

10201 Lee Highway Suite 500 Fairfax, Virginia 22030 703.691.1805 703.691.1855 fax www.sirweb.org info@sirweb.org

## Embargoed for Release, March 29, 2004, 7:00 a.m. MST

### New Study Shows Combination of Minimally Invasive Treatments as Effective as Surgery for Solitary Liver Cancers Interventional Radiology Technique Easier on Patients; Doesn't Affect Healthy Tissue

Phoenix, Arizona (March 29, 2004) -- Results of a new study show that combining two minimally invasive interventional radiology treatments for liver cancer is as effective as surgery for treating single tumors up to 7cm in diameter, according to data presented today at the 29<sup>th</sup> Annual Scientific Meeting of the Society of Interventional Radiology. The treatment combines embolization, blocking the blood supply to the tumor, with radiofrequency ablation, killing the tumor with heat. This combination is effective at treating solitary hepatocellular carcinoma lesions up to seven centimeters and affords patients survival benefits on par with surgical resection, but without the trauma. The minimally-invasive interventional treatment targets only the tumor tissue, and spares the healthy tissue. In addition to equally effective, it also offers an easier and much quicker recovery than surgery.

"This new treatment takes two well-established interventional radiology procedures and combines them to optimize treatment for patients with primary liver cancer. Although surgical resection has historically been considered the gold standard for the treatment of patients with single lesions, the survival data is promising, and we remain cautiously optimistic that these results will hold up in the long-term," says study investigator Anne M. Covey, MD, an interventional radiologist at Memorial Sloan Kettering Cancer Center in New York.

Primary liver cancer most commonly occurs in the setting of underlying liver disease or cirrhosis due to hepatitis. Currently surgery offers the best chance for a cure. However, patients with primary liver cancer often present with other medical problems or liver disease that make surgery very risky. In fact, surgical resection is possible in less than 20% of cases, making alternative therapies imperative. Chemotherapy drugs are generally inactive against primary liver cancer.

"Although more studies are needed, this study is significant because it compares the combined interventional radiology techniques to surgical resection within a tertiary care facility with equal experience in tumor embolization and surgery, broadening the applicability of the interventional techniques in the treatment of primary liver cancer. A multi-disicplinary approach is imperative," says Covey.

### About the Study

This study included all patients with solitary hepatocellular carcinoma undergoing either surgical resection or embolization followed by radiofrequency (RF) ablation between January 1996 and August 2002. Only patients with liver tumors less than 7 cm were included. The study involved 40 patients who had surgical resection and 33 who had embolization plus ablation. There were significantly more patients with more advanced liver disease (Okuda stage II) in the embolization group compared to the surgery group (36 percent versus 0 percent). The median follow-up was 22 months for the embolization group and 23 months for the surgery group. The 1,2, 4 and 5 year survivals for the combined treatment were 97%, 83%, 77% and 56% versus 81%, 70%, 70% and 57% for the surgery group.

Of the 19 surgical patients that had recurrence of their tumor, seven subsequently underwent embolization in order to attempt to prolong survival. Quite notably, despite the advanced stage of the liver tumors, four out of these 7 are currently alive with no evidence of active disease at 12, 16, 19 and 30 months from the date of recurrence, 2 are currently alive with disease and remain candidates for further embolization and/or ablation. "The majority of the patients who have surgery will have recurrence of their cancer, because they still have cirrhosis and hepatitis. Repeat surgery is often not possible, so finding another way to treat them is important," says Covey.

#### About Embolization and Radiofrequency Ablation

Embolization is a well-established non-surgical interventional radiology technique that blocks the blood supply feeding a tumor, causing it to shrink. Using imaging for guidance, the interventional radiologist makes a tiny nick in the skin and inserts a catheter in the femoral artery in the groin. The physician guides the catheter through to the arteries supplying the liver and finally the tumor. Tiny particles the size of grains of sand are then released into the blood vessels feeding the liver tumor. The particles mechanically block the flow of blood to the tumor.

Radiofrequency ablation (RFA) is a non-surgical, localized treatment that kills the tumor cells with heat, while sparing the healthy liver tissue. Radiofrequency energy can be given without affecting the patient's overall health and most patients are discharged within 24 hours. In this procedure, the interventional radiologist uses imaging to guide a small needle through the skin into the tumor. From the tip of the needle, a tiny umbrella shaped array of thin wires opens within the tumor. Then a mild radiofrequency energy (similar to microwaves) is transmitted to the tip of the needle, where it is converted into heat. The umbrella shape allows the RFA device to heat and kill a precise round "ball" of tumor with very little risk of damaging adjacent normal structures. The dead tumor tissue shrinks and slowly forms a scar.

# About Liver Cancer

## Primary liver cancer:

- According to the American Cancer Society, about 14,000 cases of primary liver cancer are diagnosed each year. The most common form is hepatocellular carcinoma (HCC). This is a tumor that begins in the main cells of the liver (hepatocytes). Primary liver cancer is twice as common in men as in women.
- HCC most frequently occurs in those who have a form of liver disease called cirrhosis. Cirrhosis occurs when the liver becomes diseased and develops scarring, usually over a period of years. The liver attempts to repair, or regenerate itself. This process can lead to the formation of tumors. In the United States, the most common causes of cirrhosis are chronic infection with a liver virus called Hepatitis B or C, or alcohol abuse.
- The incidence of primary hepatocellular carcinoma is on the rise, because of the increase of Hepatitis C in America.

## About the Society of Interventional Radiology

An estimated 5,000 people are attending the Society of Interventional Radiology's 29<sup>th</sup> Annual Scientific Meeting in Phoenix, Arizona. Interventional radiology is the medical specialty devoted to advancing patient care through the innovative integration of clinical and imaging-based diagnosis and minimally invasive therapy. Interventional radiologists are physicians who specialize in minimally invasive, targeted treatments performed using imaging for guidance. They use their expertise in reading X-rays, ultrasound, CT, MRI, and other diagnostic imaging, to guide tiny instruments such as catheters, through blood vessels or through the skin to treat diseases without surgery. Interventional radiologists pioneered modern medicine with the invention of angioplasty and the catheter-delivered stent, which were first used to treat peripheral arterial disease.

Interventional radiology procedures are a major advance in medicine that do not require large incisions – only a nick in the skin – and offer less risk, less pain and shorter recovery times compared to open surgery. More information can be found at <u>www.SIRweb.org</u>.

## Interviews are available by contacting the press office on site at 602-514-7890.

## ХХХ