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**Outpatient Treatment Kills Benign Bone Tumors  
Nonsurgically With Heat**

***Interventional Radiology Treatment Eliminates Debilitating Pain in Young Patients***

Seattle, Washington (March 2, 2007) – Research shows that an outpatient, nonsurgical treatment for a benign bone tumor called osteoid osteoma both destroys the tumor and eliminates debilitating pain. In ninety-one percent of those treated in the study, presented today at the 32nd Annual Scientific Meeting of the Society of Interventional Radiology, the treatment ended patients' pain immediately, with no post-procedure complications. This nonsurgical technique — radiofrequency ablation — heats and destroys the nerve endings in the tumor that were causing pain. It also preserves the patient's healthy bone, prevents major surgery and eliminates the need for lengthy rehabilitation and recovery. The interventional radiologist can visualize the tumor with CT and insert the needle into the correct area while monitoring the heat, thereby ensuring that the entire tumor is destroyed and will not grow back.

“Our research showed the interventional treatment's success rate is as good as surgery's, but without the risk. Plus, almost all of our patients walked out of the hospital within hours of the procedure pain-free,” says interventional radiologist Eran Hayeems, M.D., University Health Network and Mount Sinai Hospital, Toronto, Ontario, Canada. This treatment is available throughout the United States, is FDA-approved, and is covered by most insurance providers.

Often, lesions are deep inside the bone and not readily visible on the surface to a surgeon. Therefore surgeons must remove a wider area around the tumor, and still may not succeed in getting the entire tumor. For example, if a typical lesion is under 1 cm a surgeon may need to remove up to 5 cm of surrounding bone. This can sometimes result in bone grafting in order to prevent future bone fractures. The surgery can also require up to six months of rehabilitation. However, using CT imaging an interventional radiologist can pinpoint the precise location of the lesion and deliver a targeted treatment directly to the site, destroying the tumor inside the bone while leaving the remaining healthy bone intact. Radiofrequency ablation, performed by interventional radiologists on an outpatient basis, relieves pain immediately without requiring patient rehabilitation.

“Radiofrequency ablation allows otherwise healthy patients to avoid an invasive operation, get immediate pain relief, and get back to their lives right away,” added Hayeems. “Because we can visualize the tumor, an interventional radiologist can ensure that we get it all, so it won't grow back. Interventional radiology should be the first-line standard treatment for osteoid osteomas.”

### **About the Technique**

In radiofrequency ablation (RFA), heat is delivered directly into the tumor via a probe that is inserted through the skin using CT, MR and/or ultrasound imaging for guidance. From the tip of the needle, radiofrequency energy is transmitted into the targeted tissue where it produces heat and kills the tumor. RFA is a nonsurgical, localized treatment that spares healthy tissue without any systemic side effects. RFA can be performed without affecting the patient's overall health and most people can resume their usual activities in a few days.

### **About Osteoid Osteoma**

Osteoid osteomas are relatively rare benign bone tumors that affect mainly young people (teens to 20's) who are otherwise healthy. They are three times more common in males than females. These bone lesions primarily occur in the long bones of the leg; but, they can also occur in the bones of the arms and spine. The lesions can result in growth deformities if located in long bones, or scoliosis if in the spine. If left untreated the tumors do heal over time, however it takes an average of five to six years and up to 10 years for that to occur. Typically, the pain is sharp and worse at night, but responds well to aspirin or nonsteroidal anti-inflammatory drugs (NSAIDs). These medications, however, can cause side effects such as stomach ulcers and intestinal bleeding. For patients who require intervention, surgery has been the historical treatment.

### **About the Study**

The study involved 26 patients, 19 male and seven female, with a mean age of 29. Twenty-three of the patients had lower extremity or pelvic lesions, and three had upper extremity or scapular lesions. The procedure was technically successful in one hundred percent of the cases with no peri- or post-procedural complications. In ninety-one percent of the patients treated there was resolution of pain. Four patients were lost to follow-up. Abstract 96 can be found at [www.SIRmeeting.org](http://www.SIRmeeting.org).

### **About the Society of Interventional Radiology**

Interventional radiologists are board-certified 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 nonsurgically. As the inventors of peripheral angioplasty and the catheter-delivered stent, interventional radiologists pioneered minimally invasive modern medicine, and provide treatments that offer less risk, less pain and less recovery time compared to open surgery. More information can be found at [www.SIRweb.org](http://www.SIRweb.org).

***Local interviews, medical illustrations and broadcast quality video footage are available by contacting SIR's Communications Department at  
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