

## **Interventional Radiology: How surgery is changing**

By Suzy Devers

Back in the early 1960s, there wasn't much a doctor could do for someone with advanced gangrene. That is, until Dr. Charles Dotter came along with a radical new idea: *treat the patient without a scalpel.*

Eighty-two-year old Laura Shaw became the first to benefit from angioplasty and Dotter's revolutionary thinking. Instead of amputating her gangrenous foot, he opened up the blocked artery with a catheter, a thin flexible tube. Once the artery was open, the blood flowed freely, the pain diminished and Shaw walked out of the hospital on both feet. Thus began the field of interventional radiology (IR).

Fast forward to 2008 and you'll find IR at the forefront of many of the advancements in surgery today. Aided by high-tech imaging techniques, interventional radiologists guide small tubes or tiny needles through an opening in the skin (as small as the tip of a pencil) to treat disease without surgery.

According to Dr. Michael J. Sassman, D.O., an interventional radiologist who practices at Parker Adventist Hospital, interventional radiology is being used to treat everything from cancer and uterine fibroids to varicose veins and compression fractures.

Sassman says interventional radiology is also extremely effective at relieving pain. He points to two IR procedures in particular, kyphoplasty and vertebroplasty, that he says can alleviate up to 90 percent of the pain from vertebral compression fractures associated with osteoporosis.

After ongoing visits to pain clinics and multiple consultations with surgeons, 81-year-old Lucy Pacheco from Las Vegas, New Mexico turned to kyphoplasty to ease the excruciating pain of five compression fractures in the vertebrae. "No one should be in that much pain, says Pacheco's daughter, Rhita Bax, NP.

Bax, a nurse practitioner, who helped her mother navigate the medical system and ultimately helped her find Dr. Sassman, says, "After kyphoplasty my mom saw immediate relief. She was walking right away and she was standing straighter."

To perform kyphoplasty, an out-patient procedure, Sassman places a tiny probe into two small incisions at the site of the fracture. He then drills the bone and inserts a balloon, called a bone tamp, on each side of the fracture. The spaces created by the balloons are filled with a quick-drying orthopedic cement to strengthen and stabilize the vertebra and to reduce the painful pressure.

Vertebroplasty is similar to kyphoplasty in that it also treats the vertebral body with orthopedic cement, although it does not use balloons to open up the space. Both

vertebroplasty and kyphoplasty offer new hope to people suffering from the pain and deformity of untreated osteoporosis.

Interventional radiologists are also seeing great success in treating uterine fibroids and other types of tumors. For Melanie Mills the choice to go with an IR procedure, called fibroid embolization, was an easy one. “I had a painful non-cancerous mass in my abdomen,” she explains. “But I didn’t want to be cut open. I wanted something minimally-invasive.”

So Mills turned to Dr. Dietrich W.L. Schultze M.D., an interventional radiologist who also practices at Parker Adventist Hospital. Schultze placed a tiny tube through a nick in the groin. He then inserted extremely small sand-like particles through the tube to block the arteries and the blood supply to the fibroid. In essence, he starved the tumor. The procedure took about an hour and a half and Mills remained in the hospital for 24 hours. Mills says she felt back to normal within a week.

Today, a number of conditions that previously demanded radical open surgery can be treated through minimally-invasive procedures by interventional radiologists. Because IR does not require surgical incisions, it typically involves less risk and less recovery time. For more information about interventional radiology, visit [www.sirweb.org](http://www.sirweb.org).