

Sandy is a 68 yo WF with greater than 20 history of multiple sclerosis and 1.5 year history on non-healing fracture of the base of the fifth metatarsal (outside foot bone). She had already tried immobilization and had very low activity levels. Non-union was believed to be due to poor blood flow in the affected extremity. Cells were obtained, isolated, and culture expanded and then injected into the fracture site under CT planned fluoroscopy. After 2 months, she noted resolution of nagging pain in the area. Thin slice CT was taken before the procedure and 9 months after the procedure.



The fracture site being injected with stem cells under thin slice CT planned fluoroscopy (real time x-ray). Note that some cells were injected into the fracture area, while others were simply placed in the general fracture region. If this injection based treatment were not successful, then the next step would have been surgically re-breaking the bone and installing plates (ORIF).

### **Thin Slice CT Radiologist Reading Before: Sep 2007**

**IMPRESSION: INCOMPLETE HEALING OF THE FRACTURE OF THE BASE OF THE LEFT FIFTH METATARSAL BONE, ALTHOUGH THE ALIGNMENT IS ANATOMIC.**

### **Thin Slice CT Radiologist Reading After: Jun 2008**

**IMPRESSION:**

- 1. No new fracture. The fifth metatarsal base fracture line is only faintly visible along the lateral aspect and is otherwise healed.**