Surgical repair of ankle fracture in an obese smoking female facilitated with nanocrystalline hydroxyapatite (NanoBone® Bone Graft)

David Yeager, DPM, FASPS, FACFAS
Morrison, Illinois

Preoperative

Patient is a 64-year-old obese female with a history of diabetes and smoking who presented with foot pain due to suspected left ankle fracture and managed with narcotic pain medication. Her VAS was 9/10 and clinical examination and radiography revealed left ankle fracture. The patient was recommended to undergo open reduction and internal fixation (ORIF) surgery to stabilize and heal the fracture.

Surgical Procedure

Patient underwent surgery and was fitted with plate and screws to address the left ankle fracture and 5mL of NanoBone SBX Putty was spackled into the joint space and around the implant hardware to fill deficits and facilitate fusion. The patient went home after a 1-day stay with postoperative instructions and no complications.

Postoperative

At 3-month follow-up the patient reports pain relief with decreased use of narcotic pain medication, a VAS score of 4/10 and improved neurological status. Fusion has occurred in the fracture and in the interface between the implants and the patient's bone – and the implants are well-positioned and intact. Remodeling of bone is visible on postop X-rays. The patient is improving with relief of symptoms and only minor pain, with VAS score stable at 4/10. The patient has returned to light activity and movement. Despite the patient's age and smoking, NanoBone provides the scaffold to enable healing quicker.

Fig. 1. Preoperative lateral and medial X-rays demonstrating left ankle fracture

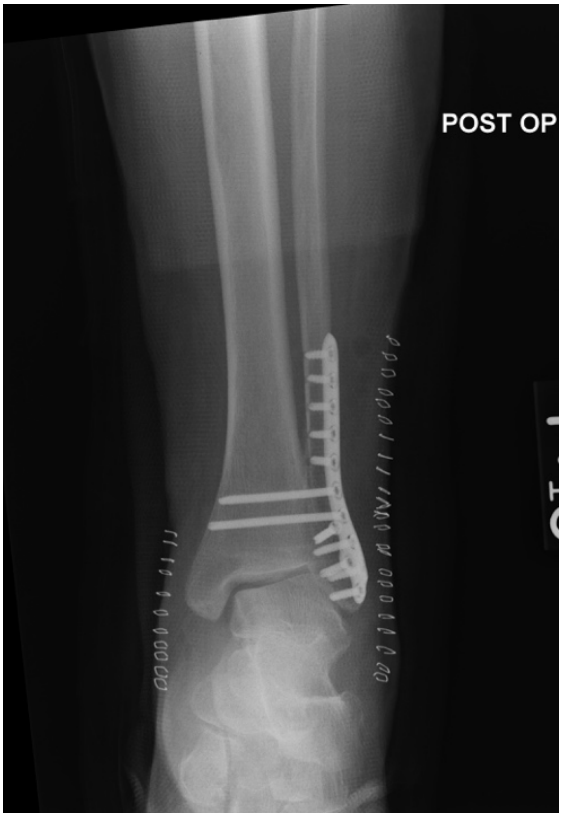

Fig. 2. 3-month postoperative lateral X-rays demonstrating stable, intact implants with fusion progression

NanoBone®
Rapid Osteogenesis

Artoss, Inc.
425 E Saint Germain St, Ste 106
St. Cloud, MN 56304-0752

T: +1 320.259.4321
F: +1 320.961.2160
info@nanobone.us
www.nanobone.us