Bone Marrow Concentrate and Stem Cells in Foot & Ankle Fusion

Current treatment is based on a fracture-healing model.

It has been demonstrated that diabetics have both a low level of growth factors and an increased risk for non-union following foot and ankle fusion.


The addition of bone marrow aspirate and platelet rich plasma has the potential to enhance healing of Orthopaedic fusions.


The Modern paradigm suggests three critical biologic components for bony healing following fracture or bony fusion:

1. Osteoconductive substrate living or allograft bone ceramic (calcium sulphate or calcium phosphate) porous metals
2. Bone forming cells
   pluripotential stem cells vs. osteoblasts
3. Growth Factors
   BMP
   PDGF
   Endostial reaming
   Platelet Rich Concentrate