

BSM Decision Making

Geoffrey Marecek, MD

Associate Professor

Cedars – Sinai Department of Orthopaedic Surgery



Disclosures

Relevant Disclosures:

Consultant – BoneSupport AB

Consultant – Zimmer Biomet

All others in program



Objectives

- **Understand options for BSM use in trauma**
- **Use a decision-making algorithm to employ BSMs**



Allograft

Chips

Structural Fibula




The Use of a Novel Moldable Calcium Phosphate Putty (Montage®) For Periarticular Fractures – Early Clinical Results

Omar Hammad Atassi¹, Gennadiy Busel¹, Guadalupe De La Fuente¹, David Donohue¹, Benjamin Maxson¹, Anjan Rajni Shah¹, David Timothy Watson¹, Anthony F Infante¹, Katheryne Downes¹, Roy W Sanders¹, Hassan Riaz Mir¹

Comparison of Autogenous Bone Graft and Endothermic Calcium Phosphate Cement for Defect Augmentation in Tibial Plateau Fractures. A Multicenter, Prospective, Randomized Study

Thomas A. Russell, Ross K. Leighton and on behalf of the Alpha-BSM Tibial Plateau Fracture Study Group
J Bone Joint Surg Am. 2008;90:2057-2061. doi:10.2106/JBJS.G.01191

Treatment of tibial plateau fractures with a novel fenestrated screw system for delivery of bone graft substitute

Alexander L. Telis¹ · Douglass W. Tucker²  · Edward Compton² · Donald J. DeSanto³ · John J. Carney² · John A. Scolaro³ · Geoffrey S. Marecek⁴ · Adam K. Lee⁵

Autologous Iliac Bone Graft Compared with Biphasic Hydroxyapatite and Calcium Sulfate Cement for the Treatment of Bone Defects in Tibial Plateau Fractures

Function of Graft – Compressive Strength

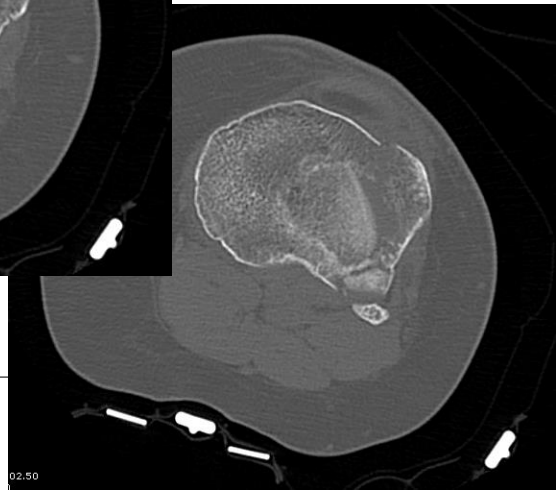
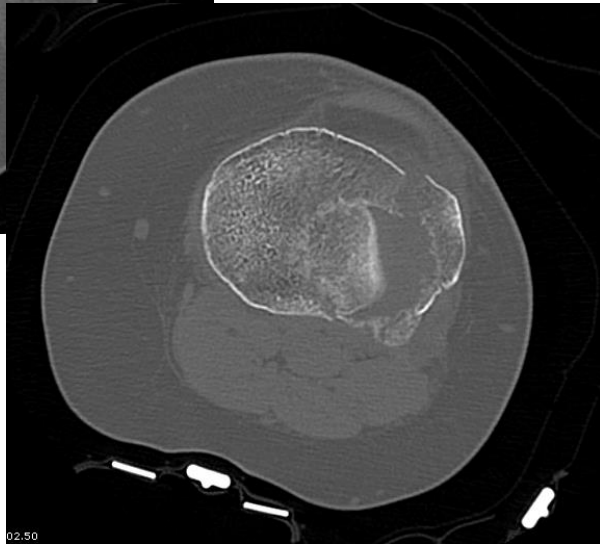
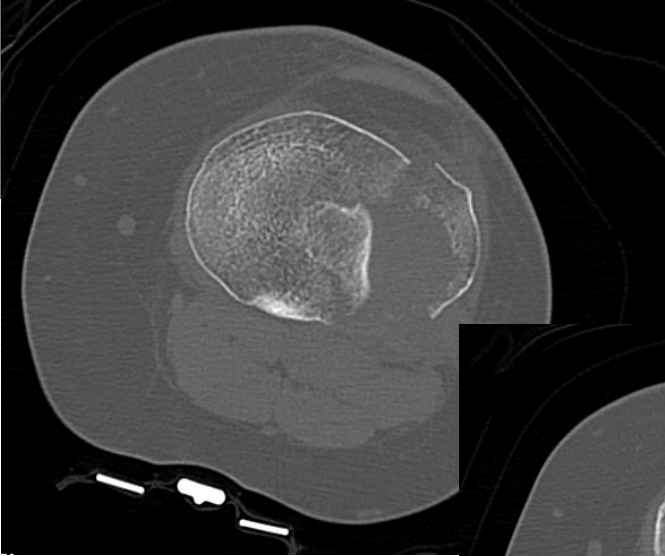
Size of Defect – small, large, massive?

Access to defect – direct or indirect?

Defect characteristics – closed? Open due to comminution?

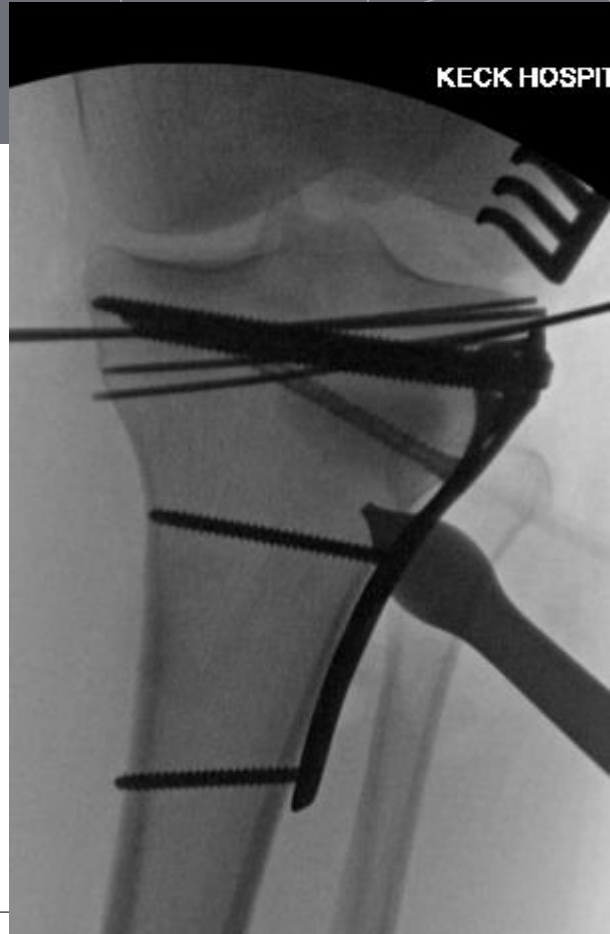
Case 1





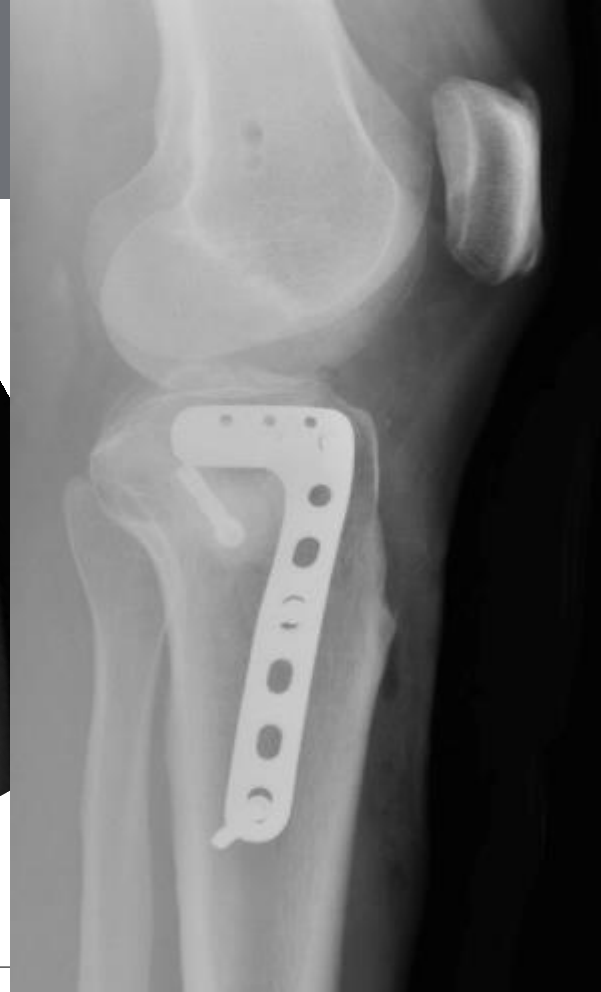








postop





5 months

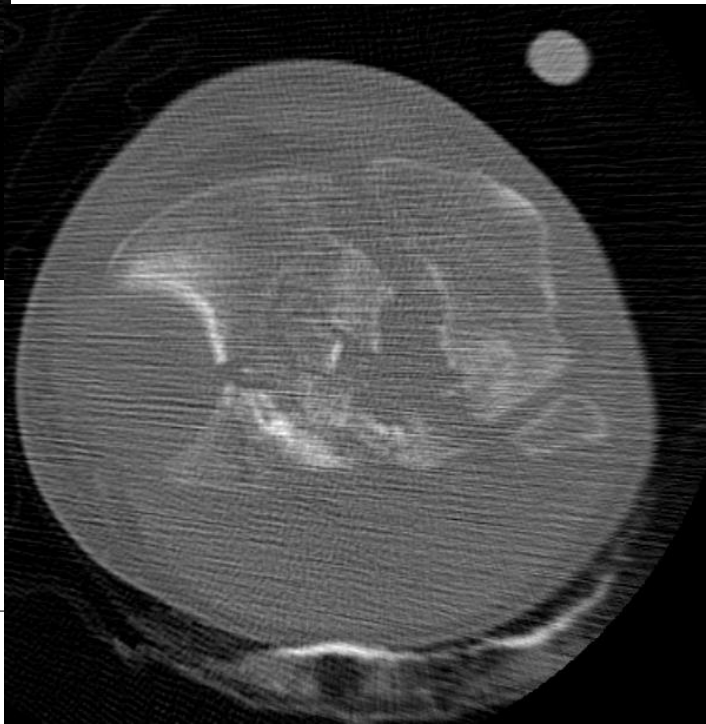
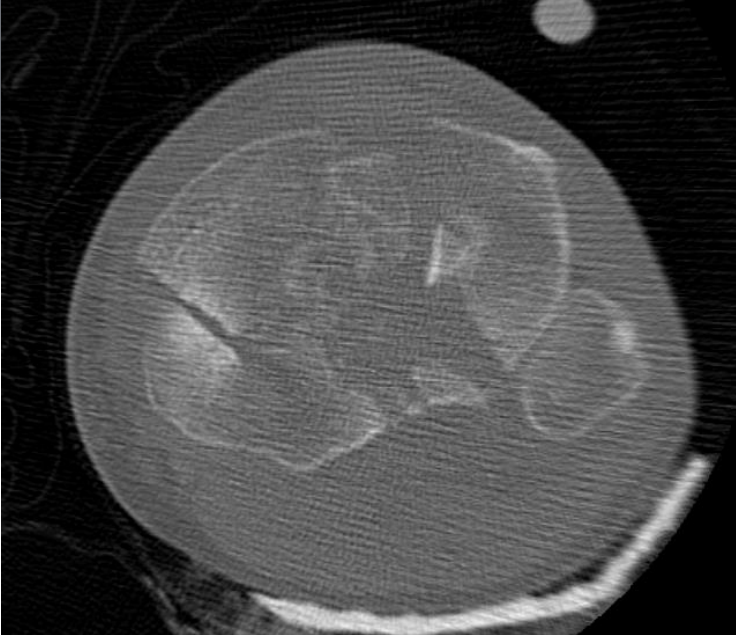


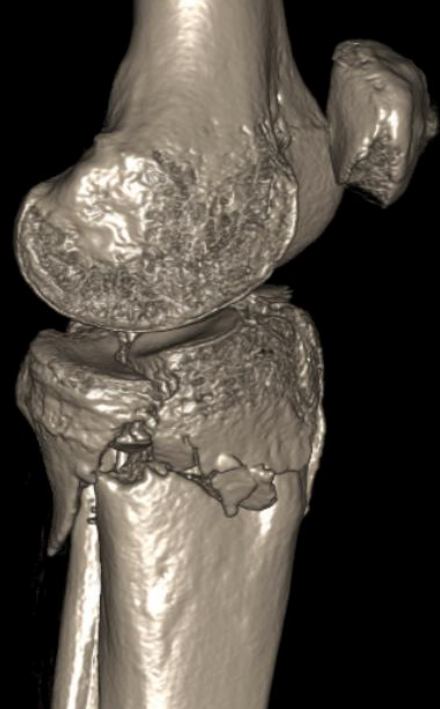
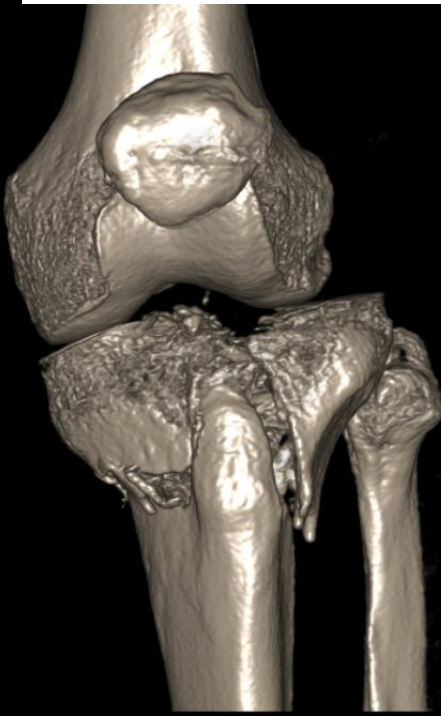
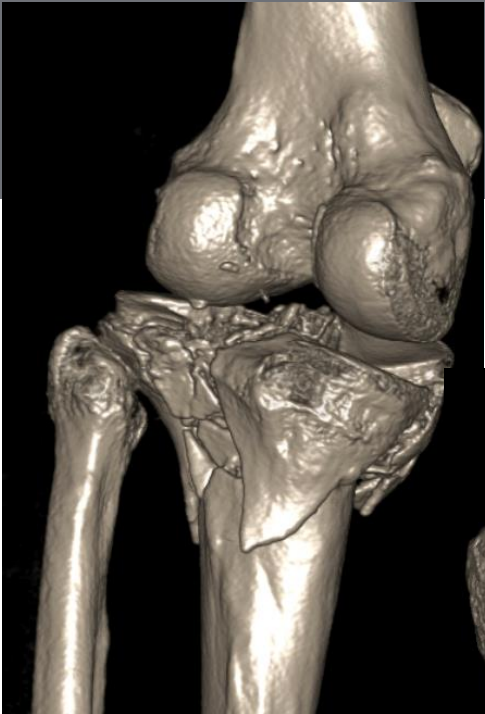
Standing

Case 2





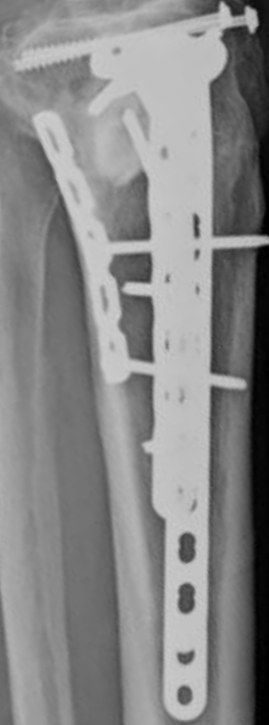




postop



12 mos



Case 3



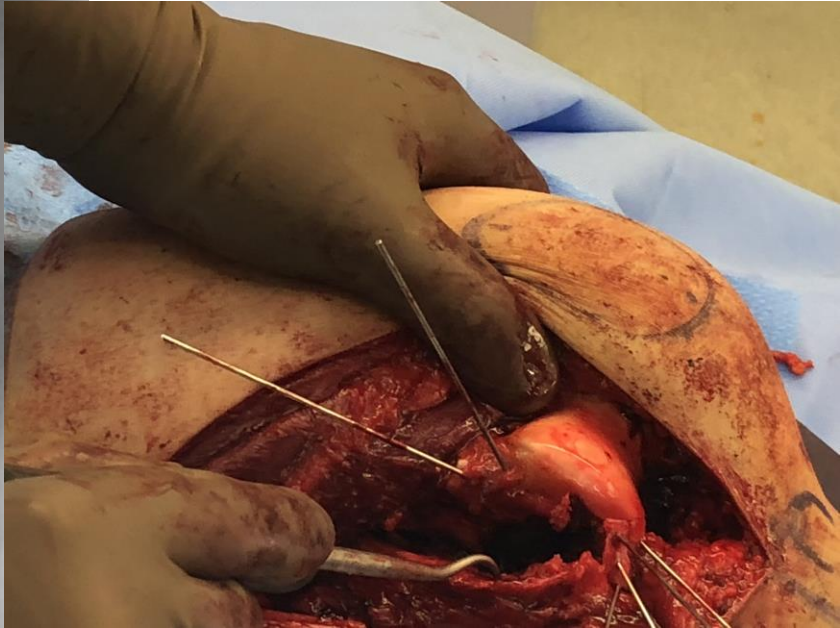
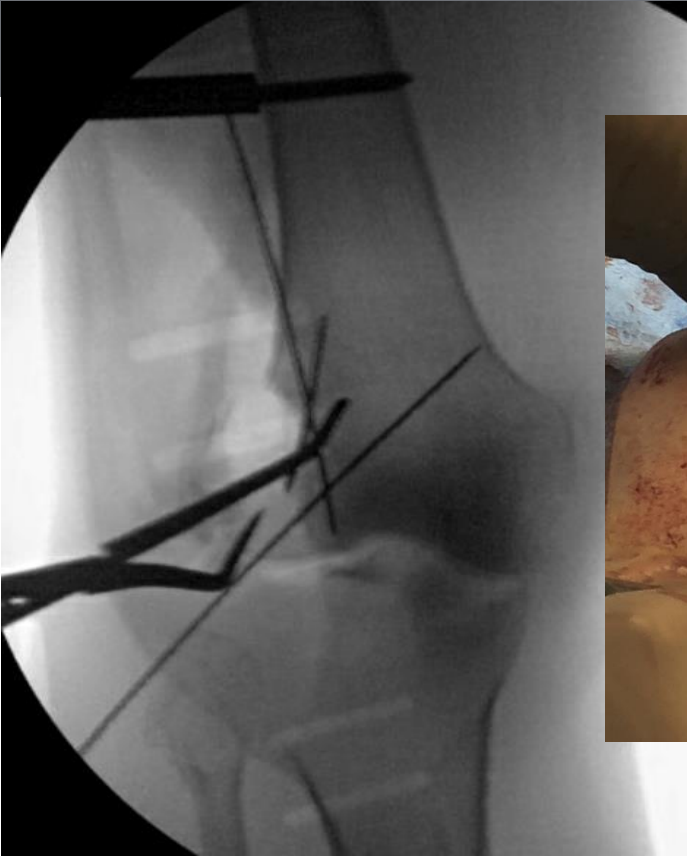


TABLE
ST-OP



postop

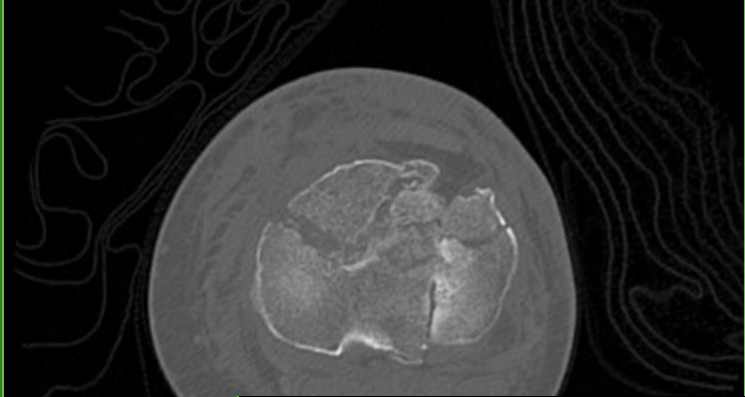


6 wks



Case 4







Summary

- **There are many BSM suitable for use in supporting articular reduction**
- **Access to the defect and whether it is constrained or unconstrained will drive the decision-making algorithm**
- **Allograft, particularly fibular shaft allograft, remains useful**