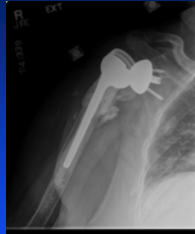


Unstable Reverse-Now What

John W. Sperling, MD, MBA
Mayo Clinic



Disclosure

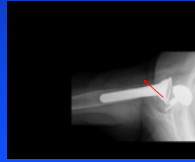
- Biomet-royalties

Introduction

- Etiology of instability
 - Component malposition
 - Soft tissue imbalance
 - Both

Introduction

- **Component malposition**
 - Good quality x-rays and CT scan



Introduction

- **Component Options**
 - Glenosphere: increase size and offset
 - Humerus: increase length, offset, and constrained liner
 - Re-establish deltoid tension if humeral bone deficiency

Metaphyseal Bone Loss

- **Frankle et al.**
 - Proposed concept of APC reverse
 - Restoration of proximal humerus with support for implant fixation
 - Facilitate adequate humeral length
 - Properly tension the deltoid muscle

Metaphyseal Bone Loss

- Frankle et al.
 - 25 patients with average bone loss 5.4 cm
 - Improve ASES score 31 to 70
 - Abduction increase from 32 to 82 degrees

Metaphyseal Bone Loss

- Two Primary Options
 - Allograft reconstruction
 - Prosthesis that uses metal to reconstruct missing bone

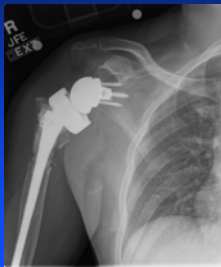
Humeral Bone Loss

- Problems with Allograft
 - Time consuming
 - Graft resorption
 - Disease transmission
 - Availability of graft material
 - Soft tissue reattachment very challenging

Immediate Post-op: Allograft



1 Year Post-op: Allograft Resorption



Humeral Bone Loss

- **Prosthetic Replacement**

- Standard treatment hip and knee reconstruction
- Address bone deficiency and soft tissue reattachment



Humeral Bone Loss

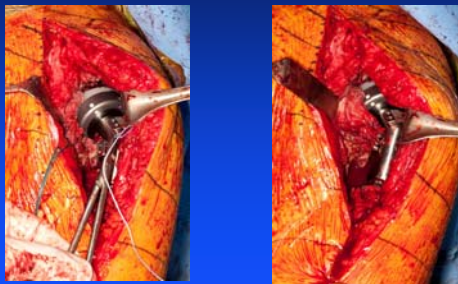
- **Prosthetic Reconstruction**
 - Time efficient
 - Eliminates concern of graft resorption
 - Eliminates concern of availability of graft material
 - Provide secure soft tissue reattachment

Humeral Bone Loss

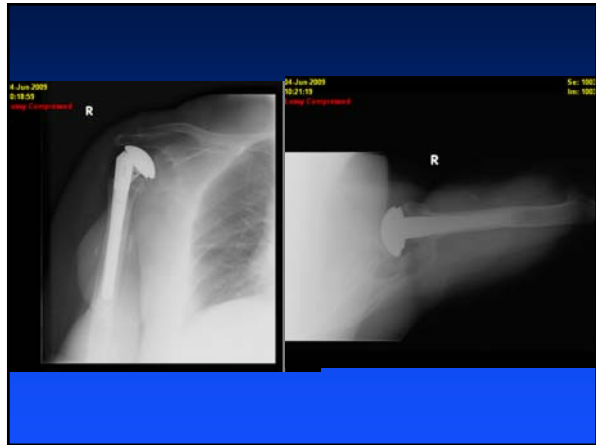
- **Prosthetic Replacement**
 - Manage 4 cm to entire humerus

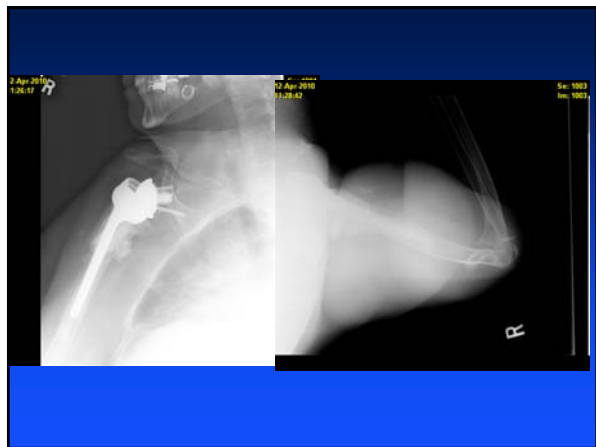


Soft Tissue Repair



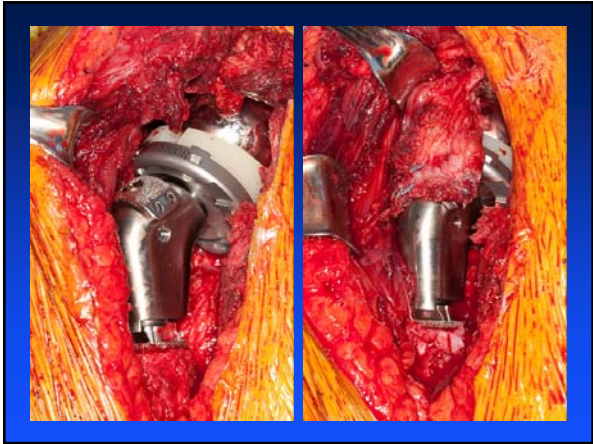




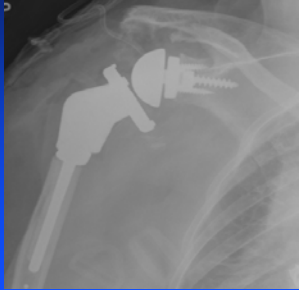








Revision Arthroplasty



Summary

- **Unstable Reverse**
 - Soft tissue
 - Component malposition
 - Combination

Summary

- **Goal**
 - Restoration of proximal humerus with support for implant fixation
 - Facilitate adequate humeral length
 - Properly tension the deltoid muscle

