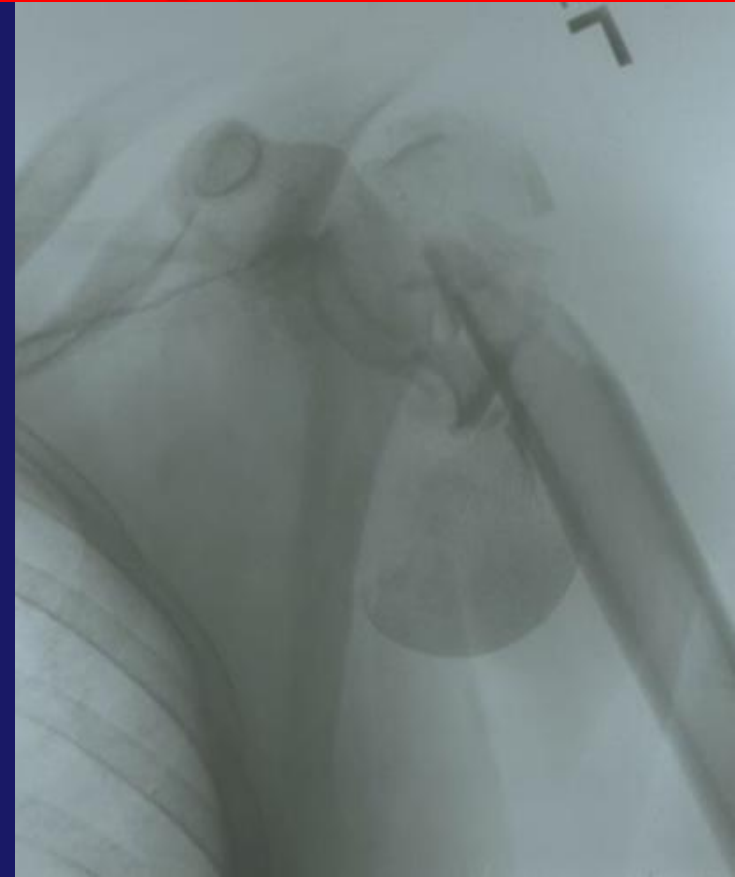


Proximal Humeral Fractures: Selecting the Right Approach

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Banner
University Medical Center
Phoenix Campus

I (and/or my co-authors) have something to disclose.

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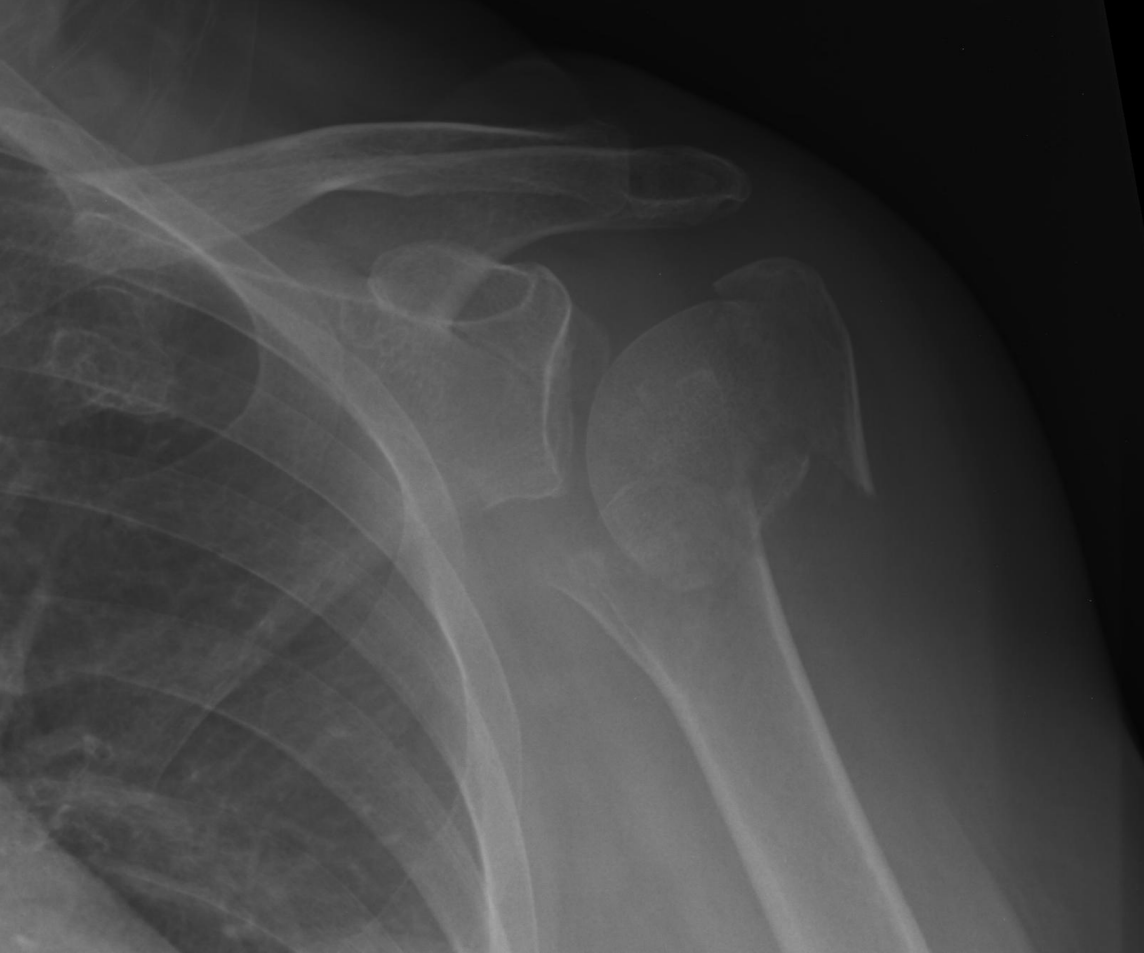


AAOS Orthopaedic Disclosure Program on the AAOS website at

<http://www.aaos.org/disclosure>

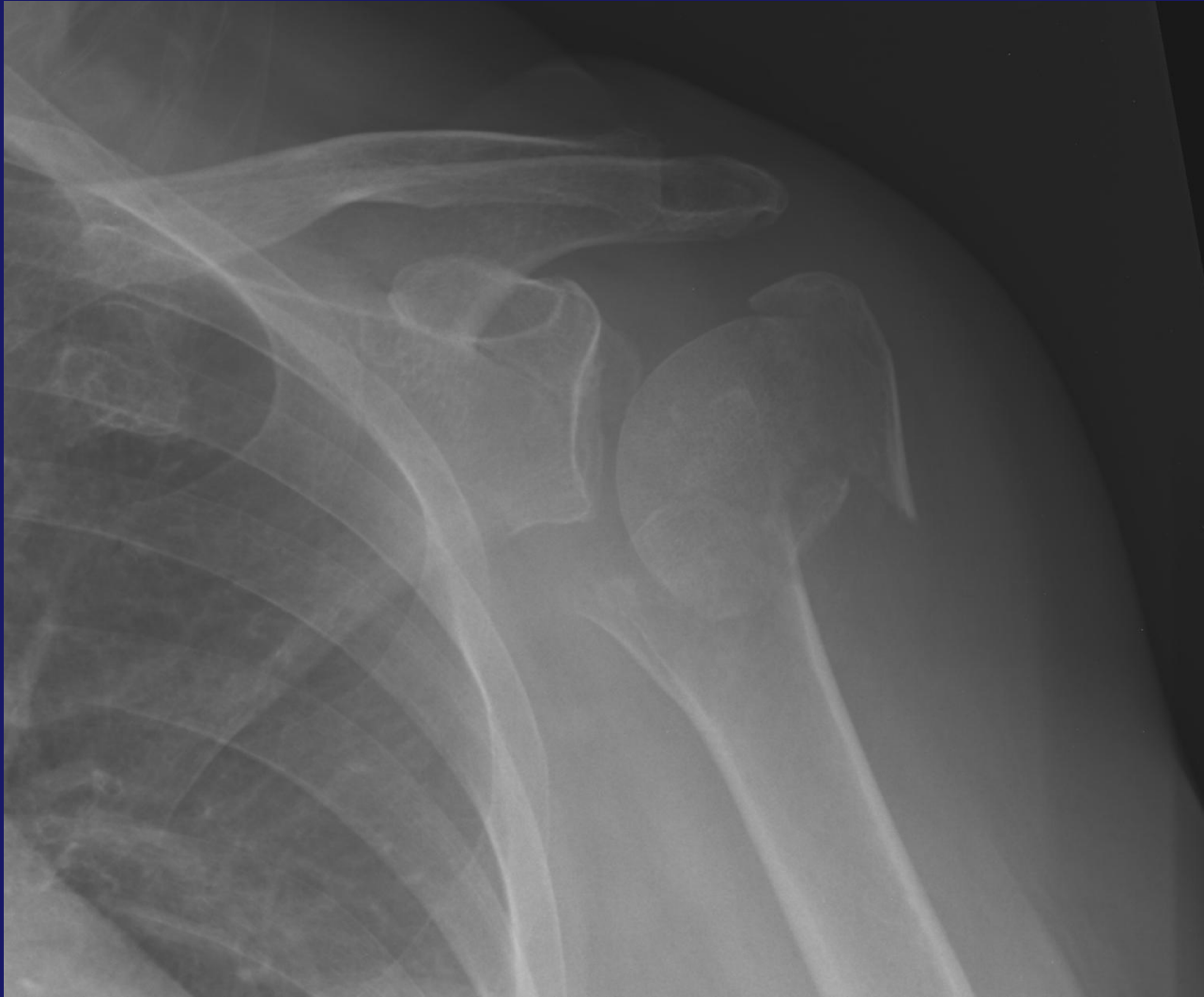
Approach

- Nonoperative
- Operative
 - Plate
 - Deltopectoral
 - Deltoid splitting
 - Nail
- Arthroplasty



- **78 yr old female, retired**
- **Lives by self, stable medical conditions**

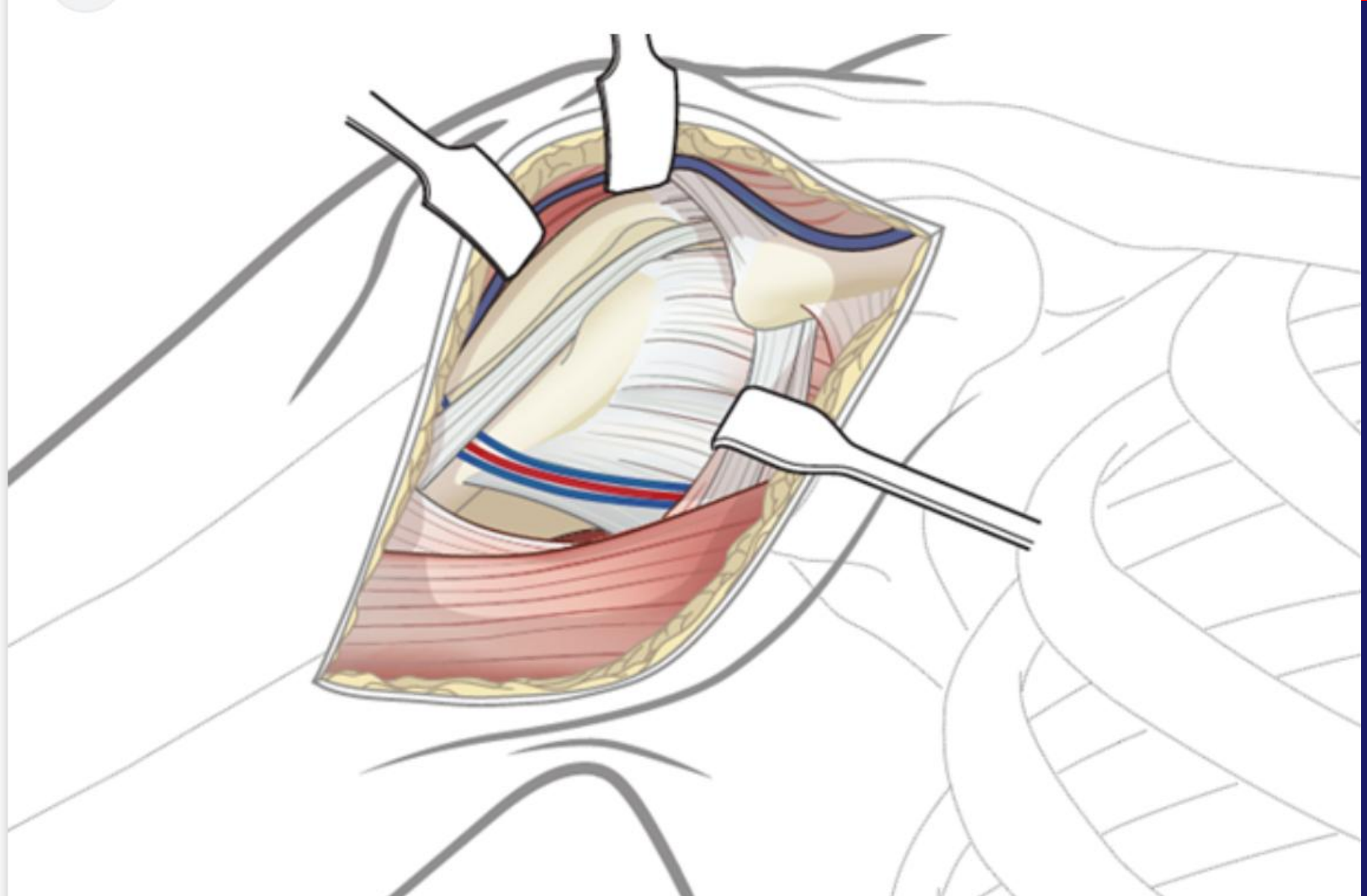
How would you treat this patient?





- **10 weeks post injury**
- **130 degrees flexion**
- **Minimal pain, functional, independant**

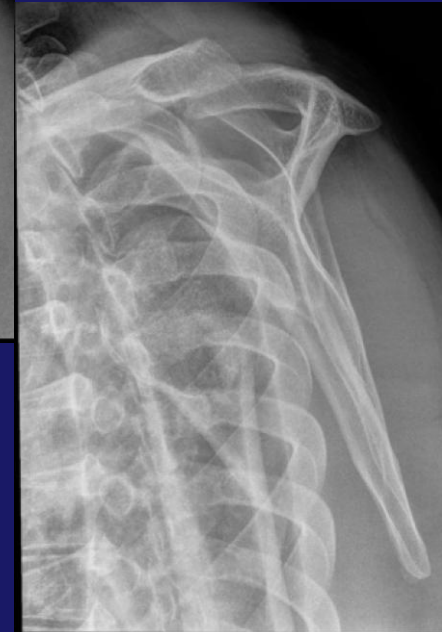
Delto-Pectoral Approach



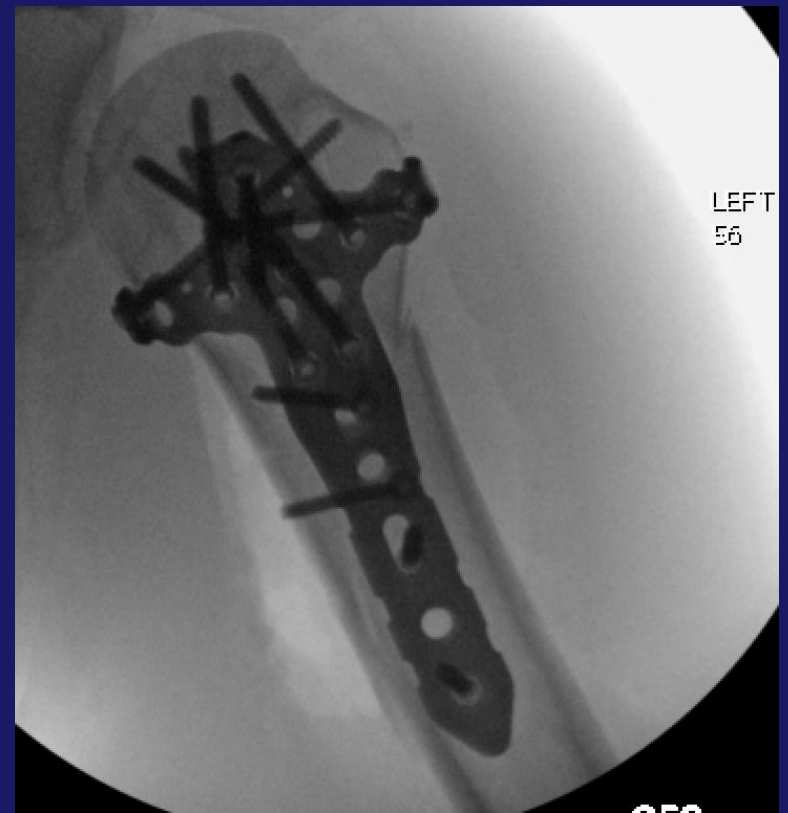
41M, proximal humerus fracture-dislocation

- **Associated axillary nerve injury**
- **Biceps tendon laceration**
- **No significant past medical history**
- **Non-dominant side**
- **Mountain biking fall (3 hours prior to arrival at ER)**

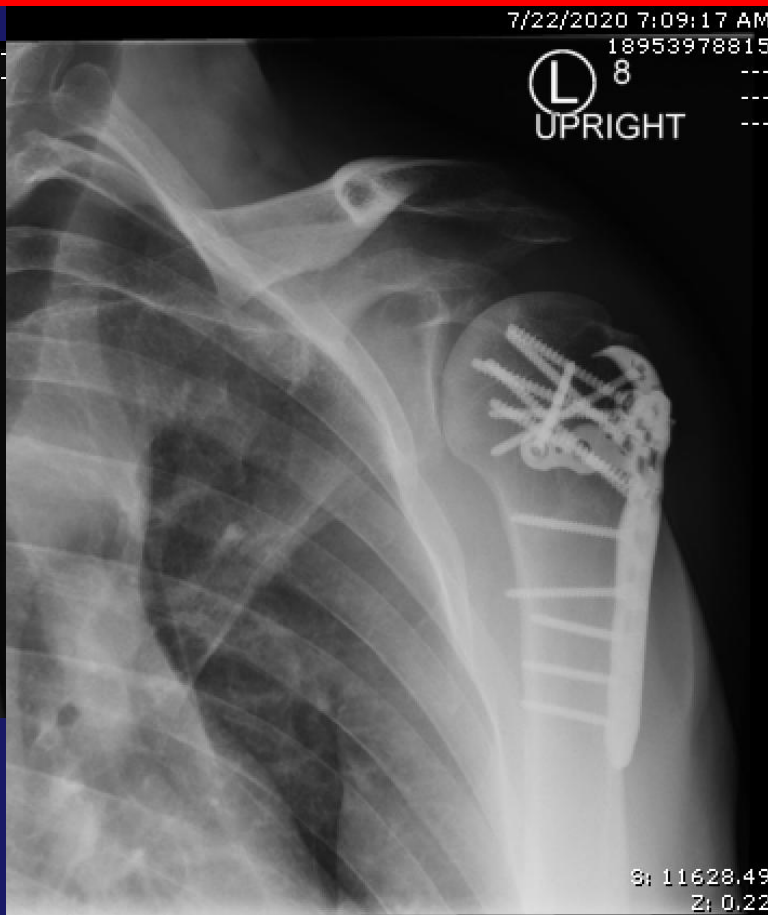
12/29/19



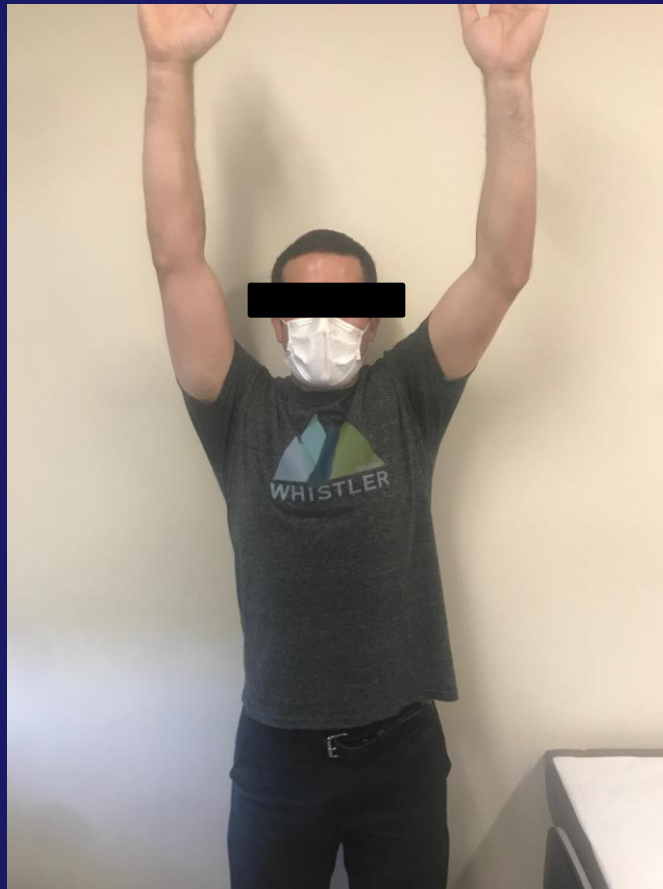
OR on 12/30/19



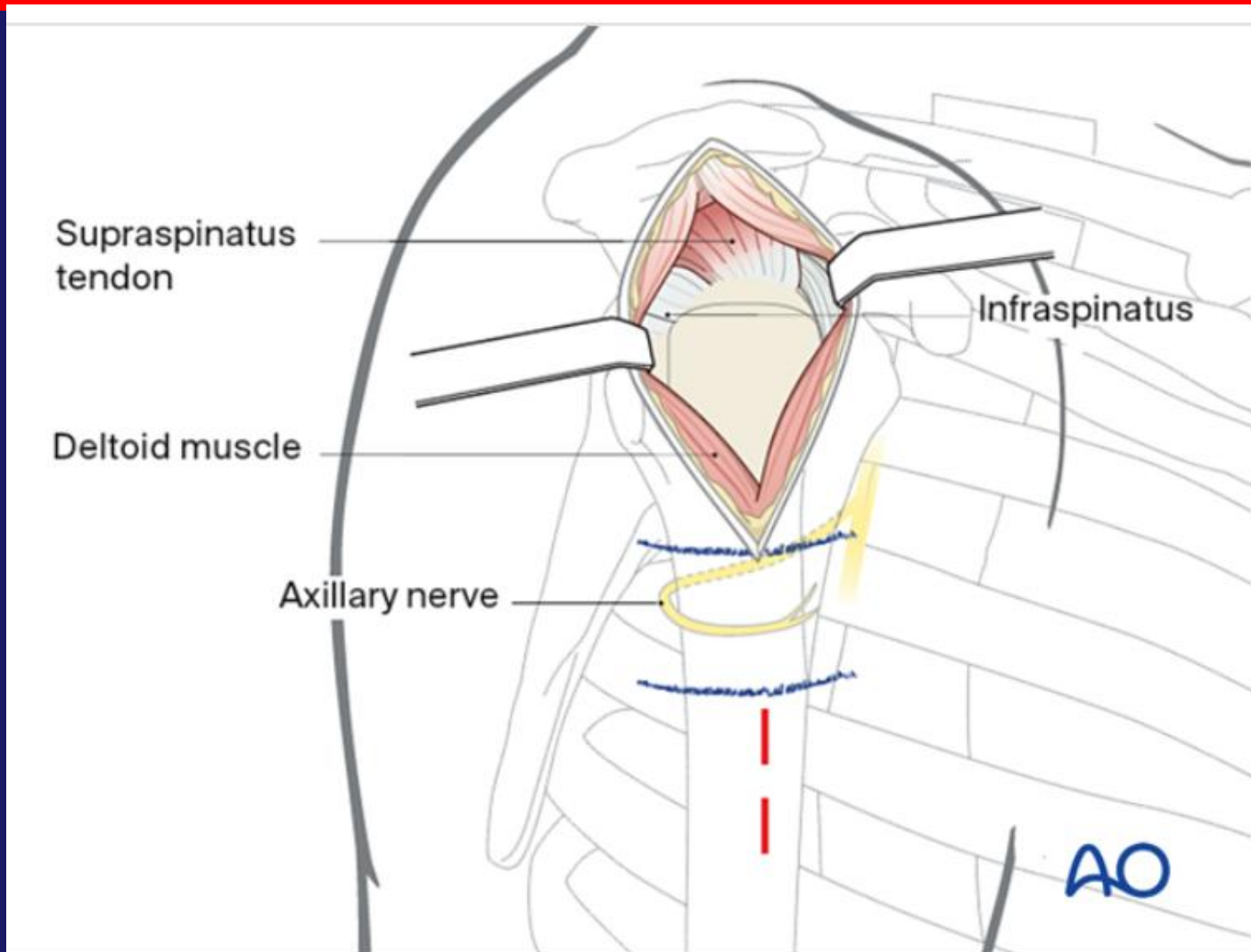
7/22/20



Outcomes – 7/22/20



Deltoid Split Approach



Valgus Impacted Fracture

- 34 yr old polytrauma patient
- Bilateral open femur fractures: IM nails
- Open L tibial shaft fracture: IM nail
- L tibial plateau fracture: ORIF
- L proximal humeral fracture: ?

PMH – prior clavicle ORIF, ETOH abuse

Radiographs



Ⓛ

PORTABLE

Valgus impacted
four part proximal
humeral fracture

3D CT



Anterior view



Lateral view

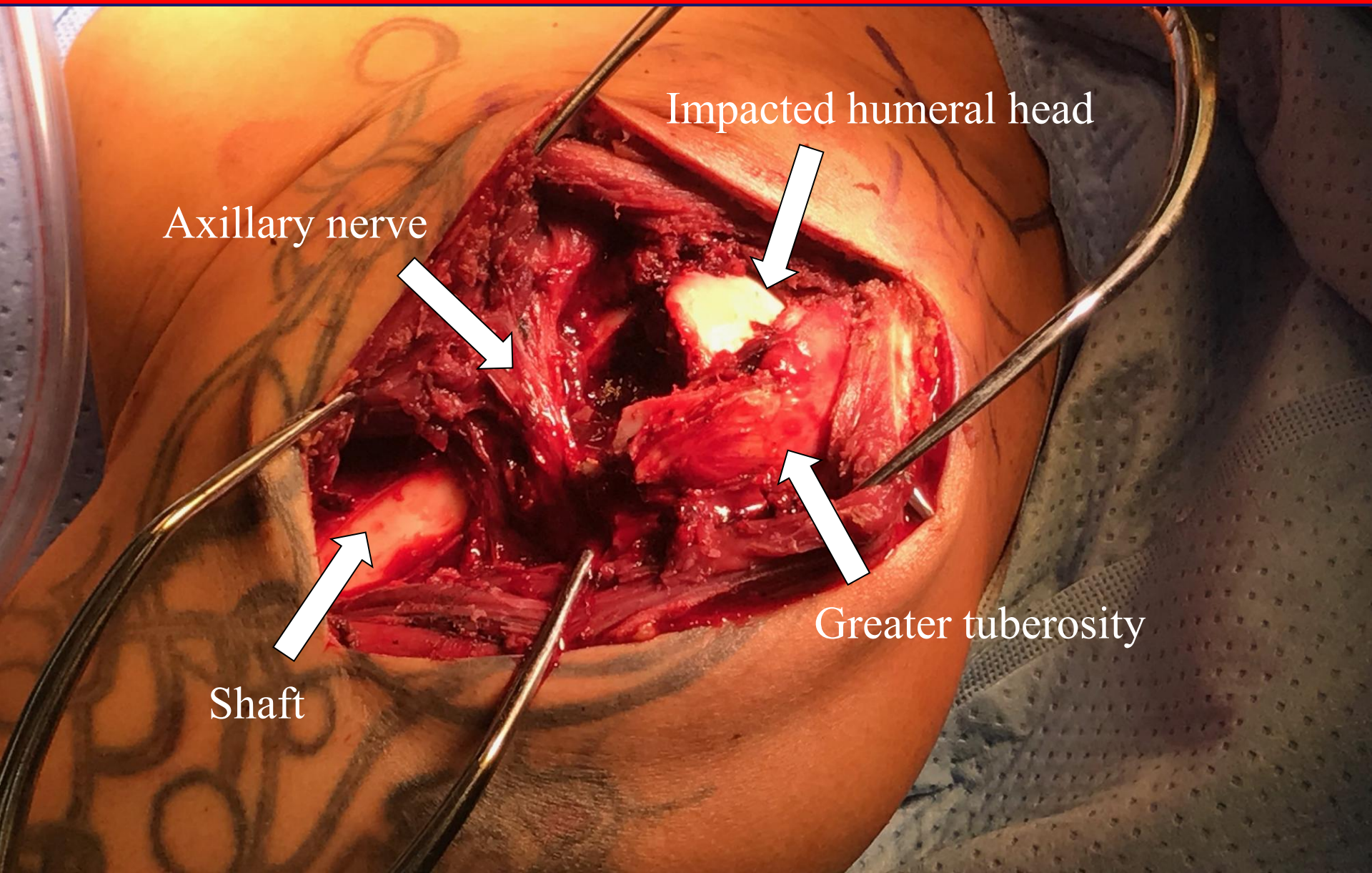
Surgical Approach

- Majority of pathology is posterior
- Anterior (delto-pectoral) approach would not reveal the main fracture lines well
- Ideal case for deltoid split approach, or “lateral” approach which allows for better posterior exposure

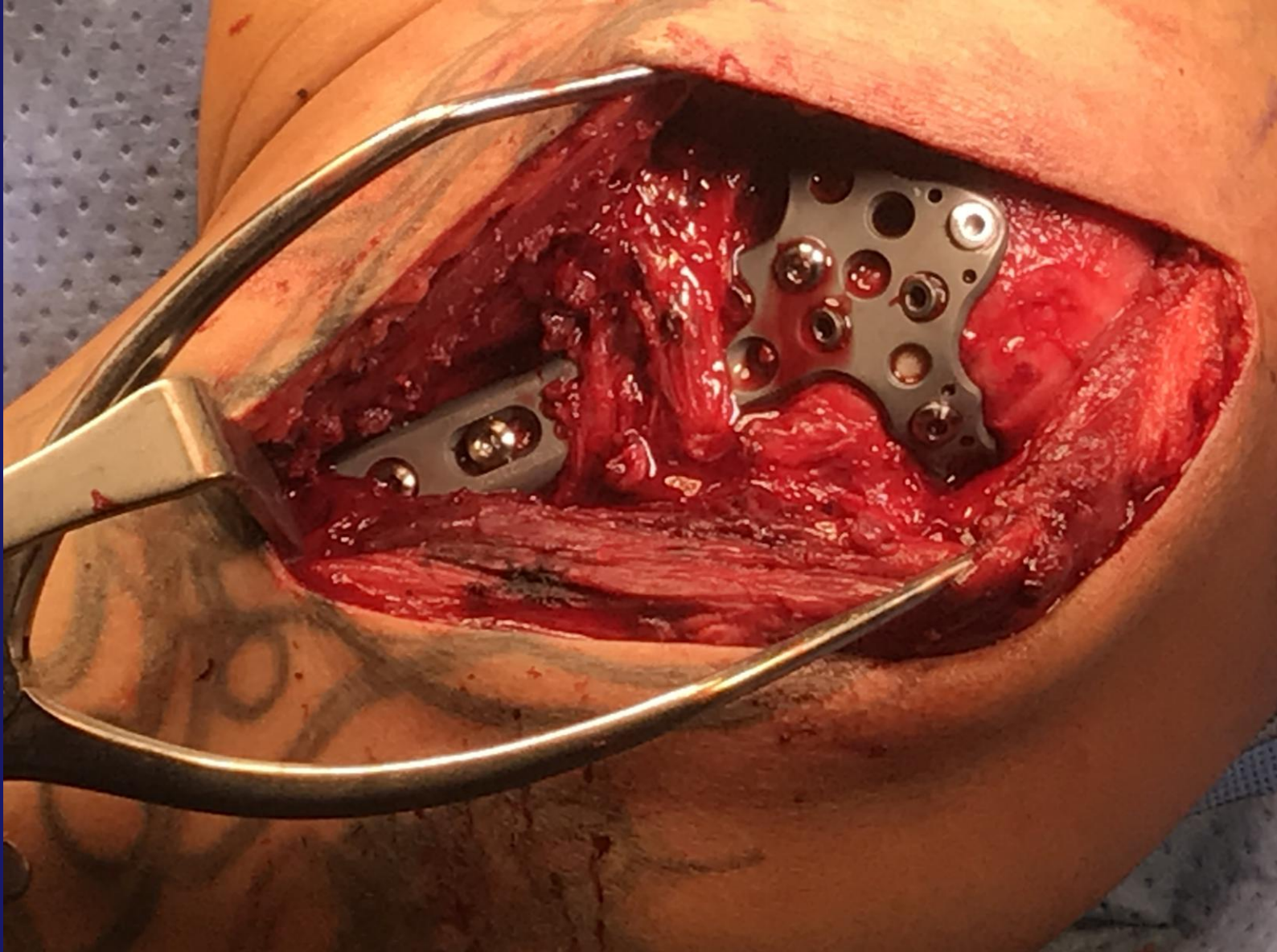
Intra-operative view



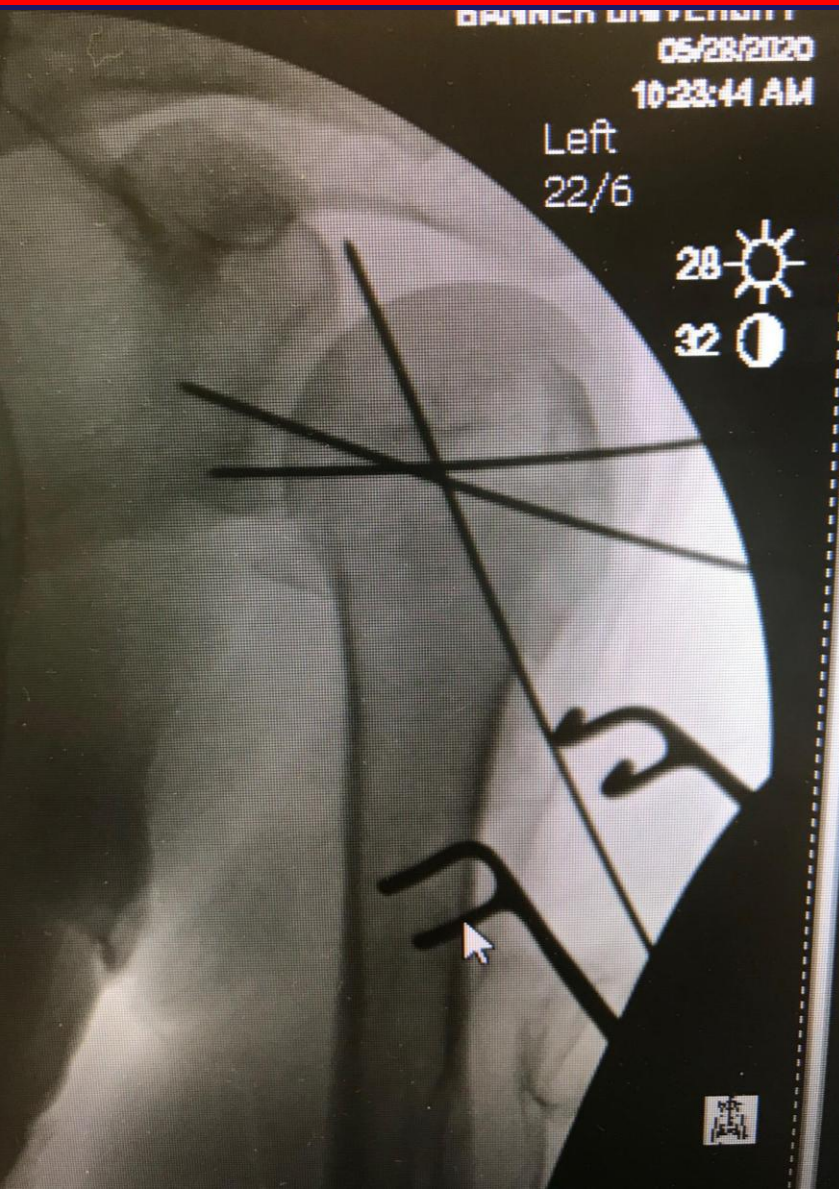
Intra-operative view



Intra-operative view post reduction and plate application



Fixation



doi: 10.1016/j.jse.2020.06.020. Epub 2020 Jul 7.

Deltpectoral vs. deltoid split approach for proximal HUmerus fracture fixation with locking plate: a prospective RAndomized study (HURA)

Dominique M Rouleau ¹, Frédéric Balg ², Benoit Benoit ³, Stéphane Leduc ³, Michel Malo ³, François Vézina ², G Yves Laflamme ³

Affiliations + expand

PMID: 32650077 DOI: [10.1016/j.jse.2020.06.020](https://doi.org/10.1016/j.jse.2020.06.020)

- 85 patients, mean age 62
- DP 41, DS 45
- Q-DASH 12 versus 26 (DP better)
- Constant 56 versus 51 (DP better)
- More complications in DS group

Proximal Humeral Nailing

Proximal Humeral Fx: IM Nail Indications

Fx with Diaphyseal Extension

Fx with Metaphyseal Comminution

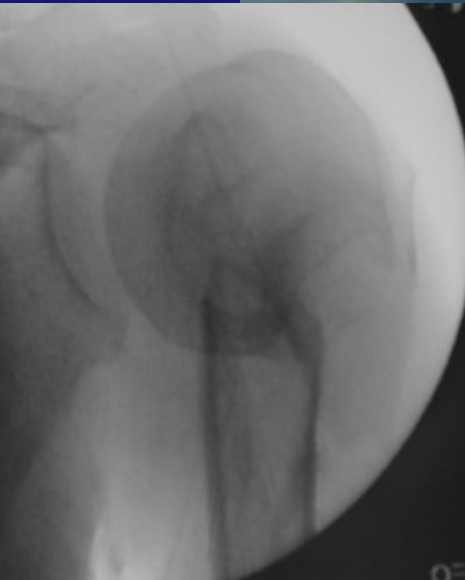
Fx with Ipsilateral Diaphyseal Fx



Approach

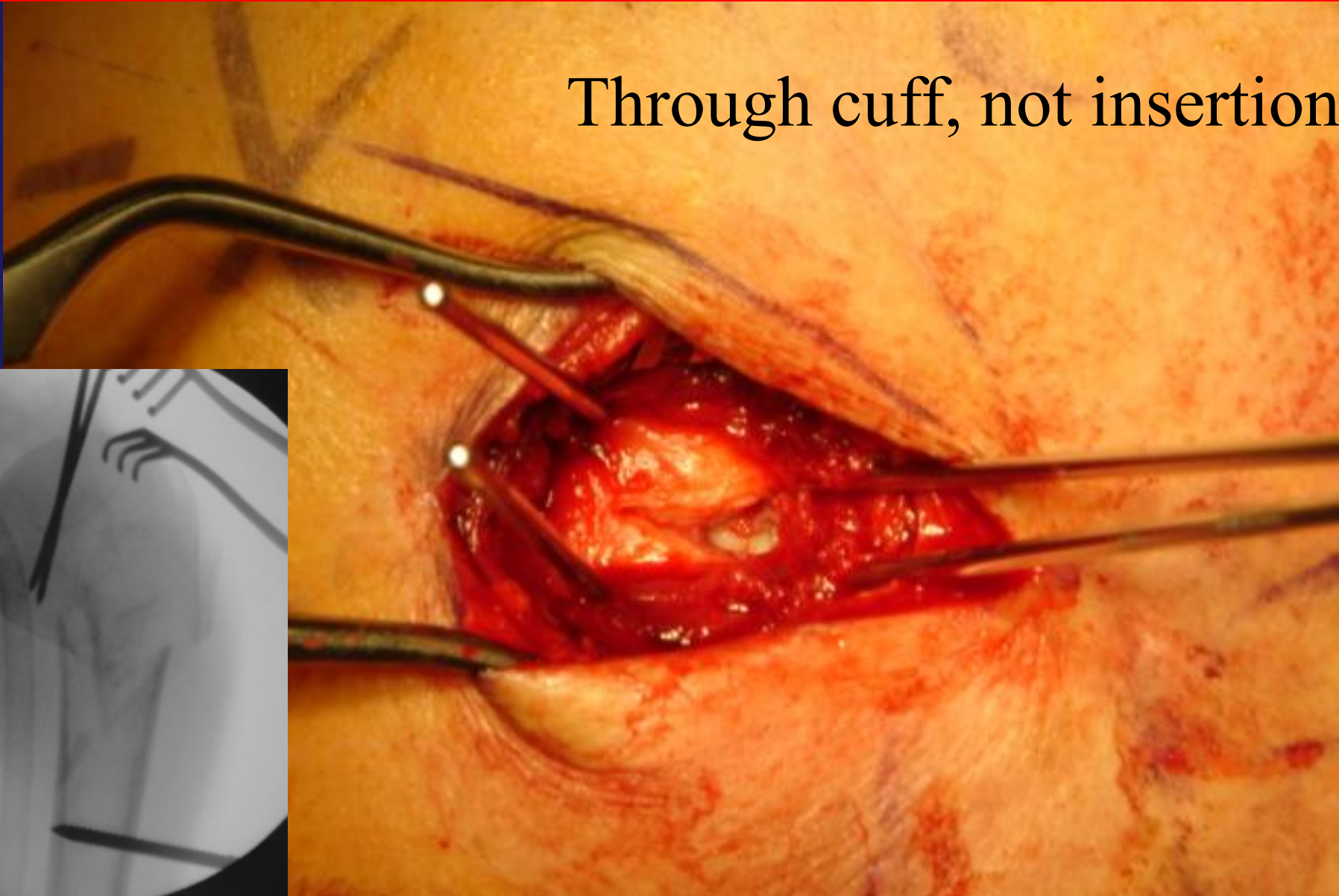


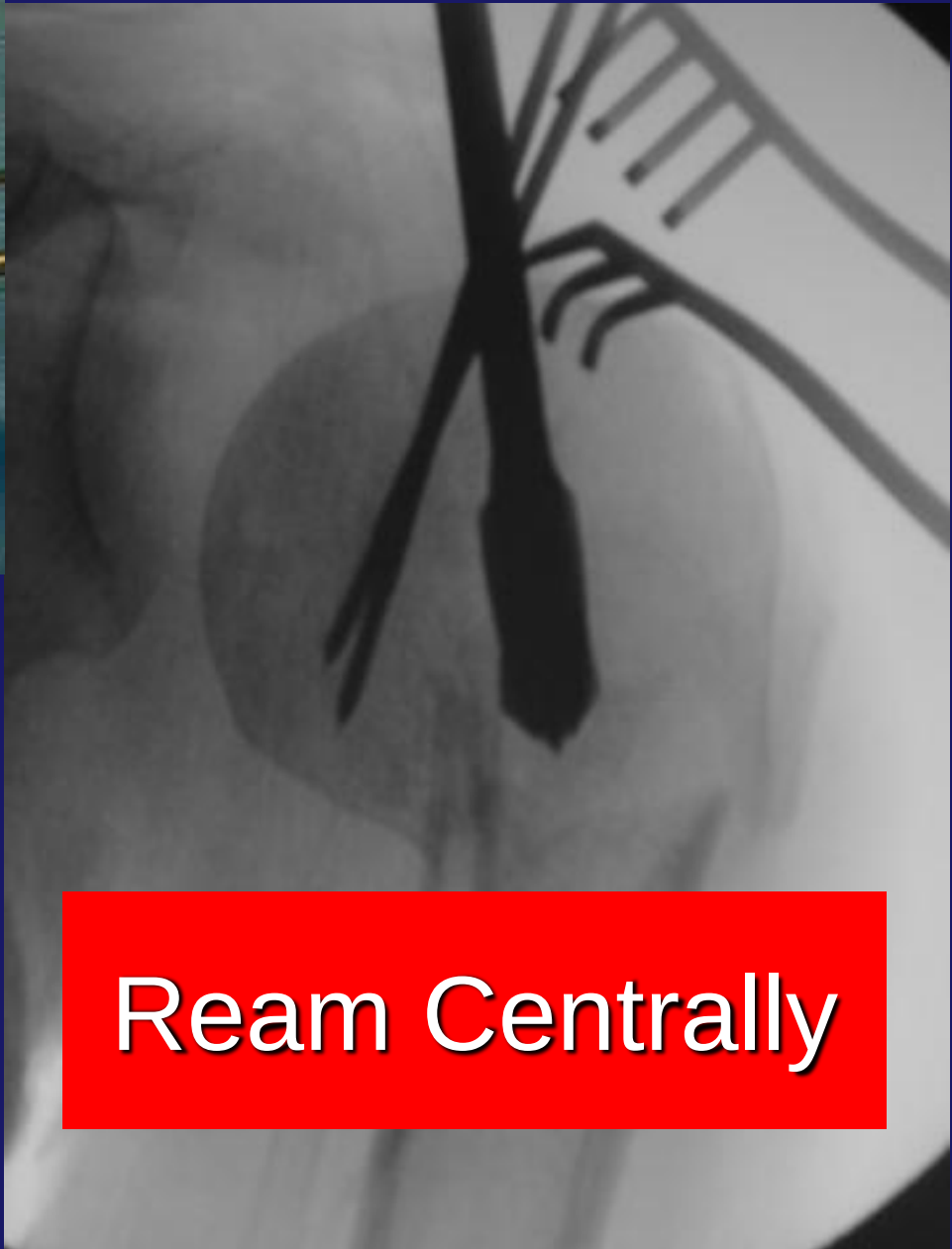
Rotator Cuff Incision Preparation



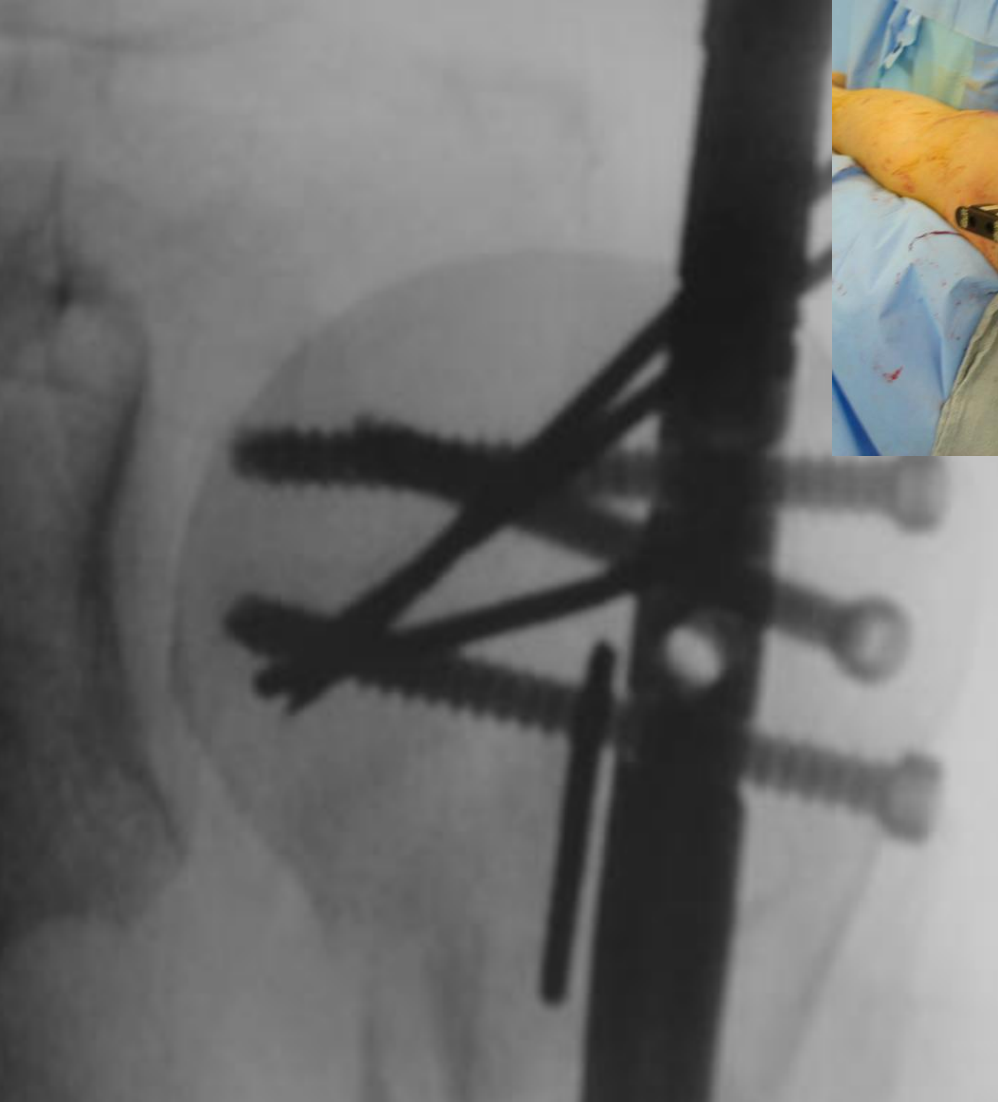
Rotator Cuff Incision

Through cuff, not insertion





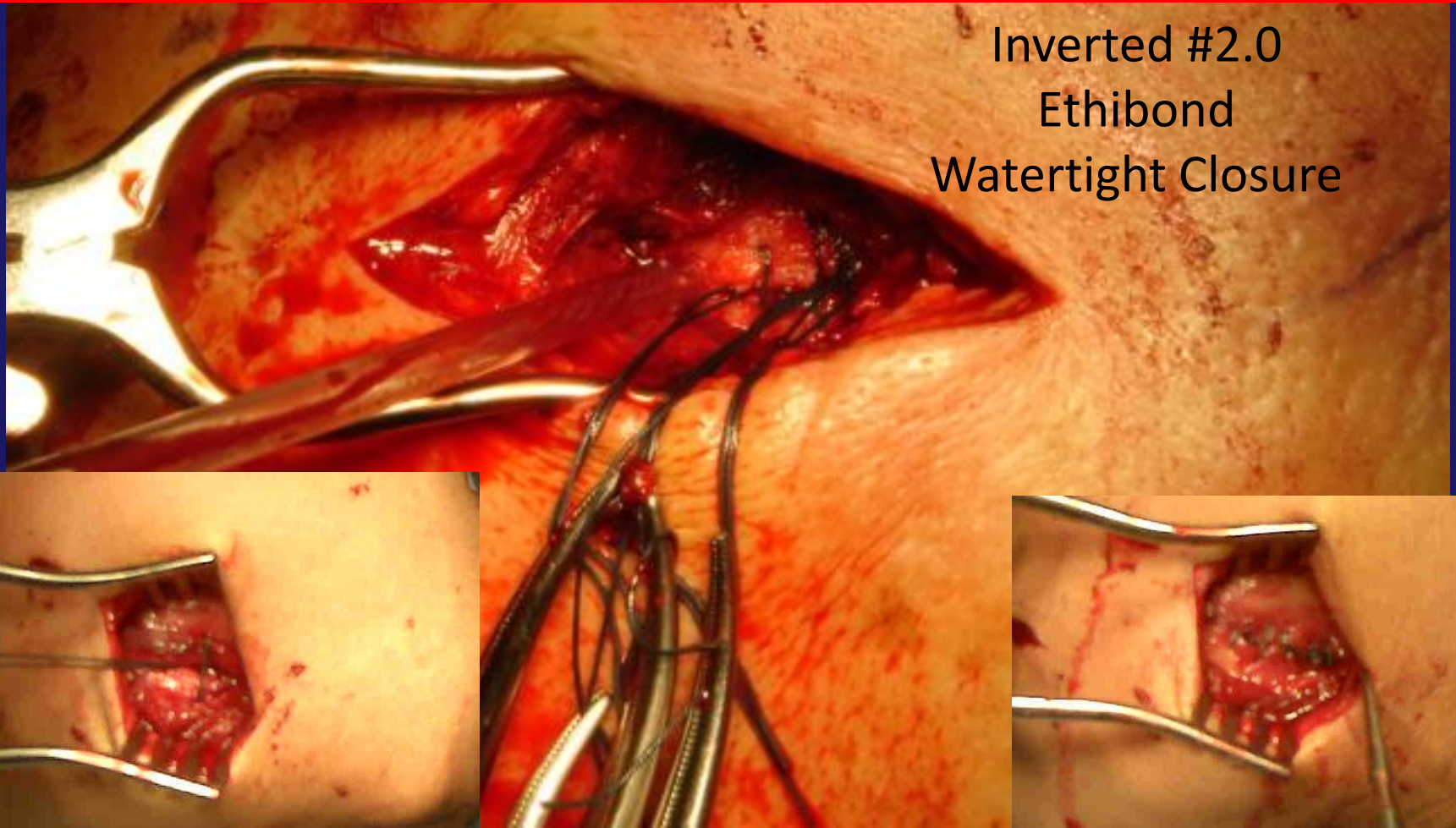
Ream Centrally



Proximal
Interlocking Screws

Rotator Cuff Repair

Inverted #2.0
Ethibond
Watertight Closure



Proximal Humeral Fx With Metaphyseal Extension

