

UCSF Trauma Course 5/16/2019 1

Distal Radius Fractures: Case Based Approaches

Melvin P. Rosenwasser, MD
 Robert E. Carroll Professor of Surgery of the Hand
 Chief, Orthopaedic Hand and Trauma Service
 Director, Trauma Training Center



NewYork-Presbyterian COLUMBIA COLUMBIA UNIVERSITY DEPARTMENT OF ORTHOPEDIC SURGERY

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Disclosures

Consultant- Stryker
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Distal Radius Fractures Common Many need surgery

Most fractures can be fixed through the familiar Volar FCR sheath splitting approach
 Some cannot
 Some can be best managed through a different single or combination approach
 Fresh Fractures (less than 7 days old) can be manipulated to a reduction and then internally fixed
 Delayed treatment with early callus formation may necessitate a secondary approach for open reduction even if a volar locking plate will be employed as definitive fixation
 We as wrist fracture surgeons should be comfortable with other approaches
 My goal is to match the fracture to the approach and then to hardware

We will review standard FCR split, volar ulnar lunate facet, radial column, and dorsal lunate facet
 Try them and become a master of wrist fracture surgery

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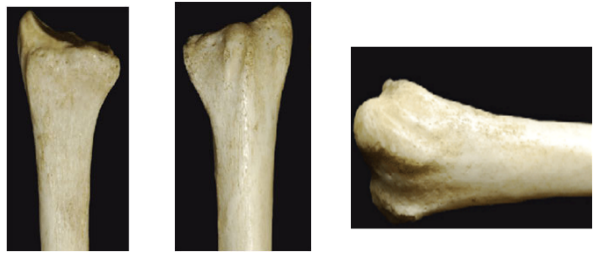
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Plateable Surfaces of the Distal Radius- Volar, Dorsal, Radial Columns



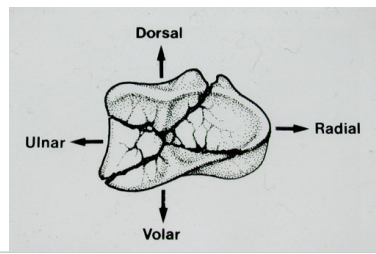
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Capture the displaced facet and win the game

Assess direction of displacement of facet (same as carpus)

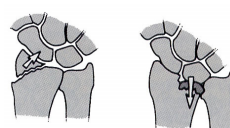
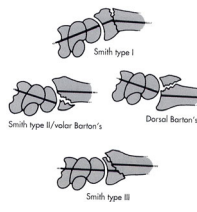


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**Carpus will follow articular facets
Implant must capture the facet
How to Get There?**

Chauffeur's Die-punch

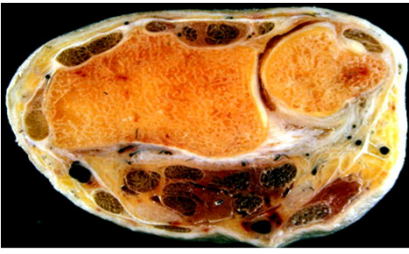



Smith type I
Smith type II/volar Barton's Dorsal Barton's
Smith type III

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How to get around the anatomy that cloaks the distal radius



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Dorsal Lunate Facet Plate

You may not be able to capture (reduce) this facet with a palmar plate alone

Approach is easy between 4th and 5th dorsal comp

Extensor tendons do not have to be disturbed

This is true buttressing plate

Especially helpful for thin osteopenic dorsal cortex

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Dorsal Approach to the Wrist for Lunate Fossa Fractures and DRUJ Pathology

VIDEO


- ◆ Incision along ulnar border of distal radius
- ◆ Divide retinaculum between EDM and EDC
- ◆ Subperiosteal elevation under EDC for lunate fossa fractures
- ◆ Create window between EDM and ECU for DRUJ pathology



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**Primarily a dorsal lunate facet fx
Why would you go with a volar locking plate?**



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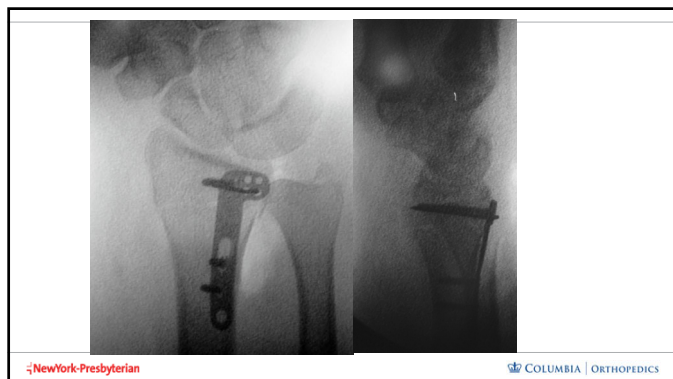
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Easy to go Between 4th and 5th Dorsal Comp minimal retraction and you are right on the dorsal lunate facet



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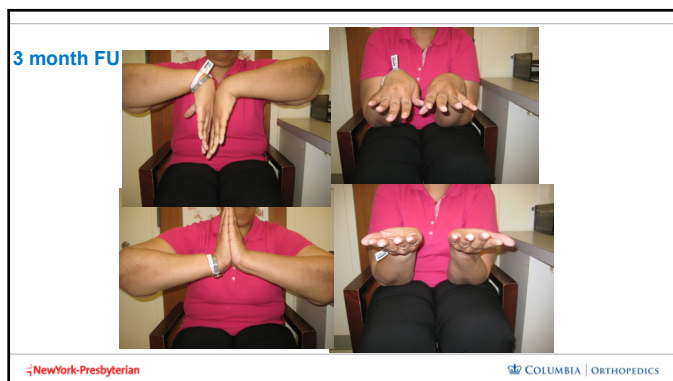
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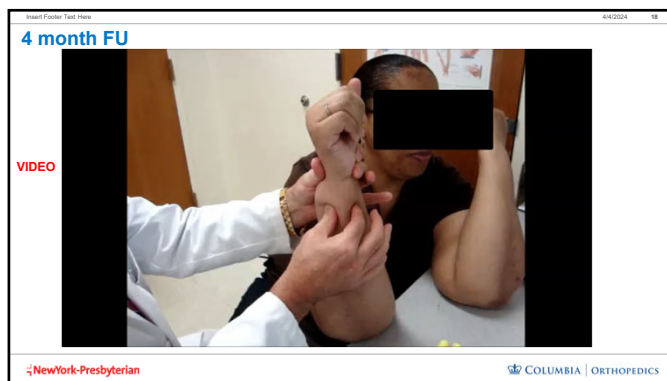
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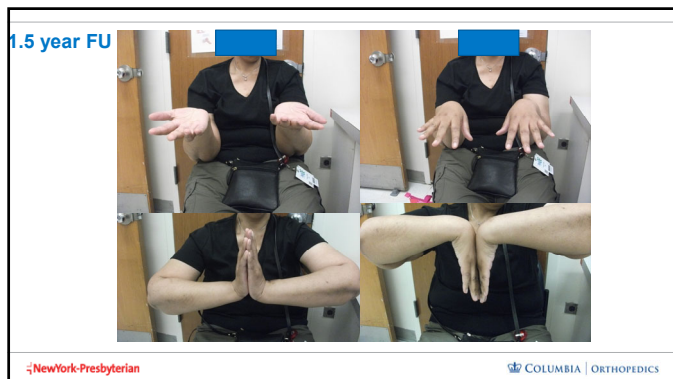
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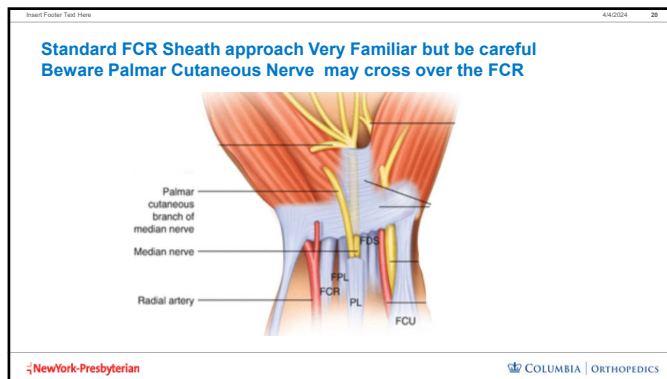
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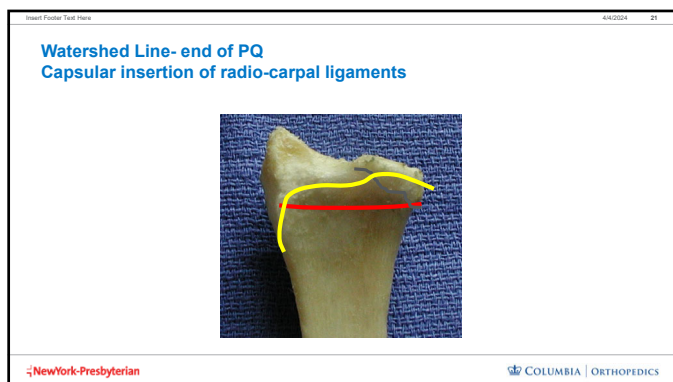
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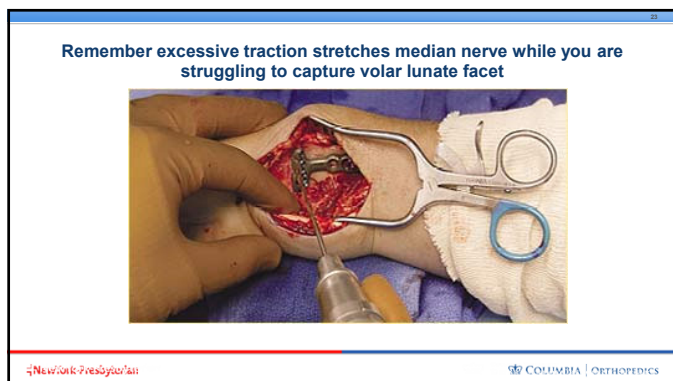
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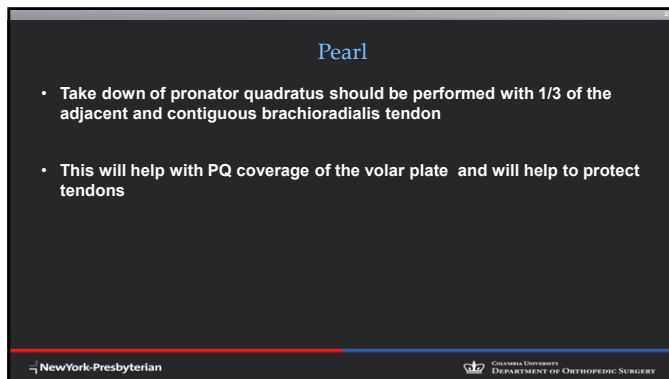
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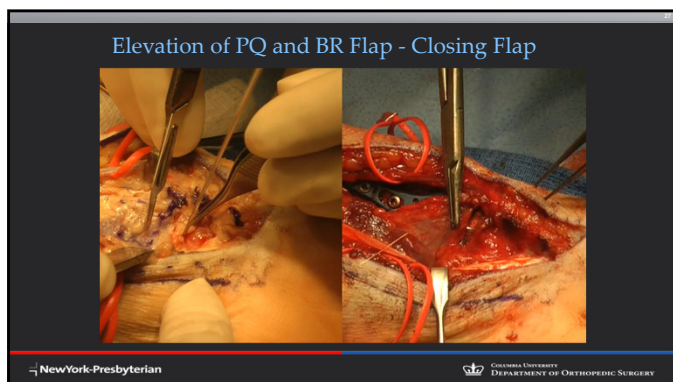
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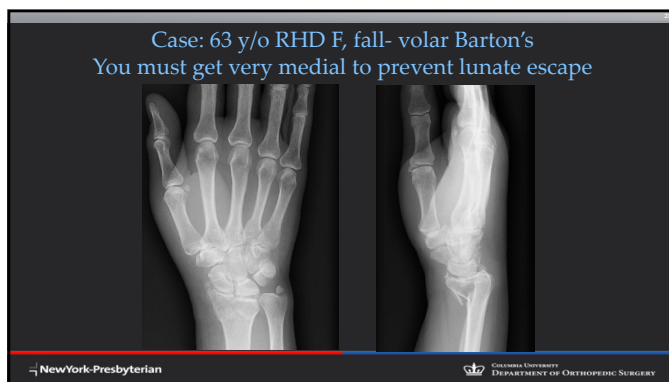
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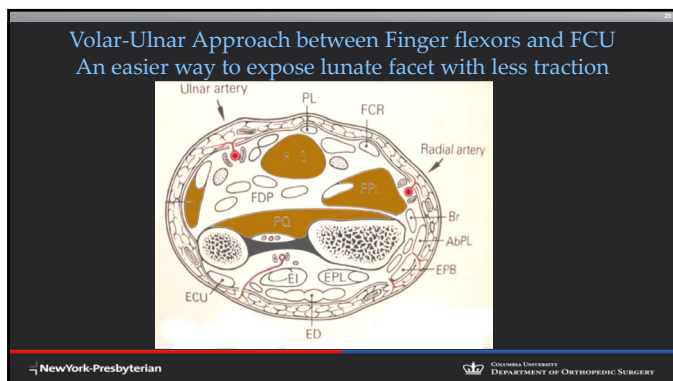
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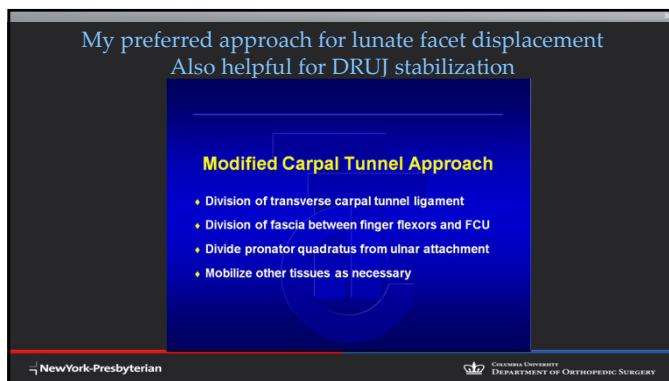
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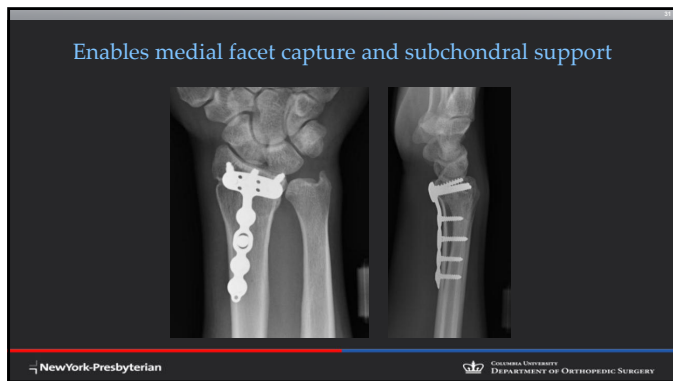
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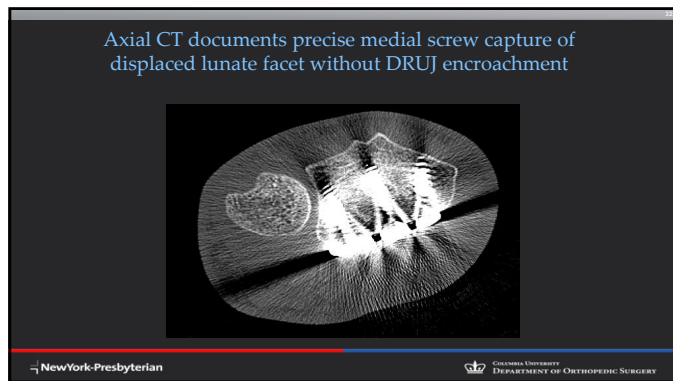
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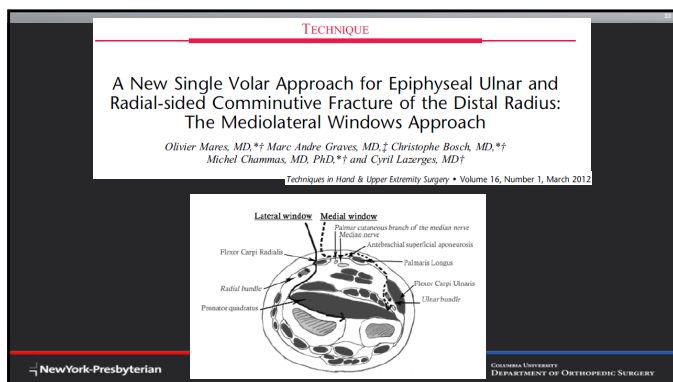
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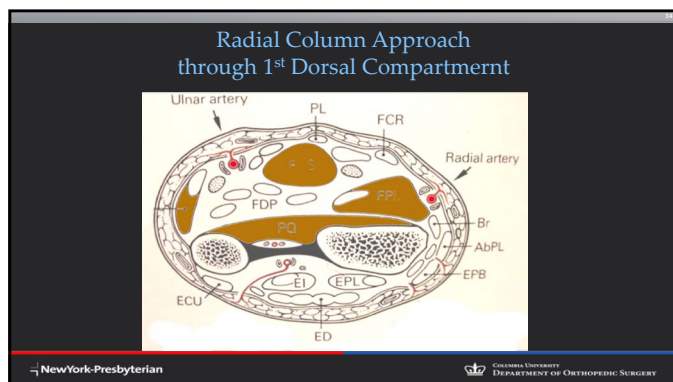
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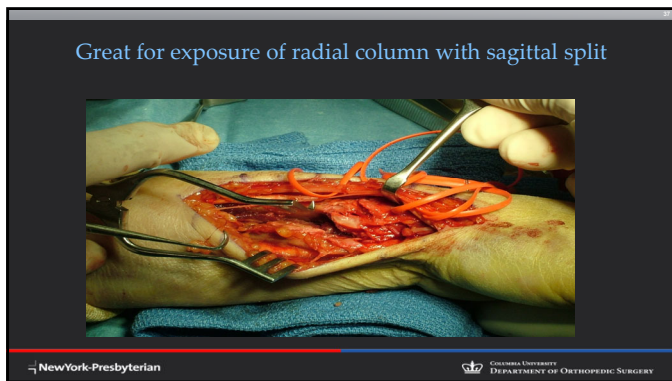
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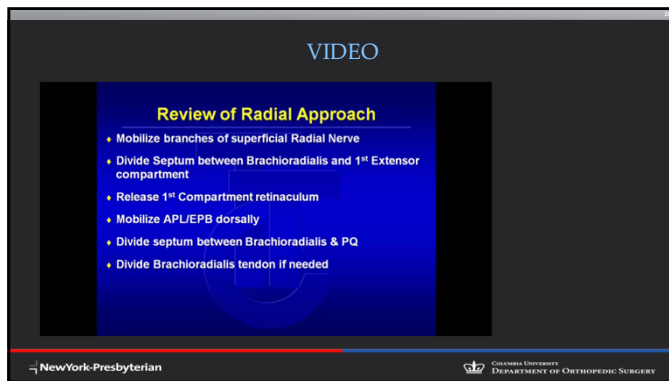
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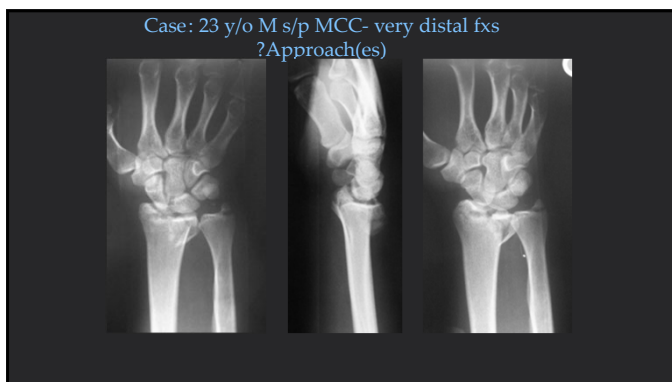
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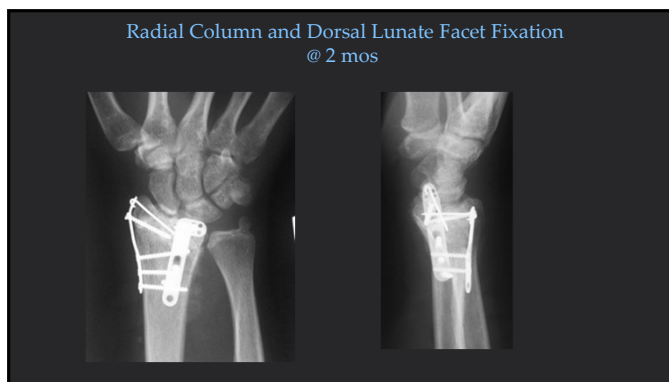
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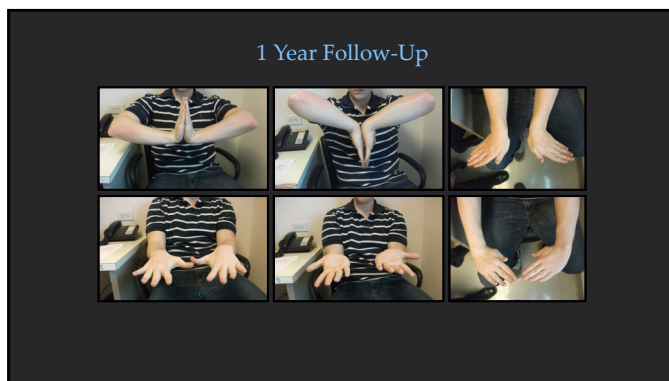
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Despite what you may have heard
@ 1 Year -Radial Column plates are well tolerated



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Summary Take Home Points

Most distal radius fractures are well treated with a VLP and an FCR split incision
But before you go into default mode
Study the injury films and consider the articular facet displacement and carpal translation
It may be better to use a fragment specific approach not only to get a reduction but to maintain it as well
This requires the other approaches discussed in this talk

These approaches are safe and can be mastered.
Remember One size does not fit all.


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Thank You

mpr2@cumc.columbia.edu


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59 y/o RHD M: injury films @2 days post fall



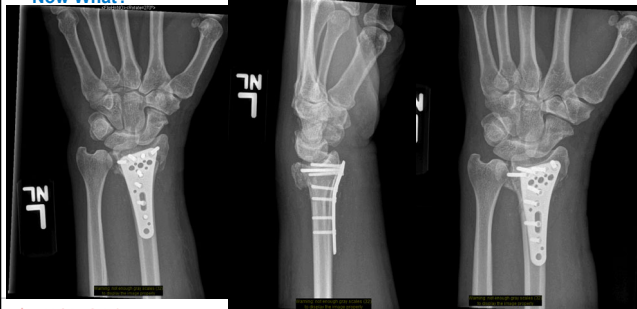
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Intra-Op film: @5 days post-injury
Dorsal comminution and marked reversal of tilt
FCR split approach and dorsal bone grafting of void



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1st post op visit still in splint with collapse
Now What?



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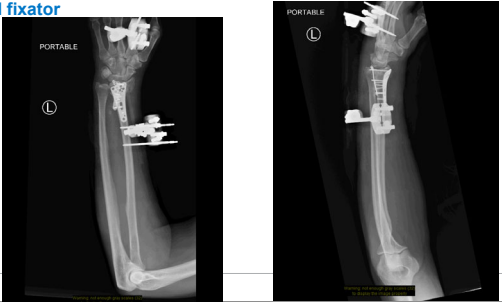
Options



- Do nothing
- Revise through 2 incisions with new volar plate
- Spanning Plate
- External fixator
- Accessory dorsal plates
- More bone graft or substitute

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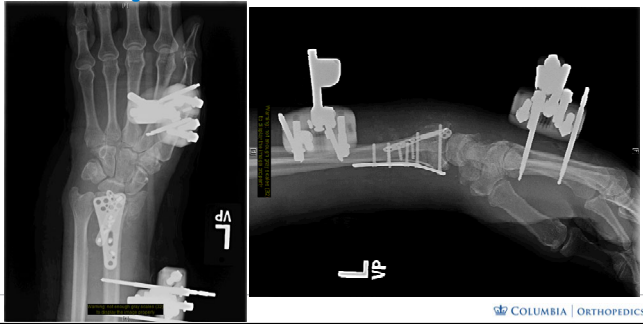
Operated @ 1 month post orig surgery
Removed volar screws, osteotomy lunate facet, allograft
Dorsal facet plate linked with screws from volar plate
Spanning external fixator




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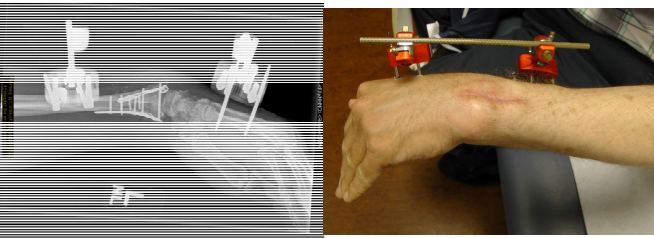
Immediate post-op: lunate reduced, no over distraction
Radial column ignored







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@ 1 month stable alignment: fixator removed




 

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@ 2 months: stable alignment, back to work

Radial column collapse not as important to fix as the lunate facet and carpal alignment



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