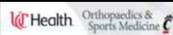


**Unstable Proximal Femur Fx's  
- Plates**

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Peter J. Stern Professor & Chairman,  
Department of Orthopaedic Surgery  
University of Cincinnati Medical Center

May 1, 2019



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**Disclosure**

*Paid Consultant for  
Stryker  
Royalties  
Stryker;  
SLACK, Inc*



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**Disclosure**

*Research Support:  
OTA; FOT; DOD, NIH*



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**Disclosure**



*Deputy Editor:*  
**JAAOS**  
*Editorial Board:*  
**JOT; JBJS; JOR;**  
**CORR**



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**Failure**

**Not Uncommon !**



*Etiology*

- ❖ Watershed Vascularity
- ❖ High Deforming Forces
- ❖ Varus Malreduction



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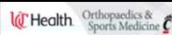

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**Prevention of Failure**

- ❖ Indirect Reduction / Biologic Reduction – Preserve Vascularity
- ❖ Implant Selection
- ❖ Fracture Reduction – Prevent Varus



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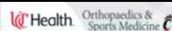
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## Indirect Reduction Techniques

- ❖ Achieve Reduction
- ❖ Preserve Fx Healing Ability
  - Minimize Soft Tissue Stripping From The Fragments





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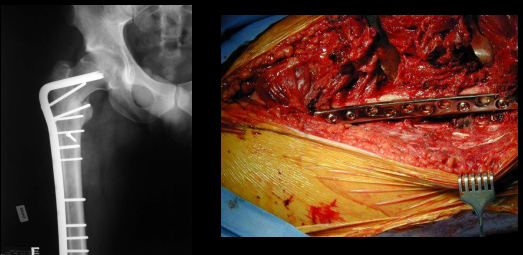
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## Indirect Reduction / Biologic Reduction – Preserve Vascularity





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## Implant Selection





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### Archdeacon Concept:

- ✓ If The Reduction Is Anatomic With Bone To Bone Contact, Then The Implant Serves As A Neutralization Device Or A Tension Band.
- ✓ If The Reduction Is Not Anatomic, And The Medial Buttress Is Not Restored, The Implant Serves As A Bridging Device.



PLATE NAIL

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### Fracture Reduction – Prevent Varus (Restore the Neck – Shaft Angle)



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### Varus Malreduction

- ❖ Increases Moment Arm & Bending Forces



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## What Are The Tips & Tricks For Plating An Unstable Proximal Femur Fracture ?

✓ Position = Lateral



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## Consider Lateral Position



Lateral Decubitus Position



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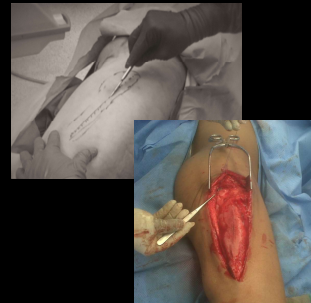
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## Advantages – Lateral Position



- ❖ Neutralizes The Gravitational Forces Acting On The Bone And Soft Tissues
- ❖ Adipose Tissue “Falls Away”
- ❖ Facilitates Reduction And Exposure
- ❖ Compatible With Intraoperative Image Intensification



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## Lateral Position Checklist

- ✓ Radiolucent Flat Top Table
- ✓ Radiolucent Bean Bag
- ✓ Blanket "Table Top" For Down Leg
- ✓ Pad / Protect Peroneal Nerve
- ✓ Drape Leg Free



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## Bone Foam

Position Down Leg

- ❖ Flexed With Injured Limb Extended
- ❖ Extended With Injured Limb Flexed
  - Helpful In Subtrochs With Proximal Segment Flexion



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## What Are The Tips & Tricks For Plating An Unstable Proximal Femur Fracture ?

- ✓ Position = Lateral
- ✓ Imaging = C Arm

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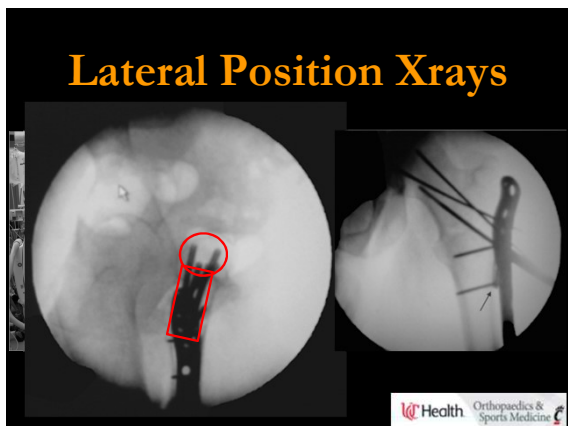
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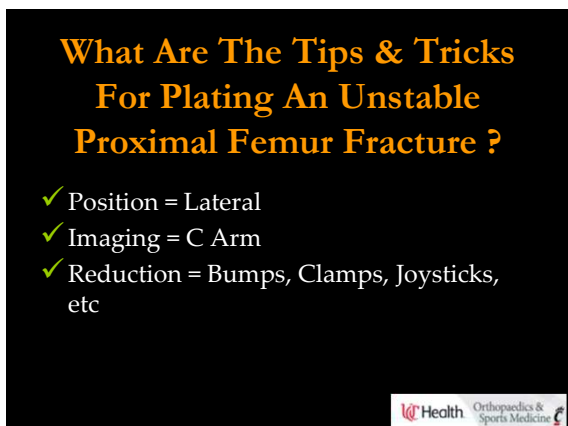
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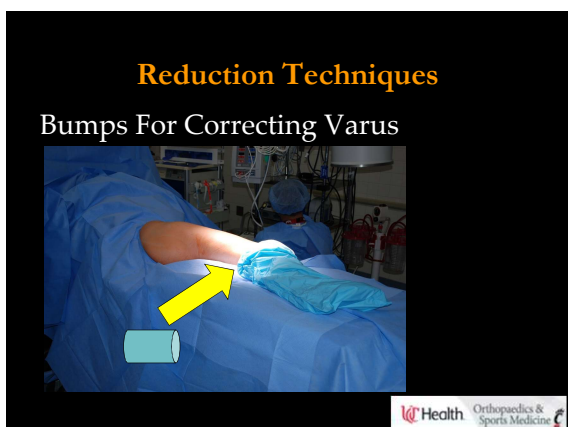
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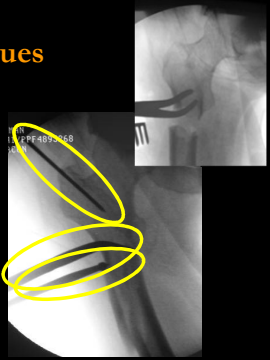
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### Reduction Techniques

Instruments For Manipulating Proximal Femur

- ❖ Ball Spike
- ❖ Standard Clamp
- ❖ Schantz Pin



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### What Are The Tips & Tricks For Plating An Unstable Proximal Femur Fracture ?

- ✓ Position = Lateral
- ✓ Imaging = C Arm
- ✓ Reduction = Bumps, Clamps, Joysticks, etc
- ✓ Fixation



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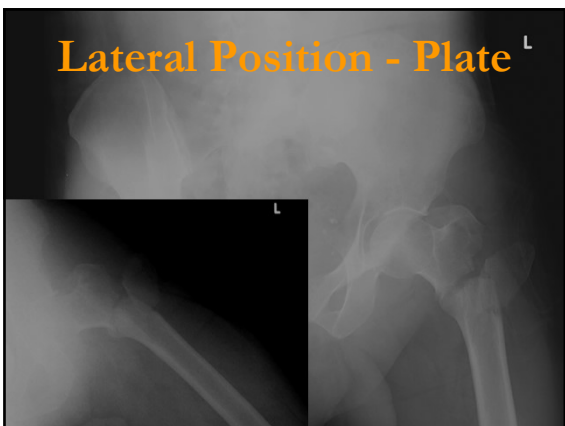
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### Lateral Position - Plate <sup>L</sup>



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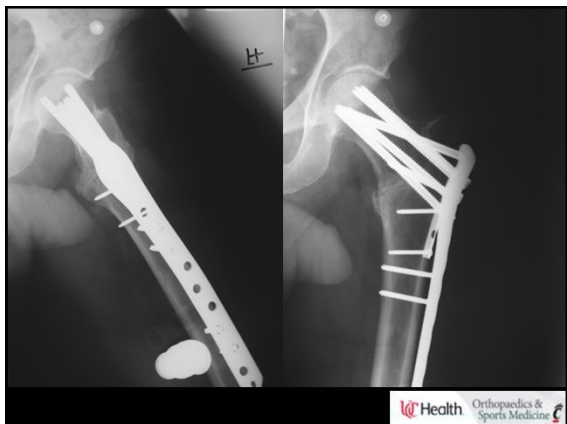
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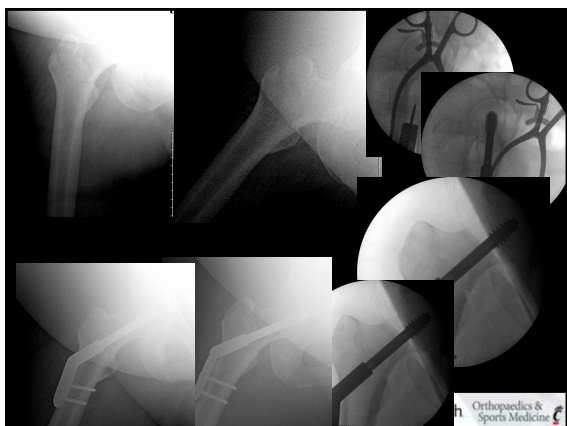
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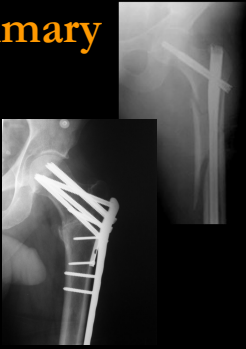
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## Summary

- ❖ Respect Vascularity
  - Minimally Invasive Reduction Techniques
- ❖ Prevent Varus !!!
- ❖ Appropriate Implant
  - Anatomic Reduction = Neutralization Device = Plate Construct
  - Non-Anatomic Reduction = Bridging Device = IM Nail



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*Thank You*



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Thank You



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