



The Universal Hip Workshop

# Cup Surgical Technique

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COLLEGE OF  
VETERINARY MEDICINE



Notes

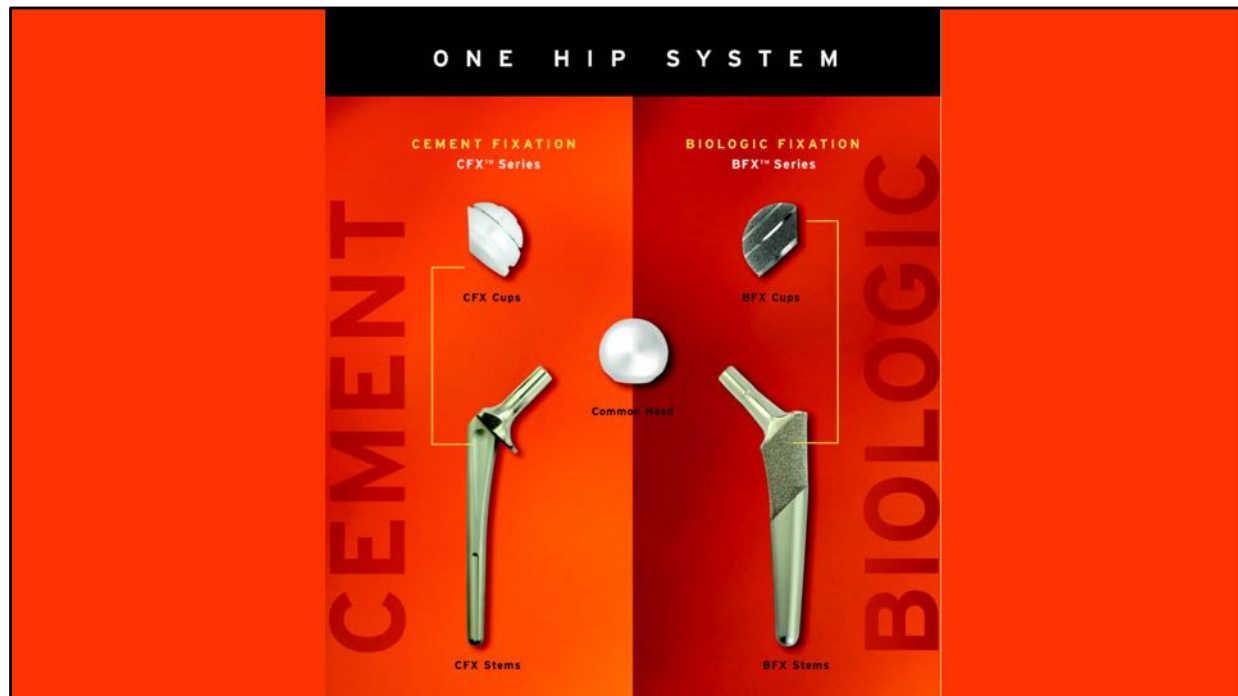
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## Notes

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## Cup Surgical Technique

# Overview: Acetabular Preparation

- Templating
- Patient positioning
- Surgical exposure
- Reaming to achieve press-fit
- Cup insertion
- Cup alignment and adjustment

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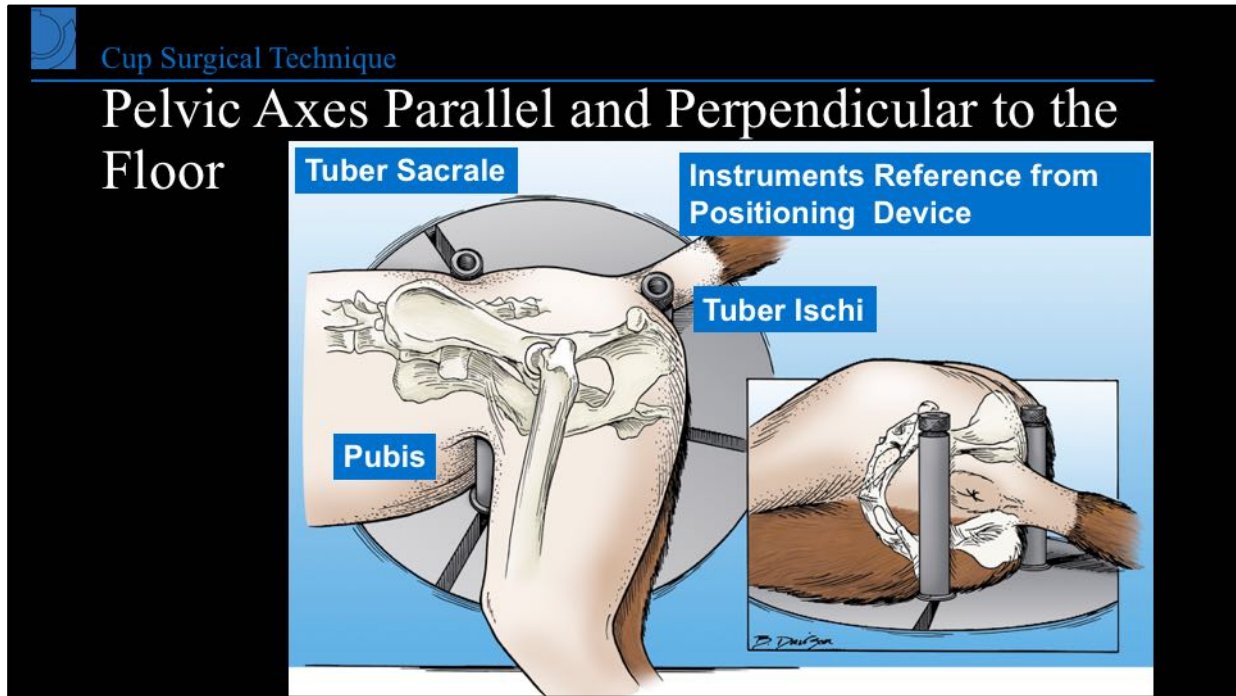
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## Cup Surgical Technique

# Surgical Approach

- Cranio-lateral Approach
- Must develop adequate exposure
- Locate reliable references or landmarks

## Notes

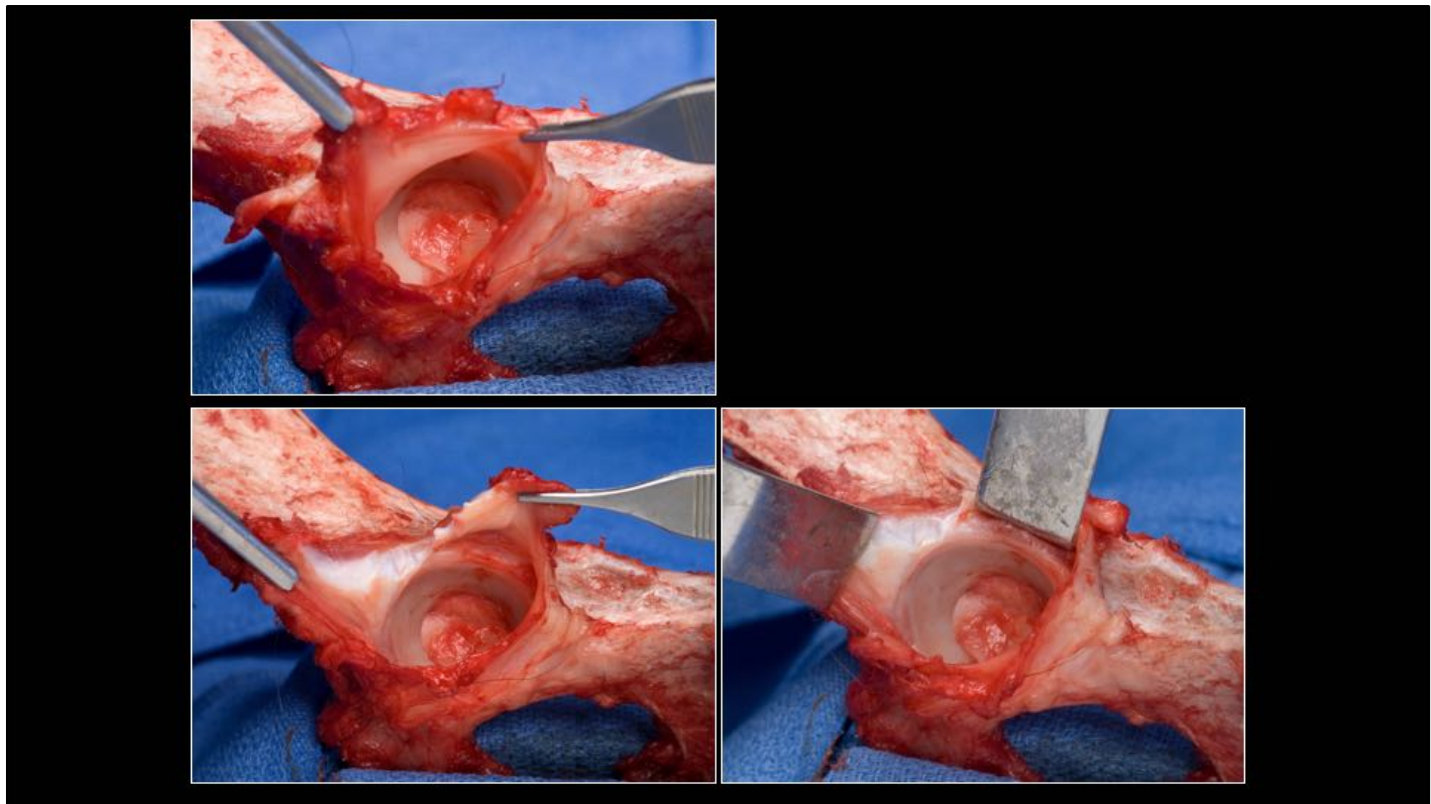
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## Notes

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#### Cup Surgical Technique

## Acetabular Bone Preparation & Press-fit Enhanced: Two Stage Reaming Process

- Depth: Starter Reamer
  - Odd numbered sizes
- Diameter: Finishing Reamer
  - Even numbered sizes

### Notes

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## Cup Surgical Technique

### Reaming

- Starter reamer: cheese grater
  - Undersized 1mm smaller than the finishing reamer
  - Remove cartilage and sclerotic bone
  - Create depth
  - Ream to appropriate depth (cranial and caudal bone columns; often to medial wall)

#### Notes

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## Eccentric reaming

- Commonly caudal



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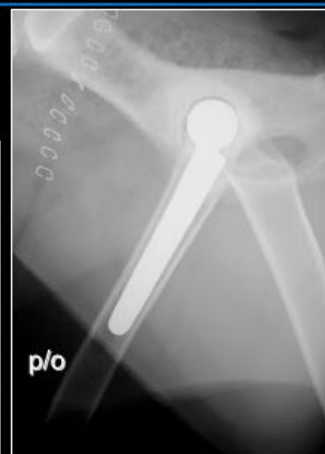
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## Cup Surgical Technique

# Eccentric reaming

14mo Dobermann



**Loss of  
press fit**

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## Eccentric reaming



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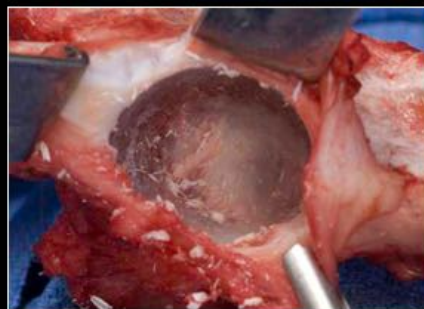
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## Cup Surgical Technique

# Concentric reaming



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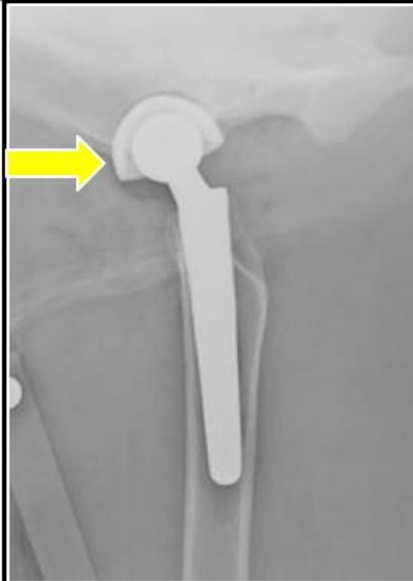
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## Cup Surgical Technique

### Failure to translate dorsally

- Non - dysplastic



### Notes

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- Dorsal subchondral bone
- Selective reaming dorsally
- Confirm seating with trial cup

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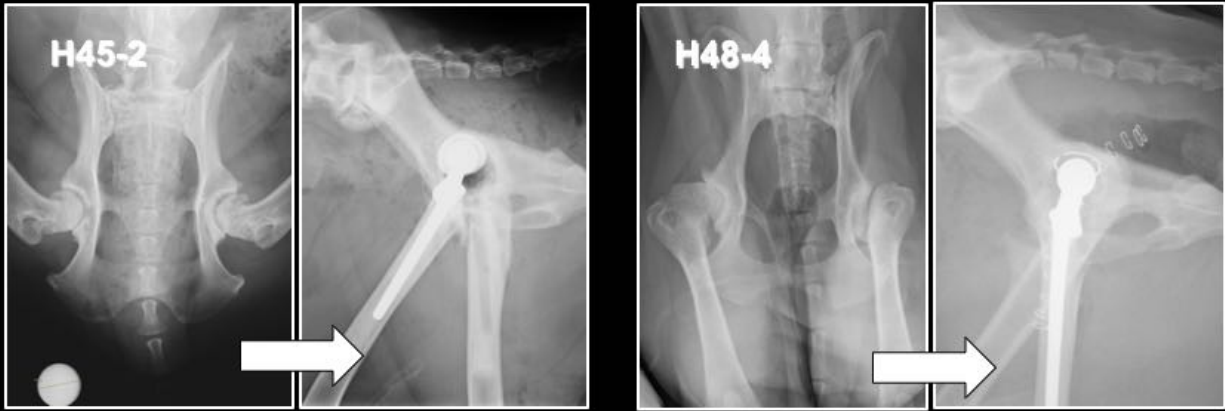
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## Cup Surgical Technique

# Excessive dorsal translation

- dysplastic – arthritic hip
- saucerization



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## Cup Surgical Technique

# Chip

7yo MN German short haired pointer 22kg



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## Cup Surgical Technique

# ESUVTH



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## Notes

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- Magnitude of dorsal rim loss to maintain stability?
- Cranial to caudal press fit compromised.



## Notes

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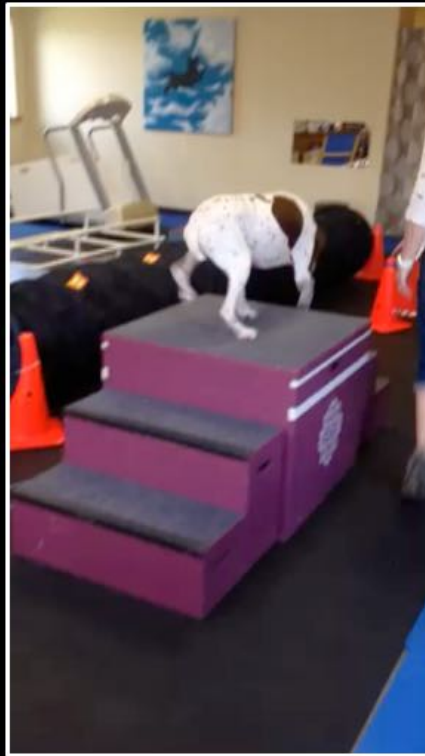
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**12 weeks  
post right  
THR explant**



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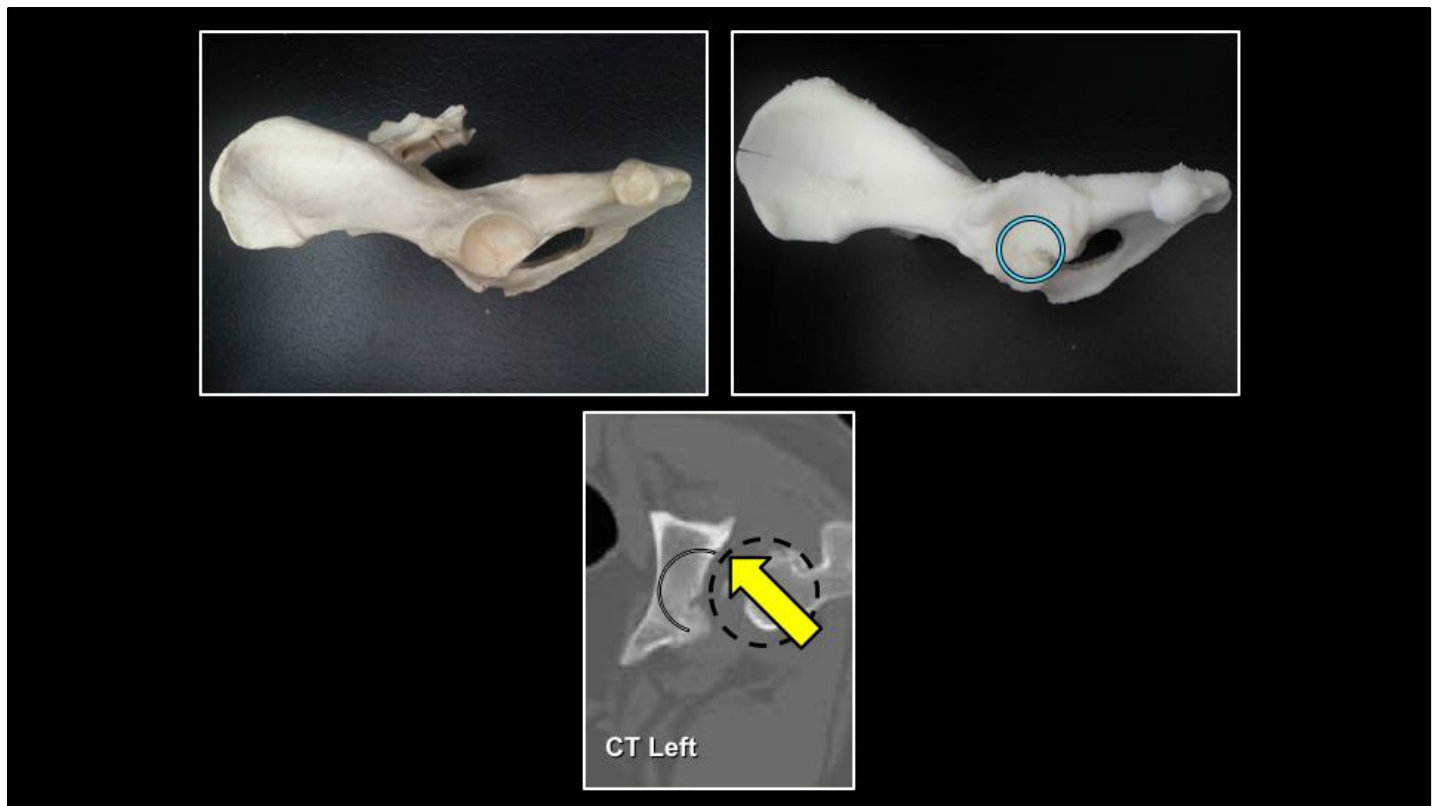
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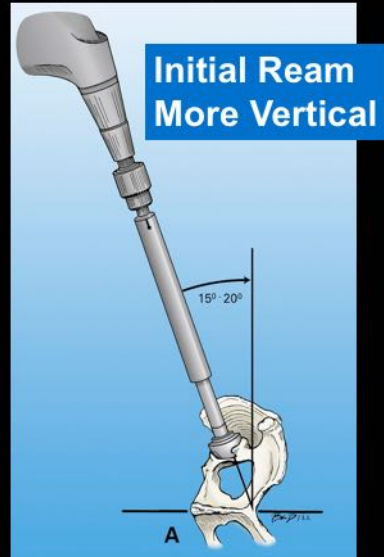
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### Cup Surgical Technique

## Center Reamer Over “True Acetabulum”

- Start at 15- 20° angle off vertical
  - Reduces dorsal migration
- Use incremental reaming 21,23,25 etc
  - Don't invade final envelope



### Notes

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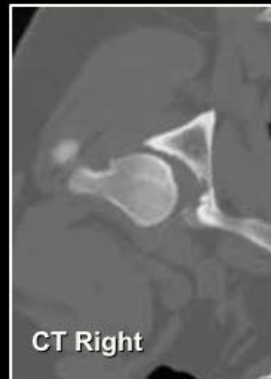
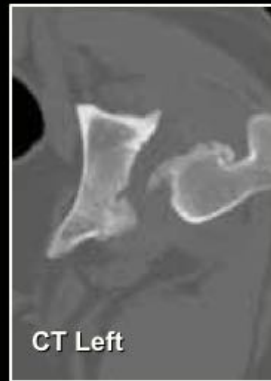
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Adjust reaming for the  
saucerized acetabulum



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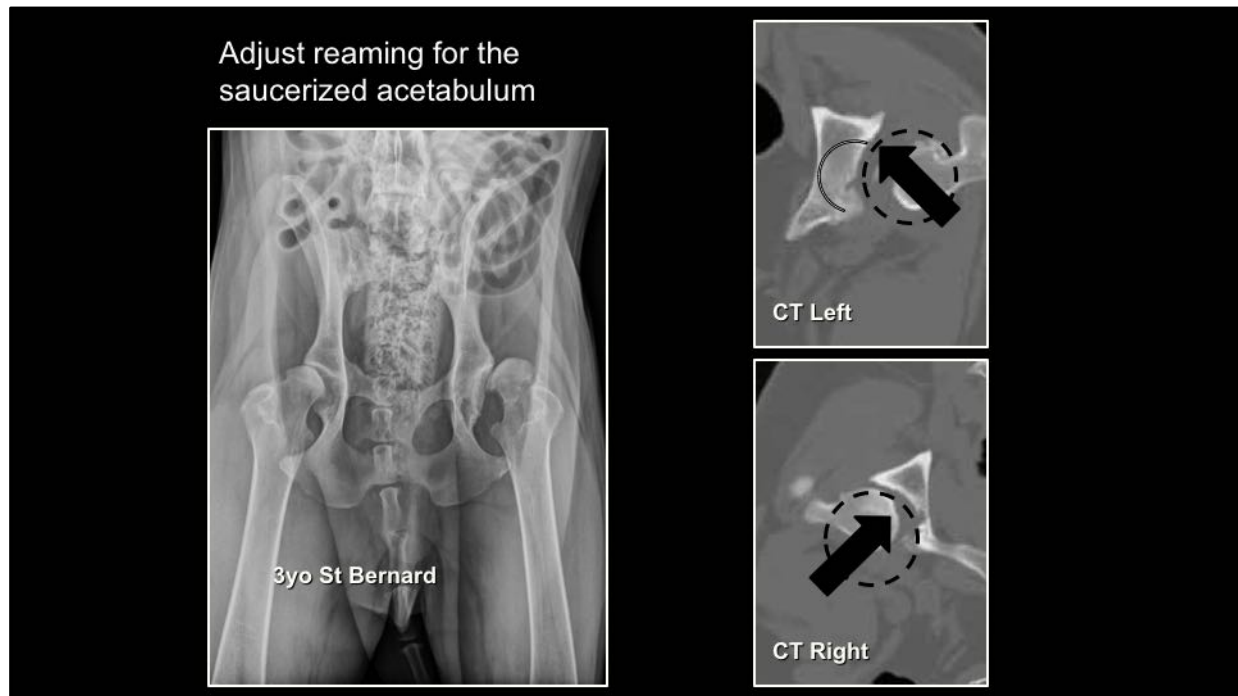
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Preserve DAR

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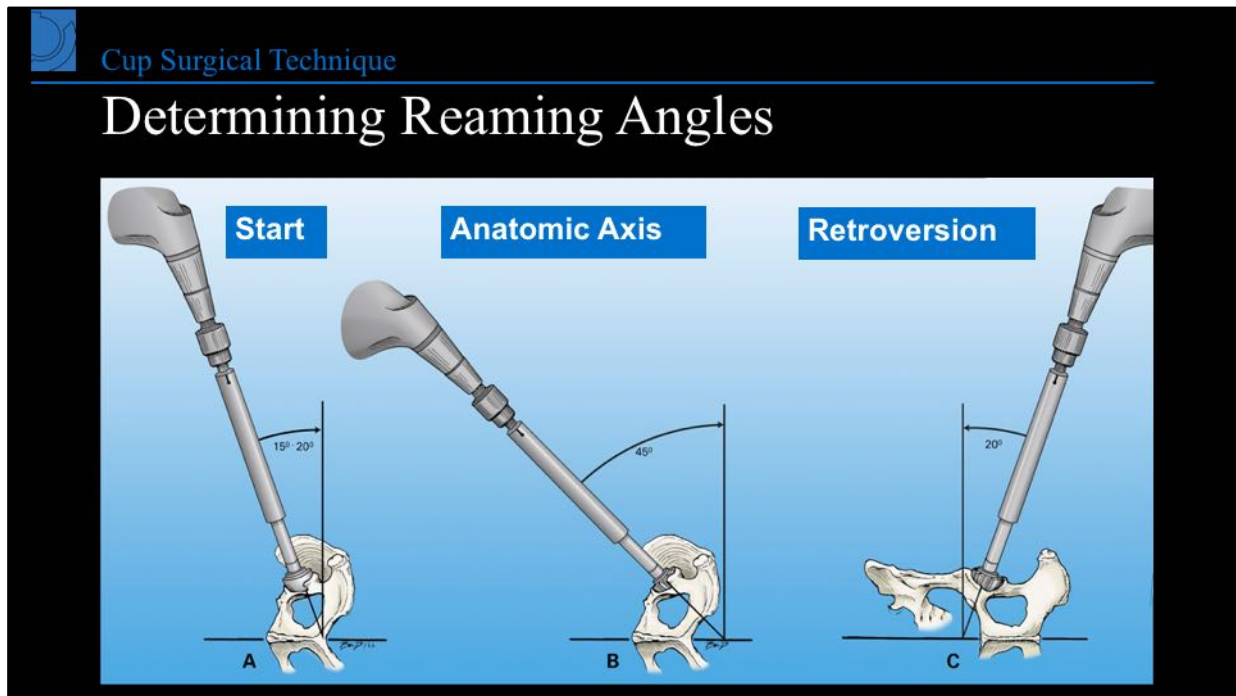
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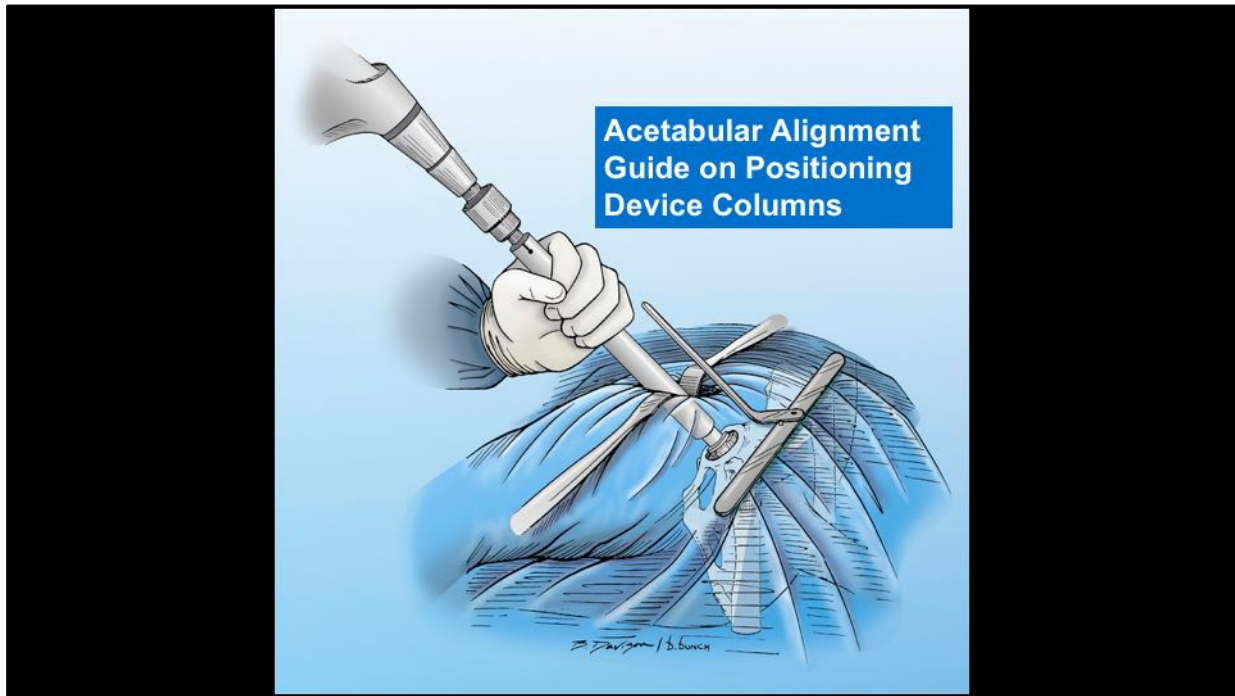
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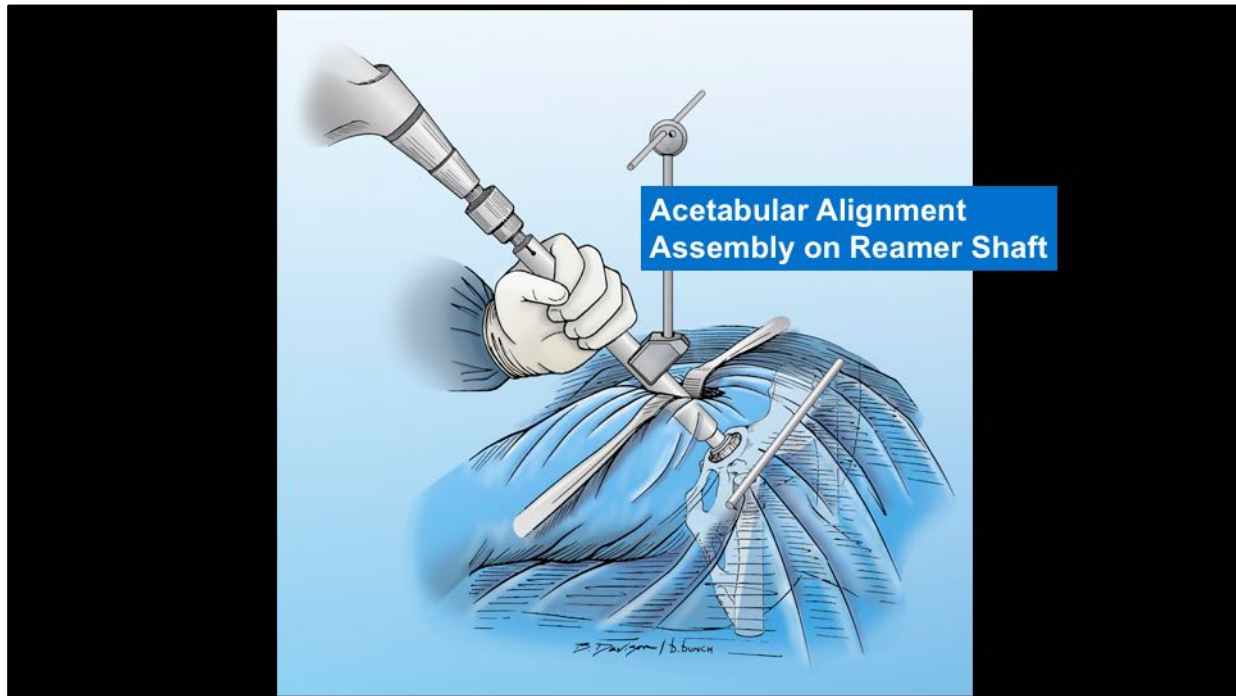
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## Notes

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## Cup Surgical Technique

# Reaming

- Finishing reamer
  - To establish the diameter & create press-fit
  - Finishing reamers only cut on the sides
  - Same size as final BFX cup size
  - 1mm larger than CFX cup (cement mantle)

## Notes

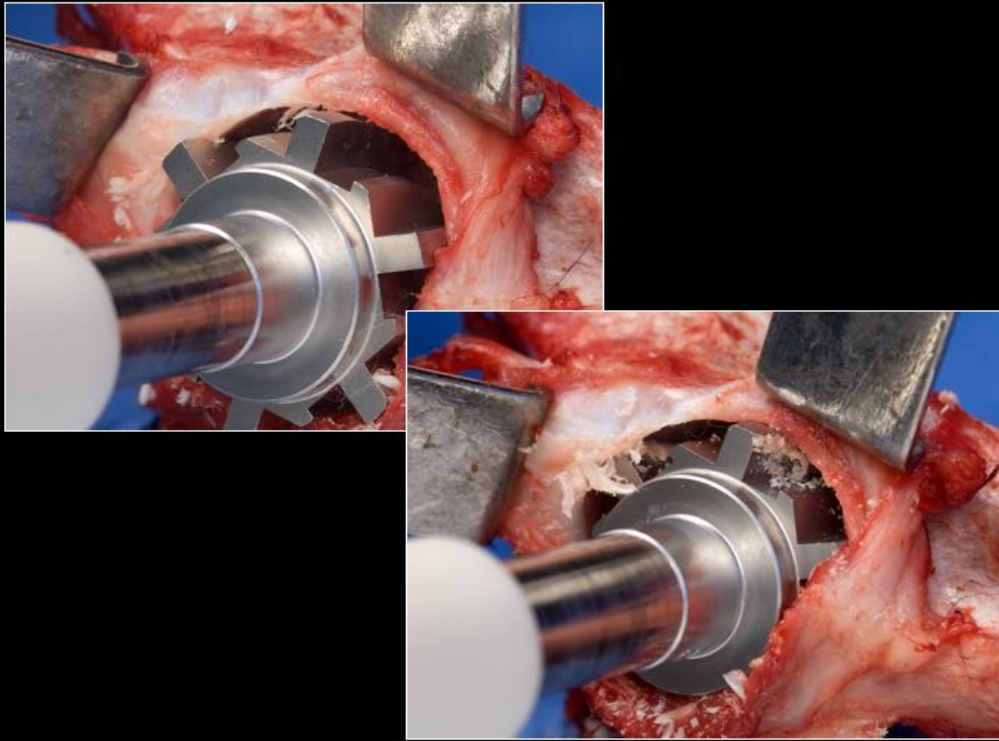
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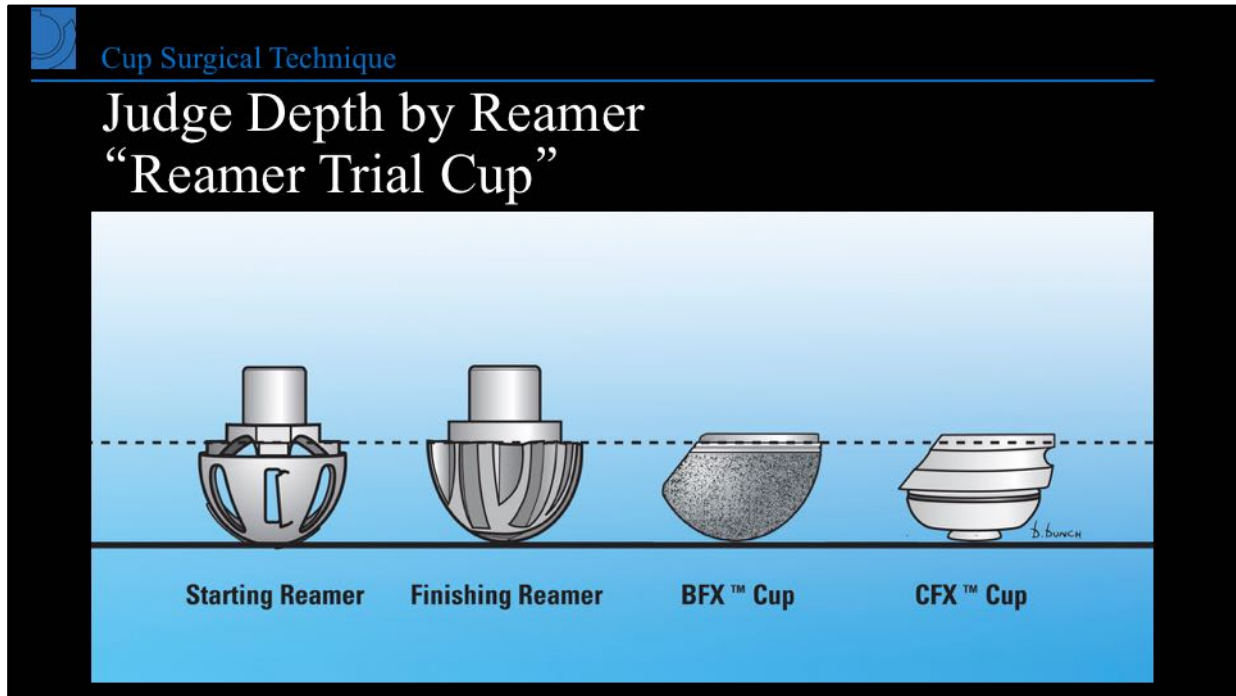
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## Cup Surgical Technique

### General Principles

- The BFX cup is NOT spherical (last 3mm cylindrical)
- Therefore
- Orientation of reaming defines the orientation of the cup
- All reaming should be aligned
  - One exception: very initial reaming

#### Notes

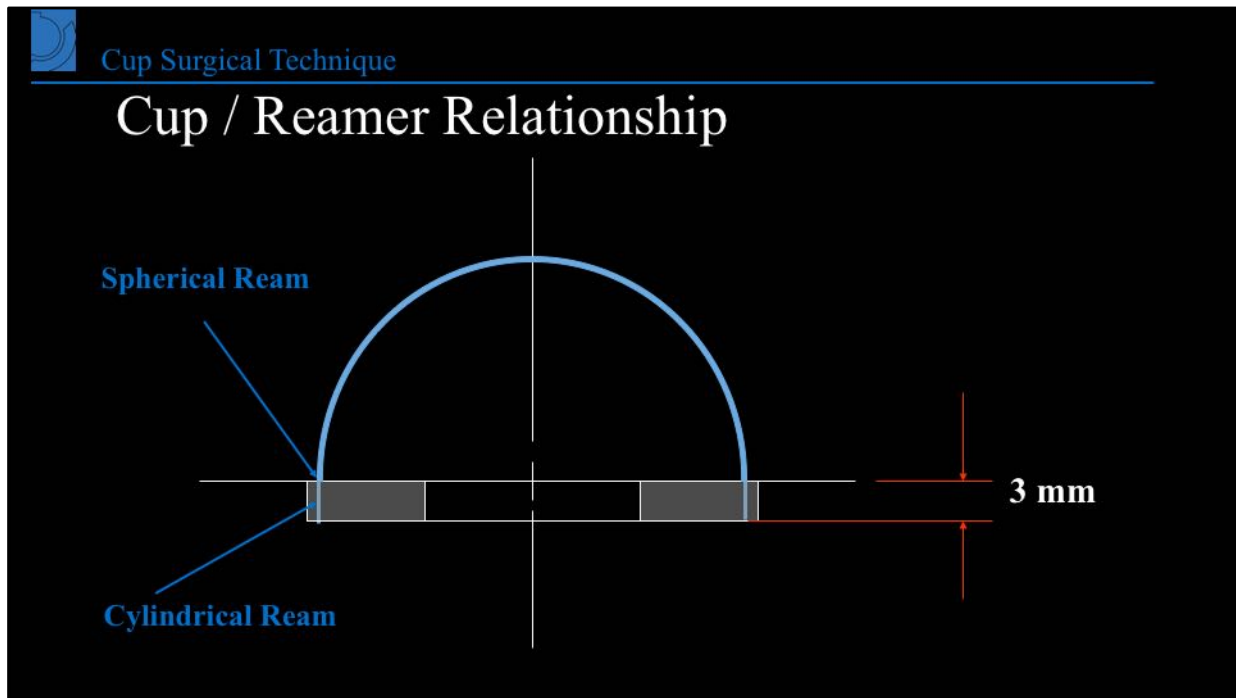
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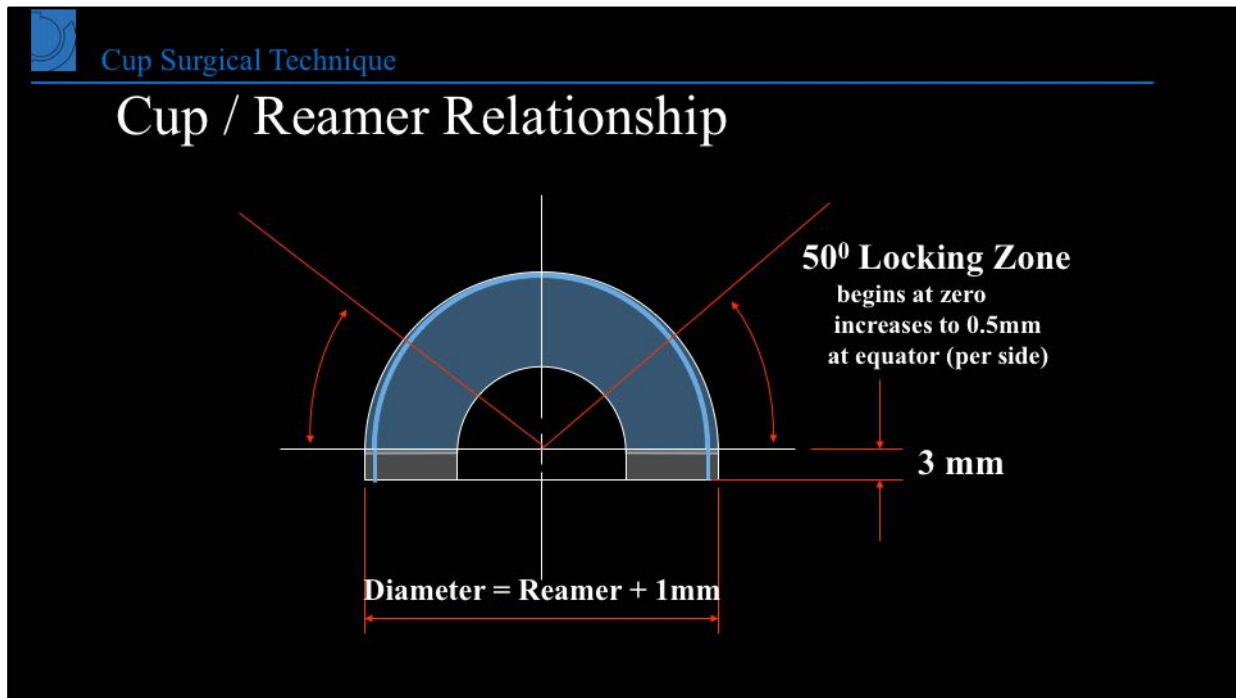
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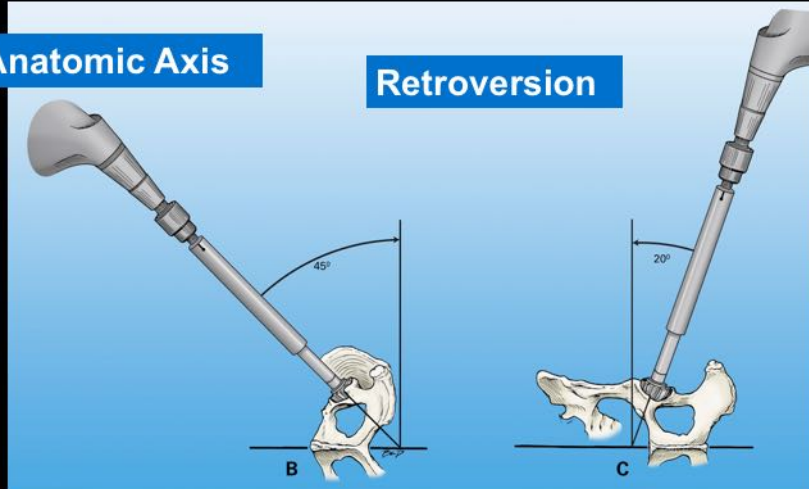


Cup Surgical Technique

## Finish Reaming at Anatomic Angle or Axis Acetabulum

Anatomic Axis

Retroversion



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## Cup Surgical Technique

### Before cup insertion

- Place plastic trial cup to
- assess acetabular boundaries
- Remove ventral osteophytes
- Remove or retract ventral joint capsule
  - Can be pulled in
- Keep cup oriented ventrally on initial insertion

### Notes

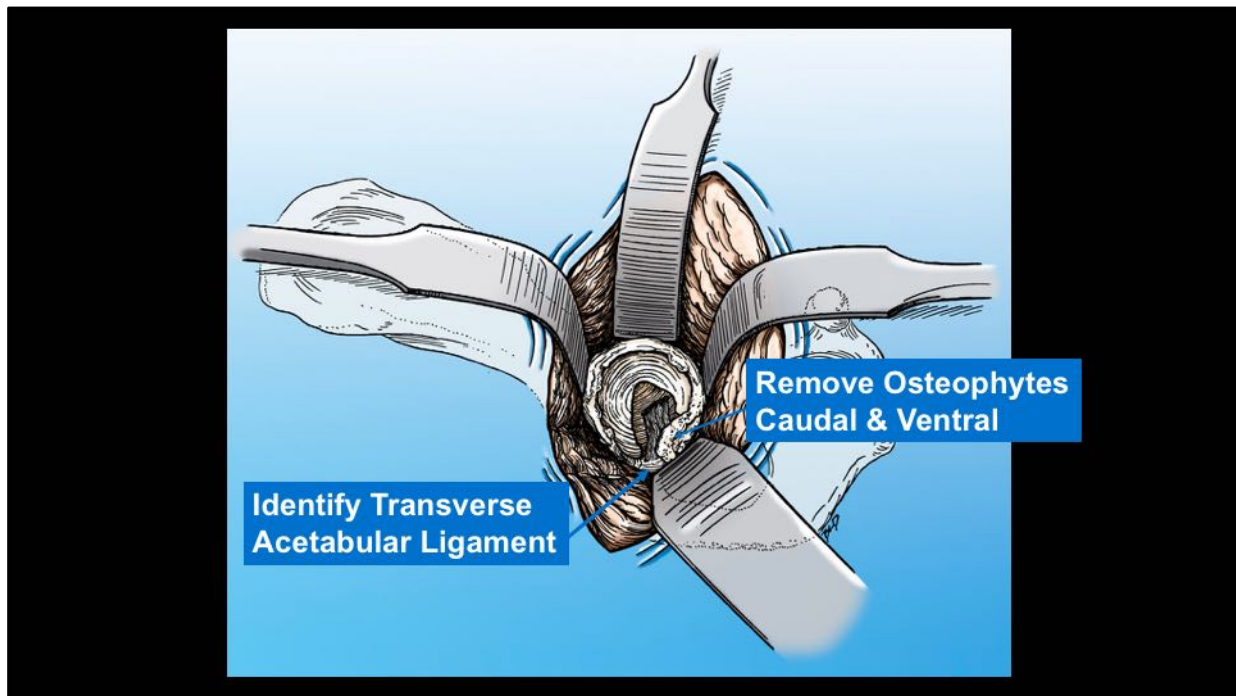
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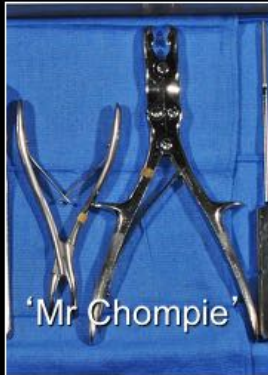
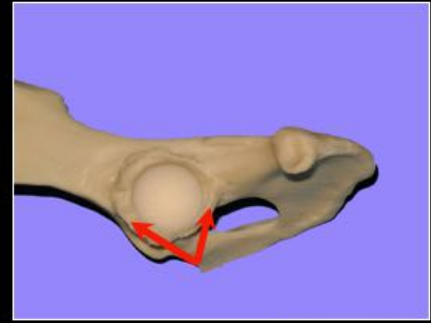
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## Cup Surgical Technique

# Remove ventral osteophytes

- Bone in this region will interfere
- with cup positioning



## Notes

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