



The Universal Hip Workshop

Augmented Fixation

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Notes



Augmented Fixation

Subsidence

- Occurs within 8-12 weeks after surgery
- Common in patients with low Canal Flare Index
- Often avoided by following proper surgical techniques and patient-owner adherence to postoperative care

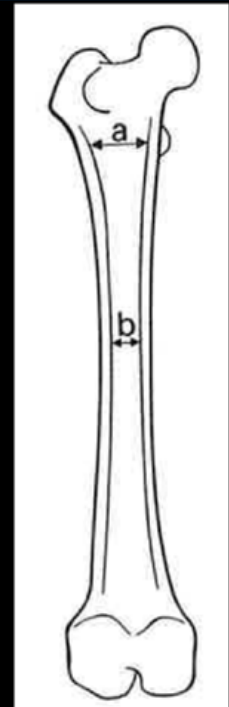


Notes



Femoral Morphology

- a/b = Canal Flare Index (CFI)
- <1.8 is a risk factor for subsidence



a = at level of lesser trochanter
b = at narrowest part of femoral shaft

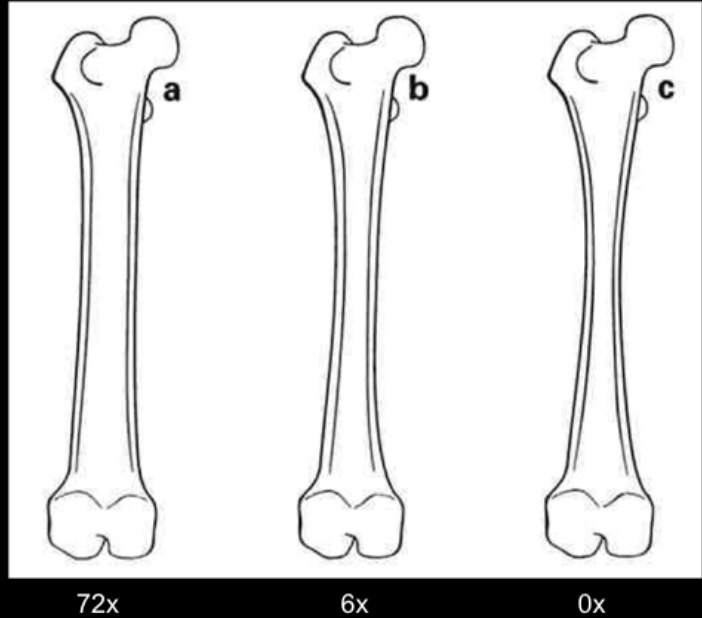
Notes



Augmented Fixation

Risk Factors Associated with CFI

- a = stove pipe
- b = normal
- c = champagne flute
- CFI
 - $a < 1.8$
 - $b = 1.8-2.5$
 - $c > 2.5$



Notes



Augmented Fixation Solutions

BFX EBM Collared Stem

- Proximomedial collar rests upon neck resection
- Designed to resist subsidence during early postoperative period

BFX EBM Lateral Bolt Stem

- Bolt inserted through lateral femoral cortex and into femoral stem
- Designed to resist subsidence and stem rotation during early postoperative period

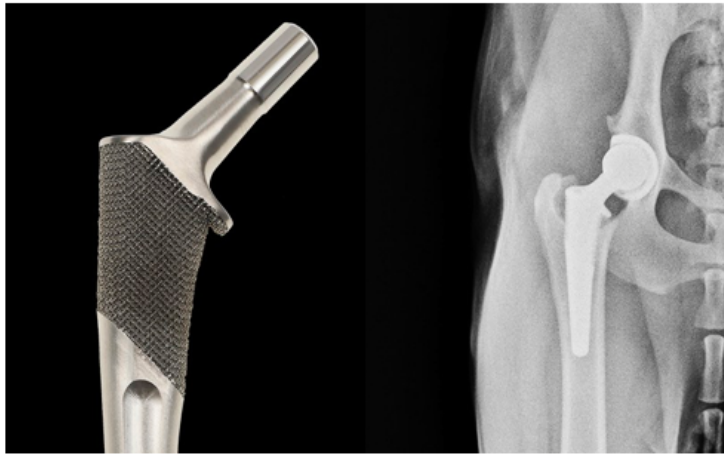


Notes

Overview

- Uses same technical procedure as BFX EBM Collarless stem
- Requires intraoperative press fit
- Small bone-collar gap remains after press fit to permit “settling” of stem
- Built using same EBM technology as Collarless stem
- Available in Standard and Large Breed sizes (#6-12)

Universal Hip BFX® Collared Stem



Notes



BFX EBM Collared Stem

Scope & Technical Use

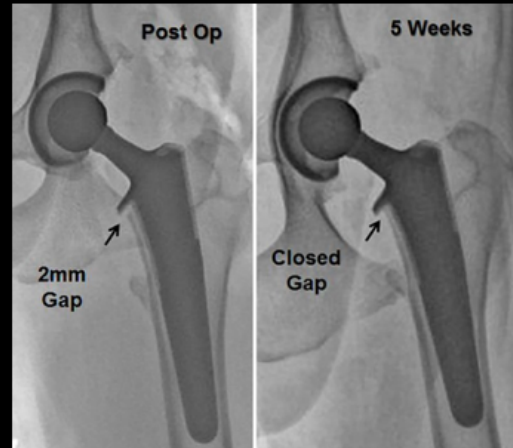


Stems

SIZE
#6
#7
#8
#9
#10S*
#11S*
#12S*

*short taper

- Bone-collar gap after press fit



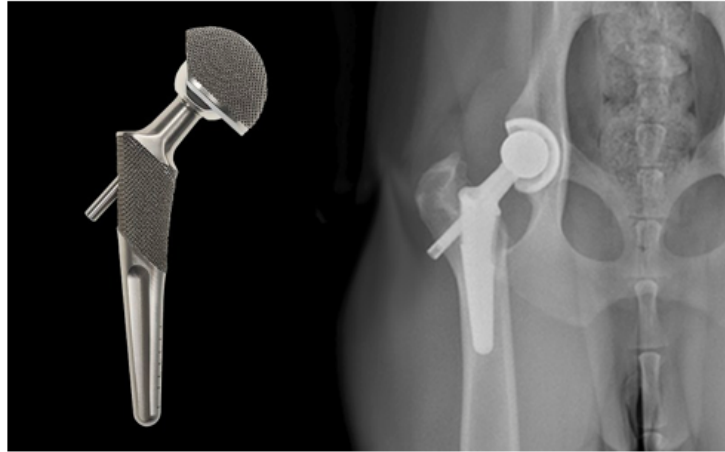
Notes

Overview

- Uses same technical procedure as BFX EBM Collarless stem
- Requires intraoperative press fit
- Insertion of lateral bolt is the final step in stem fixation once press fit is achieved
- Requires use of supplemental instrument set
- Built using same EBM technology as Collarless stem
- Available in Standard and Large breed sizes (#5-12)

Universal Hip

BFX® Lateral Bolt Stem



Notes



BFX EBM Lateral Bolt Stem

Scope & Technical Use



Stems

SIZE
#5
#6
#7
#8
#9
#10S*
#11S*
#12S*

*short taper

Bolts

LENGTH	STEM SIZES
8mm	#5-12
10mm	#5-12
12mm	#5-12
14mm	#5-12
16mm	#7-12
18mm	#7-12
20mm	#7-12
22mm	#7-12

Instrument Set

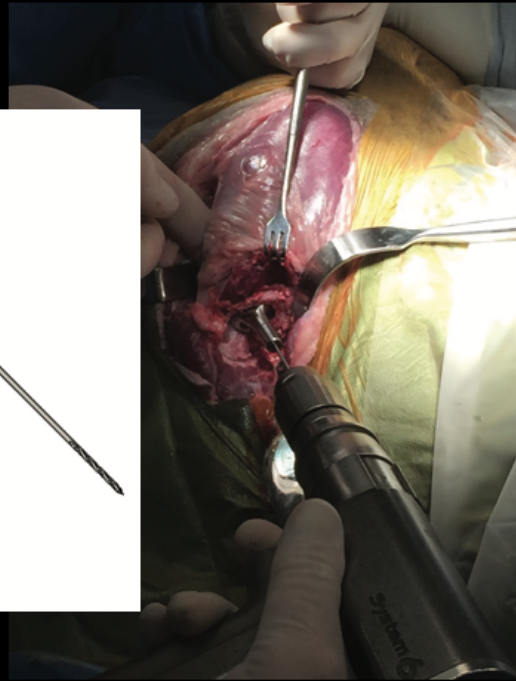
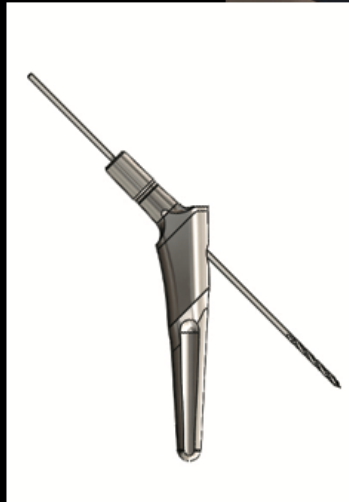


Notes



Pictorial Summary

- 1. Bolt Alignment Drill
 - Drill through pilot hole in neck of stem
 - Use light pressure to initiate hole in endosteal surface
 - Increase pressure to advance drill through cortex



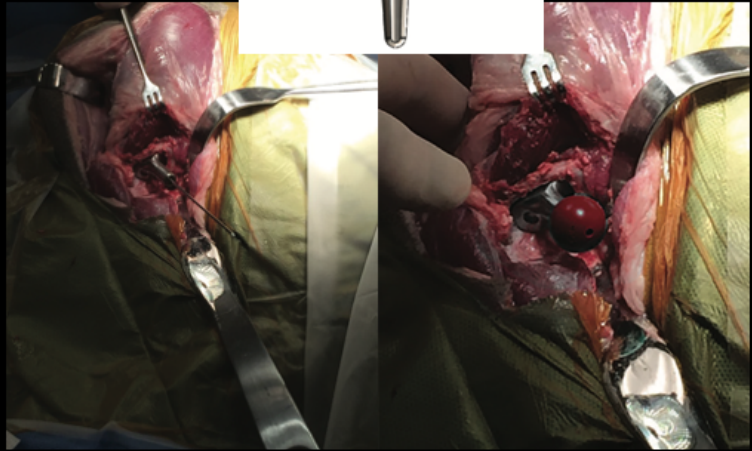
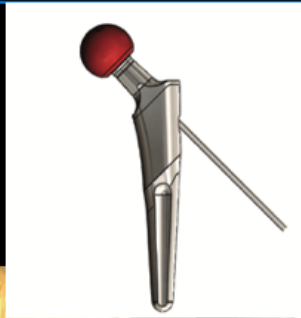
Notes



BFX EBM Lateral Bolt Stem

Pictorial Summary

- 2. Trial Head & K-wire
 - Remove drill and replace with k-wire
 - Cut k-wire at end of neck and place trial head



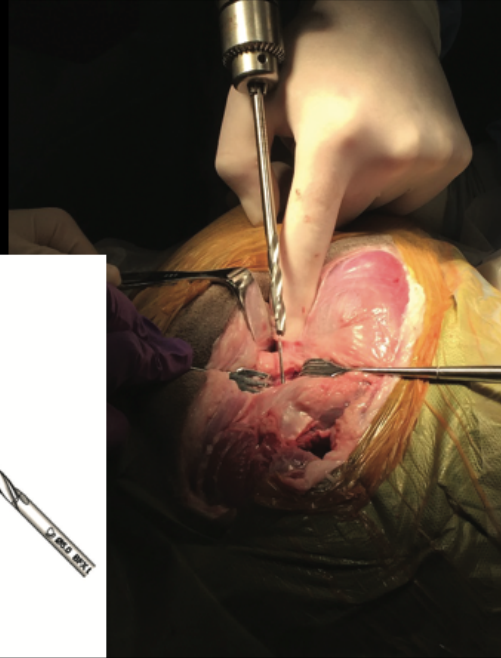
Notes



BFX EBM Lateral Bolt Stem

Pictorial Summary

- 3. Cannulated Drill Bit
 - Drill lateral cortex with cannulated drill bit over k-wire
 - Do not drill down completely into implant



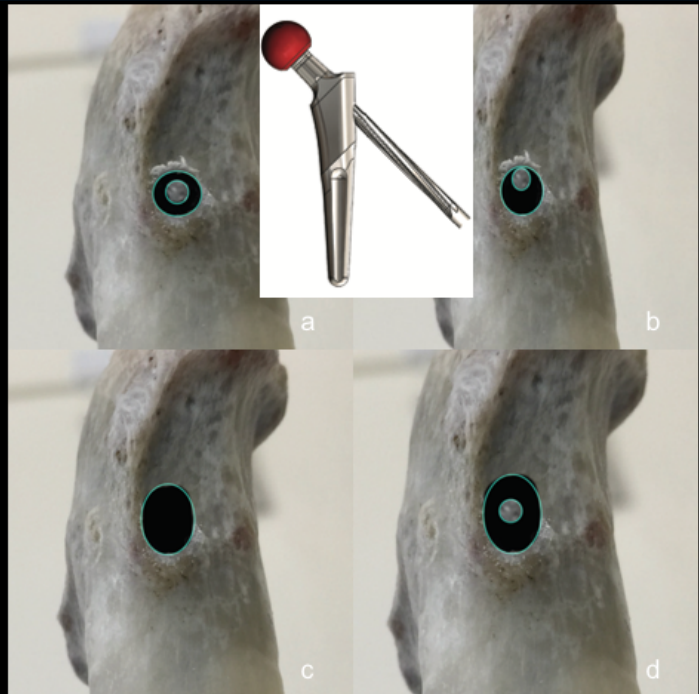
Notes



BFX EBM Lateral Bolt Stem

Pictorial Summary

- 4. Awl
 - Remove remainder of bone by hand using the awl
 - Check for concentricity
 - a) Concentric
 - b) Eccentric
 - c) Corrected
 - d) Confirm correction



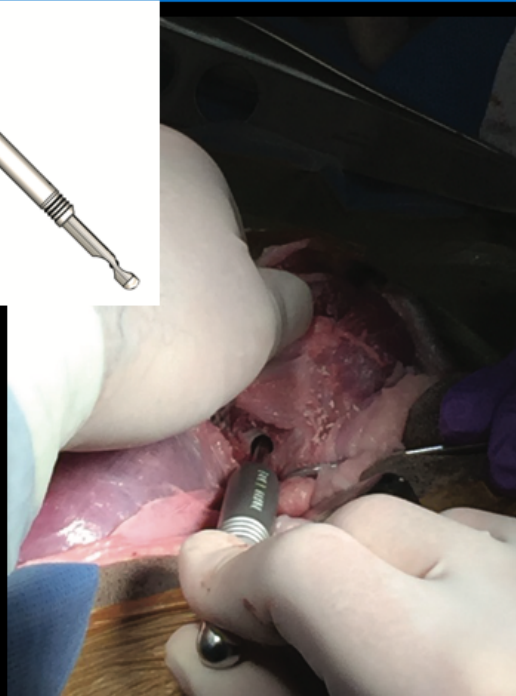
Notes



BFX EBM Lateral Bolt Stem

Pictorial Summary

- 5. Bolt Gauge
 - Flush hole in lateral cortex towards implant to remove debris
 - Use bolt gauge for intraoperative determination of bolt length

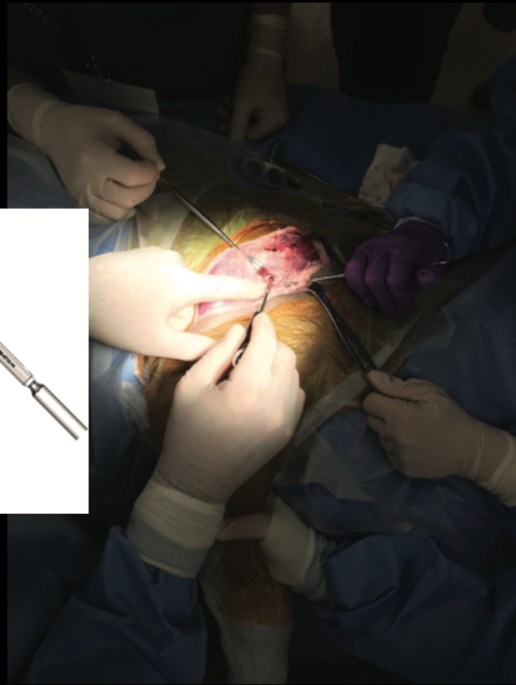


Notes



Pictorial Summary

- 6. Bolt Insertion
 - Insert bolt through lateral cortex and into the implant
 - Tighten bolt until definitive stop is felt
 - Bolt should protrude 2-4mm beyond lateral cortex



Notes



Summary

- Subsidence
- Femoral Morphology Risk Factors – Low CFI (“stove-pipe” morphology)
- Augmented Fixation - Expansion of scope of BFX THR
- Collared vs Lateral Bolt
- Indicated for large breed dogs and patients with low CFI and poor quality femoral trabecular bone
- Is the Collarless stem now obsolete?
- Subpopulation in which cement still used (33%)

Notes



The Universal Hip Workshop

Cadaver Bones Lab: Femoral Preparation



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Notes
