



The Universal Hip Workshop

B^{IO}MEDTRIX

Ohio State University
June 8-9, 2018

INNOVATION • EDUCATION • SUPPORT

Notes



The Universal Hip Workshop

- System Overview
- Patient Evaluation
- Pre-op Templating
- Surgical Approach
- Augmented Fixation
- Lab: Femoral Preparation
- Stem Surgical Technique
- Cup Surgical Technique
- Lab: Acetabular Preparation
- Bone Cement
- Lab: BFX & CFX THR
- Post-op Radiographic Assessment
- CFX/BFX Decision Making
- Complications and Revision Options
- Product Certification

Notes




System Overview

Sam Minutillo

Project Engineer, BioMedtrix














Notes



System Overview

A Comprehensive THR System

Standard Products	Special Products	Customs
 CFX® Series  Micro  Nano	 BFX® Collared  BFX® Lateral Bolt  Centerline Stem™	 BFX® Prox. Bone Loss  Flanged Acetabular Cup
 BFX® Series		 

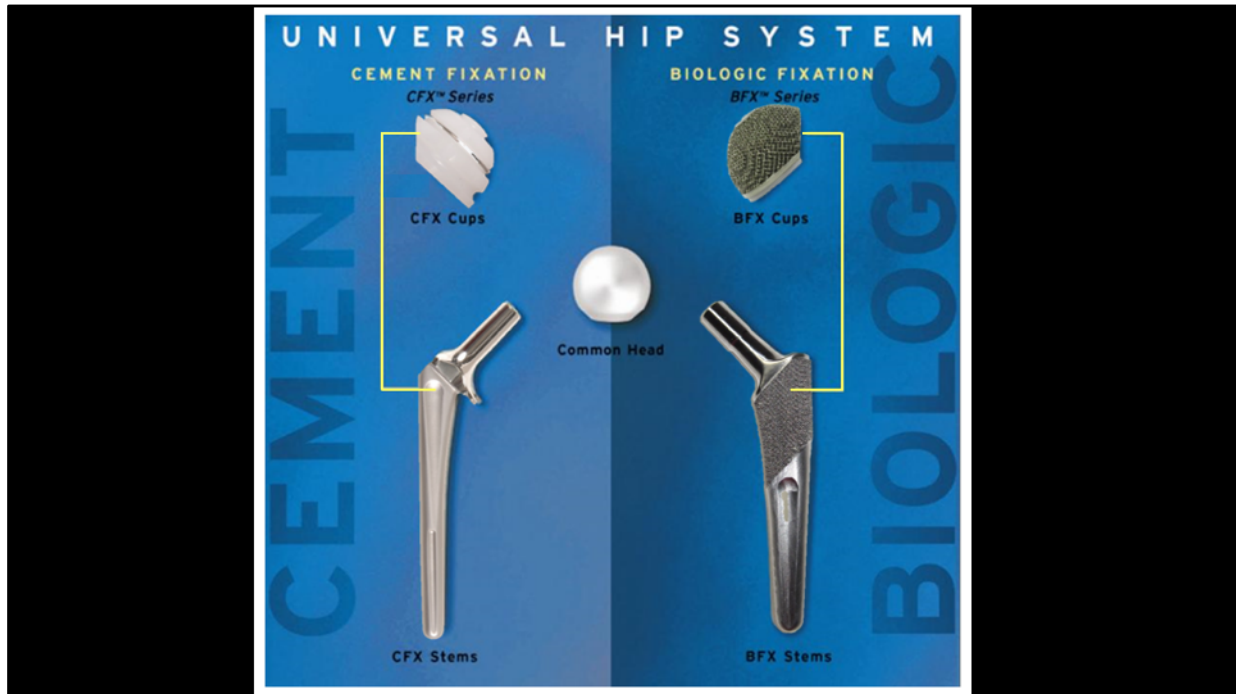
The Universal Hip System is a comprehensive implant system addressing diversity in patients and their multiple indications requiring a THR.

Composed of **standard** product lines which address approx. 80% of the cases.

Special products addressing the other 20% of indications and provide the design evolution of the system keeping it contemporary with technology and clinical techniques.

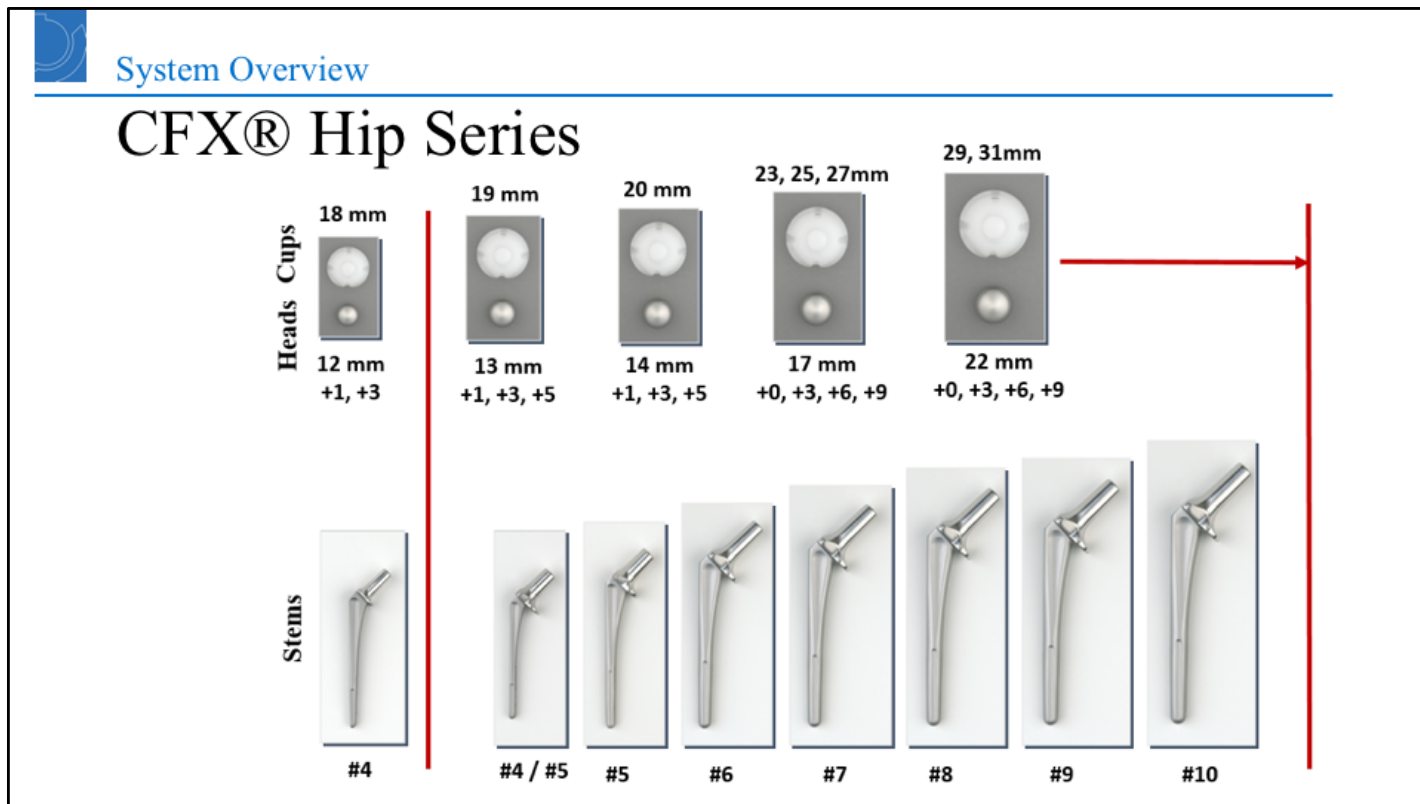
And also **customs**. There are always cases which fall out of the norm through deformities or trauma which can only be met with a custom implant.

Notes



- The workshop today will focus on the CFX and BFX Series of implants.
- CFX hip series, for cemented applications and the BFX hip series, for cementless hip applications.
- Both systems share a common surgical procedure and
- Also share a common 17mm head.
- This provides interchangeability between systems so BFX components can be used with CFX components expanding the clinical indications for the system.

Notes



Notes



System Overview

Cement Accessories



Mixing Bowl



Centralizer



Cement Plug



Cement Gun



Disposable 12 cc Syringe
and 14 gauge Cannula
MICRO



Disposable 35 cc Syringe
and 6mm Cannula
CFX Standard

Notes



System Overview

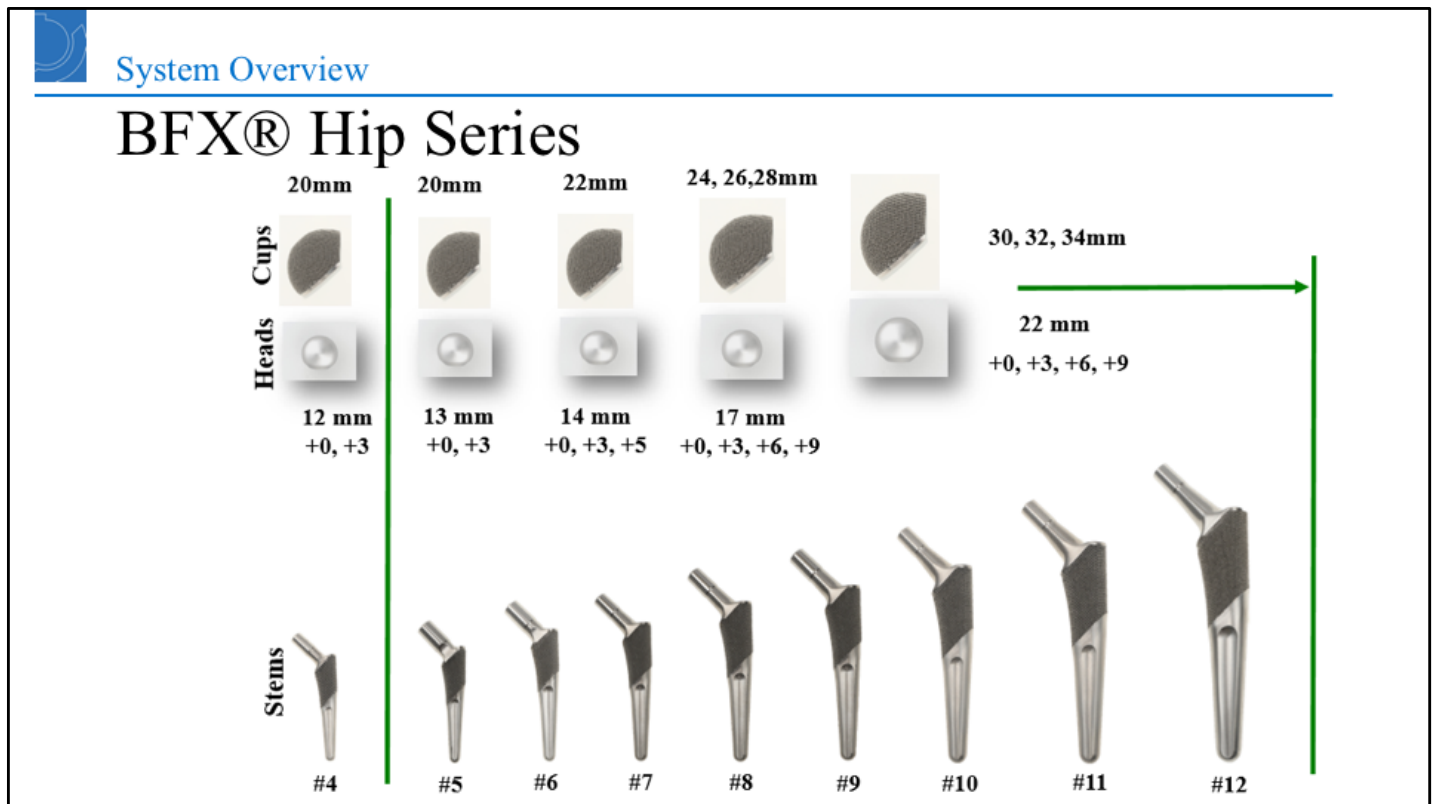
Veterinary Bone Cement

- In 20cc doses with and without Gentamicin

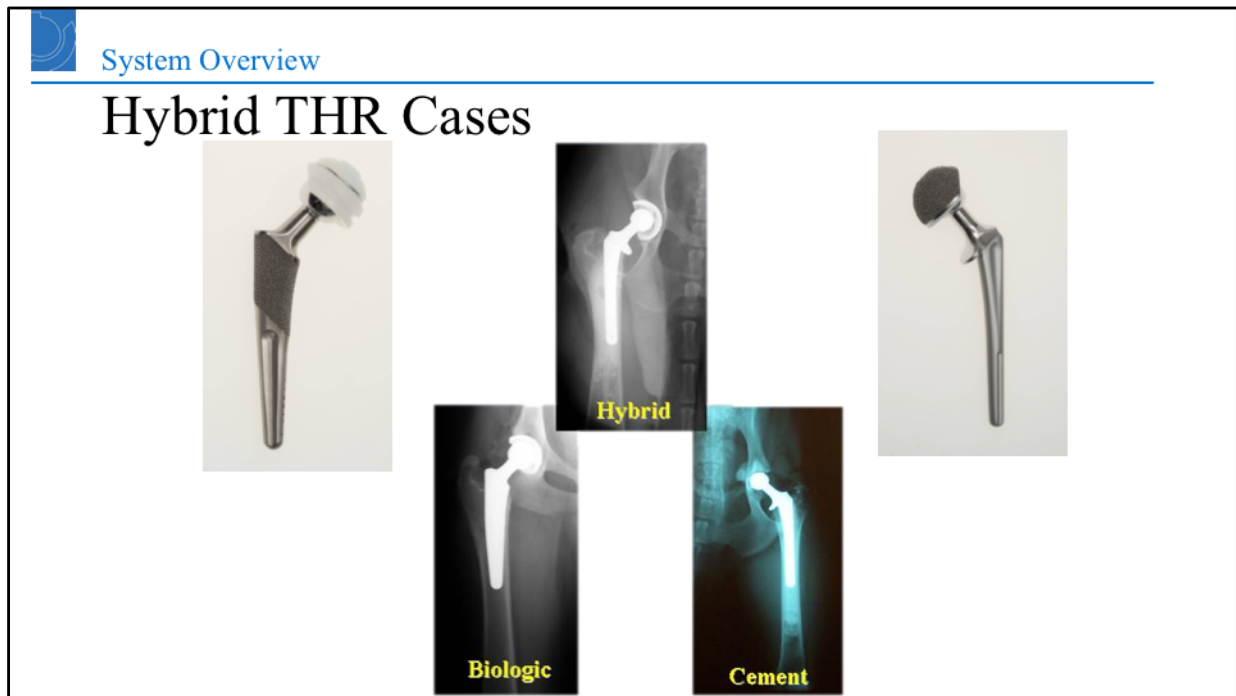


- BioMedtrix has veterinary bone cement which has over 15 years clinical experience in humans.
- The most widely used cement in humans is Simplex bone cement mfg'd by Stryker.
- This vet bone cement has similar strength properties as Simplex. Mixing and handling is slightly different with our cement having a longer liquid phase.
- We will be using this in the lab on Sunday.

Notes



Notes



- Besides matched implant combinations within each system, it is possible to have hybrid fixation.
- Hybrid fixation is a combination of a cemented application on one side of the joint and cementless on the other.
- For example, there are clinical indications which are best addressed with a cemented stem and press fit cup.
- We will discuss this further, but some of the larger breeds (Great Danes) and other breeds like German Shepherds do not have femoral canal geometry adequate to achieve a press fit or the quality of the cancellous bone is not adequate to support a cementless stem. In those cases, the more appropriate clinical option is hybrid fixation.

Notes

System Overview

Hip Correlator Chart

Micro & Nano Breeds

Stem/Head				Cup			
CFX				CFX	6mm I.D.		
#1 +0	#2 +0	#3 +0	One piece stem/head Maximum patient weight: 20 lbs (9.0 kg)	10mm			
#1 +2	#2 +2	#3 +2					
#1 +4	#2 +4	#3 +4					
Stem		Head		Cup			
CFX				CFX	8mm I.D.		
#2	Maximum patient weight: 40 lbs (18.2 kg)	8mm +0		12mm			
#3		8mm +2		14mm			
		8mm +5		16mm			

Standard & Large Breeds

Stem		Head		Cup	
CFX	BFX			CFX	BFX
#4	#4	12mm +0		12mm I.D.	20mm
Maximum patient weight: 60 lbs (27.3 kg)	Maximum patient weight: 30 lbs (13.6 kg)	12mm +3			22mm
		12mm +6			
Stem		Head		Cup	
CFX	BFX			CFX	BFX
#4 / #5	#4	13mm +1		13mm I.D.	20mm
#4 stem / #5 neck Maximum patient weight: 80 lbs (36.4 kg)		13mm +3			
		13mm +5			
		13mm +7			
#5	#5	14mm +1		14mm I.D.	22mm
#6	#6	14mm +3			
		14mm +5			
#7	#7	14mm +7			
#8	#8	17mm +0			
		17mm +3			
#9	#9	17mm +6			
#10	#10	17mm +9			
		17mm +13			
#11	#11	22mm +0		22mm I.D.	30mm
		22mm +3			
		22mm +6			
		22mm +9			
#12	#12	29mm		31mm	32mm
		22mm +0			
		22mm +3			
		22mm +6			

PRODUCT COLOR GUIDE

Products listed in the color blocks above are interchangeable only within their specified color block. They cannot be combined with products in other color blocks.

REVISION /
HYBRID
BFX CUP

For use with
competitors' stem
and head

Additional
16mm or 18mm cup
inspectors required

Cup

16mm I.D.
24mm
26mm
28mm
18mm I.D.
30mm
32mm
34mm

- There are many implant choices with these systems. A correlator chart was developed as a quick reference to determining available implant combinations.
- If a particular stem has been sized for a patient's femur, then that size can be referenced and all implant combinations are shown for the acetabular side.
- The same holds true for sizing the acetabular cup first.
- This chart is provided as part of the welcome package sent to all workshop registrants.

Notes



System Overview

Product Color Coding



Total Knee
orange



TATE Elbow®
green



Universal Hip
blue



Plates & Screws
gold



I-Loc® IM Fixator
black

Notes



System Overview

Universal Hip System

- blue



Micro & Nano Hip
Set



Basic Set



CFX Supplemental

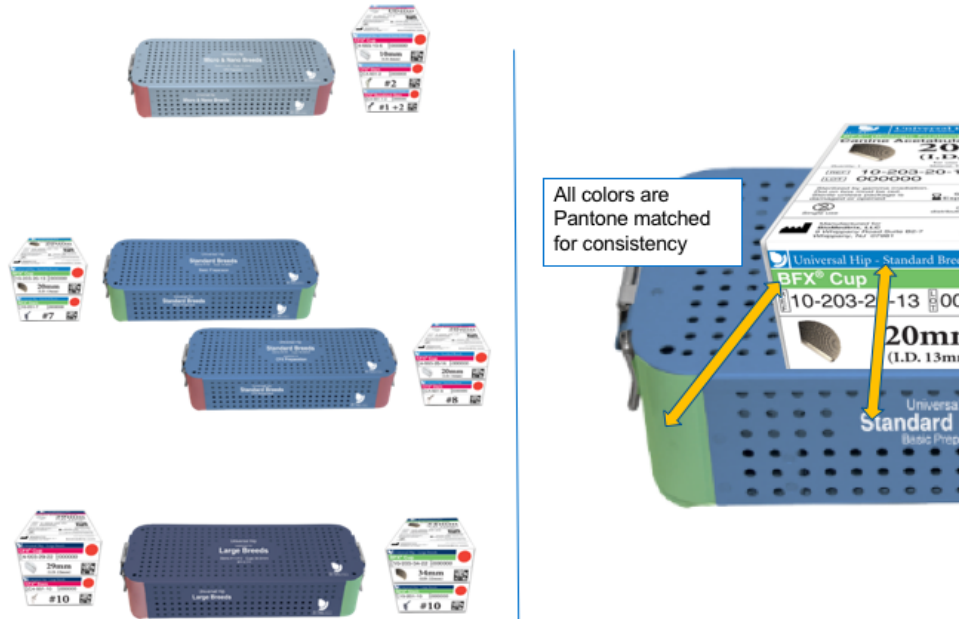


Large Breed Supplemental

Notes

System Overview

Implants match their instruments

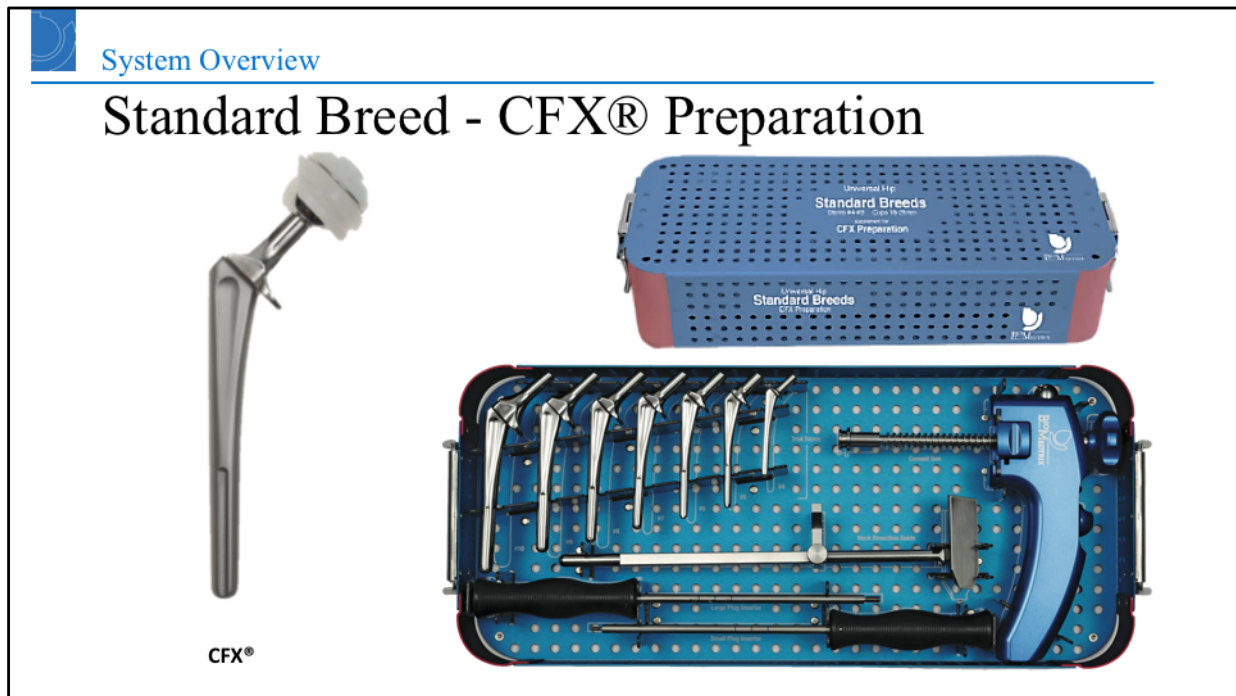


Notes




- Universal Instrument Set supports one surgical technique for both cemented and cementless systems
- Case #1 provides both the femoral and acetabular prep's –common prep's for both systems
- With the BFX System, the preparation is complete. In a cemented application, move to Case #2.

Notes




- Ancillary instruments are provided to support the continued preparation for the cemented implants.
- Also, the bottom tray provides extended sizes for the BFX System.

Notes



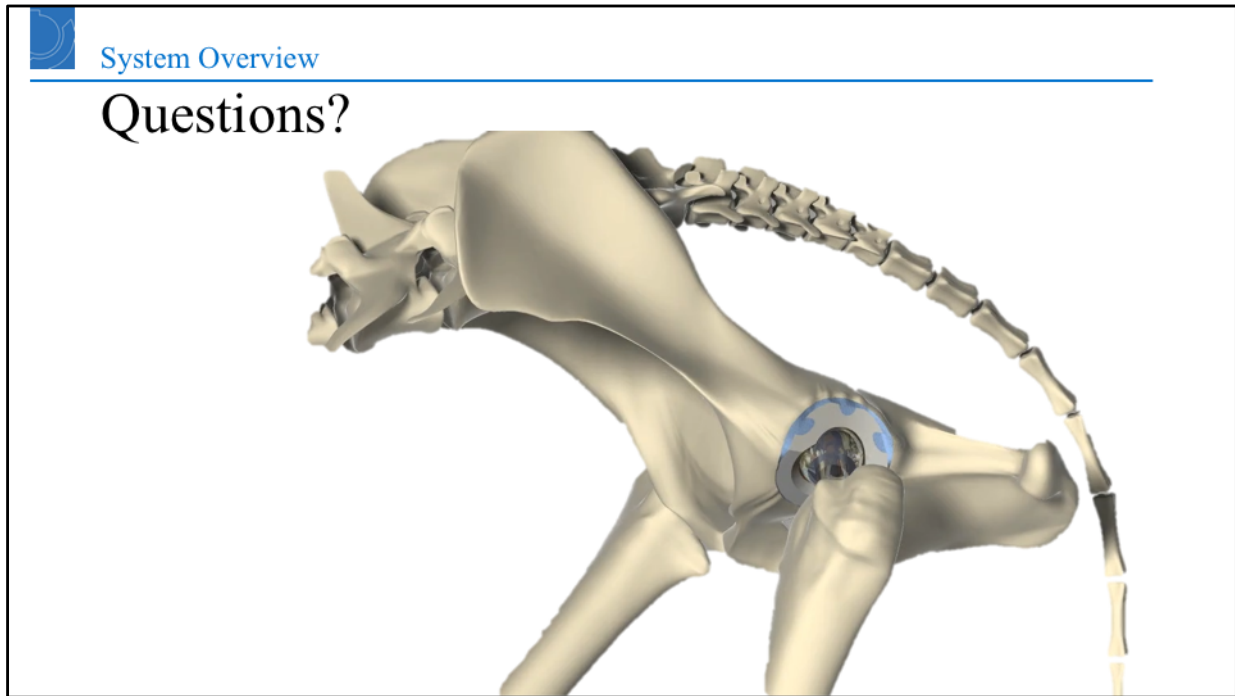
System Overview

Universal Hip System – Design Rationale



Flash Drive
Dropbox

Notes



On the flash drive we provided there is a Univ Hip design rational and overview presentation. There are about 50 slides with notes which provides technical information on the manufacturing technologies which we use to make these implants along with explanations of engineering principles used in these designs.

If you are interested you can review this and contact us with any questions. If you have reviewed it and have questions, then feel free to ask us any time during the course.

Notes
