

### A Superconstruct<sup>™\*</sup> for the Treatment of Charcot Deformity

Bridging Advances in Technology and Technique





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#### **Bridging Advances in Technology and Technique**

**Superconstruct**<sup>™</sup>: Fixation and techniques utilized beyond the normal principals of orthopaedics in order to improve stability in the Charcot patient.

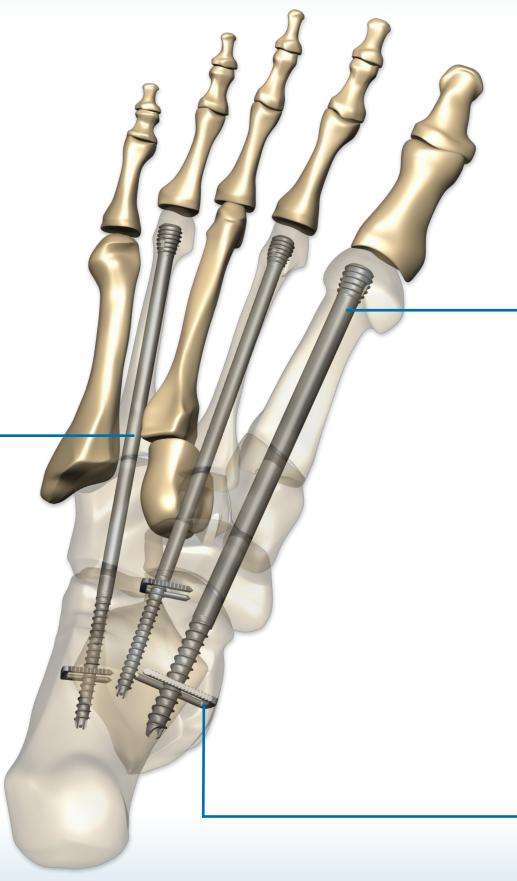
- Bridge Beyond the Area of Injury
- Use the Strongest Device
- Maximize the Mechanical Function

## The AXIS Superconstruct<sup>™</sup>... Evolution of Charcot Fixation

# Bridge beyond the Area of Injury

"...fusion is extended beyond the zone of injury to include joints that are not affected to improve fixation...the fixation is dramatically improved"<sup>1</sup>

 AXIS Beams from 70-160mm



<sup>1</sup> V. James Sammarco MD, Superconstructs in the Treatment of Charcot Foot Deformity: Plantar Plating, Locked Plating and Axial Screw Fixation, *Foot Ankle Clin N AM 12 (2009) 393-407*, 399.

## The AXIS Superconstruct<sup>™</sup>... Evolution of Charcot Fixation

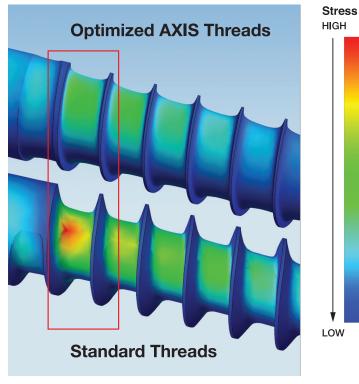
### **Use the Strongest Device**

"...the strongest device is used that can be tolerated by the soft tissue"1

- Large Shank Beams with Sizes up to 7.5mm
- Thread Design Optimized to Handle Higher Bending Forces
- Type II Anodized Titanium Alloy for Enhanced Fatigue Strength

## **AXIS Strength Advantage**

#### **39% Reduction in Stress Risers**



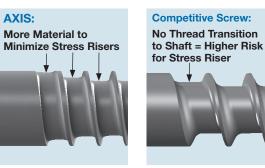
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## More Material Where Needed Most

#### **AXIS: Novel Parabolic Thread Shape**



#### Optimized Thread Transition of Minor Diameter To Shaft

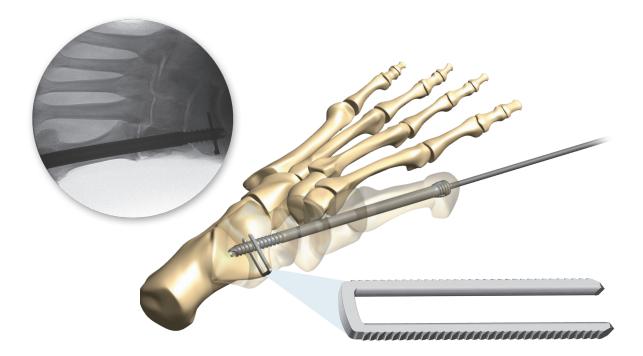


## The AXIS Superconstruct<sup>™</sup>... Evolution of Charcot Fixation

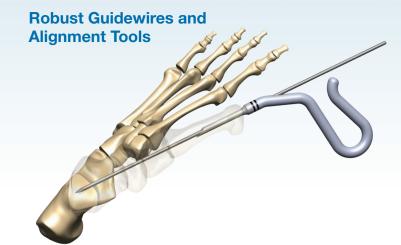
#### **Maximize the Mechanical Function**

"...devices are applied in a position that maximizes mechanical function"<sup>1</sup>

- Intramedullary Beaming Minimizes Stress Risers in Cortical Bone as Seen from Placement of Plates and Oblique Screws
- X-Clip Acts as an "Intraosseous Anchor" to create a Superconstruct<sup>™</sup>
  - Improves Thread Purchase
  - Improves Construct Stability Through Maintenance of Compression
  - Increases Surface Area to Dissipate Shear Forces



## Specialized Instrumentation Facilitates Alignment and Hardware Insertion



Precision Guided X-Clip Targeting Guide

#### **AXIS<sup>™</sup>: Fully Cannulated Fusion Beams**

	5.5 mm
	6.5 mm
Staating and the state of the s	7.5 mm

Beam Size	Lengths
5.5mm	70-150mm
6.5mm	70-160mm
7.5mm	70-160mm

X-Clip Size	Lengths
5.5mm	15 & 20mm
6.5mm	25 & 30mm
7.5mm	25 & 30mm

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#### **EXTREMITY** M E D I C A L

Indications For Use: The AXIS Charcot Fixation System in diameters of 5.5, 6.5 and 7.5mm is indicated for reconstruction procedures, non-unions and fusions of bones in the foot and ankle including the metatarsals, cuneiforms, cuboid, navicular, calcaneus and talus; specific examples include: medial and lateral column fusion resulting from neuropathic osteoarthopathy (Charcot).

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