

WHAT IS ALL OF THE HYPE REGARDING SUPRAPATELLAR NAILING?

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Disclosures

- Member: OTA & AAOS Committees
- AAOS Now Editorial Board & multiple others
- Member: MAOA & COS BOD
- Show commercially available products



Objectives

- **Suprapatellar Nailing: Not just for Proximal Fractures**
- **Teaching Tips**



The Scenerio

You are on call. A tibia shaft fracture comes in. An suprapatellar IMN is the treatment option chosen. You want the case to go smoothly.

Positioning – Semi-Extended

- **Supine**
- **Hip Bump**
- **Draping**
- **Leg Ramp**
- **Sterile Bump**



The Incision



The Incision

- **Midline incision**
- **Split the quads**
- **Stop 5 mm proximal to pole of patella**
- **Can extend medial or lateral**

Suprapatellar Tips

- **Need ~15 Degrees of Knee Flexion**
 - **Protects Anterior Cortex**
 - **Protects Tibial Tubercle**
 - **Better Access to Starting Point**
 - **Avoid Too Anterior Trajectory**



Suprapatellar Tips

- **If Cannula is Tight**
 - **Use a Smaller One**
 - **Release the Patella to allow Subluxation (Medial or Lateral)**

Suprapatellar Tips

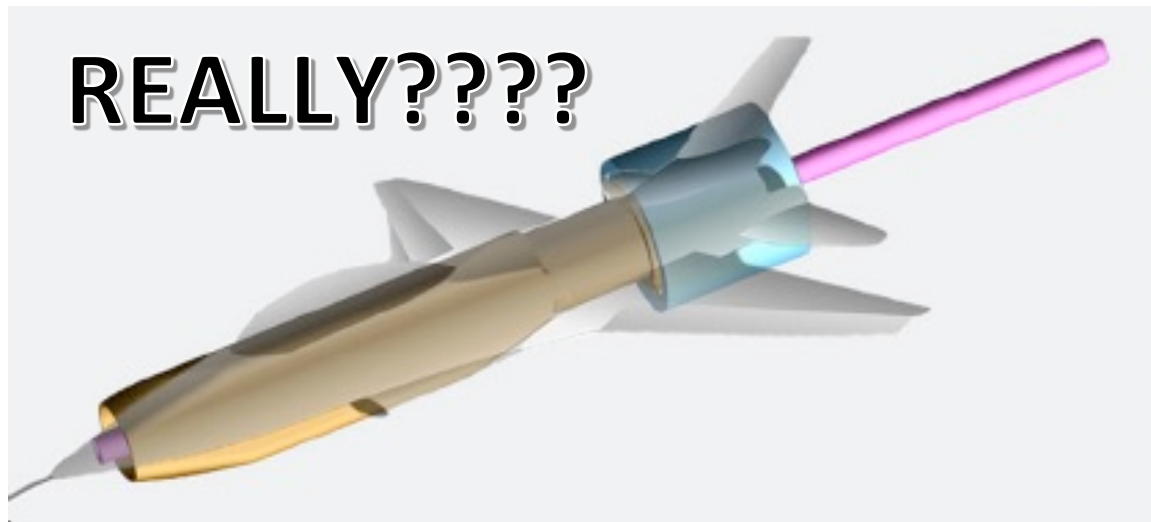
- **If Difficulty with Start Point or Trajectory**
 - **Guide Pin First, Then Cannula**



It has taken off!

Application of the Chinese Aircraft-shaped Sleeve system in the treatment of tibial shaft fractures using a suprapatellar approach for tibial intramedullary nailing: a randomised controlled trial

Ke Lu^{1,2}, Ting-ting Zhou³, Yi-jun Gao², Hong-zhen Wang², Zhi-qiang Wu², Yuan Wang², Dong-gui Zheng⁴ and Qi-rong Dong^{1*} 



Is Suprapatellar Nailing Better?

Suprapatellar Versus Infrapatellar Tibial Nail Insertion: A Prospective Randomized Control Pilot Study

*Daniel S. Chan, MD, Rafael Serrano-Riera, MD, Rebecca Griffing, BSc, Barbara Steverson, RN, MHA,
Anthony Infante, DO, David Watson, MD, H. Claude Sagi, MD, and Roy W. Sanders, MD*

Conclusions: Overall, there seemed to be no significant differences in pain, disability, or knee range of motion between these 2 tibial intramedullary nail insertion techniques after 12 months of follow-up. Based on this pilot study data, larger prospective trial with long-term follow-up is warranted.

Suprapatellar Intramedullary Nail Technique Lowers Rate of Malalignment of Distal Tibia Fractures

Frank R. Avilucea, MD, Kostas Triantafillou, MD,† Paul S. Whiting, MD,‡ Edward A. Perez, MD,§ and Hassan R. Mir, MD, MBA, FACS||*

Conclusions: This is the largest patient series directly comparing the suprapatellar with infrapatellar IMN insertion technique in the treatment of distal tibia fractures. In the treatment of distal tibia fractures, suprapatellar IMN technique results in a significantly lower rate of malalignment compared with the infrapatellar IMN technique.

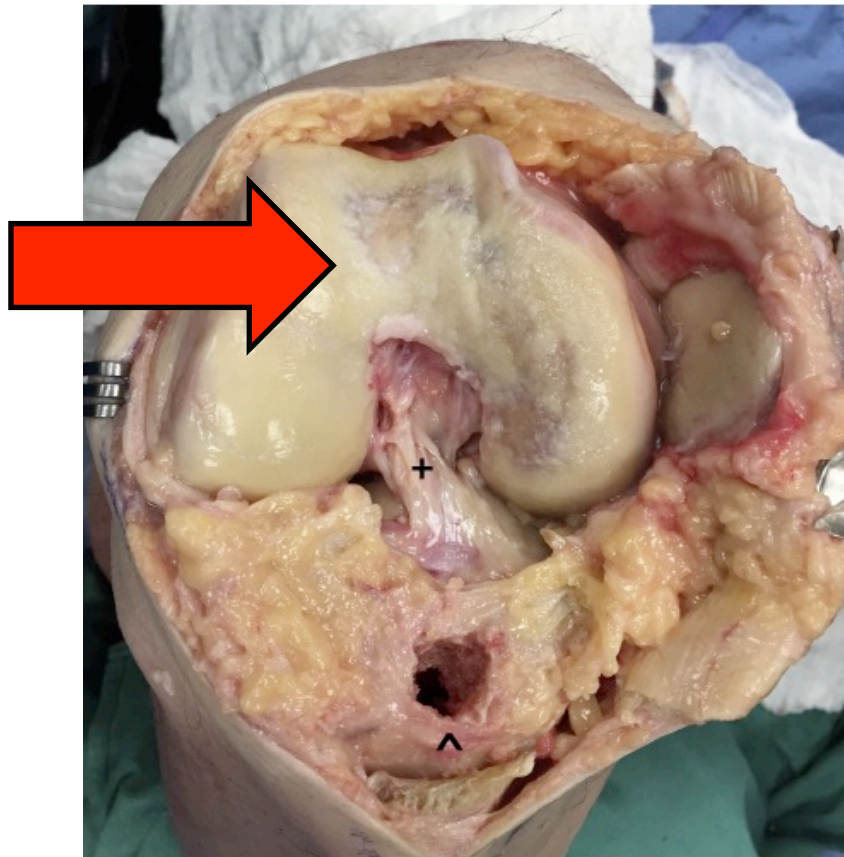
Comparison between suprapatellar and parapatellar approaches for intramedullary nailing of the tibia. Cadaveric study[☆]



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Debate

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Clinical Faceoff

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Clinical Faceoff: Suprapatellar Tibial Nailing for Tibia Fractures

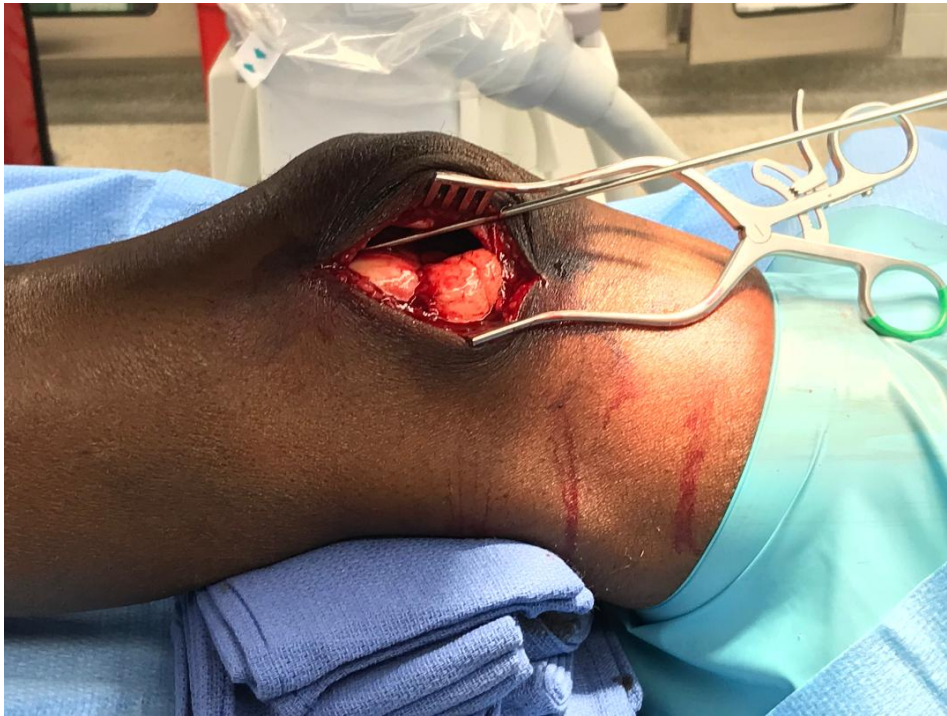
Lisa K. Cannada MD, FAAOS, Hassan R. Mir MD, Stephen A. Kottmeier MD



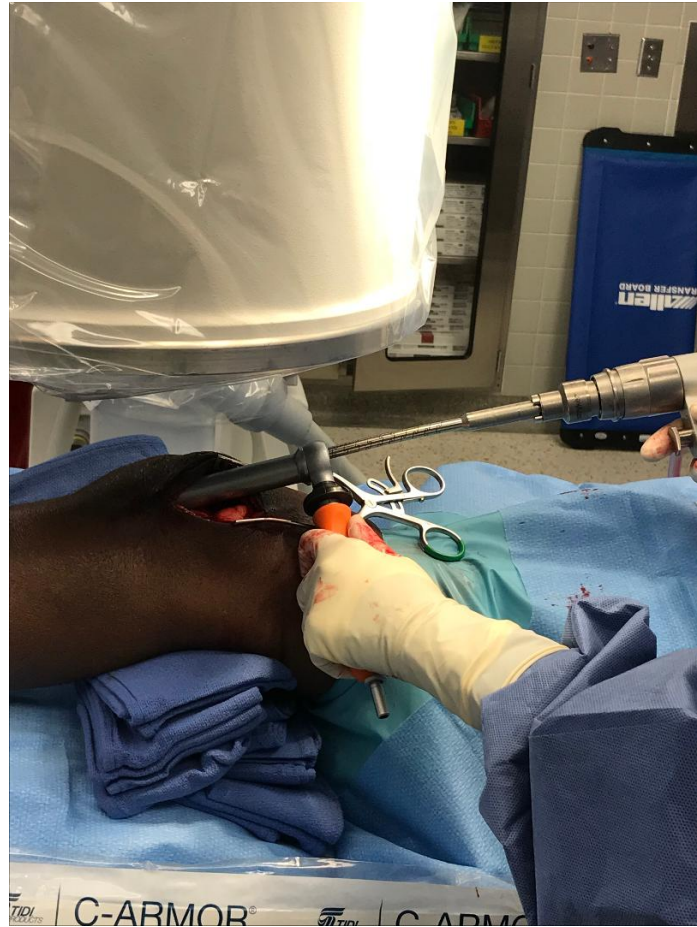
Let's Get Started
with My Way













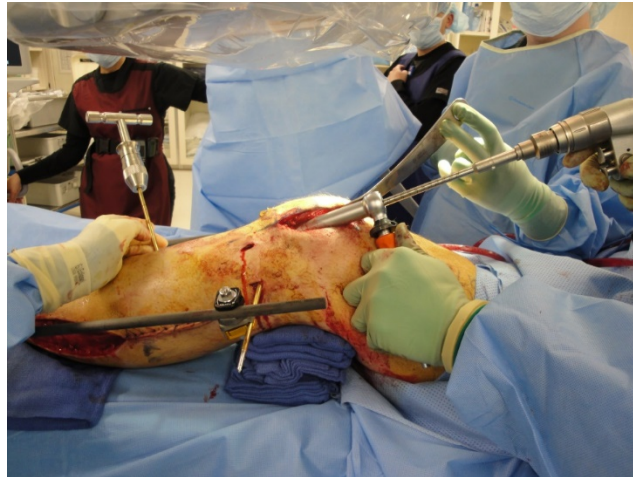




Semi Extended Position

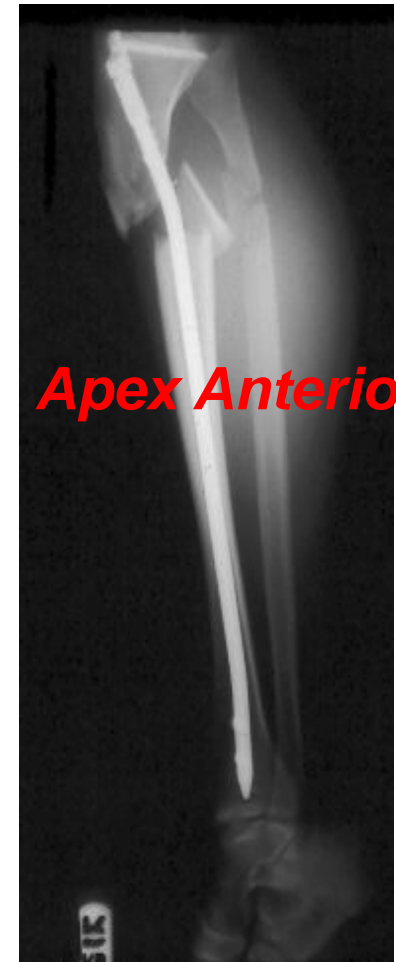


Can Still Do all the Tricks!



Proximal Tibia Fractures & IMN

- Nailing of fractures is problematic
- Number of techniques to avoid malalignment



Mini Plates





Distal Tibia



Distal Fractures: Alignment



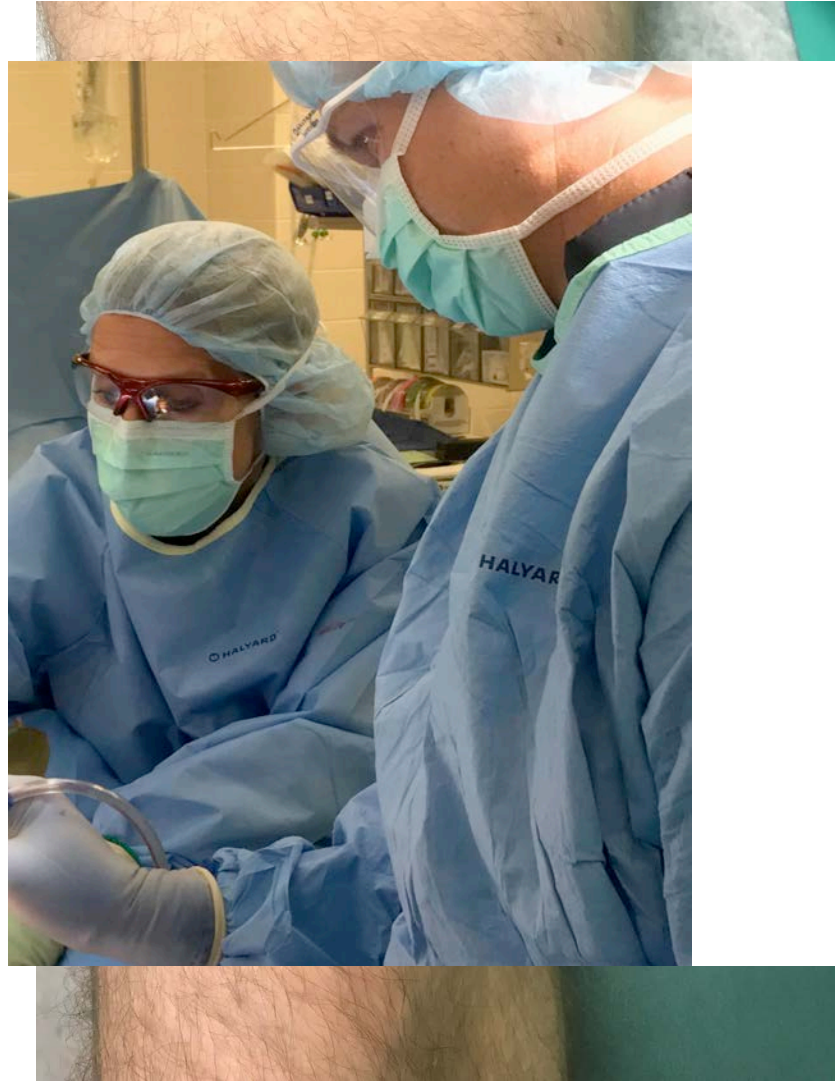
Attention to Detail will lead to a Happy Ending!



Considerations

- Removal...
- Infection...
- Always plan ahead





Summary

You Can Do It!

New technique

New Variant

Good Results





Thank You!

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