

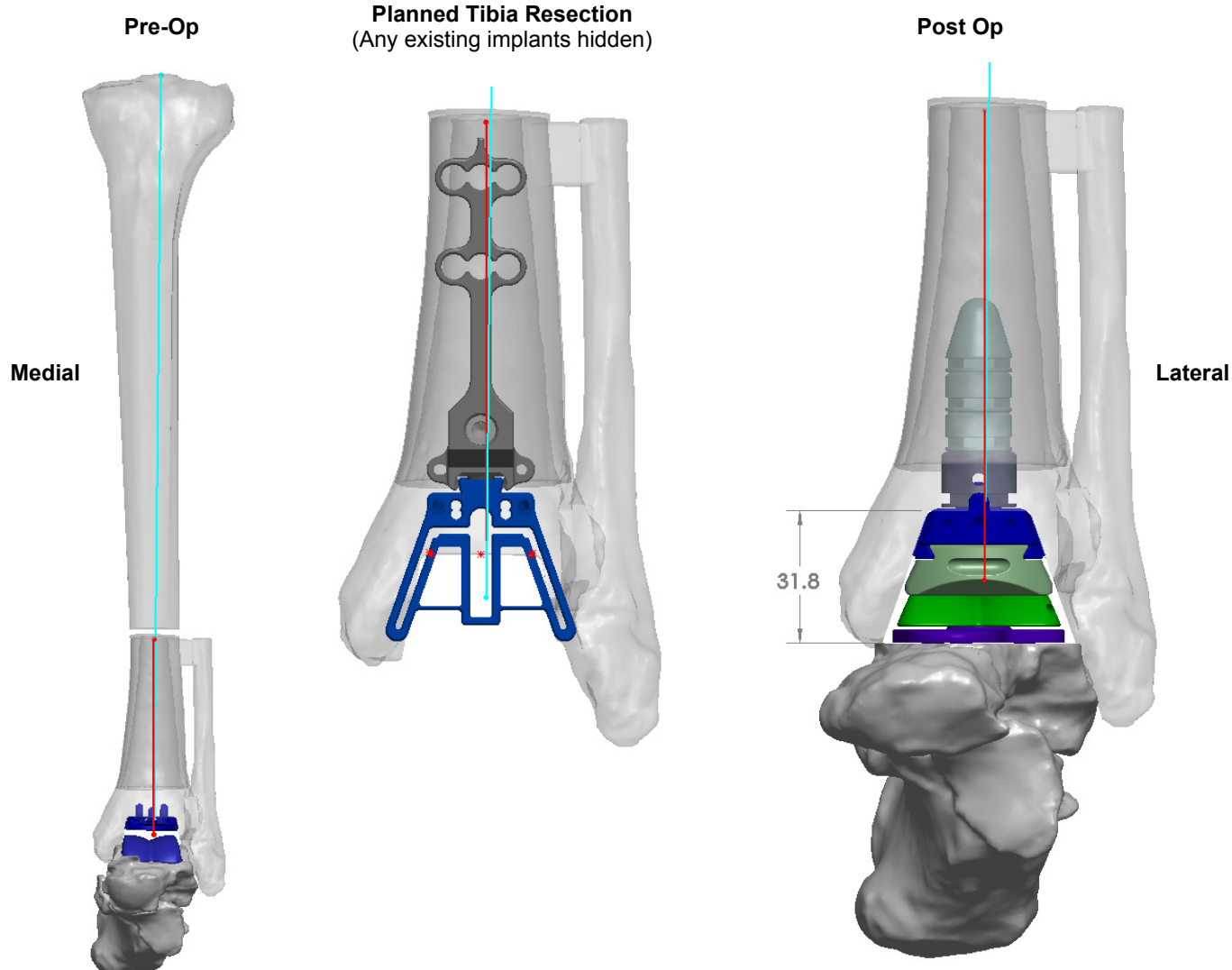
PROPHECY™ INVISION™

Preoperative Navigation Report



CASE22492 - Surgeon: 1 Training
Fancy Foot Training - Left - Surgery: 21-Sep-2017

Tibia: INVISION™ Size 4 Long +4mm thickness
Talus: Size 4 INVISION™ Dome, Size 5 Left Pegged Plate
Anterior Views



— Tibia Mechanical Axis
— Tibia Anatomic axis
- - - Resection Planes

Axis Angles Anatomic vs. Mechanical

Coronal = 0.5°

Implant Information

Tibial tray: Sz 4 Long +4mm thickness

Tibial insert: Sz 4

Stem Components:

Top: 16 mm

Middle: 16 mm

Middle: 16 mm

Base: 18 mm

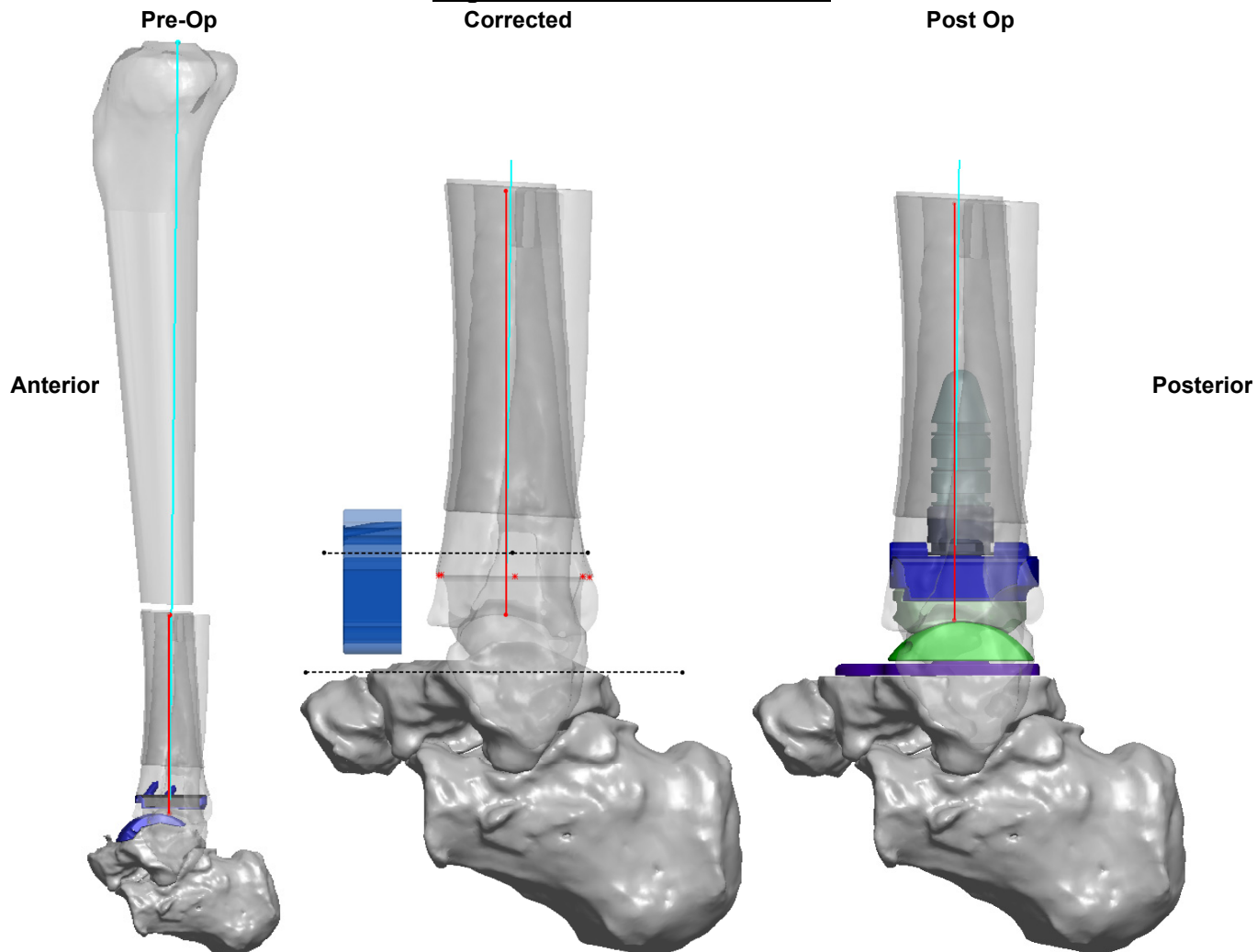
Talar dome: Sz 4 INVISION™

Talar plate: Sz 5 Standard 3 mm
thick, Pegged, LeftPROPHECY™ Part Number:
PROPINV

- The full height of the implant construct (tibia tray + thinnest poly+ talar dome + talar plate): 31.8 mm
- Medial malleolus thickness at implant corner: 12.1 mm.

Tibia: INVISION™ Size 4 Long +4mm thickness
Talus: Size 4 INVISION™ Dome, Size 5 Left Pegged Plate

Sagittal Views from Lateral Side



— Tibia Mechanical Axis
— Tibia Anatomic axis
- - - Resection Planes

**Axis Angles
Anatomic vs. Mechanical**

Sagittal = 0.6°

Tibia Implant Alignment

- Coronal Plane: **Anatomic Axis**
- Sagittal Plane: **Anatomic Axis**

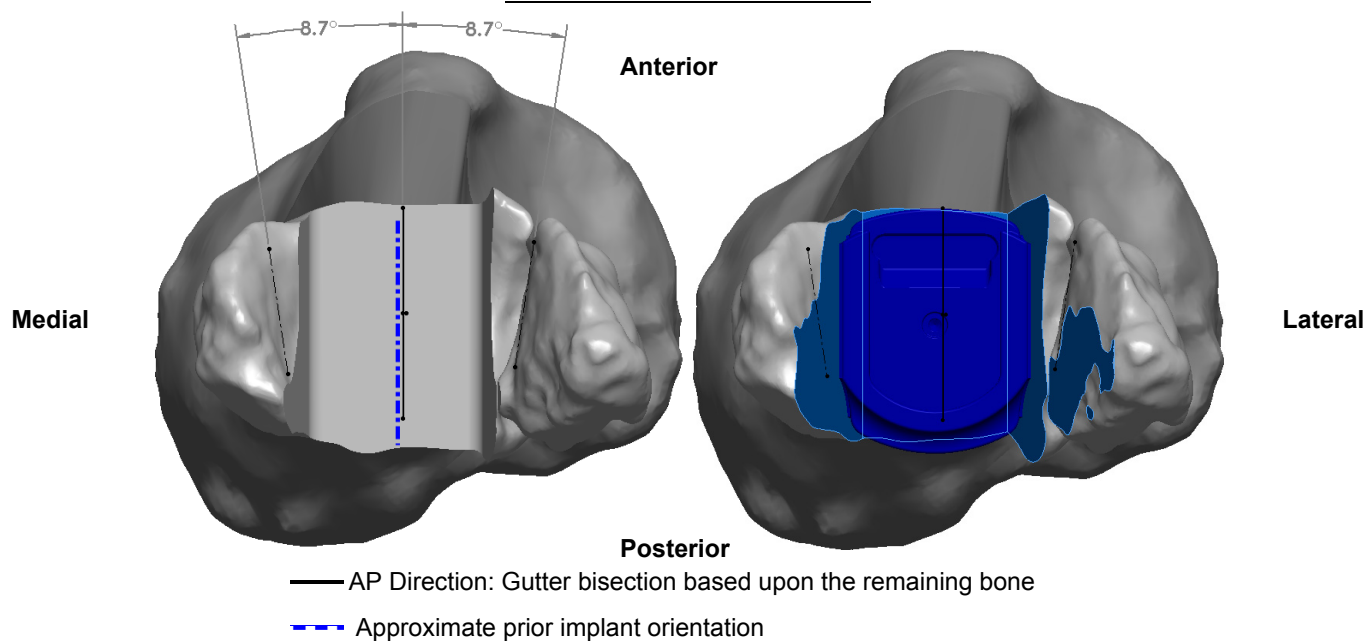
Medial/Lateral placement is set:

- to Bisect gutters
- to ensure the stem implants fall within the tibial canal

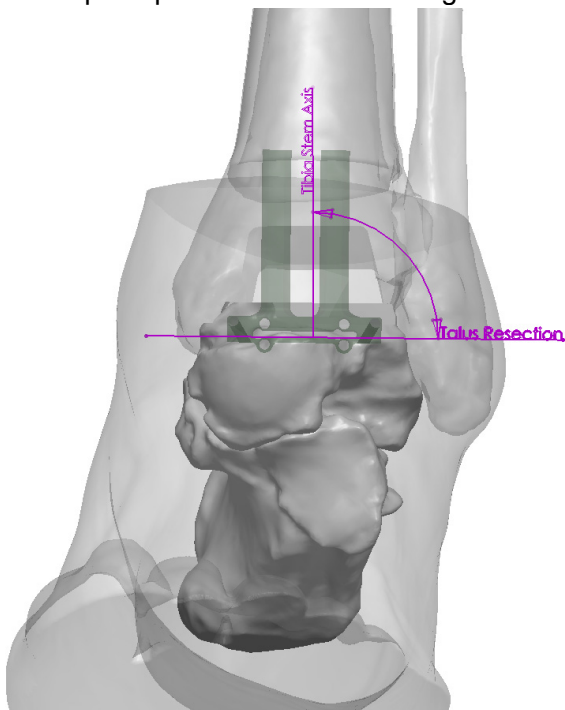
The red points represent discrete points on the tibia bone. The tibia resection is set:

- to resect at least 6.2 mm proximal to the identified surface.

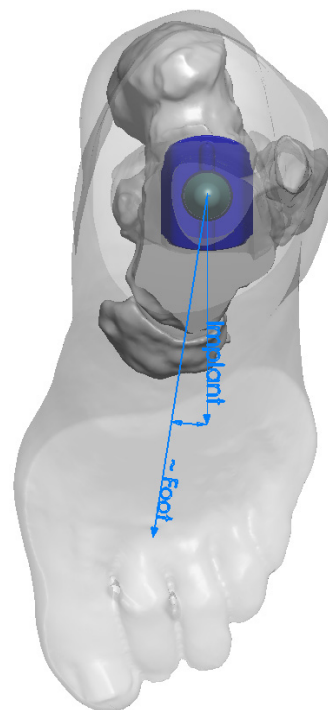
Tibia: INVISION™ Size 4 Long +4mm thickness
Tibia Rotation Distal Views



- Tibia gutter angle: 17.4°.
- Planned implant orientation is approximately equivalent to the prior implant orientation.
- A-P Tibia implant placement: Anterior edge.



Talus resection guide relative to the talar bone and the planned tibia alignment axis. The resections will result in a correction of 0°.

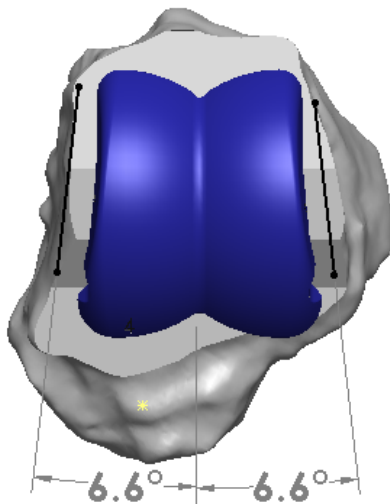


The tibia internal/external orientation is 8.9° external to the approximate foot orientation. The talus orientation is 3.4° external to the tibia orientation.

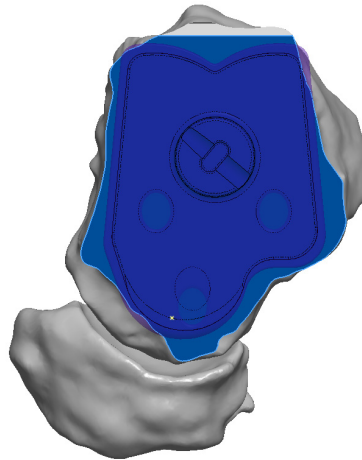
Talus: Size 4 INVISION™ Dome, Size 5 Left Pegged Plate Talus Rotation Top Views

AP Direction: Gutter bisection based upon the remaining bone

Posterior

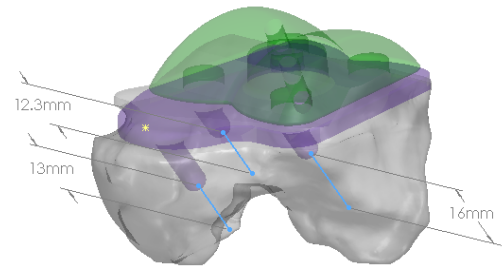


Superior view



Black outline represents the
alternative size 4 Std
INVISION™ pegged talar plate.

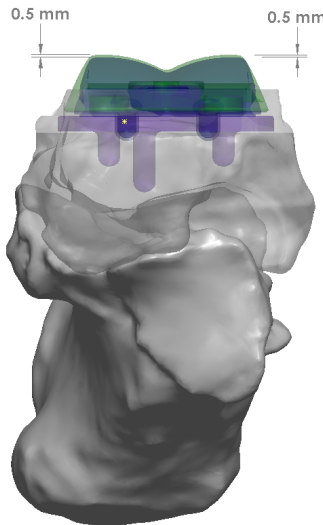
Superior View



Remaining distance between the
seated pegs and the inferior talus:
Anterior: 13 mm
Medial: 12.3 mm
Lateral: 16 mm

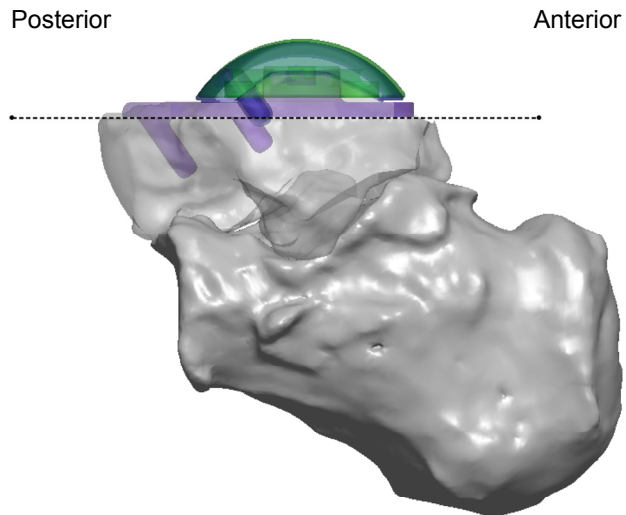
Oblique view

Medial



Anterior View with Implants and Primary Talus

Lateral



Medial View with Implants and Primary Talus

Notes:

- Talus resection angle in Coronal Plane: **Parallel to the remaining talar dome.**
- Size 4 INVISION™ talar dome.
- Size 5 INVISION™ pegged plate is selected to maximize bone coverage while minimizing implant overhang.
- Talar Gutter angle: 13.2°.
- Talus anterior direction: **Gutter bisection based upon the remaining bone.**
- The distal flat of the talar implant is 2.1 mm distal to the yellow talar neck point shown above.
- The talar plate leaves 4.1 mm of uncovered, resected talar neck in the planned position.
- Implantation of the new talus implant is planned at 0.5 mm more proximal on the medial and lateral side than the primary talar implant.

Summary

Tibial Alignment Method

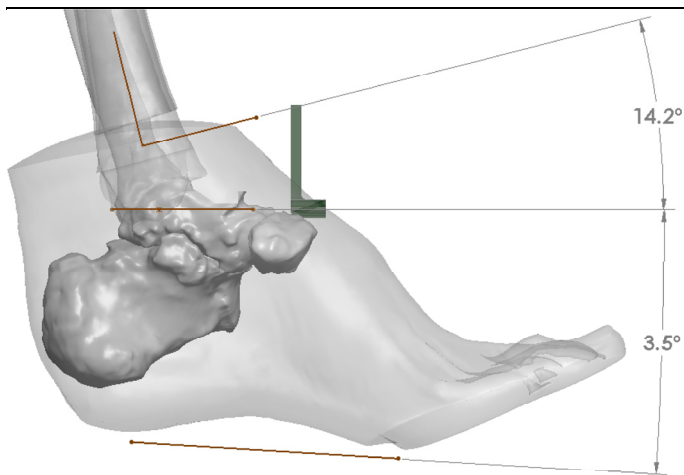
- Tibia Implant Alignment in Coronal Plane: Anatomic Axis.
- Tibia Implant Alignment in Sagittal Plane: Anatomic Axis.
- Anterior direction is set by the Gutter bisection.
- Medial/lateral implant placement:
 - Bisect gutters.
 - The cuts on the medial malleolus and fibula are minimized.
 - AP tibial coverage.
- Anterior/Posterior implant placement: Anterior edge

Talar Alignment Method

- Talus implant flexion is set to: Follow curvature of the talar dome.
- Talus implant is selected to maximize bone coverage while minimizing implant overhang.
- Anterior direction is set by Gutter bisection.
- Resection depth: 2.1 mm distal to the yellow talar neck point.

PROPHECY™ Engineering Comments

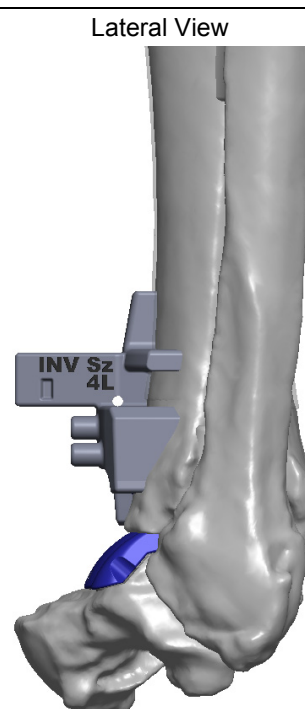
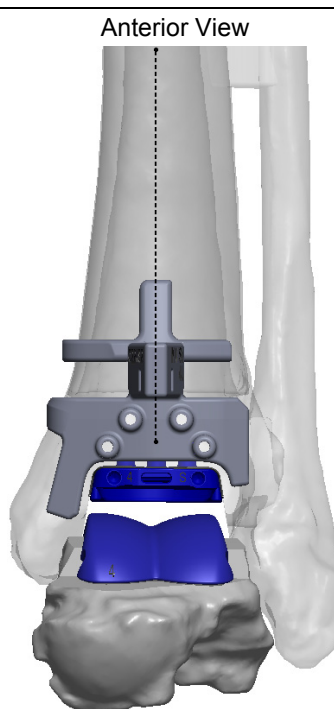
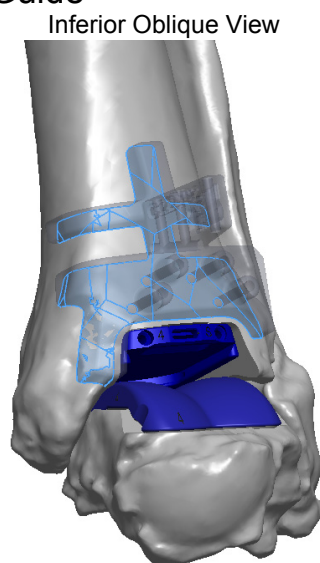
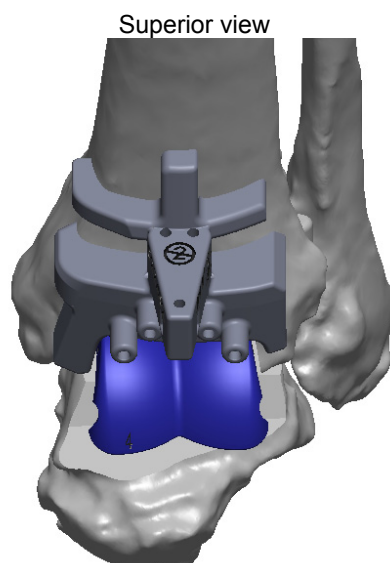
- Note: Some Fancy Feet assemblies have substantial anterior talar subluxation relative to the tibia.



Sagittal view of pre-op talus showing:

- Talus resection vs. tibia resection.
- Talus resection vs. bottom of foot line.

Tibial Alignment Guide

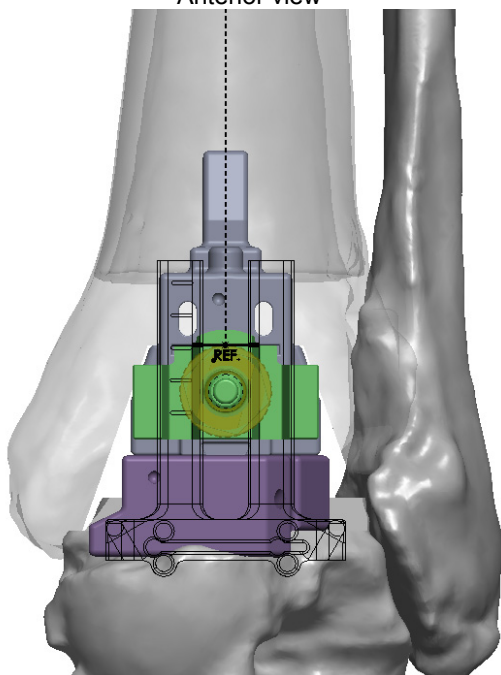


Tibia Guide Comments:

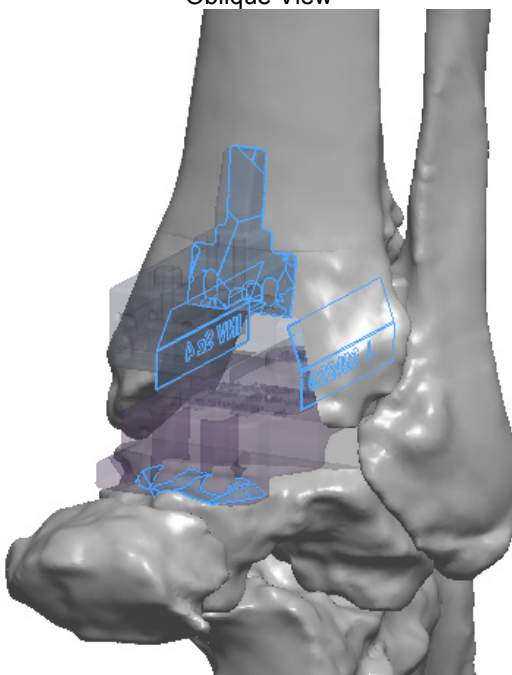
- The two distal k-wires will be within 1 mm of the existing implant. Care should be used when inserting the k-wires.

Joint Spacer Guides for Talus Resection

Anterior view

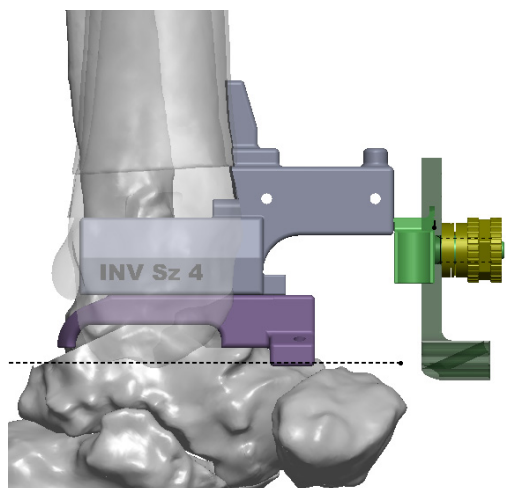


Oblique View

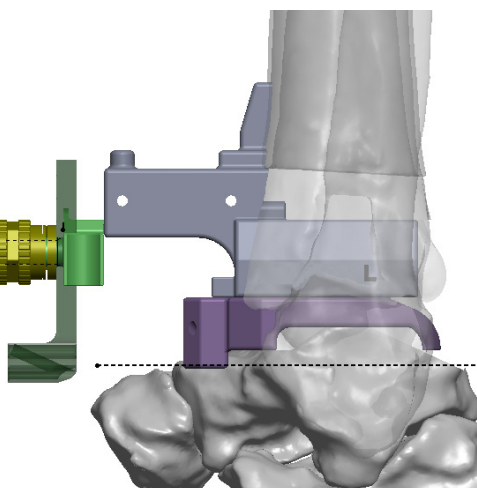


--- Tibia Stem Axis

Medial view



Lateral View



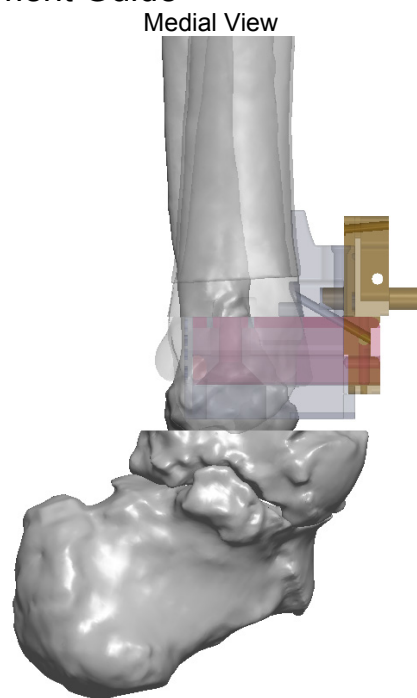
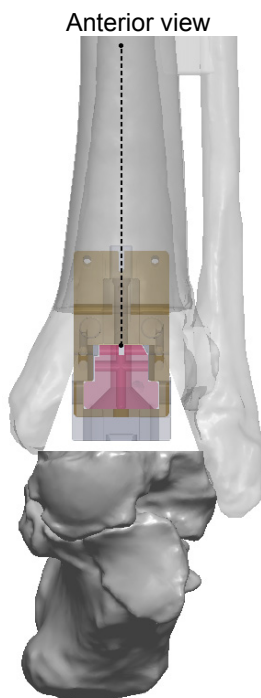
Part Identification



Spacer Guide Comments:

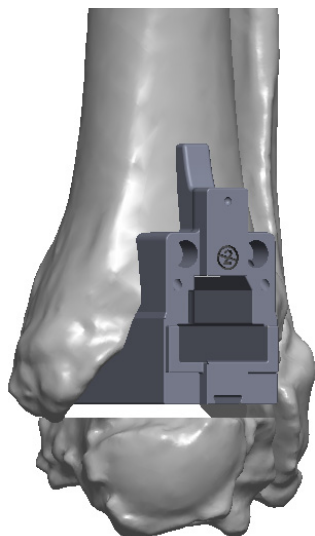
- If the joint is too loose, the provided 3 mm shims can be used to tension it appropriately before setting the talus resection depth.

Tibial Stem Alignment Guide

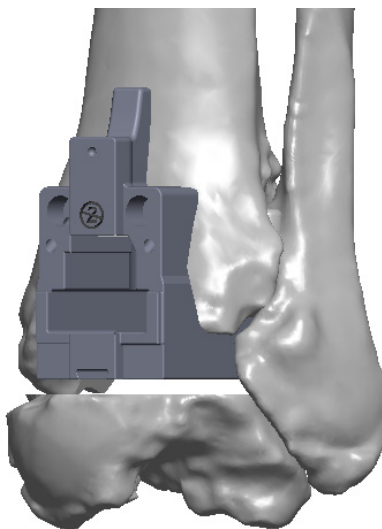


--- Tibia Stem Axis

Medial Oblique view



Lateral Oblique View



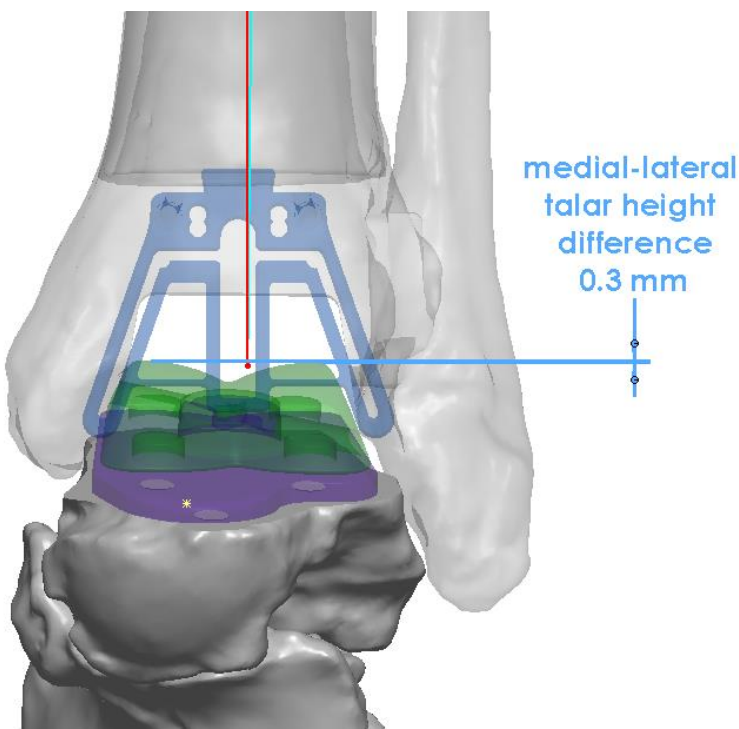
Part Identification
Posterior View



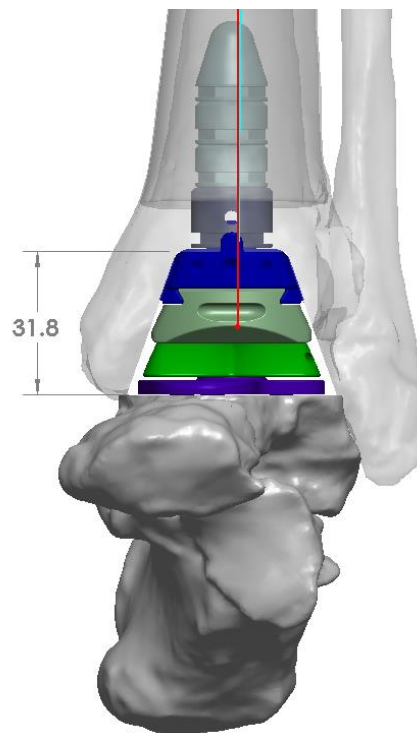
Stem Guide Comments:

- The tibia stem guide was designed to leave a distal gap of 3 mm to the resected talus. If the joint is too loose, the provided 3 mm shims can be used to tension it appropriately before reaming.

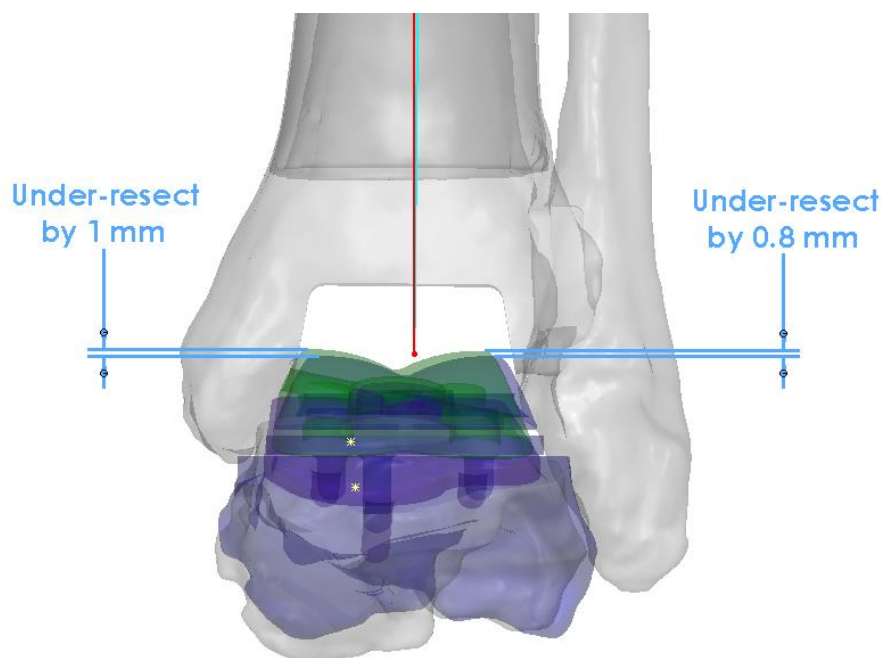
APPENDIX: Talus Resection Angle and Tibia Resection Height



Pre-op medial-lateral talar height difference: 0.3 mm



The full height of the implant
construct (tibia tray + thinnest
poly+ talar dome + talar
plate): 31.8 mm



The swing of the talus & overall resection height
(relative to standard implant height). The "corrected"
talus is highlighted.

The total planned resection height is:

- 30.8 mm on the medial side
- 31.0 mm on the lateral side.

This is equivalent to the height of the
implants shown with the thinnest poly less
1 mm on the medial side and 0.8 mm on
the lateral side.

The system has 10 mm of additional poly
thickness available