OPTETRAK® LOGIC®
Operative Technique

OPTETRAK® LOGIC® INTRA-MEDULLARY TIBIAL PREPARATION

Addendum to the Optetrak Logic LPI® Distal First Operative Technique

INTRODUCTION

The tibia can be prepared using either the LPI extra-medullary preparation method or the LPI intra-medullary tibial preparation method. This technique reviews the IM tibial preparation technique.

Follow the Optetrak Logic LPI Operative Technique for preparation of the femur.

The LPI IM Tibial Alignment Guide consists of two individual parts:

1. **LPI IM Tibial Resection Guide**
2. **LPI IM Tibial Guide Coupler**

The LPI IM Tibial Resection Guide offers the following features:

1. tibial resection height adjustment knob
2. tibial slope adjustment knob; 1 degree increments from 0 – 10 degrees
3. extra-medullary drop rod attachment feature.
4. tibial cutting block fixation lever *(Figure 1).*

Identify the entry point to the tibial IM canal on the proximal tibial surface. The recommended anatomical landmark to initiate the perforation of the tibial IM canal is the tibial insertion of the ACL. This point corresponds to a straight proximal extension of the tibial IM canal.

Open the tibial IM canal using the Optetrak Femoral Pilot Drill *(Figure 2).* It is recommended to use a suction cannula to aspirate the contents of the canal.

Insert the Optetrak T-Handle IM Rod into the tibial IM canal. This instrument is fluted to allow the endosteal content to be evacuated proximally through the hole, preventing sudden increases in the pressure inside the bone *(Figure 3).*

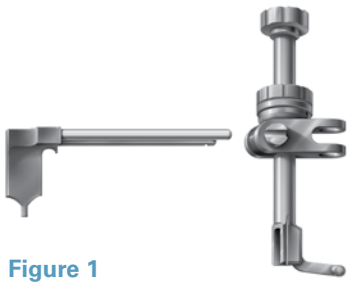

Figure 1
LPI IM Tibial Resection Guide (right) and LPI IM Tibial Guide Coupler (left)

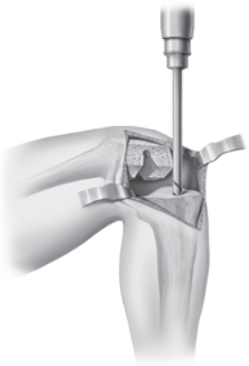

Figure 2
Tibial IM Canal is Opened Using the Femoral IM Pilot Drill

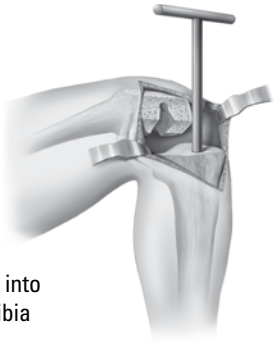

Figure 3
IM Rod is Inserted into IM Canal of the Tibia

Assemble the LPI IM Tibial Guide Coupler to the LPI IM Tibial Resection Guide by inserting the rails of the Coupler into the body of the Resection Guide. With the locking lever of the LPI IM Tibial Guide in the "open" position, assemble the LPI Tibial Resection Guide onto the dovetail of the LPI IM Tibial Guide *(Figure 4).* Once the Tibial Resection Guide is positioned onto the LPI IM Tibial Guide, set the locking lever to the "closed" position *(Figure 5).*

Place the T-handle IM Rod into the hole of the LPI Tibial IM Coupler and insert the assembly into the tibial IM canal, verifying that medial edge of the LPI Tibial Resection Guide is aligned with the center of the proximal tibia *(Figure 6).*

Once the assembly has been placed into the IM canal and is aligned with the proximal tibia, adjust posterior slope and resection depth of the tibial cut.

Rotate the slope adjustment knob to select the desired posterior slope of the tibial resection. Align the degree markings to the line on the IM Guide. The LPI IM Tibial Guide allows posterior slope adjustments from 0 to 10 degrees.

The LPI Fixed Tibial Stylus should be placed in the cutting slot of the LPI Tibial Resection Guide. The resection level should be adjusted with the height adjustment knob so that LPI Fixed Tibial Stylus references the proximal tibia plateau. Typically, the 10mm side of the stylus is used when referencing the most normal plateau and the 1mm side is used when referencing the most affected plateau *(Figure 7).*

Alternatively, the LPI Cut Line Predictor may be inserted through the slot of the Tibial Resection Guide to determine the tibial resection level.

An extra-medullary drop rod can be introduced into the drop rod attachment feature to verify mechanical alignment with extra-medullary landmarks such as the center of the ankle of the second metatarsal.

Once the LPI Tibial Resection Guide is adjusted to the desired resection level and slope, it can be pinned in position.

Move the locking lever of the LPI IM Tibial Guide to the "open" position and remove the LPI IM Tibial Guide leaving only the Resection Guide pinned to the tibia.

The alignment of the cutting block can be verified by placing the Mauldin Multi-Tool into the anterior recess of the block and inserting the drop rod into the Mauldin Tool. The drop rod can be used to assess alignment with extra-medullary landmarks *(Figure 8).*

Proceed to make the proximal tibial resection.

Figure 4
Assembly of LPI Tibial Resection Guide to the LPI Tibial Cutting Block. Lever is in the "Open" Position.

Figure 5
Locking Lever is in the "Closed" Position

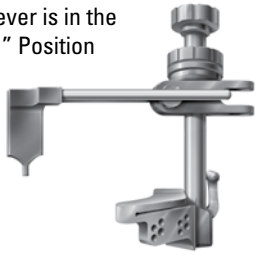

Figure 6
Verify Alignment

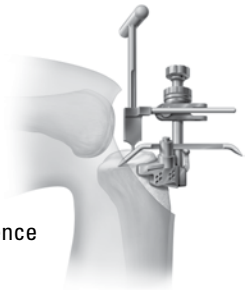

Figure 7
Use the Stylus to Reference the Tibial Plateau

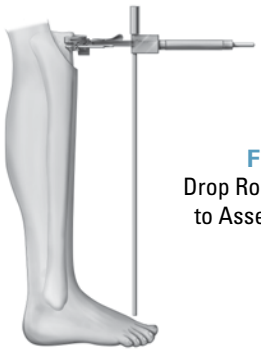

Figure 8
Drop Rod Can Be Used to Assess Alignment

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