

Lab Exercise:
Distal Femoral Osteotomy
Using 3D Printed Guides
for Medial Patellar Luxation Management

Stabilization Using i-Loc
Interlocking Nail



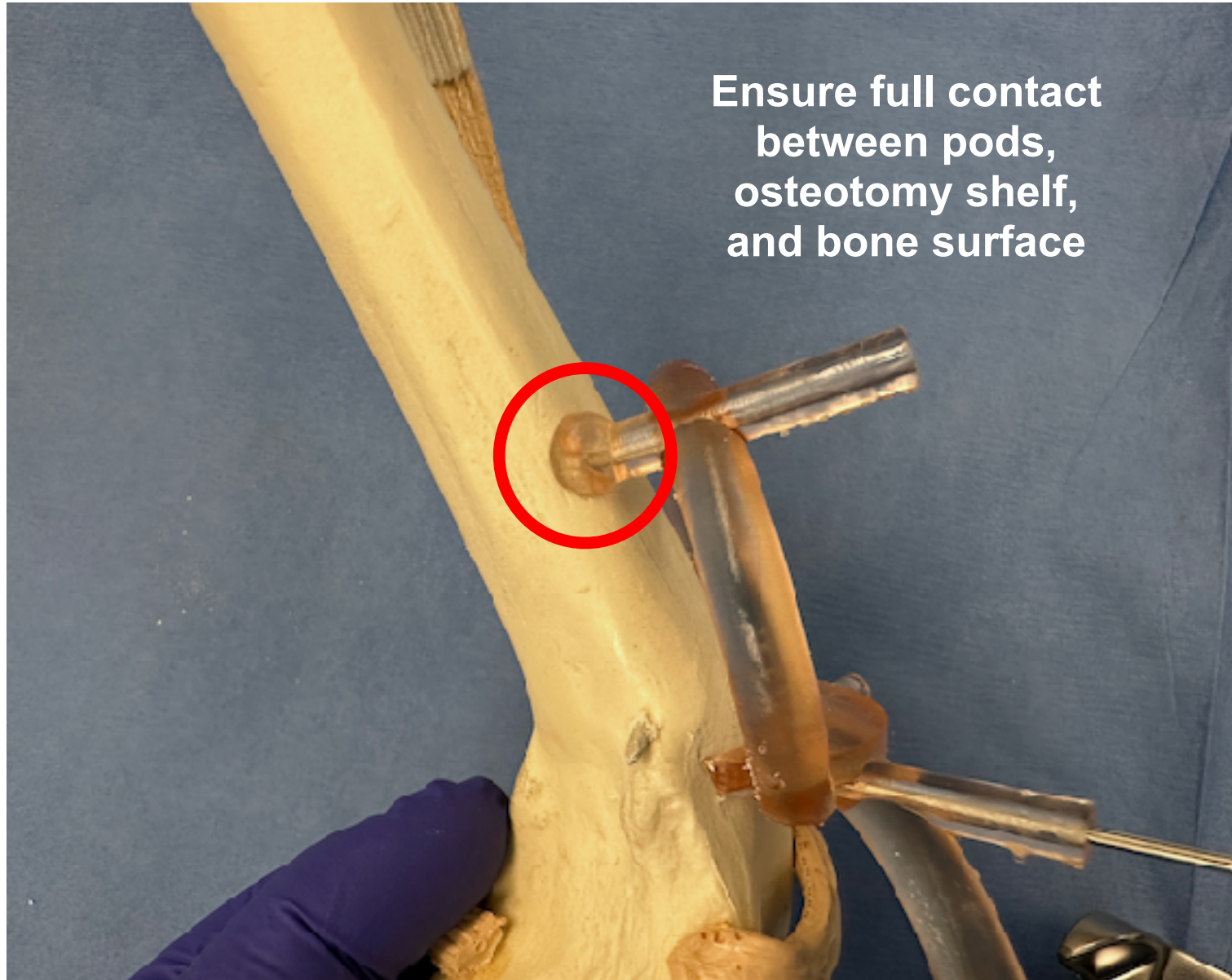
Bone model is the same
as previous exercise

Correction is designed as a single
opening wedge osteotomy

Pin location is modified to allow for
placement of interlocking nail

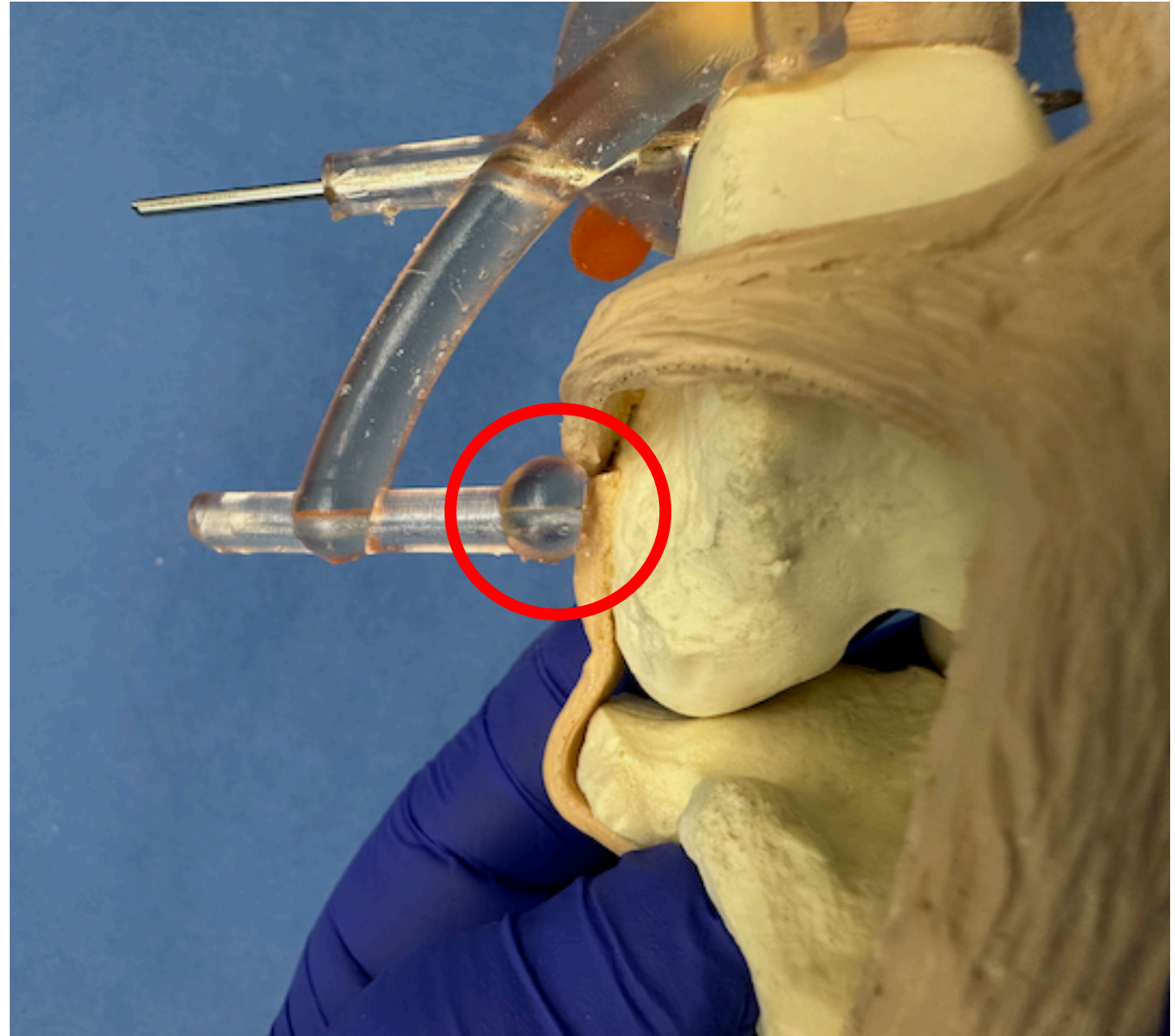


Secure the osteotomy guide – same technique as previous exercise

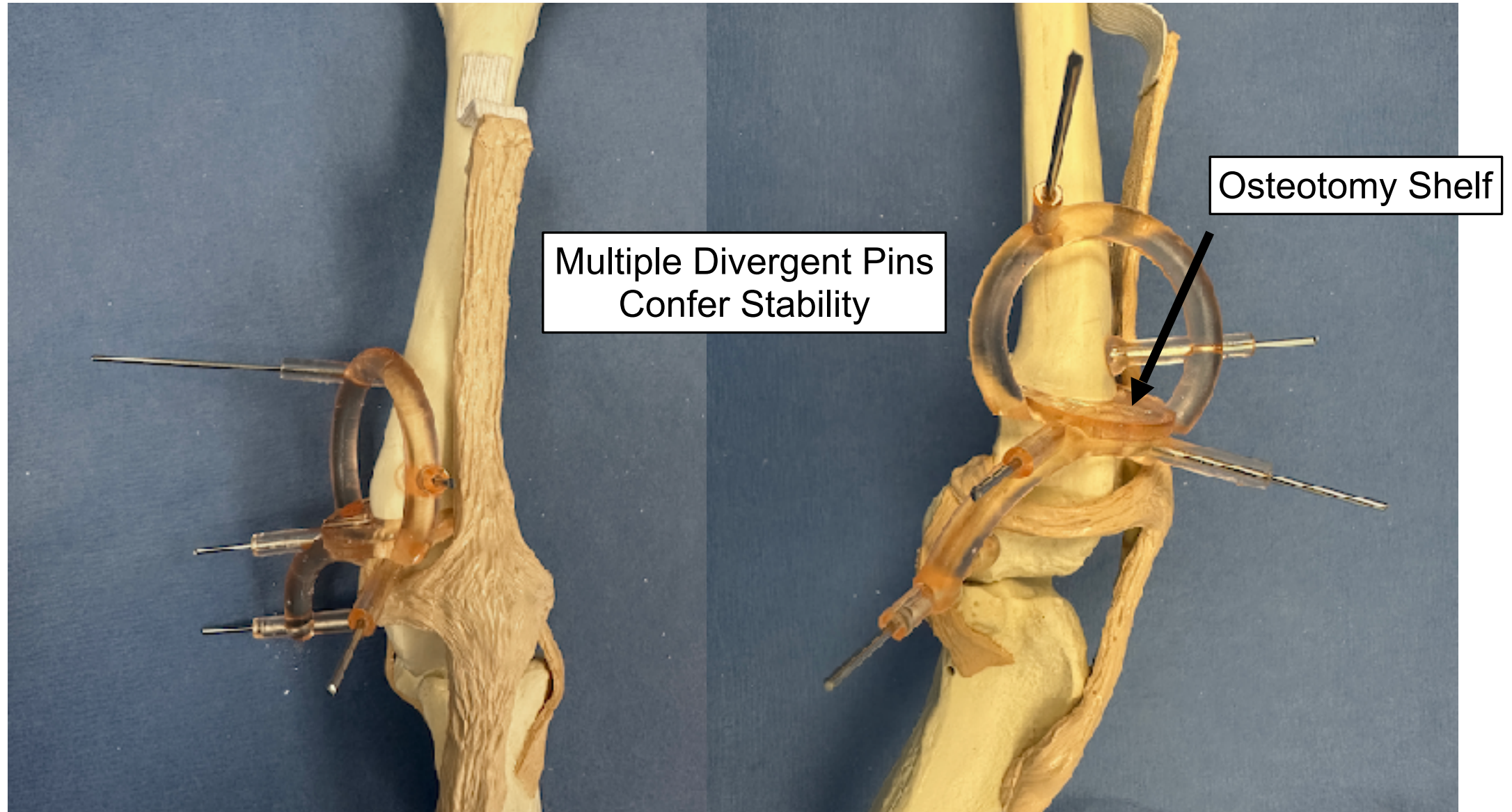


NOTE:

Distal transcondylar pin
guide is deliberately offset
from bone surface to
minimize periarticular soft
tissue dissection



Completed Osteotomy Guide Construct



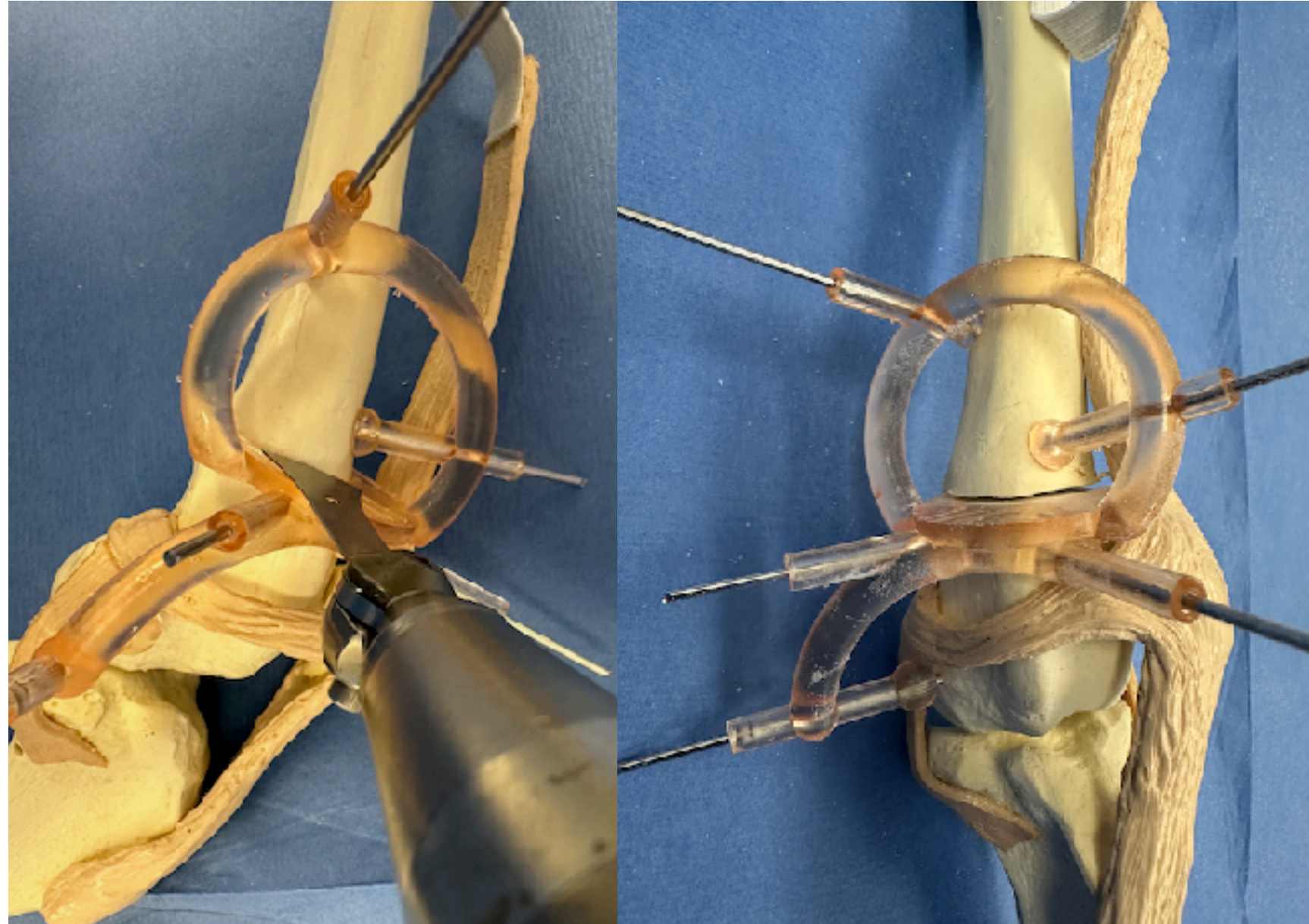
Perform Osteotomy – Proximal Side of Osteotomy Shelf

Important:

Saw blade **must** be maintained in a position flat against the osteotomy shelf

Tip:

Start with a short saw blade as it will be less likely to bend while cutting



Remove all pins apart from
cranial pins on either side of
osteotomy

Remove osteotomy guide

Clinical Tip:

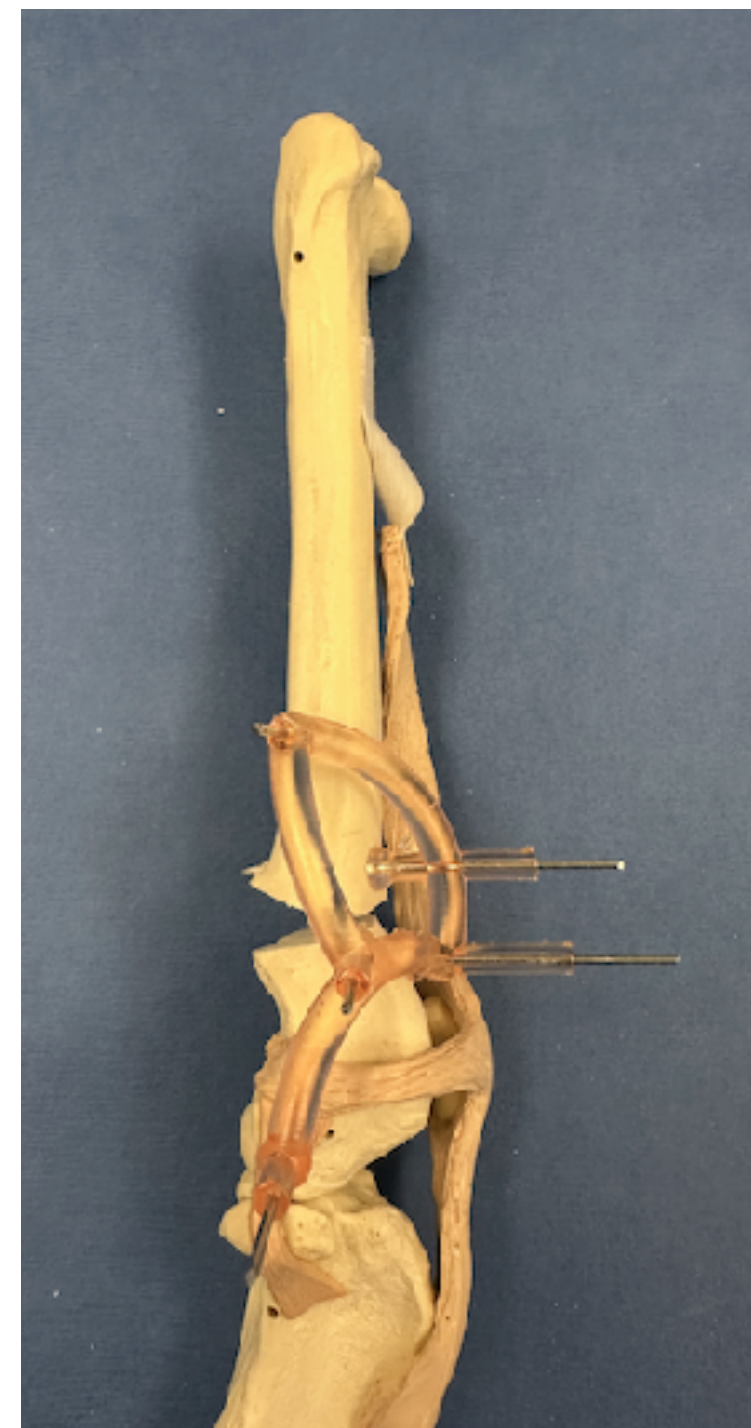
Stabilize cranial pins with
needle driver to avoid
inadvertent removal



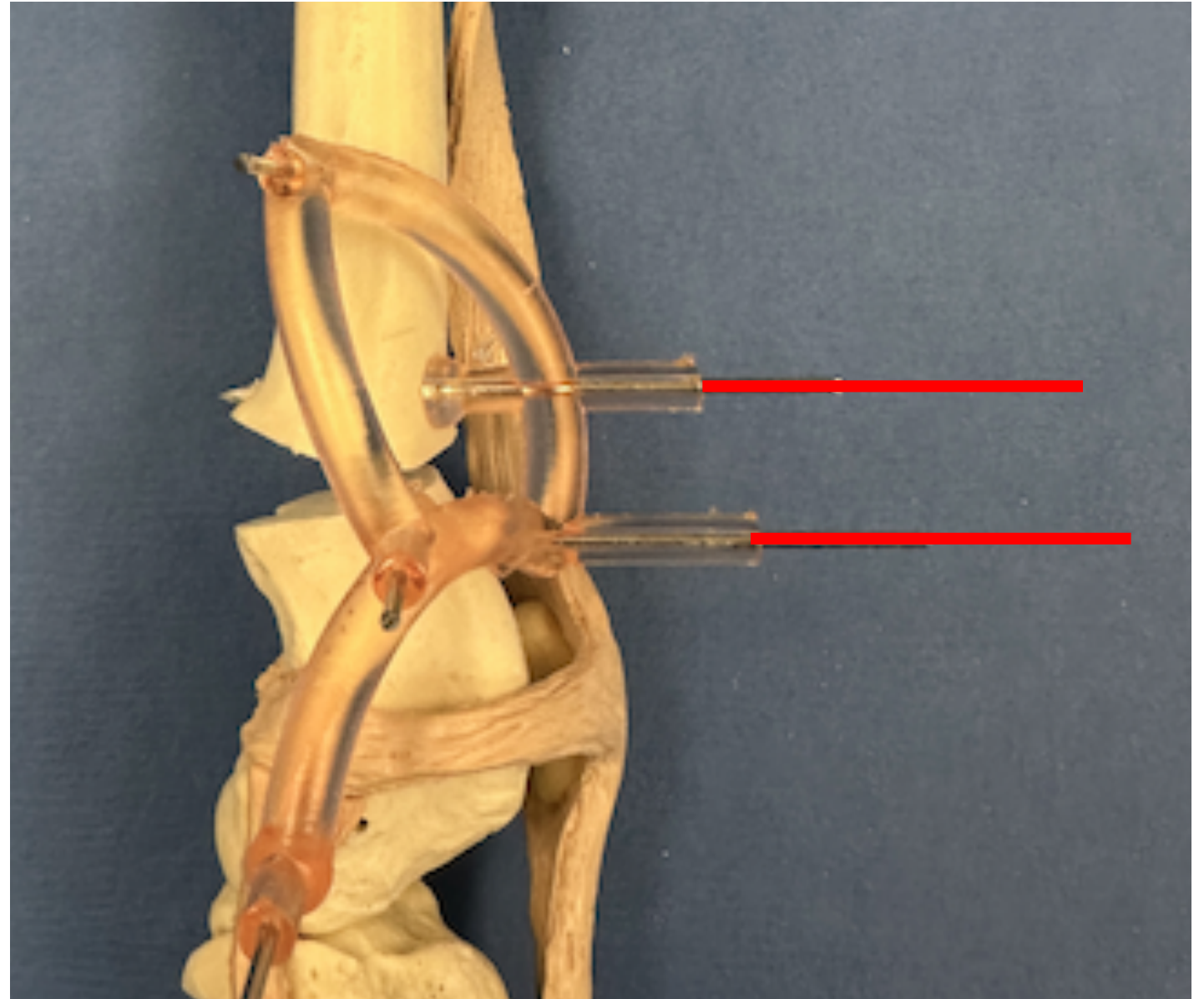
Slide reduction guide over
cranial pins

Replace all other pins

Ensure that guide is in
complete contact with bone
surface



Note that cranial pins
are now parallel

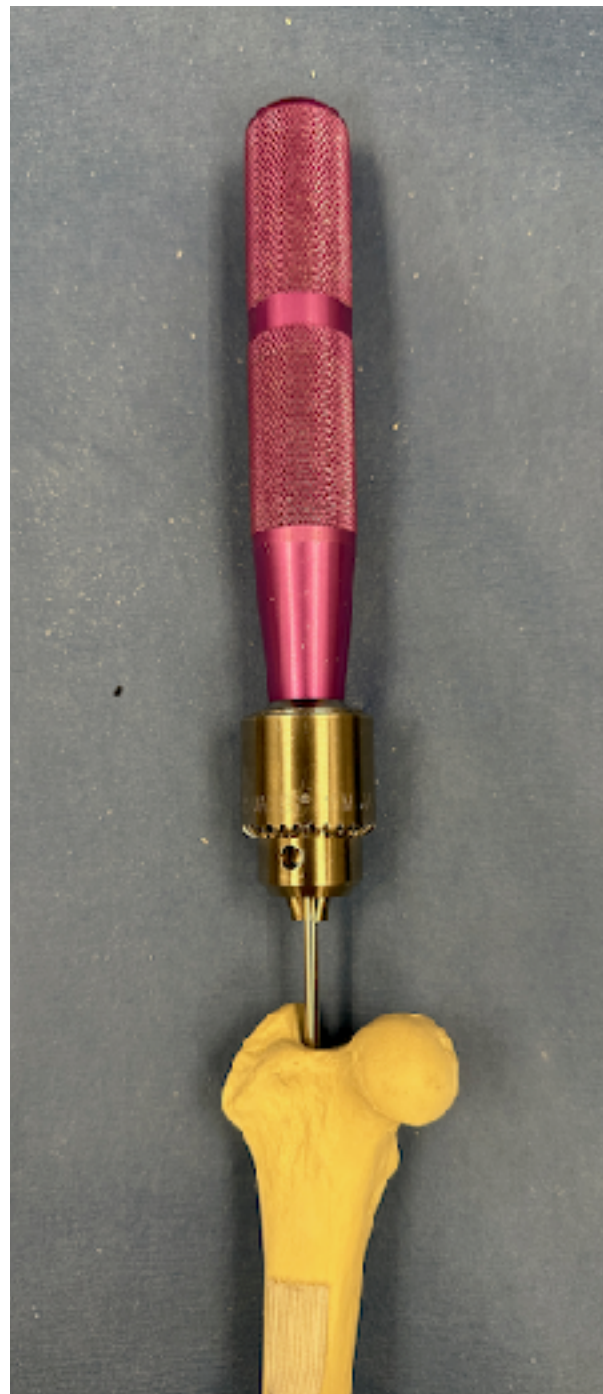


Prepare to place
interlocking nail with
standard instrumentation



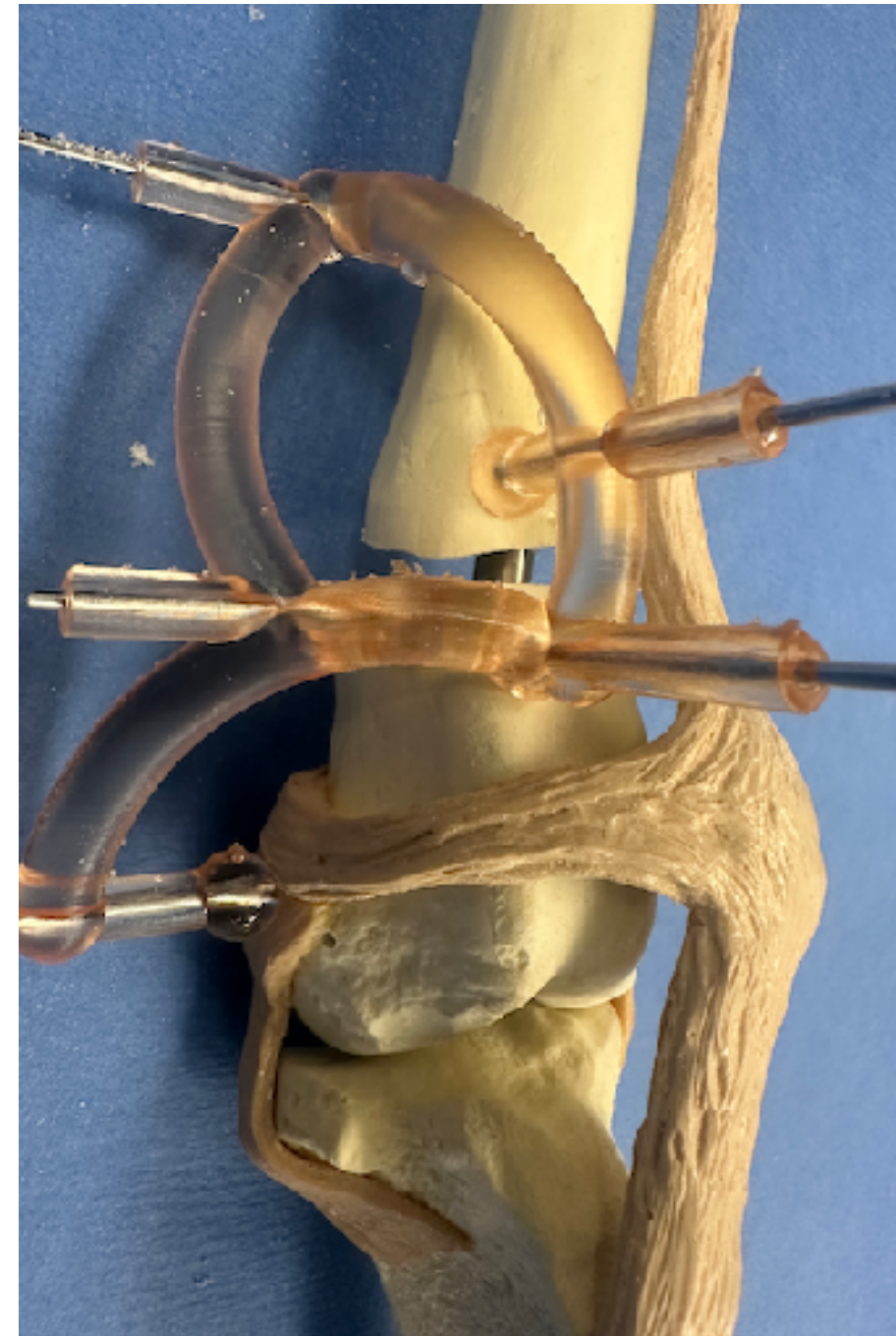
Open canal from
intertrochanteric fossa using
IM pin

Use awl to dilate opening to
accommodate a #7 nail

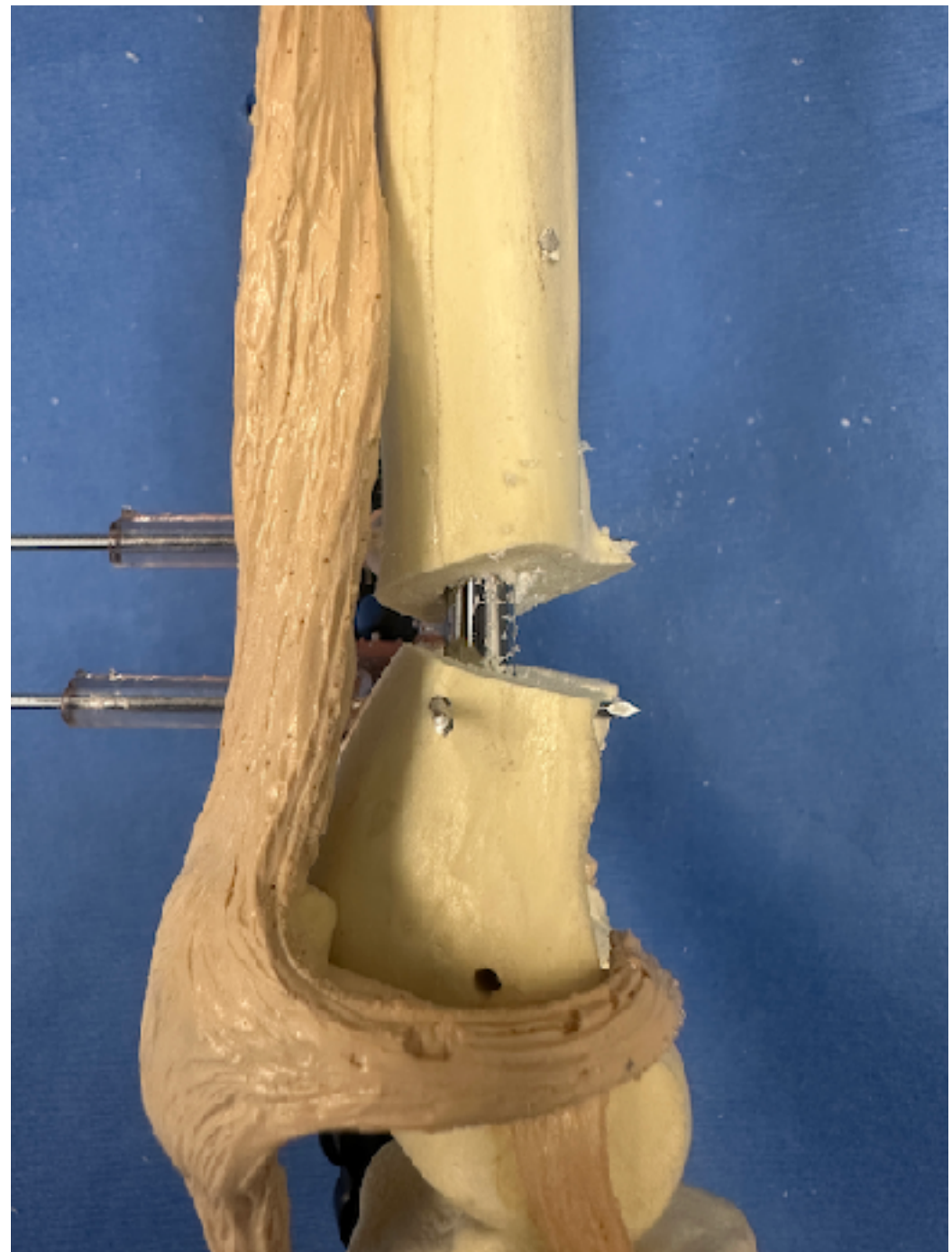


Use #6 trial nail to
further prepare IM
canal

Extend preparation
into distal segment



Trial nail should
bypass divergent
pins



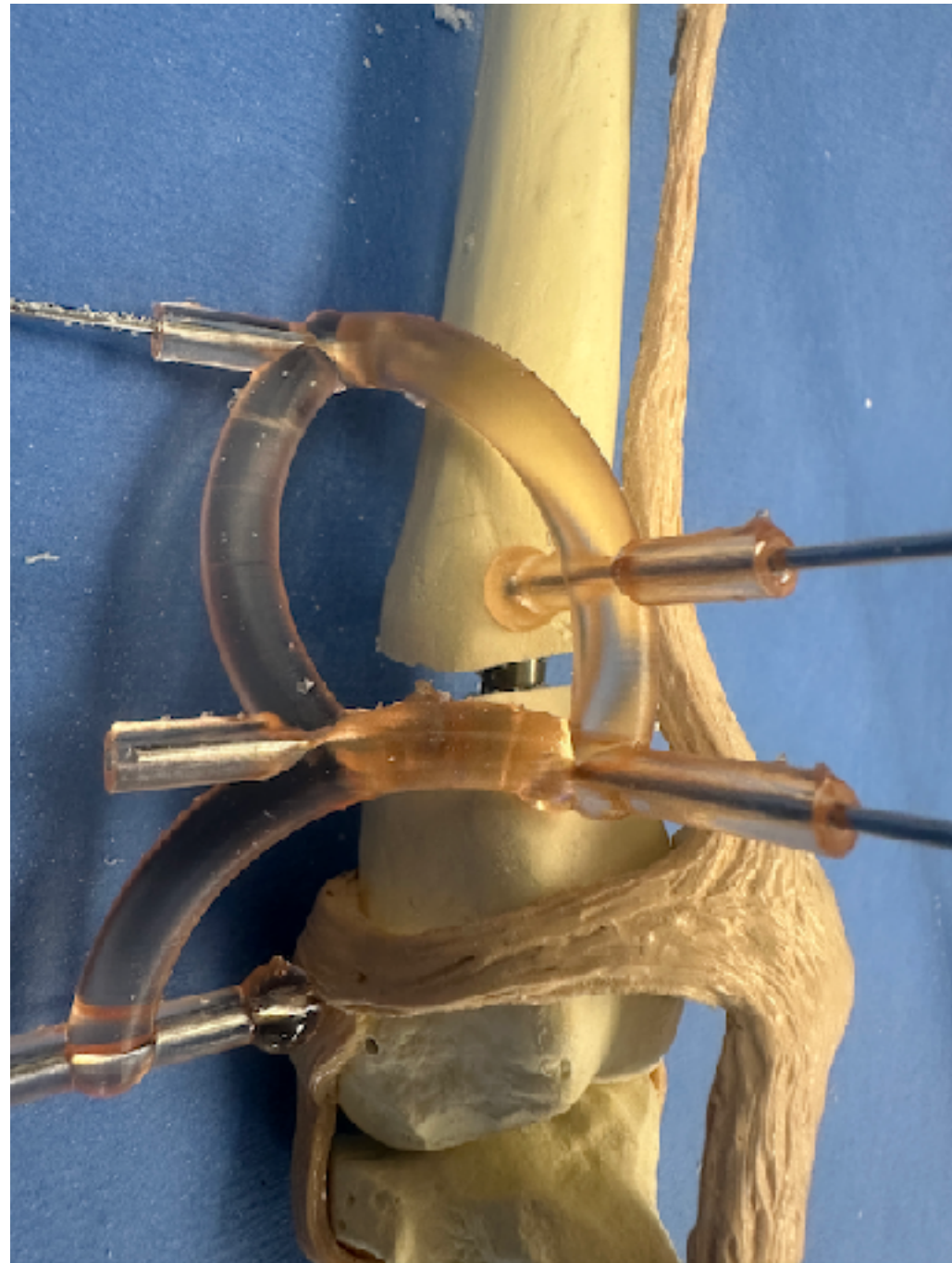
Continue
preparation with
#7 trial nail



Assemble nail on
extension

Ensure that arrows
are aligned

Insert nail



Trim lateral pins to
allow jig placement

Secure jig and proceed
with drilling and bolt
insertion using standard
technique

