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Joint Preservation

Technique Guide

VersiTomic®

PCL Technique



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*The opinions expressed are those of Dr. Rauh
and are not necessarily those of Stryker*

VersiTomic PCL Technique

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Introduction

Surgeons should consider anatomy, scientific evidence and their own experience when deciding to perform this surgery as well as considering single versus double bundle PCL reconstructions.

Arthroscopic Evaluation and Debridement

1. Care is taken to identify the anatomic insertion points of the PCL on both the femur and tibial surfaces.
2. The PCL remnant on the medial wall of the intercondylar notch is debrided arthroscopically.

Note the respective PCL footprints, especially if choosing to perform double bundle reconstructions.

3. Creation of a posteromedial portal is usually helpful. This can be accomplished with spinal needle localization and visualization with a 70° arthroscope through the notch superior to the ACL. A posteromedial cannula is often useful to aid in later insertion and removal of instruments and arthroscope.

Locate tibial PCL footprint and begin to remove the remaining PCL fibers using a combination of shaver, Stryker PCL Curette, and Stryker PCL Liberator/Rasp.

Stryker PCL Liberator/Rasp has 3 functions:

- Liberator with a tapered tip for elevating soft tissue
- Rasp to assist in removal of tissue/bone
- The pin hole located just above the rasp can serve as a pin protector while reaming the tibial tunnel



Tibial Guide Assembly

- a** Unscrew the knob until it is in its final unlock position, press in the button and slide tibial arm into place. Adjust angle and tighten down the knob to the lock position. Squeeze sides of Backstopper and slide over distal aspect of tibial spine into slots.

- b** Pre-chuck the 2.4mm guide pin up to the back of the Backstopper to provide a positive stop when drilling. This is done to assist in preventing over drilling of the tibial pin.

- c** Ensure the pin meets the PCL capture cup.

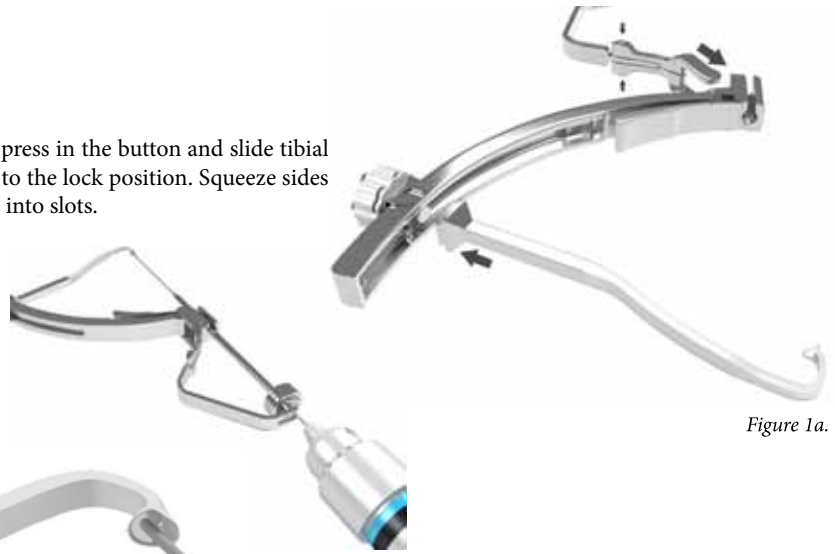


Figure 1a.

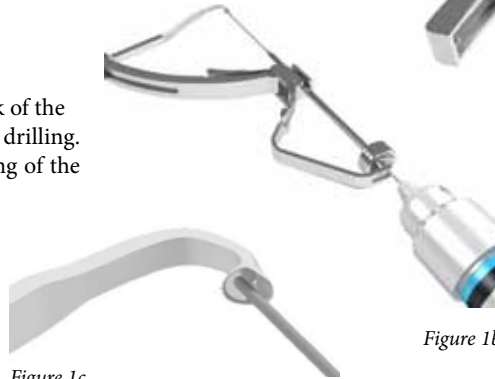


Figure 1b.

Figure 1c.

Tibial Tunnel Guide Placement

1. A 30° arthroscope is placed into the PM portal.
2. Insert the Stryker PCL Tibial Arm into the joint through the AM portal.

Tips:

- Central or AM portal helps to avoid condyles
- Remove bullet entirely when inserting the guide
- Hold upside-down as bringing it into incision, then flip around once inside joint

The guide is designed to accommodate two PCL tibial tunnel insertion sites (based on surgeon preference and specific to each patient's individual anatomy).

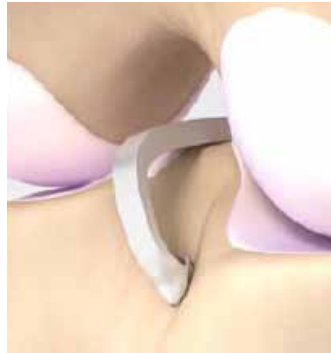
- Posterior View A: within the native PCL footprint
- Posterior View B: approximately 14 mm down the back of the tibia (when bottomed out against tibial plateau)



Figure 2.



Posterior View A



Posterior View B

Tibial Tunnel

Use the pre-chucked 2.4 drill tip guide pin to drill tibial tunnel. Be sure to flip down the Backstopper and drill until the Jacob's Chuck hits the Backstopper, which occurs when the 2.4 guide pin tip should be inside the PCL capture cup. Fluro may be used to monitor/evaluate pin. Drilling should occur with visualization through the PM portal.

Pin Protector

The PCL Tibial Arm is designed to be a pin protector. Tips to prevent advancement of the guide pin through the PCL capture cup window:

- Remove the Bullet and Backstopper
- Drop your hand to capture the guide pin in the 'cup' of the guide, away from the 'window'
- Alternatively, you can use the hole in the Liberator/Rasp as a pin protector.

The position of the guide pin is verified using fluoroscopy. Drill tibial tunnel using appropriate sized Stryker VersiTomc Cannulated Drill. Completion of the tibial tunnel drilling may be done by hand reaming.



Figure 3.

Femoral Tunnel – Outside-In

For the outside-in technique, the PCL Femoral Arm is attached to the tibial spine and inserted into the joint. Laser lines on the femoral arm help to measure distance from the articular cartilage. Care is taken to ensure anatomic tunnel placement whether performing single or double bundle reconstructions.

Make a small incision and advance the guide bolt through medial soft tissues and secure to bone.

Drill the pin from outside – in and advance the reamer over the guide pin.

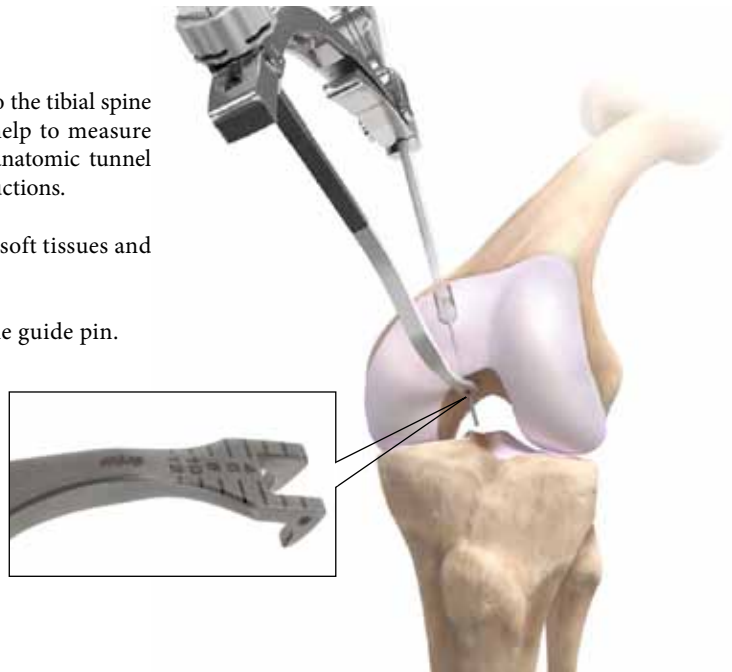


Figure 4.

Graft Passage and Fixation

Use a grasper, 18 gauge wire, or surgical wire to pass a suture loop through the tibial tunnel. Use the suture manipulator or probe to pull the suture through joint space and out the anterolateral portal. Use the eyelet of the femoral pin to pass suture through femoral tunnel. Use passing suture to pass the graft through the tibial tunnel and femoral tunnels.

Graft fixation techniques and implants are surgeon and patient specific based upon implant IFU, patient anatomy, and surgeon preference.

PART NUMBER	DESCRIPTION
234-020-181	Tibial Drill Guide Spine
234-020-182	Tibial Drill Guide Bolt
234-020-126	PCL Tibial Arm
234-020-127	PCL Femoral Arm
234-020-128	PCL Backstopper
234-020-131	PCL Liberator/Rasp
234-020-132	PCL Curette
234-040-050	5.0mm VersiTomic Cannulated Drill
234-040-055	5.5mm VersiTomic Cannulated Drill
234-040-060	6.0mm VersiTomic Cannulated Drill
234-040-065	6.5mm VersiTomic Cannulated Drill
234-040-070	7.0mm VersiTomic Cannulated Drill
234-040-075	7.5mm VersiTomic Cannulated Drill
234-040-080	8.0mm VersiTomic Cannulated Drill
234-040-085	8.5mm VersiTomic Cannulated Drill
234-040-090	9.0mm VersiTomic Cannulated Drill
234-040-095	9.5mm VersiTomic Cannulated Drill
234-040-100	10.0mm VersiTomic Cannulated Drill
234-040-105	10.5mm VersiTomic Cannulated Drill
234-040-110	11.0mm VersiTomic Cannulated Drill
234-040-115	11.5mm VersiTomic Cannulated Drill
234-020-148	5mm Femoral Reamer 3-Fluted
234-020-028	5.5mm Femoral Reamer 3-Fluted
234-020-062	6mm Femoral Reamer 3-Fluted
234-020-029	6.5mm Femoral Reamer 3-Fluted
234-020-061	7mm Femoral Reamer 3-Fluted
234-020-030	7.5mm Femoral Reamer 3-Fluted
234-020-008	8mm Femoral Reamer 3-Fluted
234-020-031	8.5mm Femoral Reamer 3-Fluted
234-020-009	9mm Femoral Reamer 3-Fluted
234-020-032	9.5mm Femoral Reamer 3-Fluted
234-020-010	10mm Femoral Reamer 3-Fluted
234-020-033	10.5mm Femoral Reamer 3-Fluted
234-020-011	11mm Femoral Reamer 3-Fluted
234-020-034	11.5mm Femoral Reamer 3-Fluted
234-020-078	12mm Femoral Reamer 3-Fluted

A surgeon must always rely on his or her own professional clinical judgment when deciding whether to use a particular product when treating a particular patient. Stryker does not dispense medical advice and recommends that surgeons be trained in the use of any particular product before using it in surgery.

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Literature Number: LJPVTPCL-BR Rev. 1
MS/GS 01/12

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