



EndoBlade™ Soft Tissue Release System

Surgical Technique



EndoBlade Soft Tissue Release System

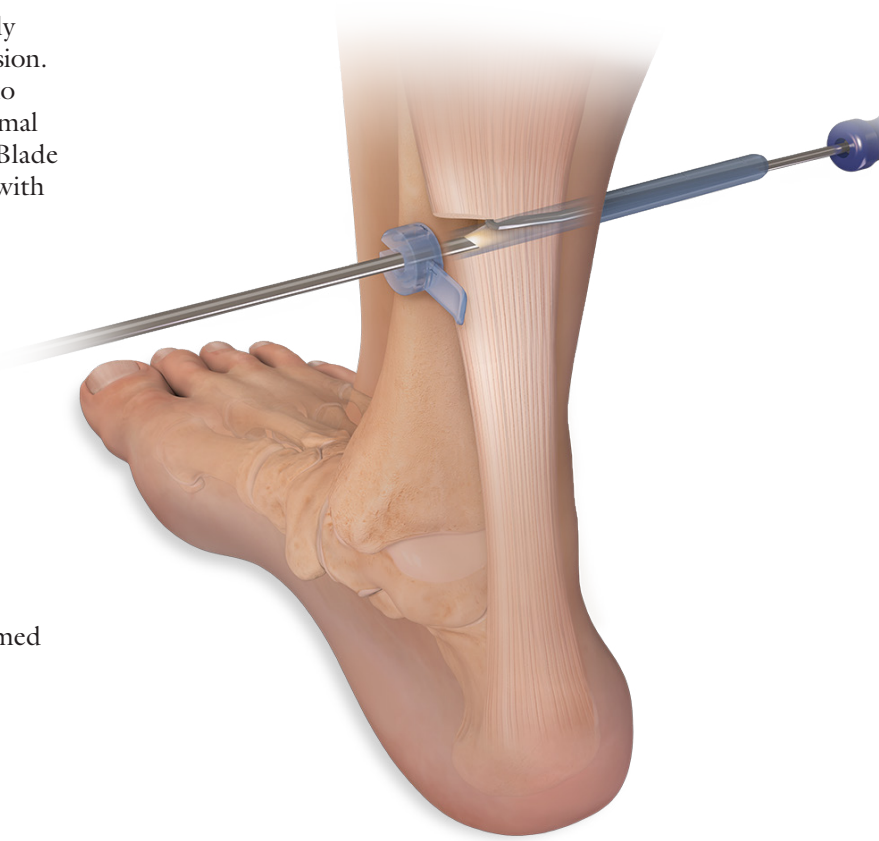
EndoBlade™ Soft Tissue Release System

Endoscopic Gastroc Recession

Arthrex® has developed a comprehensive, completely disposable system for endoscopic gastrocnemius recession. This minimally invasive technique allows surgeons to significantly improve patients' dorsiflexion with minimal morbidity or risk of wound complications. The EndoBlade System is a dual portal technique that is compatible with all 4 mm arthroscopes.

Features

- **All-In-One System**
 - Unique Plane Finder to avoid sural nerve damage
 - Ergonomic single use blades allow for effective release of aponeurosis
 - Optimized cannula length and diameter
 - Transparent cannula for visual feedback
- **Minimally Invasive – two small portal incisions**
 - Minimized pain, scarring and blood loss
 - Allows for immediate weightbearing when performed in isolation*
- **Identify correct endoscopic plane under direct visualization**
- **Compatible with all 4 mm arthroscopes**
 - No fluid irrigation required

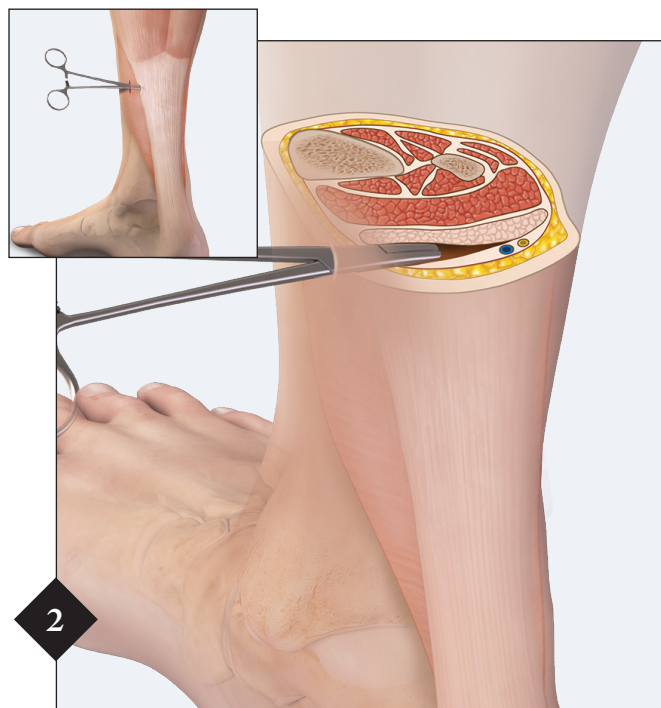


EndoBlade™ Soft Tissue Release System

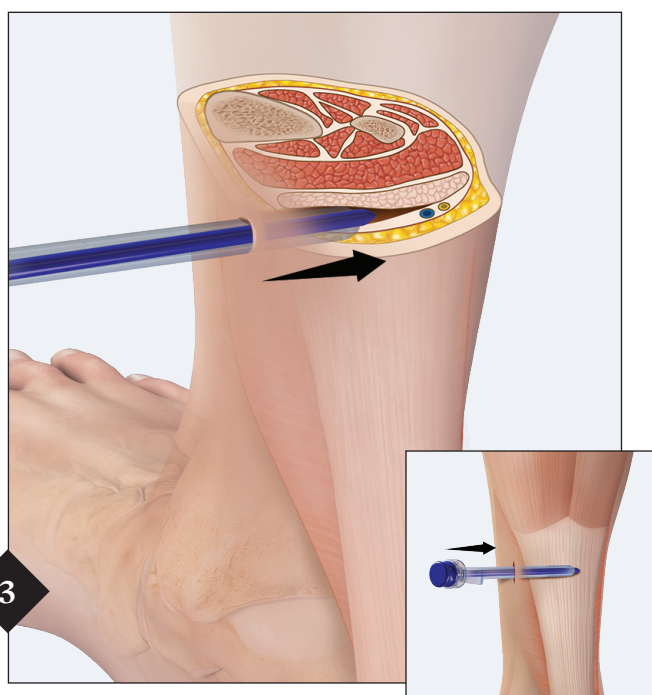
Endoscopic Gastroc Recession



Stabilize the ankle in neutral position against the surgeon's body to put the gastrocnemius tendon under moderate tension. Make a 6 mm medial portal using a scalpel at the location 2 cm distal to the lowest part of the gastrocnemius muscle belly and slightly anterior to the palpable medial border of the gastrocnemius tendon.



Puncture the deep crural fascia using a hemostat. Advance the hemostat into the plane just posterior to the tensioned gastrocnemius tendon. Gently spread the hemostat tips to create a potential space.



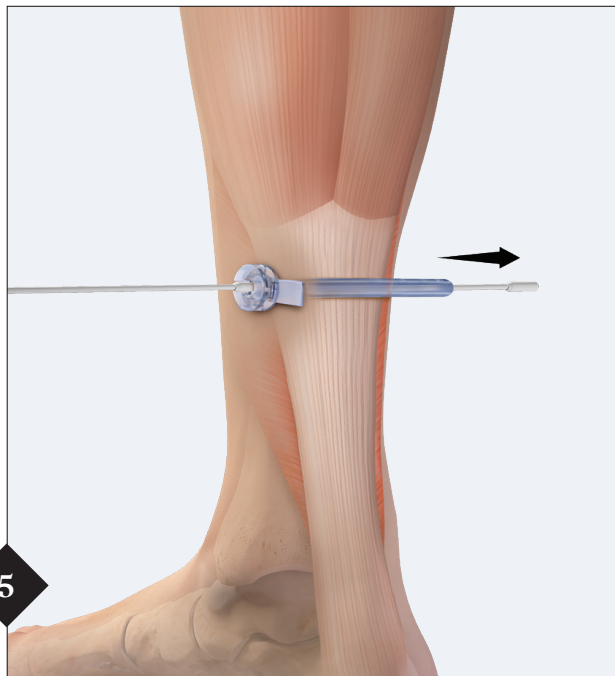
Insert the clear cannula and trocar into the soft tissue plane just posterior to the gastrocnemius tendon but deep to the crural fascia. Use a "Guitar Pick" technique to feel the medial border of the gastrocnemius tendon together with direct palpation posteriorly at the calf to direct the trocar tip into the correct plane. Avoid anterior insertion into soleus muscle bellies as the entire cannula should be directly palpable in the subcutaneous plane of the posterior calf. Relax the dorsiflexion force from the surgeon's body while advancing the cannula laterally. Palpate for the sural nerve commonly located posterior to the lateral third of the cannula.



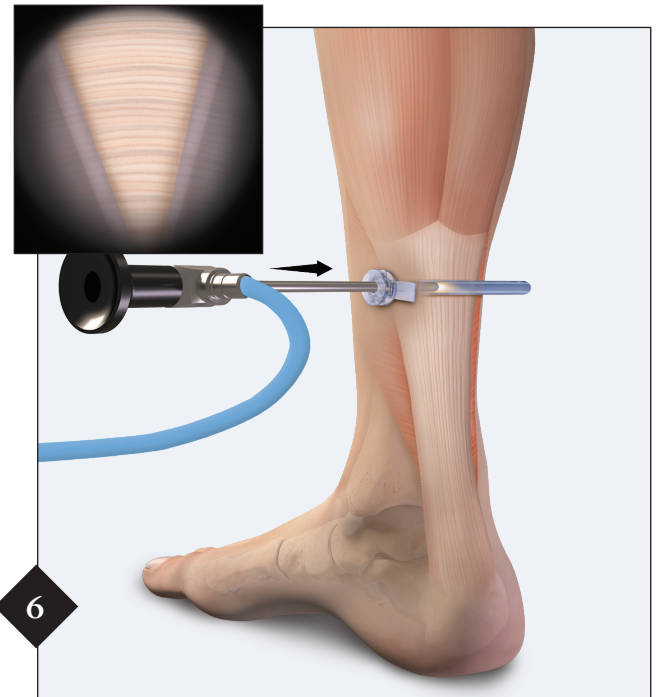
Make a 6 mm lateral portal over the tip of the trocar and advance the cannula out through the skin.

EndoBlade™ Soft Tissue Release System

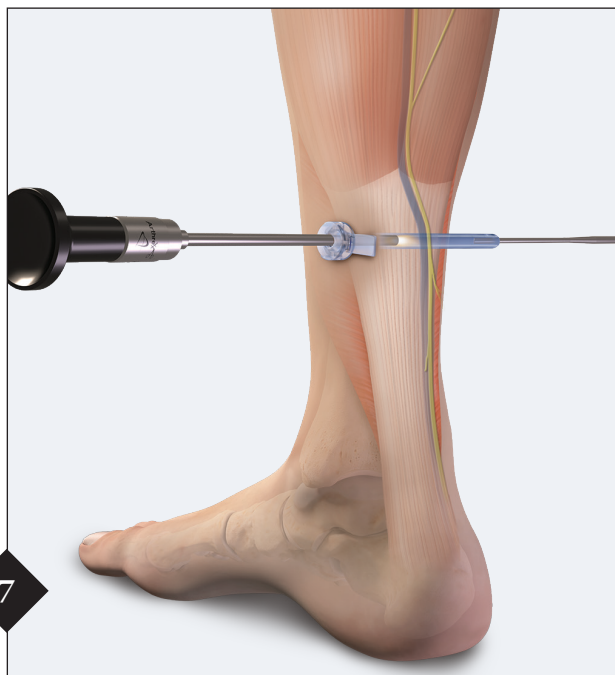
Endoscopic Gastroc Recession



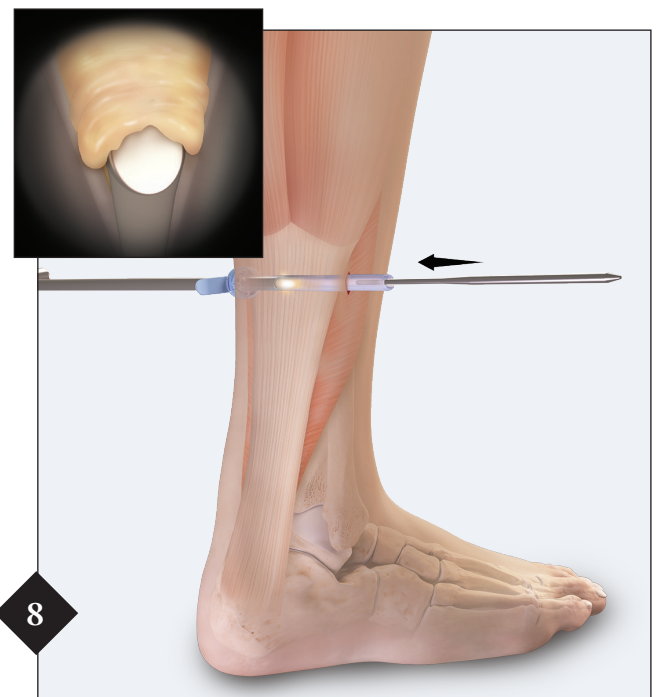
Remove the trocar and clean the inside of the cannula using the cotton swabs.



Adjust the cannula so that the opening slot is facing directly superior or the thumb tab pointing directly inferior. Insert a 4 mm 30 degree arthroscope into the cannula and look directly toward the opening slot. Confirm the correct plane of insertion by observing the gastrocnemius tendon fibers anteriorly. If muscle bellies are visualized, the cannula was inserted too anteriorly into the soleus. Carefully retract the cannula under direct visualization until the tip of the cannula is in the correct plane; then advance the cannula through the lateral portal.



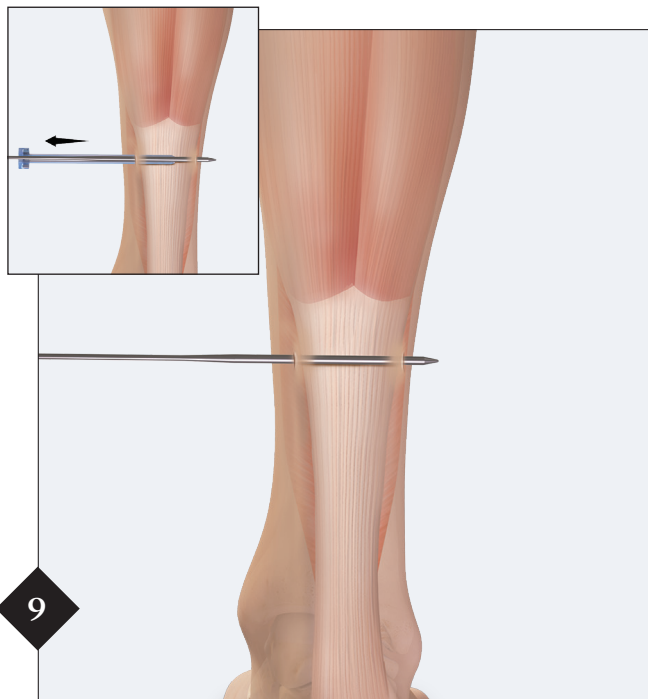
In some instances the sural nerve and saphenous vein can be directly visualized through the clear cannula. Aim the camera viewing directly posterior to visualize the structures. This too confirms appropriate placement and that these structures will not be damaged during recession.



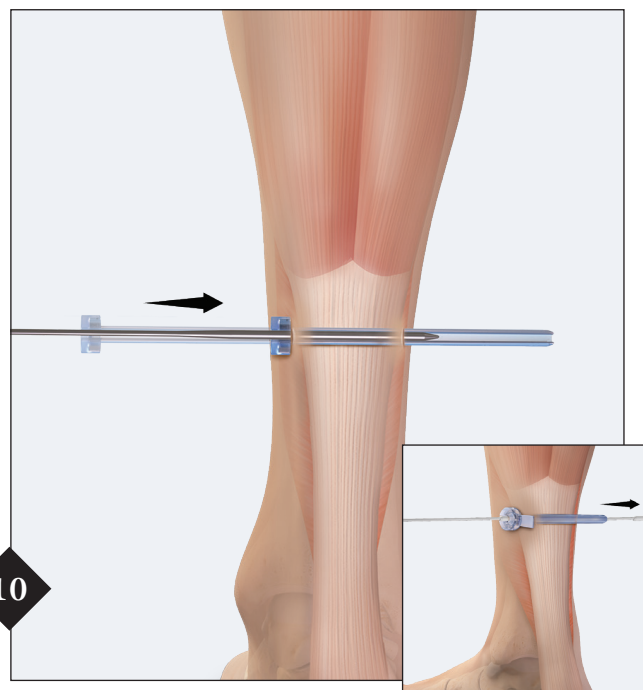
Optional: If the gastrocnemius tendon is clearly observed without interposed soft tissue, continue with step 11 on the following page. If crural fascia or sural nerve is observed overlying the gastrocnemius tendon, use the Plane Finder under direct visualization from the lateral portal to dissect into the correct plane.

EndoBlade™ Soft Tissue Release System

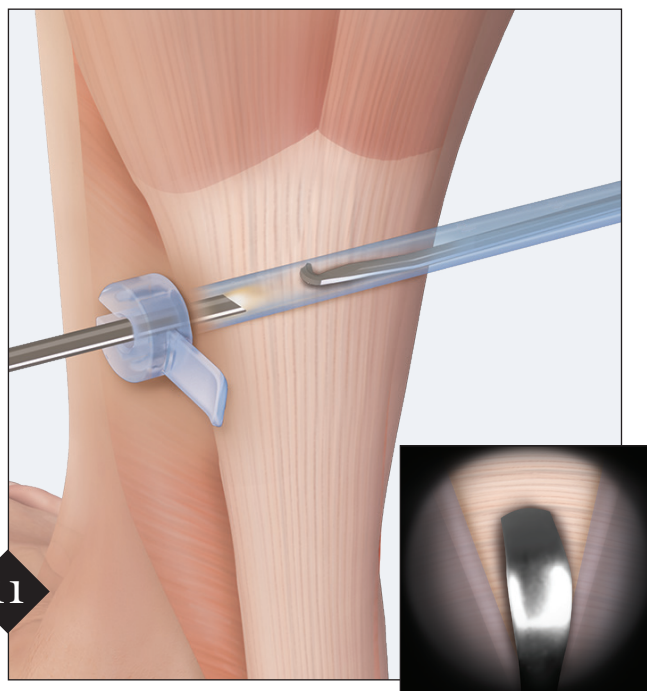
Endoscopic Gastroc Recession



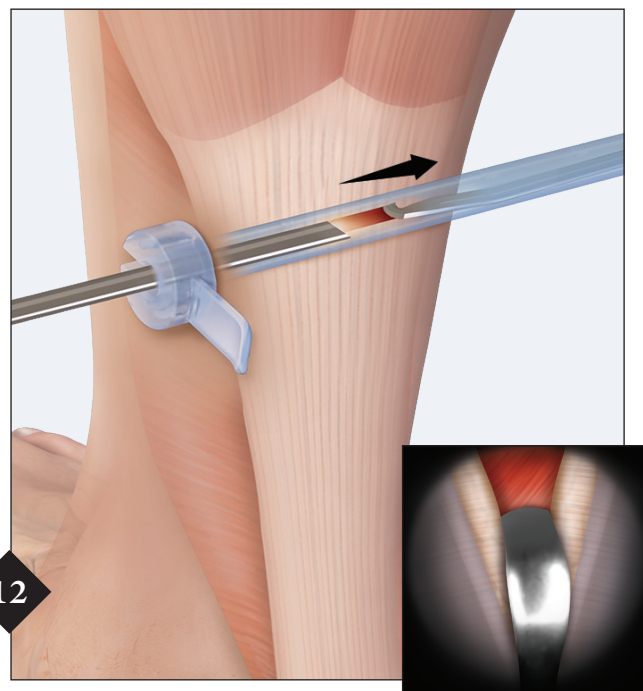
Optional – Insertion of Plane Finder: Advance the Plane Finder medially until the tip exits from the medial portal and the cannula is removed. Advance the Plane Finder further medially until the thicker portion of it shows just outside the medial portal.



Optional: Reinsert the cannula over the Plane Finder into the correct plane directly against the gastrocnemius tendon, meaning the thumb pad is aimed superiorly. Remove the Plane Finder and clean the inside of the cannula using cotton-tipped applicators.



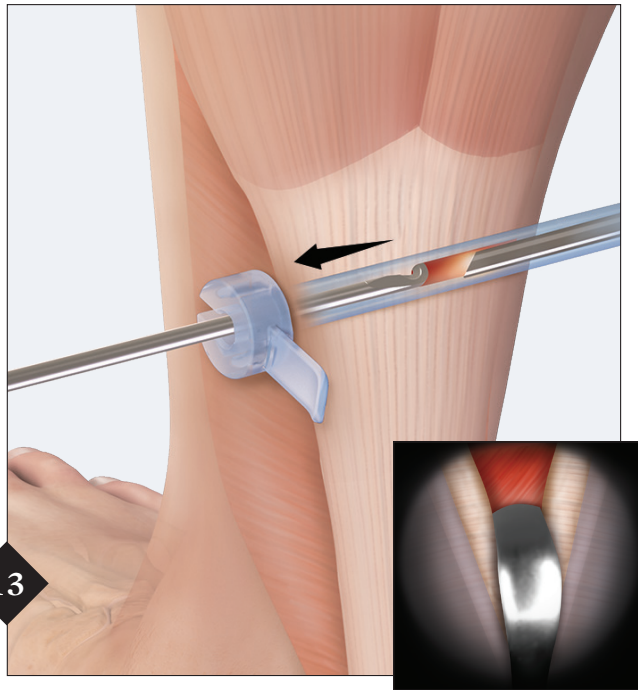
Insert a hook knife from the lateral portal. Maintain moderate tension of the tendon by leaning against the sole of foot.



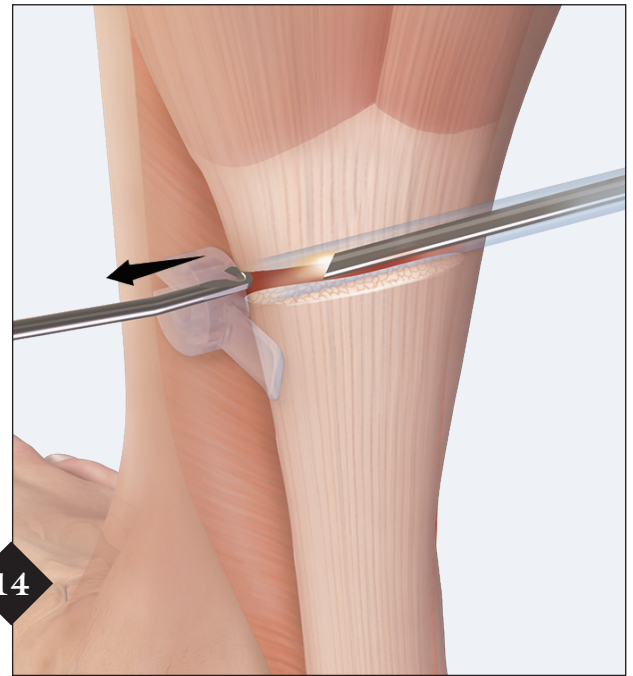
Cut the gastrocnemius tendon from midline until the most lateral border is released.

EndoBlade™ Soft Tissue Release System

Endoscopic Gastroc Recession



Switch the camera to lateral portal and complete the gastrocnemius tendon release from midline until the most medial border is released.



Optional: Use the curved hook knife to reach further anteriorly for the most medial part of the tendon if needed.



Observe underlying soleus muscle along the entire length of opening slot to confirm the complete release.



Manipulate the ankle into 15 degrees of dorsiflexion. Observe the improved range of motion and the decrease in passive tension of the gastrosoleus.

EndoBlade™ Soft Tissue Release System

Endoscopic Plantar Fascia Release

Arthrex® has also developed a comprehensive, completely disposable system for endoscopic plantar fascia release. This minimally invasive technique allows surgeons to safely and effectively resect the plantar fascia through two small 1 cm incisions. The EndoBlade system is a dual portal technique that is compatible with all 2.7 and 4.0 mm arthroscopes.

Features

- **All-In-One System**
 - Ergonomic single use blades allow for effective release of plantar fascia
 - EndoBlade Rasp makes for quick removal of fatty tissue affecting visualization
 - Optimized cannula length and diameter
 - Transparent cannula for visual feedback
- **Minimally Invasive – two small portal incisions**
- **Identify correct endoscopic plane under direct visualization**
- **Compatible with all 4 mm arthroscopes**
 - No fluid irrigation required



EndoBlade™ Soft Tissue Release System

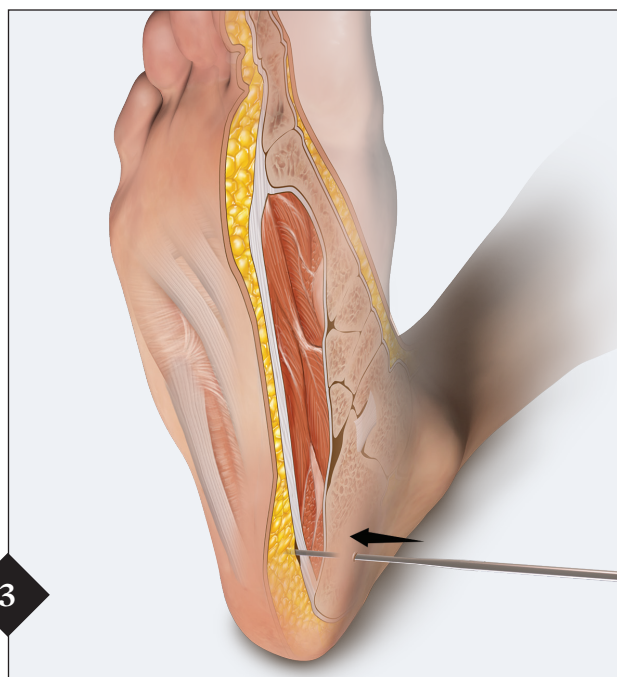
Endoscopic Plantar Fascia Release



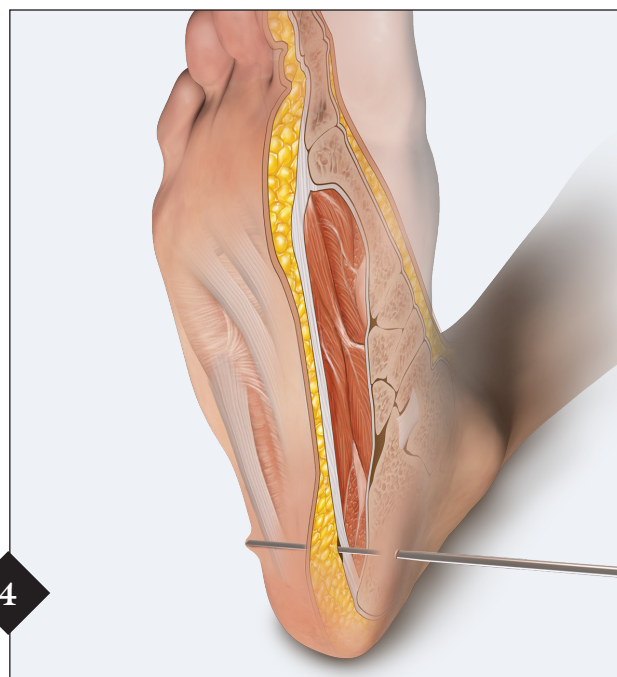
A small 0.5 cm incision is made approximately 1.5 cm from the plantar skin and slightly anterior to the medial calcaneal tubercle. This medial portal is typically aligned with the posterior border of the distal tibia.



A blunt instrument such as a hemostat, is inserted to correctly identify the proper plane. This should be directly inferior to the plantar fascia. Care should be taken to avoid penetration of the fascia itself.



The Plane Finder instrument is inserted through the medial incision and carefully directed laterally while advancing in the plane inferior to the plantar fascia.



Advancement of the Plane Finder continues until tenting of the lateral skin is noted. This typically is 1.5-2.0 cm inferior to the course of the sural nerve.

EndoBlade™ Soft Tissue Release System

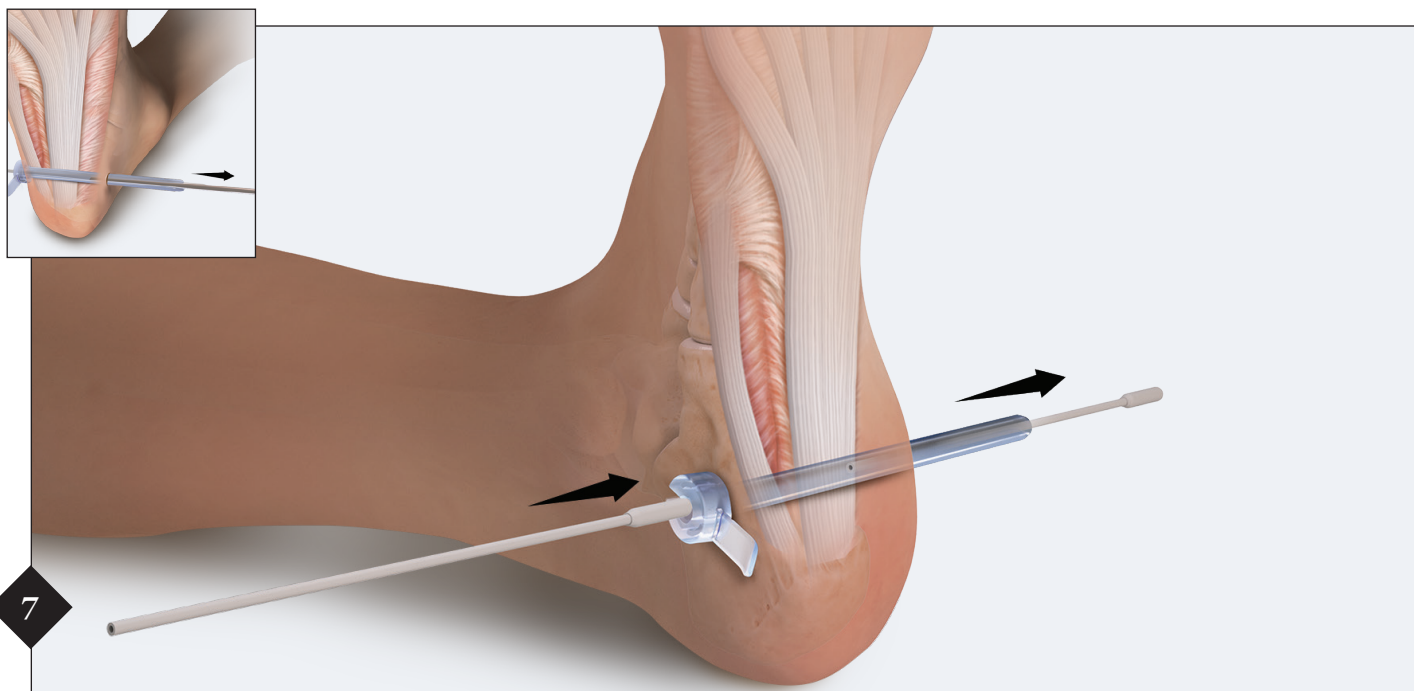
Endoscopic Plantar Fascia Release



A small incision on the lateral heel is made to allow exit of the Plane Finder. This creates a lateral portal for the endoscope to be inserted in the correct plane.



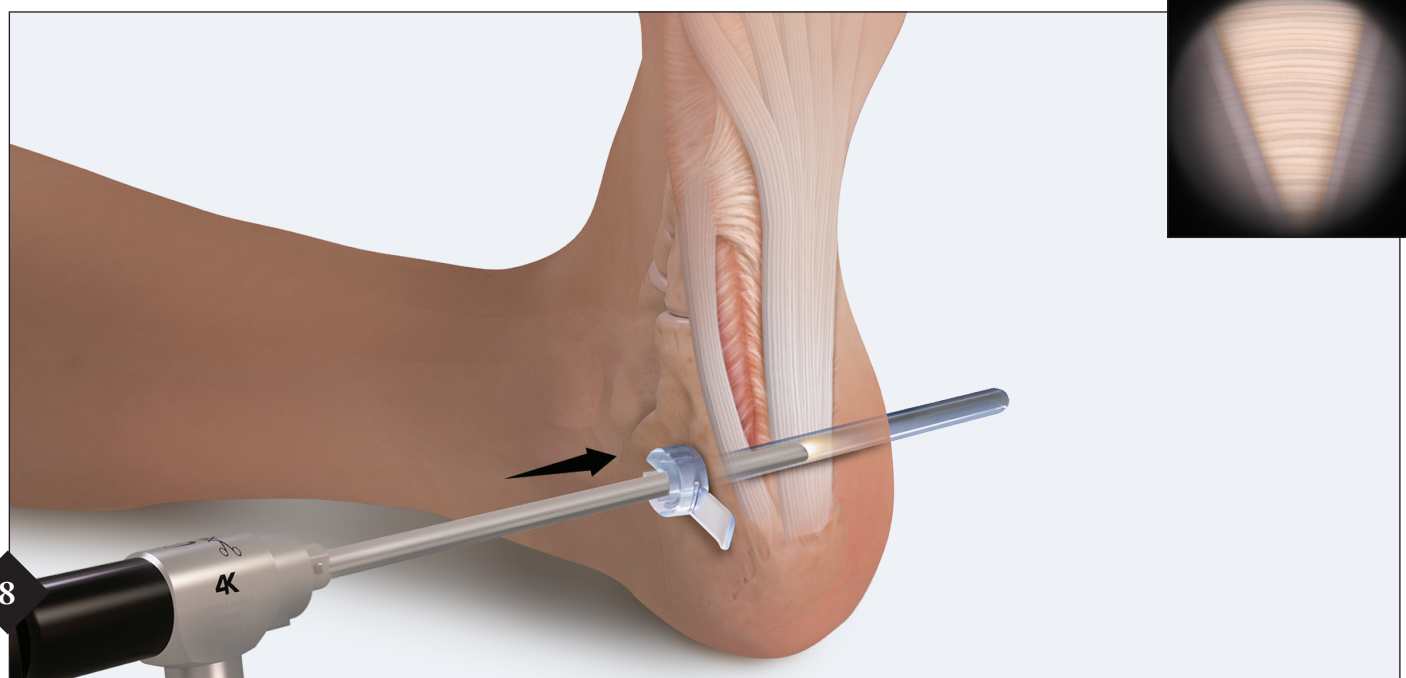
The clear cannula is inserted into the lateral portal over the Plane Finder to maintain position in the proper plane. The cannula is advanced until the flange is in close approximation to the lateral heel. The flange is rotated plantarly to orient the cannula slot superiorly allowing access to the plantar fascia.



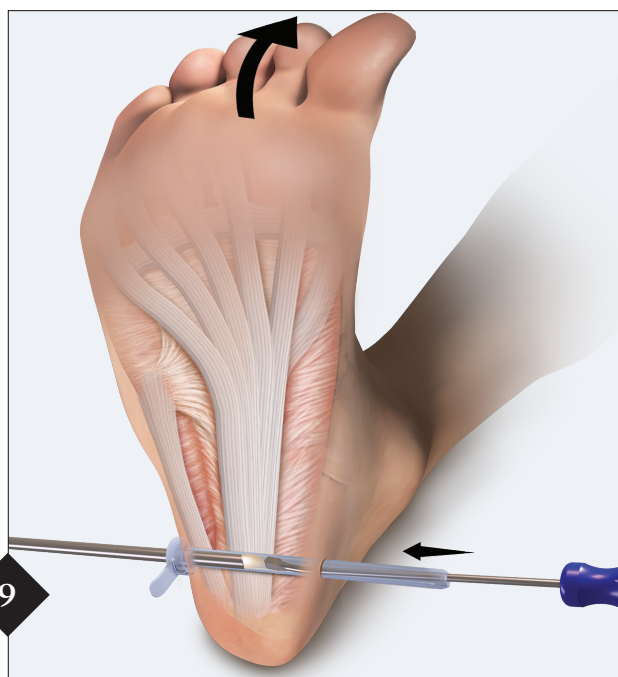
The Plane Finder is then removed. Several cotton swabs are then passed from a lateral to medial direction helping to clear the cannula of any soft tissue which may be impeding visualization.

EndoBlade™ Soft Tissue Release System

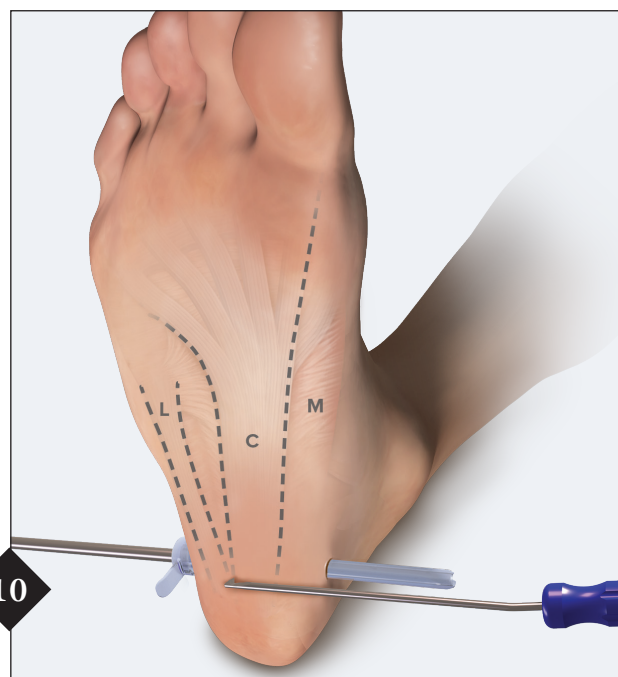
Endoscopic Plantar Fascia Release



A 4 mm 30 degree arthroscope is introduced into the lateral portal via the cannula. At this point, the fascia should be readily visualized.



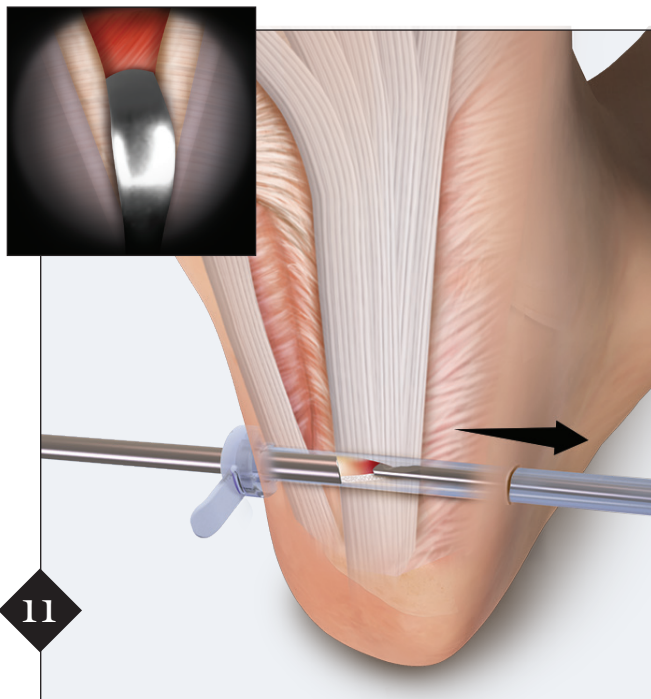
The soft tissue rasp is introduced into the medial portal and used to remove any remaining soft tissue from the field. It is helpful to start on the lateral portion of the fascia and pull medially while applying pressure until the fibers of the plantar fascia are fully visible. Utilize the windlass mechanism by extending the digits to create tension in the plantar fascia and the surrounding tissues.



The blade is then positioned external to the cannula on the plantar aspect of the foot and held in position simulating the desired amount of the plantar fascia to be released. It is helpful for the surgeon to place their thumb on the shaft of the blade directly at the tip of the cannula medially. As the blade is introduced into the cannula the thumb acts as a manual stop helping to release only the desired amount.

EndoBlade™ Soft Tissue Release System

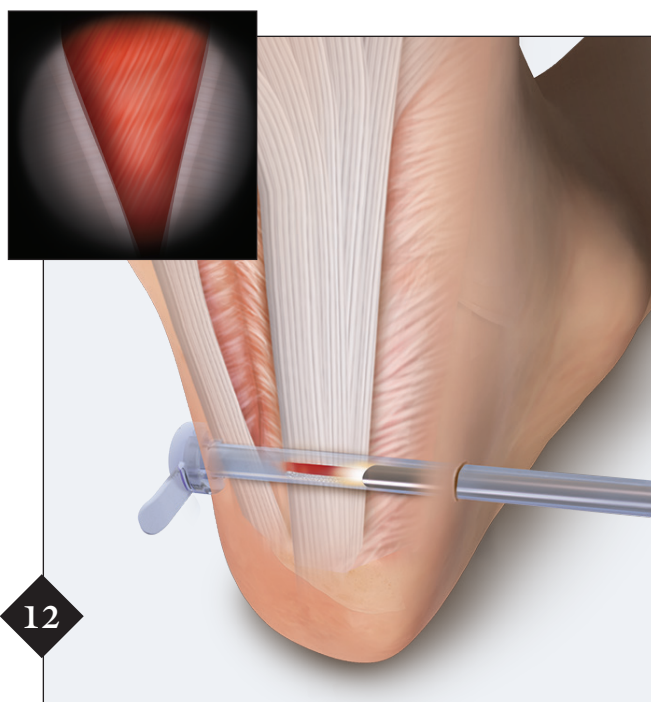
Endoscopic Plantar Fascia Release



The cutting blade is then introduced into the medial portal and while applying upward pressure the plantar fascia is released. Elicit the windlass mechanism again as the release is being made.

Ordering Information

EndoBlade Endoscopic Gastroc Recession System	AR-8855DS
EndoBlade Endoscopic Plantar Fascia Release System	AR-8856DS



The endoscope is again used to visualize the underlying intrinsic musculature confirming a full thickness release has been completed. Residual fibers of the medial band or abductor fascia may remain and need to be released.



The wound is irrigated and closure is completed with sutures.

This description of technique is provided as an educational tool and clinical aid to assist properly licensed medical professionals in the usage of specific Arthrex products. As part of this professional usage, the medical professional must use their professional judgment in making any final determinations in product usage and technique. In doing so, the medical professional should rely on their own training and experience and should conduct a thorough review of pertinent medical literature and the product's Directions For Use.



View U.S. patent information at www.arthrex.com/corporate/virtual-patent-marking

©2017, Arthrex Inc. All rights reserved. LT1-00057-EN_A