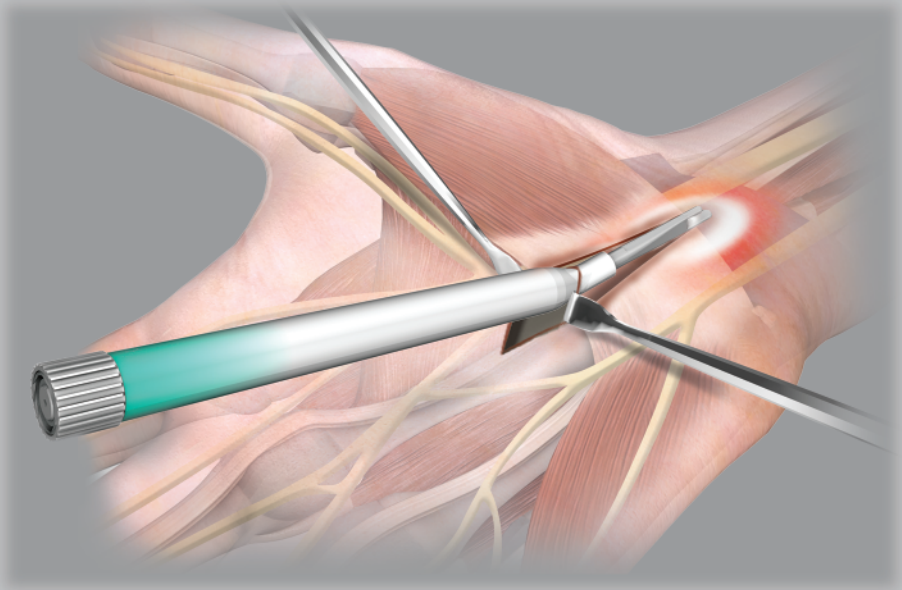
Hand & Wrist

stryker

KnifeLight
Carpal Tunnel Ligament Release

Operative Technique



Hand & Wrist

KnifeLight System

This publication sets forth detailed recommended procedures for using Stryker devices and instruments.

It offers guidance that you should heed, but, as with any such technical guide, each surgeon must consider the particular needs of each patient and make appropriate adjustments when and as required.

A workshop training is recommended prior to first surgery.
Follow the instructions provided in our cleaning and sterilization guide (L24002000). All non-sterile devices must be cleaned and sterilized before use. Multi-component instruments must be disassembled for cleaning. Please refer to the corresponding assembly/ disassembly instructions.

Please remember that the compatibility of different product systems have not been tested unless specified otherwise in the product labeling.

See Instructions for Use (package insert) (V15143 and V15142) for a complete list of potential adverse effects, contraindications, warnings and precautions. The surgeon must discuss all relevant risks including the finite lifetime of the device with the patient when necessary.

Indications & Contraindications

Intended Use and Indications

The Stryker Knifelight is a manual surgical instrument used for the release of the carpal tunnel ligament. It features an integrated light source to illuminate the surgical site which allows for a minimally open technique with minimal disturbance of surrounding tissue.

Contraindications

- Tissue adhesion in the carpal tunnel area which may potentially compromise the safe and precise separation of the carpal ligament
- Past infection in the area of the carpal tunnel
- Previous surgical procedure in the area of the carpal tunnel, particularly a previously split carpal ligament with persistent symptoms
- Previous fracture in the area of the carpus or the distal forearm
- Skeletal deformity of the hand caused by rheumatoid arthritis
- Distinct median nerve dysfunction which requires microsurgical epineurolysis
- Nerve damage which is not caused by a compression syndrome in the area of the carpal tunnel
- Moreover, the product is subject to the following general contraindications and limitations:
- Acute or suspected infection of the hand
- Compromized vascular flow (e.g. Raynaud's syndrome)

Operative Technique – Antegrade Approach

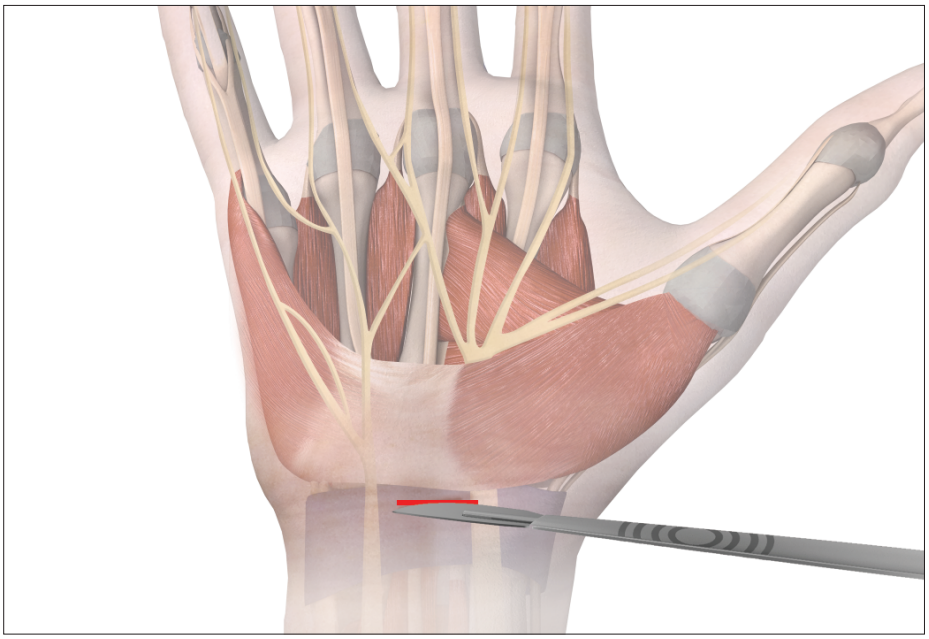
Minimal invasive carpal tunnel release of carpal channel

Step 1 – Landmarks and Incision

The procedure is performed with the patient supine and the operative hand supported on a hand table. It is usually performed under local anesthesia, however, surgeon preference dictates the type of anesthetic used. The hand is prepped and draped sterilely. A forearm or upper arm tourniquet is used to control bleeding.

Place the hand in extension on a dorsal wrist support and identify the proximal part of the transverse carpal ligament.

A transverse skin incision of 1-2 cm is made at the proximal palmar wrist crease.



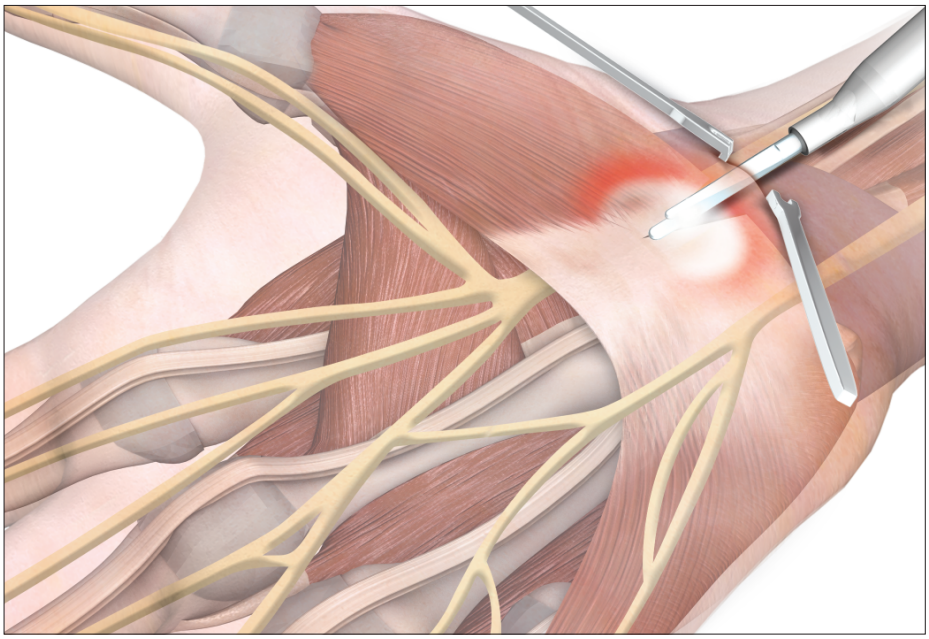
Step 2 – Dissection

Dissect the antebrachial fascia just ulnar to the Palmaris longus tendon and expose the Median nerve proximally to its admittance to the Carpal Tunnel. A scissors-dissector with a blunt-atraumatic tip is inserted specifically to the carpal ligament to dissect aponeurotic tissues.

Operative Technique – Antegrade Approach

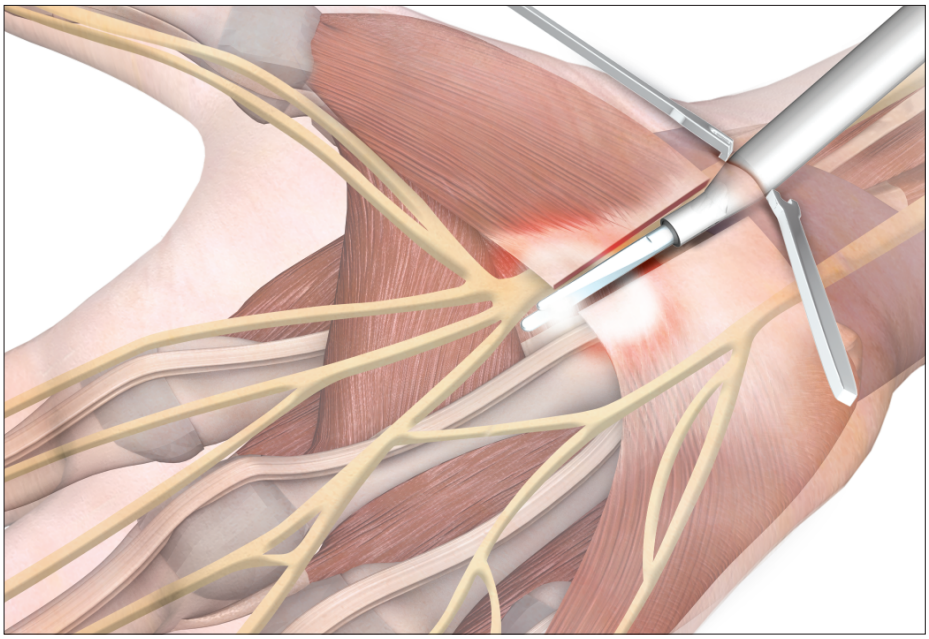
Step 3 – KnifeLight Insertion

Illuminate the KnifeLight and the area, keep the transverse carpal ligament between the two short and longer protective protruding edges of the tip with the longer skid deep into the ligament aiming distally toward the third interdigital crease.



Step 4 – Release of Carpal Ligament

Gently push the KnifeLight forward in a continuous way aiming distally toward the third interdigital crease until the ligament is completely divided. A spot light will become visible under the skin in the palmar region. A probe or a blunt dissector is inserted into the carpal tunnel to make sure the carpal tunnel is completely decompressed.

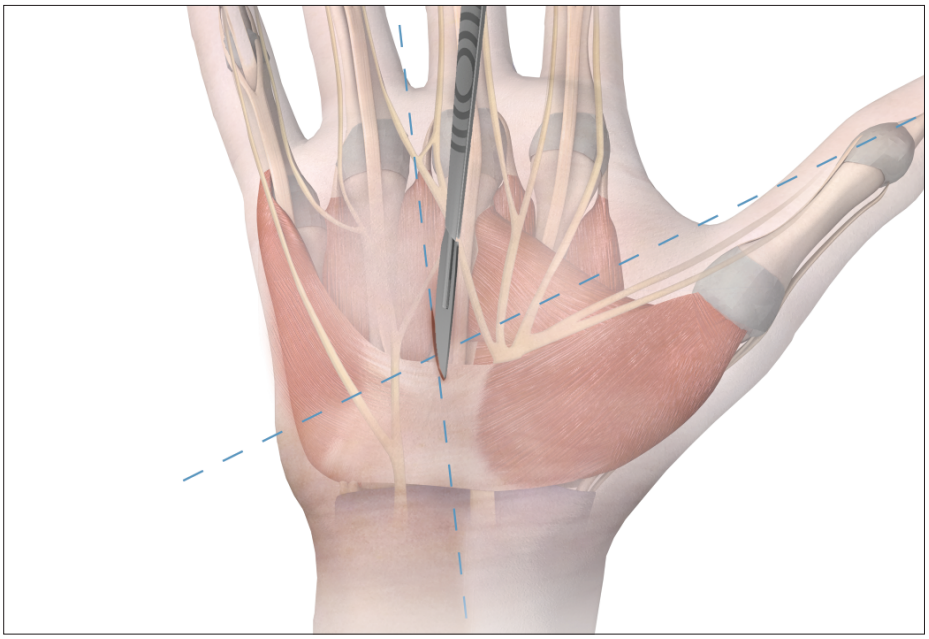


Operative Technique – Retrograde Approach

Minimal invasive carpal tunnel release of carpal channel

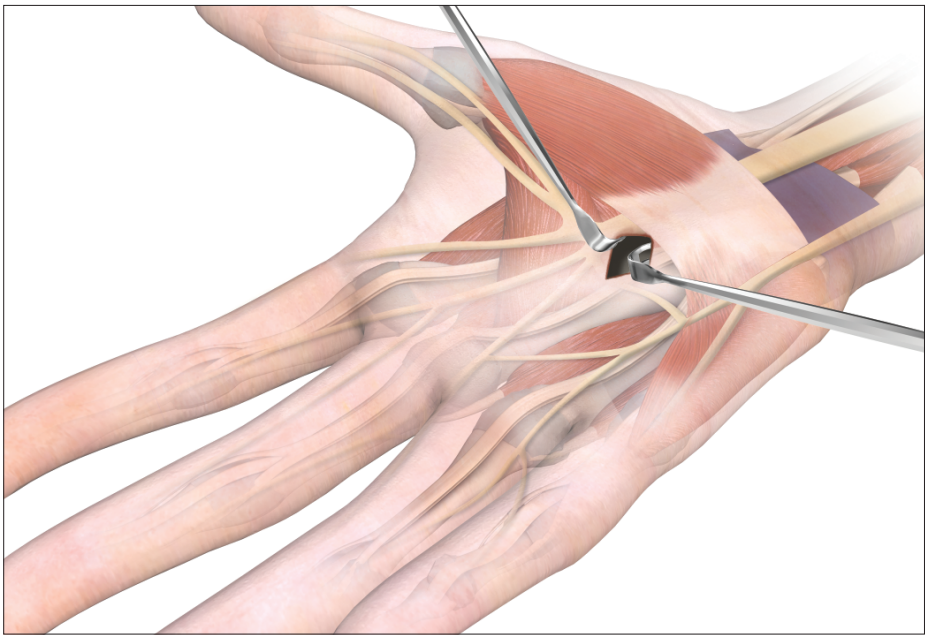
Step 1 – Landmarks and Incision

The procedure is performed with the patient supine and the operative hand supported on a hand table. It is usually performed under local anesthesia, however, surgeon preference dictates the type of anesthetic used. The hand is prepped and draped sterilely. A forearm or upper arm tourniquet is used to control bleeding. An incision is made at the junction of Kaplan's line and the radial border of the ring finger. This places the incision of the distal end of the transverse carpal ligament (TCL).



Step 2 – Dissection

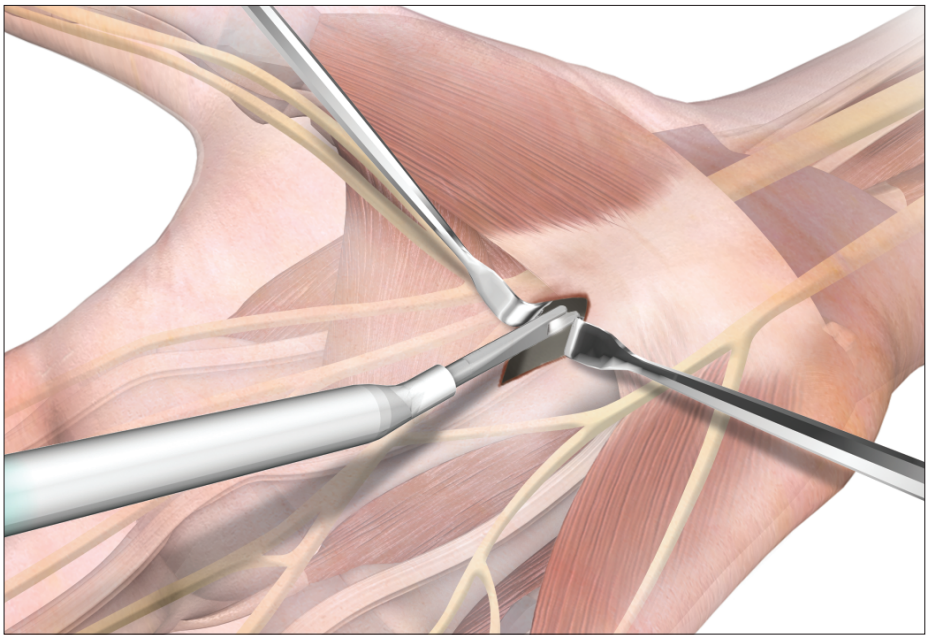
Deeper dissection is facilitated using small hand-held or self retaining retractors. Proximally placed Ragnell retractors retract subcutaneous fatty tissue. Under direct visualization, the distal end of the TCL is divided exposing the contents of the carpal canal.



Operative Technique – Retrograde Approach

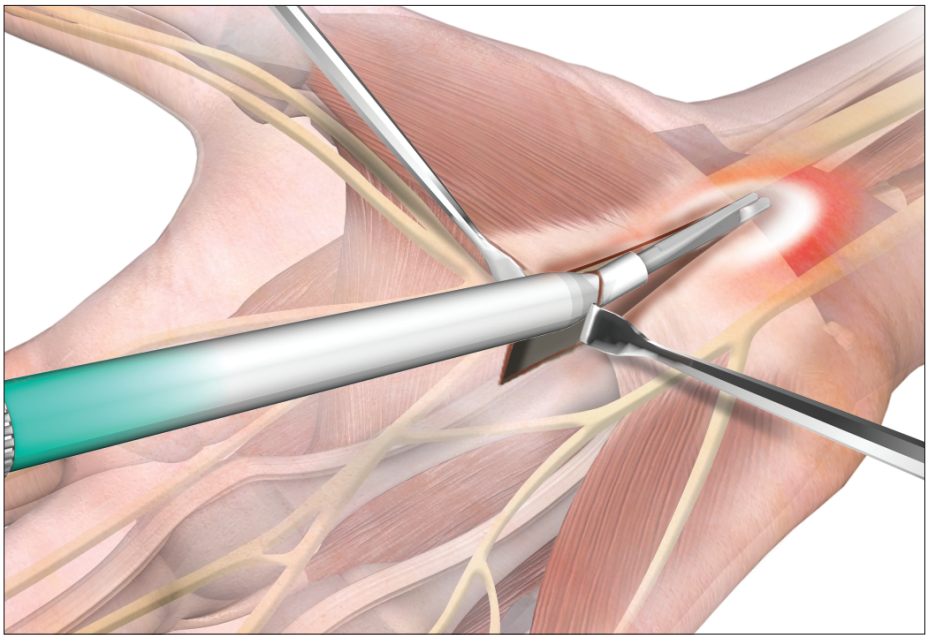
Step 3 – KnifeLight Insertion

A hemostat is used to bluntly clean the contents of the canal from the under-surface of the ligament. Illuminate the KnifeLight and the area, keep the transverse carpal ligament between the two short and longer protective pro-truding edges of the tip with the longer skid deep into the ligament aiming proximally.



Step 4 – Release of Carpal Ligament

The KnifeLight is advanced proximally enabling the KnifeLight blade to engage the TCL. Gentle continual forward pressure is applied as the blade transects the ligament. There should be mini-mal resistance encountered. Forceful advancement of the KnifeLight is not recommended. At no time should the KnifeLight be retracted distally and re-advanced as this greatly increases the chance of accidentally transecting vital structures.



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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.

The information presented is intended to demonstrate the breadth of Stryker product offerings. A surgeon must always refer to the package insert, product label and/or instructions for use before using any Stryker product. Products may not be available in all markets because product availability is subject to the regulatory and/or medical practices in individual markets. Please contact your Stryker representative if you have questions about the availability of Stryker products in your area.

The products listed above are CE marked.

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