KnifeLight
Carpal Tunnel Ligament Release

Operative Technique
This publication sets forth detailed recommended procedures for using Stryker Osteosynthesis 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 required prior to first surgery.

See package insert 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.
Features & Benefits

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
• Compromised vascular flow (e.g. Raynaud’s syndrome)

Features & Benefits

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.

• Minimally open, non-endoscopic, approach to Carpal Tunnel Ligament Release
• 1 - 2cm incision
• Illuminates ligament and surrounding landmarks
• Cutting blade is isolated from the surrounding anatomy to help avoid unintentional damage
• Smooth tip protects nerves
• Can be performed in the O.R., surgery center, or office under local anaesthesia
• Suitable for most CTLR procedural techniques
• No capital equipment required
• Packaged sterile as a single use instrument
• Up to 5 minutes uninterrupted illumination
Operative Technique

Minimal invasive carpal tunnel release of carpal channel

Antegrade Approach

**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 steriley. 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 it’s admittance to the Carpal Tunnel. A scissors-dissector with a blunt-atraumatic tip is inserted specifically to the carpal ligament to dissect aponeurotic tissues.
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

Minimal invasive carpal tunnel release of carpal channel

Retrograde Approach

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 steriley. 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.
Step 3 – KnifeLight Insertion
A hemostat is used to bluntly clean the contents of the canal from the undersurface of the ligament. The KnifeLight is then introduced with the upper and lower portions straddling the partially divided TCL.

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 minimal 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.
### Ordering Information

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<thead>
<tr>
<th>REF</th>
<th>Description</th>
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<tbody>
<tr>
<td>3300-001-000</td>
<td>KnifeLight - Packaged Individually 10 packages/box*</td>
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- **Tip Dimensions**
  - Height: 6.3mm
  - Width: 4.1mm
<table>
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<tr>
<td><strong>VariAx - Distal Radius System</strong></td>
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