

## AN ALTERNATIVE METHOD

1. No pre-placement of sutures is needed but placement of four *short absorbable sutures on the borders of the mesh* allows easy grasping of the mesh for manipulation.
2. The long axis and the center of the mesh are marked prior to insertion of the mesh into the abdomen.
3. A single T-ANCHOR\* is placed percutaneously and through the mesh to anchor the upper end of the mesh. Then another T-ANCHOR\* is placed percutaneously and through the mesh to similarly anchor the lower end of the mesh.
4. The mesh is pulled up to the abdominal wall by pulling on the T-ANCHOR\* sutures. This allows the mesh to be centered on the hernia defect.
5. The intra-abdominal pressure is lowered and the mesh is stapled / tacked.
6. Additional Kumar T-ANCHORS™\* are placed at the site of the single T-ANCHORS\* and then in pairs to secure proper *transfascial fixation* to the prosthetic mesh as shown in figures inside.
7. The needle is so designed that it does not peel the mesh away from the abdominal wall during this step.
8. If re-positioning of a fired T-ANCHOR\* is necessary, it can be removed with a grasper introduced into the abdominal cavity, preferably through the 10 mm port.

**Please Read the Detailed Instructions For Use prior to using this device.**

EACH Kumar T-ANCHORS™ HERNIA SET PROVIDES 8 T-ANCHORS TO FORM 4 TRANS-FASCIAL SUTURES

**FREE SAMPLE**

Available Upon Request

[www.NashvilleSurg.com](http://www.NashvilleSurg.com)

Ph: 615-382-4996

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## Frequently Asked Questions

1. **Is it necessary to tack the Mesh if the Kumar T-ANCHORS™\* are used?**  
Yes. The Kumar T-ANCHORS™\* provide Trans-fascial Suture Fixation of the Mesh *in addition* to staplers / tackers.
2. **Do the Kumar T-ANCHORS™\* increase post-operative pain?**  
It appears that the Kumar T-ANCHORS™\* cause less post-operative pain than conventional sutures because these do not form a complete circle around the tissues.
3. **Can the Kumar T-ANCHORS™\* cause Nerve Entrapment?**  
This is avoided by placement of each pair of T-ANCHORS\* parallel to the expected course of the nerves. Also, as described above, complete nerve entrapment is avoided because T-ANCHORS\* do not form a complete circle.
4. **What if a T-ANCHOR\* breaks?**  
Caution: The hemostatic tag to hold the T-ANCHOR\* nylon suture should be applied at the suture end only.  
*If the suture is grasped in the middle, crush injury may lead to breakage of the suture.*  
Need for removal of broken T-ANCHORS\* during surgery is determined by the surgeon. The material is bio-compatible.
5. **Can the metal bars of the Kumar T-ANCHORS™\* cause adhesions?**  
The exposed surface area of the T-ANCHOR\* metal bar is only 10 mm sq. It lies buried in the Mesh. However, exposure of the T-ANCHOR\* metal bar to the peritoneal cavity can also be avoided by placement of the T-ANCHOR\* between the Mesh and the abdominal wall (See Diagram on front page).
6. **How strong are the Kumar T-ANCHORS™\*?**  
The Kumar T-ANCHORS™\* comprise an MRI compatible metal bar attached to a 0 Nylon Suture. In laboratory bench testing, mean tensile strength of the T-ANCHORS\* was 4.76 lbs.

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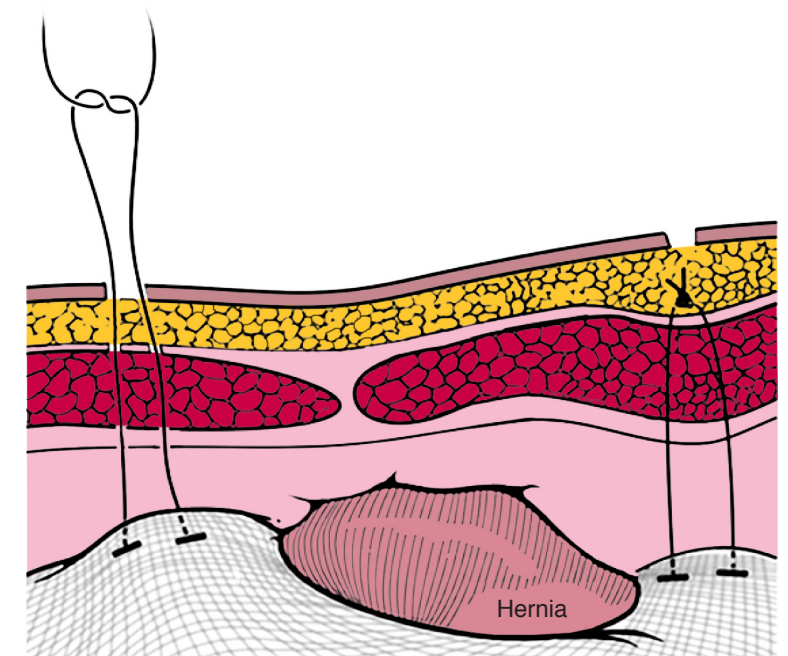
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## Mesh Fixation Made Easy

**Trans-Fascial Mesh Fixation  
With**

**NO SUTURE PASSER**

**The Kumar T-ANCHORS™\*  
Hernia Set**



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## THE NEED

Proper fixation of Prosthetic Mesh is critical in repair of all Hernias.

The ideal method for Fixation of the Mesh in Laparoscopic Repair of Abdominal Wall Hernia is a combination of tacking and Trans-fascial Sutures.

**Recurrence of Hernia is significantly lower if a combination of tacking and Trans-fascial Sutures is used for Mesh Fixation.**

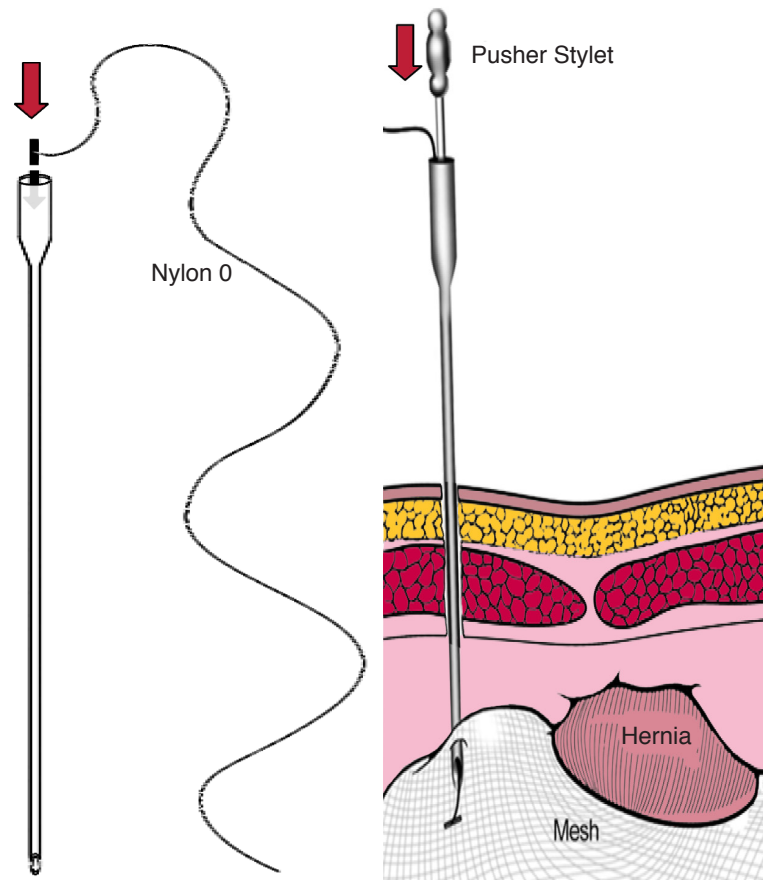


Fig 1

## THE PROBLEM

Previous methods for placement of Trans-fascial Sutures use one of the Suture Passer devices.

*Grasping and feeding of sutures into the Suture Passer is technically difficult* because of the lack of depth perception and three dimensional (3D) visual feedback in laparoscopy.

*Pre-placement of sutures* on the periphery of the Mesh results in a confusing *bird's nest* like appearance when the Mesh is introduced into the abdomen and unrolled.

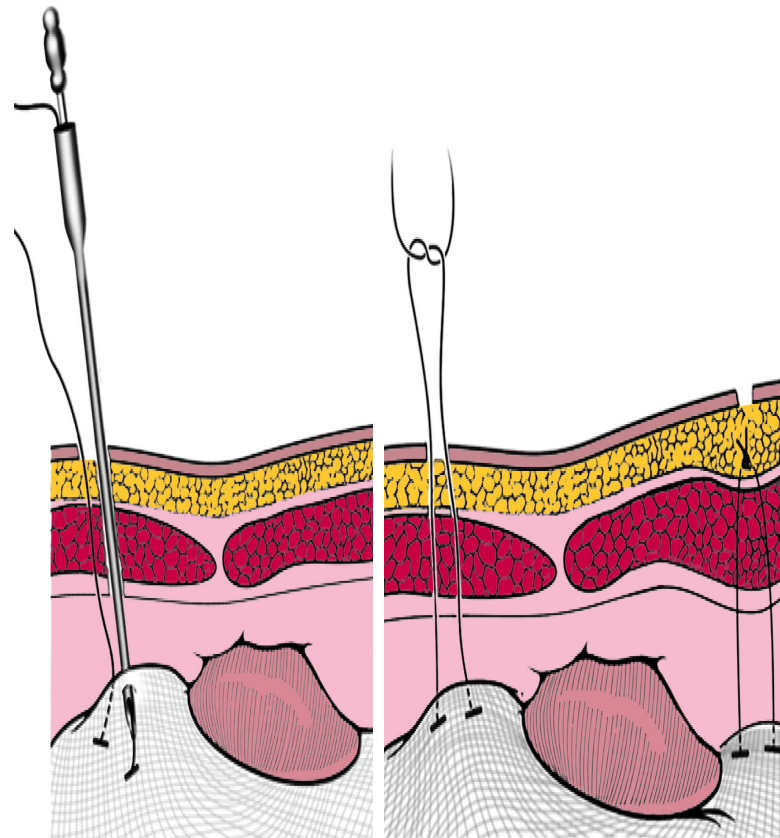


Fig 3

Fig 4

## THE SOLUTION

**The Kumar T-ANCHORS™\* provide an easy method for Trans-fascial Suture Fixation of Prosthetic Mesh without the need for grasping and feeding of sutures into a Suture Passer.**

**The Kumar T-ANCHORS™\* are to be used in addition to tacking.**

Each Kumar T-ANCHOR™\* is an MRI compatible metal bar (10X1 mm) attached to a size 0 mono-filament suture (Fig 1).

Each T-ANCHOR\* is loaded into a 16 ga. Needle (Fig 1) that punctures the selected incision site on the skin, The Needle is advanced through the abdominal wall and through the edge of the Mesh under laparoscopic visualization (Fig 2).

The T-ANCHOR\* is fired by advancing the Pusher Stylet through the Needle (Fig 2). The Needle is withdrawn.

A second T-ANCHOR\* is loaded into the Needle. The Needle is advanced through the *same skin incision site but at a different angle*, to create a musculo-fascial bridge (Fig 3). This second T-ANCHOR\* is fired as before, by advancing the Pusher Stylet through the Needle. It is placed 1-2 cm away from the first T-ANCHOR\* at the edge of the Mesh. The Needle is withdrawn.

The two sutures of the T-ANCHORS\* are tied to create easy and secure Trans-fascial Mesh Fixation (Fig 4). The knots lie in the subcutaneous tissue.

## THE ADVANTAGES

- Grasping and feeding of sutures into the Suture Passer is eliminated
- Technical ease
- Shorter length of procedure
- Cost savings through less OR time
- Costs similar to conventional techniques

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