



# Superior Capsular Reconstruction Technique Guide Using Matrix™ HD Allograft



## OVERVIEW

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RTI Surgical offers surgeons the Matrix™ HD allograft in 3mm, 5mm and 6mm thicknesses and may be used in homologous applications such as repair or replacement of damaged or inadequate integument tissue and as supplemental support, protection, reinforcement or covering of soft tissue in a novel surgical technique, Superior Capsular Reconstruction (SCR) for an irreparable rotator cuff tendon.



- SCR is a novel technique for massive, irreparable rotator cuff tears.
  - Teruhisa Mihata, M.D., Ph.D. was the first to describe the SCR procedure in 2007.
- Large irreparable rotator cuff tears are difficult to manage, especially in the young and middle aged. Several surgical procedures, such as massive rotator cuff repair, partial rotator cuff repair, and reverse total shoulder arthroplasty may be associated with a high incidence of graft re-tear or poor long-term clinical outcomes.<sup>1</sup>
- Superior capsule defects are associated with irreparable rotator cuff tears when the supraspinatus and infraspinatus tendons are torn and retracted. The superior capsule is located on the inferior surface of the supraspinatus and infraspinatus tendons and attaches to the greater tuberosity.<sup>2</sup>
- The SCR procedure reinforces superior stability of the glenohumeral joint and may prevent impingement. Literature suggests the SCR procedure may be a reliable treatment for massive irreparable rotator cuff tears and could delay reverse total shoulder arthroplasty.<sup>2</sup>

## SUPERIOR CAPSULAR RECONSTRUCTION TECHNIQUE USING THE MATRIX™ HD ALLOGRAFT<sup>3</sup>

This technique should not be substituted for the independent professional judgment of the health care provider. Please refer to the labeling for complete instructions for use.

### 1 Patient Preparation

- Position patient per surgeon preference (beach chair or lateral decubitus).

### 2 Bone Bed Preparation

- Remove pathologic bursal tissue for increased visualisation of glenoid and tuberosity footprints (Figure 1). Debride superior glenoid and greater tuberosity rotator cuff footprints to create bleeding bone beds. Concomitant repair of rotator cuff tendons is often performed. When indicated, coracoplasty and biceps tenodesis or tenotomy may also be performed.

### 3 Glenoid Anchor Placement

- Apply glenoid suture anchor per standard practice and physician's preference. These anchors should span the rotator cuff defect and allow for complete coverage. Usually, 2-3 anchors are sufficient. It is recommended to stay medial on the glenoid to ensure no penetration of the glenoid chondral surface inferiorly.

### 4 Tuberosity Anchor Placement

- Apply tuberosity suture anchor per standard practice and physician's preference. The medial row anchors in the tuberosity should also span the rotator cuff defect. Usually two anchors are sufficient. These anchors are placed in the tuberosity at the articular margin.

### 5 Patient Measurements

- Evaluate the size of superior capsular defect with an arthroscopic measuring probe and record measurements between the anchors for the anterior posterior dimensions of the Matrix™ HD allograft. Use the arthroscopic measuring probe to also record the measurements from the glenoid anchors to the lateral aspect of the greater tuberosity for the medial to lateral dimensions of the Matrix HD allograft (Figure 5).

### 6 Graft Measurements and Preparation

- Translate patient measurements to the Matrix™ HD allograft.
- Oversize the graft per standard practice and physician's preference for adequate suturing.
- Pass the corresponding sutures from the anchors through the Matrix™ HD allograft prior to passing the graft into the subacromial space.

### 7 Graft Passage and Fixation

- Insert the Matrix™ HD allograft into the subacromial space and attach the graft medially to the glenoid.
- Attach graft medially at tuberosity. It is surgeon preference to incorporate additional lateral row anchor fixation. If so, fix the allograft just lateral to the greater tuberosity.
- Add side-to-side sutures between the Matrix™ HD allograft and residual/ remaining intact rotator cuff tissue, if possible (Figure 3).



Figure 1

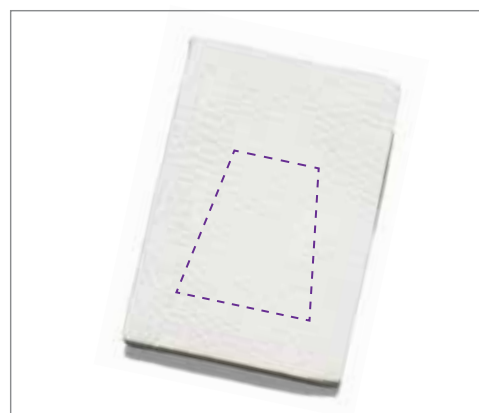


Figure 2



Figure 3

#### ORDERING INFORMATION

Code	Description
TDT346	3mm Matrix HD, 4cm x 6cm
TDT546	5mm Matrix HD, 4cm x 6cm
TDT646	6mm Matrix HD, 4cm x 6cm
TDT358	3mm Matrix HD, 5cm x 8cm
TDT558	5mm Matrix HD, 5cm x 8cm
TDT658	6mm Matrix HD, 5cm x 8cm



#### REFERENCES

1. Petri M, Greenspoon JA, Moulton SG, Millett PJ. Patch-Augmented Rotator Cuff Repair and Superior Capsule Reconstruction. The Open Orthopaedics Journal. 2016;10:315-323. doi:10.2174/1874325001610010315.
2. Mihata, T., et al. Clinical Results of Arthroscopic Superior Capsule Reconstruction for Irreparable Rotator Cuff Tears. Arthroscopy. Vol 29, No 3, March 2013; 459 - 470.
3. Burkhart, Stephen S. et al. "Arthroscopic Superior Capsular Reconstruction for Massive Irreparable Rotator Cuff Repair." Arthroscopy Techniques, Volume 5, Issue 6, e1407 - e1418.

Speak to your local Business Development Manager for further information or contact us using the details below:

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