Pectoral Muscle/Tendon Tear (May 18, 2012)

These exams require careful positioning and scanning. We should approach these exams similar to how we approach an Elbow exam looking for a bicep tendon tear. We don’t need to include the entire pectoral muscle on this exam just like we don’t include the entire bicep muscle on an Elbow exam. The small FOV sequences of this protocol are designed to show tears of the pectoral tendon at its insertion on the Humerus or at the junction of the pectoral muscle and pectoral tendon. The large FOV STIR Axial sequence will show muscle tears that aren’t seen on the small FOV sequences. The anatomy that must be included on the small FOV sequences of this exam is: mid pectoral muscle through the Humerus from left to right, top of the pectoral muscle through the deltoid tuberosity of the Humerus superiorly to inferiorly, and posterior to the Humerus through the pectoral muscle posteriorly to anteriorly. A 16cm FOV should be achievable on most patients. Position the arm of the patient (affected side) as close to the patient’s body as possible in order to help achieve the 16cm FOV. Try to position the patient with the affected side as close to isocenter as possible in order to ensure good imaging through the Humerus laterally.

**Axial Scans:** PD, STIR

Average Scanning Parameters:
16cm FOV  
5 mm slice thickness  
1 mm slice gap  
32 slices  
Scan affected side only. Scan from the top of the pectoral muscle through the deltoid muscle. Patient should be prone. Affected arm at patient’s side, opposite arm can be above patient’s head.

**Coronal Scans:** T1, T2 Fat Sat

Average Scanning Parameters:
16cm FOV  
4 mm slice thickness  
0 mm slice gap  
24 slices  
Images should be parallel to pectoral muscle. Scan affected side only. Patient should be prone. Affected arm at patient’s side, opposite arm can be above patient’s head.
**Sagittal Scans: T1, T2 Fat Sat**

Average Scanning Parameters:

16cm FOV
5 mm slice thickness
1 mm slice gap
25 slices

Images should be perpendicular to pectoral muscle. Scan affected side only. Patient should be prone. Affected arm at patient’s side, opposite arm can be above patient’s head.

---

**Bilateral STIR Axial:**

5 mm slice thickness
1 mm slice gap
32 slices

Include both sides, both arms should be at the patient’s side. Patient should be prone.

Note: If scanning on an Espree magnet, the right and left sides should be scanned separately due to the FOV limitations of the Espree.