MSK CHEST MRI

9-29-22

PECTORALIS MUSCLE **Images**

1. 3 Pl loc SSFSE offset ant 50
2. Ax Cal (PURE)
3. Straight Ax T1 28 FOV 5/1
4. Straight Ax T2 fat

►Mid humeral head superiorly through soft tissue of axilla inferiorly

5. Oblq Cor T1 28 FOV 4/1
6. Oblq Cor T2 fat

►Grx on Axial parallel to pectoralis muscle/chest wall

►From chest wall anteriorly through the entire pectoralis muscle & humerus posteriorly

7. Oblq Sag T1 28 FOV 5/2.5
8. Oblq Sag T2 fat

►Grx on Axial perpendicular to pectoralis / chest wall.

►From edge of sternum medially through entire humerus laterally. Center S/I at the level of soft tissue of axilla.

COIL:
8ch Cardiac or GEMS: Body Array

Request:
MRI Chest wo

Include in Study notes: Date of injury? previous surgery?

SCAPULA **IMAGES**

1. 3 Pl loc SSFSE offset post 50
2. Ax Cal (PURE)
3. Straight Ax T1 24 FOV 5/2.5
4. Straight Ax T2 fat
5. Oblq Cor T1 24 FOV 4/1
6. Oblq Cor T2 fat

►Oblique perpendicular to shoulder joint, parallel to scapula, through entire scapula.

7. Oblq Sag T1 24 FOV 5/2.5
8. Oblq Sag T2 fat

► Oblique parallel to shoulder joint, perpendicular to scapula, through entire scapula.

OPTIONAL CONTRAST

9. +C Straight Ax T1 fat 24 FOV 5/2.5
10. +C Oblq Cor T1 fat 24 FOV 4/1
    +C Oblq Sag T1 fat 24 FOV 5/2.5

COIL:
8ch Cardiac or GEMS: Body Array

Request:
MRI Chest wo
or
MRI Chest w/wo
Optional Contrast: Multihance .1mmol/kg Max 20 mL
Low eGFR inpatient Dose: No Change

CHEST WALL—Non-Specific

►Radiologists should specify coverage. Please check prior to contrast. Sequences in scanners are very thin. Depending on coverage and area needed slice thickness may be increased.

1. 3 Pl Loc
2. Ax T1 Breath hold
3. Ax T2 fat (Flex) Resp triggered
4. Sag T2 fat (Flex) Resp triggered
5. Sag T1 Breath hold
6. Cor T1 Breath hold
7. Cor T2 Fat (Flex) Resp triggered

POST CONTRAST IF PROTOCOLED

8. +c Ax T1 fat (Flex) Breath hold
9. +c Sag T1 fat (Flex) Breath hold
10. +c Cor T1 fat (Flex) Breath hold

***Built in Flex for scanners that have it.

OPT: Lava-Flex (Pre or Post)

COIL:
8ch Cardiac or GEMS: Body Array

Request:
MRI Chest wo or MRI Chest w/wo
Optional Contrast: Multihance .1mmol/kg Max 20 mL

Low eGFR inpatient Dose: No Change

STERNUM

1. 3 Pl loc SSFSE offset ant 80
2. Ax Cal (PURE)
3. Oblq Cor T1 24 FOV 4/1
4. Oblq Cor T2 IDEALarc

►Grx on **Sag loc** parallel to long axis of sternum

5. Oblq Ax T1 **Swap freq to A/P** 22 FOV 5/2.5
6. Oblq Ax T2 IDEALarc 22 FOV 5/2.5

►Grx on obl Cor, above sternal notch to below sternum

7. Oblq Sag T1 **Swap freq to A/P** 24 FOV 4/1
8. Oblq Sag T2 IDEALarc

►Grx on obl Cor through entire sternum (Rt to Lt)

OPTIONAL CONTRAST

9. +C Oblq Cor T1 fat 24 FOV 4/1
10. +C Oblq Ax T1 IDEALarc 22 FOV 5/2.5
    +C Oblq Sag T1 fat 24 FOV 4/1

PRONE if possible
COIL:
8ch Cardiac or GEMS: Body Array
Request:
MRI Chest wo or w/wo
Optional Contrast: Multihance .1mmol/kg Max 20 mL
Low eGFR inpatient Dose: No Change

If patient is unable to lie prone for Sternum or SC Joints and there is quality issues with breathing motion, it is OK to run BH or Respiratory Triggered sequences from Chest Wall-Non-specific protocol. It is OK to call the reading room and check to ensure no repeats are needed.

S-C JOINTS (Sternoclavicular)

1. 3 Pl loc SSFSE offset ant 80
2. Ax Cal (PURE)
3. Cor T1 Through SC Joints 24 FOV 4/0.5
4. Cor T2 STIR Through SC Joints 24 FOV 4/0.5
5. Sag T1 Through SC Joints 24 FOV 4/1
6. Sag T2 IDEALarc Through SC Jnts 24 FOV 4/1
7. Ax T1 Through SC Joints 20 FOV 4/0.5
8. Ax T2 IDEALarc Through SC Jnts 20 FOV 4/0.5

OPTIONAL CONTRAST

9. +C Cor T1 fat 24 FOV 4/0
10. +C Sag T1 fat 24 FOV 4/1
    +C Ax T1 IDEALarc 20 FOV 4/0.5

COIL:
If Prone, you can use the posterior Gems coil or 8ch Cardiac

Supine use:
8ch cardiac
16ch wrap coil

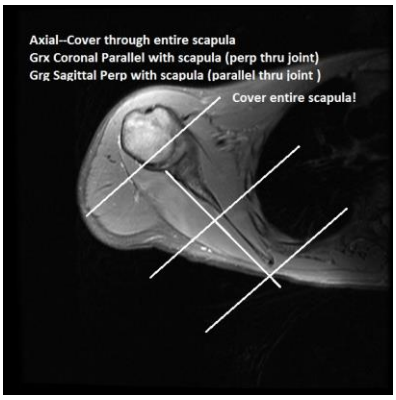
Request:
MRI Chest wo or w/wo
Optional Contrast: Multihance .1mmol/kg Max 20 mL
Low eGFR inpatient Dose: No Change

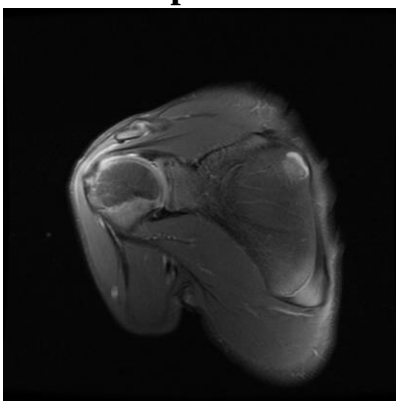
BH T1 tips post 29.1 upgrade:

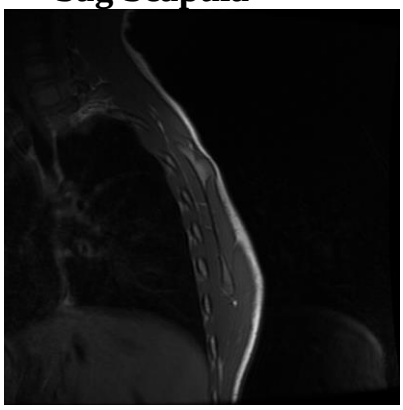
- **If the BH time is 7 seconds, you can select the Scan button twice to get a 14 second breath hold**
- **TR can be adjust to adjust scan time and # acqs**
- **Reps before pause is not the same as locs before pause**
  - **# of acqs is different than # BH**
  - **To determine BH scan time take the TR x # Reps before pause**
  - **To determine #BH, divide the time of each BH into the total series time**
  - **Fast TR Bipolar should be on in the Advanced Tab to help with Scan time**
- **If T1's too long for BH, you can increase NEX to 2 and free breath the sequence or see if LAVA-FLEX can be ran instead in one or two planes.**

Scapula Set up:

Cor Scapula **Sag Scapula**







Pectoralis Muscle Set up: