

# **THE SPONDYLOARTHRITIS RESEARCH CONSORTIUM OF CANADA MAGNETIC RESONANCE IMAGING INDEX FOR SCORING INFLAMMATION IN THE SPINE**

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## **MRI METHODOLOGY**

### **Positioning**

1. Posterior markers are placed on patient at approximately T1, T4, T8 and T12. Patients lie supine, as straight as possible. We use posterior coils only. Record relationship of anatomical structures to coil elements for follow-up reference.
2. Total spine is scanned in 2 segments with slight overlap
  - a. C1 – T10 (must include)
  - b. T10 – S2 (must include)

### **Scouts**

3. Scout images in 3 planes, as per usual.

### **Sequence - location and angles**

4. Standard sagittal spine

### **Sequence – parameters**

These are suggestions and can be adjusted according to magnet specifications. The protocol includes a minimum of 16 slices per sequence in all cases to visualize the transverse processes and costovertebral joints. More slices may be necessary if scoliosis is present.

5. TI TSE and Short Tau Inversion Recovery (STIR) sequences.
6. Common parameters:

1. 16 slices minimum-may need more if scoliosis present
2. 4 mm thick, 10% gap-may be 3mm thick in the upper spine
3. FOV 380mm, square
4. Phase encode head/foot
5. NSA 1, Oversampling 80%
6. Anterior saturation slab

7. TI TSE- TR 423ms (2 concatenations), TE 13ms, ETL 3, Matrix frequency 512, phase 256
8. STIR- TR 4250ms, TI 145ms, TE 50ms, ETL 9, Matrix frequency 384, phase 256