1. Magnetic Field Strength of Scanner Used:

1.5 T  3.0 T  4.0 T  7.0 T  Other, specify:

1. Body part scanned:

Brain  Cervical spine  Thoracic spine  Lumbar spine

1. RF receiver coil(s) and number of channels: (check all that apply)

Head coil:  Neck coil:  Spine Array:  Body coil (transmit)

1. T2-weighted spin-echo acquired (for B0-susceptibility distortion correction):

Yes  No

1. Contrast Used:

Yes  No

If Yes, name of the contrast: dosage:

1. DTI sequence parameters
2. Sequence:  Spin-echo  STEAM
3. Slice orientation:  Axial  Coronal  Sagittal  Oblique
4. Field of view (mm x mm): by
5. In-plane resolution (mm x mm): by
6. Slice thickness (mm):
7. Number of slices:
8. Repetition time (TR) (milliseconds):
9. Echo time (TE) (milliseconds):
10. Number of signal averages:
11. Number of diffusion-weighting gradient directions:
12. b-values (square mm per second):

1st: 2nd: 3rd: 4th: 5th: 6th:

1. Acquisition time (minutes):
2. Base resolution (points):
3. Phase resolution (percent): Partial Fourier:  Yes, specify:  No
4. Band width (Hertz per pixel):
5. Echo spacing (milliseconds): Echo train length (EPI factor): No. of shots:
6. Interpolation:  Yes  No
7. Phase-encode direction:
8. Flow compensation:  Yes  No
9. Fat signal suppressed:  Yes  No
10. Parallel acquisition used:  Yes  No

If yes, method used:  GRAPPA  SENSE  Other, specify

Additional details:

1. Post processing and analysis
2. Software used:  Scanner-provided  FSL  DtiStudio  Other, specify:
3. DWI co-registered to b = 0 image and corrected for subject motion and eddy current induced distortion (affine transformation)?  Yes  No
4. DWI co-registered to T2 image for B0-susceptibility distortion correction?  Yes  No
5. Spatially registered to a template for data analysis?  Yes  No
6. Name of the scanner manufacturer:

GE  Siemens  Philips  Other, specify

1. Name of the scanner software and its version number:

Name: Version Number:

\* Element is classified as Core.

## GENERAL INSTRUCTIONS

This CRF includes data typically recorded for imaging studies to obtain in vivo images of brain tissues. Diffusion Tensor Imaging (DTI) is important when a tissue has an internal fibrous structure analogous to the [anisotropy](http://en.wikipedia.org/wiki/Anisotropy) of some crystals. Water will then diffuse more rapidly in the direction aligned with the internal structure, and more slowly as it moves perpendicular to the preferred direction.

Important note: None of the data elements included on this CRF Module are classified as Core (i.e., required for all ALS clinical studies to collect). All data elements are classified as supplemental (i.e., non Core) and should only be collected if the research team considers them appropriate for their study. Please see the Data Dictionary for element classifications.

## SPECIFIC INSTRUCTIONS

Please see the Data Dictionary for definitions for each of the data elements included in this CRF Module.

* RF receiver coil(s) and number of channels – Check all that apply