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