1. Has concurrent brain MRI been performed?  Yes  No
2. Have multiple timepoint spine MRIs been performed?  Yes  No, single date spine MRI
   1. If YES, how many have been performed?  2  3  4  5  6  >6
   2. If >6 specify:

*Please fill out one form per spinal MRI date*

1. Study analysis:  Study 1  Study 2  Study 3  Study 4  Study 5  Study 6
2. Spine segments available for interpretation on MRI (Choose all that apply):

Cervical  Thoracic  Lumbar

1. Magnetic field strength of scanner used:

1.5 T  3.0 T  7.0 T  Other, specify:

1. Name of the scanner manufacturer:

GE Siemens Philips Canon Other, specify:

1. Sequences used:  T1-weighted  T2-weighted  Post-contrast T1  GRE  Diffusion
2. T1-MRI sequence parameters
   1. Specify type/name of T1 sequence used:
   2. Slice orientation:  Axial  Coronal  Sagittal
   3. Slice thickness: mm
   4. Gap between slices: mm
   5. Repetition time (TR): ms
   6. Echo time (TE): ms
3. T2-MRI sequence parameters
   1. Specify type/name of T2 sequence used:
   2. Slice orientation:  Axial  Coronal  Sagittal
   3. Slice thickness: mm
   4. Gap between slices: mm
   5. Repetition time (TR): ms
   6. Echo time (TE): ms
4. Gradient echo (GE) sequence parameters (copy the following sections if parameters are different for the 2 sequences)
   1. Specify type/name of GE sequence used:
   2. Slice orientation:  Axial  Sagittal
   3. Slice thickness: mm
   4. Gap between slices: mm
   5. Repetition time (TR): ms
   6. Echo time (TE): ms
   7. Inversion time (TI): ms
5. DWI sequence parameters
   1. Type of diffusion sequence:  Single shot EPI  Multi shot EPI
   2. Slice orientation:  Axial  Sagittal
   3. Slice thickness: mm
   4. Gap between slices: mm
   5. b-value:  B0  B1000  Other, specify:
6. Post contrast T1WI sequence parameters
   1. Specify type/name of postcontrast T1 sequence used:
   2. Slice orientation:  Axial  Sagittal  Coronal
   3. Slice thickness: mm
   4. Gap between slices: mm
   5. Repetition time (TR): ms
   6. Echo time (TE): ms
7. Overall assessment of MRIs
   1. Reader blinded to clinical data?  Yes  No
   2. Quality of images technically satisfactory? Yes  No  Partially (specify):­
8. Lesions found:  Cervical  Thoracic  Conus Medullaris
9. ***Cervical MRI***
   1. Cervical spine MRI normal:  Yes  No  Unknown
   2. Cord swelling/expansion:  Yes  No
   3. Cord atrophy:  Yes  No
   4. Cord lesions:  Yes  No
   5. Cord lesion levels:  C1  C2  C3  C4  C5  C6  C7
   6. Enhancement:  Yes  No
      1. Levels:
   7. Diffusion restricted:  Yes  No  Equivocal
      1. Levels:
   8. Nerve root enhancement:  Yes  No  Equivocal
      1. If YES, or Equivocal:  Ventral  Dorsal
   9. Primary cord lesion pattern:  Mostly gray  Mostly white  Both gray and white  Entire cross section  Indeterminate
   10. Cord white matter:  Lateral column  Posterior column
   11. Cord grey matter involvement:  Anterior horn  Posterior cord  Central gray  All gray (H sign)
   12. Presence of bright spots:  Yes  No
       1. Levels:
   13. If prior comparison MRI available:  Unchanged  Improved  Worsened  N/A
   14. Presence of cervicomedullary junction lesion: Yes No
10. ***Thoracic MRI***
    1. Thoracic MRI normal:  Yes  No  Unknown
    2. Cord swelling/expansion:  Yes  No
    3. Cord atrophy:  Yes  No
    4. Cord lesions:  Yes  No
    5. Cord lesion levels:  T1  T2  T3  T4  T5  T6  T7  T8  T9  T10  T11

T12

* 1. Enhancement:  Yes  No
     1. Levels:
  2. Diffusion restricted:  Yes  No  Equivocal
     1. Levels:
  3. Nerve root enhancement:  Yes  No  Equivocal
     1. If YES or Equivocal:  Ventral  Dorsal
  4. Primary cord lesion pattern:  Mostly gray  Mostly white  Both gray and white  Entire cross section  Indeterminate
  5. Cord white matter:  Lateral column  Posterior column
  6. Cord grey matter involvement:  Anterior horn  Posterior cord  Central gray  All gray (H sign)
  7. Presence of bright spots:  Yes  No
     1. Levels:
  8. If prior comparison MRI available:  Unchanged  Improved  Worsened  N/A

1. ***Lumbosacral MRI***
   1. Lumbosacral MRI normal:  Yes  No  Unknown
   2. Cord atrophy:  Yes  No
   3. Conus medullaris lesion:  Yes  No
   4. Conus medullaris enhancement:  Yes  No
   5. Conus medullaris diffusion restricted:  Yes  No  Equivocal
   6. Cauda equina root enhancement:  Yes  No  Equivocal
      1. If YES or Equivocal  Ventral  Dorsal
   7. If prior comparison MRI available:  Unchanged  Improved  Worsened  N/A
2. **Other incidental findings** Yes No
   1. If YES, indicate type(s):

Low lying conus

Spinal/vertebral malformation

Open or closeddysraphism

Chiari I

Tumor, specify:

Recorder Signature: Date:

## General Instructions

This form contains data elements that are collected for spine magnetic resonance imaging. Responses to categories are obtained from health professionals performing the procedure.

Important note: All of the data elements included on this CRF Module are classified as Core (i.e., strongly recommended for all mitochondrial disease clinical studies to collect).

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.