For autopsy specimens, a common checklist can be filled out, but the presence of specific findings in specific muscles and nerves should be evaluated and reported.

**Clinical History**

**1. Gender of patient:** [ ]  male [ ]  female

**2. Age at presentation:** \_\_\_ years \_\_\_ months

**3. Age at biopsy:** \_\_\_ years \_\_\_ months **Age at prior muscle biopsies** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**4. Symptoms at presentation (check all that apply):**

[ ]  Weakness

If experiencing weakness, then indicate distribution:

 [ ]  Symmetrical [ ]  Asymmetrical [ ]  Limb-girdle

 [ ]  Proximal [ ]  Distal [ ]  Facioscapulohumeral

 [ ]  Paraspinal [ ]  Finger flexor [ ]  Neck [ ]  Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[ ]  Other muscle symptoms:

 [ ]  Hypotonia [ ]  Muscle pain [ ]  Exercise intolerance

 [ ]  Episodic muscle pain/cramping [ ]  Rhabdomyolysis [ ]  Contractures

[ ]  Failure to thrive

[ ]  Respiratory difficulties

[ ]  Skin changes

[ ]  Eye symptoms:

 [ ]  Ptosis [ ]  Ophthalmoplegia

[ ]  Joint laxity

[ ]  Clinical features of cardiac involvement/Known cardiac disease, Specify:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[ ]  Central nervous system disease, Specify:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[ ]  Exposure to toxins, supplements, or drugs (and relationship between exposure and biopsy acquisition), Specify:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[ ]  Others (see item 9)

**5.** **Laboratory findings**

*Elevated creatine kinase:* [ ]  Yes [ ]  No [ ]  Unknown \_\_\_\_\_\_\_ Patient Value \_\_\_\_\_\_\_\_\_(Normal Range)

*Elevated erythrocyte sedimentation rate (ESR):*

[ ]  Yes [ ]  No [ ]  Unknown \_\_\_\_\_\_\_ Patient Value\_\_\_\_\_\_ (Normal Range)

*Elevated C-reactive protein (CRP):* [ ]  Yes [ ]  No [ ]  Unknown \_\_\_\_\_Patient Value\_\_\_\_\_\_\_ (Normal Range)

*Known autoantibodies in patient:* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**6. EMG Findings:** [ ]  Not known [ ]  Myopathic [ ]  Neuropathic

**7. Imaging findings (brain/muscle): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**8. Familial Inheritance:** [ ]  None [ ]  Autosomal Recessive [ ]  Autosomal Dominant

 [ ]  X-linked [ ]  Maternal

**9. Other symptoms, signs, known diseases, and lab data: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

## Muscle Biopsy and Autopsy Tissue Information

1. \*Is this a biopsy or autopsy specimen? [ ]  Biopsy [ ]  Autopsy

If this is an autopsy specimen, what is the approximate postmortem interval? *(please specify)*

1. Tissue collected: (please specify)
2. \*Size of tissue collected: ( )x( )x( ) cm
3. \*Date of tissue collection: (mm/dd/yyyy)
4. Biopsy method: [ ]  Open [ ]  Needle
5. Name of laboratory where pathology was performed: (please specify)
6. Name of laboratory director: (please specify) [ ]  Unknown
7. Name of pathologist who diagnosed the case: (please specify)
8. \*Freezing or Fixation Used?

[ ]  Frozen: Amount: *(please specify)* mg [ ]  Not known

[ ]  Formalin-fixed: Amount: *(please specify)* mg [ ]  Not known

[ ]  Paraffin-embedded: Amount: *(please specify)* mg [ ]  Not known

[ ]  Epon-embedded: Amount: *(please specify)* mg [ ]  Not known

1. Was electron microscopy performed? [ ]  Yes [ ]  No
2. Was subsequent biochemical or genetic testing performed? [ ]  Yes [ ]  No

If Yes, record results in table below:

Table to input subsequent biochemical or genetic testing data

| Test Name | Results (including units) |
| --- | --- |
| *(data to be entered by site)* | *(data to be entered by site)* |
| *(data to be entered by site)* | *(data to be entered by site)* |
| *(data to be entered by site)* | *(data to be entered by site)* |

**Microscopic Description**

1. **Which standard histochemical stains were used\*? (choose all that apply)**

[ ]  H and E [ ]  Gomori trichrome [ ]  NADH [ ]  COX [ ]  SDH

[ ]  COX/SDH [ ]  PAS [ ]  Oil Red O [ ]  ATPase 4.3 [ ]  ATPase 4.6

[ ]  ATPase 9.4 [ ]  Acid phosphatase [ ]  Phosphorylase [ ]  Myoadenylate deaminase

[ ]  Esterase [ ]  Phosphofructokinase [ ]  Sudan black [ ]  Other, specify: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Which of the following diagnostic abnormalities were noted on histochemical stains (choose all that apply)\*?**

Fatty infiltration [ ]  absent [ ]  mild [ ]  moderate [ ]  severe

Endomysial fibrosis [ ]  absent [ ]  mild [ ]  moderate [ ]  severe

Myofiber degeneration [ ]  absent [ ]  mild [ ]  moderate [ ]  severe

Necrosis [ ]  absent [ ]  mild [ ]  moderate [ ]  severe

Myophagocytosis [ ]  absent [ ]  present in \_\_\_\_ fibers

Basophilic fibers, large nuclei [ ]  absent [ ]  present in \_\_\_\_\_ fibers

Hypertrophic fibers [ ]  absent [ ]  present in \_\_\_\_\_ fibers

[ ]  Approximate fiber size (largest)\_\_\_\_\_\_\_\_\_\_\_

Atrophy/Hypotrophy [ ]  absent [ ]  present

[ ]  Approximate fiber size (smallest) \_\_\_\_\_\_\_\_

Specify:

[ ]  All fibers within the specimen

[ ]  Subsets of fibers, leading to excessive variation in fiber size

Specify (choose all that apply): [ ]  single fibers [ ]  groups of fibers

 [ ]  type 1 fibers only [ ]  type 2 fibers only

[ ] Perifascicular distribution

 [ ]  Atrophic/hypotrophic fiber shape [ ]  angulated [ ]  round

[ ]  Nuclear bags/clumps [ ]  absent [ ]  present

Myopathy-associated pathological structures, specify:

Central nuclei [ ]  absent [ ]  present

Specify estimated % of fibers (include eccentric nuclei): \_\_\_\_\_

 Internal nuclei [ ]  absent [ ]  present

Specify estimated % of fibers (if not quantified above): \_\_\_\_\_

Marked hypotrophy of type 1 fibers [ ]  absent [ ]  present

Nemaline rods/bodies [ ]  absent [ ]  sparse [ ]  moderate (present in \_\_\_\_\_% of fibers)

Specify: [ ]  Restricted to one fiber type, specify which: \_\_\_\_\_

 Red inclusions on trichrome [ ]  absent [ ]  sparse [ ]  moderate (present in \_\_\_\_\_% of fibers)

Rimmed vacuoles [ ]  absent [ ]  sparse [ ]  moderate (present in \_\_\_\_\_% of fibers)

 Non-rimmed vacuoles [ ]  absent [ ]  sparse [ ]  moderate (present in \_\_\_\_\_% of fibers)

Ragged red fibers [ ]  absent [ ]  sparse [ ]  moderate (present in \_\_\_\_\_% of fibers)

COX- negative fibers [ ]  absent [ ]  sparse [ ]  moderate (present in \_\_\_\_\_% of fibers)

Strongly SDH-reactive blood vessels (SSV’s) [ ]  absent [ ]  present

Central cores [ ]  absent [ ]  sparse [ ]  moderate (present in \_\_\_\_\_% of fibers) Minicores [ ]  absent [ ]  sparse [ ]  moderate (present in \_\_\_\_\_% of fibers)

 Core-like lesions [ ]  absent [ ]  sparse [ ]  moderate (present in \_\_\_\_\_% of fibers)

 Targetoid fibers [ ]  absent [ ]  sparse [ ]  moderate (present in \_\_\_\_\_% of fibers)

 Moth-eaten fibers [ ]  absent [ ]  sparse [ ]  moderate (present in \_\_\_\_\_% of fibers)

Tubular aggregates [ ]  absent [ ]  present in \_\_\_\_\_% of fibers)

 [ ]  only seen in type \_\_\_\_ fibers

Ring fibers [ ]  absent [ ]  sparse [ ]  moderate (present in \_\_\_\_\_% of fibers)

Split fibers [ ]  absent [ ]  sparse [ ]  moderate (present in \_\_\_\_\_% of fibers)

Lobulated fibers [ ]  absent [ ]  sparse [ ]  moderate (present in \_\_\_\_\_% of fibers)

 Blood vessel deposits suggestive of amyloid [ ]  absent [ ]  present

Abnormalities of fiber type [ ]  absent [ ]  present

Specify\*: [ ]  Type 1 predominance \_\_\_\_\_\_ % Type 1 fibers

[ ]  Type 2 predominance \_\_\_\_\_\_% Type 2 fibers

[ ]  Fiber type grouping (of both fiber types)

Absent staining for a histochemical stain:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Inflammation [ ]  absent [ ]  mild [ ]  moderate [ ]  severe

Specify:

[ ]  Distribution

[ ]  Perivascular

 [ ]  Evidence of vascular damage [ ]  Thrombi identified in blood vessels

 [ ]  Focal

[ ]  Diffuse

[ ]  Endomysial

[ ]  Perimysial

[ ]  Involving fascia

 [ ]  Associated with myofiber damage

 [ ]  Associated with non-necrotic myofiber

 [ ]  Granulomas

 [ ] Necrotizing [ ] Non-necrotizing [ ] Giant cells present [ ]  Foreign material present

 [ ]  Inflammatory cells identified

 Specify (choose all that apply):

 [ ]  Lymphocytes

 [ ]  Neutrophils

 [ ]  Macrophages

 [ ]  Eosinophils (as a prominent component)

 [ ]  Microorganisms identified, specify which: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Abnormal storage material

Specify:

 Excessive glycogen [ ]  absent [ ]  mild [ ]  marked

 Excessive intracellular lipid [ ]  absent [ ]  mild [ ]  marked

Intramuscular nerve branches [ ]  absent [ ]  present

 Specify:

 [ ]  Decreased axonal density [ ]  Increased endoneurial fibrosis

 [ ]  Abnormality of myelination \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[ ]  Abnormal structures \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Muscle spindles [ ]  absent [ ] present

Myotentinous insertion sites [ ] absent [ ] present

Additional observations

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Which immunohistochemical stains were used? (choose all that apply)**

[ ]  Myosin immunohistochemistry

[ ]  Fast myosin \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[ ]  Slow myosin \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[ ]  Embryonic myosin \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[ ]  Fetal myosin \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[ ]  Dystrophin panel

 Specify:

 [ ]  Dystrophin rod domain (DYS1) [ ]  absent [ ]  reduced [ ]  cytoplasmic [ ]  normal

 [ ]  Dystrophin C terminus (DYS2) [ ]  absent [ ]  reduced [ ]  cytoplasmic [ ]  normal

 [ ]  Dystrophin N terminus of rod domain (DYS3)

[ ]  absent [ ]  reduced [ ]  cytoplasmic [ ]  normal

 [ ]  Dystrophin (BMD Hotspot) [ ]  absent [ ]  reduced [ ]  normal

 [ ]  Spectrin [ ]  absent on necrotic fibers [ ]  normal

 [ ]  Utrophin [ ]  normal [ ]  increased at sarcolemma

[ ]  Other stains for limb-girdle or congenital muscular dystrophy

 Specify:

 [ ]  Laminin 2/Merosin (80 kDa) [ ]  absent [ ]  reduced [ ]  normal

[ ]  Laminin 2/Merosin (300 kDa) [ ]  absent [ ]  reduced [ ]  normal

 [ ]  Alpha dystroglycan (VIA4) [ ]  absent [ ]  reduced [ ]  normal

 [ ]  Alpha dystroglycan (IIH) [ ]  absent [ ]  reduced [ ]  normal

 [ ]  Beta dystroglycan [ ]  absent [ ]  reduced [ ]  normal

 [ ]  Alpha sarcoglycan [ ]  absent [ ]  reduced [ ]  normal

 [ ]  Beta sarcoglycan [ ]  absent [ ]  reduced [ ]  normal

[ ]  Delta sarcoglycan [ ]  absent [ ]  reduced [ ]  normal

 [ ]  Gamma sarcoglycan [ ]  absent [ ]  reduced [ ]  normal

[ ]  Dysferlin [ ]  absent [ ]  reduced [ ]  cytoplasmic [ ]  normal

[ ]  Emerin [ ]  absent [ ]  normal

 [ ]  Collagen VI [ ]  absent [ ]  reduced [ ]  normal

 [ ]  Caveolin 3 [ ]  absent [ ]  reduced [ ]  normal

 [ ]  Integrin 7 [ ]  absent [ ]  reduced [ ]  normal

 [ ]  nNOS [ ]  absent [ ]  reduced [ ]  normal

[ ]  Inflammatory myopathy panel

 [ ]  CD3 [ ]  absent [ ]  present in \_\_\_ % of lymphocytes

[ ]  CD4 [ ]  absent [ ]  present in \_\_\_ % of lymphocytes

 [ ]  CD8 [ ]  absent [ ]  present in \_\_\_ % of lymphocytes

 [ ]  CD20 [ ]  absent [ ]  present in \_\_\_ % of lymphocytes

 [ ]  CD138 [ ]  absent [ ]  present in \_\_\_ % of lymphocytes

 [ ]  CD45 [ ]  absent [ ]  present in \_\_\_\_% of mononuclear cells

[ ]  CD68 [ ]  absent [ ]  present in \_\_\_\_% of mononuclear cells

[ ]  C5b-9 [ ]  absent [ ]  present on endomysial capillary walls

 [ ]  cytoplasmic staining of necrotic fibers

[ ]  Major Histocompatability Complex [ ]  absent [ ]  focal [ ]  diffuse

 [ ]  sarcolemmal [ ]  cytoplasmic

[ ] Protein aggregate myopathy panel

 [ ]  Desmin [ ]  normal [ ]  increased

 [ ]  Myotilin [ ]  normal [ ]  increased

 [ ]  B crystallin [ ]  normal [ ]  increased

 [ ]  Ubiquitin [ ]  normal [ ]  increased

1. **Additional immunohistochemical/immunofluorescence assays performed**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. **Other abnormalities noted on immunohistochemistry: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Epon-Embedded Tissue/Electron Microscopy**

1. **Abnormalities seen on:** [ ]  Light microscopy (Toluidine blue staining) [ ]  Electron microscopy

[ ]  Both – Light microscopy and Electron microscopy

1. **Abnormalities noted in:** [ ]  Nuclei

[ ]  Contractile apparatus

 [ ]  Sarcotubular organization

 [ ]  Mitochondria, specify (choose all that apply):

[ ]  Abnormal size

 [ ]  Large [ ]  Small

[ ]  Abnormal shape

[ ]  Abnormal numbers

 [ ]  Abnormal location

 [ ]  Abnormal architecture

 [ ]  Basal lamina

 [ ]  Satellite cells

 [ ]  Intramuscular nerve twigs

1. **Describe any pathological inclusions noted:**  [ ]  N/A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Describe any abnormal storage material identified:** [ ]  N/A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**\_\_\_\_\_\_\_

## General Instructions

This form contains data elements that are collected when performing various muscle biopsies.

Important note: The data elements included in this CRF module span the range of diagnostic abnormalities seen in both pediatric and adult neuromuscular biopsy specimens. While each of these specific elements does not need to be included in every clinical biopsy report, this checklist provides a list of potentially pertinent positive and negative findings that should be considered when reporting a muscle biopsy. While the usefulness of these specific findings will depend on the differential diagnosis on a clinical case, all of these findings can be clinically important in specific situations. In cases where a specific diagnosis is not clear, it is recommended to evaluate and report the presence or absence of these findings to facilitate subsequent attempts to select biopsies for genetic testing or enrollment in research studies.

## Specific Instructions

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

* Clinical History: These elements should be included, when available, to communicate the understanding the pathologist had of the participant/ subject’s clinical symptoms.
* Size of tissue collected –This information may not be available for autopsy tissue.