# DIAGNOSIS OF PATHOLOGY THAT IS LIKELY TO ACCOUNT FOR CLINICAL PARKINSONISM

# **NEUROPATHOLOGY FORM – MAJOR HISTOPATHOLOGIC FINDINGS:**

*In the box, record a number to reflect the presence and severity of the histopathologic feature. 0: none, 1: minimal/mild, 2: moderate, 3: severe* 

### Link to additional entities specifically related to PD

	Neuron loss & gliosis (spongiosis)	Neuronal lesions				Glial lesions		Threads		
		Tau (NFT& PB)	ASN (LB)	UBQ (MND-I)	NF or αBC (BN)	Tau (CB &, TA or AP)	ASN (GCI)	Tau	ASN	UBQ
Frontal cortex										
Motor cortex										
Parietal cortex										
Temporal cortex										
Cingulate cortex										
Entorhinal cortex										
Hippocampus										
Amygdala										
Basal nucleus										
Striatum										
Globus pallidus										
Thalamus										
Subthalamic n.										
Midbrain tectum										
Red nucleus										
Substantia nigra										
Locus ceruleus										
Tegmentum										
Pontine base										
Hypoglossal n.										
X/IX n.										
Inferior olive										
Dentate nucleus										

ASN=α-synuclein, UBQ =ubiquitin, NF=neurofilament, α-BC=αB crystallin, NFT=neurofibrillary tangle, PB=Pick body, LB=Lewy body, MND-I=motor neuron disease inclusion; BN=ballooned neuron; CB=coiled body, TA=tufted astrocyte, AP=astrocytic plaque; GCI=glial cytoplasmic inclusion

# ADDITIONAL ENTITIES SPECIFICALLY RELATED TO PD:

- Other Parkinsonian Disorders
- Alzheimer Type Pathology
- Vascular Pathology
  Ischemic & Hemorrhagic Pathology

# **Other Parkinsonian Disorders**

MULTIPLE SYSTEM ATROPHY

- 1. Striatonigral degeneration
- 2. Olivopontocerebellar degeneration
- 3. Both striatonigral and olivopontocerebellar degeneration
- 4. Not assessed
- 9. Missing/unknown

PROGRESSIVE SUPRANUCLEAR PALSY

- 1. Yes
- 2. No
- 3. Not assessed
- 9. Missing/unknown

CORTICOBASAL DEGENERATION

- 1. Yes
- 2. No
- 3. Not assessed
- 9. Missing/unknown

FRONTOTEMPORAL DEMENTIA AND PARKINSONISM WITH TAU-POSITIVE OR ARGYROPHILIC INCLUSIONS (MOST FTDP-17)

- 1. Yes
- 2. No
- 3. Not assessed
- 9. Missing/unknown

FTD with UBIQUITIN-POSITIVE (SYNUCLEIN- & TAU-NEGATIVE) INCLUSIONS

- 1. FTD with motor neuron disease
- 2. FTD without motor neuron disease
- 3. None present
- 4. Not assessed
- 9. Missing/unknown

FTD WITH NO DISTINCTIVE HISTOPATHOLOGY

- 1. Yes
- 2. No
- 3. Not assessed
- 9. Missing/unknown

SUBSTANTIA NIGRA DEGENERATION (NO SPECIFIC HISTOPATHOLOGY, E.G. ARJP)

- 1. Yes
- 2. No
- 3. Not assessed
- 9. Missing/unknown

SPINOCEREBELLAR ATAXIAS (E.G., SCA-2 AND SCA-3)

- 1. Yes
- 2. No
- 3. Not assessed
- 9. Missing/unknown

STRIATAL DEGENERATIONS (HUNTINGTON'S DISEASE)

- 1. Yes
- 2. No
- 3. Not assessed
- 9. Missing/unknown

# **Alzheimer Type Pathology**

NIA/REAGAN INSTITUTE NEUROPATHOLOGICAL CRITERIA

- 1. High likelihood of dementia being due to Alzheimer's disease
- 2. Intermediate likelihood of dementia being due to Alzheimer's disease
- 3. Low likelihood of dementia being due to Alzheimer's disease
- 4. Criteria not met
- 5. Not done
- 9. Missing/unknown

CERAD NEUROPATHOLOGICAL CRITERIA

- 1. Definite Alzheimer's disease
- 2. Probable Alzheimer's disease
- 3. Possible Alzheimer's disease
- 4. Criteria not met
- 5. Not done
- 9. Missing/unknown

ADRDA/KHACHATURIAN

- 1. Alzheimer's disease
- 2. Criteria not met
- 3. Not done
- 9. Missing/unknown

OTHER OR UNSPECIFIED NEUROPATHOLOGICAL CRITERIA

- 1. Alzheimer's disease, unspecified
- 2. Criteria not met
- 3. Not done
- 9. Missing/unknown

BRAAK & BRAAK STAGE

- 1. Stage I-II
- 2. Stage III-IV
- 3. Stage V-VI
- 4. Neurofibrillary degeneration not present
- 5. Not assessed
- 9. Missing/unknown

**NEURITIC PLAQUES** 

- 1. Frequent neuritic plaques
- 2. Moderate neuritic plaques
- 3. Sparse neuritic plaques
- 4. No neuritic plaques
- 5. Not assessed
- 9. Missing/unknown

#### DIFFUSE PLAQUES

- 1. Frequent diffuse plaques
- 2. Moderate diffuse plaques
- 3. Sparse diffuse plaques
- 4. No diffuse plaques
- 5. Not assessed
- 9. Missing/unknown

#### AMYLOID ANGIOPATHY

- 1. Present
- 2. Absent
- 5. Not assessed
- 9. Missing/unknown

# **Vascular Pathology**

Atherosclerotic vascular pathology (of the circle of Willis)

- 1. Present
- 2. Absent
- 5. Not assessed
- 9. Missing/unknown

Arteriosclerosis (small parenchymal arteriolar disease)

- 1. Present
- 2. Absent
- 5. Not assessed
- 9. Missing/unknown

Another type of angiopathy (e.g., CADASIL or arteritis)

- 1. Present
- 2. Absent
- 5. Not assessed
- 9. Missing/unknown

## Ischemic & Hemorrhagic Pathology

One or more large artery cerebral infarcts

- 1. Yes
- 2. No
- 3. Not assessed
- 4. Missing/unknown

One or more cortical microinfarcts (including "granular atrophy")

- 1. Yes
- 2. No
- 3. Not assessed
- 4. Missing/unknown

One of more lacunes (small artery infarcts and/or hemorrhages)

- 1. Yes
- 2. No
- 3. Not assessed
- 4. Missing/unknown

One or more hemorrhages

- 1. Yes 2. No
- 3. Not assessed
- 4. Missing/unknown

Subcortical arteriosclerotic leukoencephaolopathy

- 1. Yes
- 2. No
- 3. Not assessed
- 4. Missing/unknown

Cortical laminar necrosis

- 1. Yes
- 2. No
- 3. Not assessed
- 4. Missing/unknown

Medial temporal lobe sclerosis (including hippocampal sclerosis)

- 1. Yes
- 2. No
- 3. Not assessed
- 4. Missing/unknown

Other pathology related to ischemic or vascular disease not previously specified

- 1. Yes
- 2. No
- 3. Not assessed
- 4. Missing/unknown