

arrangements are approved by the ADNI-NPC in advance. Brain removal costs should be limited to \$500 whenever possible.

Death certificates and related paperwork and transport to funeral home or body donor programs post-autopsy are not covered by ADNI-NPC.

Exceptions: The ADNI-NPC Coordinator must approve any exceptions to the above costs via communication with the Leader or Co-Leader of the ADNI-NPC. However, if a death occurs after regular business hours or if the Leader or Co-Leader of the ADNI-NPC are unreachable, the Coordinator is empowered to allow charges of up to \$1000 (for transportation and brain removal) if the expenses seem justified. As a rule, this amount should be for the extreme exception. Please inform the transporter/ pathologist that ADNI-NPC is a research study with limited funds and suggest a cost reduction.

ADNI-NPC Neuropathology Protocols

Where possible, each center will undertake its own brain assessment and forward a standard set of fixed tissue blocks or sections and frozen tissue to the ADNI-NPC (see below). For sites that do not routinely undertake neuropathologic studies, a separate brain removal protocol is listed on page 15.

Financial Assistance with Block Sampling, Preservation, and Shipping Costs

The ADNI-NPC will fund all costs in shipping frozen and fixed tissue samples to St. Louis. To assist participating centers and neuropathologists with the costs of providing frozen tissue slices and/or formalin-fixed paraffin wax-embedded tissue, the following costs will be reimbursed, if requested. Please address an invoice for these costs to the ADNI-NPC Coordinator at Washington University School of Medicine. **The ADNI-NPC is unable to provide funds without an invoice. Please consult the NPC regarding additional financial support if needed to reimburse for materials, time, and effort in provision of tissue samples.**

1. Recovery of coronal frozen tissue slices and formalin-fixed paraffin wax-embedded tissue blocks (*see list of brain regions below) \$300.
2. Recovery of formalin-fixed paraffin wax-embedded tissue sections (*see list of brain regions below) \$100.

ADNI-NPC Block Sampling

Resources to defray the costs of sampling, tissue processing, administration, and transport will be made available to each center already undertaking neuropathology. These resources are to facilitate the provision of the standard set of blocks to the ADNI-NPC. To minimize the burden on participating centers, formalin-fixed, paraffin wax-embedded tissue blocks from the following 17 areas from the left cerebrum will be forwarded to the ADNI-NPC. Whenever possible, blocks should be labeled with the

number below in parenthesis. If this is cannot be accommodated, a key to the block numbers should be included with block shipment. Please provide a **macroscopic or gross description of the brain**. This description should include any observations of the brain made prior to sampling including the fresh brain weight and date and time of autopsy. Please see *Example Macroscopic Description* on page 18.

1. Middle frontal gyrus (Block 1)
2. Superior and middle temporal gyri (Block 2)
3. Inferior parietal lobe (angular gyrus) (Block 3)
4. Occipital lobe to include the calcarine sulcus and parastriate cortex (Block 4)
5. Anterior cingulate gyrus at the level of the genu of the corpus callosum (Block 19)
6. Precentral gyrus (Block 21)
7. Posterior cingulate gyrus and precuneus at the level of the splenium (Block 30)
8. Amygdala and entorhinal cortex (Block 23)
9. Hippocampus and parahippocampal gyrus at the level of the lateral geniculate nucleus (Block 5)
10. Striatum (caudate nucleus and putamen) with olfactory cortex at the level of the nucleus accumbens (Block 6)
11. Striatum and pallidum at the level of the anterior commissure to include nucleus basalis of Meynert, basal forebrain, and septum (Block 17)
12. Thalamus and subthalamic nucleus (Block 8)
13. Midbrain with red nucleus (Block 9)
14. Pons with locus coeruleus (Block 11)
15. Medulla oblongata (Block 12)
16. Cerebellum with dentate nucleus (Block 14)
17. Spinal cord (Block 13)

In the unusual situation where it is impractical to forward a tissue block (e.g., if the block is used for stereology or a particular brain area cannot accommodate an additional tissue block for the ADNI-NPC), 10 paraffin wax sections (4-8 μm) from each block will be provided to ADNI-NPC for systematic neuropathology and research diagnosis.

Frozen Tissue

To provide tissue for biochemical studies and to advance the aims of the Biomarkers Study, snap frozen tissue will be dissected, frozen, and sent to ADNI-NPC. The following coronal right hemibrain slices (0.5 to 1cm thick), where possible, will be taken:

1. Frontal lobe to include striatum;
2. Frontal and temporal lobe at the level of the mamillary body;
3. Temporal and parietal lobes at the level of the lateral geniculate nucleus;
4. Occipital lobe to include the calcarine sulcus.
5. Cerebellar hemisphere to include the dentate nucleus (parasagittal/radial slice)

Note: It is the responsibility of the shipping institution to initiate a material transfer agreement (MTA) for the provision of tissue to the ADNI-NPC if required.