

## Specimen Submission Guidelines for Pathologic Evaluation of Sudden Unexplained Infant Death with Pathologic or Clinical Suspicion of Infection

Sudden unexplained infant deaths (SUID) are defined as the death of an infant less than one year old, in which the investigation, autopsy, medical history review, and appropriate laboratory testing fail to identify a specific cause of death. **Some of these cases have gross or histopathologic features suggestive of an infectious process and may be submitted for evaluation by the Infectious Diseases Pathology Branch.** Performance of specific immunohistochemical, molecular, or other assays will be determined using clinical and epidemiologic information provided by the submitter and the histopathologic features identified in the submitted tissue specimens.

### Collection of Tissue Specimens

Tissues should be collected in accordance with the National Association of Medical Examiners (NAME) protocol for a complete SUID autopsy. In cases where there is gross or microscopic evidence of an infection present, or when clinical history raises the suspicion of infection, tissue from the organ(s) demonstrating pathology should be sampled heavily and submitted for evaluation. Major organs without apparent histopathologic changes may be submitted representatively.

The NAME SUID white paper can be accessed online:

[http://thename.org/index2.php?option=com\\_docman&task=doc\\_view&gid=90&Itemid=31](http://thename.org/index2.php?option=com_docman&task=doc_view&gid=90&Itemid=31)

### Submission of Specimens

#### Paraffin-embedded tissue blocks

In general, this is the preferred specimen and is especially important to submit in cases where tissues have been in formalin for a significant time. Prolonged fixation (>2 weeks) may interfere with some immunohistochemical and molecular diagnostic assays.

#### Wet tissue

If available, we highly recommend that unprocessed tissues in 10% neutral buffered formalin be submitted in addition to paraffin blocks.

#### Unstained slides

Although not optimal, if paraffin blocks are unavailable it may be possible to utilize unstained sections cut at 3–5 microns (10 slides per block) for immunohistochemistry and special stains but *not* molecular diagnostic assays (e.g. PCR).

#### Fresh-frozen tissue

Send separately on dry ice

#### Electron Microscopy (EM) specimens

Samples fixed in glutaraldehyde and held in phosphate buffer. Sample containers are filled to the top with phosphate buffer and sent on wet ice. Do not freeze. Epoxy-embedded tissues are also accepted.

Please refer to our [General Guidelines for Shipping Pathology Specimens](#) (next page).

# General Guidelines for Shipping Pathology Specimens

## Infectious Diseases Pathology Branch

Packaging Guidelines		
Room Temperature	Refrigerated (frozen gel packs)	Frozen (dry ice) §
<ul style="list-style-type: none"> <li>Formalin-fixed wet tissues</li> <li>Formalin-fixed paraffin-embedded blocks *</li> <li>Glass slides with sections from paraffin-embedded blocks</li> <li>Glass slides with smears</li> <li>EM blocks / EM grids</li> </ul>	<ul style="list-style-type: none"> <li>Fresh tissue</li> <li>Blood</li> <li>Wet tissue in EM fixative</li> <li>Stool for EM</li> </ul>	<ul style="list-style-type: none"> <li>Fresh frozen tissue</li> <li>Serum</li> <li>Body fluids (BAL, CSF, urine)</li> </ul>

\* During the warmer months (June – August), it is advisable to ship the block(s) with a frozen gel ice-pack in order to prevent the melting of paraffin-embedded tissue blocks during transit.

§ When shipping frozen specimens from long distances or from international locations, it is best to use a combination of dry ice and frozen gel ice-packs. The gel ice-packs will remain frozen for a day or two after the dry ice has dissipated.

Shipping Guidelines
<ul style="list-style-type: none"> <li>All packages should be mailed for receipt by Friday.</li> <li>US Federal Holidays should be taken into consideration before mailing specimens.</li> <li>Exceptions can be made for urgent cases <u>with prior approval</u>.</li> <li>Please provide us the shipper's package tracking number(s).</li> <li>Specific regulations for packaging, labeling, and shipping may be found at:               <ul style="list-style-type: none"> <li><a href="http://www.cdc.gov/laboratory/specimenmanagement/shipping-packing.html">http://www.cdc.gov/laboratory/specimenmanagement/shipping-packing.html</a></li> <li><a href="http://www.cdc.gov/biosafety">http://www.cdc.gov/biosafety</a></li> <li><a href="http://www.iata.org/whatwedo/cargo/dangerous_goods/Pages/infectious_substances.aspx">http://www.iata.org/whatwedo/cargo/dangerous_goods/Pages/infectious_substances.aspx</a></li> </ul> </li> </ul>

Supporting Documentation
<ul style="list-style-type: none"> <li>Please include               <ol style="list-style-type: none"> <li>a cover letter outlining a brief clinical history, including relevant demographic / epidemiologic information</li> <li>a completed <a href="#">CDC Form 50.34</a></li> <li>a copy of (a) the autopsy report (preliminary or final) or (b) surgical pathology report</li> <li>copies of pertinent laboratory results (microbiology, hematology, serology, culture, and/or biochemical)</li> <li>images (clinical and/or gross autopsy photos)</li> </ol> </li> <li>Include the full name, title, complete mailing address, e-mail address, and telephone and fax numbers of the submitter. This will be the person to whom the final pathology report is addressed.</li> </ul>

**▶▶ Advance consultation is REQUIRED concerning the submission of all cases. ◀◀**

**All specimens should be addressed to:**

Infectious Diseases Pathology Branch (IDPB)  
Centers for Disease Control and Prevention (CDC)  
1600 Clifton Rd NE, MS G-32  
Atlanta, GA 30329-4027

Phone: (404) 639-3133  
Fax: (404) 639-3043  
[pathology@cdc.gov](mailto:pathology@cdc.gov)