

Specimen Submission Guidelines for Unexplained Illness due to Possibly Infectious Etiology

Determining the cause of an infectious disease can be challenging, particularly when specimens such as serum, blood or CSF are unavailable, or when traditional laboratory assays have been unsuccessful at identifying a specific agent. Tissue-based diagnostics, utilizing specimens acquired through biopsy or autopsy, provide extremely powerful and versatile methods of establishing an etiologic diagnosis. These samples, when stored in 10% neutral buffered formalin, are almost always rendered non-infectious and can be stored safely at room temperature for days to weeks, until analysis by specific histopathologic, immunohistochemical or molecular assays.

For deceased patients, tissues obtained at autopsy are preferable; however, when an autopsy is impractical because of real or perceived biosafety risks, or because of cultural practices, limited tissue collection may still be possible, and should be considered.

1. **When an autopsy is performed**, representative portions from all major organs (lung, heart, liver, kidney, spleen and brain), as well as any tissues or organs that show conspicuous lesions, or are indicated by clinical findings, should be submitted for evaluation.
2. **When a complete autopsy of deceased patient is not possible**, a full-thickness biopsy should be collected from any conspicuous skin lesion (e.g. petechiae, eschar, or purpura). Core or wedge biopsy specimens of major organs (particularly liver), obtained by using a viscerotome or by limited autopsy, are also acceptable.

Biopsy specimens of skin, bone marrow, or other tissues, obtained from living patients, are also acceptable for evaluation.

All tissue specimens should be placed in 10% neutral buffered formalin and maintained at room temperature. If there is adequate tissue available and circumstances permit collection and storage of fresh tissue, these specimens should be maintained in liquid nitrogen or on dry ice, and shipped separately from the formalin-fixed specimens.

Each specimen MUST be labeled clearly with a unique patient identifier that includes the patient name. When available, a brief clinical history, including any pertinent laboratory results, should also be included.

Shipping Guidelines

- All packages should be mailed for receipt by Friday.
- U.S. Federal Holidays should be taken into consideration before mailing specimens.
- Exceptions can be made for urgent cases with prior approval.
- Please provide us the shipper's package tracking number(s).
- Specific regulations for packaging, labeling, and shipping may be found at:
 - <http://www.cdc.gov/laboratory/specimenmanagement/shipping-packing.html>
 - <http://www.cdc.gov/biosafety>
 - http://www.iata.org/whatwedo/cargo/dangerous_goods/Pages/infectious_substances.aspx
- 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.

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 USA

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

