Molecular Diagnostics Specimen Collection Guide

Specimen Collection and Handling

The Molecular Diagnostics Unit offers PCR-based molecular testing designed to assist in the diagnosis of both solid tumors and lymphoproliferative disorders.

1) Submission of IN-HOUSE Samples

**Note:** Specimens delivered to Room 3S247 in Building 10 will be accepted from 7:30 AM to 4:30 PM.

When submitting patient samples to the Molecular Diagnostics Unit, the requesting physician or nurse must enter a CRIS order prior to submission of the sample. The CRIS order is listed under the heading of Anatomic Pathology, sub-heading, Molecular Pathology. The information submitted in the order must include the type of specimen and the requested tests.

Blood:

1. **3 ml** of whole blood is collected in light-blue citrate tube *(one tube only).*
2. The tubes are wrapped in plastic bags *(at room temperature)*, and sent immediately to the Molecular Diagnostics Unit.

Bone Marrow Aspirates, CSF, and Other Tissues

Bone Marrow Aspirates:

1. Draw **2 ml** in plain syringe with no anticoagulant. DO NOT USE HEPARINIZED SYRINGE.
2. IMMEDIATELY place sample into the EDTA tube (lavender top) and mix gently to prevent clotting.

CSF:

1. **2 cc** or more. Samples are placed in a sterile, capped plastic tube, wrapped in a plastic bag and then placed in a second bag or cup with wet ice. **At no time should the ice and the tube have direct contact.**
2. If fresh CSF is not available, cytospins of the CSF that are air-dried and Diff-Quick-stained may be submitted in lieu of fresh samples.

2) Submission of Samples from OUTSIDE of the NIH

**Note:** Notification of submission of samples from outside the NIH must to be made as a consultation to the Laboratory of Pathology. The Molecular Diagnostics Unit is not a reference laboratory.

Blood:

1. **3 ml** of whole blood is collected in light-blue citrate tube *(one tube only).*
2. The tubes are wrapped in plastic bags and "bubble wrap" to prevent breakage.
3. The wrapped tubes are then placed into a Styrofoam box with "cold packs" (i.e., "picnic-type" frozen ice packs) and transported overnight by courier to the address given below.

Bone Marrow Aspirates:

1. Draw **2 ml** in plain syringe with no anticoagulant. DO NOT USE HEPARINIZED SYRINGE.
2. IMMEDIATELY place sample into the EDTA tube (lavender top) and mix gently to prevent clotting.
3. The sample is wrapped in a plastic bag and "bubble wrap," placed into a Styrofoam box with "cold packs" for shipping by overnight delivery by courier to the address given below. Do not freeze.

3) Submitted FFPE Tissues

All FFPE biopsy tissues performed for molecular diagnostic testing should be submitted routinely through Surgical Pathology. The Surgical Pathology staff is responsible for triaging the case for all specialized testing, including molecular diagnostic assays. It is essential that separate
CRIS orders for both surgical pathology examination, and molecular diagnostic testing are submitted, and the required tests are listed on both CRI S forms. If the patient does not have an active MRN, then it is essential that a tissue examination sheet be completed in the Surgical Pathology Main Office (Building 10/2S262), and all required assays are listed on this form.

**Blood and bone marrow samples should be sent directly to:**

Molecular Diagnostics Unit  
Laboratory of Pathology, CCR  
National Cancer Institute  
9000 Rockville Pike  
Building 10, Room 3S249  
Bethesda, MD 20892

**Note:** All other tissues samples should be brought to the Surgical Pathology Main Office (Building 10/2S262).