

Introduction

In patients with suspected hematologic disease, bone marrow biopsies and aspirates are performed to diagnose and monitor disease. First, the treating physician, often a hematologist-oncologist, enters a request for the procedure. The collected specimens are then reviewed by a hematopathologist.

The evaluation of bone marrow specimens includes a detailed microscopic examination, as well as other ancillary testing. Frequently used ancillary testing includes flow cytometry, cytogenetics, and other molecular studies.

UK HealthCare Chandler Laboratories clients may request a comprehensive bone marrow analysis, which includes a microscopic examine in all cases. Additional ancillary testing will be performed as requested by the submitting physician. Additional testing includes cytogenetics, flow cytometry, immunohistochemistry and/or molecular testing. Each diagnostic test can be ordered separately.

The best value for the patient is achieved when the submitting physician provides relevant clinical information, an adequate specimen and samples should be packed and stored properly. Please see details below on obtaining and shipping an ideal specimen.

Treating Physicians

Prior to requesting a biopsy, the treating physician should obtain a UK HealthCare Bone Marrow requisition form via the Bone Marrow Collection menu option on the UK HealthCare Clinical Laboratories website.

<https://www.testmenu.com/UKLab>

Complete the form denoting the requested testing prior to sample collection. Bone marrow processing is available Monday through Friday 8am to 4pm. To allow for same day processing, it is preferable for the samples to be received in the UK Laboratory no later than 12 pm.

A recent peripheral blood smear and CBC report should be submitted with the bone marrow sample.

Bone Marrow Specimen Requirements

Aspirate

The bone marrow aspirate for morphology, should be collected in a syringe with EDTA. If EDTA is unavailable, aspirate should be collected without additive, and then immediately transferred to an EDTA collection container to prevent the aspirate from clotting. Bone marrow films should be made with the aspirate and sent with any excess aspirate.

Approximately 6-8 bone marrow aspirate slides should be made and placed in plastic slide holders for transportation. Additional aspirate may be collected if ancillary testing is ordered.

- Flow cytometry: 3.0 mL in EDTA container
- Cytogenetics/FISH: 4.0 mL in sodium heparin container.
- Molecular studies: 3-4.0 mL in EDTA container

Biopsy

The optimal length for trephine core biopsy should be at least 1-2 cm (Minimum of 1cm for Leukemia's and 1.5cm for Lymphomas). Touch prep slides should be made by gently tapping the biopsy several times on a slide. The biopsy should then be placed in a formalin container. A clot section can be submitted if no trephine core biopsy is obtained.

Laboratory Handling & Shipping Requirements

For your convenience, we provide shipping kits containing all supplies needed for the following steps:

1. Place slides into slide holders provided.
2. Liquid aspirate can be placed into the EDTA or sodium heparin tubes in the kit as needed.
3. Biopsy/clot piece in formalin containers.
4. Label all specimen parts with at least two patient identifiers (patient name, date of birth, social security number). Include the specific site the bone marrow was taken from.
5. Place all specimen in the foam insert in the cardboard box provided. Place the foam insert into a sealable biohazard bag before placing in box.
6. Place the completed bone marrow requisition and CBC report in the package.
7. Seal and place address air bill for Next Day Air with the provided label to:

CORE Laboratory
HA645 CCC
Attention: Bone Marrow Tech
University of Kentucky Hospital
800 Rose Street
Lexington, KY 40536

UK HealthCare Laboratories Contact Information

Core Laboratory
Phone: 859-257-1973
Fax: 859-257-7696

Bone Marrow Technologist
Phone: 859-562-6685
Monday – Friday 8:00am – 4:00 pm