

PROCESSING BONE MARROW BIOPSIES FOR HEMATOPATHOLOGY

Adapted from the Standard Operating Procedures of the Histology Laboratory Department of Anatomic Pathology at EMORY UNIVERSITY HOSPITAL, Atlanta, GA.

Principle:

When architectural features of both bone and marrow are important in diagnosis, aspirated bone marrow is usually obtained with sternal puncture needle. Smears are made and the remainder is processed as a biopsy specimen.

Precautions:

Wear gloves and protective clothing during decalcification procedures.

Perform procedures under a fume hood.

DO NOT MIX FORMHALDEHYE WITH **RDO**. POISONOUS GAS IS LIBERATED.

Procedure:

Bone marrow biopsies are collected by the Hematology Laboratory Staff and placed immediately into B5 fixative (to which 1.0ml of formaldehyde is added just prior to use). The time of collection is recorded on the specimen container and at the top of the Pathology requisition. The specimen is assigned an accession number, which is recorded on the requisition and the specimen container.

The following steps are performed by the histotech:

The histotech assigned to bone marrows will check the gross room throughout the day for arrival of any bone marrow specimens.

Fixation time in B5 is 1-2 hours.

Fill out a gross sheet for bone marrow listing:

Surgical number

The patient's name

Record "bone marrow biopsy" in the TYPE OF TISSUE column

Record "BM" number in CASSETTE IDENTIFICATION column

Record the number of pieces of bone marrow in CASSETTE IDENTIFICATION column

Record the location code in the LOCATION column

After fixation, wash in tap water for 2-3 minutes (decant used B5 into labeled water container).

Decalcify specimen in **RDO** solution by pouring filtered **RDO** (approx. 20cc) into specimen

container.

Decal time is 20 to 40 minutes.

Note: Some biopsies require less time than others, depending on the amount of bone present; check biopsies after 20 minutes.

Biopsy is checked for decalcification by bending to check flexibility.

Place specimen into blue cassette labeled with both surgical and bone marrow numbers (decant used **RDO** into proper drain with water flush).

Wash in running tap water for 1 hour.

Place in 10% buffered formalin until ready to load on processor.

The evening histotech will load specimens onto processor.

Note: Some biopsies may arrive too late to complete this procedure in entirety. Store in 10% buffered formalin overnight to be completed the following day.

Bone marrow biopsy sections must be air-dried completely before heat-affixation at 60 degrees C oven for 40 minutes.

References:

Beard, C., et al, "ACHIEVING TECHNICAL EXCELLENCE IN LYMPH NODE SPECIMENS: AN UPDATE", LABORATORY MEDICINE, VOL 16, No. 8, Aug. 1985, 468-475

Beard, C., Bowling, M., "TECHNICAL FACTORS IN EVALUATION OF LYMPH NODE BIOPSIES", Laboratory of Pathology, National Cancer Institute, National Institute of Health, Bethesda, Md.

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