

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 a 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 FORMALDEHYDE 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:

1. The histotech assigned to bone marrows will check the gross room throughout the day for the arrival of any bone marrow specimens.
2. Fixation time in B5 is 1-2 hours.
3. Fill out a gross sheet for bone marrows listing:
 - a. surgical number
 - b. the patient's name
 - c. record bone marrow biopsy" in the TYPE of TISSUE column
 - d. Record the "BM" number in the CASSETTE IDENTIFICATION column
 - e. Record the number of pieces of bone marrow in the CASSETTE IDENTIFICATION column
 - f. Record the location in the LOCATION column
4. After fixation, wash in tap water for 2-3 minutes (decant used B into labeled waste container.)
5. Decalcify specimen in **RDO** solution by pouring filtered **RDO** (approx. 20cc) into specimen container.
6. Decal time is 20 to 40 minutes.
7. Biopsy is checked for decalcification by bending to check flexibility.
8. Place specimen into blue cassette labeled with both surgical and bone marrow numbers (decant used **RDO** into proper drain with water flush.)
9. Wash in running tap water for 1 hour.
10. Place in 10% buffered formalin until ready to load into processor.
11. The evening histotech will load specimens into 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., "TECHINICAL FACTORS IN EVALUATION OF LYMPH NODE BIOPSIES", Laboratory of Pathology, Nat'l. Cancer Inst., Nat'l. Inst. of Health, Bethesda, MD
- Sontoanni, R. Hammami, A., "NUCLEAR BUBBLING: AN OVERLOOKED ARTIFICAT", JOURNAL OF HISTOTECHNOLOGY, Vol. 13, No. 2 June 1990, 135-136

