Specimen Collection and Handling Guidelines for Bone Marrow Aspirate

If protocol-specific collection and handling instructions for bone marrow aspirate are not provided in the protocol or through a linked resource (usually in Section 15 in SWOG-led protocols), then follow the instructions outlined below.

Collecting Bone Marrow Aspirate

1. Use the protocol-specified collection tube type(s) to collect bone marrow aspirate.
   a. One or more tubes can be used to collect the required volume of bone marrow (e.g., if 10 mL of bone marrow aspirate is requested, then one 10-mL or two 5-mL tubes may be used to collect 10 mL).
   b. Pre-label vacutainer tube(s) according the specimen labeling requirements.
      - Note: laterality (right or left) is a labeling requirement for bone marrow.
2. Use anticoagulated syringes to collect bone marrow aspirate. Then, place the marrow into the vacutainer tube(s).

Storage of Bone Marrow Aspirate

- Bone marrow aspirate should be shipped as soon as possible to optimize cell viability.
- If bone marrow aspirate cannot be shipped immediately after collection, then store at 4°C (40°F) until shipment. **Do not freeze the bone marrow aspirate**.
- Storage time longer than 24 hours can greatly impact specimen quality and should avoided whenever possible.

Additional Considerations for Bone Marrow Aspirate Collections for Leukemia:

- For leukemia protocols, if participants have a high white blood cell count (e.g., greater than 100,000 cells/µL), then the bone marrow aspirate may be a “dry tap” (meaning that the collection is unsuccessful). In these cases, peripheral blood is often a potential substitute. Refer to the protocol for the volume of peripheral blood that should be collected instead, as it can be a larger volume than the bone marrow requested.