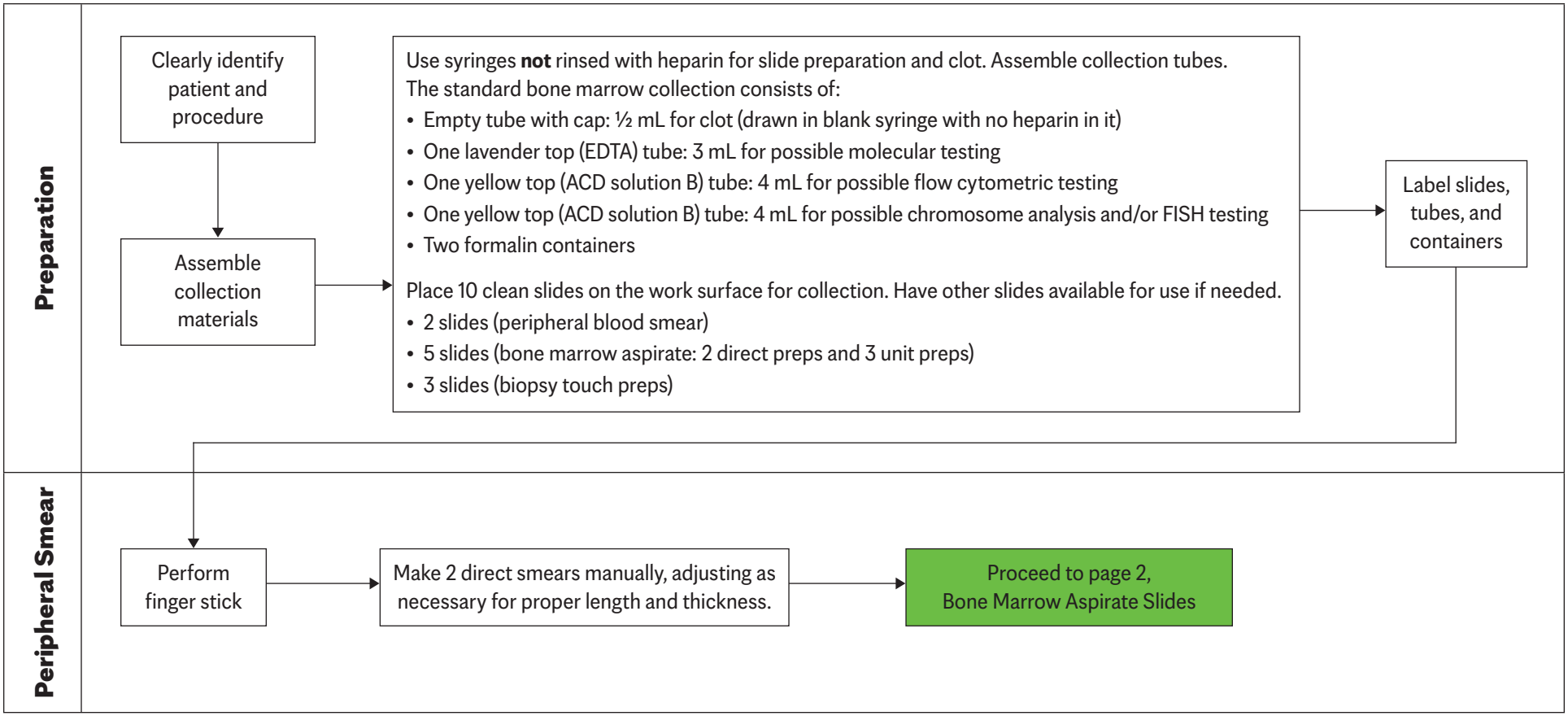
MAYO CLINIC LABORATORIES

Bone Marrow Core Biopsy, Clot, and Aspirate Collection Guideline



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Bone Marrow Core Biopsy, Clot, and Aspirate Collection Guideline (continued)

Bone Marrow Aspirate Slides

Syringes used for bone marrow slides and clot **should not** be rinsed with heparin.
All other syringes can be pre-rinsed with liquid heparin to prevent clotting.
Make your best effort to prepare evenly distributed slides, without crush artifact, of correct length and thickness.

Make slides immediately once aspirate is obtained.

Decant excess fluid from slide or tip the slide so the excess fluid drains away from the units.

Direct smears

- Use a glass rod to place a drop of aspirate toward the frosted end of the slide and make a wedge smear with a clean slide.
- Make 2 good direct smears.

Unit preps

- Use a glass rod to place a drop on slide, slightly above the center, and use a clean slide to **gently** "squash" the units to spread them out.
- Pull the two slides in opposite directions horizontally until the smear is complete.
- Pull at a steady speed, but not too fast, to prevent cell distortion.
- Forceful "squashing" will break the cells.
- Make 3 good unit preps per unilateral collection.

Bone Marrow Aspirate Clot and Tubes

Fill sample tubes quickly after making the slides.

Bone marrow aspirate clot

- Use sample in non-heparinized syringe.
- Put ½ mL in empty tube.
- After clotted, move clot to formalin vial.

Bone marrow aspirate tubes

Priority of filling sample tubes is:

- **EDTA** – 3 mL
- **ACD** – 4 mL (x2)

Recap and gently invert to mix.

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Bone Marrow Core Biopsy, Clot, and Aspirate Collection Guideline (continued)

Bone Marrow Core Biopsy

Check the biopsy core for adequacy as soon as collected — 1 cm length **minimum**.

- Assess whether biopsy piece appears to be bone, cartilage (inadequate), or fat (inadequate).
  - Bone has a spongy, porous texture.
  - Cartilage has a hard, white appearance and texture. Sometimes tumor will be white or black appearing, but will not usually have the hard texture of cartilage.
  - Fat has a yellow appearance and soft feel.
- If inadequate, ask for a redirect for a better core biopsy sample.

Even if some of the core appears inadequate, **keep all pieces for processing**.

Touch prep instructions

- Use forceps to move biopsy core to clean slide and gently roll core across the full length of the slide.
- Do not crush the biopsy.
- Make 3 touch preps.
- Gently remove clot, if necessary.
- Place all collected biopsy pieces into a formalin vial separate from the clot.

Transport Information

To transport specimen

- Place slides in plastic slide holder and stretch parafilm around container.
- Core and clot should be in separate formalin jars, with parafilm stretched around lids.

To avoid formalin contamination, slide carriers must not have been previously used to carry fixed slides. Place slide carriers in a separate bag and apart from any formalin-fixed biopsy specimens during transport.