

Wound and Soft Tissue Cultures: Collection Recommendations

General Considerations

1. Preferably collect specimen prior to initiation of therapy and only from wounds that are clinically infected or deteriorating or that fail to heal over a long period.
2. Cleanse skin and mucosal surfaces.
 - a. For closed wounds and aspirates, disinfect as for a blood culture collection with 2% chlorhexidine or 70% alcohol followed by an iodine solution (1 to 2% tincture of iodine or a 10% solution of povidone-iodine [1% free iodine]). Remove iodine with alcohol prior to specimen collection.
 - b. For open wounds, debride, if appropriate, and thoroughly rinse with sterile saline prior to collection.
3. Sample viable infected tissue, rather than superficial debris.
4. Avoid swab collection if aspirates or biopsy samples can be obtained.

Specimen collection after proper disinfection

1. Closed abscesses
 - a. Aspirate infected material with needle and syringe.
 - b. If the initial aspiration fails to obtain material, inject sterile saline, nonbacteriostatic saline subcutaneously. Repeat the aspiration attempt.
 - c. Remove needle and submit with Luer-Lok on the syringe or place contents in a sterile Vacutainer tube with out preservatives or anticoagulants.
2. Fine Needle Aspirate
 - a. Insert the needle into the tissue, using various directions, if possible.
 - b. Collect aspirate in syringe, remove the needle and submit with Luer-Lok on the syringe.
3. Open Wounds
 - a. Cleanse the superficial area thoroughly with sterile saline, changing sponges with each application. Remove all superficial exudates.
 - b. Remove overlying debris with scalpel and swabs or sponges.
 - c. Collect a biopsy or curette sample from base or advancing margin of lesion.
4. Pus
 - a. Aspirate the deepest portion of the lesion or exudate with a syringe and needle.
 - b. Collect a biopsy sample of the advancing margin or base of the infected lesion after excision and drainage.
 - c. For bite wounds, aspirate pus from the wound, or obtain it at the same time of incision, drainage, or debridement of infected wound. (*Do not culture fresh bite wounds, as there is generally not yet evidence of infection. These wounds will harbor the resident respiratory microbiota introduced from the bite, but cultures cannot predict if they will cause infection.*)
5. Tissues and biopsy samples
 - a. Collect sufficient tissue, avoiding necrotic areas. Collect 3- to 4-mm biopsy samples.
 - b. Place small pieces of tissue in anaerobic transport vial; place larger pieces of tissue in a sterile container.
6. Collect swabs only when tissue or aspirate cannot be obtained.
 - a. Limit swab sampling to wounds that are clinically infected or those that are chronic and not healing.
 - b. Remove superficial debris by thorough irrigation and cleansing with nonbacteriostatic sterile saline. If wound is relatively dry, collect with two cotton-tipped swabs moistened with sterile saline.