TISSUE CYTOLOGY
(Fine Needle Biopsy/Aspiration)

Key Components for Submission

- Up to four slides with well-stained, thinly spread samples
- A maximum of two different tissues sites/sources
- Relevant history/lesion description

Fine needle aspiration (FNA)

Fine needle biopsy (without aspiration) is preferred for most lesions.

Fine needle aspiration may be considered if there is concern that the lesion will exfoliate poorly.

Impression Smears and Swabs

Can be used for making imprints from a biopsy specimen or from superficial/draining lesions not amenable to FNA, but interpretation may be limited.

May not adequately sample cell populations or organisms deeper in tissue.

Maximize Cellular Spread and Integrity

1. Expel the sample onto a clean glass slide.
2. Place a second slide gently over the sample and **without applying pressure**, pull the two slides apart in a **smooth horizontal motion.**

PRO TIP: Holding the sample slide and spreader slide above the table can help to ensure no pressure is applied during the spreading process.

PRO TIP: Avoid pulling the sample slide and spreader slide apart in a vertical fashion. This will create a sandwich preparation where cells are often not spread thinly enough for optimal assessment.

Staining and Submission

1. After smears are prepared, they should be rapidly air-dried to avoid drying artifact. A hair dryer on cool setting can help facilitate drying.
2. Ensure slides are labeled with site and patient name.
3. Stain slide using a Romanowksy-type stain according to manufacturer's protocol.
4. Apply immersion oil and coverslip (see The Basics).

When Scanning, Make Sure That

- Slide is sample side up, pointing toward scanner lens
- Slide lock is engaged
- There are no objects preventing movement of scanner (including no operating centrifuges)