

Optimizing ThinPrep® pap specimen adequacy

Occasionally, a ThinPrep® pap is assessed as “unsatisfactory for evaluation due to scant cellularity”. Nationally, labs are reporting an unsatisfactory rate for ThinPreps® of less than 2%. Allina Health Laboratory’s cytology lab shows a similar unsatisfactory rate.

Sometimes patient factors, such as atrophy, will result in an unsatisfactory Pap test. However, optimizing specimen collection technique and avoidance of lubricants can make a dramatic difference in reducing the number of unsatisfactory Paps. The following are suggestions for optimal collection technique:

- Do **not** remove mucus, discharge or blood from the cervix with a swab prior to collecting the Thin Prep Pap test. This practice may remove a significant amount of cellular material resulting in a scanty sample.
- Use a cytobrush and spatula. Published reports have shown that this combination collects the most cells and is best for obtaining the endocervical /transformation zone component (EC/TZ). Use of the cytobroom has been reported to show a lower EC/TZ recovery and we do not recommend its use.
- To help obtain an adequate sampling from the EC/TZ using the cytobrush, insert the brush into the cervix until only the bottom fibers are visible. Slowly rotate $\frac{1}{4}$ to $\frac{1}{2}$ turn in one direction. Do NOT over-rotate as this may cause bleeding and loss of EC/TZ cells.
- Vigorously twirl the brush and spatula in the liquid at least ten times. Push the brush against the side of the vial to remove any mucus. Use the spatula to mechanically remove mucus and cells from the cytobrush.
- Advise patients to avoid use of any type of lubricant for 72 hours prior to having their Pap test.
- Avoid lubricant when collecting the Pap. Residual lubricant can interfere with the cytobrush and spatula in acquisition of cervical cells. Also, lubricant may create a potential immiscible interface with the alcohol based liquid Pap solution, leading to potential agglutination and cellular loss.
- Menses can compromise cellularity.

Follow-up Recommendations for an Unsatisfactory Pap

- A repeat Pap in three to four months is the preferred follow-up in most situations.
- If the unsatisfactory result is due to obscuring inflammation and an organism is identified, specific treatment can be given before repeating the Pap.
- If the Pap test is repeatedly unsatisfactory due to obscuring blood, inflammation, or necrosis, additional clinical evaluation, such as colposcopy or biopsy may be helpful; or consider HPV testing.

Thin Prep Paps with No EC/TZ Component

Multiple retrospective longitudinal cohort studies have shown that patients with paps lacking EC/TZ cells are not more likely to have squamous lesions upon follow-up than are patients with EC/TZ cells. Retrospective case-control studies have failed to correlate false-negative Pap reports and lack of EC/TZ cells or partially obscuring factors. Finally, a study that looked specifically at liquid cytology showed no difference in the technology’s ability to detect CIN2-3 whether EC/TZ was present or not. Therefore, early repeat testing of women whose Pap smears are negative but lack an EC/TZ is not justified.

Follow-up Recommendations for a Pap with No EC/TZ

- Pap follow-up in 12 months for women with a negative Pap smear and no EC/TZ.
- A 6 month follow-up may be warranted in some situations, such as previous atypical Paps, inability to visualize the cervix, inability to obtain an adequate sample, immunosuppression, or history of insufficient frequency of previous screening.

For more information or questions, contact Dr. Jack Shelton, Allina Health Laboratory Cytopathology Director, at 763-236-4856 or jack.shelton@allina.com .

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