

Other thoughts on the relative value of the liquid based pap technologies
By Alan Waxman, MD
University of New Mexico
Department of Obstetrics and Gynecology
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Key points:

Decrease:

ASCUS, and Satisfactory but limited by blood, and inflammatory debris

Increase:

Benign Cellular Changes, Dysplasia low grade >> high grade

Unknown at this time:

Whether this technology's increase in sensitivity reduces the rate of cervical cancer, and if it is cost effective.

Background

The studies on Thinprep and Autocyte prep mostly compare the liquid based prep with conventional paps done on either a historical control population or by smearing the cells on a slide for conventional Pap and then putting the rest of the cells on the broom into the thin prep liquid. Most studies show a decrease in ASCUS, Satisfactory but limited by blood and inflammatory debris and an increase in Benign Cellular Changes and dysplasia pick-up when compared with conventional Pap. The dysplasia findings are most impressive at the LSIL level, but are fairly consistent with HSIL as well, though the numbers of HSIL are uniformly small and sometimes not significant.

The **question that remains** is, will this increase in sensitivity reduce the rate of cervical cancer, and is it cost effective. The studies aren't there yet to answer the question of cervical cancer. There have been several attempts at answering the second, i.e. cost effectiveness, with conflicting results. In addition to the Agency for Health Care Policy and Research review in the other part of this same FAQ, Montz (funded by thin prep's parent company CYTYC) finds thin prep cost effective. Montz looks at rates of cancer and cost per year of life saved and their model showed that liquid based paps could decrease the incidence of cervical cancer. Meyer finds it impossible to improve sensitivity and cost effectiveness together. The problem with cost effectiveness studies is that they all use models with assumptions. The Montz study assumed a cost of \$19.50 for thin prep. This is cheaper than many institutions.

The cost savings of thin prep that offset the higher price of the test are most likely to be found in patient call-back to repeat Paps for Unsatisfactory or Satisfactory but limited by...and Benign Cellular Changes which don't really need to be called back most of the time. The down side is increased call back for colposcopy for LSIL. In most institutional settings, the budget for Pap smears is different from the budget paying for clerks and docs to call-back patients is different from the budget that pays for colposcopy. Would the HSIL patients found on Thin Prep but not found on conventional Pap have been found with a subsequent Pap prior to development of cancer???? That would seem to be so, but I know of no studies that address it.

At this time the CDC is not paying for Thin Prep with it's Breast and Cervical Cancer Program monies, citing lack of cost-effectiveness data.

One I/T/U Area currently uses Thin Prep. They are excited that their ASCUS rate has dropped from 12% to 7%. Their Paps are read in-house by their pathologist. By most national measures 12% reflects a relative over-reading of ASCUS (as does 7%) because ASCUS usually comprises no more than 5% of Paps.

References:

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