Cytopathology in Focus: Why not call everything ASCUS?

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August 2018—Below is a question shared on the ASC listserv. My reply to the question follows.

A pathologist colleague who practiced previously as an obstetrician/gynecologist is of the opinion that categorizing the level of abnormality we observe on a Pap test is a waste of time. All the clinician needs to know, he says, is whether the test is normal or abnormal. The Pap test is a screening test, he says correctly, and its only relevance is in pointing out who needs a colposcopy and biopsy.

Being more specific gives the clinician guidance on what to look for on colposcopy, I argue. There is a significant false-negative rate with colposcopy, and providing a more specific diagnosis can help improve the number of successful biopsies, as well as help avoid unnecessary biopsies. The appropriate diagnosis also ensures the patient receives the correct follow-up. With HPV testing, however, my colleague's argument is compelling. Can you help?

The main problem with the primary HPV testing model (*yes* or *no* to colposcopy) is that the gold standard—colposcopy and biopsy—is not gold at all.

Colposcopy's sensitivity is about 52 percent, and it doesn't have the high specificity that a Pap test does. That means that patients and pathologists are relying on colposcopists, who have a 50:50 chance of detecting a lesion, to find disease. As we all know from doing cytologic-histologic correlations for more than 40 years, the most common reason for non-correlation is sampling error; 70 percent of errors, in other words, are due to colposcopy error. Most colposcopists have no specific training requirements or certification for the procedure, no required proficiency test, no quality assurance or quality improvement metrics, and, until recently, no standardized terminology for reporting lesions.

Does that mean colposcopy is a total waste of time? That we should rely on HPV tests alone to detect disease and just proceed to LEEP?

Of course not.

Every test (including HPV tests) has innate limitations. Pathologists know that. It is the combination of tests that often provides the most convincing evidence of disease.
The beauty of the Pap test is that it can do so much with so little: indicate hormonal status, diagnose infections, evaluate the background microbiome, detect and diagnose dysplasia and cancer. These are akin to cellular biopsies. And, like so much in cytology, it is relatively inexpensive—a lot of information at low cost.

It is unfortunate that our society tends to value high-priced, highly technical processes, but such processes don't always equate to better health. Look at the re-emergence of organic farming as a healthy alternative; these are ancient ways of food production but they generally provide for better nutrition than commercial agricultural methods.

Primary HPV testing has not been uniformly embraced in the U.S. and it may be because colposcopists are aware of the limitations of colposcopy. The U.S. is a litigious country. Now it will become the gynecologist's responsibility to detect and biopsy disease in women with a positive HPV test. All of the pathologists who lived in the litigation era are well aware of the high cost of a "missed" Pap test. We are about to enter the era of the "missed" colposcopy test. I predict that the burden of malpractice will begin to swing to the colposcopist, who was somewhat protected when the Pap test could be the target of the claim, but what of the positive high-risk HPV test and negative colpo/biopsies? A negative biopsy will be clear proof it wasn't an interpretive error; the colposcopist will be held accountable for missing the disease. Add to that extended intervals between HPV testing without a national screening program and we have a potential recipe for disaster.

While it is easy to be glib about tossing out a test that has the best and only true track record for preventing cancer, one should consider the potential ramifications, especially for those of us with mothers, wives, sisters, and friends we love.

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