Improving Diagnostic Accuracy in Cervical Cancer Screening

Cervical cancer screening is an important tool in women's health.

However, the variability in how pathologists diagnose CIN lesions can lead to the over-diagnosis of reactive/reparative lesions as high-grade ones, as well as the under-diagnosis of high-grade lesions.

That's why the College of American Pathology recently published guidelines that recommend the use of p16 immunostaining when a cervical biopsy diagnosis doesn't fit the clinical impression, or when there is a professional disagreement in the interpretation of that biopsy.

Let's take a look at how p16 staining of a cervical biopsy in a paraffin block can lead to better cervical cancer screening decisions.

The first case involves a 28-year-old woman whose Pap read as ASC-US/HPV positive. An area of aceto-whitening was biopsied but was difficult to interpret.

It was originally thought to be reactive squamous metaplasia, but p16 staining revealed it to be CIN2.

In the next case, a 54-year-old woman's Pap read as ASC-H. A biopsy close to the external orifice showed cells that varied in size and nuclear density, which was thought to be either a CIN2-or- CIN3 lesion or atrophy.

However, the P16 staining came back negative, and this was diagnosed as atrophy—not CIN2 or CIN3.

These two cases show the important role that p16 staining plays in cervical cancer screening, enabling more accurate diagnostic and treatment-based decisions in patient care. Thus, the use of p16 staining helps ensure that a woman is neither under-treated nor over-treated.