

Please select Print from the file menu or right mouse click and choose print from the menu to print this page.

---

**[1028] Differential Expression of ProExC as a Diagnostic Tool in Evaluating Cervical Squamous Metaplasia and High Grade Dysplasia**

**RA Simon, JN Warner, PA Bourne, TA Bonfiglio. University of Rochester Medical Center, Rochester, NY**

**Background:** Overexpression of minichromosome maintenance protein 2 (MCM2) and topoisomerase II- $\alpha$  (TOP2A) in cervical cells indicates aberrant S-phase induction due to high-risk HPV infection. The ProExC immunostain (TriPath Imaging), a cocktail of MCM2 and TOP2A, has been evaluated in liquid based cervical cytology smears and cervical tissue biopsies as a potentially diagnostic marker for high grade cervical dysplasia (HGD). Cervical squamous metaplasia can mimic HGD, creating a diagnostic dilemma. The purpose of the present study is to evaluate staining patterns of ProExC in immature squamous metaplasia, atypical squamous metaplasia, and HGD to determine whether ProExC is a useful marker in differentiating these processes, which have very different clinical implications.

**Design:** A total of 32 cervical biopsies were evaluated, including 11 immature metaplasias (IM), 11 atypical metaplasias (AM), and 10 HGDs. Each case was stained with ProExC, Ki67 (Dako), and p16 (Biocare). Nuclear staining was considered positive for all stains. ProExC staining was noted in basal and parabasal cells in negative control cases. The p16 stain was performed as a positive control, as it is known to stain most cases of HGD. Patterns of expression were recorded.

**Results:** In both IM and AM, ProExC expression was interpreted as negative in 92% of cases (10/11, each). In contrast, in HGD, diffuse expression of ProExC was detected in the basal and middle thirds of the epithelium in 70% (7/10) of cases and full thickness staining was seen in the remaining 3 cases. Staining with p16 was negative in the majority of IM (82%, 9/11) and AM (73%, 8/11), with basal or focal full thickness staining in the remaining cases. In all HGDs (100%, 10/10), there was diffuse p16 nuclear expression from two thirds to full epithelial thickness. Ki67 expression in all metaplasias was either negative (64%, 14/22) or seen in scattered epithelial cells (36%, 8/22). In all HGDs (100%, 10/10), Ki67 was expressed in scattered cells in up to two thirds of the epithelial thickness.

**Conclusions:** ProExC is a useful diagnostic tool in differentiating IM or AM from HGD in cervical biopsies, when used alone or in conjunction with p16. ProExC and p16 staining results are similarly positive in HGD. However, ProExC shows fewer false positive results in IM and AM than p16. Ki67 does not appear useful in differentiating between metaplasias and HGD.

Category: Gynecologic

Tuesday, March 4, 2008

**Poster # 112, Tuesday Afternoon**

Close Window