Key Summary of Published Article

Contributions of Liquid-Based (Papanicolaou) Cytology and Human Papillomavirus Testing in Co-testing for Detection of Cervical Cancer and Precancer in the United States

Background

- In 2003, the United States Food and Drug Administration (FDA) approved the Papanicolaou (Pap) cytology and human papillomavirus (HPV) co-test for routine screening of women 30 years of age and older.[1]
- Current screening options, depending on the guideline, include Pap alone, HPV alone, and co-testing with Pap and HPV together as screening options.[2,3,4]
- **Objective:** Given the recent challenges of the contribution of cytology in cervical cancer screening, this study retrospectively assessed the relative contributions of Pap testing (using liquid-based cytology [LBC]) and HPV testing to detect cancer and precancer among a nationally representative population of women undergoing co-testing for cervical cancer screening.

Methods

- Investigators conducted a retrospective study of deidentified co-test results from women ≥30 years old who had at least 1 LBC/HPV co-test done at Quest Diagnostics from 2010 through 2018.
- Results of LBC and HPV tests were compared among patients with a diagnosis of cervical cancer or precancer. Comparisons were done for overall results and after stratifying based on the interval between co-testing and diagnosis (<1 year vs longer).

Results

- The analysis included close to 19 million screening co-test results from 13.6 million women:
  - 1,615 co-test results preceded 1,259 diagnoses of cervical cancer.
  - 11,164 co-test results preceded 8,048 diagnoses of cervical precancer (>95% identified by CIN3).
- For the data set of results from the entire 9-year study period, co-testing identified 86.9% of cancers and 95.6% of precancers.
- For the data set of results within 1 year of diagnosis, co-testing identified 94.1% of cancers and 99.7% of precancers (*P*<0.0001).
  - HPV testing alone identified 77.5% of cancers and 97.6% of precancers; thus, co-testing identified over half of the cancers (+16.6%) and precancers (+2.1%) that HPV testing alone would have failed to identify.

Conclusions and Discussion

- LBC/HPV co-testing identified more cases of cancer and precancer than either test alone at any point in time in the study.
- To date, this study represents the largest assessment of LBC/HPV co-test results from a diverse population of women across the United States.
- The findings re-emphasize the value of the LBC (Pap) component of co-testing for detection of cervical cancer and precancer in the context of routine preventive care.[5]

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Webpage

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