



# **Comparison of Cytology Proficiency Testing—Glass Slides versus Virtual Slides**

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**Rhonda Whalen, M.S.**  
**Chief, Laboratory Practice Standards Branch**  
**Division of Laboratory systems**  
**Public Health Practice Program Office**

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# Objective

To compare gynecologic cytology proficiency testing (PT) performance using glass slides and virtual slides



# Study Design

- Participant performance was evaluated using glass slide and computer tests
- 10 challenges per test (glass slide and computer)
- Virtual slides were created using referenced glass slides from Maryland CLIA-approved cytology PT program
- Computer test challenges, scoring, timing as specified in CLIA regulations
- Glass slide test administered by Maryland Cytology PT Program (MCPTP)
- Computer test (CytoView II) administered by CDC contractor



# Participants

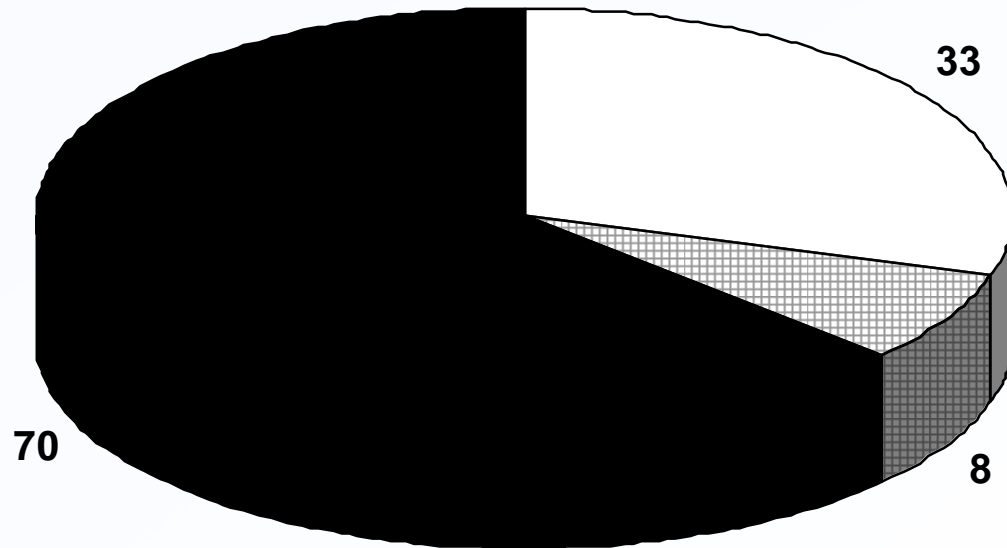
- Cytologists enrolled in Maryland's program
- 111 volunteer participants (52 pathologists, 59 cytotechnologists)
- Testing (glass slide, computer) provided on-site (Maryland laboratories)



# Comparison of Individual Performance on MCPTP and Cytoview II



N=111



□ Higher MCPTP score   ▨ Higher CytoView™ II score   ■ Equal on both tests



# Results

- Test mean score
  - glass slide 99.2%
  - virtual slide 96.8%
- Pass rate
  - glass slide 100%
  - virtual slide 93.8%



# Results

When virtual slides with less than 90% consensus are excluded from analysis, the virtual slide pass rate is increased to 99.1%



# Conclusion

- Each slide (glass or virtual) should be field-validated by cytotechnologists and pathologists
- If field validation and CLIA referencing of virtual slides is comparable to glass slides, computer testing can be equivalent to glass slide testing

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