# Comparison of Cytology Proficiency Testing–Glass Slides versus Virtual Slides
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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
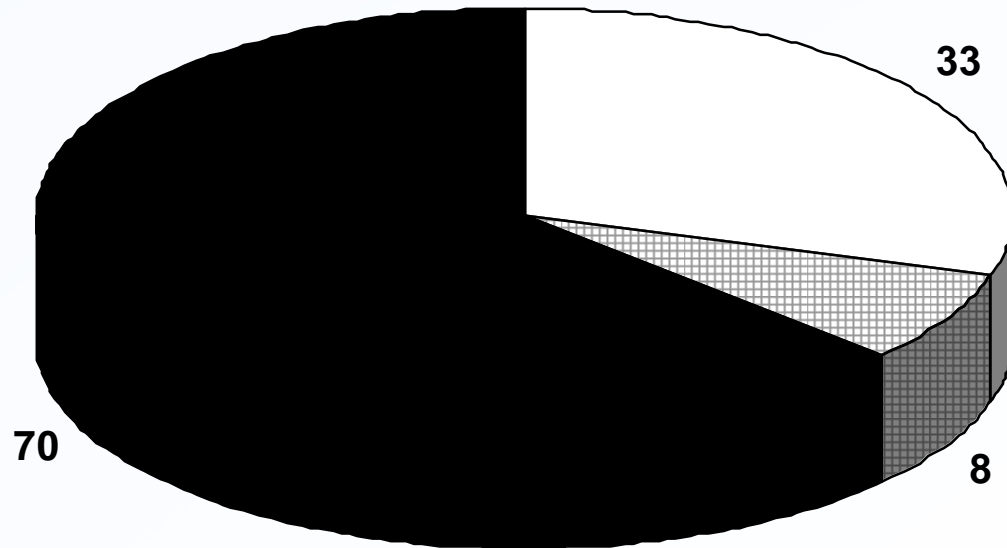
# Participants

- 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: 33
Higher CytoView™II score: 8
Equal on both tests: 70

Legend: □ 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%

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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