

Introduction: Overview of Current Molecular Diagnostic Testing on Cytology

Samples

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Laboratory Processing: Practical Considerations

1. *The Cytology Specimen and Preparations: Advantages and Limitations*

Gilda da Cunha Santos, Mauro Ajaj Saieg

2. *Sample Acquisition and Test Requisition*

Ross A. Miller, Ashwyna Sunassee

3. *Pre-analytic Workflow and Specimen Evaluation*

John M. Stewart

4. *DNA-Based Sequencing Assays*

Pasquale Pisapia, Miriam Cieri, Francesco Pepe, Umberto Malapelle, Giancarlo

Troncone

5. *RNA-Based Assays*

Umberto Malapelle, Pasquale Pisapia, Miriam Cieri, Francesco Pepe, Giancarlo

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6. *FISH Testing of Cytology Specimens: Pre-analytic, Analytic, and Post-analytic Considerations*

Karen D. Tsuchiya, Laura J. Tafe, Julia A. Bridge

7. *Molecular Cytopathology Correlations: Interpretation of Molecular Diagnostic Results*

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Clinical Relevance

1. *Human Papillomavirus (HPV) Testing of Head and Neck Cancers*

Eleanor Russell-Goldman, Jeffrey F. Krane

2. *Human Papillomavirus (HPV) Testing on Cervical Cytology Specimens*

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3. *Molecular Diagnostics in Lung Cytology*

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4. *Molecular Diagnostics in Thyroid Cytology*

Michiya Nishino

5. *Molecular Diagnostics in Breast Cytology*

Liza M. Quintana

6. *Molecular Diagnostics in Salivary Gland Cytology*

Esther Diana Rossi, Zubair W. Baloch

7. *Molecular Diagnostics in Pancreatic and Biliary Cytology*

Mingjuan Lisa Zhang, Martha Bishop Pitman

8. *Fluorescence In Situ Hybridization (FISH) Testing in Urinary Tract Cytology*

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