Quality, Patient Safety and Error Reduction in Cytopathology

Jan F. Silverman, MD, FCAP
Allegheny General Hospital
Pittsburgh, PA
Quality, Patient Safety & Error Reduction in Cytopathology

GYN Cytology
- 10% vs. Partial Rescreening
- ASCUS Rate
- ASCUS:SIL Ratio; LG, HG, & CA Rate
- Cyto/Histo Correlation
- Monolayer vs. Conventional; Imaging
- Retrospective Review
- HSIL follow-up letters
- Monitor professional and tech performance to overall lab
- Monitor referral rate for cytotechs
- Monitor unsatisfactory rate and no endo cx. component
- Monitor 2 step discrepancy between tech and pathologists
Quality, Patient Safety & Error Reduction in Cytopathology

• Errors
• 2nd Opinion
• Critical Value
TO ERR IS HUMAN
Building a Safer Health System

Linda T. Kohn, Janet M. Corrigan, and
Molla S. Donaldson, Editors
Committee on Quality of Health Care in America
INSTITUTE OF MEDICINE

NATIONAL ACADEMY PRESS
Washington, D.C.
IOM Report
Deaths from Medical Errors

• Colorado & Utah studies – 44,000 deaths – NY study – 98,000 deaths
• 8th leading cause of death. More than MVA (44,000), Breast CA (43,000) & AIDS (17,000)
• Total national costs – lost income, lost household production, disability & health care costs of preventable adverse events (M.E. resulting in injury) – $17 – 29 billion, (1/2 of which is health care costs)
Pathology & Lab Testing

- 70% of medical decisions that affect or change clinical course related to lab data
- 240 million PAP tests/year. 60 million SP specimens
- >97% CA dx based on pathology specimen dx
Error, IOM Definition

- Failure of a planned action to be completed as intended (execution error)
- Use of wrong plan to achieve an aim (planning failure)
Errors in Anatomic Pathology


Troxel. AJSP 28:1092, 2004
A Total of 218 Surgical Pathology Claims From 1995, 1996, and 1997

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Troxel. Am J Surg Pathol 28(8); 1092-95, 2004
A Total of 272 Surgical Pathology Claims From 1998 Through 2003

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• Extranodal lymphomas
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Troxel DB
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• 32-YEAR-OLD WOMAN WITH THYROID NODULE
  – Thyroid, left lobe
  – FNA of 7 cm nodule
DIAGNOSIS

Papillary thyroid carcinoma

Comment: Tissue confirmation is indicated
Case 2

- 82-YEAR-OLD MAN WITH LUNG NODULE
  - FNA cytology and cell block of right lung mass
PRELIMINARY DIAGNOSIS

? Neuroendocrine neoplasm

IHC for synaptophysin, chromogranin - Negative
Specimen(s) Received
LUNG, RIGHT, FINE NEEDLE ASPIRATION, CYTOLOGY AND CELL BLOCK

Clinical History

Cancer History:
BREAST
SKIN

Treatment History:
RADIATION
CHEMOTHERAPY: 4 YEARS AGO

Other Clinical Conditions:
SIZE OF LESION: 1.5 CM

Date Ordered: 2/8/2005
Date Complete: 2/8/2005
Date Reported: 2/9/2005
FINAL DIAGNOSIS

Metastatic adenocarcinoma, consistent with a breast primary
Interinstitutional 2nd Review

- 777 patients / 9.1% discordant dx
- Change in Rxmet – 5.8%
- Cytology & FNA discrepant – 21%
- S.P. discordant – 7.8%

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Layfield et al.
Di Ci 26: 45-48, 2002
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Outside FNA followed by left lower lobe segmental resection at treating institution.
Diagnosis:

FNA DX (Outside Hospital):

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• ADASP recommend adoption of IPC as “institutional policy” when patients are referred to a second institution. (AJSP 17:743, 1993)
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• Standard of practice with well established guidelines for clinical pathology
Critical Value Notification

• CLIA 88 – Section 493.1109
• JCAHO Standard LO3.2:1
• JCAHO 2005 - 2007 National Patient Safety Goals
• CAP
Critical Values in Surgical Pathology

Telma C. Pereira, MD,1 Yulin Liu, MD, PhD,1,2 and Jan F. Silverman, MD1,2

Key Words: Critical value; Surgical pathology; Physician notification

AJCP 130:731, 2008
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• Greater differences of opinion with new METS in known 1°, orgs. in immunocompetent & no phone call needed for urine polyoma virus, new HSIL
Cytology CV

Additional CV’s

• Herpes in pregnant female PAP smears
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Survey Results

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• Survey 225 ADASP members for grading 17 possible S.P. CVs.
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AJSP 30: 897-899, 2006
Human Pathol 37: 982-984, 2006
AJCP 125: 815-817, 2006
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- Cases that have immediate clinical consequences
- Unexpected or discrepant findings
- Infections
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• Structure QA Programs to Identify & Correct Random & Systematic Errors
• Value of interinstitutional and internal 2nd Opinion
• Cyto/Histo Correlation
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  - Thyroid, left lobe
  - FNA of 7 cm nodule

**DIAGNOSIS**

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*Comment:* Tissue confirmation is indicated

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- 82-YEAR-OLD MAN WITH LUNG NODULE
  - FNA cytology and cell block of right lung mass
**Preliminary Diagnosis**

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IHC for synaptophysin, chromogranin - Negative

**Clinical History**
- Cancer History: Breast
- ER
- GCDFP
- TTF-1

**Specimen Received**
- Lung, right, fine needle aspiration, cytology and cell block

**Final Diagnosis**
Metastatic adenocarcinoma, consistent with a breast primary
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Interinstitutional 2nd Review

Case 3
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- Structure QA Programs to Identify & Correct Random & Systematic Errors
- Value of interinstitutional and internal 2nd Opinion
- Cyto/Histo Correlation
- Prel/Final FNA Correlation