Disclosures

- None
Objectives

- What to correlate
- When to correlate
- How to correlate
- Why correlate
- Expectations/Goals
What to correlate

- All in house cases

- Selected out of house cases
  - Hospital policy for review of slides
  - Physician request
  - Select cases of interest
  - Bill - price of using low cost provider

- Other tests (flow, cytogenetics, Her2Neu)

- ? Electronic medical record?
When to correlate

- Time of sign out
  - Standard of care
  - No one is interested in your explanations 2 months later

- Does bias result -
  - Know f/u
  - Cover your own tracks - 2nd reviewer?
  - worth it
How to correlate

- Identify case
- Identify cause
Identify case

- Look up history of every case
  - Standard of care
  - Clinician will not tell you
Identify cause

- Sampling, regression, progression, interpretation

- Lack of agreement for interpretation
  - No blame box
  - Outside consultant
  - If doc won’t admit error probably have a problem
Why correlate

- Identify *future* problems for the patient
- Identify problems in the lab
- Monitoring improves performance: real feedback *(APLM 132; 13)*
Identify future problems for the patient

- *Usually* do not need to admit liability in your report - not a future problem, sometimes need to call your lawyer first

- Often better with a phone call

- Do need to direct clinician for more sampling
  - HSIL on Pap is real
  - No biopsy site in breast excision
Identify problems in the lab

- Single case versus trends
- Need to summarize results q 6-12 months
- Do need to track by pathologist - most important cause of error in diagnosis
Expectations/goals

- Pap smears:

- HSIL bx, neg Pap (look back)
  - Required but no agreed on expectations
  - Some interpretation errors (5-30%?)

- HSIL Pap, neg bx
  - <5% interpretation errors ASC-H

- HPV rate for ASC and NILM?
Expectations/goals

- **Thyroid FNA** -
  - FNR <1%
  - FPR 0%
  - No standard for atypicals, follicular lesions

- **Cores**
  - >90% sampling
  - ?harder to interpret pap ca on core?
Expectations/goals

- Breast core -
  - FNR all sampling and documented in the core
  - FPR 0%
    - ADH not DCIS, send out afterward
    - High grade DCIS send out first
    - Small inv ca - sus and send out afterward
Expectations/goals

- **Fluids**
  - FNR - interpretation <5%
    - Known patterns
    - Lobular ca, small cell ca, rare cells
    - Should be using IPOX routinely
  - FPR
    - 0%
    - Rare tumor cells - sus and repeat
Expectations/goals

- Lung FNA
  - Subtyping
    - Poorly dif carcinoma with features of both recommend repeat (1-5% of cases)
Summary/Pearls

- DO C-H correlation at time of sign out
- Summarize q6-12 months by doc

- Interpretation errors should be rare
  - If doc won’t admit error have a problem
  - Most interpretations errors can be avoided if you know where the pitfalls are:
    - PD lung ca
    - Rare atypical cells in fluid -sus
    - Breast core: ADH not DCIS
    - Thyroid: rare atypical cells - not negative
    - Paps: rare cells -ASC-H
Thank you for participating!
Cytologic correlation (and it’s close cousins cytologic – cytologic correlation and histologic- histologic correlation) is a routine part of quality assurance in any pathology laboratory. This review focuses on what to correlate, when to correlate, how to correlate, why correlate, and what a laboratory director’s expectations and goals might be. The data is derived from the literature and my personal experience.

I believe all in house cases should be correlated. I only correlate out of house cases when there is a hospital policy for review of slides, a physician requests it, or I have a particular interest in the case. My opinion is that reviewing outside cases is part of the price the insurer bears for insisting that their pathology goes to a low price laboratory rather than to me, so I make sure I bill for it. It is also important to correlate diagnoses with the results of other tests (flow, cytogenetics, Her2Neu), and this is a new CAP Checklist question in anatomic pathology (3). In only a few months this has already lead to changes in diagnosis twice in our laboratory. Since it is easy to overlook, a more formal process may need to be put in place for this to occur.

I strongly believe that all cases should be correlated at the time of sign out. I personally look up the history on every single case, since I know many clinicians won’t bother to tell me what they already know. While there is no accepted standard, I believe this is standard of care. No one is interested in your explanations 2 months later, and preventable patient harm can occur in that interval. This does bias the results – you know the follow-up, and one generally tries to make things correlate. Also there may be a temptation for an individual pathologist to cover up his own errors. Nevertheless the chance to prevent harm makes it worth it.

It is important to identify the cause of any discrepancy. The most common causes are sampling, regression, progression, and interpretation. The literature suggests that there may be a lack of agreement on interpretation as a cause for discrepancy (8, 9). One solution in the literature is to use a No blame box (9). Our approach has been to send the case to an outside consultant. It is my experience that if a pathologist routinely has trouble acknowledging an interpretation error, there are larger problems with his or her performance than that individual case.

When correlating I attempt to identify future problems for the patient and problems in the lab. It has also been shown that monitoring cytologic histologic correlation improves performance (7). This is another example, like pre-screening rather than re-screening Pap
smears (1), where more formalized and accurate feedback can lead to improvements that less formal and accurate feedback can not achieve.

While one always has to make the correct diagnosis in the report, one usually does not have to admit liability in the report. When faced with this, one may need to contact one’s lawyer first and then call the physician before signing the report. More often, one needs to direct the clinician to obtain more tissue sampling, for example when the HSIL on the Pap is real or there is no biopsy site in a breast excision. Phone calls are often helpful in this setting as well.

To identify problems in the lab, trends are often more helpful than individual cases, so there is a need to summarize the results every 6-12 months. It is important to track errors by individual pathologists since this has been shown to be the most important cause of error in diagnosis in most settings (10).

Based on my personal experience and the literature, the following results might be expected:

• Pap smears:
  • HSIL bx, neg Pap (look back)
    - Required but no agreed on expectations
    - Some interpretation errors (5-30%?)
  • HSIL Pap, neg bx
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• Thyroid FNA -
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• Cores (13)
  - >90% sampling
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Lung FNA
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In summary, cytologic histologic correlation is best done at the time of sign out so the clinician can be directed to adequately take care of the patient in a timely manner. Nevertheless, the results need to be summarized every 6-12 months to look for trends among individual pathologists. Interpretation errors should be rare. Most interpretations errors can be avoided if you are familiar with the pitfalls and know the ways around them.

References


4. David O, Cabay RJ, Pasha S, et al. The role of deeper levels and ancillary studies (p16(Ink4a) and ProExC) in reducing the discordance rate of Papanicolaou findings of high-grade squamous intraepithelial lesion and follow-up cervical biopsies. Cancer Cytopathol 2009;117:157-166.


