Diagnostic Errors

Pathology Expertise: Key Points

- Many publications describe discrepancies in diagnosis when a subspecialist pathologist conducts a “second read.”
- Change of diagnosis that affects treatment choice can occur in as many as 20% of cases, depending on the type of cancer.
- NCCN Member Institutions report that errors are most common in central nervous system (CNS) and hematologic malignancies, sarcoma, and skin, prostate and breast cancers. Changes from benign to malignant or vice versa, though rare, are especially significant.
- Correlates of accurate diagnosis and staging include:
  - pathologists with subspecialty boards;
  - consensus conferences;
  - robust QA/QI programs;
  - expertise in IHC, FISH, flow cytometry, molecular diagnostics, and cytogenetics; and
  - adequacy of tissue fixation.

Selected Citations Regarding Pathology Discrepancies


2. *Central nervous system (CNS) cancers*: 8.8% “major disagreement” plus 19.2% “less serious but substantial” disagreement in diagnosis. A neuropathologist at a large, academic cancer center may review 50 times as many brain/CNS tumor cases as a pathologist in a community hospital. (Bruner, et al. Diagnostic discrepancies and their clinical impact in a neuropathology referral practice. *Cancer.* 1997;79:796-803.)


8. *Liver and gastrointestinal cancers:* 6.8% major discrepancy for liver cancer and 7.2% major discrepancy for gastrointestinal cancers, with clinical significance that changed treatment or prognosis. (Hahm, et al. The value of second opinion in gastrointestinal and liver pathology. *Arch Path Lab Med.* 2001;736-739.)