Beth Israel Lahey Health
Beth Israel Deaconess Medical Center

Gross-Only Examination and its Effect on Patient Safety and Efficiency

HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

TAP TO GO BACK TO KIOSK MENU

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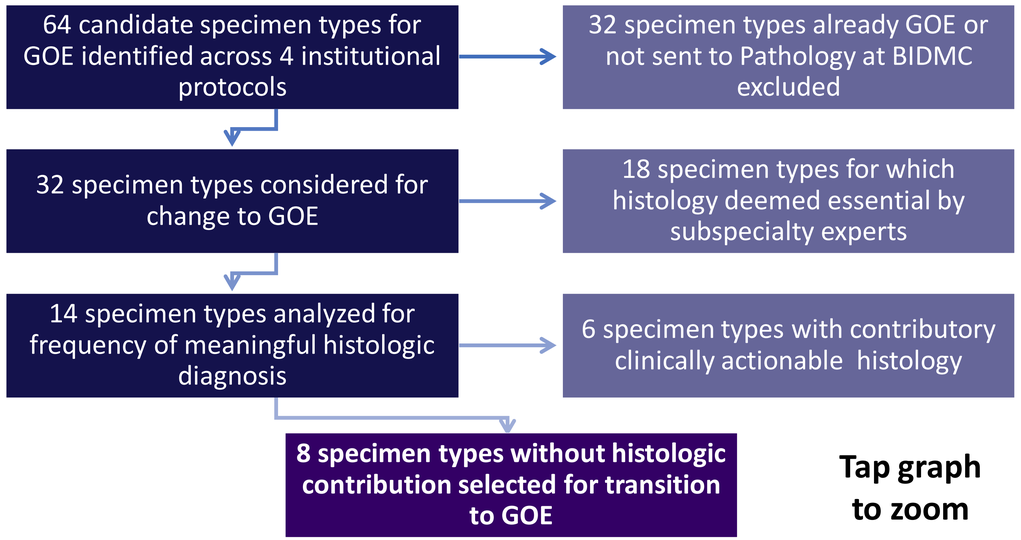
Background

Gross-only examination (GOE) in surgical pathology is typically reserved for specimens with a low probability of significant microscopic findings. However, there remains great inter-institutional variability in GOE policy, in part due to a general lack of agreement between pathologists and treating clinicians on which specimen types qualify for GOE. We examined the impact of a change in GOE policy on patient safety, efficiency, and laboratory resource utilization.

Design

- 64 specimen types identified among four Pathology departmental protocols analyzed by GOE
- 32 of these specimen types have routine histology at Beth Israel Deaconess Medical Center (BIDMC)
- 14 specimen types selected for in-depth review based on local subspecialty expert consensus and specimen frequency
- Initial clinical and final histopathologic diagnosis reviewed for clinically actionable information in an audit of 100-200 specimens of each type reviewed from one year prior
  - For specimen types received too infrequently, all specimens from the prior three years were reviewed.
- Cases initially categorized into specimen types according to assigned accessioning code
- Manual review of pathology reports conducted to reclassify incorrectly accessioned specimens and specimen types with the same accessioning sequence
- Medical records reviewed to determine which specimens to exclude based on surgical indication
- Pathology reports further reviewed to determine which specimens had significant histologic diagnoses that differed from clinical and gross diagnoses



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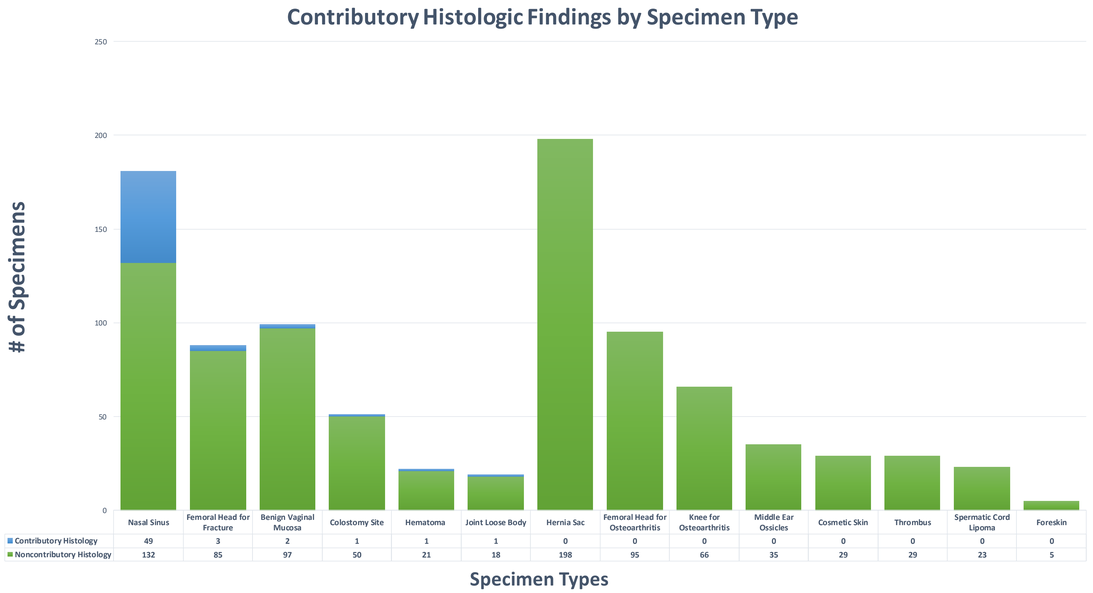


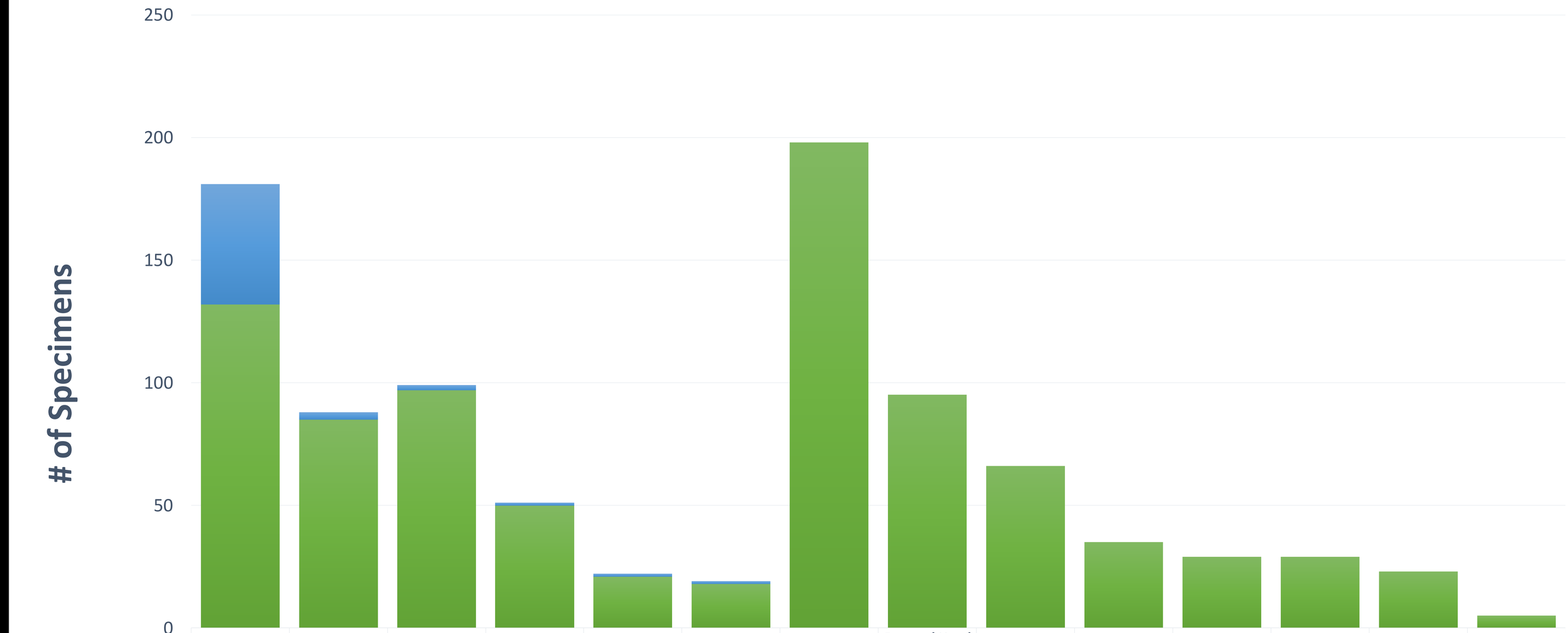
Results

- Eight specimen types ultimately identified for which histologic examination provided no diagnostic benefit over GOE:
  - Subset of cases received over one year prior for hernia sacs (98), femoral heads for osteoarthritis (95), knee joints for osteoarthritis (66), cosmetic skin (29), spermatic cord lipomas (23), and foreskins (5)
  - All cases received over three years for middle ear ossicles (33), skin for cosmetics (29) and non-brain/non-cardiac thrombi
- Remaining specimen types each had at least one clinically actionable histologic diagnosis not identified by gross examination
  - Nasal septa and sinus contents for chronic sinusitis or septoplasty (49/132 cases, typically acute inflammation with eosinophils)
  - Femoral heads for fracture (3/85 with metastatic malignancies)
  - Benign or incidental vaginal mucosa (2/97, including one aggressive angiomyxoma)
  - Colostomy site resections (1/50; all cases over three years)
  - Hematoma (1/21 with metastatic sarcoma)
  - Joint loose body (1/18 with tenosynovial giant cell tumor)

Conclusion

In the age of cost and labor constraints, accumulated small reductions in cost and workload can lead to improved efficiency and better allocation of scarce resources. When making these changes, impact on patient safety should be considered and included in cost-benefit analyses. Gaining consensus from clinical partners and review by subspecialty experts are key components of change efforts. At the time of presentation, our institution has transitioned spermatic cord lipomas and middle ear ossicles to GOE. Based on this study, we recommend a periodic review of GOE policy with transitioning to GOE alone when impact on patient safety is negligible.

Contributory Histologic Findings by Specimen Type



	Nasal Sinus	Femoral Head for Fracture	Benign Vaginal Mucosa	Colostomy Site	Hematoma	Joint Loose Body	Hernia Sac	Femoral Head for Osteoarthritis	Knee for Osteoarthritis	Middle Ear Ossicles	Cosmetic Skin	Thrombus	Spermatic Cord Lipoma	Foreskin
Contributory Histology	49	3	2	1	1	1	0	0	0	0	0	0	0	0
Noncontributory Histology	132	85	97	50	21	18	198	95	66	35	29	29	23	5

Specimen Types