



## **Quarter 4 In Review**

At Associates in Pathology, one of our main points of focus is case turnaround time (TAT). TAT for pathology specimens is an indicator of efficiency. TAT affects coordination of patient care, which in turn impacts satisfaction of both physicians and patients. We handle a variety of case types, each with their own TAT guidelines. Non-Gynecologic Cytology, FNAs, and Surgical Pathology cases have a goal of 90% signed out within 2 working days, Molecular cases are within 3 working days, and Gynecologic Cytology (Pap Smears) are within 7 working days.

Frozen section analysis is an essential tool utilized during surgery by offering the surgeon a rapid diagnosis; therefore frozen section TAT has direct impact on patient's therapy and safety during/after surgery. With respect to our Intraoperative Single Frozen Sections, we strive to have a call back to surgeons in 20 minutes or less.

The chart above reviews AIP's TAT for 2023 Quarter 4.

## DECEMBER INCREASE

- AIP was able to help UW Madison Pathology Department when a maintenance problem left them unable to work
- AIP added 1,037 cases to their workload which

## WHAT IS INKING AND WHY IS IT SO IMPORTANT?

- Pathologists' Assistants utilize ink often when grossing specimens
- Margins (cut surfaces) are inked to allow Pathologists to see if there is tumor at the cut edge microscopically
- Lumpectomies get six colors to differentiate the six different surfaces (Superior, Inferior, etc.)
  - Allows the surgeon to know which margin, if any, are positive
  - They can then go back in and remove just where tumor was present
- Ink can also be used to mark areas of interest
  - Inking highlights these surfaces, making them more distinguishable microscopically
  - Serosa, pleura, and ovarian capsules are commonly inked surfaces
  - Other areas of interest that may be inked are perforated edges, surgical defects, and tumor on a serosal surface



Picture 1: Cut surface of colon with tumor extending through bowel wall into underlying soft tissue, approaching blue inked margin.



Picture 2: Cross section of a lumpectomy showing four of the six inks, with a mass present.



Picture 3: Inked Margin involved by carcinoma.

Interesting Stain of the Quarter: SMMHC Immunohistochemical Stain

- Smooth Muscle-Myosin Heavy Chain (SMMHC)= cytoplasmic structural protein
  - Major component of the contractile apparatus in smooth muscle cells
- SMMHC stain reacts with myoepithelial cells in normal breast and prostate tissue
  - Helpful stain to distinguish benign from malignant lesions
  - Benign lesions retain myoepithelial layer leading to positive staining
  - Myoepithelial layer is lost in invasive carcinoma of breast and prostate leading to negative staining



Picture 4: H & E stained breast parenchyma with group of glands on right concerning for carcinoma with benign appearing glands of left.



Picture 5: IHC stain for SMMHC demonstrating intact myoepithelial layer in benign glands on left and loss of myoepithelial cells on right indicating carcinoma.