

Pathology Student Interest Group

**Sponsored by the
College of American Pathologists**

Pathology

**Right Now, A Pathologist
Somewhere Is....**

...Evaluating Surgical Specimens

- **Diagnosis and Staging of Cancer**
- **Adequacy of Resection**
- **Detection of Occult Disease**
- **Diagnosis of Infectious Disease**



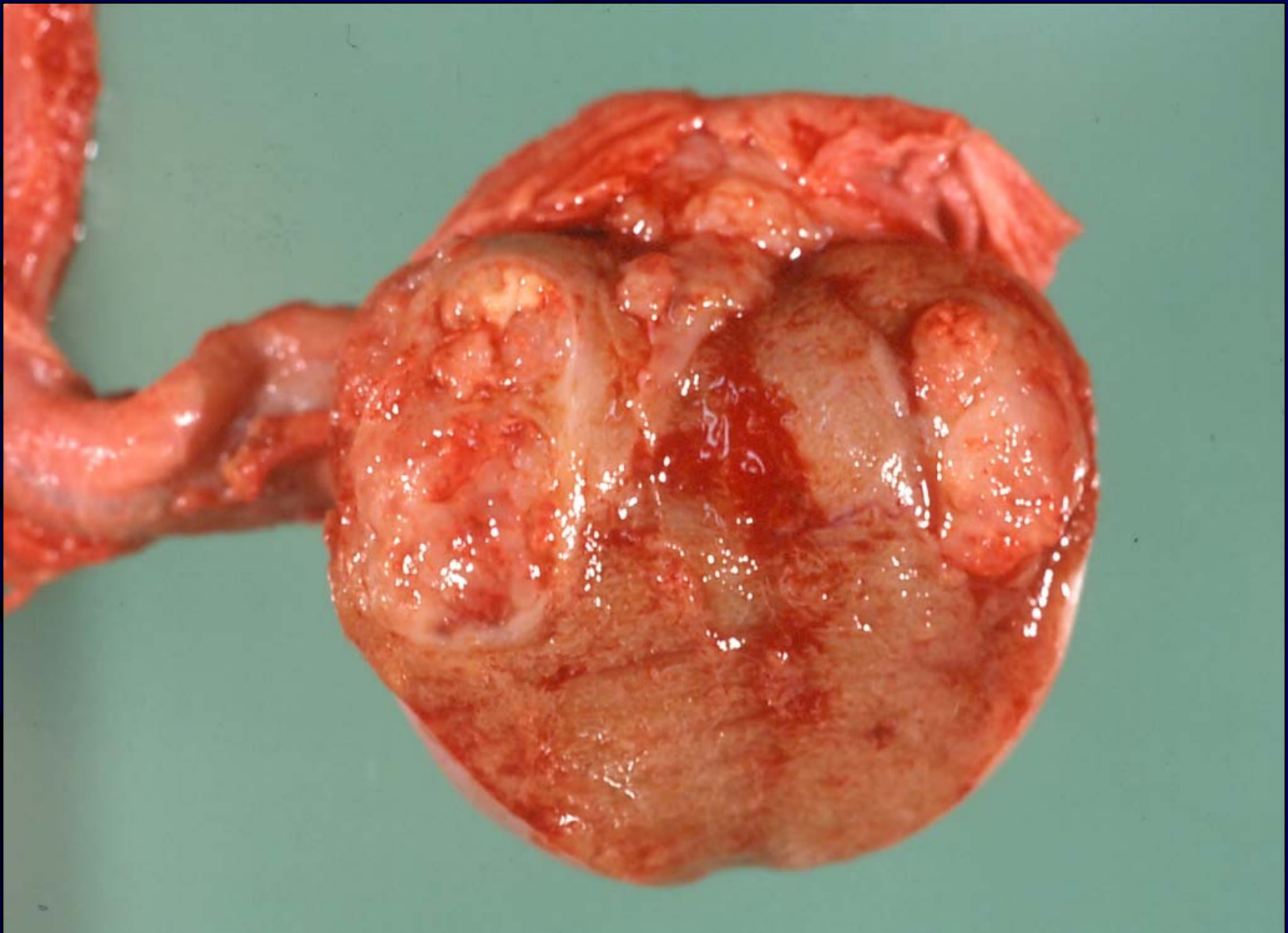
**Biopsy Specimens, Requisition sheets,
Histology Cassettes**



Grossing Station



Gross Specimen: Inked Breast Biopsy



Gross Specimen: Testis



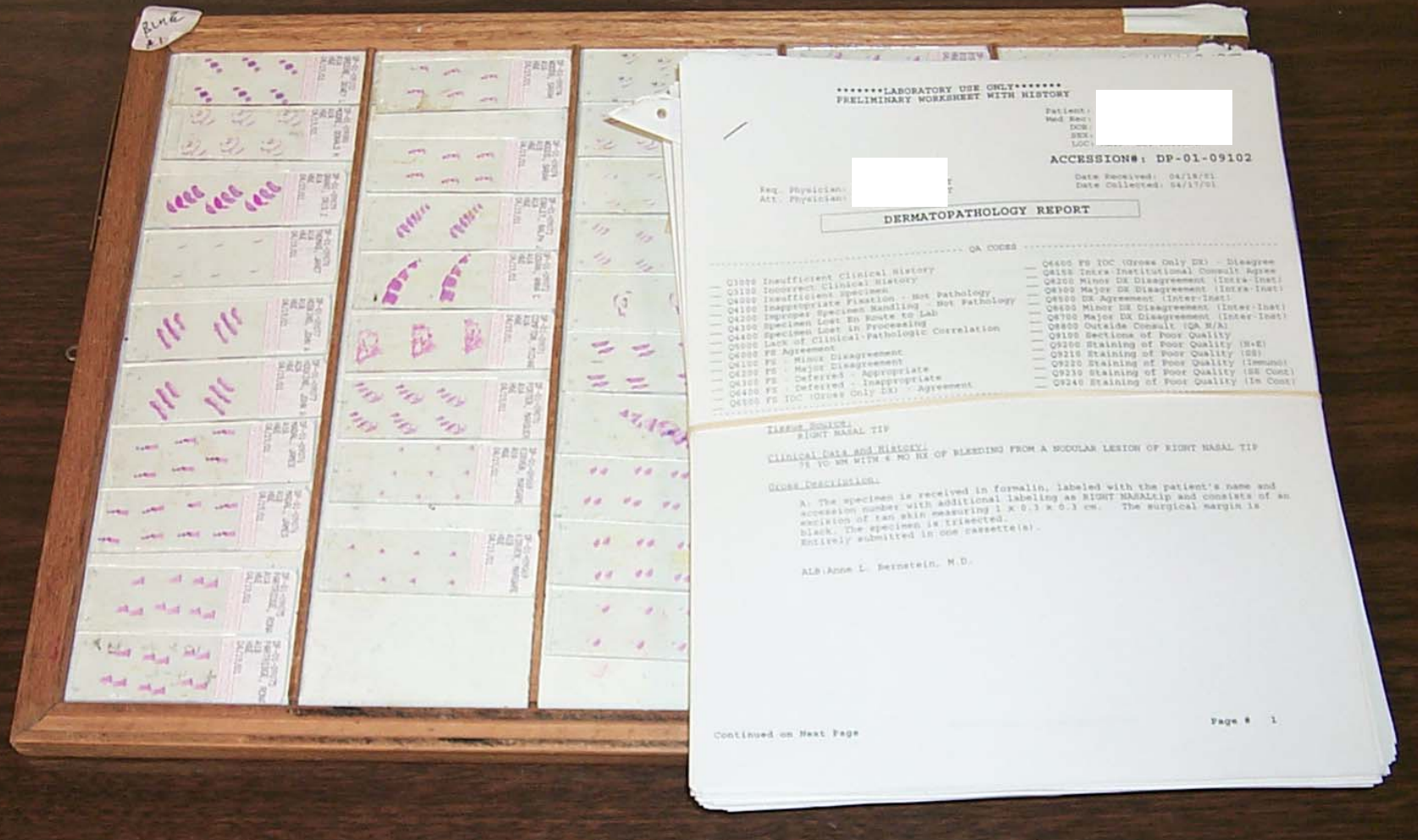
Gross Specimen: Liver

Preparation of Histologic Sections



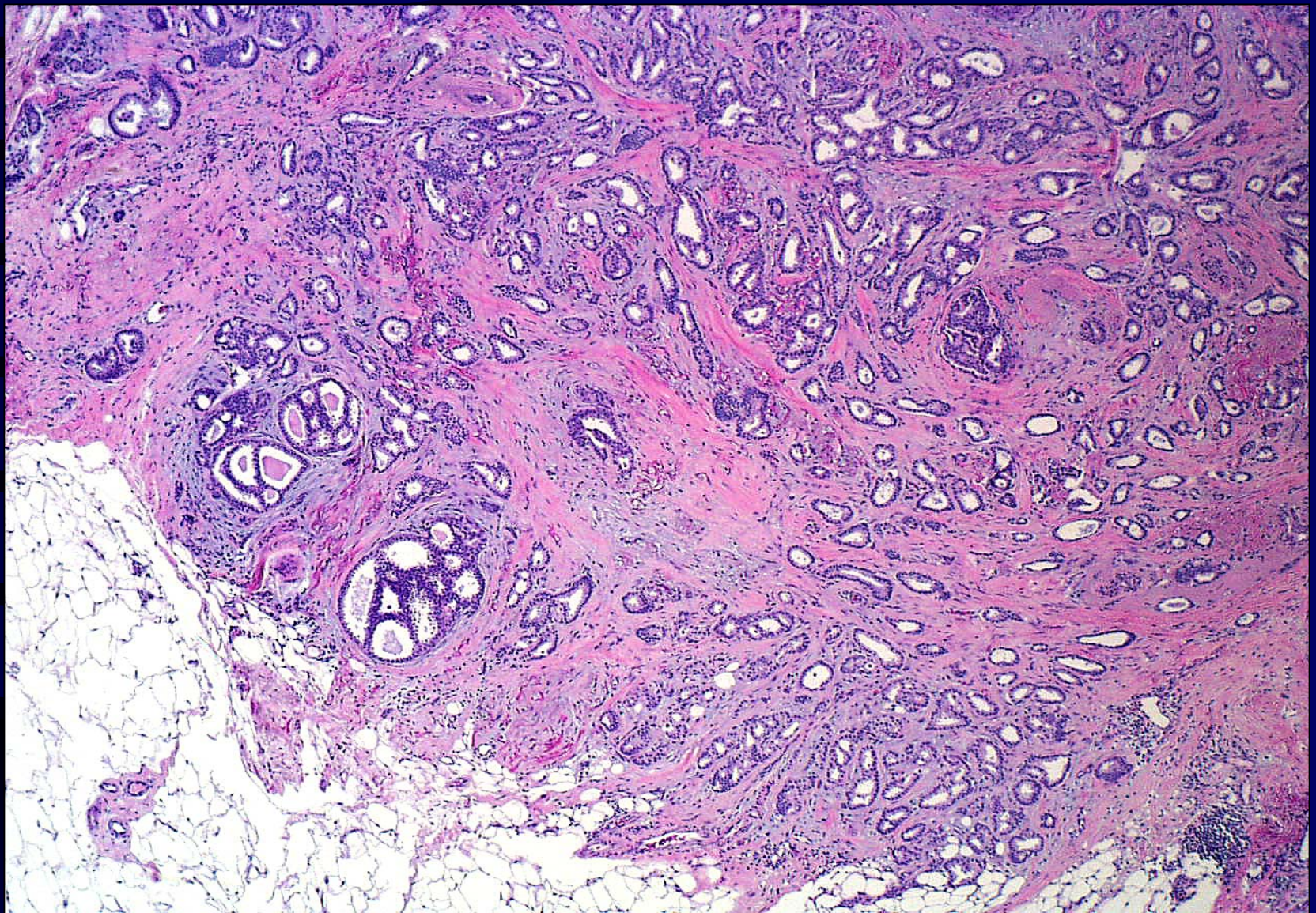
Histotechnologist

Stained Histologic Sections and Gross Reports

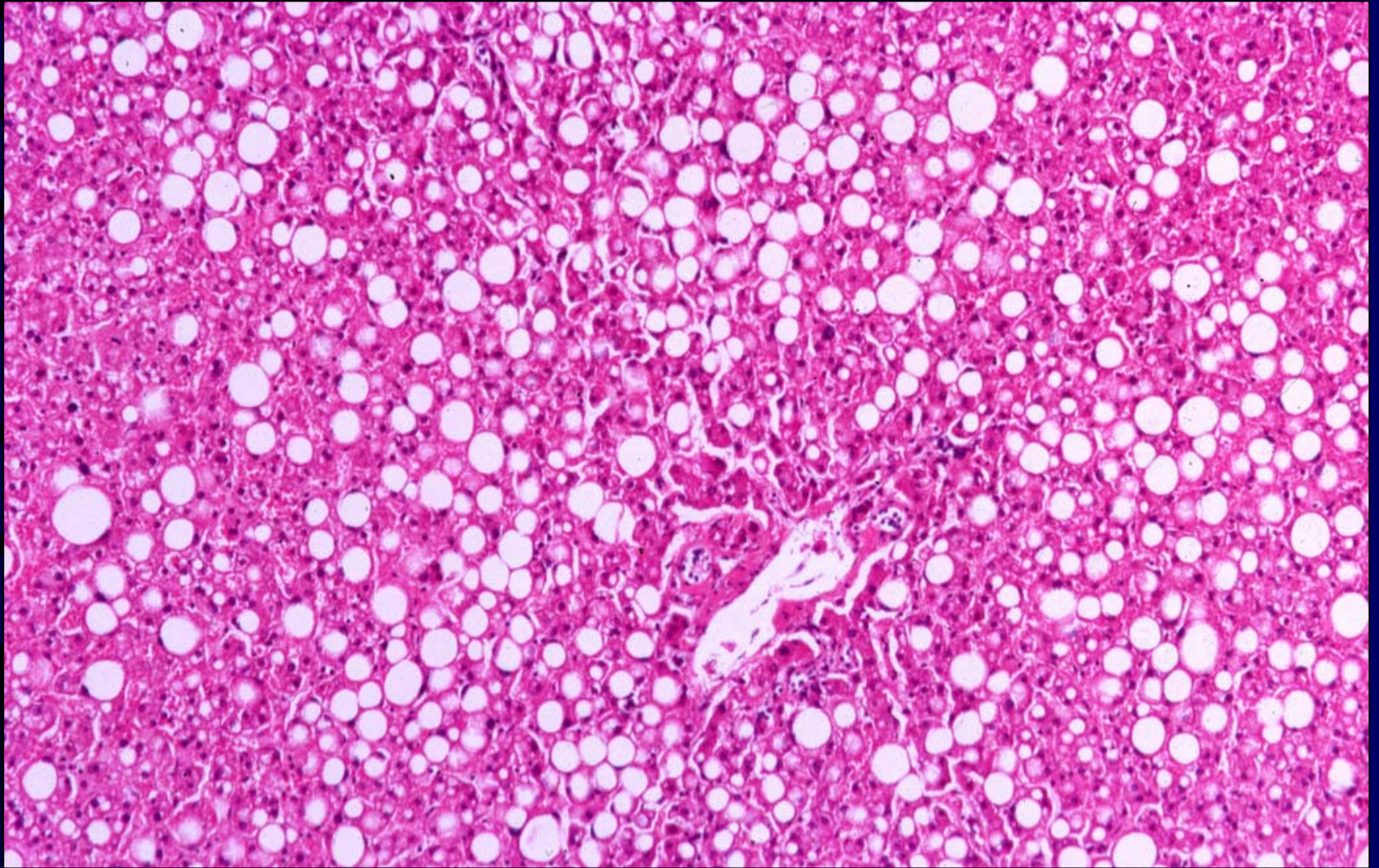




Histopathology Diagnosis and Teaching



Invasive Breast Carcinoma

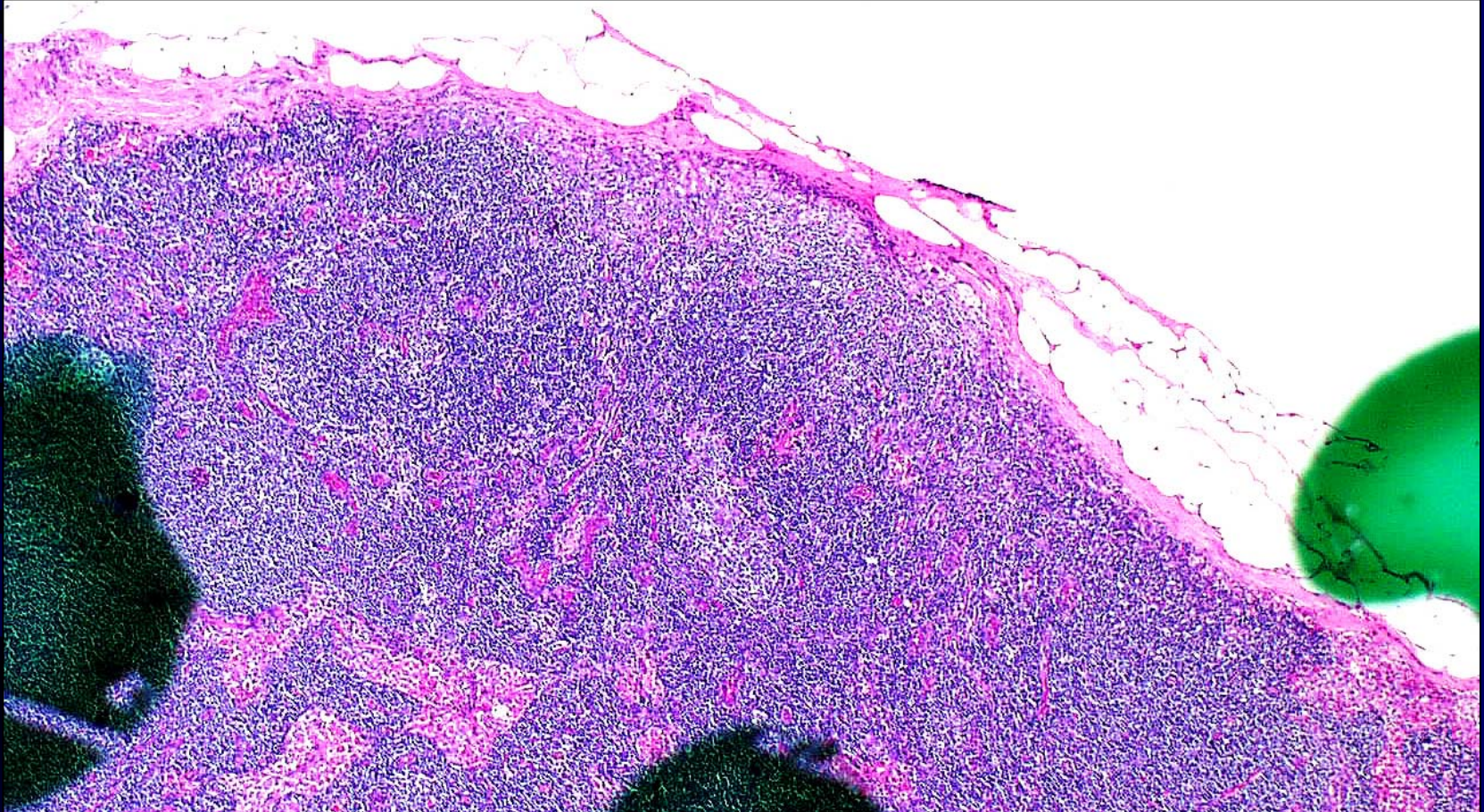


Hepatic Steatosis

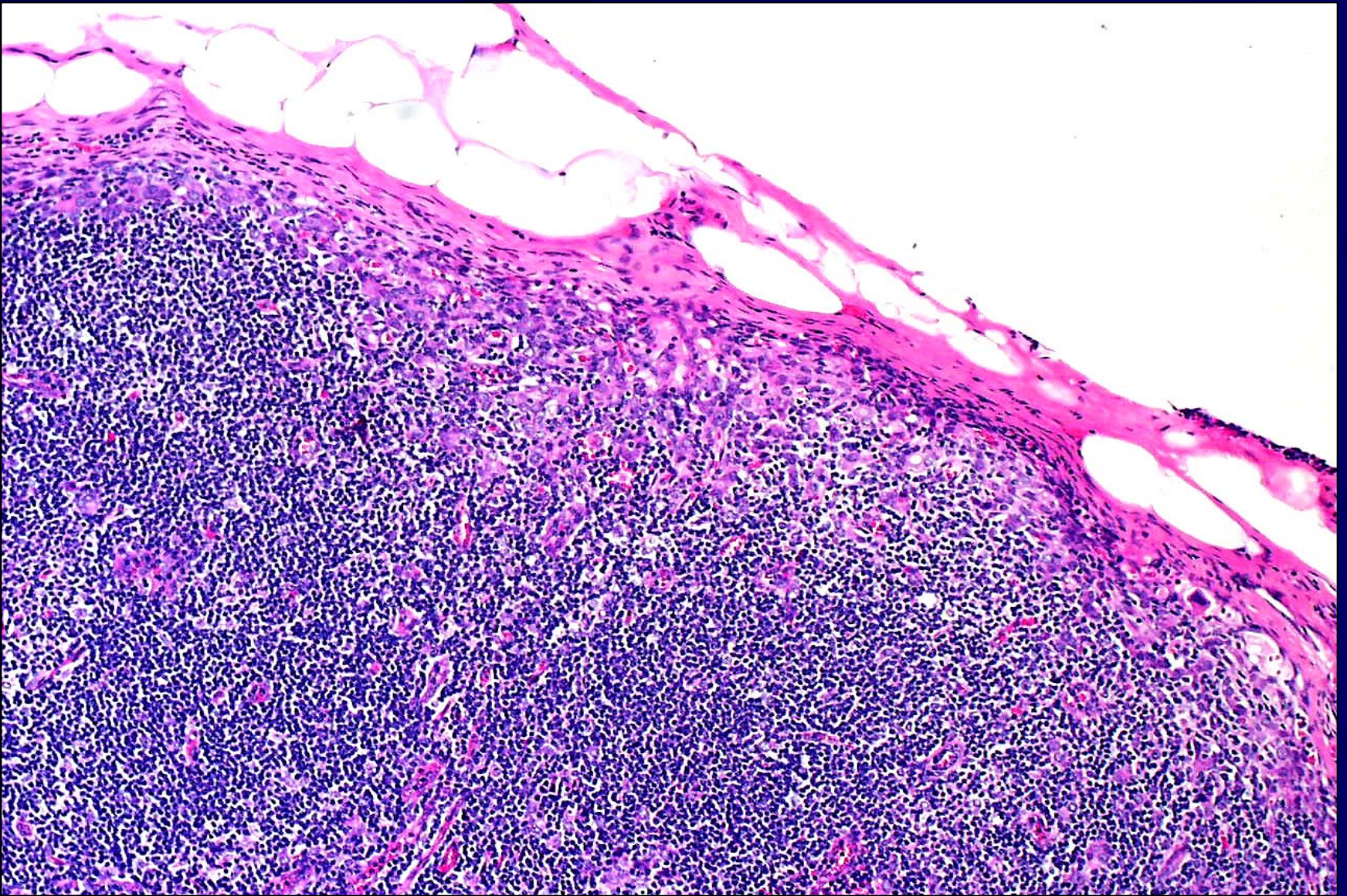
Immunohistochemistry



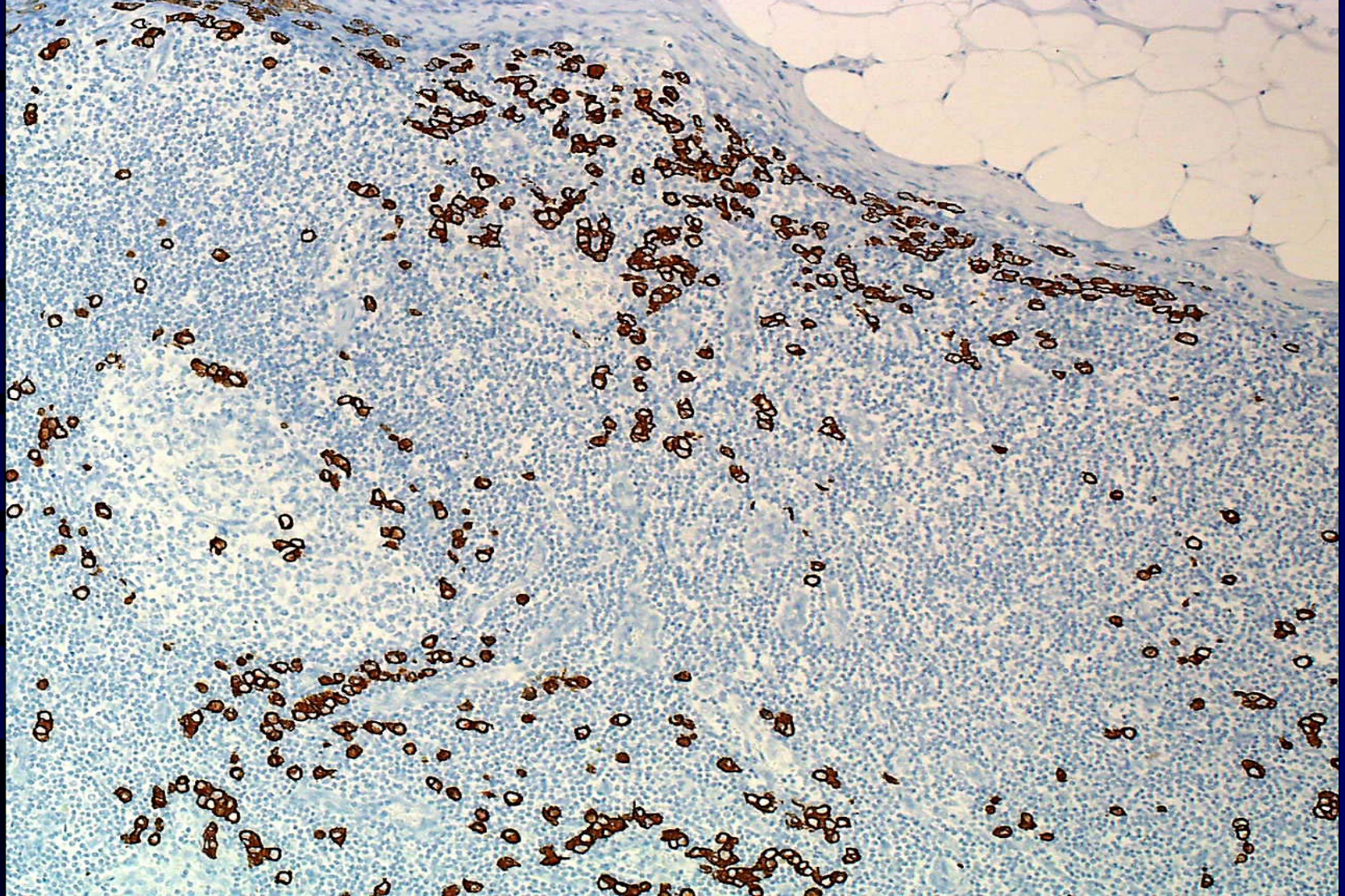
Hematoxylin and Eosin



**Lymph Node:
Examination for Metastasis**



Higher Power: Sinus Histiocytosis



**Immunohistochemistry Positive:
Metastatic Lobular Breast Carcinoma**

...Performing Intraoperative Consultations

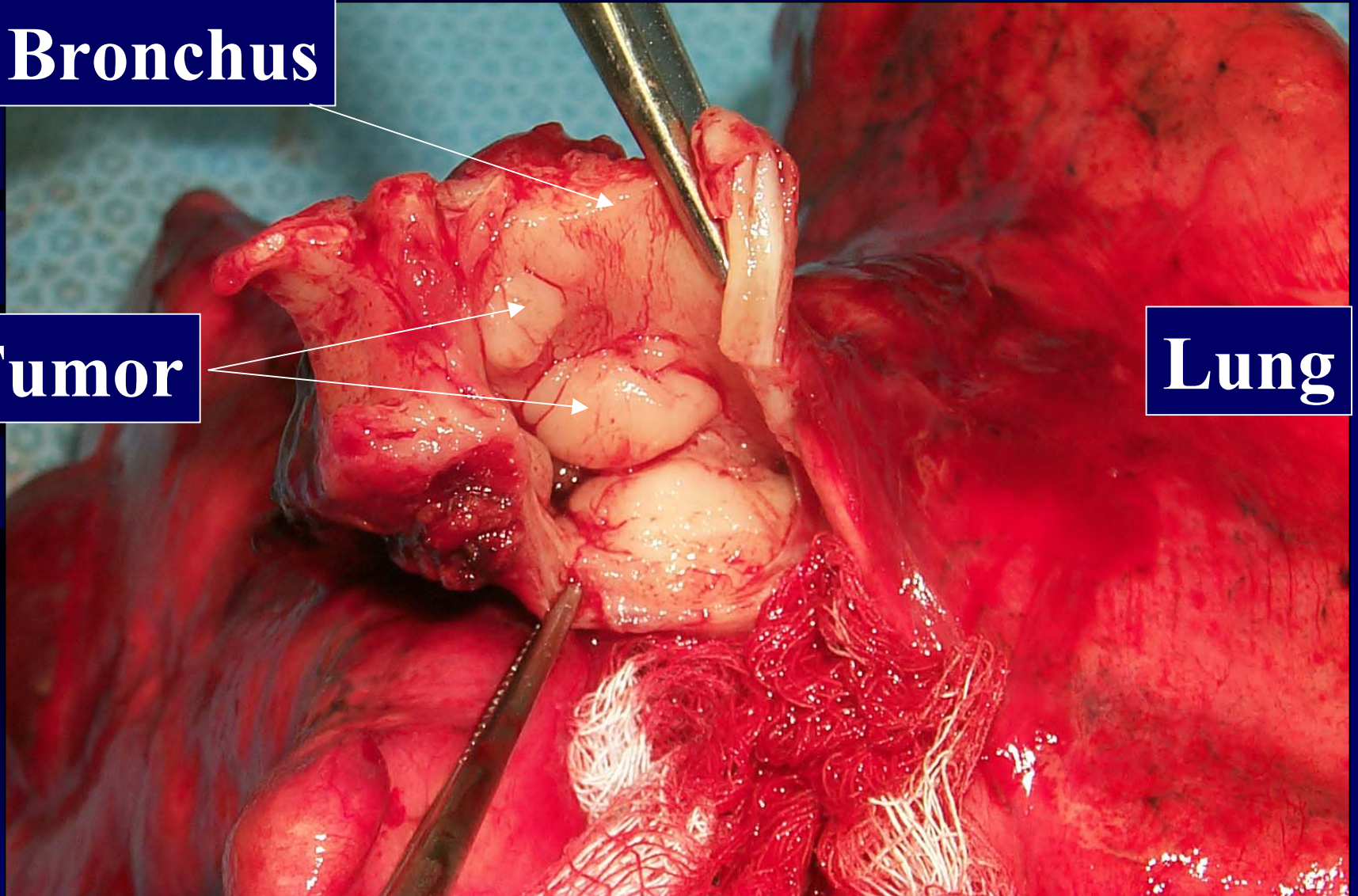
- Frozen Sections**
- Touch Preps**
- Gross Examinations**
- Fine Needle Aspirations**
- Evaluate Organs for Transplant**

Gross Specimen

Bronchus

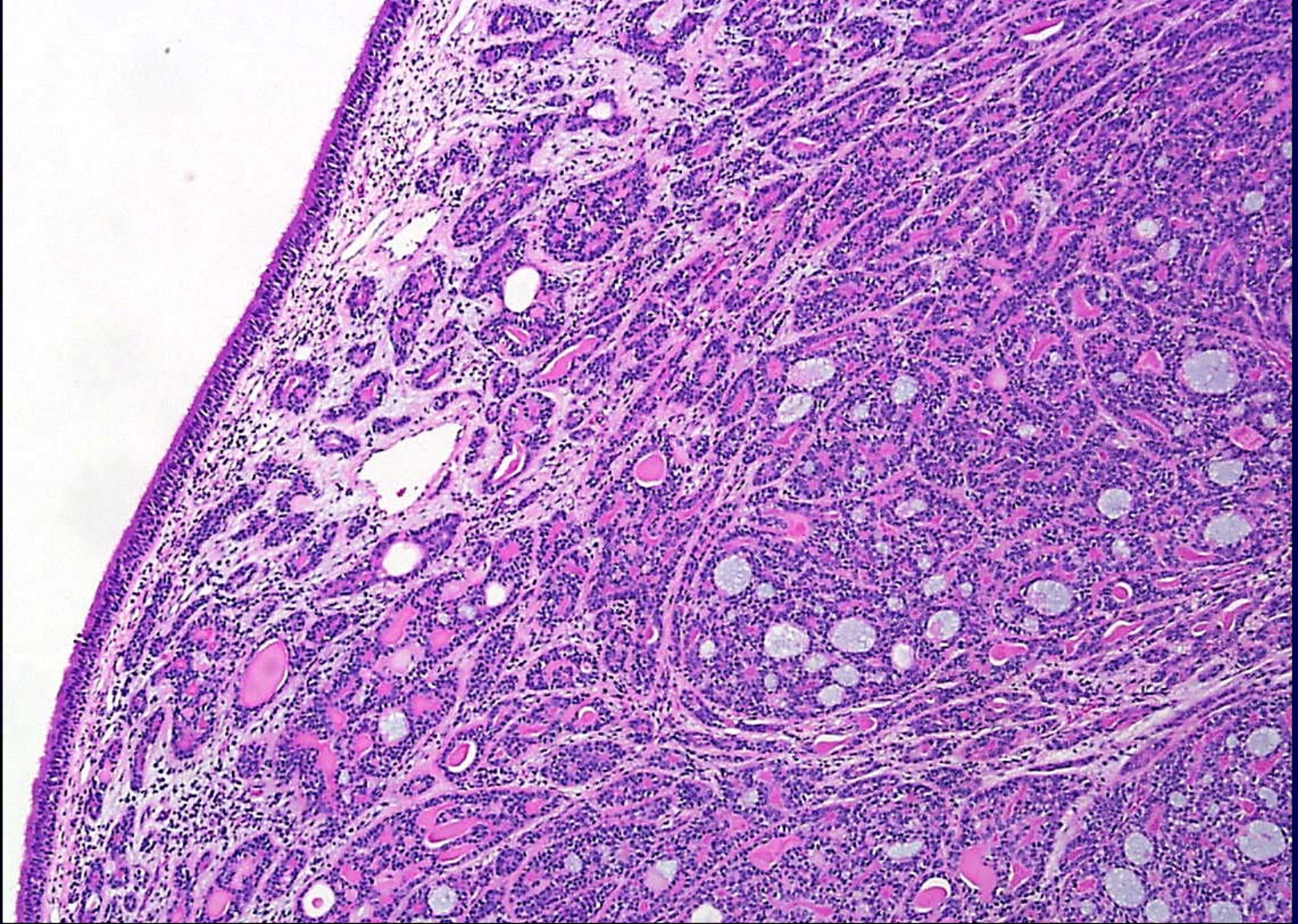
Tumor

Lung





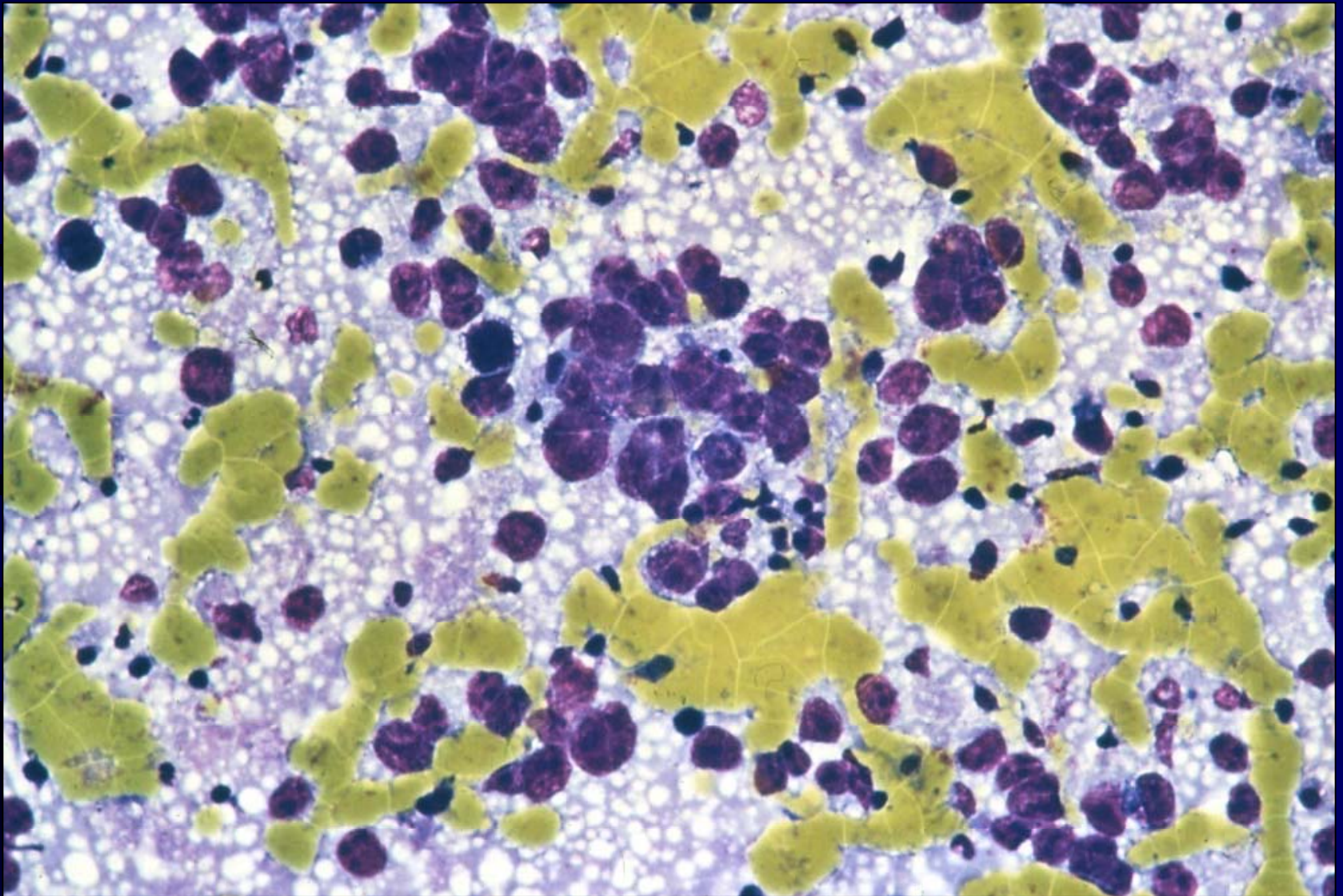
Intraoperative Histologic Diagnosis



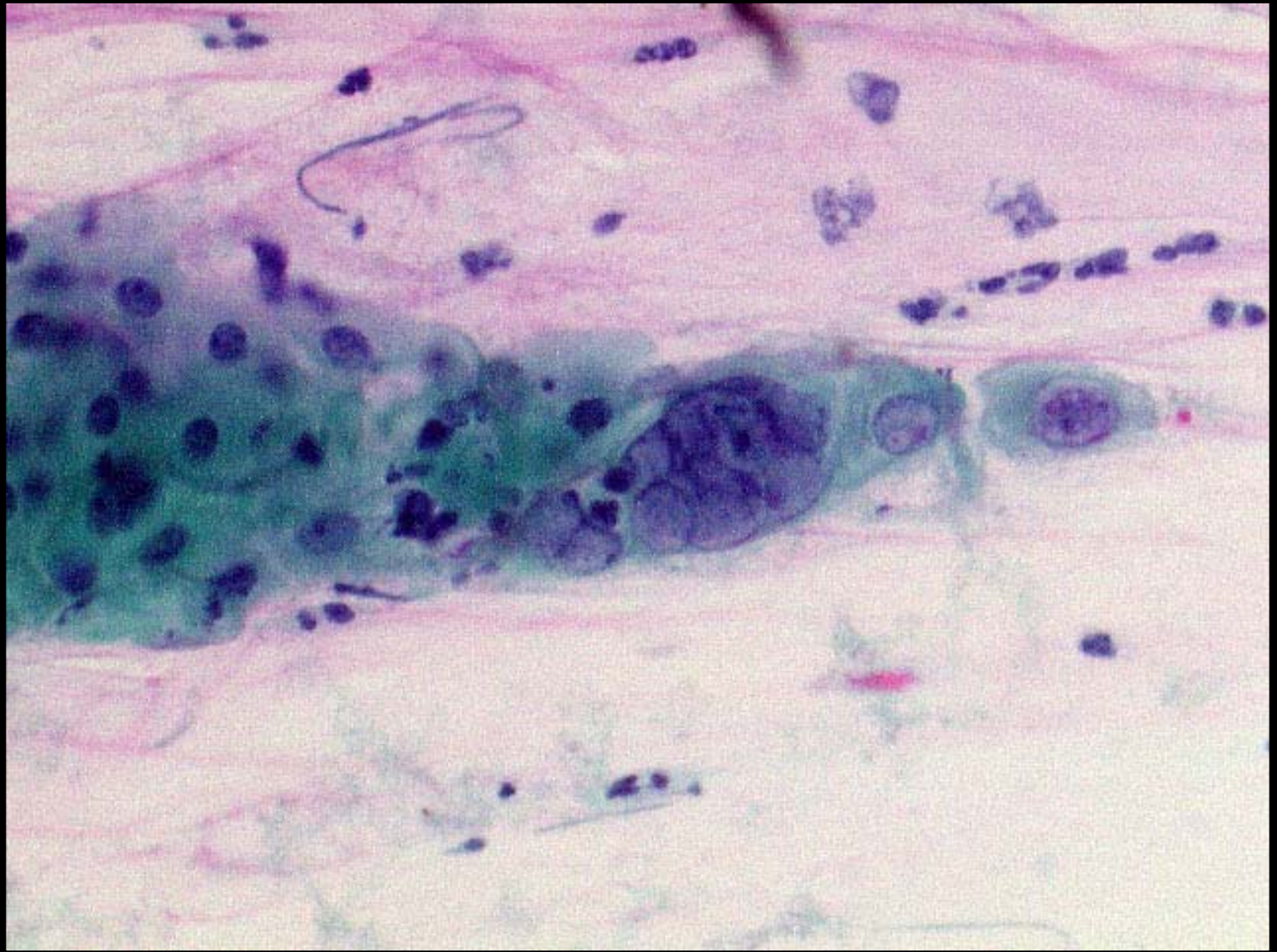
Tumor Approaching Bronchial Epithelium

...Evaluating Cytology Specimens

- **Pap Smears and Body Fluids**
- **Fine Needle Aspirations**
- **Imprint Preparations**
- **Sperm Identification**
- **Stat Interpretations**



Seminoma FNA



PAP Smear with Herpes

...Performing Autopsies

- **Confirm Clinical Impressions**
- **Determine Cause of Death**
- **Identify Hereditary Conditions**
- **Diagnose Diseases**
- **Educate**

Autopsy Case Review

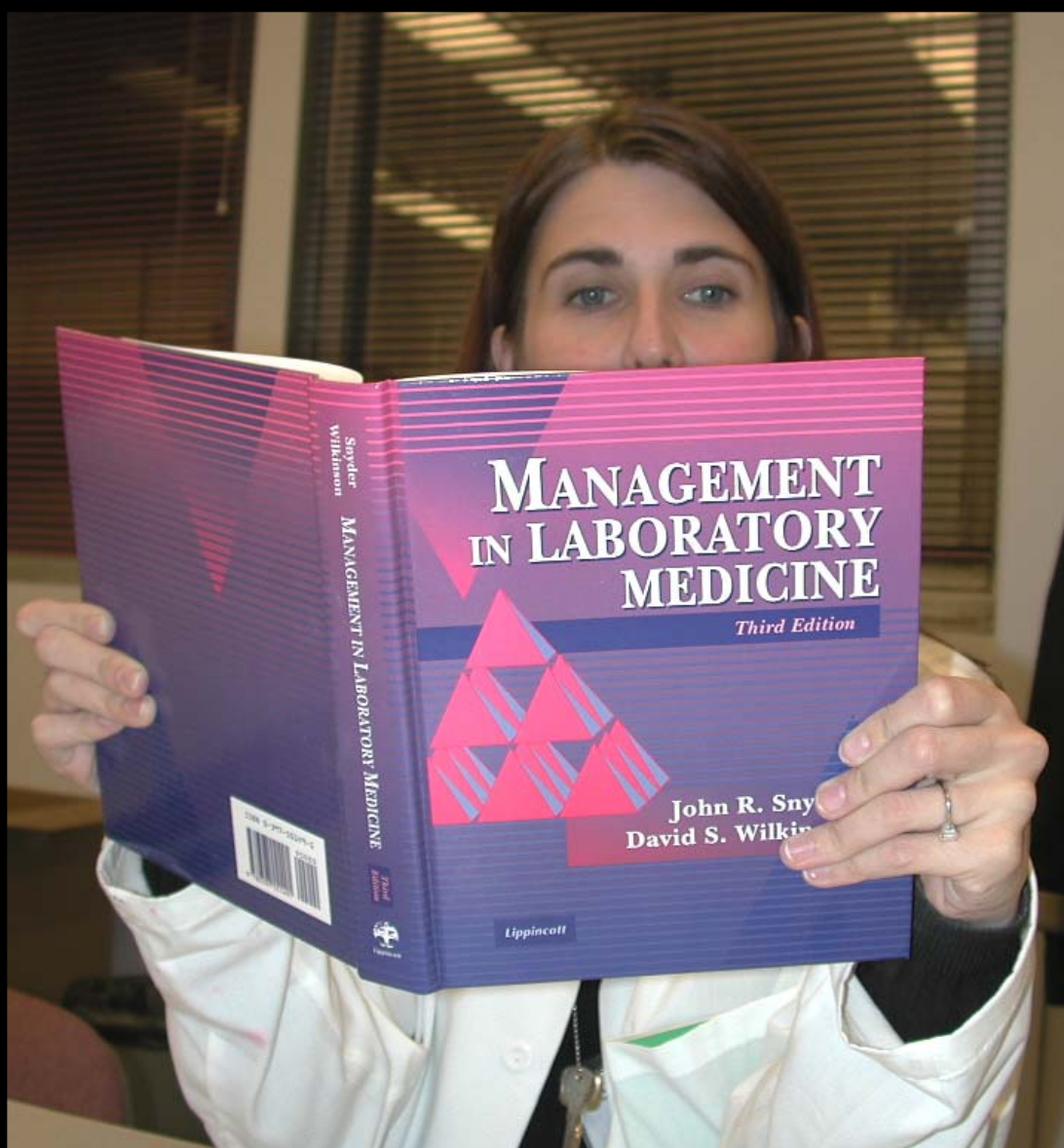


...Practicing Forensics

- Cause and Manner of Death
- Crime/Death Scene Investigation
- Evidence Procurement
- Courtroom Testimony



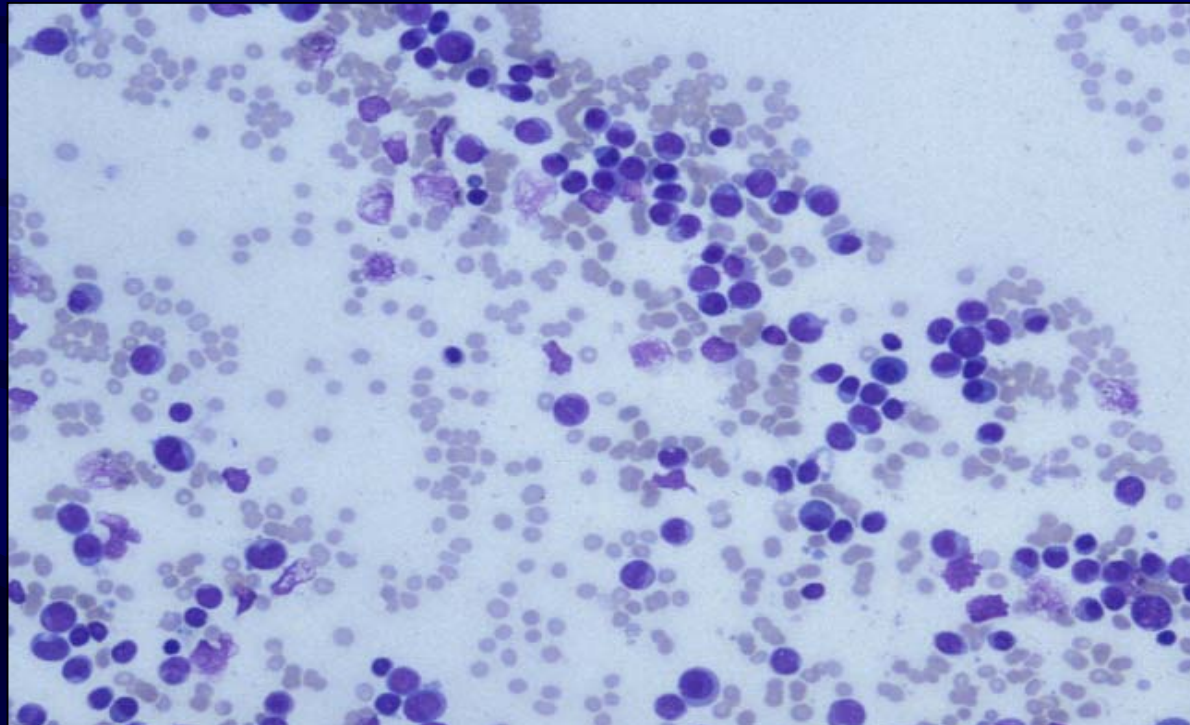
...Managing the Laboratory



QA, QI, QC:
Insuring the
Quality of
Patient Care

...Interpreting Challenging Peripheral Blood Smears

- Leukemia
- Anemia
- Malaria
- Lead
Poisoning



Peripheral Blood Smear: Leukemia

...Performing and Interpreting Bone Marrow Biopsies

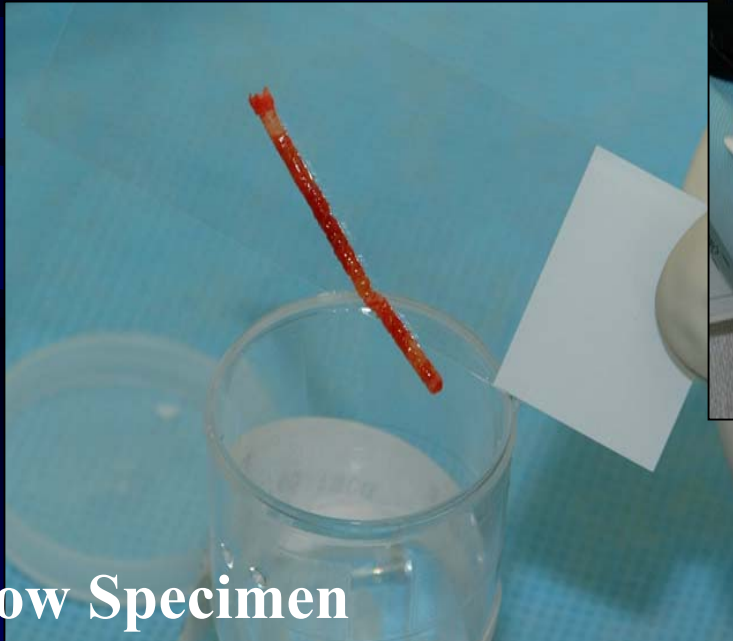
- **Morphology**
- **Flow Cytometry**
- **Clinical Correlation**
- **Molecular Studies**
- **Treatment**



Bone Marrow Aspirate and Biopsy



Preparation of slides at bedside



Bone Marrow Specimen

...Evaluating Patients with Bleeding/Clotting Disorders

- **Recommend Laboratory Tests**
- **Interpret and Correlate Results**
- **Recommend Treatment**

...Evaluating Lymph Nodes

- **Morphology**
- **Flow Cytometry**
- **Immunohistochemistry**
- **Molecular Studies**

...Performing Hemotherapy

- **Plasmapheresis**
- **Leukopheresis**
- **Red Cell Exchange**
- **Stem Cell Harvesting**

...Interacting with Clinicians

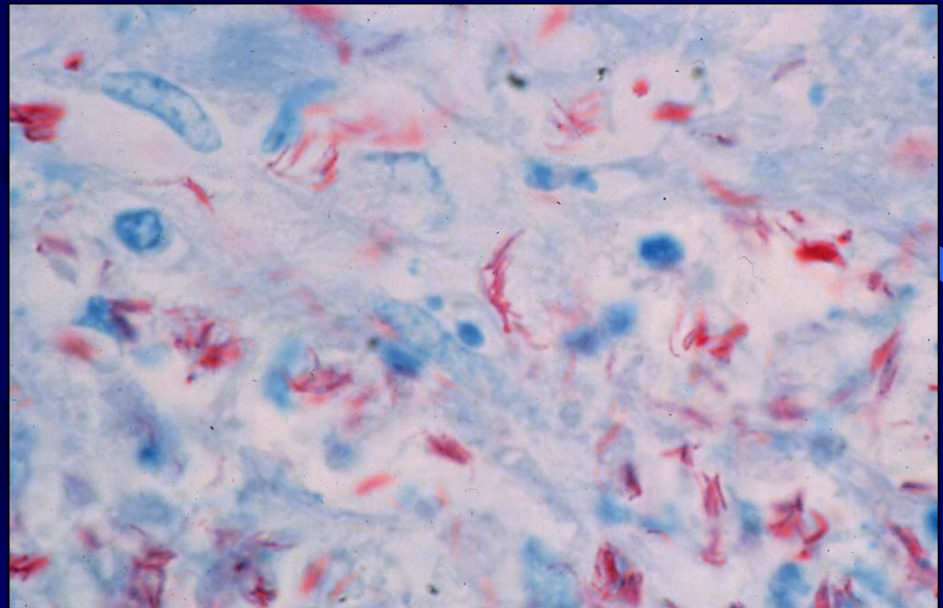


“Doctor’s Doctor”

...Isolating Infectious Diseases

- Chemotherapy Patients
- AIDS Patients
- Transplant Patients

Acid Fast Organisms



...Coordinating Transfusions

- Transfusion Reactions
- Blood Utilization and Donation
- Rare Blood Type Identification
- Trauma Patients



...Applying Molecular Pathology

- Cancer and Oncogenes
- Karyotyping for Genetic Defects
- DNA Fingerprinting

Trisomy 21



...Teaching

- **Clinicians**
- **Laboratory Personnel**
- **Residents**
- **Medical/Dental Students**
- **Lay Community**



Small Group Teaching

...Learning

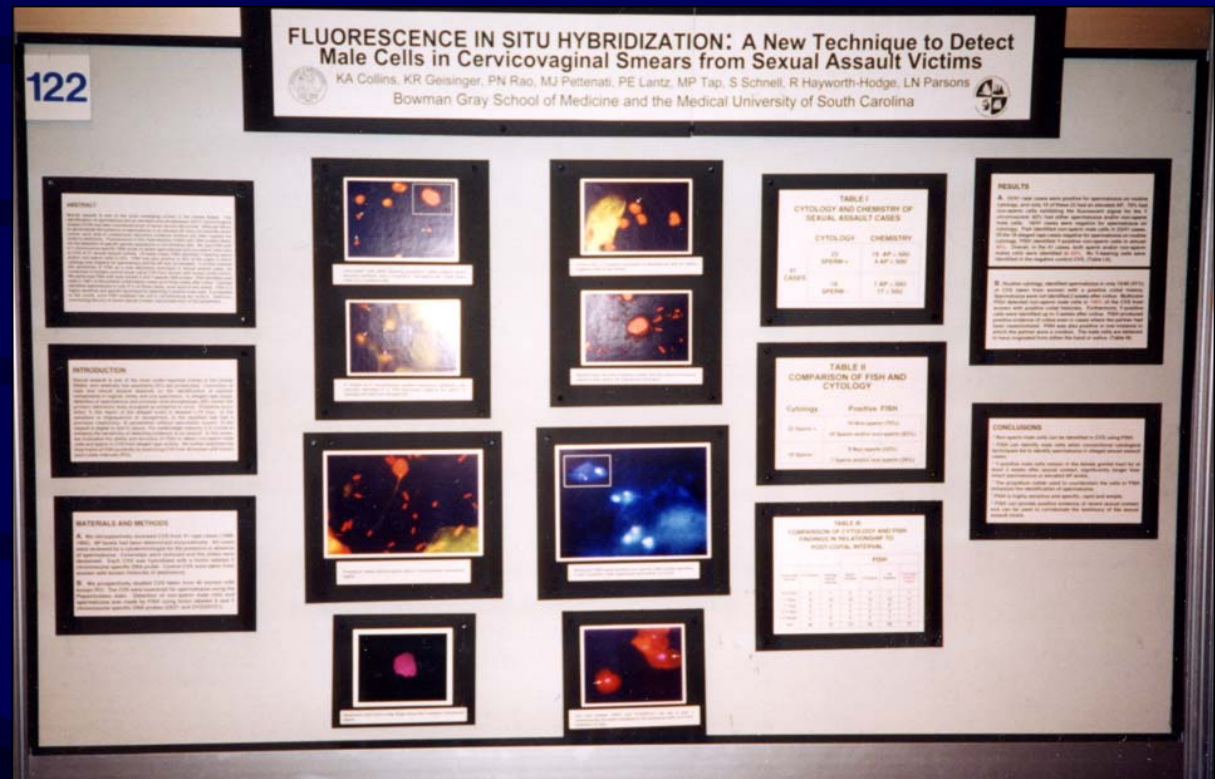
- **Books**
- **Case Material**
- **Colleagues**
- **Conferences**
- **National Meetings (CAP)**

...Researching and Publishing

Basic Science

Clinical Science

Case Reports and Series



Poster at National Meeting

...Developing Leadership Skills

- **Medical Administration**
- **Legislative Agendas**
- **Grassroots Advocacy**
- **Local, State, and National Medical Societies**

Areas in Pathology

- **Cytopathology**
- **Neuropathology**
- **Forensic Pathology**
- **Dermatopathology**
- **Hematopathology**
- **Molecular Pathology**
- **Pediatric Pathology**
- **Oral Pathology**
- **Blood Bank/
Transfusion
Medicine**
- **Informatics**
- **Chemical Pathology**
- **Medical
Microbiology**

Lifestyle Issues

- **Hours**
- **Limited On-Call Time**
- **Improving Job Market**
- **Above Average Income**
- **Private Practice vs. Academics**

Why is Pathology Important to the Clinician?

- Understand And Treat Disease
- 70% of data in patient charts is from the pathology laboratory
- “Doctor’s Doctor”
- Pathology Is On Many Specialty Boards....



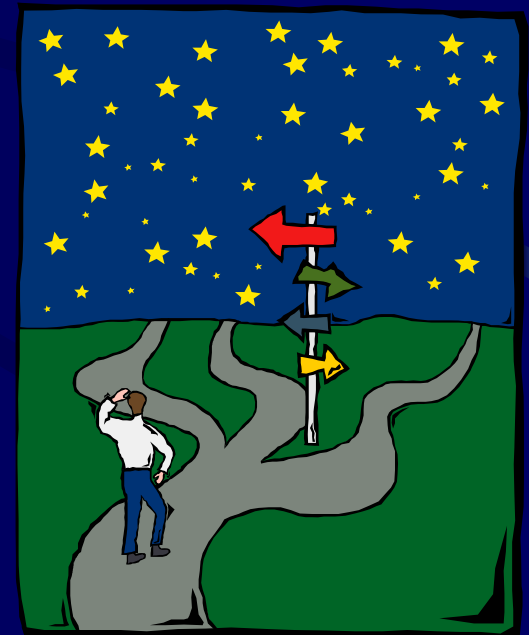
Pathology in Medical School

Medical Students do NOT
formally rotate through the
Pathology Service unless they
choose to do an Elective!



Opportunities

- Review your Patient's Pathology with a Pathologist or Resident
- Shadow a Pathologist or Resident
- Take an Elective Rotation
- Attend Various
Clinicopathological
Conferences



**Right Now a Pathologist is
Practicing Medicine,
Making a Difference, and
Striving for Excellence!**