



CYTOPATHOLOGY

Department of Pathology and Laboratory Medicine

SCOPE OF PRACTICE PGY-5

- Recognize normal cytomorphology of cells derived from organs such as lymph node, thyroid, salivary glands, lung, liver, pancreas, kidney, adrenal gland, and soft tissues by fine-needle aspiration, washing, brushing or passive fluid collection
- **Cervical Cytology**
 - Become familiar with the Bethesda System for reporting cervical cytology
 - Recognize common cellular components in cervical specimen
 - Recognize the features of dysplasia and invasive carcinoma of the uterine cervix
 - Recognize effects of inflammation and repair, radiation, intrauterine devices on cervical cytology
 - Recognize the cytopathic effects of genital viral infection, including Human Papillomavirus (HPV), Herpes, and Cytomegalovirus (CMV)
 - Recognize common infectious agents in the female genital tract, Lepothrix, Candida, Trichomonas, and Actinomyces
 - Recognize common artifacts that may be present in cervical Pap smears (air drying, fungi, cellular degeneration)
 - Recognize the effects of hormonal stimuli on the cervical/vaginal epithelium.
- **Head & Neck Cytology**
 - Become familiar with the Bethesda System for reporting thyroid cytology
 - Recognize cytologic features of squamous cell papilloma and carcinoma of oral cavity
 - Recognize cytologic features of common salivary gland neoplasms, including pleomorphic adenoma, mucoepidermoid carcinoma, and adenoid cystic carcinoma

- **Respiratory Cytology**
 - Know the cytology of pulmonary viral (herpes, CMV) and fungal (histoplasmosis, Pneumocystis Carinii, blastomycosis, cryptococcosis, coccidiomycosis) infections
 - Recognize cytologic features of a granulomatous inflammation
 - Know the cytologic criteria to identify the various types of lung carcinoma
 - Become familiar with immunocytochemical profiles of common lung cancers, such as small cell carcinoma, squamous cell carcinoma and adenocarcinoma
 - Become familiar with molecular testing of lung cancers, such as EGFR and K-RAS mutations
 - Be aware of components of respiratory specimens that can be confused with malignant cells
- **Renal and Urinary Tract Cytology**
 - Become familiar with the Paris System for reporting urinary cytology
 - Recognize cytologic features of renal cell carcinoma and transitional cell carcinoma
 - Become familiar with the immunocytochemical profile of renal cell carcinoma
 - Be aware of the different constituents of voided, catheterized, and irrigated urinary bladder specimens
 - Recognize decoy cells in urine
 - Recognize BCG and other treatment related cytologic changes in urine
- **Digestive System Cytology**
 - Recognize cytologic features of benign and malignant neoplasms of the stomach
 - Become familiar with the differential diagnosis of spindle cell neoplasms (nerve sheath tumor, gastrointestinal stromal tumor, benign and malignant smooth muscle tumor) and their immunocytochemical profiles
 - Recognize cytologic features of hepatocellular carcinoma and cholangiocharcinoma
 - Recognize benign and malignant neoplasms of pancreas and potential pitfalls in endoscopic guided FNA (especially contamination with gastric and intestinal mucosa)
- **Soft Tissue Cytology**
 - Become familiar with common features of sarcomas and their immunocytochemical profiles
- **Body Fluid Cytology**
 - Be aware of the methods of CSF collection (lumber puncture vs. shunt device)
 - Know that a significant increase of any type of cells in CSF, including inflammatory cells, may constitute a medical emergency and should be reported to the clinician immediately

- Know the features of bacterial, viral, fungal meningitis
- Know cytologic features and immunoprofiles of mesothelial cells and metastatic adenocarcinoma of different origins
- **Cytopreparation and FNA Skills**
 - Be familiar with major preparatory techniques in the cytology laboratory: conventional smear, liquid-based thin layer, routine and special stains, cytocentrifugation, and cell blocks
 - Know the cardinal rules and indication of FNA on superficial masses
 - Be able to critically analyze a clinical situation, weighed against the quantity of the specimen, and select the most appropriate cytopreparatory method
 - Master FNA technique
- **Administrative and Regulatory Issues**
 - Become familiar and compliant with federal and state regulations, including but not limited to CLIA '88, HIPPA, HCFA, etc.
 - Be aware of the essential elements of quality control and quality assurance programs in cytology