GOALS AND OBJECTIVES
LABORATORY MEDICINE
PGY-1 ANATOMICAL PATHOLOGY RESIDENT

(SURGICAL/CYTOPATHOLOGY, HEMATOPATHOLOGY, BIOCHEMISTRY AND MEDICAL MICROBIOLOGY)

This block is dedicated to laboratory medicine, which will be spent in Surgical and Cytopathology (1 week), Hematopathology (1 week), Biochemistry (1 week) and Medical Microbiology (1 week).

1. SURGICAL PATHOLOGY/ CYTOPATHOLOGY ROTATION

MEDICAL EXPERT ROLE

- The resident will be placed on the daily resident schedule and will participate in the usual rotations: surgical pathology sign-out, frozen sections and grossing, as well as one week in cytology

- For daily sign-out in general surgical pathology, the resident is responsible to review all the slides the day before (at the discretion of the staff, only a portion of the slides may be required), read around the cases, and review pertinent clinical histories and ancillary information

- The resident must be able to present the cases to the staff in a clear, concise, manner and come up with reasonable differential diagnoses

- For frozen section, the resident will shadow the senior residents and staff, and observe carefully the technique of grossing the specimen, selecting the appropriate section for frozen section, the technique of freezing, cutting in the cryostat, and staining of the slides

- In the grossing lab, the PGY1 resident will observe the pathology assistants and senior residents in grossing the specimens- photographing, measuring, inking, and taking appropriate sections
• By the end of the rotation, they should be able to independently gross small specimens

• The Surgical Manual by Lester is an invaluable reference book and should be consulted before each case

• During the cytology rotation, 1 days should be spent with the cytology technicians who will show the PGY1 resident the cytology lab, the preparation area, and introduce the PGY1 resident to the cytology techniques and stains (alcohol-fixed, air dried, cell block preparation, FNA, etc)

• 2-3 days of the cytology week will be spent signing out the cases with the staff

• Since the cytology cases come out the same day as the sign-out, as soon as they are screened by the cytology technicians, they don’t need to be reviewed prior to sign out

COMMUNICATOR ROLE

• Understand Surgical Pathology critical values and the need to report these to the appropriate person

• Formulate comprehensive and clinically meaningful pathology reports, prioritizing the features of importance.

• Demonstrate awareness of the importance of timeliness, clarity and accuracy in all verbal and written communications

• Act as consultants to clinical colleagues on the interpretation and relevance of pathology findings

COLLABORATOR ROLE

• Consult effectively with other physicians and health care professionals.

• Contribute effectively to interdisciplinary team activities.

• Understand the importance of contributing to educational/or research endeavors of clinical and laboratory colleagues.

• Participate in multidisciplinary rounds, as appropriate.

• Be aware of the strong interface between the laboratory and clinical disciplines.
SCHOLAR ROLE

- Explain the principles of evidence based medicine and its relevance to clinical decision making
- Record personal learning objectives during the rotation and take responsibility for self-managing your own learning objectives documental at the beginning of the rotation
- Seek ongoing feedback from teachers and modify learning objectives as necessary
- Show up on time and attend all appropriate learning sessions and rounds
- Complete all necessary evaluations on time
- Adhering to hospital rules and accepted standards of dress while working

MANAGER ROLE

- Utilize resources of the laboratory effectively to achieve an accurate diagnosis.
- Understand principles of quality assurance and patient safety.
- Allocate finite health care resources wisely
- Utilize information technology to optimize patient care, life-long learning and other activities.
- Work effectively and efficiently in a health care organization.

PROFESSIONAL ROLE

- Deliver highest quality care with integrity, honesty and compassion.
- Exhibit appropriate personal and interpersonal professional behaviours.
- Practice medicine ethically consistent with obligations of a physician.
- Demonstrate the knowledge, skills and attitudes relating to gender, culture, and ethnicity pertinent to anatomical pathology.
2. HEMATOPATHOLOGY, MEDICAL BIOCHEMISTRY, MEDICAL MICROBIOLOGY ROTATION

This block will be spent rotating in the clinical pathology lab: two weeks in hematopathology, one week in biochemistry and one week in microbiology. This will give PGY1 resident introductory exposure to clinical pathology and will help him/her decide if they wish to pursue a career in GP. All weeks include interaction with faculty and appropriate reading.

MEDICAL EXPERT ROLE

HEMATOPATHOLOGY

• During the HEMATOPATHOLOGY weeks, the resident will acquire a basic knowledge of:

  i. Normal hematopoiesis and cell biology as they pertain to the structure and function of all hematopoietic elements.

  ii. The structure and functional relationships of all components of the reticuloendothelial system.

  iii. The components of humoral and cellular immunity, the role of complement and its pathways of activation.

• Acquire knowledge of hematopathological disorders including:

  i. Common anemias, including diagnostic strategies, morphological findings on the peripheral blood and bone marrow level, clinical associations, complications, and basic principles of patient management.

  ii. Common neoplastic disorders of leukocytes including diagnostic strategies, common classification schemes and the role of cytogenetics, molecular studies, and flow cytometry.

• Present cases in a clear, concise, integrated, and problem based manner

BIOCHEMISTRY

• During the BIOCHEMISTRY week, the resident will acquire a basic knowledge of:

  • Automated and Acute Care Chemistry, Enzymology, Lipids/Lipoproteins, and Therapeutic Drug Monitoring
• Incorporate sign-out and review responsibilities, quality control review and decision-making, and exposure to laboratory instrumentation and techniques

MICROBIOLOGY

• In the first year of their training PGY1 residents in Anatomical Pathology will spend 3-4 days in the EORLA Microbiology Reference Laboratory at The Ottawa Hospital as part of an orientation to other Clinical Pathology labs. The rotation in Microbiology will be from Tuesday to Friday, and therefore permit the resident to attend Tuesday City Wide Infectious Disease rounds and Friday’s academic half day for Medical Microbiology and Infectious Disease residents (except for July & August). This is a short time in the microbiology lab and so the resident will be given a tour of the lab and receive some didactic sessions to optimize the learning experience.

• The resident will review the Safety Manual and be provided with a bio-safety orientation. They will be able to describe basic safety principals and how to work safely in the laboratory.

• The resident will spend half a day in the Set-up area and will be able to describe the different types of specimens that are received and how they are processed.

• The resident will spend time on the urine bench and the Vitek/Susceptibility bench. They will understand how urine specimens are worked up and the general principals of identification and susceptibility testing of bacteria.

• The resident will spend time on the Gram and BacT/Alert bench. The resident will be able to describe how to perform a Gram’s stain and the utility of this stain in microbiologic diagnosis.

• The resident will spend time on either the respiratory or wound benches. They will be able to describe how these specimens are worked up and understand the concept of normal, colonizing, or commensal flora.

COMMUNICATOR ROLE

• Obtain and synthesize relevant history from other members of the health care team, patients, families, communities.

• Discuss information/cases with other members of the health care team in terms of diagnosis and prognosis.

• Listen effectively.
• Acquire effective communication skills, both verbal and written with clinical colleagues in order to interpret clinical pathology/biochemistry/microbiology findings in the clinical context.

• Formulate comprehensive and clinically meaningful Hematopathology reports, prioritizing the features of importance.

**COLLABORATOR ROLE**

• Consult effectively with other physicians and health care professionals.

• Contribute effectively to other interdisciplinary team activities.

• Participate in multidisciplinary rounds as appropriate.

• Be aware of the strong interface between the laboratory and clinical disciplines.

• Develop skills in supporting educational and/or research endeavors of clinical and laboratory colleagues through individual opportunities or group learning experiences.

• Understand the value of interdisciplinary and intradisciplinary collaboration in patient management decisions. This includes the need for case review including review by external institutions and agencies. The residents must demonstrate a willingness to seek consultation opinions if so requested by clinical colleagues with modification of subsequent diagnostic impressions if appropriate.

• Develop skills in supporting educational and/or research endeavors of clinical and laboratory colleagues through individual opportunities or group learning experiences.

**MANAGER ROLE**

• Utilize resources of the laboratory effectively to achieve an accurate diagnosis.

• Allocate finite health care resources wisely.

• Utilize information technology to optimize patient care, life-long learning and other activities.

• Work effectively and efficiently in a health care organization.

**SCHOLAR ROLE**

• Explain the principles of evidence based medicine and its relevance to clinical decision-making.
• Record personal learning objectives during the rotation and take responsibility for self-managing your own learning objectives documented at the beginning of the rotation.

• Seek ongoing feedback from teachers and modify learning objectives as necessary.

**PROFESSIONAL ROLE**

• Take positive steps to maintain a healthy and positive attitude in yourself and to promote it in others.

• Demonstrate appropriate relationships with patients, family members, and setting limits where appropriate.

• Showing integrity and honesty and a high level of responsibility towards patient care.

• Demonstrate appropriate relationships with all staff physicians and consultants.

• Show up on time and attend all appropriate learning sessions and rounds.

• Complete all necessary evaluations on time.

• Adhere to hospital rules and accepted standards of dress while working.

*Revised May 2016*