GOALS AND OBJECTIVES
DIAGNOSTIC RADIOLOGY
PGY-1 ANATOMICAL PATHOLOGY RESIDENTS

MEDICAL EXPERT

- Understand the nature of formation of all types of radiological images, including physical and technical aspects, patient positioning, contrast media.

- Knowledge of the theoretical, practical and legal aspects of radiation protection, including other imaging techniques and their possible harmful effects.

- Knowledge of human anatomy at all ages, both conventional and multiplanar, with emphasis on radiological applications.

- Knowledge of all aspects of clinical radiology, including understanding of disease, appropriate application of imaging to patients, importance of informed consent, complications such as contrast media reactions, and factors affecting interpretation and differential diagnosis.

- Understand the fundamentals of quality assurance in radiology.

- Understand the fundamentals of epidemiology, biostatistics and decision analysis.

- Understand the fundamentals of when the patient’s best interests are served by discontinuing a procedure, or referring the patient to another physician.

- Understand the appropriate follow-up care of patients who have received investigations and/or interventional therapy.

- Have an understanding of radiological reporting.

- Competence in effective consultation and in conduct of clinico-radiological conferences.
SPECIFIC OBJECTIVES

GENERAL

- Describe briefly the basic technical aspects of radiographs, computerized tomography, magnetic resonance imaging and ultrasound.
- Describe the indications and limitations of each imaging modality.
- Describe basic radiological features as related to the major organ systems including but not limited to the below:

BREAST

- Describe the BIRADS classification and its clinical implications in patient management
- Correlate de BIRADS findings with the usual pathological changes associated with each grade.
- Describe the different types of breast biopsies, their indications and limitations (stereotactic, US guided core needle, vacuum assisted).

CHEST

- Describe the differences between mediastinal and lung windows, and their indications and limitations for evaluating suspicious chest lesions or for staging lung cancer.
- Describe the CT characteristics associated with benign and malignant lesions.
- Describe the indications and limitations for fine needle aspiration biopsy and core biopsy.

MUSCULOSKELETAL

- Describe the general X-ray, CT and MRI characteristics usually associated with benign and malignant tumours.
- Describe the X-ray, CT and MRI characteristics which indicate a particular type of tissue constituent (e.g. osseous and cartilaginous type of calcification in X-rays, adipose tissue and blood intensity on MRI, etc).

ABDOMEN/PELVIS
• Describe the general CT and MRI characteristics usually associated with benign and malignant gynaecologic lesions.

• Describe the general CT and MRI characteristics usually associated with benign and malignant hepatobiliary and pancreatic lesions.

• Describe the indications and limitations for fine needle aspiration biopsy and core biopsy of intraabdominal lesions.

HEAD

• Describe the general CT and MRI characteristics usually associated with benign and malignant lesions of the central nervous system.

• Describe briefly the different MRI studies and their indications and limitations.

THYROID

• Describe the US characteristics usually associated with benign and malignant tumours.

• Describe the technique and the indications and limitations for fine needle aspiration biopsy of the thyroid.

THE RESIDENT IS EXPECTED

• To be paired with a resident or staff for signouts.

• To attend radiology teaching rounds

• To follow the schedule and tasks requested from the teaching staff.

• To read and be proactive in reaching the objectives.

• To be evaluated according to the general and specific objectives.

• To be responsible in having the evaluation completed at the end of the rotation.

COMMUNICATOR

PGY1 residents should begin developing their role as communicators, encompassing all the competencies specified in the Royal College Objectives of Training in the Laboratory Medicine Programs. Specific objectives for pathology residents in their PGY1 year are:
• Observe the means by which a Pathologist communicates with their clinical colleagues (e.g. via written reports, at interdisciplinary rounds, informally).

• Reinforce with their clinical colleagues the need to provide appropriate clinical information when providing material for laboratory testing.

• Read pathology and other lab reports on their own patients, and critically evaluate the effectiveness and relevance of the information provided for the management of those patients.

• Appreciate the impact of acute or chronic illness on a child and his/her family and provide empathetically the appropriate information and support. Similarly, appreciate the impact of critical illness on a critically ill patient and his/her family.

COLLABORATOR

• Participate effectively and appropriately in a health care team.

• Develop a knowledge of the roles and responsibilities of a Pathologist in the team.

• Develop a knowledge of, and respect for, the roles and responsibilities of other professionals in the team.

• Work with others to assess, plan, provide and integrate care for patients.

• Attend and participate in interprofessional team meetings, including cancer teams.

• Gain an insight into the sources of interprofessional conflict (particularly those involving pathologists) and ways it may be prevented and resolved.

• Gain insight into means by which pathologists can provide leadership and/or direction in a health care team.

• When possible, visit the pathology laboratory to review specimens from patients under your care, and report back the findings to clinicians.

MANAGER

• Gain knowledge of the indications for, and effects of, admitting a patient to hospital.

• Gain knowledge of the judicious use of available resources, particularly with respect to diagnostic and therapeutic procedures that directly or indirectly effect the laboratory (e.g. ordering image guided biopsies for surgical pathology).

• Observe ways in which pathologists contribute to the effectiveness and leadership of health care organizations and systems.

• Learn to manage one’s practice and career effectively, with respect to:
- setting priorities/effect time management
- balancing one’s work and home life
- employing appropriate use of information technology for patient care.

**HEALTH CARE ADVOCATE**

- Respond to individual patient health care needs and issues as part of patient care. This includes learning to identify what these needs are, and identifying opportunities for advocacy, health promotion, and disease prevention among one’s patients.
- Begin to identify the health needs of the community served by different clinical disciplines, including:
  - opportunities for advocacy, health promotion, and disease prevention among these communities
  - vulnerable or marginalized populations within those served
  - barriers to access to care and resources.
- When possible, attend autopsies of persons under one’s clinical care.

**SCHOLAR**

- Maintain and enhance professional activities through ongoing learning, including:
  - attendance at rounds as determined by the rotation, attendance at AP/GP academic Full-day, individual study, etc.
- Learn to critically evaluate medical information at its sources and apply this appropriately to practice decisions.
- Attend journal clubs and Grand Rounds where medical literature is evaluated.
- Facilitate the learning of others, which as a PGY1 could include: explaining medical conditions and procedures to patients and their families, medical students, residents.
- Contribute to the development and dissemination of new knowledge and practices.
- Observe ways in which staff and other colleagues practice evidence-based medicine.
- Use one’s own clinical cases to propose scholarly questions and conduct a systemic search for evidence relating to pathogenesis, management, etc. for the illnesses/situations encountered. Disseminate one’s findings to colleagues.

**PROFESSIONAL**

- Demonstrate commitment to patients, the profession, and society through ethical practice,
including:

- Schedule or report absences from work as required by the rotation, with respect for the needs of the service and one’s colleagues.

- Explore the professional bodies of which pathologists are typically members (e.g. Canadian Association of Pathologists, USCAP, etc).

- Demonstrate a commitment to physician health and sustainable practice.

- Observe how staff physicians and other colleagues strive to balance personal and professional priorities.

- Learn to balance one’s own personal and professional priorities (e.g. consider, observe, and learn about time management skills).

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