

2013
VERSION 1.0

This document applies to those who begin training on or after July 1st, 2013.

DEFINITION

Anatomical Pathology is that branch of laboratory medicine concerned with the study of the morphologic aspects of disease. It includes the subdomains of cytopathology, gynecological pathology, dermatopathology, gastrointestinal pathology, cardiovascular pathology, respiratory pathology, musculoskeletal pathology, renal pathology, genito-urinary pathology, endocrine pathology, ophthalmic pathology, head and neck pathology, neuropathology, pediatric pathology, forensic pathology, and certain laboratory methods including but not limited to immunohistochemistry, immunofluorescence, in-situ hybridization, flow cytometry, molecular pathology, and electron microscopy.

GOALS

Upon completion of training, a resident is expected to be a competent specialist in Anatomical Pathology capable of assuming a consultant's role in the specialty. The resident must acquire a working knowledge of the theoretical basis of the specialty, including its foundations in the basic medical sciences and research.

Residents must demonstrate the requisite knowledge, skills, and attitudes for effective patient-centred care and service to a diverse population. In all aspects of specialist practice, the graduate must be able to address issues of gender, sexual orientation, age, culture, ethnicity and ethics in a professional manner.

ANATOMICAL PATHOLOGY COMPETENCIES

At the completion of training, the resident will have acquired the following competencies and will function effectively as a:

Medical Expert

Definition:

As Medical Experts, Anatomical Pathologists integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional attitudes in their provision of patient-centred care. Medical Expert is the central physician Role in the CanMEDS framework.

Key and Enabling Competencies: Anatomical Pathologists are able to...

1. Function effectively as consultants, integrating all of the CanMEDS Roles to provide optimal, ethical and patient-centred medical care

- 1.1. Perform a pathology consultation, including the preparation of a complete report and recommendations in response to a request from another health care professional or a medico-legal authority (e.g., coroner)
- 1.2. Demonstrate use of all CanMEDS competencies relevant to Anatomical Pathology
- 1.3. Identify and appropriately respond to relevant ethical issues arising in patient care and medical decision-making
- 1.4. Demonstrate the ability to prioritize professional duties when faced with multiple cases and problems
- 1.5. Demonstrate compassionate and patient-centred care
- 1.6. Demonstrate medical expertise in situations other than patient care, such as providing expert legal testimony or advising governments, as needed

2. Establish and maintain clinical knowledge, skills and attitudes appropriate to Anatomical Pathology

- 2.1. Apply knowledge of the clinical and fundamental biomedical sciences relevant to Anatomical Pathology, including:
 - 2.1.1. Normal anatomy, physiology, and biochemistry
 - 2.1.2. General principles of embryologic development and common variations of normal development
 - 2.1.3. Basic principles of cell biology, immunology and pathogenesis, and the changes that occur in disease states
 - 2.1.4. Normal gross, light microscopic, and ultrastructural appearance of tissues
 - 2.1.5. Appearance of normal cells in cytologic preparations
 - 2.1.6. Principles of tissue fixation, decalcification, processing, and routine histochemical staining
 - 2.1.7. Gross and microscopic appearances of tissues in disease states
 - 2.1.8. Cytological appearance of cells in disease states, in both non-gynecologic and gynecologic preparations
 - 2.1.9. Principles of and indications for ancillary diagnostic techniques:
 - 2.1.9.1. Immunofluorescent microscopy
 - 2.1.9.2. Immunohistochemistry and in-situ hybridization (ISH), including fluorescent in-situ hybridization (FISH)
 - 2.1.9.3. Cytogenetics
 - 2.1.9.4. Molecular pathology
 - 2.1.9.5. Flow cytometry

- 2.1.9.6. Special histochemical stains
- 2.1.9.7. Transmission electron microscopy
- 2.1.9.8. Digital microscopy

- 2.2. Describe the CanMEDS framework of competencies relevant to Anatomical Pathology
- 2.3. Apply lifelong learning skills of the Scholar Role to implement a personal program to keep up-to-date, and enhance areas of professional competence
- 2.4. Contribute to the enhancement of quality care and patient safety in Anatomical Pathology, integrating the available best evidence and best practices

3. Perform a complete and appropriate assessment of a case

- 3.1. Obtain a relevant clinical history
- 3.2. Identify and explore clinical issues to be addressed in the pre-analytical, analytical and post-analytical handling of a case
- 3.3. Assess specimen adequacy in surgical and cytopathology specimens
- 3.4. Perform a pathological examination that is focused and relevant
- 3.5. Formulate a differential diagnosis based on the pathological examination
- 3.6. Select ancillary techniques judiciously in a resource-effective and ethical manner
- 3.7. Establish a final diagnosis that takes into account clinical correlations
- 3.8. Generate a clear, concise report that enhances patient management
- 3.9. Communicate the findings in a timely fashion, with appropriate documentation

4. Demonstrate proficient and appropriate use of diagnostic and procedural skills

- 4.1. Demonstrate effective, appropriate, and timely performance of diagnostic procedures relevant to Anatomical Pathology
 - 4.1.1. Perform a complete adult and pediatric post-mortem examination, with appropriate full description and diagnosis at gross and microscopic levels
 - 4.1.2. Perform a complete forensic autopsy, including but not limited to toxicologic examination and the submission of specimens to the forensic sciences laboratory
 - 4.1.3. Interpret the findings of post-mortem examinations in the context of the relevant clinical history
 - 4.1.4. Prepare and diagnose frozen sections, including but not limited to the preparation of imprint cytology specimens
 - 4.1.5. Demonstrate appropriate dissection, description, and sampling of surgical specimens for routine and ancillary procedures
 - 4.1.6. Take high quality gross and microscopic photographs of specimens
 - 4.1.7. Demonstrate safe practices in the laboratory, frozen section room, and

autopsy suite, to minimize occupational risk

- 4.2. Ensure appropriate informed consent has been obtained for autopsies, genetic testing, research, or other tests as required
 - 4.2.1. Describe the provincial and institutional rules governing consent for post-mortem examinations
 - 4.3. Ensure adequate follow-up is arranged when a pathologist performs a diagnostic procedure
 - 4.4. Use diagnostic and preventative interventions appropriately
 - 4.4.1. Utilize appropriate ancillary techniques, including but not limited to molecular cytogenetics, for family counseling and screening
 - 4.4.2. Recognize patterns of familial cancer syndromes, using appropriate ancillary tests to guide genetic counseling
 - 4.4.3. Utilize other areas of laboratory medicine, including but not limited to microbiology, for diagnosis and preventative interventions
 - 4.5. Demonstrate effective use of digital microscopy and interpretation of gross and microscopic digital images, including digitized and scanned slides
 - 4.5.1. Demonstrate knowledge of the principles of telepathology
- 5. Seek appropriate consultation, recognizing the limits of their own expertise**
- 5.1. Demonstrate insight into their own limits of expertise
 - 5.2. Demonstrate effective, appropriate, and timely consultation of another pathologist as needed for optimal patient care
 - 5.3. Recognize situations where there is a need to consult other health professionals
 - 5.4. Recommend relevant follow-up services for a patient and/or the patient's family

Communicator

Definition:

As *Communicators*, the primary role of Anatomical Pathologists is to effectively transmit diagnostic information to clinicians in both verbal and written form.

Key and Enabling Competencies: Anatomical Pathologists are able to...

1. Convey effective oral and written information about a case

- 1.1. Prepare clear, concise, comprehensive, and timely written reports for surgical pathology, cytopathology, and autopsy consultations
 - 1.1.1. Use synoptic and other standardized reporting formats as appropriate
 - 1.1.2. Integrate information from ancillary studies and other sources into the

pathology report

- 1.1.3. Convey diagnostic uncertainty and recommend additional studies when needed
- 1.1.4. Communicate critical values or unexpected results in a timely manner
- 1.2. Interact effectively with surgeons during intra-operative consultations
 - 1.2.1. Convey diagnostic uncertainty and discuss deferral of diagnosis when needed
- 1.3. Present and discuss pathology cases effectively at clinical rounds
- 1.4. Maintain clear, accurate, and appropriate written or electronic documentation
- 1.5. Present medical information effectively to the public or media about a medical issue

2. Develop rapport, trust, ethical and professional relationships with clinical colleagues

- 2.1. Recognize that being a good communicator is a core clinical skill for pathologists, and that effective communication can foster patient satisfaction, physician satisfaction and improved clinical outcome
- 2.2. Establish positive professional relationships with clinical colleagues that are characterized by understanding, trust, respect and honesty
- 2.3. Respect patient confidentiality and privacy
- 2.4. Listen effectively and be aware of and responsive to nonverbal cues

3. Accurately elicit and synthesize relevant clinical and pathological information and perspectives of patients and families, colleagues, and other professionals

- 3.1. Gather information about a disease and about a patient's beliefs, concerns, and expectations
- 3.2. Seek out and synthesize relevant information from other sources as appropriate

4. Accurately convey relevant information and explanations to colleagues and other professionals, as well as patients and families when appropriate

- 4.1. Deliver information to a patient and family, colleagues and other professionals in a humane manner and in such a way that it is understandable and encourages discussion and participation in decision-making

5. Develop a common understanding on issues, problems, and plans with patients, families, and other professionals

- 5.1. Respect diversity and difference, including but not limited to the impact of gender, religion, and cultural beliefs on decision-making
 - 5.1.1. Ensure appropriate communication with patient and/or family members with respect to the handling of surgical and post-mortem procedures in the context of a multi-cultural society
- 5.2. Encourage discussion, questions, and interaction relevant to the case
- 5.3. Address challenging communication issues effectively, such as obtaining informed consent, delivering bad news, disclosing errors and addressing anger, confusion and misunderstanding
 - 5.3.1. Communicate and document issues arising from adverse incidents appropriately

Collaborator

Definition:

As *Collaborators*, Anatomical Pathologists effectively work within a health care team to achieve optimal patient care.

Key and Enabling Competencies: Anatomical Pathologists are able to...

1. Participate effectively and appropriately in an interprofessional health care team

- 1.1. Describe the pathologist's roles and responsibilities to other professionals
- 1.2. Describe the roles and responsibilities of other professionals within the health care team, including but not limited to administrators and support staff
- 1.3. Recognize and respect the diversity of roles, responsibilities and competences of other professionals in relation to their own
- 1.4. Work with others to assess, plan, provide and integrate care for individuals and groups of patients
 - 1.4.1. Collaborate with clinical colleagues to help with the development and implementation of a management plan when appropriate
- 1.5. Work with others to assess, plan, provide and review other tasks, such as research problems, educational work, program review or administrative responsibilities
- 1.6. Participate effectively in interprofessional team meetings
- 1.7. Explain the role of intra- and extra-departmental review of diagnostic material
- 1.8. Enter into interdependent relationships with other professions for the provision of quality care
 - 1.8.1. Provide advice to clinical colleagues regarding histologic and cytologic

specimen collection and handling

- 1.8.2. Discuss indications for appropriate use of intra-operative and urgent consultations
- 1.9. Respect team ethics, including confidentiality, resource allocation, and professionalism
- 1.10. Demonstrate leadership in a health care team, as appropriate

2. Work with other health professionals effectively to prevent, negotiate, and resolve interprofessional conflict

- 2.1. Demonstrate a respectful attitude towards other colleagues and members of an interprofessional team
- 2.2. Work with other professionals to prevent conflicts
- 2.3. Employ collaborative negotiation to resolve conflicts
- 2.4. Respect differences and address misunderstandings and limitations in other professionals
- 2.5. Recognize one's own differences, misunderstandings and limitations that may contribute to interprofessional tension
- 2.6. Reflect on interprofessional team function

Manager

Definition:

As *Managers*, Anatomical Pathologists are integral participants in health care organizations, organizing sustainable practices, making decisions about allocating resources, and contributing to the effectiveness of the health care system. Anatomical Pathologists are central to quality management within the laboratory and, by extension, to the quality of health care.

Key and Enabling Competencies: Anatomical Pathologists are able to...

1. Participate in activities that contribute to the effectiveness of their health care organizations and systems

- 1.1. Work collaboratively with others in their organizations
- 1.2. Describe the structure and function of the health care system as it relates to Anatomical Pathology, including the roles of pathologists and other physicians
- 1.3. Describe principles of health care financing, including physician remuneration, budgeting and organizational funding
- 1.4. Explain the principles of and participate in quality control, quality assurance and quality improvement
 - 1.4.1. Identify and explore issues to be addressed in the pre-analytic, analytic and post-analytic stage of specimen handling

- 1.4.2. Demonstrate expertise in laboratory safety initiatives

2. Manage their practice and career effectively

- 2.1. Set priorities and manage time to balance clinical workload, practice requirements, outside activities and personal life
 - 2.1.1. Describe the principles of workload measurement within the laboratory
- 2.2. Demonstrate an understanding of the principles of laboratory management, including but not limited to collaboration with technical managers, and hospital and laboratory administration
- 2.3. Implement processes to ensure personal practice improvement
- 2.4. Employ information technology appropriately

3. Allocate finite health care resources appropriately

- 3.1. Recognize the importance of just allocation of health care resources, balancing effectiveness, efficiency and access with optimal patient care
- 3.2. Apply evidence and management processes for cost-appropriate care

4. Serve in administration and leadership roles, as appropriate

- 4.1. Chair or participate effectively in committees and meetings
- 4.2. Lead or implement change in health care as appropriate
- 4.3. Plan relevant elements of health care delivery (e.g., work schedules)

Health Advocate

Definition:

As *Health Advocates*, Anatomical Pathologists responsibly use their expertise and influence to advance the health and well-being of individual patients, communities, and populations.

Key and Enabling Competencies: Anatomical Pathologists are able to...

1. Respond to individual patient diagnostic needs and issues as part of patient care

- 1.1. Identify opportunities for advocacy, health promotion and disease prevention with individuals to whom they provide care

2. Respond to the health needs of the communities that they serve

- 2.1. Describe the practice communities that they serve
- 2.2. Identify opportunities for advocacy, health promotion and disease prevention in the communities that they serve, and respond appropriately

3. Identify the determinants of health for the populations that they serve

- 3.1. Identify the determinants of health of the populations, including barriers to access to care and resources
 - 3.1.1. Evaluate laboratory practices and test selection regularly to ensure they meet community needs
- 3.2. Identify vulnerable or marginalized populations within those served and respond appropriately

4. Promote the health of individual patients, communities, and populations

- 4.1. Describe an approach to implementing a change in a determinant of health of the populations they serve
- 4.2. Describe the importance of screening in the early detection and treatment of certain cancers, including but not limited to gynecological cancer
- 4.3. Describe the role of molecular methods used to screen for familial cancer syndromes
- 4.4. Describe how public policy impacts on the health of the populations served
- 4.5. Describe the role and demonstrate an understanding of the ethics of genetic screening in family planning and for hereditary cancers
- 4.6. Identify points of influence in the health care system and its structure
 - 4.6.1. Reinforce to the public and to the profession the essential contribution of laboratory medicine to health
- 4.7. Describe the ethical and professional issues inherent in health advocacy, including altruism, social justice, autonomy, integrity and idealism
- 4.8. Appreciate the possibility of conflict inherent in their role as a health advocate for a patient or community with that of manager or gatekeeper
- 4.9. Describe the role of the medical profession in advocating collectively for health and patient safety
- 4.10. Demonstrate the ability to recognize instances of child abuse and elder abuse in pathology practice

Scholar

Definition:

As *Scholars*, Anatomical Pathologists demonstrate a lifelong commitment to reflective learning, as well as the creation, dissemination, application, and translation of medical knowledge.

Key and Enabling Competencies: Anatomical Pathologists are able to...

1. Maintain and enhance professional activities through ongoing learning

- 1.1. Describe the principles of maintenance of competence
- 1.2. Describe the principles and strategies for implementing a personal knowledge management system
- 1.3. Recognize and reflect on learning issues in practice
- 1.4. Conduct personal practice audits
- 1.5. Pose an appropriate learning question
- 1.6. Access and interpret the relevant evidence
- 1.7. Integrate new learning into practice
- 1.8. Evaluate the impact of any change in practice
- 1.9. Document the learning process

2. Critically evaluate medical information and its sources, and apply this appropriately to practice decisions

- 2.1. Describe the principles of critical appraisal
- 2.2. Critically appraise retrieved evidence in order to address a clinical or laboratory question
- 2.3. Integrate critical appraisal conclusions into practice

3. Facilitate the learning of other health professionals, residents, students, patients, families, the public, and others, as appropriate

- 3.1. Describe principles of learning relevant to medical education
- 3.2. Identify collaboratively the learning needs and desired learning outcomes of others
- 3.3. Select effective teaching strategies and content to facilitate others' learning
- 3.4. Deliver an effective lecture or presentation
- 3.5. Assess and reflect on a teaching encounter
- 3.6. Provide effective and constructive feedback
- 3.7. Describe the principles of ethics with respect to teaching

4. Contribute to the development, dissemination, and translation of new knowledge and practices

- 4.1. Describe the principles of research and scholarly inquiry
- 4.2. Describe the principles of research ethics
- 4.3. Describe the principles of tissue acquisition for research
- 4.4. Pose a scholarly question, and formulate a plan to answer the question

- 4.5. Conduct a systematic search for evidence
- 4.6. Select and apply appropriate methods to address the question
- 4.7. Disseminate the findings of a study
- 4.8. Complete a scholarly project

Professional

Definition:

As *Professionals*, Anatomical Pathologists are committed to the health and well-being of individuals and society through ethical practice, profession-led regulation, and high personal standards of behaviour.

Key and Enabling Competencies: Anatomical Pathologists are able to...

1. Demonstrate a commitment to their patients, profession, and society through ethical practice

- 1.1. Exhibit appropriate professional behaviors in practice, including honesty, integrity, commitment, compassion, respect and altruism
- 1.2. Demonstrate a commitment to delivering the highest quality care and maintenance of competence
- 1.3. Recognize and appropriately respond to ethical issues encountered in practice
- 1.4. Recognize and manage conflicts of interest
- 1.5. Recognize the principles and limits of patient confidentiality as defined by professional practice standards and the law
- 1.6. Maintain appropriate boundaries with colleagues, other health professionals, laboratory staff, students and patients

2. Demonstrate a commitment to their profession, clinical colleagues, patients, and society through participation in profession-led regulation

- 2.1. Demonstrate knowledge and understanding of the professional, legal, and ethical codes of practice, including but not limited to:
 - 2.1.1. Local regulations regarding the reporting of deaths to the medical examiner or coroner
 - 2.1.2. Conducting forensic investigations
 - 2.1.3. Principles and practice of presenting pathologic evidence in a court of law
- 2.2. Fulfil the regulatory and legal obligations required of current practice, including but not limited to timely reporting of cases and of critical values
 - 2.2.1. Demonstrate knowledge of the policies on reportable diseases, including but not limited to infectious diseases

OBJECTIVES OF TRAINING IN THE SPECIALTY OF ANATOMICAL PATHOLOGY (2013)

- 2.3. Demonstrate accountability to professional regulatory bodies
- 2.4. Demonstrate awareness of professional and institutional codes of conduct and respond appropriately to breaches in these codes
- 2.5. Participate in peer review

3. Demonstrate a commitment to physician health and sustainable practice

- 3.1. Balance personal and professional priorities to ensure personal health and a sustainable practice
- 3.2. Strive to heighten personal and professional awareness and insight
- 3.3. Recognize other professionals in need and respond appropriately

This document is to be reviewed by the Specialty Committee in Anatomical Pathology by December 31, 2014.

Revised – Specialty Committee – January 2013 and May 2013

Approval – Specialty Standards Review Committee – February 2013