Anatomical Pathology Training Experiences

2019
VERSION 1.0

These training requirements apply to those who begin training on or after July 1, 2019.

The following training experiences are required, recommended, or optional, as indicated.

TRANSITION TO DISCIPLINE (TTD)

The focus of this initial stage is orientation to the program and institution policies, protocols, resources, and facilities, including laboratory safety, and issues of patient privacy and confidentiality. During this stage residents will participate in basic specimen handling and microscopy, and will demonstrate an understanding of clinicopathologic correlation.

Required training experiences (TTD stage):

1. Clinical training experiences
   - 1.1. Observation of and select participation in
     - 1.1.1. Intraoperative consultation
     - 1.1.2. Gross specimen dissection
     - 1.1.3. Specimen preparation
     - 1.1.4. Tissue processing
     - 1.1.5. Slide preparation
     - 1.1.6. Autopsy

2. Other training experiences
   - 2.1. Orientation to the anatomical pathology service
     - 2.1.1. Orientation to laboratory facilities: autopsy suite, gross dissection room, intraoperative consultation suite, specimen accessioning room, and histology laboratory
     - 2.1.2. Familiarization with and access to clinical laboratory work stations, including
       - 2.1.2.1. Microscope, camera, access to laboratory information system (LIS), dictation system, and library/computer with internet access
       - 2.1.2.2. Multiheaded microscope and conference room
     - 2.1.3. Orientation and instruction in
       - 2.1.3.1. Basic skills in microscopy
       - 2.1.3.2. LIS, dictation system, and electronic patient record (EPR)

2.1.3.3. Principles of normal histology
2.1.3.4. Principles of tissue handling

2.1.4. Orientation to pathology reporting

2.2. Orientation to the program, hospital(s), and university
2.2.1. Orientation to Competence by Design
2.2.2. Orientation to postgraduate medical education (PGME) policies and resources
2.2.3. Orientation to hospital policies and the institutional code of conduct

2.3. Development of a personal learning plan
2.4. Participation in the Anatomical Pathology residency formal curriculum, e.g., academic half days

Recommended training experiences (TTD stage):

3. Clinical training experiences
3.1. Departmental and/or multidisciplinary rounds

4. Other training experiences
4.1. Orientation to specialized laboratories: immunohistochemistry; molecular pathology; immunofluorescence; electron microscopy (EM)
4.2. Orientation to the ergonomics of work stations

FOUNDATIONS OF DISCIPLINE (F)

The focus of this stage is the development of the knowledge and skills required to integrate clinical and laboratory information in the evaluation of disease processes. This includes assessing patients and performing gross dissection and microscopic reviews of simple surgical specimens, as well as triaging specimens for ancillary studies. During this stage residents will demonstrate their understanding of hospital autopsy protocol and perform basic technical tasks in autopsies.

Required training experiences (Foundations stage):

1. Clinical training experiences
1.1. Relevant patient care areas, including
1.1.1. Oncology inpatient and outpatient experience
1.1.2. Surgery inpatient and operative experience, including the experience of intraoperative consultation to pathology
1.1.3. Other clinical disciplines[1] with a high volume of clinicopathologic correlation

1.2. Anatomical pathology services
1.2.1. Intraoperative consultation suite
1.2.2. Accessioning station

[1] *Examples include dermatology, gastroenterology, and gynecology.*

1.2.3. Gross dissection room
1.2.4. Histology/cytopathology laboratory
1.2.5. Molecular/cytogenetics laboratory
1.2.6. Digital imaging/photography station
1.2.7. Autopsy suite

1.3. Multidisciplinary patient conferences involving pathology

2. Other training experiences
   2.1. Formal instruction in
      2.1.1. Anatomy as relevant to surgical and autopsy pathology dissection
      2.1.2. Normal histology and variants
      2.1.3. Basic sciences related to pathology
      2.1.4. Completion of pathology requisitions
      2.1.5. Legal issues, privacy, ethics, and the principles of informed consent for autopsy and/or research
      2.1.6. Quality assurance (QA) and laboratory management
      2.1.7. Basic skills in digital imaging
      2.1.8. Basic skills in photography

   2.2. Maintenance of a personal learning plan
   2.3. Maintenance of the Anatomical Pathology program logbook and/or ePortfolio, as relevant

Recommended training experiences (Foundations stage):

3. Clinical training experiences
   3.1. Medical imaging
   3.2. Other clinical experiences in preparation for the Medical Council of Canada Qualifying Examination Part II (MCCQE Part II)

4. Other training experiences
   4.1. Formal instruction in
      4.1.1. Teaching skills
      4.1.2. Research methodology

   4.2. Attendance at scientific lectures and/or meetings
   4.3. Simulation training in the triage of tissues for routine and ancillary studies

CORE OF DISCIPLINE (C)

In this stage, residents build on the skills and knowledge of the previous stages to conduct intraoperative assessments, perform gross dissection of all specimens, perform medical, forensic, and pediatric autopsies, manage cytopathology specimens, select and interpret molecular and non-molecular test results, and generate complete and accurate reports. During this stage, residents recognize clinicopathologic correlations while participating in direct patient care. In addition, residents will demonstrate responsibility for participation in quality management, teaching, and the maintenance of a personal learning, wellness, and career plan.

Required training experiences (Core stage):

1. Clinical training experiences
    - 1.1. Anatomical pathology service across the full breadth of cases: age; complexity; diagnosis
        - 1.1.1. Intraoperative consultation suite
        - 1.1.2. Accessioning station
        - 1.1.3. Gross dissection room
        - 1.1.4. Histology/cytopathology laboratory
        - 1.1.5. Molecular/cytogenetics laboratory
        - 1.1.6. Digital imaging/photography station
        - 1.1.7. Hospital autopsy suite
        - 1.1.8. Forensic autopsy suite
    - 1.2. Supervision and/or teaching, and assessment of junior residents, medical students, or other learners
    - 1.3. On-call/after-hours coverage of anatomical pathology service
    - 1.4. Multidisciplinary patient conferences
        - 1.4.1. Longitudinal interaction and participation in clinicopathological conferences (CPCs)
        - 1.4.2. Case preparation, presentation, and participation, in the role of a staff pathologist, in multidisciplinary clinical team rounds such as tumour boards and/or clinicopathologic rounds
        - 1.4.3. Preparation and presentation of cases at rounds for multidisciplinary clinics, for example outpatient clinics, the operating room, genetics counselling sessions, cancer clinics, endoscopy clinics, and/or colposcopy clinics
2. Other training experiences
    - 2.1. Formal instruction in
        - 2.1.1. Core areas of Anatomical Pathology
            - 2.1.1.1. Surgical pathology
                - 2.1.1.1.1. Intraoperative pathology
            - 2.1.1.2. Gross pathology
            - 2.1.1.3. Cytopathology

2.1.1.4. Pediatric and perinatal[2] pathology
2.1.1.5. Neuropathology
2.1.1.6. Autopsy pathology
2.1.1.7. Forensic pathology
2.1.1.8. Ancillary studies
2.1.1.8.1. Special histochemical stains
2.1.1.8.2. Immunohistochemistry and in situ hybridization
2.1.1.8.3. Immunofluorescence
2.1.1.8.4. Molecular pathology, including cytogenetics
2.1.1.8.5. Flow cytometry
2.1.1.8.6. Electron microscopy

2.1.1.9. Digital photography and slide scanning
2.1.1.10. Principles of laboratory management and resource utilization

2.1.2. Career planning
2.1.3. Physician wellness

2.2. Journal club
2.3. Completion and presentation of a scholarly project
2.4. Maintenance of a personal learning plan
2.5. Maintenance of the Anatomical Pathology program logbook and/or ePortfolio, as relevant

Recommended training experiences (Core stage):

3. Clinical training experiences
   3.1. Anatomical Pathology in a community hospital-based setting
   3.2. Direct patient care in relevant clinical areas, such as multidisciplinary cancer clinic(s)

4. Other training experiences
   4.1. Formal instruction in pathology informatics
   4.2. Participation in university and/or hospital committees/organizational structure

Optional training experiences (Core stage):

5. Clinical training experiences
   5.1. Simulation training in fine needle aspiration biopsy (FNA)

6. Other training experiences
   6.1. Formal postgraduate training leading to an advanced degree, such as master of

[2] *This includes fetuses, stillbirths, placentae, infants, and children.*

science (MSc), master of education (MEd), or doctor of philosophy (PhD)

6.2. Collaboration in basic science research

TRANSITION TO PRACTICE (TTP)

The focus of this stage is the consolidation of skills required to participate in laboratory management as a junior member of staff; manage the daily workload of an Anatomical Pathologist, including surgical pathology, intraoperative consultations, cytopathology, and autopsy; and represent Anatomical Pathology on multidisciplinary teams. In addition, residents select, interpret, and integrate the implications of molecular pathology into patient management. During this final stage residents will also be responsible for supervising laboratory staff, including junior learners.

Required training experiences (TTP stage):

1. Clinical training experiences
   - 1.1. Anatomical pathology services
     - 1.1.1. Intraoperative consultation suite
     - 1.1.2. Accessioning station
     - 1.1.3. Gross dissection room
     - 1.1.4. Histology/cytopathology laboratory
     - 1.1.5. Molecular/cytogenetics laboratory
     - 1.1.6. Digital imaging/photography station
     - 1.1.7. Autopsy suite
   - 1.2. Supervision and/or teaching, and assessment of junior residents, medical students, or other learners
   - 1.3. Direction of laboratory staff, as required
   - 1.4. On-call/after-hours coverage of anatomical pathology service
   - 1.5. Case preparation, presentation, and participation, in the role of a staff pathologist, in multidisciplinary clinical team rounds such as tumour boards and/or clinicopathologic rounds, including conveying the results and clinical significance of molecular pathology tests
2. Other training experiences
   - 2.1. Participation in laboratory management
   - 2.2. Participation in an institutional QA program
   - 2.3. Career planning
     - 2.3.1. Instruction in the requirements of continuing professional development and maintenance of competence
     - 2.3.2. Instruction in anatomical pathology practice models, including academic, community, and private laboratories

Recommended training experiences (TTP stage):

3. Other training experiences
   3.1. Further training in research, education, and/or leadership

Optional training experiences (TTP stage):

4. Clinical training experiences
   4.1. Direct patient care in relevant clinical areas

5. Other training experiences
   5.1. Teach audiences other than junior learners
   5.2. Training in leadership and administration
   5.3. Formal instruction in
      5.3.1. Personal financial planning
      5.3.2. Remuneration/contracts

   5.4. Formal postgraduate training leading to an advanced degree, such as master of science (MSc), master of education (MEd), or doctor of philosophy (PhD)

CERTIFICATION REQUIREMENTS

Royal College certification in Anatomical Pathology requires all of the following:

1. Successful completion of the Royal College examination in Anatomical Pathology; and
2. Successful completion of the Anatomical Pathology Portfolio.

NOTES:

The Anatomical Pathology Portfolio refers to the list of entrustable professional activities across all four stages of the residency Competence Continuum, and associated national standards for assessment and achievement.

MODEL DURATION OF TRAINING

Progress in training occurs through demonstration of competence and advancement through the stages of the Competence Continuum. Anatomical Pathology is planned as a 5-year residency program. There is no mandated period of training in each stage. Individual duration of training may be influenced by many factors, which may include the student's singular progression through the stages, the availability of teaching and learning resources, and/or differences in program implementation. Duration of training in each stage is therefore at the discretion of the faculty of medicine, the competence committee, the residency training committee, and the program director.

Guidance for programs

The Royal College Specialty Committee in Anatomical Pathology suggested course of training, for the purposes of planning learning experiences and schedules, is as follows:

1-3 blocks in Transition to Discipline

6-12 blocks in Foundations of Discipline

36-42 blocks in Core of Discipline

6-12 blocks in Transition to Practice

**One block is equal to 4 weeks*

Guidance for postgraduate medical education offices

The stages of the Competence Continuum in Anatomical Pathology are generally no longer than

3 blocks for Transition to Discipline

12 blocks for Foundations of Discipline

42 blocks for Core of Discipline

12 blocks for Transition to Practice

**One block is equal to 4 weeks*

This document is to be reviewed by the Specialty Committee in Anatomical Pathology by December 31, 2020.

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