

Surgical Pathology Fellowship Curriculum

OVERVIEW

This is a one-year fellowship designed to offer advanced training in general surgical pathology. The Surgical Pathology laboratory at University of Minnesota Medical Center, Fairview receives over 10,000 specimens per year representing all organ systems.

All surgical Pathology faculty members have different areas of interest, assuring trainee interaction with faculty with expertise in specific organ system pathology. The Surgical Pathology fellowship consists of two rotations, six months each in duration. These two rotations include the “Hot Seat” and the Consult/Frozen section rotations.

The purpose of this program is to afford the fellows the opportunity to function in a semi-independent fashion under supervision and guidance of experienced faculty. It is the expectation that fellows will pursue leadership positions either in academia or in community practice. Particular emphasis is placed in the academic aspects of the practice of Surgical Pathology. This is achieved through different approaches; including an emphasis not only on the morphologic aspects of disease, but in understanding underlying pathophysiologic mechanisms and the molecular biology aspects of disease. Furthermore, emphasis is also placed through example on lifelong teaching-learning skills. This goal is approached through discussions of every case, during interdisciplinary conferences and by means of intradepartmental lectures. An inquisitive approach to the practice of surgical pathology is fundamental to this fellowship; participation in research projects with faculty members will foster this attitude.

The thrust of this fellowship can be summarized as the importance of distinguishing between Surgical Pathology as a technique (critical for patient care) and Surgical Pathology as a field of scientific pursuit, essential for the understanding of disease and to further scientific knowledge. Mastering the technical components of the specialty refers to the acquisition of a complex body of morphologic criteria to establish a correct diagnosis. This is critical for patient care and essential for the furtherance of scientific knowledge in pathology. The latter is achieved through an inquisitive approach to the information gathered in order to generate new knowledge. The latter is emphasized throughout this fellowship. A critical component of this fellowship is therefore, to develop and foster scientific vision and scientific attitude to the practice of the specialty.

A different set of skills to be developed during this year relates to the acquisition of supervisory, teaching and mentoring skills. Under supervision and guidance of faculty members, fellows are expected to develop and enhance these skills through their interaction with junior residents, technicians and clerical personnel.

One component of this fellowship, important for the program and for the institution is translational/clinicopathologic research. Fellows are expected to participate in one or more of numerous projects under way, to present their findings at national meetings and to write the appropriate manuscripts. Time, resources, guidance and supervision and special funds are available for travel to meetings and for publications.

The educational goals and objectives for the fellowship are listed in the following sections. Each is referenced to the relevant ACGME competency (is)

ACGME CORE COMPETENCIES:

Patient Care: Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Medical Knowledge: Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care.

Practice-based Learning and Improvement: Fellows must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.

Interpersonal and Communication Skills: Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Fellows are expected to:

Professionalism: Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

Systems-based Practice: Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

Overall Educational Goals for the Fellowship (CPR IV.A.1):

These are the overall educational goals for the fellowship (applies to both the Hot Seat and Consult/Frozen section experiences). Each goal is referenced to the ACGME core competency or competencies it addresses. Patient Care=PC, Medical Knowledge=MK, Professionalism=Prof, Communication Skills=CS, Practice Based learning and Improvement=PBLI, and Systems-based practice=SBP.

Upon completion of the fellowship the fellows are expected to:

1. Demonstrate a current and accurate understanding of the pathophysiological basis of disease processes (benign and malignant) (PC, MK, PBLI).

2. Recognize the diagnostic gross and microscopic diagnostic properties in the initial and late stages of disease (PC, MK).
3. Establish appropriate differential diagnoses and devise reliable strategies to evaluate alternative diagnoses (PC, MK, PBLI).
4. Recognize the limitations of tissue diagnosis and maximize the diagnostic information (PC, MK).
5. Recognize your role as a medical consultant and be certain you have the appropriate clinical data before rendering a diagnosis (PC, Prof, PBLI).
6. Understand the diagnostic information necessary for proper patient care and concisely communicate that data to the responsible clinician (MK, PC, CS).
7. Identify a problem, from either diagnostic or conceptual points of view, devise a strategy to address it and prove that the solution is reproducible and reliable (PBLI, SBP, MK, PC).
8. While there Board-certified hematopathologists and cytopathologists as well as fellows in both subspecialties, the surgical pathology fellows are expected to review appropriate material including cytopathology and other ancillary studies (flow-cytometry, molecular diagnostics and cytogenetics) for the appropriate work-up of their cases (PC, MK, SBP, PBLI).

Hot Seat Rotation Objectives: Upon completion of this rotation the fellow is expected to:

1. Provide preliminary diagnoses or differential diagnoses on in-house cases and an evaluation strategy within turn-around times established by the department and the College of American Pathologists. (PC, MK, SBP, PBLI).
2. Discuss the morphologic diagnostic criteria employed in specific cases with junior residents (MK, PBLI).
3. Effectively discuss underlying pathophysiologic mechanisms and molecular biologic implications of observations with residents and faculty from other department (MK, CS, PBLI, SBP).
4. Become thoroughly familiar with departmental quality assurance and quality improvement protocols (PC, SBP, PBLI).
5. Understand and use the departmental diagnostic templates (PC, MK, SBP)
6. Be thoroughly familiar with and effectively use diagnostic ancillary techniques available in the department, such as histochemistry and immunohistochemistry (PC, MK, SBP).
7. Obtain appropriate information from electronic medical record to establish appropriate clinicopathologic correlations (PC, MK, CS).
8. Develop and sharpen mentoring/leadership skills through interactions with residents, clinical and surgical colleagues (PC, Prof, CS, SBP, PBLI).

Educational objectives specific to Consult/Frozen section rotation: Upon completion of the “consult/frozen section” rotation the fellow is expected to:

1. Provide preliminary diagnoses or differential diagnoses on consult and referral cases along with an evaluation strategy within turn around times established by the department and the College of American Pathologists (PC, MK, SBP, PBLI).
2. Participate in the regular Quality Assurance/Quality improvement meeting of the division of Anatomic Pathology, presenting data (turnaround time and discrepancies) for consults and referral cases and for frozen section examinations. (This information is gathered by clerical personnel, but will be presented and analyzed by the consult/frozen section fellow) (SBP, PBLI, PC).
3. Demonstrate the ability to effectively function under situations of relative stress due to time constraints and surgeon pressures during frozen section performance and examination (PC, SBP, Prof, CS).
4. Demonstrate appropriate supervisory and leadership skills through interactions with residents and technicians in the gross room (PC, SBP, PBLI, Prof).
5. Understand the indications and limitations of frozen section examination (PC, MK, PBLI).
6. Be thoroughly familiar with the surgical implications of frozen section diagnoses rendered (PC, MK, PBLI).

GRADED RESPONSIBILITY FOR FELLOWS IN SURGICAL PATHOLOGY (CPR IV.A.4; IR III.B.4)

As fellows progress during the rotations, they will be afforded progressively greater independence in the work-up of cases and in the elaboration of preliminary diagnoses for in-house cases and for consultation/referral cases. Likewise, they will be afforded progressively greater independence in their interactions with pathology residents, clinical and surgical colleagues. Expectations for fellow performance in all rotations and call are outlined in the following section.

Hot Seat Rotation: Months 1-6:

During the six months “Hot Seat” rotation, the fellow alternates with staff pathologists previewing slides of in-house cases with residents. The Hot Seat fellow is authorized to order special histochemical stains, immunohistochemical stains and any other ancillary studies that the fellow deems necessary for the study of the cases. Faculty members responsible for the case are available to discuss the morphologic features and to discuss the appropriate case work-up. The fellow is responsible for elaborating preliminary surgical pathology diagnoses, which includes formatting of reports integrating all information necessary for patient care, as determined by standard (modified CAP templates) and for compliance with all institutional requirements. All cases previewed by the fellow are then reviewed by the staff pathologist who discusses with the resident and fellow relevant issues pertaining to the case.

Conferences: The Hot Seat Rotation fellow will alternate with staff pathologists to present the Wednesday surgical pathology Conference. This conference is attended by all residents in the program. The fellow will select and prepare at least five cases and will discuss them at this Conference. For this purpose, a representative slide on each case will be provided to the Information System Specialist, to be scanned and put on the residency website. This should be done at least one week ahead of the conference. The fellow will review appropriate literature and be able to discuss the differential diagnoses. The attending pathologist should serve as a guide for case selection.

Consult/Frozen Section Rotation: Months 7-12:

During the Consult/Frozen Section rotation, the fellow is involved in consultation and referral cases and in frozen sections. During this rotation, the fellow previews slides on all cases submitted to the institution in consultation to specific faculty members in their areas of expertise; during this rotation the fellow also previews all cases referred to the institution for treatment. The fellow is responsible for deciding, in consultation with the faculty, whether additional studies are necessary. The fellow is then responsible for elaborating the preliminary diagnoses and reports on the consult and referral cases. These reports must include all information necessary for patient care and to comply with CAP and institutional requirements. The cases are then reviewed with the consulting pathologist and with the pathologist assigned to "referral" cases. Immediate feed back is provided on every case. Consultation and referral cases can be "batched" during the day; during the second rotation, the Consult fellow is also a member of the Frozen Section Team. This team includes a resident, the consult fellow and a staff pathologist assigned to frozen sections. For frozen sections, the resident and the fellow review relevant information in the electronic medical record on each case in which a frozen section has been requested. Under supervision of staff pathologist they are responsible for sampling appropriate tissues for frozen section. Staff technicians freeze, cut and stain the tissue (trainees must also be proficient in this technique). The stained sections are examined by the resident and the fellow, who elaborate a preliminary diagnosis. The staff pathologist reviews the slides with them and a final frozen section diagnosis is then communicated to the surgeon and documented in the chart. The fellow on frozen sections is responsible for supervising Pathologist Assistants and residents in the provision of fresh tissue for the tissue bank (Tissue procurement facility, BioNet), in such a way that diagnostic aspects necessary for patient care are not compromised, while at the same time, representative samples are provided to tissue bank for further studies. Patient care is always assigned higher priority; staff pathologist responsible for frozen sections and overseeing the gross room is always available for consultation. The fellow on frozen sections is also responsible for quality assurance of frozen tissue submitted for tissue bank, by reviewing the frozen section slides and correlating the morphologic features with the final diagnoses. Staff pathologists are available for discussion of any aspects that the fellow may specifically want to address. The Consultation-frozen section fellow also assists the staff pathologists in teaching and

supervising junior residents in the gross room, as needed. Staff pathologists are available on-site at all times to assist in this process.

On-call duties: Each fellow will be on-call during nights and on week-ends and holidays, alternating with surgical pathology residents. Fellows will assist in the preparation of frozen sections requested during on-call time and help in coordinating processing of “Rush” specimens. Diagnoses for frozen sections and “rush” biopsies will be established in consultation with staff pathologist on-call. Only staff pathologist is authorized to provide a final diagnosis on frozen section consultations and on “rush” specimens.

Conferences:

Surgical Pathology fellows will be expected to attend all intradepartmental conferences (as highlighted in Conference schedule).

In addition, Hot Seat Fellow will be responsible for preparing and presenting surgical pathology conference as indicated above, alternating with staff pathologists.

Performance Assessment and Evaluations of Program and Faculty:

1. Faculty assessment of Fellow performance: Surgical pathology faculty will assess the fellow’s performance quarterly using a global evaluation form and the Sign out evaluation form found on the following page.
2. Feedback from multiple raters: Feedback on the fellow’s interactions with other members of the healthcare team will be gathered through assessments completed by technicians, surgical staff, residents, and students twice during the fellowship year.
3. Semi-annual Performance reviews: The program director will formally meet with the fellow at least twice during the training year to review all assessments and the fellow’s performance.
4. Fellows are not expected to keep a case log. The computer information system can generate this information. Specifically, the number of cases in which the fellow was involved in previewing in-house cases, consultation/referral cases or frozen sections. This information will be monitored quarterly by the director of the fellowship program and shared with the fellows. This information will be accumulated every year and used for comparative, statistical analyses. This information will be made available to candidates for fellowship and to ACGME inspectors.
5. Faculty Evaluation: Fellows will be asked to assess the teaching abilities of the surgical pathology faculty at the end of each rotation (Twice during fellowship year).
6. Program Evaluation: Fellows will be offered the opportunity confidentially evaluate the overall fellowship program at least once through the year. This is

an opportunity for fellows to identify strengths of the training program and opportunities for modification to improve the educational experiences.

7. Informal feed-back: Evaluations and feed-back are by nature retrospective. Therefore, recommendations for changes presented at the end of a rotation are of no benefit to the fellow during that rotation. Fellows are encouraged to provide recommendations and constructive criticism throughout the rotation. These appraisals and recommendations or complaints can be addressed to any faculty member in Surgical Pathology, the director of the fellowship program, the director of surgical pathology, or the director of the residency and fellowships program. Likewise, in addition to formal evaluation, informal evaluation on the fellows' performance will be provided on a daily basis by every faculty member involved in every case in which the fellow participates.

SURGICAL PATHOLOGY
Fellow Semi-Independent Sign-out Evaluation

Please rate as 1 (demonstrates this skill all the time); 2 (demonstrates this skill in a majority of cases); or 3 (needs to demonstrate this skill more often). Write Comments below.

1. Reviews appropriateness of gross description- completeness, adequacy of sections _____

2. Quality of written descriptions: completeness of reports, compliance with CAP and institutional guidelines _____

3. Accuracy of diagnoses _____

4. Judgment in acting independently vs. consulting attending _____

5. Communication with clinicians

Communication with residents _____

Communication with technical clerical personnel

Communication with staff pathologists

6. Turnaround time _____

7. Resource utilization - staff time and special stains _____

Comments:

Name of Fellow _____ Date _____

Name of evaluating Pathology faculty _____