



UNIVERSITY OF ALBERTA
FACULTY OF MEDICINE & DENTISTRY
Department of Laboratory Medicine & Pathology



**ALBERTA PRECISION
LABORATORIES**

Leaders in Laboratory Medicine

CLINICAL FELLOWSHIP PROGRAM IN BREAST PATHOLOGY

Department of Laboratory Medicine and Pathology
Faculty of Medicine and Dentistry, University of Alberta
and
Alberta Precision Laboratories

Guidelines and Objectives
April 2020

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CLINICAL FELLOWSHIP IN BREAST PATHOLOGY

INTRODUCTION and BACKGROUND

The fellowship is designed to provide comprehensive training in breast pathology, including needle core biopsy, open biopsy, segmental resection and mastectomy interpretation. Various methods of intraoperative interpretation of tumors, margins, and lymph node status will be taught. The fellow will have an comprehensive experience in diagnosing a variety of pathologic conditions including (but not limited to) benign lesions, inflammatory conditions, pre-malignant lesions, in situ carcinoma, invasive carcinoma, and spindle cell lesions of the breast. Gross and microscopic interpretation will be augmented with knowledge in breast biomarker use and interpretation, as well as advances in cancer genetics and molecular markers for breast cancer treatment. Emphasis will be on an integrated team-based approach between pathology, surgery, oncology and radiology. Edmonton services a wide area of patients in the Edmonton and Northern Zones of Alberta Health Services, North West Territories, Nunavut and parts of Saskatchewan. The University of Alberta Hospital, Cross Cancer Institute and Misericordia Hospitals provide breast pathology expertise throughout Western Canada. Multiple hospital and non hospital sites will be available as sites of teaching for the fellow, including The Misericordia Community Hospital, The Grey Nuns Hospital, The Royal Alexandria Hospital, The University of Alberta Hospital, The Cross Cancer Institute and DynaLifeDx Laboratory.

PROGRAM OBJECTIVES

Diagnostic objectives

1. Gain experience and expertise in the gross, microscopic and molecular diagnosis of
 - a. neoplastic breast lesions
 - b. precursor lesions of breast neoplasia
 - c. non-neoplastic breast lesions
 - d. mimics of neoplastic breast lesions
2. Gain experience and expertise in intraoperative consultation techniques used for interpreting diagnosis, margin interpretation, and lymph node status in breast surgery.
3. Write and interpret the following for breast specimens
 - a. gross descriptions
 - b. diagnostic surgical pathology reports
 - c. intraoperative consultations
 - d. consultation reports requested by other physicians
 - e. cancer board review reports
 - f. reports interpreting biomarker status for neoplastic breast lesions
4. Develop expertise in clinical-pathologic correlation with emphasis on
 - a. radiologic-pathology correlation
 - b. gross/surgical – histology correlation
 - c. biomarker status – histology correlation
 - d. treatment response – pathology correlation

5. Integrate special stains, immunohistochemistry, in-situ hybridization, and molecular test results into the interpretation of breast pathology, and correlate these results with impact on patient diagnosis, treatment and prognosis.

Educational objectives

1. Teach medical students, pathology residents, surgery residents, oncology residents, and family practice residents basic and advanced concepts in breast pathology in small groups, didactic, and informal settings.
2. Attend, prepare cases for and present at a variety of clinical and pathology rounds including:
 - a. Multidisciplinary breast rounds
 - b. Cancer board rounds
 - c. other rounds as listed below
3. Regular reference and reading of to peer reviewed breast pathology journals and breast pathology text books will be required.

Research objectives

The fellow will be introduced to ongoing translational and/or clinical research projects and will be encouraged to participate and complete at least one project.

PROGRAM CURRICULUM

The Breast Pathology Fellowship program curriculum will include:

- Anatomy
- Gross pathology
- Normal histology
- Pathology
- Special stains
- Immunohistochemistry
- in-situ hybridization
- Other molecular tests
- Intraoperative consultation techniques
- Clinical pathologic correlation

Mandatory and Elective Rotations:

Mandatory Rotations (there is potential for concurrent site rotations depending on interest and inter-site coordination)

1. 3 months Misericordia hospital, for gross and microscopic diagnosis of a variety of surgical breast specimens and Cancer Board reviews, frozen sections.
2. 2 months University of Alberta Hospital, for gross and microscopic diagnosis of a variety of surgical breast specimens, introduction to basic research, frozen sections.
3. 2 months CCI, for gross and microscopic diagnosis of a variety of surgical breast specimens, cancer reviews, biomarker interpretation, frozen sections.
4. 2 months DynalifeDx, needle core biopsy interpretation.
5. 3 month elective, as approved by Fellowship Committee

Seminars, Rounds and Teaching Sessions

1. The fellow will be required to submit an updated bibliography of breast pathology journals and text books in the first month of training, and will continue to update this bibliography every three months.
2. The fellow will teach at least one didactic breast pathology lesson to each of
 - a. medical students
 - b. pathology residents
 - c. Edmonton zone pathology staff
3. Attendance, preparation and presentation at the following rounds will be required for interesting cases and the fellow's assigned cases;
 - a. Zonal multidisciplinary breast rounds via telepathology (1x per 2 weeks)
 - b. Cross Cancer Institute multidisciplinary discussion for new breast cancer patients (2x per week)
 - c. Cross Cancer Institute breast cancer recurrence rounds (1x per week)
 - d. Comprehensive Breast Program rounds (as required)
 - e. City Wide Pathology Rounds (four times per year)

Clinical/On Call Experience

1. Attendance at all breast pathology frozen sections will be expected when on site.
2. No formal on call expected, however, some after-hours on-site work may be expected for surgeries performed outside of normal operating room hours.

Quality Management

1. The fellow will adhere to all Alberta health services quality assurance and quality control processes, procedures and policies.
2. Participation and understanding of quality assurance and quality control processes is mandatory.
3. The fellow will integrate surgical pathology quality assurance practices into his/her daily practices.

Research and Development

1. Research. write and submit at least one peer reviewed paper on a topic mutually selected by the student and primary preceptor.
OR
Write and submit at least two case reports mutually selected by the student and primary preceptor.
2. Participation and presentation at *Discovery, Research and Innovation (DRIVE)* meeting in Lab Medicine, University of Alberta

SPECIALTY TRAINING REQUIREMENTS

Eligible candidates must have a completed a residency training in Canada with a focus on anatomical or general pathology through a recognized program. Fellowship in the Royal College of Physicians of Surgeons (RCPSC) is recommended but not required. If the candidate does not hold an FRCPC from the RCPSC, they will be strongly encouraged to

prepare for either the general or anatomical pathology Royal College exam during this fellowship, and the curriculum and rotations will be modified accordingly with approval of the fellowship committee. Preferred fellowship candidates will demonstrate the following attributes:

- 1) An aptitude for specialty practice in anatomical pathology including excellent communications skills, leadership skills, interest in advocating for patients and the ability for complex thinking with regards to clinical-pathologic correlation.
- 2) A special interest in breast pathology as proven by previous experience, such as educational rotations in breast pathology and/or research projects that pertain to breast pathology.
- 3) Proven ability to act as an independent consultant including traits such as willingness to take responsibility, paying attention to detail, trust, motivation, good judgment, initiative, insight and ability to relate well with other pathologists, technologists, administrative staff and clinical colleagues.

Candidates will be able to commit at least 8 hours per day, 5 days a week in a clinical setting. Other time commitments may include some evenings and weekends as required for research, preparation for rounds, on call duties, professional meetings and/or independent study.

DURATION AND LOCATION

Twelve months of approved training in adult breast pathology and/or other approved electives. The fellow will rotate through the Misericordia Hospital, the Cross Cancer Institute, the University of Alberta Hospital and DynaLife Dx laboratories. Suggested guidelines for the length of each rotation are given above. There is potential for concurrent site rotations or increased duration of any particular site rotation depending on mutual interest and inter-site coordination.

EVALUATION

There will be an emphasis on informal formative feedback. Formal written evaluations will be provided to and discussed with the fellow at the midpoint and conclusion of each mandatory and elective rotation. It is the responsibility of the fellow to ensure that preceptors are aware of the mandatory written evaluations required at the midpoints and ends of each rotation.

The successful completion of the fellowship will be evaluated by the breast pathology fellowship committee and based upon the last three months of written evaluations, completion of all fellowship requirements and demonstration to the committee that the fellow is able to practice in an independent, responsible, ethical and professional manner.

RESOURCES AND PERSONNEL

Space and Workload

Each rotation site will provide the fellow with a microscope, computer and private or shared office facilities.

Funding

As per Edmonton Zone Department fellowship allocation form University of Alberta and Alberta health Services.

Salary scale: at the PGY 6 level.

Faculty responsible for the Breast Pathology Fellow

Members of Breast Pathology Fellowship Committee (contact addresses and locations listed above):

Dr. Sveta Silverman
Dr. Gilbert Bigras
Dr. Judith Hugh
Dr. Erene Farag

ex officio members:

Dr. Michael Mengel (Academic Department Head, Laboratory Medicine and Pathology)

Dr. Todd Chaba (Residency training directory for Anatomical Pathology)

Dr. Carolyn O'Hara (Clinical Department Head, Laboratory Medicine and Pathology)

ACCREDITATION AND CERTIFICATION

Upon successful completion the fellow will be issued a certificate from the office of Post Graduate Medical Education, Faculty of Medicine, University of Alberta, affirming that 12 months of subspecialty training have been successfully completed.

RECOMMENDED READING and EDUCATION RESOURCES

- Schnitt SJ and Collins LC. Biopsy Interpretation of the Breast (2nd Edition, Biopsy Interpretation Series)**
- Rosen PP. Pathology of the Breast (2nd Edition)**
- Tavassoli F. Pathology of the Breast (2nd Edition)**
- WHO**
- College of American Pathologists**
- Canadian Association of Pathologists**