

DEPARTMENT OF PATHOLOGY
University at Buffalo

Pathology Residency Program Description and Overview

Program: Four Year Combined Anatomic and Clinical Pathology

The 4-year combined Anatomic/Clinical Pathology training program is the main program of this department. The program is designed to provide residents with current concepts and techniques, as well as the traditional principles of pathology. Emphasis is placed on clinicopathologic correlations and the role of the pathologist as a consultant to the clinician and to the patient. The selection of rotations depends upon the needs of the individual resident as well the requirements of the ACGME and American Board of Pathology. For individuals in a combined anatomic and clinical pathology program, the first four years of Pathology training are typically as follows:

Year I: (12 months)

- Basic Anatomic Pathology including
 - Surgical Pathology 8 months
 - Autopsy Pathology Integrated
- Introduction to Clinical Pathology
 - Introduction to Clinical Pathology 1 month
 - Chemistry I 1 month
 - Hematology I 1 month
 - Microbiology I 1 month
 - Management Integrated

Year II: (12 months)

- Anatomic Pathology:
 - Surgical Pathology 5 months
 - Autopsy Pathology Integrated
 - Special EM/Renal 1 month
 - Cytology I 1 month
- Anatomic or Clinical Pathology
 - Cytogenetics 1 month
- Clinical pathology
 - Blood bank/Transfusion Medicine 2 months
 - Hematology II 2 months
 - Management Integrated

Years III and IV:**(24 months)**

- Anatomic pathology
 - Autopsy Pathology Integrated
 - Surgical Pathology 6 months
 - Cytology II 2 months
 - Pediatric Pathology 1 month
 - Forensic Autopsy 1 month
- Anatomic or clinical Pathology
 - Immunopathology/Tissue Typing 1 month
 - Molecular diagnostics 1 month
- Clinical Pathology
 - Chemistry II/Toxicology 3 months (2 months as of 7/07)
 - Hematology II 3 months (2 months as of 7/07)
 - Microbiology 3 months (4 months as of 7/07)
 - Blood Bank/Transfusion Medicine 0 months (2 months as of 7/07)
 - Management Integrated
- Electives 3 months (2 months as of 7/07)

Overview of Teaching Facilities:

The training program is an integrated one, primarily utilizing the resources of five University-affiliated teaching hospitals and one freestanding high volume laboratory. Two of the hospitals (Buffalo General Hospital and Women's and Children's Hospital of Buffalo) and the freestanding laboratory (Flint Road, Williamsville) are part of Kaleida Health, the largest health care provider in Western New York. Two other Kaleida Health Hospitals (Millard Fillmore Suburban and Millard Fillmore Gates Circle) are used for an enhance surgical pathology experience. The value of this integrated approach is in providing an extensive, varied and balanced experience that meets the individual and collective needs of its trainees. The strengths of the various laboratories are utilized to provide for the needs of the trainee.

Among the University-affiliated hospitals, the Buffalo General Hospital and the Roswell Park Cancer Institute currently form the "core" of the anatomic pathology program. These institutions, located across the street from each other, offer a very broad and extensive spectrum of patient material that meets most of the program's educational needs in anatomic pathology. A large volume of surgical pathology and cytology material is available for resident training at the Buffalo General Hospital, as well as subspecialty services such as renal pathology, bone marrow pathology, flow cytometry, neuropathology and dermatopathology. A laboratory service devoted to the study of bone pathology and a laboratory for the study of neuropathology and neuromuscular disease, which is recognized as an established referral center, are on the premises of the Buffalo General Hospital. The Roswell Park Cancer Institute, which is a NCI designated Comprehensive Cancer Care Center, offers a unique and extensive experience in oncologic pathology. This hospital also has a particularly active consultation service and offers experience in specialties such as cytogenetics and supplemental experiences in flow cytometry and molecular pathology. The office of the Erie County Medical Examiner, at the Erie County Medical Center is used to provide forensic pathology experience during the period of anatomic

pathology training. At the Women's and Children's Hospital of Buffalo, residents are exposed to pediatric pathology and to a staff with special expertise in this area.

In clinical pathology, the experience is concentrated in Kaleida Health's Laboratories. These laboratories encompass the consolidated laboratory operation of Kaleida Health, including those located at Buffalo General Hospital, Millard Fillmore Gates, Millard Fillmore Suburban, Women & Children's Hospital of Buffalo, DeGraff Memorial Hospital, and the Regional Laboratory at Flint Road in Williamsville, NY. These laboratories perform over five million billable (12 million-total) tests per year, offering routine, stat, esoteric/specialty, and point of care testing. This is a Reference Laboratory that services the Western NY community as well as providing National Specialty Referral Services. The laboratory menu includes over 1000 different tests, from routine profiles to the most esoteric procedures, using technologically advanced instrumentation with computerized test reporting. The laboratory has a staff of over 400 people. The experience in Kaleida Health's laboratories is supplemented by experiences at the Roswell Park's specialized clinical pathology services (Cytogenetics, Flow Cytometry, Molecular Pathology, HLA, Transfusion Services), the Department of Veterans Affairs Medical Center (particularly in Hematology and Hematopathology) and the Erie County Medical Center (Microbiology). Experience in informatics and laboratory management is provided both through didactic lectures and hand-on experience at all sites.

The institutions below comprise the training sites in the program. The rotations offered at that site are listed with each specialty area (in capital letters).

Kaleida Health Care System

Buffalo General Hospital (Kaleida)

---- Anatomic Pathology ----

Program Emphasis:

- Autopsy pathology
- Cytopathology
- Surgical pathology
- Subspecialty pathology
 - Hematopathology
 - Neuropathology
 - Renal pathology
 - Informatics (Integrated)
 - Ophthalmologic Pathology

---- Clinical Pathology ----

Program Emphasis:

- Introduction to clinical pathology
- Introduction to chemical pathology
- Hematology/hematopathology and flow cytometry
- Blood bank/transfusion medicine
- Laboratory management (Integrated)
- Cytogenetics
- Molecular/Biochemical Genetics

**Center for Laboratory Medicine
Flint Road, Williamsville, NY (Kaleida)**

Program Emphasis:

- Microbiology
- Chemistry
- Laboratory Management (Integrated)
- Immunology

Women & Children's Hospital of Buffalo (Kaleida)

Program Emphasis:

- Pediatric pathology
- Special hematology/special coagulation laboratory

Roswell Park Cancer Institute

Program Emphasis:

- Surgical pathology
- Autopsy pathology
- Oncologic Pathology (Separate fifth year Selective in Oncologic Pathology available)
- Cytogenetics
- Cytology
- Flow cytometry and molecular diagnostics
- Hematopathology
- Dermatopathology

**Veterans Administration Western New York
Health Care System at Buffalo**

Program Emphasis:

- Clinical Pathology
- Anatomic pathology (surgical pathology/autopsy pathology)
- Hematology/Hematopathology

Erie County Medical Center

Program Emphasis:

- Forensic pathology
- Microbiology
 - Virology
 - Parasitology
 - Advanced microbiology

Research Opportunities:

The Department of Pathology and Anatomical Sciences at the State University of NY at Buffalo School of Medicine serves as a focus for considerable research activity with a number of laboratories. The major areas of research include experimental hypertension, oncologic pathology, endocrine pathology, immunopathology related to transplantation and neurologic disease, and molecular biology. The Department of Pathology and Anatomical Sciences at the School of Medicine, in conjunction with the Graduate School of the State University of New York operates a fully accredited graduate program in experimental pathology. Moreover, each of the affiliated hospitals engages in various clinically applied research projects, with the Roswell Park active in oncology focused research. Residents are expected to engage in some type of investigational activities, with input from departmental faculty. A mentor program is used, to help provide career guidance to the residents.

Teaching Activities:

The Pathology Department participates in numerous teaching activities. Pathology residents support the teaching rotations of other department's residents (such as Oral Pathology and OB/Gyn), as needed, particularly during their rotations. They are active participants in the teaching of medical students both informally and more formally during medical students' month long pathology elective taken during their third and fourth year of medical school. Pathology residents also participate in the education of medical students taking a post-sophomore year of pathology at RPCI. Residents are expected to rotate in and participate in teaching the laboratories for the Dental Students in the Dental Pathology Course and Medical Students in their pre-clinical courses given at the Medical School. In addition, the residents teach each other through formal and informal demonstrations, lectures and case presentations.

Electives:

Options for electives include additional training in any of the rotations listed above or one of the following elective rotations: Dermatopathology, Neuropathology, Hematopathology, or Ophthalmologic Pathology. In addition, special research projects are available in a number of areas. Elective rotations are available after satisfactory completion of the core rotations.

Integrated Topics:

Topics such as management, informatics/computer skills, research, statistics, evidenced based medicine, population based medicine, and ethics are taught throughout the residency program. These topics may be taught using a variety of mechanisms including but not limited to participation in working departmental meetings, Journal Clubs, Core Lectures, Teleconferences (ASCP, etc.), master classes, information technology presentations, and computer based CD-ROM training programs.

Administration of the Training Program:

Administration of the program is the responsibility of the Program Director with advice and assistance from the Residency Advisory Committee. The Residency Advisory Committee is

broadly representative of the major disciplines in the Department of Pathology and has representation from all teaching sites. It is chaired by the Program Director and meets on a regular basis, at least once per year. The Committee charges include the following: evaluation of resident applicants, selection of candidates for the NRMP Match, review resident performance, review program and rotation goals and objectives and curriculum, develop policies and procedures affecting resident education, and review effectiveness of the residency training program.