

MEDICAL RENAL PATHOLOGY FELLOWSHIP

**Department of Pathology and Laboratory Medicine
University of Calgary
Calgary, Alberta**

Objectives

Updated: January 31, 2023
Supervisor: Dr. H. Benediktsson

Introduction

The purpose of the Medical Renal Pathology Fellowship is to provide comprehensive training in the field of medical renal pathology, primarily through interpretation of native and transplant kidney biopsies. The duration of the program is 12 months and will be located at Foothills Medical Centre, Calgary, AB.

Overall, the goal of the fellowship is to develop diagnostic skills so the pathologist can recognize “most renal pathology lesions, integrate these with the clinical findings to generate accurate differential and final diagnoses, and can create a comprehensive, accurate and clear report. The pathologist is able to independently communicate appropriate information with nephrologists.” (From Renal Pathology Society Training Program Recommendations)

Objectives

Surgical Pathology Objectives

- Collect relevant clinical information pertaining to the renal biopsy cases
- Understand concepts of renal biopsy collection, tissue triage and laboratory processing
- Develop competency in interpretation of renal biopsy components
 - Light microscopy
 - Immunofluorescence microscopy
 - Electron microscopy
 - Additional studies when relevant (i.e. PLA2R, C4d in transplant, etc)
- Communication of relevant results to clinicians via pathology reports and direct communication (when indicated)
- Participation in weekly Renal Biopsy QA rounds
- Involvement in several ‘stat’/‘on call’ native and transplant biopsies during the fellowship

Educational Objectives

- Prepare brief literature reviews or educational materials, based on biopsy cases or QA rounds cases
- Read and review reference textbooks and periodicals through the departmental resources
- Participate in resident and undergraduate student teaching
- Suggested to attend the Nephrology grand and educational rounds, when possible

Research Objectives

- Participation in clinic-pathologic and/or translational research with presentation at one conference or peer-reviewed publication
- At least 1 month of protected research time for completion of the research project

Program Overview

The duration of the fellowship is one year. In this period, the fellow is expected to achieve a special competence in renal and transplantation pathology, to participate in teaching and to pursue independent research activities.

The fellow will co-report all renal biopsies, including light microscopy, immunofluorescence and electron microscopy, with the supervisors. The fellow will work along-side the on call renal pathologist,

who are scheduled in one week blocks. Initially, the fellow will take a small case load (1 to 2 cases per day) but will increase their workload as the fellows experience increases. The laboratory facilities of Alberta Precision Laboratories located in the Foothills Medical Centre (FMC). FMC and Alberta Children's Hospital (ACH) are the main sites of transplantation activity. The fellow is also expected to attend several renal biopsy procedures in order to gain familiarity with the biopsy technique, triaging and processing of renal biopsy tissue.

Greater than 600 renal biopsies are accessioned per annum, about 50% from transplanted kidneys. Most of the biopsies were received from physicians based at Foothills Medical Centre or Alberta Children's Hospital, with smaller numbers coming from other Calgary area hospitals as well as from other sites in Southern Alberta. All biopsies are examined utilizing plastic and paraffin embedded sections for light microscopy, immunohistochemistry for immunofluorescence, and electron microscopy. Special immunohistochemical and molecular techniques are employed in selected cases. Several full-time technologists performing preparations for light microscopy, immunofluorescence, and electron microscopy and the fellow must interact in a professional and collegial manner and understand the technologist roles in the preparation of the renal biopsy specimens.

Although the focus of the fellowship is to improve and sharpen the diagnostic skills in renal and transplantation pathology, protected time for the completion of a research project is essential. This can be taken *en bloc*, or spaced at intervals throughout the training period. It is anticipated that at least one research project will be completed and the results presented at a national or North American meeting. In addition, presentations at international meetings are encouraged.

Participation in the teaching activities of renal and transplantation pathology both at the undergraduate and post-graduate level is expected.

Renal Pathologists

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Evaluation

There will be 4 performance evaluations, occurring at the 3, 6, 9 and 12 month periods. Performance is evaluated based on fundamental skills, professional attitudes, and knowledge, and is carried by collecting data from all supervising faculty members. The results are discussed with the fellow and kept on file.

The candidate will be issued a certificate from the office of Post Graduate Medical Education, Faculty of Medicine, University of Calgary, affirming that a year in subspecialty training has been successfully completed.