McGill Thoracic Oncology & Interventional Respirology Fellowship Program

Administrative Information

Name of Institution: McGill University

Training sites: McGill University Health Center (Montreal General and Glen sites), Jewish General Hospital

Parent training program: Adult respirology

Program co-directors:

Dr Stéphane Beaudoin  stephane.beaudoin@mcgill.ca

Dr Linda Ofiara  linda.ofiara@mcgill.ca

A list of teaching faculty and training committee members can be found in Appendix A.

Program administrative coordinator:

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Rationale

The diagnosis and management of thoracic malignancies and pleural effusions relies heavily on advanced procedures and expertise provided by interventional respirologists. They are involved throughout the continuum of care, from diagnosis to therapy, including palliation.

Dedicated training is necessary to master the knowledge and skills relevant to the practice of interventional respirology. Because respirology residency training does not cover those competences, additional training is required.
Mission

The fellowship program’s mission is to allow trainees to develop the skills and the knowledge necessary to practice in the field of interventional respirology & thoracic oncology.

The program aims to train physicians who will become leaders in their community by setting up an interventional respirology program. Furthermore, the program aims to promote academia in interventional respirology and encourage graduates to develop an academic profile.

The fellowship is a 1-year training program, usually completed from July to June.

The program can only welcome one trainee per year.

** For those interested in pursuing a practice in thoracic oncology (including longitudinal care of lung cancer patients and management of oncology therapeutics), the fellowship can be adapted to include an in-depth oncology exposure. However, this is not considered equivalent to a formal medical oncology certification.**

Eligibility Criteria

Candidates are considered eligible if they fulfill the following criteria:

- Be medical doctors who are graduates of medical schools listed in the Faimer Directory
- Be certified in respirology (or eligible to sit for the exam) by the Royal College of Physicians & Surgeons of Canada or an equivalent national certification body (for out of Canada applicants).
- Hold a scholarship from their home government, university or Faculty of Medicine (applicants from the Province of Quebec must apply for “formation complémentaire” and get funded by the RAMQ)

The application deadlines, required documents, and a description of the online application process can be found here: [https://www.mcgill.ca/pgme/programs/fellowship-programs](https://www.mcgill.ca/pgme/programs/fellowship-programs)

McGill Interventional Respirology Fellowship
The training environment

The McGill University Health Center is a tertiary teaching hospital designated as a regional referral center for thoracic oncology. The services offered include thoracic surgery, radiation oncology, medical oncology, palliative care, interventional radiology, interventional respirology, and the full spectrum of medical and surgical specialties.

The respiratory services are provided at the Montreal Chest Institute located at the Glen site. It includes a large outpatient clinic, a pulmonary function laboratory, a day hospital & endoscopy unit, a 20-bed inpatient unit, a 6-bed sleep laboratory, and a 7-bed respiratory ICU.

Program Structure

Interventional Respirology Track

The focus is on mastery of skills and knowledge required to practice linear EBUS, radial EBUS, navigation bronchoscopy, as well as thoracic ultrasound, chest drain insertion, indwelling pleural catheter insertion (IPC), and medical thoracoscopy. Therapeutic bronchoscopy is also part of the program, but it is not the main focus.

Trainees will also achieve thorough competence in the evaluation, staging, and interdisciplinary management of thoracic oncology disorders, as well as complex benign and malignant pleural disorders.

The fellow will be exposed to the following approximate number of procedures:

- Linear EBUS: 450-500
- Radial EBUS: 60-80
- Navigation bronchoscopy: 10-15
- IPC insertion: 90-120
- Medical thoracoscopy: 20-30
- Therapeutic bronchoscopy: 20-25
  (including rigid/flexible bronchoscopy with stent insertion, tumor debulking, airway dilatation, and brachytherapy)
A complete list of the learning objectives can be found in Appendix B.

Duties & responsibilities of the fellow

The fellow participates in the scheduled procedure days by triaging and reviewing cases ahead of time, preparing the patient & obtaining informed consent, performing the procedure, and taking part in the post-procedure patient evaluation, under the direct supervision of the staff.

EBUS procedures days (thrice weekly) usually run from 7h30 am until 12h-14h, depending on the number of cases and their complexity. Most IPC insertions are scheduled on Wednesdays, but urgent requests can be done at any point during the week. Thoracoscopy cases take place once per week.

In addition, the fellow sees outpatient and inpatient interventional pulmonology consultations, under the supervision of the staff.

Outpatient clinics

Participation in the following scheduled clinics will take place throughout the year: rapid investigation clinic for lung cancer and thoracic oncology interdisciplinary clinic. In addition, outpatient referrals for complex pleural diseases and medical thoracoscopy, as well as follow-ups of therapeutic bronchoscopy patients will be seen throughout the year.

A one-month thoracic oncology ambulatory rotation also takes place later in the year. The fellow still attends complex procedures, but otherwise attends various thoracic oncology clinics, tumor board meetings, and lung cancer investigation clinics.

On-call Duties

There are no formal on-call duties, but for occasional cases occurring outside regular hours or on weekends, the fellow will be asked to participate.

Academic activities

The fellow must attend the following weekly meetings:

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- Respirology academic conference
- Respirology clinical cases’ rounds
- Thoracic Oncology Tumor Board conference

The fellow will also actively participate in the monthly IP conference by presenting periodically during the year. The IP conference is a combination of didactic, quality-improvement, and journal club meetings.

**Simulation Learning**

The fellow will participate in the Quebec Provincial bronchoscopy course in early July, a full day of didactic and hands-on practice on low and high-fidelity models. In addition, he/she will spend time using a high-fidelity EBUS simulator under the supervision of one of the faculty. A pleural procedure simulation course also takes place each year, to practice chest drain and IPC insertion.

**Didactic Learning**

The bronchoscopy course includes a half-day of lectures. Topics in pleural care are available through an online platform, as are the lectures of the bronchoscopy course. In addition, formal presentations are done during the IP rounds.

Subscription to the AABIP website will be provided for one year, so that the fellow can access the webinars and other educational material.

**Teaching**

Because procedural teaching is an integral part of interventional respirology, the fellow is expected to get involved in teaching and supervising certain procedures for respirology and medicine residents, especially as he/she gains more experience. In addition, formal didactic teaching sessions for respirology residents will take place once or twice per year. Teaching and supervision done by the fellow will be supervised by the attending staff.

**Research**

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The fellow is expected to get involved in ongoing research projects lead by faculty of the program. The publication of at least one peer-reviewed article is expected, and presentation at national / international conferences is strongly encouraged.

Fellows are encouraged to take courses in epidemiology/biostatistics offered through McGill University. Classes usually take place in afternoons, for 2-3 weeks total in the spring, allowing the fellow to still participate in most clinical activities. A description of the options can be found here: https://www.mcgill.ca/epi-biostat-occh/academic-programs/summer

Fellows can also pursue additional respiratory research training through a one-year program under the supervision of the IP physicians. Details can be found here: https://mcgill.ca/pgme/files/pgme/respiratory_research_fellowship_june2016.pdf

Vacation & Conferences

Fellows can take up to 4 weeks of vacation, and up to 10 days of conference leave.

The costs of one conference will be reimbursed by the program.

Support Staff & Workspace

Ample administrative and clerical support is available for all clinical activities. A workspace with computer access is provided in the same building where all the clinical activities take place.

Evaluation

Fellows will receive verbal feedback from faculty following procedures and other patient interactions.

Quarterly formal evaluations will be filled based on the feedback of all physicians and non-physicians working with the fellow. The program director will meet with the fellow to review those evaluations.
Fellows must maintain a procedure log to track volumes for each procedure, diagnostic yield, and complication rates. The procedure log will also be reviewed quarterly with the program director.

**Weekly schedule example**

<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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</thead>
<tbody>
<tr>
<td><strong>am</strong></td>
<td>EBUS</td>
<td>EBUS</td>
<td>Thoracoscopy &amp; IPC insertion</td>
<td>EBUS &amp; Therapeutic bronchoscopy</td>
<td>7h30-9h Respirology clinical conference</td>
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<tr>
<td><strong>12h-13h</strong></td>
<td>Respirology academic rounds</td>
<td>EBUS</td>
<td>Thoracic Oncology Tumor Board</td>
<td>IP rounds</td>
<td></td>
</tr>
<tr>
<td><strong>pm</strong></td>
<td>Lung Cancer investigation clinic</td>
<td>IPC insertion &amp; pleural cases f/u</td>
<td>Thoracic oncology interdisciplinary clinic</td>
<td></td>
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**Thoracic Oncology Track**

The focus is on mastery of skills and knowledge necessary to provide expert oncologic care to patients suffering from thoracic malignancies. In addition, fellows develop the competence to perform linear and radial EBUS, as well as advanced pleural procedures such as chest drain insertion, indwelling pleural catheter insertion, and medical thoracoscopy.

The structure of the program is similar to what is described above, except that more formal oncologic exposure is provided, through the following activities:

- Oncology service rotations for 6 blocks (including inpatient and outpatient consultations, with a focus on lung cancer, but exposure to other cancers)
- Radiation oncology rotations for 2 blocks
- Palliative care rotation for 1 block

Procedures are done throughout those rotations in order to ensure adequate volume and continuity of exposure.
Appendix A

Fellowship Training Program Committee

Dr Linda Ofiara (co-chair)
Dr Stéphane Beaudoin (co-chair)
Dr Anne Gonzalez
Dr Benjamin Shieh
Dr Carmela Pepe

Teaching Faculty

In addition to three fellowship-trained interventional respirology faculty (Dr Beaudoin, Dr Gonzalez, Dr Shieh), fellows will work with one advanced diagnostic bronchoscopist (Dr Ofiara), and two advanced pleural proceduralists (Dr Kevin Schwartzman and Dr Dick Menzies).

Fellows pursuing the thoracic oncology track will be supervised by the above faculty in addition to both medical oncologists (Dr Scott Owen, Dr Vera Hirsh, Dr Victor Cohen) and respirologists providing thoracic oncology care (Dr Ofiara, Dr Pepe, Dr David Small, Dr Jason Agulnik, Dr Lama Sakr).
Appendix B

Training Program Learning Objectives

Learning objectives are detailed according to the CanMEDS framework (http://www.royalcollege.ca/rcsite/canmeds/canmeds-framework-e)

In general, graduating fellows are expected to function as expert consultants in the field of interventional respirology. Their unique expertise and consultancy skills will be characterised by high-level procedural abilities, evidence-based practice, as well as compassionate and patient-centered care.

Medical Expert

At the end of the program, the fellow will be able to:

1. Describe the pathophysiology, natural history, risk factors, clinical manifestations, physical exam findings, radiologic and physiologic features, diagnostic requirements, prognosis, & management (including its complications) of the following conditions:
   a. Lung cancer
   b. Mesothelioma
   c. Pulmonary carcinoid tumors
   d. Non-lung cancer airway tumors (benign and malignant)
   e. Malignant airway obstruction
   f. Benign airway obstruction & stenosis
   g. Massive hemoptysis of any cause

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h. Bronchopulmonary fistula
i. COPD / emphysema, related to bronchoscopic volume reduction
j. Pneumothorax
k. Malignant pleural effusion
l. Undiagnosed pleural effusion
m. Recurrent benign effusions (CHF, cirrhosis, TB, drug and CTD-related)
n. Chylothorax
o. Pleural infection

2. Specifically with regards to lung cancer, apply the following principles:
   a. Lung cancer prevention, including smoking cessation and screening
   b. Invasive and non-invasive staging
   c. Determination of a therapeutic strategy in an interdisciplinary fashion, including suitability for surgical resection
   d. Understand the roles and indications of chemotherapy, targeted therapy/immunotherapy, and radiation therapy, including the implications related to tissue sampling
   e. Describe and intervene on acute & chronic complications of lung cancer itself or its treatment (surgery, chemotherapy/targeted therapy/immunotherapy, and radiation)

3. Obtain the relevant medical, social, occupational history data related to the conditions in item 1 by conducting a concise yet efficient patient interview

4. Provide expert interpretation of the following tests:
   a. PFTs in the context of central airway obstruction & pre-op lung cancer
   b. Exercise studies in the context of pre-op lung cancer
   c. Quantitative lung perfusion scans in the context of pre-op lung cancer
   d. CXR
   e. Chest CT scan, especially with regards to central and peripheral airway anatomy, mediastinal lymph nodes, and pleural anomalies
   f. Thoracic ultrasound
   g. Pleural fluid analyses
5. Describe the equipment requirements, the indications, the contra-indications, the complications, the consent process, the pre-procedure patient preparation, the post-procedure assessment, and finally the necessary documentation for the following procedures:
   a. Flexible bronchoscopy & narrow-band imaging
   b. Linear EBUS
   c. Radial EBUS
   d. Electromagnetic navigation bronchoscopy
   e. Rigid bronchoscopy (including mechanical debulking)
   f. Thermal ablative endobronchial therapies (APC, laser, electrocautery, cryotherapy)
   g. Endobronchial brachytherapy
   h. Airway stent insertion (silicone and metallic)
   i. Airway dilatation (balloon and rigid)
   j. Foreign body removal (using flexible or rigid instruments)
   k. Thoracentesis
   l. Conventional chest drain insertion
   m. Small-bore chest drain insertion
   n. Indwelling pleural catheter insertion
   o. Medical thoracoscopy
   p. Talc pleurodesis (poudrage or slurry)

6. Perform safely and efficiently the procedures listed above

7. For any of the above diagnostic procedures, describe and implement adequate sample processing standards

8. Initiate adequate non-invasive palliative measures in patients with any of the conditions listed in item 1 who experience suffering or who are at the end of life.

Communicator

At the end of the program, the fellow will be able to:
1. Communicate clearly and with compassion with patients and family members, respecting patients’ values, preferences, cultural and educational backgrounds, in a way that optimizes patient understanding and autonomy
2. Obtain informed consent for the above-mentioned procedures in a way that encourages patients to ask questions and maximizes their understanding of the procedure.
3. Engage in a discussion with patients and family members in challenging situations, including but not limited to:
   a. End-of-life care
   b. Initiation of controversial, potentially toxic or dangerous treatments
   c. Diagnostic uncertainty
   d. After complications (and / or errors) have occurred
   e. Delivering bad news
4. Promote and support informed decision-making by patients and family members with respect to investigation and treatment decisions, including suitable discussion of end-of-life care
5. Provide effective case presentations and discussions with physicians and other professionals sharing patients’ care
6. Provide effective written and/or dictated consultation notes to referring physicians and other providers, which clearly outline an accurate, problem-oriented assessment of the patient’s condition and a clear plan
7. Communicate clearly and in a manner that promotes safety with colleagues and other health professionals during procedures
8. Document clearly and efficiently the procedures listed above.

**Collaborator**

At the end of the program, the fellow will be able to:

1. Participate in interdisciplinary patient care and research by demonstrating the following:
   a. Understanding of and respect for the roles and responsibilities of other health professionals
   b. Promptly seeking the help of other professionals when appropriate
   c. Implementing safe and effective patient handovers
   d. Contributing to shared-decision making with other professionals

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e. Respect for divergence of opinions
2. Demonstrate conflict prevention and resolution skills

Leader
At the end of the program, the fellow will be able to:

1. Describe the costs and resources use burden of the common tests and procedures used in interventional respirology
2. Use health care resources appropriately and in a cost-efficient manner
3. Apply quality-improvement principles to his own practice and in his community
4. Demonstrate leadership in his community by working to improve health care delivery and promoting change, either through the implementation of new practices or systems’ improvement

Health Advocate
At the end of the program, the fellow will be able to:

1. Identify the determinants of health affecting his/her patients and their access to health care
2. Advocate for their patients to have access to the following, in the context of a resource-limited setting:
   a. Diagnostic investigations
   b. Therapeutic interventions
   c. Psychosocial support
   d. Worker’s compensation for occupational diseases or disability
3. Incorporate disease prevention, health promotion, and health surveillance into interactions with individual patients
   a. Apply smoking cessation assessment and counselling principles
   b. Discuss lung cancer screening
4. Identify the determinants of health and the health care needs of their community
5. Develop strategies to address the above in order to improve the health of members of the community

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a. Implement strategies to improve access to health care, such as streamlined lung cancer or pleural investigations for instance

**Scholar**

At the end of the program, the fellow will be able to:

1. Develop and implement a personal learning plan to maintain and enhance their knowledge and skills
2. Demonstrate the ability to improve his practice through periodic practice audits and performance assessments, particularly with regards to diagnostic and therapeutic procedures
3. Answer clinical questions through review and critical appraisal of the literature
4. Adapt their practice based on the best available evidence and their critical appraisal of it
5. Educate patients and their families about their disease, the procedures they need, and the ongoing care they require to empower them and promote their participation in their care
6. Teach colleagues, residents, students, and other health care professionals about interventional respirology topics
   a. Adapt the teaching method to the setting and the learning needs of the participants
   b. Promote interactivity in the learning encounters
   c. Deliver an effective lecture / workshop / presentation
7. Provide procedural supervision characterized by the creation of a safe environment for both patient and learner and by appropriate and timely feedback
8. Contribute to the creation and dissemination of knowledge and practices by participating in research activities, at all steps of the process (including formulation of the question, ethics considerations, study design, data acquisition & interpretation, and findings dissemination)

**Professional**

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At the end of the program, the fellow will be able to:

1. Exhibit professional behaviours in all aspects of practice, demonstrating honesty, integrity, humility, commitment, compassion, respect, altruism, respect for diversity, and maintenance of confidentiality
2. Demonstrate a commitment to excellence in all aspects of practice
3. Recognize and respond to ethical issues encountered in practice
4. Fulfill and adhere to the professional and ethical codes, standards of practice, and laws governing practice
5. Recognize and respond to unprofessional and unethical behaviours in physicians and other colleagues
6. Participate in peer assessment and standard-setting
7. Exhibit self-awareness and manage influences on personal well-being and professional performance
8. Manage personal and professional demands for a sustainable practice throughout his/her career
9. Recognize when other professionals are in need and respond appropriately