Cardiothoracic Imaging Fellowship Program

Abdominal Imaging • Body MRI • Breast Imaging • Cardiothoracic Imaging • Musculoskeletal Imaging • Neuroradiology
Program Overview

Our Department prides itself on being supportive of its fellows and places strong emphasis on the quality of teaching on a person-to-person basis. Please see our website:
http://www.bidmc.org/MedicalEducation/Departments/Radiology/Fellowships.aspx

Departmental
Daily didactic morning conferences are held for the residents. The fellows are welcomed to attend these conferences as their schedule permits. Department faculty, residents and fellows provide most didactic lectures, with frequent lectures from outside HMS faculty, past residents, as well as guest lecturers from around the world. Visiting professors from other major teaching centers in the United States and abroad spend varying periods of time in the Department. Some have taken sabbatical leave at the Beth Israel Deaconess Medical Center.

Medical Center
Radiology also has a close working relationship with a number of clinical services outside our department, which allows Radiology to participate in a number of management conferences, including Medical Management, Melanoma Management and Urology Management, as well as Chest, Pancreatico-biliary, and Liver conferences; Medical Grand Rounds, Surgical Grand Rounds, and others.

Boston
As befits a great medical city, there are many great medical conferences sponsored not only by Harvard-affiliated programs, but also by a number of other medical centers. The monthly New England Roentgen Ray Society meeting is one of the more popular Radiology meetings that also includes a special program for residents and fellows. Seminars and lectures in radiology are also held at adjacent Harvard-affiliated hospitals which include the Brigham and Women's Hospital and Boston Children's Hospital.

Current Radiology Fellowships*:
• Abdominal Imaging
• Body MRI
• Breast Imaging
• Cardiothoracic Imaging
• Musculoskeletal
• Neuroradiology

*Interventional Radiology:
Due to the creation of the integrated and independent IR residency programs, the vascular and interventional radiology fellowship program is no longer accepting applications for matriculation.
For more information:
Cardiothoracic Imaging

<table>
<thead>
<tr>
<th>Non Match Programs</th>
<th>Timeline</th>
<th>Important Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Interview Embargo Dates</td>
<td>Interviews may begin</td>
<td>December 1</td>
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<td></td>
<td>Interviews completed</td>
<td>March 31</td>
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<tr>
<td>Acceptance Embargo Date</td>
<td>No fellowship may offer acceptances before this date</td>
<td>December 1</td>
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*Exception: Internal candidates, international candidates, military candidates, and spouses are excluded from the embargo date timeline

Overview
This one-year fellowship provides involvement in clinical, educational and research thoracic imaging activities and provides excellent preparation for a career in academic radiology or private practice.

The division of Cardiothoracic Imaging at BIDMC and Harvard Medical School has been at the forefront of recent advances in thoracic imaging from both clinical and research perspectives and provides a strong academic environment for fellowship training. Our fellows are involved in all aspects of clinical thoracic imaging under the supervision of the program director and the thoracic imaging faculty. Additionally, our fellows receive mentoring, academic time, and support for teaching and research activities. Our fellows are exposed to the full spectrum of cardiothoracic disorders and a variety of diagnostic imaging methods, including CT angiography, high-resolution chest CT, functional imaging, and state-of-the-art 3-d reconstruction techniques and post-processing methods. Dedicated time (2 months, plus an additional 3rd month on an elective basis) is also provided for fellows to spend in the Cardiovascular Imaging Section, providing training and clinical experience in state-of-the art imaging of the heart and vascular system using CT and MRI.

Departmental resources include: 7 CT scanners (including 64-slice and 320-slice multidetector CT scanners and a CT-fluoroscopy unit), 3 DR units, 8 MR scanners (including 1.5-T and 3.0-T clinical and research units), an integrated PET-CT scanner, a fully implemented PACS system, two 3-D imaging labs, and two state-of-the-art, ergonomically-designed chest reading rooms.

The thoracic imaging section is comprised of 6 faculty members with a diversity of interests spanning all facets of cardiothoracic imaging. Our faculty members include experienced clinicians and researchers, award-winning educators, and editors of general radiology and subspecialty journals.

Section Overview and Clinical Activities:
Under the direction of Dr. Alexander A. Bankier, Section Chief, members of the division contribute collaboratively to its clinical, teaching, and research missions. Leadership within the section is shared and includes the following roles:
Dr. Alex Bankier, Director of Respiratory Functional Imaging and former President of the Fleischner Society, leads the research activities of the section; Dr. Paul Spirn is the QA officer of the section; Dr. Ron Eisenberg oversees resident education and also serves as the liaison for resident QA projects; Dr. Diana Litmanovich is Director of the Cardiothoracic Imaging Fellowship Program and Director of Cardiac CT, a multidisciplinary program in collaboration with cardiology. In 2017, Dr. Pritesh Mehta joined the section following completion of his fellowship training at BIDMC. The most recent member of the section, Dr. Ritu Gill brings her expertise in thoracic oncology research. The section interprets more than 80,000 exams per year and is recognized for providing timely and expert interpretation of cardiothoracic imaging studies with a service-oriented approach to referring clinicians, as evidenced by its participation in a variety of multidisciplinary conferences. Several of our faculty members also interpret studies for our community sites and/or for other sections. Led by Dr. Bankier, BIDMC is a pioneer in CT lung cancer screening and was one of the study sites of the National Lung Cancer Screening Trial (NLST), a multicenter trial that was the breakthrough for CT lung cancer screening.

Teaching:
The section takes pride in its educational activities, which span from local to international. The section holds a variety of teaching conferences for residents and fellows. Several faculty members are recipients of awards for teaching and mentoring. Most recently, Dr. Paul Spirn is consistently recognized by the department’s Award for Excellence in Teaching. Faculty members also have several educational leadership roles. Dr. Alex Bankier is Director of the Resident Scholar’s Track Program and Dr. Ron Eisenberg is Co-Director of the Resident Mentoring Program. Nationally, Dr. Diana Litmanovich is the Director of the Thoracic Case-based Refresher Course at RSNA. In recent years, the section has also been increasing its international educational mission through visiting international fellowships and professorships. Section members have also lectured at Harvard CME courses and meetings of the ARRS, RSNA, STR, NASCI and ECR, among others. Section members have also served as lead authors or editors for several recently published textbooks, including, Clinical Imaging: An Atlas of Differential Diagnosis, 5th Ed (Eisenberg), Imaging of Diseases of the Chest, 5th Ed (Bankier), Medical Imaging: What You Need to Know (Eisenberg). The section has also been recognized for its mentoring of residents and fellows in educational and research projects. Drs. Ron Eisenberg and Alex Bankier have mentored numerous residents and fellows in authoring publications in the popular “Pattern of the Month” series in the Resident’s Section of AJR. Our fellows have also successfully presented educational and research projects at local, regional, and national meetings and first-authored numerous original research, review papers and book chapters.

Research:
The section has a very active research division that is directed by Dr. Bankier, who runs a successful weekly research meeting that includes both didactic sessions and work-in-progress presentations. The section is a recognized leader in several areas of investigation, including: airway imaging, emphysema, functional imaging, radiation dose reduction, imaging of pregnant patients, and outcome/utilization studies. Section members have published numerous articles in highly regarded peer-reviewed journals in the past year and have presented abstracts at the RSNA, ARRS, ECR, and STR meetings. Several faculty members also play important editorial roles for several radiology journals, including Dr. Bankier as Deputy Editor of Radiology, Dr. Litmanovich as Deputy Editor of the Journal of Thoracic Imaging, and Dr. Eisenberg as Special Consulting Editor for AJR.
Applying

Applications are being accepted for the academic year 2020-2021 as of April 10, 2018. Please send (3) letters of recommendation (with one letter being from your residency director), CV, personal statement, and application form to:

**Robert Shaw**
Program Coordinator,
Residency & Fellowship Programs
Department of Radiology
Beth Israel Deaconess Medical Center
330 Brookline Avenue, Sherman 231
Boston, MA 02215
T: 617.667.3536 | F: 617-667-3513
rmshaw@bidmc.harvard.edu

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**Please note:**
All applicants (both US and foreign graduates) must have taken and passed:
- USMLE Step 1
- Step 2 CK
- Step 2 CS

in order to be considered for an interview.

Foreign Medical Graduates (FMGs) are required to have obtained ECFMG certification in order to be considered for an interview.

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<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>RC703B</td>
<td>4:30-6:00 PM</td>
<td>Infections and Inflammatory Cardiac Disorders Pericarditis - Diana Litmanovich</td>
</tr>
<tr>
<td>IR36</td>
<td>1:50-3:20 PM</td>
<td>Research Workshop Part I (By Invitation Only)</td>
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<tr>
<td>MSMC24C</td>
<td>3:30-5:30 PM</td>
<td>Cardiac CT Mentored Case Review: Part IV (In Conjunction with the North American Society for Cardiovascular Imaging) (Interactive Session) Coronary Artery Disease and Incidental Non-cardiac Findings. Diana Litmanovich</td>
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Alexander A. Bankier, MD PhD

Director, Cardiac Imaging Section
Director, Respiratory Functional Imaging, BIDMC
Professor of Radiology, Harvard Medical School

Fellowships
Centre Hospitalier Universitaire Lille, Frankreich
Hôpital Calmette Service de Radiologie, Lille, France 1994
MRI Research, BIDMC 2001

Residency
Radiology, University of Vienna, Vienna, Austria 1997

Internship
Internal Medicine
Evangelisches KH; KH Rudolfstiftung, Vienna 1991

Medical School
MD - University of Vienna, Vienna, Austria 1990
PhD - Transplantation Medicine
University of Brussels, Belgium 2011

Academic Accomplishments
Deputy Editor, RADIOLOGY 2007-

Contact: abankier@bidmc.harvard.edu

Diana E. Litmanovich, MD

Staff Radiologist, Cardiac Imaging
Director, Cardiac Imaging
Director, Cardiac Imaging Fellowship, BIDMC
Associate Professor of Radiology, Harvard Medical School

Fellowship:
Thoracic Imaging, BIDMC, Boston 2007

Residency:
Diagnostic Radiology
Rambam Medical Center, Haifa, Israel 2005

Internship:
Internal Medicine and Surgery,
Rambam Medical Center, Haifa, Israel 1999

Medical School:
Technion Medical School, Haifa, Israel 1999

Academic Accomplishments
Director, HMS Longitudinal PCE Radiology
Course at BIDMC, Boston, MA

Contact: dilitmano@bidmc.harvard.edu
Faculty

**CARDIOTHORACIC IMAGING**

**Ronald Eisenberg, MD, JD**
Staff Radiologist, Cardi thoracic Imaging & Musculoskeletal Imaging Sections, BIDMC
Professor of Radiology, Harvard Medical School

**Fellowship:**
Magnetic Resonance Imaging,
University of California School of Medicine,
San Diego, CA  1987

**Residency:**
Diagnostic Radiology,
University of California, San Francisco, CA  1975
Diagnostic Radiology, Massachusetts General Hospital, Boston, MA  1971

**Internship:**
Mount Zion Medical Center, San Francisco, CA 1970

**Medical School**
University of Pennsylvania School of Medicine,
Philadelphia, PA  1969

**Academic Accomplishments:**
JD in Law, William Howard Taft University School of Law, Santa Ana, CA  1996

The author of 19 books in radiology, Dr. Eisenberg has specialized in interpreting large volumes of conventional radiographs. As a non-practicing attorney and member of the California Bar, he has authored a book on radiology and the law. He has completed a doctoral degree in Jewish Studies and is the author of 6 published books in that field.

**Contact:** rleisenb@bidmc.harvard.edu

**Ritu Gill, MD, MPH**
Staff Radiologist, Cardi thoracic Imaging, BIDMC
Director, Medical Student Education Program in Radiology
Assistant Professor of Radiology, Harvard Medical School

**Fellowships:**
Cardiothoracic Radiology,
Brigham and Women’s Hospital, Boston, MA 2005
Onco radiology,
Dana Farber Cancer Institute, Boston, MA 2004

**Residency:**
Radiodiagnosis
Barnard Institute of Radiology and Oncology,
Madras Medical College, Chennai, India 2001

**Internship:**
Medicine and Surgery, Government Medical College and Hospital, Amritsar, India 1995

**Medical School**
MBBS (Bachelor of Medicine and Bachelor of Surgery), Government Medical College, Amritsar, India 1996

**Additional Postgraduate Training:**
MPH in Clinical Effectiveness, Harvard School of Public Health, Boston, MA 2012

**Clinical Interests:**
- Building prognostic models to stratify survival in Chest malignancies
- 3D and 4D imaging
- 3D modeling and printing

**Contact:** rgill@bidmc.harvard.edu
RSNA 2016