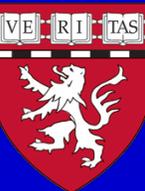


BWH Radiology Welcome Orientation

William W. Mayo-Smith MD FACR

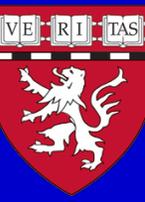
Vice Chair of Radiology, Brigham & Women's Hospital

Professor of Radiology, Harvard Medical School



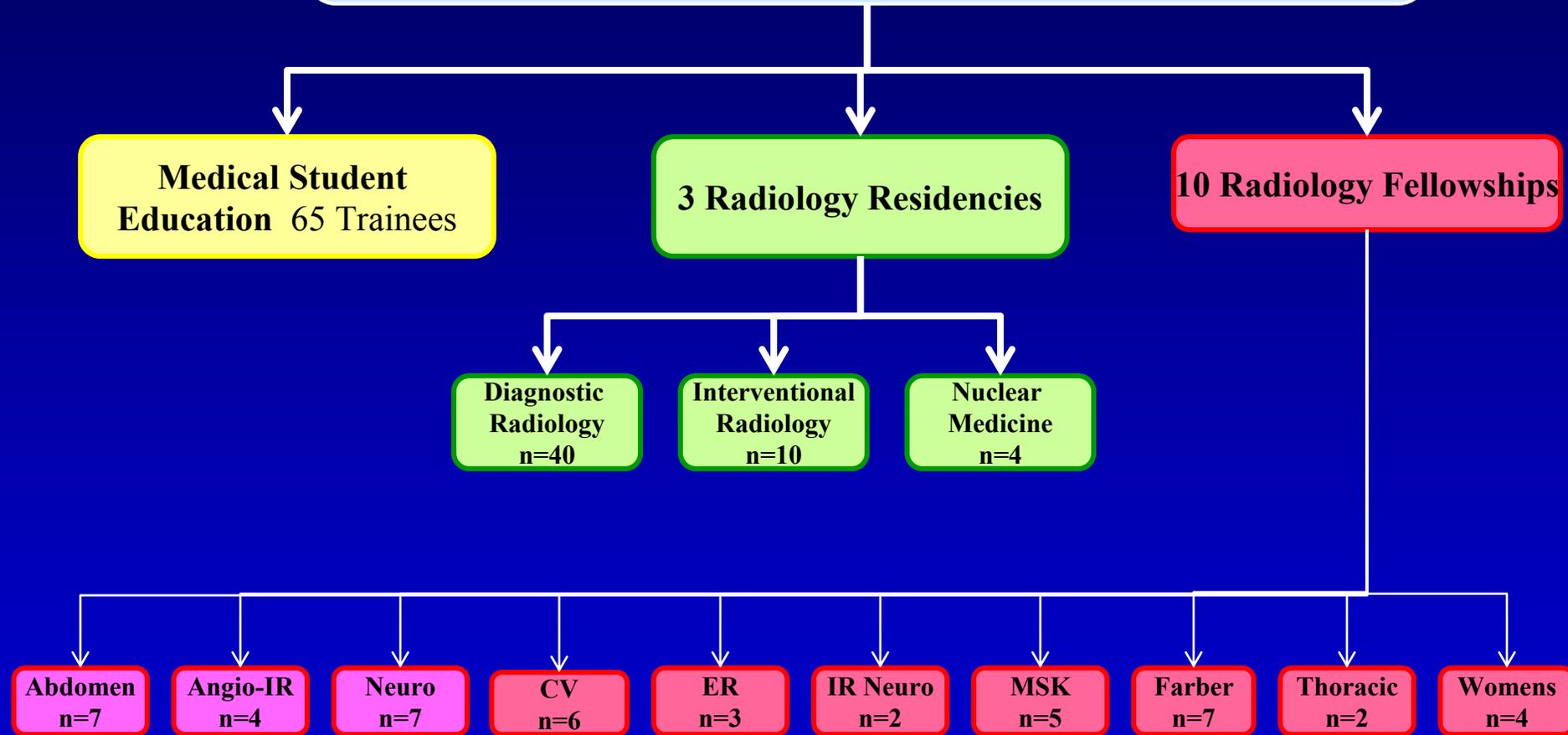
BWH Radiology Education Division

William W. Mayo-Smith, MD FACR
Vice Chair Education
Professor of Radiology

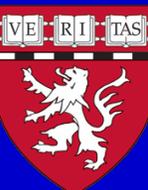


BWH Radiology Education Division

n= 160 trainees



160 Trainees!



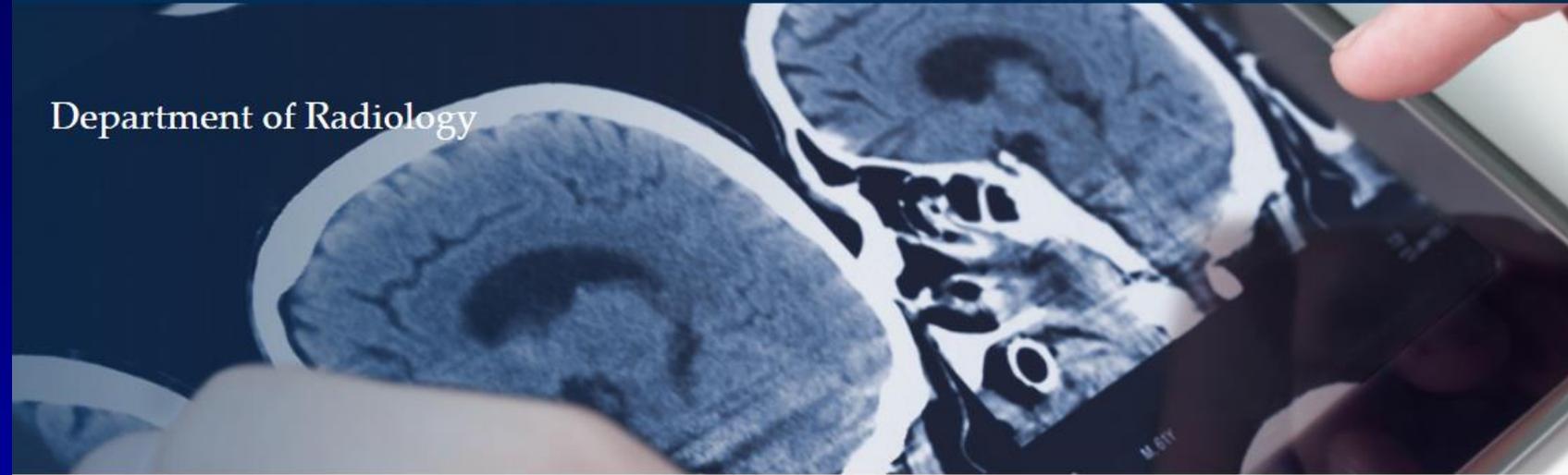
BWH Radiology Website



PATIENTS AND FAMILIES

MEDICAL PROFESSIONALS

RESEARCH



Department of Radiology

Home > Departments & Services > Radiology

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RADIOLOGY

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- For Medical Professionals
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- FIND A RADIOLOGIST
- REQUEST APPOINTMENT
- LOCATIONS
- SERVICES

Department of Radiology

The Brigham and Women's Department of Radiology provides the complete range of diagnostic imaging and interventional services integrated with services provided by the clinical departments of the Brigham and Women's Healthcare network. With locations in Boston, Brookline, Chestnut Hill, Foxborough and West Bridgewater, BWH Radiology brings sub-specialty expertise to **community-based settings** for more convenient, timely access.



CONTACT US

PHONE
(617) 732-6266

FAX
Central Scheduling: (978) 352-9015
Image Service Center: (617) 732-5300
Reports or Medical Record: (617) 566-3912

EMAIL
bwhradiologyschedulers@partners.org

PATIENT GATEWAY
[Using Patient Gateway / Visit Patient Gateway](#)





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DIAGNOSTIC RADIOLOGY RESIDENCY

- General Info
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- Residents
- Resources
- Mellins Society
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FIND A RADIOLOGIST



REQUEST APPOINTMENT



LOCATIONS



SERVICES



Diagnostic Radiology Residency



Glenn Gaviola, MD
Program Director

We commend your decision to become a radiologist and are delighted that you have taken the time to learn more about our radiology residency program.

There are multiple roles you may choose to play in radiology including diagnostician, teacher, researcher, policy maker, and administrator. While excellence in clinical radiology is our first priority we also recognize the importance of these additional roles and strive to provide our residents with the skills and opportunities that auger success in any of them.

The many attributes of our program are best appreciated during a visit to the department. However, I would like to highlight some reasons why we feel that Brigham & Women's Hospital is a special place to train.

Education



Research



Teaching opportunities



Humanitarian Efforts



Business/IT



Support



The People



**BWH Diagnostic
Radiology Residency**



BWH Radiology Residents



Madhvi Deol
Undergrad – Cornell
Med School – Cornell



Khushboo Jhala
Undergrad – UAB
Graduate – Dartmouth
Med School – Dartmouth



Yuntong Ma
Undergrad – Columbia
Graduate – Cambridge
Med School – Wash U



***Fiona Malone**
Undergrad – U Chicago
Med School – UIU



***Colette Martin**
Undergrad – UC-Riverside
Med School – Harvard

*IR/DR

Welcome Incoming Trainees Entering Class of 2018



Steven Morales-Rivera
Undergrad – U Puerto Rico
Med School – Ponce



Shruti Mishra
Undergrad – Cal Tech
Med School – Wash U



Anne-Sophie Touret
Undergrad – McGill
Med School – BU



Anh Tran
Undergrad – UC-Irvine
Med School – UC-Berkeley



Andrew Wong
Undergrad – Stanford
Graduate – UC-Davis
Med School – UC-Davis



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RADIOLOGY CLERKSHIP FOR MEDICAL STUDENTS

- Announcements
- Schedule
- Current Students
- Curriculum
- Student Assessment
- Radiology Sections
- Maps and Directions
- Student Resources
- 4th Year Opportunities
- Contact Us

FIND A RADIOLOGIST



REQUEST APPOINTMENT



LOCATIONS



SERVICES



Core Clerkship in Radiology (RD500M.23)



Sara Durfee, MD
Course Director



Dylan Kwait, MD
Associate Director

WELCOME

We would like to welcome you to the Brigham and Women's Hospital Core Clerkship in Radiology. This is an exciting time in your professional development. We hope that this clerkship will not only challenge you but will also inspire you.

Radiology provides an excellent introduction to the thought processes and problem-solving skills you will need through the upcoming year. This is especially true for those of you whose clerkship precedes medicine and surgery. Imaging tells a story in which the course of a patient's illness can be followed over time, from the initial clinical presentation.

Radiology helps put that picture together into a coherent whole in a time-efficient manner. This "bigger picture" can be difficult to synthesize when confronting the immediate problems in the "heat of battle" of the wards. When you consult a radiologist, you should leave not only with the answer to your immediate question, but also with a view of how this discussion fits into the broader picture of a patient's problem, and with more ideas on how to proceed with management.

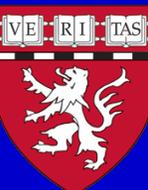
We hope that you will come away from your radiology clerkship with a better understanding that there is no such thing as a radiology "read," which suggests a fixed or reproducible quantity, e.g. the hematocrit. You will find that radiologists must draw on a deep knowledge of anatomy, pathology, pathophysiology, embryology, physics, and clinical management to arrive not at "reads" but at judgements.

That's why you will be spending time in observation, down in the "trenches of radiology." You will observe the day-to-day workings of chest, abdominal, musculoskeletal, and neurologic radiology. You will see that, unlike the classic cases we review in tutorial, imaging of real-life patients is messy. They simply don't read the book! You will see the dynamic interactions between the referring physician/surgeon and the radiologist, as, hopefully, they work as a team in helping patients get well.

Thank you and we hope that you have a great rotation!

- Sara Durfee, MD
Course Director

BWH Radiology Clerkship



BWH Radiology Fellowships



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RADIOLOGY

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[Radiology Clerkship for Medical Students](#)

[Diagnostic Radiology Residency](#)

[Integrated Interventional Radiology Residency](#)

[Joint Program in Nuclear Medicine \(JPNM\) Residency](#)

[Radiology Fellowships](#)

[Observerships](#)

[Radiology Grand Rounds](#)

[Technologist Education](#)

[Directions and Accommodations](#)

[The Holman Archive](#)

[Research](#)

[Contact and Locations](#)

Radiology Fellowship Programs

The department offers a variety of fellowship programs for individuals who have completed a residency in radiology. The one-year clinical fellowship programs specialize in cardiovascular and interventional radiology, women's imaging, thoracic radiology, emergency radiology, cross-sectional intervention, abdominal imaging, magnetic resonance imaging, ultrasound, or other fields. Each fellowship provides clinical training in all types of related examinations and wide opportunities for research supervised by senior staff members engaged in ongoing investigations. The experience is closely coordinated with activities in related clinical and surgical specialties.

Fellowship Programs

[Abdominal Imaging and Intervention](#)

[Angiography and Interventional Radiology](#)

[Breast Imaging](#)

[Cancer Imaging Program \(Dana-Farber Cancer Institute\)](#)

[Cardiovascular Imaging](#)

[Emergency Radiology](#)

[Image-Guided Therapy](#)

[Medical Informatics](#)

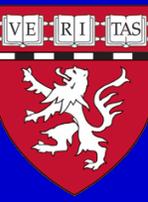
[Musculoskeletal Imaging and Intervention](#)

[Neuroradiology](#)

[Thoracic Imaging](#)

[Women's Imaging](#)

Brigham and Women's Radiology department is a participant in the fellowship match. Interviews begin approximately 21 months prior to fellowship start dates (Fall of third year of residency.) Applications should be requested in the preceding months. No applicant will be hired without a personal interview. For more information, contact the director of the individual program of interest.



Fellowship Ombudsperon



Mary Frates MD
Ultrasound



New Models For Radiology Education

PGY 1 PGY 2 PGY 3 PGY 4 PGY 5 PGY 6

Traditional Model

Intern RAD 1 RAD 2 RAD 3 RAD 4 Fellow

3+1+1

Intern RAD 1 RAD 2 RAD 3 RAD 4 Fellow

3+2

↑
Core Exam

Intern RAD 1 RAD 2 RAD 3 RAD 4 & 5

↑
Core Exam

New Models For Radiology Education



Synergies in 4th & 5th years at BWH

Abdomen & Intervention

Eye & Ear

Nuclear Medicine

Angio-Interventional

Informatics

**Pediatrics
(Boston Children's)**

Breast

MSK

Research

Cardiovascular

Neuroradiology

Thoracic

ER

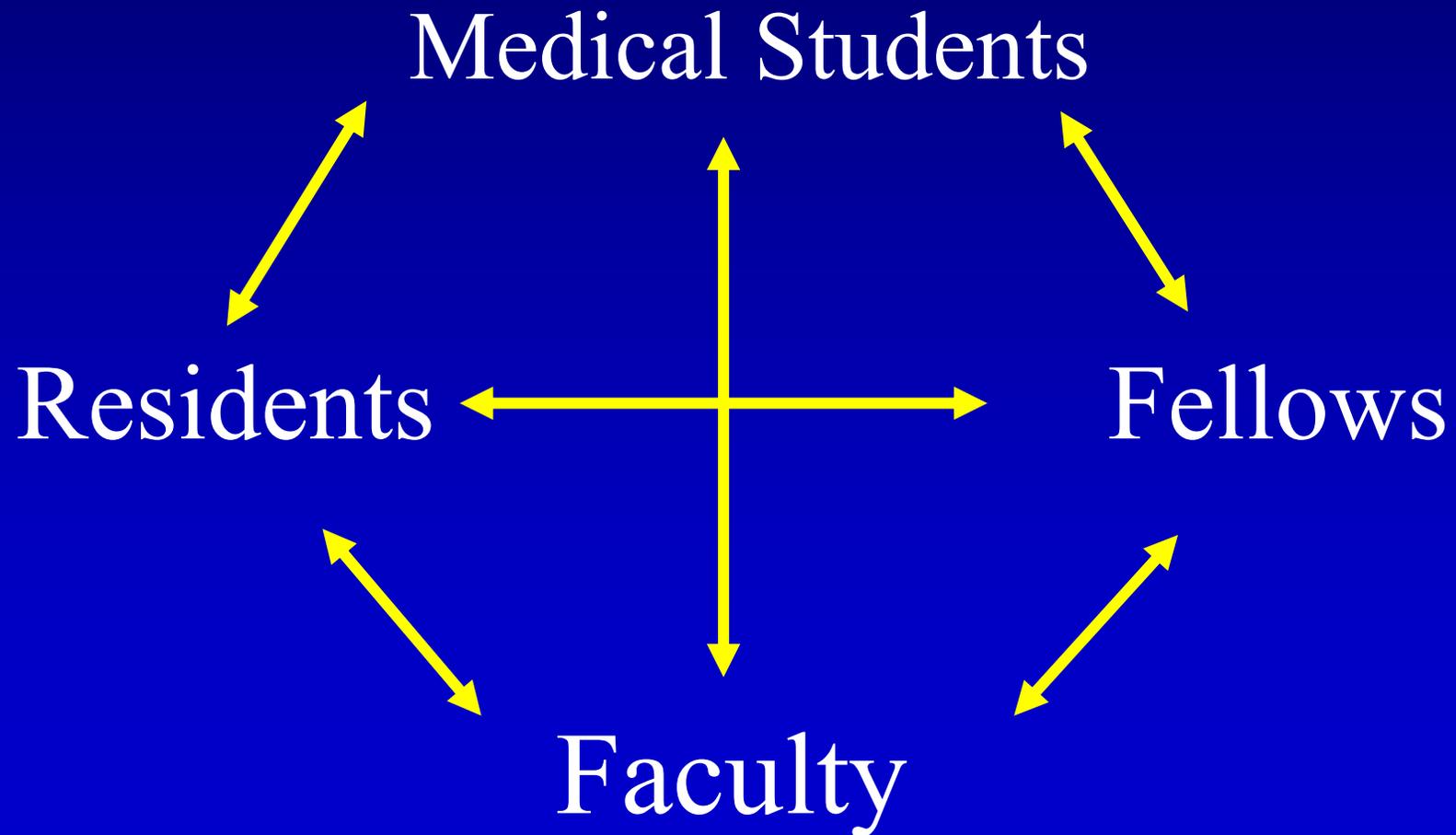
Oncology (Dana Farber)

Ultrasound

Clinician-Scientist Track

Clinician-Educator Track

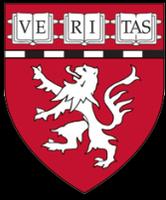
We Want to Recruit you as Educators!!



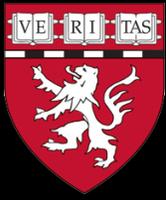
Where Am I?



Brigham & Women's Hospital



Brigham & Women's Hospital



Brigham & Women's Hospital

Dana Farber Cancer Center

Boston Childrens Hospital

Harvard Medical School

Brigham & Womens

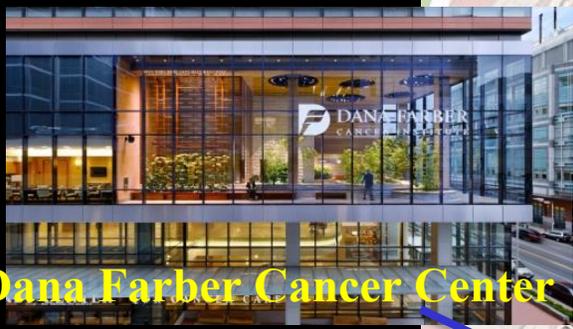
Countway Library

Shapiro CV

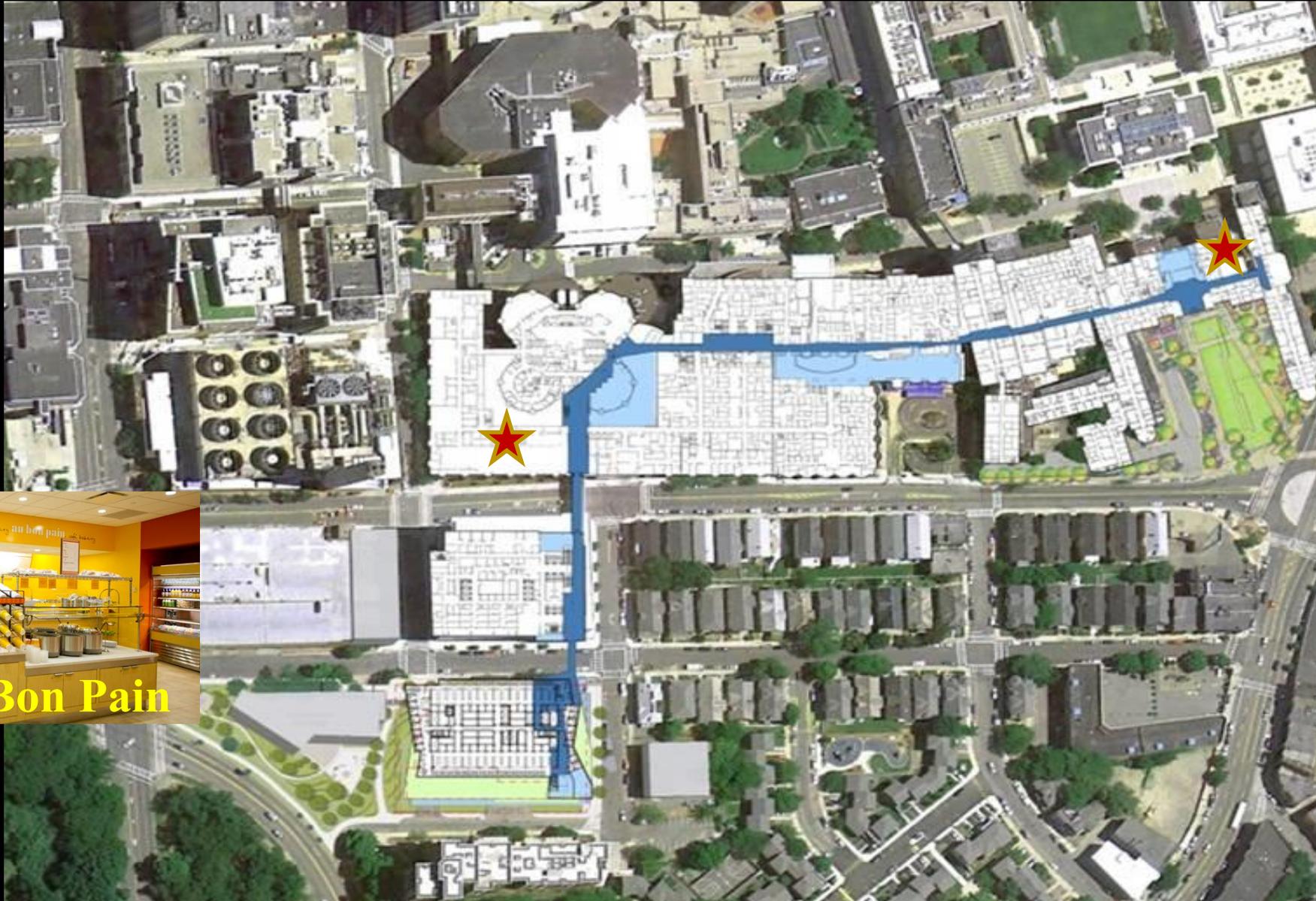
BTM Neuro/MSK

Peter Bent Brigham

Harvard School Public Health



Brigham Arial View



Pat's Place



Au Bon Pain

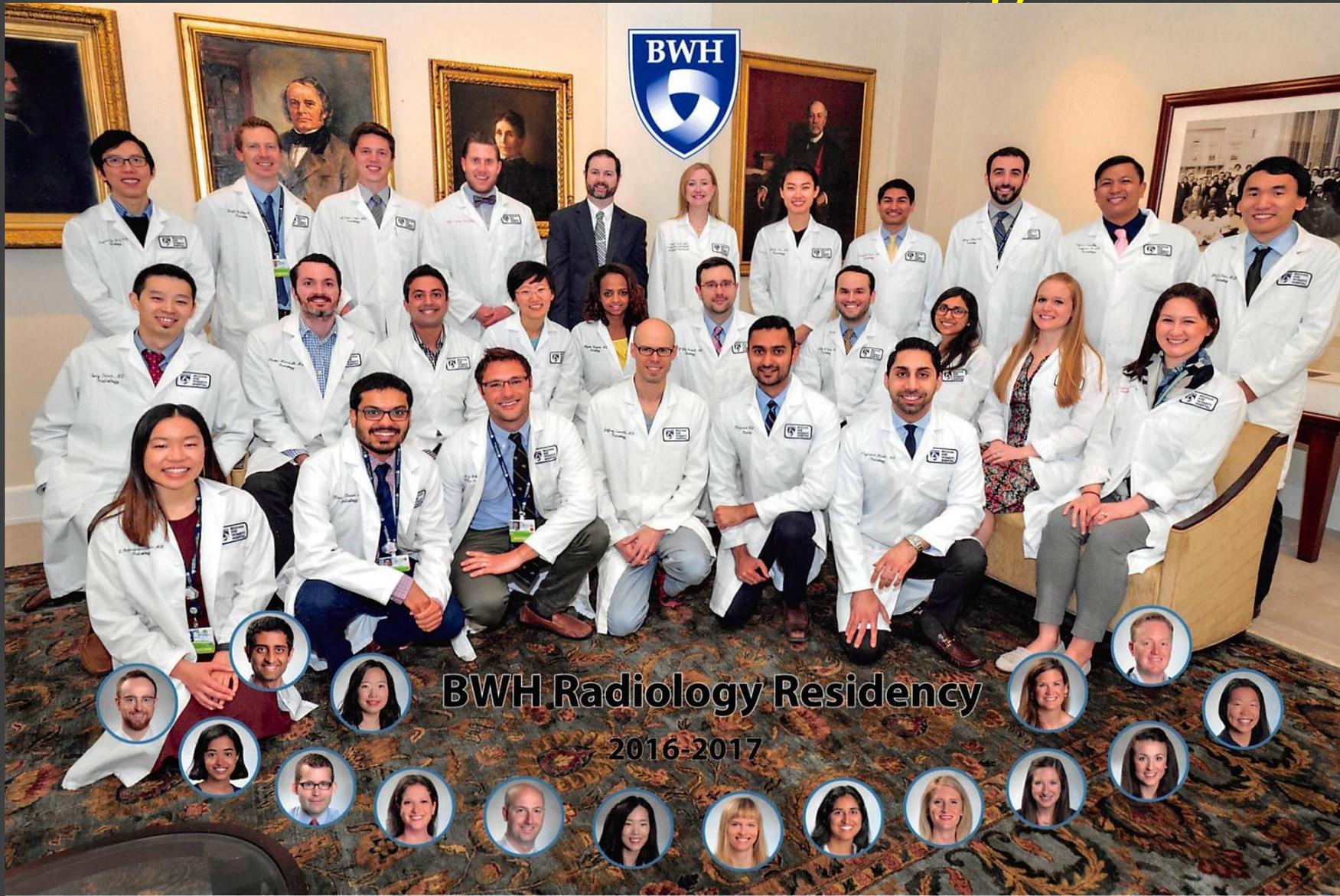


Thank You & Welcome!

- Please reach out to me at any time!
- wmayo-smith@bwh.harvard.edu

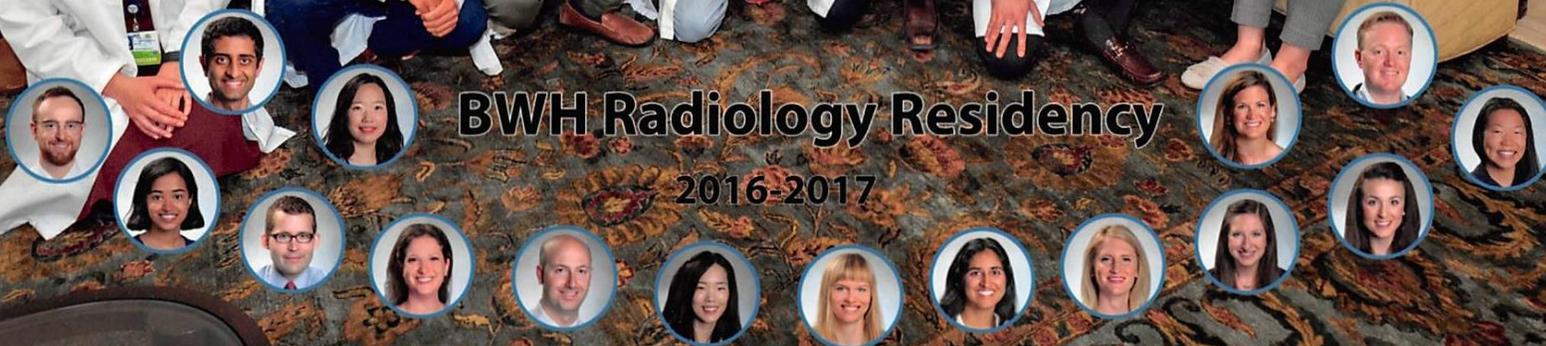


Welcome to the BWH Radiology Residency



BWH Radiology Residency

2016-2017



Meet our DR & IR/DR Residency Education Team



Program Directors – DR & IR/DR



Glenn Gaviola

Program Director
Diagnostic Radiology Residency

Associate Program Director
Interventional Radiology – Integrated Residency (“IR/DR”)

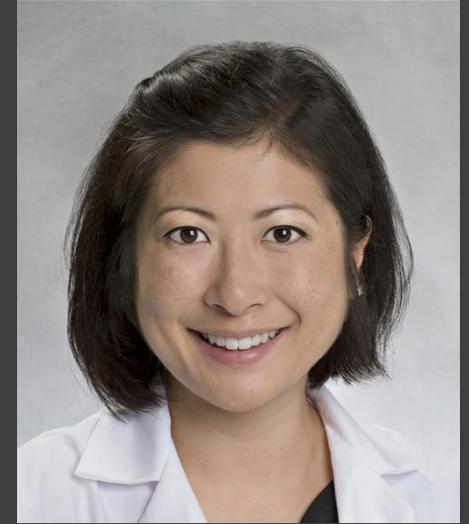


Tim Killoran

Program Director
Interventional Radiology – Integrated Residency (“IR/DR”)

Interventional Radiology Fellowship Program

Associate Program Directors - DR



Associate Program Directors - DR



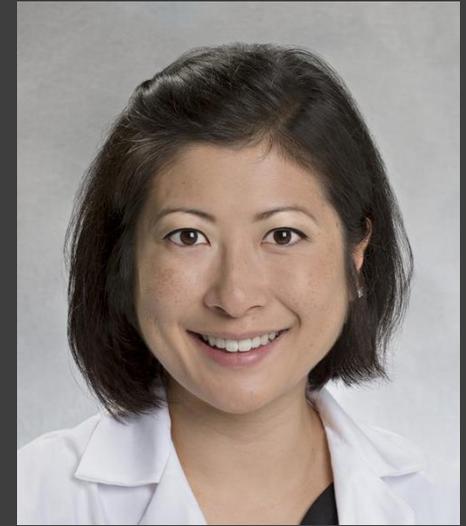
Sona Chikarmane

- Chair, Clinical Competency Committee
- Provides semi-annual reviews and summaries of resident progress
- Oversees ACGME Milestones of Core Competencies



Shanna Matalon

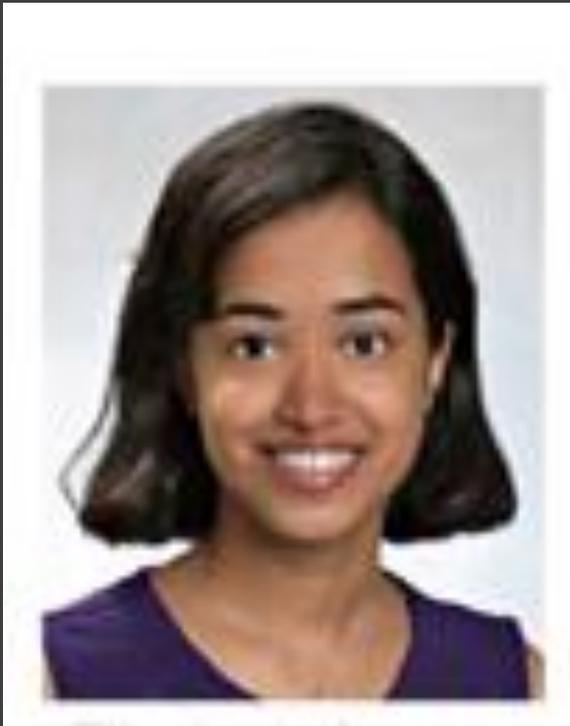
- Director, Recruitment & Resident Selection
- Manages the interview season and selection process of new residents
- Assists in new and innovative teaching and curricular designs



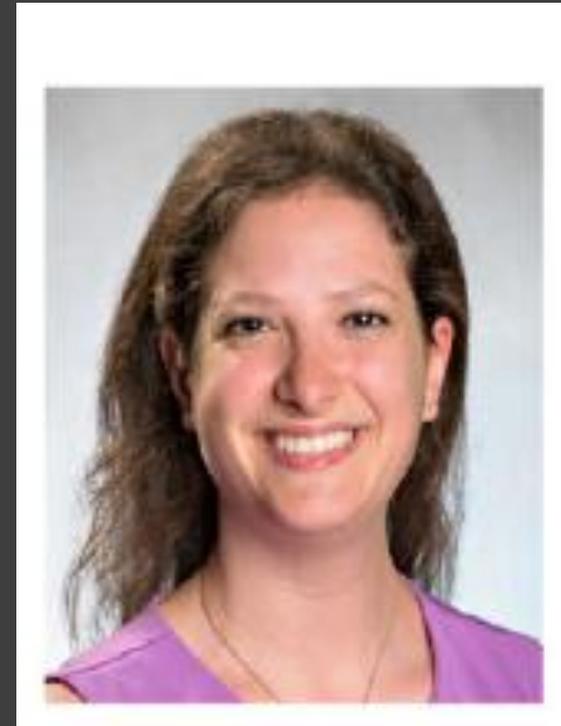
Jen Uyeda

- Director, First-Year Advising Program
- Provides all first-year and semi-annual evaluations
- Oversees resident mentoring program

Chief Residents 2018-19



Elizabeth George



Shahar Glomski

...will provide more detailed orientation session this AM

Program Coordinators



Program Coordinators



Julie Correia



Sandi Palma

Program Coordinators



Julie Correia

- Recruitment IR/DR Program
- Resident Conference Schedule
- Graduation Activities
- Alumni Development/Mellins Society/Residency Historian
- IR Fellowship Coordinator



Sandi Palma

- Recruitment DR Program
- New Innovations
- Case Log Reporting & ABR Accounts
- BWH/ MGH Resident Coordination
- Coordinate, Standardize and Centralize Fellowship Programs electronically

Program Coordinators



Julie Correia

- Recruitment IR/DR Program
- Resident Conference Schedule
- Graduation Activities
- Alumni Development/Mellins Society/Residency Historian
- IR Fellowship Coordinator



Katie Garney

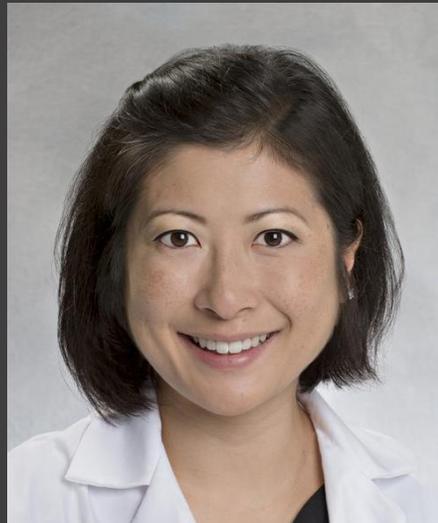
- HMS medical student coordinator
- Assists Program Coordinators with resident education matters



Sandi Palma

- Recruitment DR Program
- New Innovations
- Case Log Reporting & ABR Accounts
- BWH/ MGH Resident Coordination
- Coordinate, Standardize and Centralize Fellowship Programs electronically

Meet our DR & IR/DR Residency Education Team



Resources : New Innovations

The screenshot shows a web browser window displaying the 'Partners Health Care System' interface. The browser's address bar shows the URL <https://www.new-innov.com/Login/Home.aspx>. The page title is 'Partners Health Care System'. The navigation menu includes: Administration, Personnel, Schedules, Evaluations, Duty Hours, Logger, Conferences, Portfolio, and More. The user is logged in as 'GCG1' under the 'PARTNERS' system. The main content area is titled 'Welcome to New Innovations' and includes a welcome message for Glenn Gaviola M.D. and a group photo of the radiology department. A notice regarding Independence Day office closures is also present.

Partners Health Care System

BWH - RAD - Radiology Diagnostic | Glenn Gaviola | Help

Administration Personnel Schedules Evaluations Duty Hours Logger Conferences Portfolio More

Welcome to New Innovations

Username: **GCG1** (change) Logged into: **PARTNERS** Notices & Setup | Save Page Layout

Welcome: Glenn Gaviola M.D.

BWH - Dept. of Radiology/BWH - RAD - Radiology Diagnostic

NI Alerts and Information

Recent Enhancements (updated on 5/31/2018)

NI Conferences

Sign-Up for Email Updates

In observance of Independence Day, our offices will be closed Wednesday, July 4th. We will reopen at 8:00 AM EDT on Thursday, July 5th, 2018. You will still be able to access our software during this time.



System-Wide Notices (1)

For assistance with New Innovations you may call New Innovations at 330-899-9954 (8am-6pm) or email them from the Help Menu. You may also email the Partners Office for GME: phsgmeresmgt@partners.org.

Resources : New Innovations

Partners Health Care System

BWH - RAD - Radiology Diagnostic | Glenn Gaviola | Help

Administration Personnel Schedules **Evaluations** Duty Hours Logger Conferences Portfolio More

Welcome to New Innovations

Username: **GCG1** (change) Logged into: **PARTNERS** Notices & Setup | Save Page Layout

Welcome: Glenn Gaviola M.D.

BWH - Dept. of Radiology/BWH - RAD - Radiology Diagnostic

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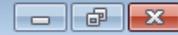
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Partners Health Care System

Conference Calendar View

Calendar Listing By Week Listing By Date

Display

Go to this date: Go

Highlight Click to highlight similar conferences

Custom View

Daily Conferences 7:45-8:30AM & 12-1PM

Print Friendly View

7/1/2018 to 8/12/2018



[Month](#) | [Week](#) | [Day](#) | [Agenda](#)



Sun	Mon	Tue	Wed	Thu	Fri	Sat
Jul 1 9:00a-11:00a New Trainee Orientation - EPIC Training	2 7:45a-8:30a New Innovations - "Evaluation of Program" - Protected time to Complete 8:30a-6:30p New Trainees Only - Hospital Orientation 12:15p-1:00p Luncheon with the New Chiefs R2, 3 & 4's	3 7:00a-3:00p New Trainees Only - Department Orientation 7:45a-8:30a Wellness Time 12:15p-1:00p New Trainees & Residents Lunch Patient Experience & Radiation Safety	4 7:45a-9:15a July 4th Holiday - No Conferences	5 7:45a-8:30a Resident Staff Meeting 12:15p-1:00p Brigham Education Institute - Wealth of Resources	6 7:45a-8:30a Neuroradiology 12:15p-1:00p Stroke	7
8	9 7:45a-8:30a Acute Abdomen-GI- Alan Yu 12:15p-1:00p ED Case Conference	10 12:15p-2:00p Resident Present CV 2018	11 7:45a-8:30a Chest/Thoracic 12:15p-1:00p Lung Cancer Staging-Suzanne	12 7:45a-8:30a Program Director Rounds 12:15p-1:00p Introduction to Protocols	13 7:45a-8:30a Breast Case Conference 12:15p-1:00p Breast Pathology	14
15	16 7:45a-8:30a Senior Case Conference	17 7:45a-8:30a Wellness - Preventing	18 7:45a-8:30a Introduction to Abdominal	19 7:45a-8:30a Chief's Open Forum	20 7:45a-8:30a iPite a Radiology report in	21



**BWH Radiology Residency AY18-19
RESIDENT CONFERENCE 4-WEEK MONTHLY SCHEDULE TEMPLATE**

CHOOOL

Monday	Tuesday	Wednesday	Thursday	Friday
3 QUALITY & PATIENT SAFETY Conference (AM) Difficult Cases QA Conference (PM)	4 GRAND ROUNDS and Guest Speaker Case Conf -or- CARDIAC/VASC/ MOLECULAR IMAGING Case and Didactic Conference	5 ULTRASOUND Case and Didactic Conference	6 RESIDENT STAFF Meeting (AM) PHYSICS (PM)	7 NEURORADIOLOGY & HEAD/NECK Case and Didactic Conference
10 EMERGENCY RADIOLOGY Case and Didactic Conference	11 GRAND ROUNDS and Guest Speaker Case Conf -or- CARDIAC/VASC/ MOLECULAR IMAGING Case and Didactic Conference	12 CHEST/THORACIC Case and Didactic Conference	13 PROGRAM DIRECTOR Rounds Conference (AM) PHYSICS (PM)	14 BREAST IMAGING Case and Didactic Conference
Senior Resident Case Conference (AM) RAD-PATH Conference (PM)	18 GRAND ROUNDS and Guest Speaker Case Conf -or- CARDIAC/VASC/ MOLECULAR IMAGING Case and Didactic Conference	19 ABDOMINAL IMAGING & INTERVENTION (GI/GU) Case and Didactic Conference	20 Beyond Interpretation Business, Research & Education Curriculum (Fall) -or- Board Review (Spring) (AM) PHYSICS (PM)	21 DFCI ONCORADIOLOGY Case and Didactic Conference (Jul, Aug, Dec, Feb, May, June) -or- NERRS MEETING NO CONF (Sept, Oct, Nov, Jan, Mar, Apr)
24 ANGIO/IR Case and Didactic Conference	25 GRAND ROUNDS and Guest Speaker Case Conf -or- CARDIAC/VASC/ MOLECULAR IMAGING Case and Didactic Conference	26 NUCLEAR MEDICINE Case and Didactic Conference	27 Beyond Interpretation General Competencies (Fall) -or- Board Review (Spring) (AM) PHYSICS (PM)	28 MSK IMAGING & INTERVENTION Case and Didactic Conference

Resources : Residency Intranet "RadCommons"

The screenshot shows a web browser window with the URL <https://www.radcommons.org/residents/index.htm>. The browser tabs include "New Innovations Residency M..." and "BWH Radiology Resident R...". The website header features the Brigham Health logo and navigation links: "Main Menu", "Quick References", "Important Links", and "Misc Links".

Radiology Resident Resources

Residency Leadership

Residency Administrative Coordinator	✉ Julie Ann Correia
Residency Administrative Coordinator	✉ Sandra Palma
Program Director	✉ Glenn Gaviola, MD
Associate Residency Program Director	✉ Jennifer Uyeda, MD
Associate Residency Program Director	✉ Sona Chikarmane, MD

Current Residents

Year 1	Year 2	Year 3	Year 4
--------	--------	--------	--------

Resources : Residency Intranet "RadCommons"

The screenshot displays the RadCommons Residency Intranet website. The browser address bar shows the URL <https://www.radcommons.org/residents/index.htm>. The website header includes the Brigham Health logo and the text "BRIGHAM AND WOMEN'S Department of Radiology". A navigation menu is open, showing the following items: Home, Phone List, Protocols, Contrast Guidelines, Resident Docs, Resident Guide 2018-2019, Sections, Physics, Rad Path, Missed Cases, Brant and Helms, MRI Level Two, Safety Trainings, and Med Student Teaching. The main content area features a "Radiology Resources" section with a "Residency Leaders" list including roles like "Residency Administrative Co" and "Program Director". Below this is a "Current Residents" section with columns for "Year 1", "Year 2", "Year 3", and "Year 4".

Resources : Residency Intranet "RadCommons"

The screenshot shows a web browser window with the URL <https://www.radcommons.org/residents/index.htm>. The page header includes the Brigham Health logo and navigation links: Main Menu, Quick References, Important Links, and Misc Links. A dropdown menu is open under "Quick References", listing various resources such as ACR Appropriateness Criteria, ACR Incidental Findings, ADA Teeth Numbering, Baclofen Pump Clearance, Cervical Lymph Nodes, CSF Shunt Valve, CSF Shunt Valve 2, E-anatomy, Fleischer Criteria for SPN, Mediastinal Lymph Nodes, Statdx, RADPrimer, Retained Objects, and Sona Chikarmane, MD. The main content area is titled "Radiology Resident" and features sections for "Residency Leadership" and "Current Residents". The "Residency Leadership" section lists roles like Residency Administrative Coordinator and Program Director. The "Current Residents" section is organized by year (Year 1 to Year 4) and includes an "Email Class" link for each year.

BRIGHAM HEALTH
BRIGHAM AND WOMEN'S
Department of Radiology

Main Menu ▾ Quick References ▾ Important Links ▾ Misc Links ▾

Radiology Resident

Residency Leadership

Residency Administrative Coordinator	✕
Residency Administrative Coordinator	✕
Program Director	✕
Associate Residency Program Director	✕
Associate Residency Program Director	✕ Sona Chikarmane, MD

Current Residents

Year 1	Year 2	Year 3	Year 4
✕ Email Class	✕ Email Class	✕ Email Class	✕ Email Class

Resources : Residency Intranet “RadCommons”

The screenshot shows a web browser window with the URL <https://www.radcommons.org/residents/index.htm>. The page header includes the Brigham Health logo and navigation links: Main Menu, Quick References, Important Links, and Misc Links. The main content area is titled "Radiology Resident Resource" and features a section for "Residency Leadership" with a table of roles and names. A dropdown menu is open under "Important Links", listing various services and systems.

Residency Leadership	
Residency Administrative Coordinator	✉ Julie Ann Correia
Residency Administrative Coordinator	✉ Sandra Palma
Program Director	✉ Glenn Gaviola, MD
Associate Residency Program Director	✉ Jennifer Uyeda, MD
Associate Residency Program Director	✉ Sona Chikarmane, MD

Current Residents

Year 1	Year 2	Year 3	Year 4
✉ Email Class	✉ Email Class	✉ Email Class	✉ Email Class

Important Links

- Research Administration
- Amion
- ANCR
- BEI (BWH Education Institute)
- Book Fund
- Healthstream
- HI-IQ
- IT Services
- New Innovation
- Outlook Web
- Paging System
- PeopleSoft
- PikeNotes
- REDCap
- Remote Login

Resources : Residency Intranet "RadCommons"

The screenshot shows a web browser window with the URL <https://www.radcommons.org/residents/index.htm>. The page header includes the Brigham Health logo and navigation links: Main Menu, Quick References, Important Links, and Misc Links. The Misc Links dropdown menu is open, listing: Radiologyanalytics, BWH-Haiti Teleradiology, CITI Program, Partners Research Portal, Radiology Research Projects Database, and VITREA. The main content area is titled "Radiology Resident Resources" and features a "Residency Leadership" section with the following roles and names:

Role	Name
Residency Administrative Coordinator	Julie Ann Correia
Residency Administrative Coordinator	Sandra Palma
Program Director	Glenn Gaviola, MD
Associate Residency Program Director	Jennifer Uyeda, MD
Associate Residency Program Director	Sona Chikarmane, MD

Below the leadership section is a "Current Residents" section with columns for Year 1, Year 2, Year 3, and Year 4. Each column contains an "Email Class" link.

Resources : Social Media

...and don't forget to follow us on social media !

Twitter: <https://twitter.com/BWHRadEdu>

Instagram: @bwhradres

Facebook: <https://www.facebook.com/groups/1771066446504749/>

Resources : Social Media

...and don't forget to follow us on social media

Twitter: <https://twitter.com/BWHRadEdu>

Instagram: [@bwhradres](https://www.instagram.com/bwhradres)

Facebook: <https://www.facebook.com/brighamandwomensradiologyeducation>
[6504749/](https://www.facebook.com/brighamandwomensradiologyeducation)

BWH Radiology Education
@BWHRadEdu
Brigham and Women's Hospital, Dept of Radiology, Education & Training
Boston, MA
brighamandwomens.org/radiology/educ...
Joined May 2018

Tweets Tweets & replies Media

BWH Radiology Education @BWHRadEdu · Jun 28
Happy birthday to our residency program director, Glenn!

BWH Radiology Education Retweeted
Harvard Macy @hanvardmacy · Jun 27
What are the job roles of the 2025 medical educator? @debsimpson3 @KMarcdante @KevinHSouza @rcahird and @boaedudley discuss in their @JournalofGME editorial. A few include Diagnostic Assessor, Content Curator, Technology Adopter, Professional Coach. #HMAAssessment #MedEd #AcMed

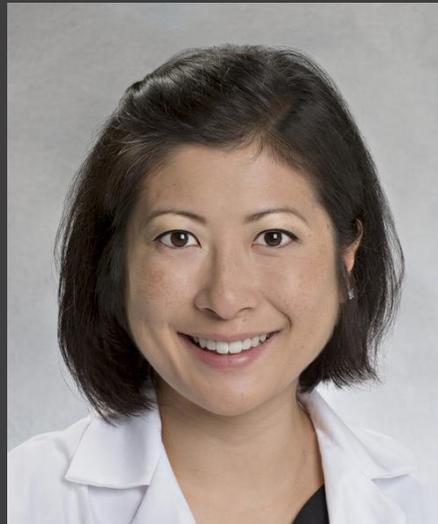
What are the Job Roles of the 2025 Medical Educator?

BWH Radiology Education @BWHRadEdu · Jun 28
The official passing of The Bat from the graduating chiefs (@gunetty and Tony) to rising chiefs (@LizzRad and Shahr)! #radres #radchiefs #radleaders

Boston trends
Belgium 431K Tweets
Rick Porcello
Rondo The Lakers' roster continues to take shape as they add Rondo and lose Randle
Martha's Vineyard 13.7K Tweets
#BELIAP 121K Tweets
#DragRace 1,776 Tweets
Japan World Cup fans are heartbroken for Japan
Julius Randle 46.5K Tweets
Alan Dershowitz 19.6K Tweets
#WorldUFODay 11K Tweets

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Welcome to your new home & family!



BRIGHAM HEALTH



**BRIGHAM AND
WOMEN'S HOSPITAL**

BWH Radiology Research

July 3, 2018

Patti Goldberger

Director of Research and Education



**HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL**

A FOUNDING MEMBER OF



Overview

- BWH Radiology Research Portfolio
- Research Resources for Trainees

BRIGHAM HEALTH



**BRIGHAM AND
WOMEN'S HOSPITAL**



**HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL**

BWH Radiology Research Portfolio

Radiology Research Personnel & Active Funding Support

Research Personnel (n = 227)

Clinical Faculty:	27
Research Faculty*:	56
Research Fellows:	26
Research Administration:	4.5
Research Support Staff:	30
POI Sponsored Staff:	6
POI Collaborators/Other:	26
POI Research Trainees:	51

***Faculty 100% Research Funded 45**

Active Research Funds (n = 236)

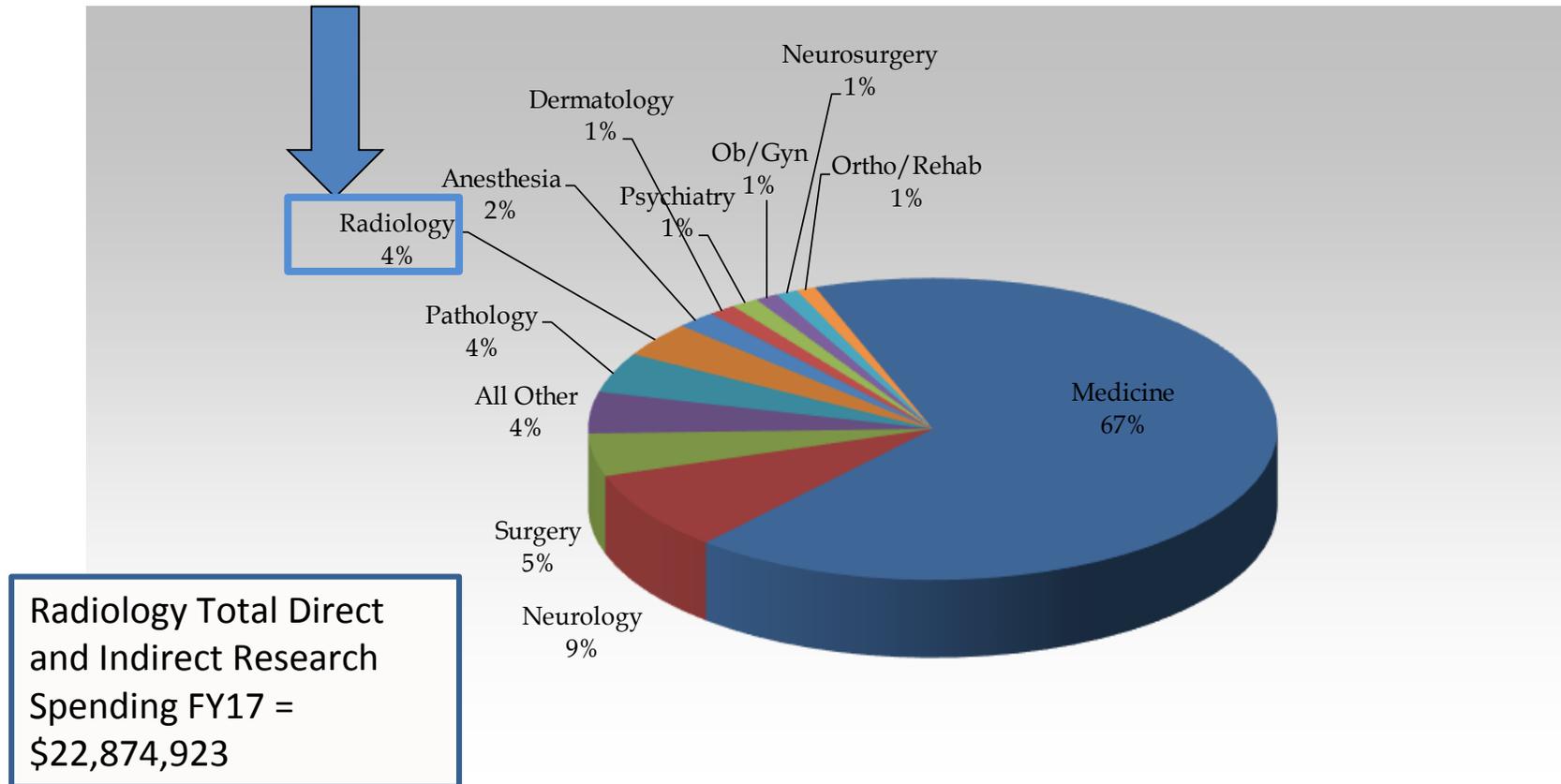
Total Costs Available as of 6/27/2018:

\$29,685,136

NIH:	47
Other Federal:	12
Non-Profits:	56
Industry:	34
Internal:	9
Sundry:	78

BWH Total Research Revenue by Dept. FY2017

FY2017 Direct + Indirect Research Revenue by Department = \$685M



FY17 NIH Grants and Awards

Departments of Diagnostic Radiology

	<u>Institute</u>	<u>Amount Awarded</u>
1	Massachusetts General Hospital	\$ 66,861,100
2	Univ Of Pennsylvania Sch Of Medicine	\$ 56,631,193
3	Stanford University Sch Of Medicine	\$ 43,572,313
4	Univ Of California San Fran Sch Of Med	\$ 40,192,681
5	Washington University Sch Of Medicine	\$ 23,013,204
6	Johns Hopkins University Sch Of Medicine	\$ 18,664,452
7	Memorial Sloan Kettering Cancer Center	\$ 18,585,884
8	Mayo Clinic	\$ 16,548,103
9	Yale University Sch Of Medicine	\$ 15,073,576
10	<i>Brigham and Women's Hospital</i>	\$ 14,143,002
11	University Of Michigan Medical School	
12	University of Minnesota Medical School	

BWH was #8 with \$14,202,018 in NIH funding in FY16

Total Direct Cost Research Expenditures – FY16 to FY17

Sponsor Type	TDC YTD – FY16	TDC YTD – FY17	% Change in TDC
All Other Sponsors	\$1,302,903	\$1,619,746	24.3%
DHHS	\$9,080,341	\$9,309,592	2.5%
Fed Subcontracts	\$1,300,963	\$978,539	(24.8%)
Foundations	\$128,343	\$353,845	175.7%
Industry	\$1,702,766	\$2,293,767	34.7%
Non-Profit	\$511,376	\$860,405	72.2%
Other Federal	\$217,079	\$200,780	(7.5%)
Total	\$14,243,771	\$15,636,675	9.8%

BRIGHAM HEALTH



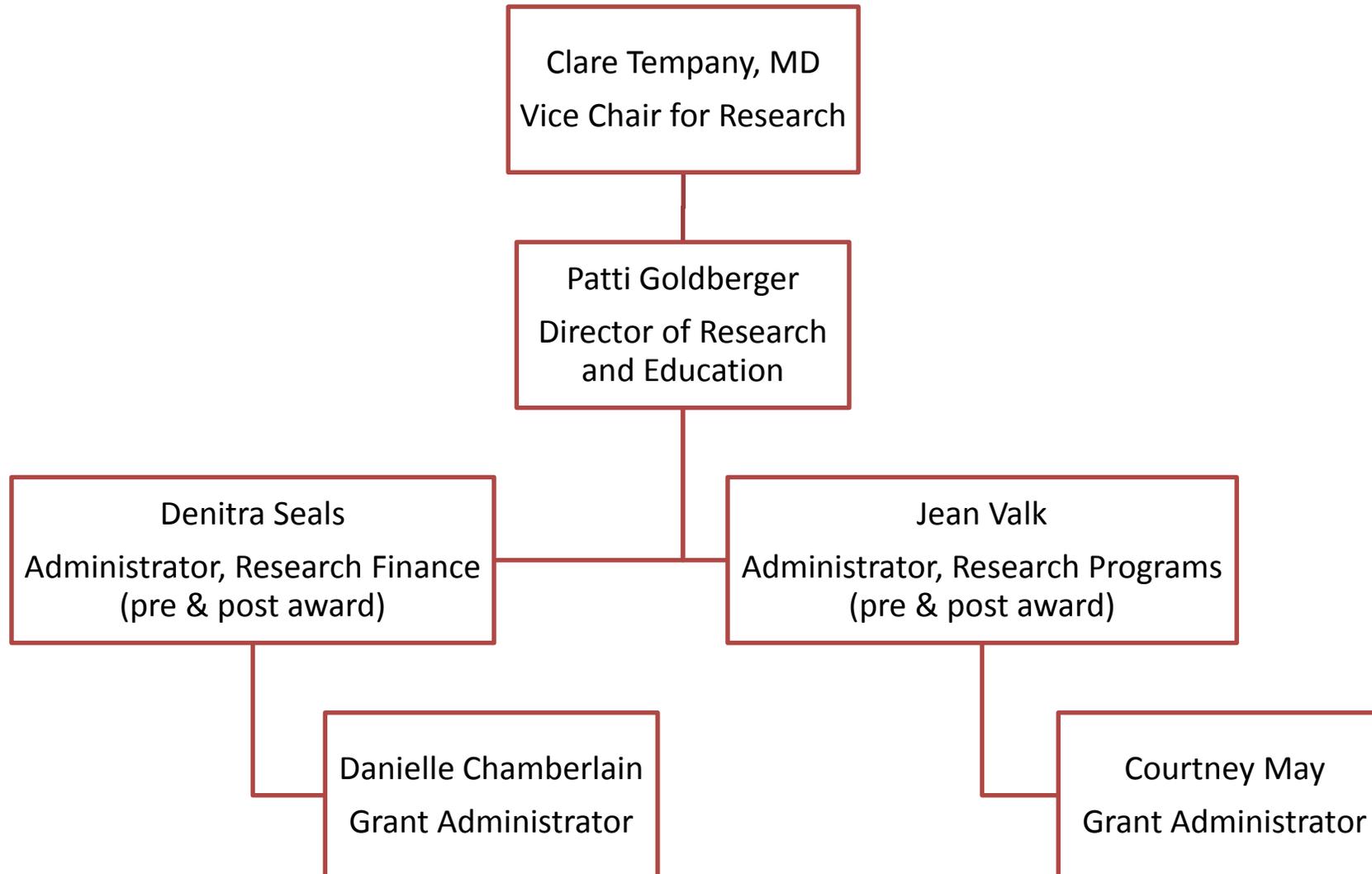
BRIGHAM AND
WOMEN'S HOSPITAL



HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

Research Resources for Trainees

Radiology Research Administration (RRA)





Radiology Research Administration

- What We Do
 - Make Radiology Research Administration an efficient and dependable source of information and guidance for Radiology researchers
 - Provide advice to researchers on BWH, Partners and Sponsor regulations and compliance issues
 - Provide accurate and timely account information, reporting and closeout of accounts
 - Provide prompt review of grant applications
 - Provide information on governmental grant and other funding opportunities

Radiology Research Web Sites

- Public Facing Internet:
 - [BWH Radiology Research](https://www.brighamandwomens.org/radiology/research) -
<https://www.brighamandwomens.org/radiology/research>
 - [BWH Research Imaging Core](https://www.brighamandwomens.org/radiology/research-imaging-core/bwh-research-imaging-core-bric) -
<https://www.brighamandwomens.org/radiology/research-imaging-core/bwh-research-imaging-core-bric>

Radiology Research Web Sites

- Intranet Site
 - <https://www.radcommons.org/residents/index.htm>

Internal Resources Available for Research

- **Biostatistical Support**
 - **As of August 1st – Department Biostatistician, Camden Bay, PhD**
 - BWH Center for Clinical Investigation Biostatistics Consulting Service
<https://www.brighamandwomens.org/research/center-for-clinical-investigation/biostatistics-consultation-services>
 - Harvard Catalyst Biostatistical Consulting Program
<https://catalyst.harvard.edu/services/biostatsconsult/>
- **Resource for Determining Patient Cohorts**
 - Research Patient Data Registry (RPDR) a centralized clinical data registry or data warehouse available to Partners researchers for user-defined querying to obtain aggregate patient totals, and, with proper IRB approval, obtain detailed clinical data. <http://rc.partners.org/rpdr>

R&D Pilot Imaging

- **Scheduling Pilot Imaging**
 - There is an approved mechanism for scheduling R&D human subject scans.
 - Can apply for up to 10 pilot scans per project



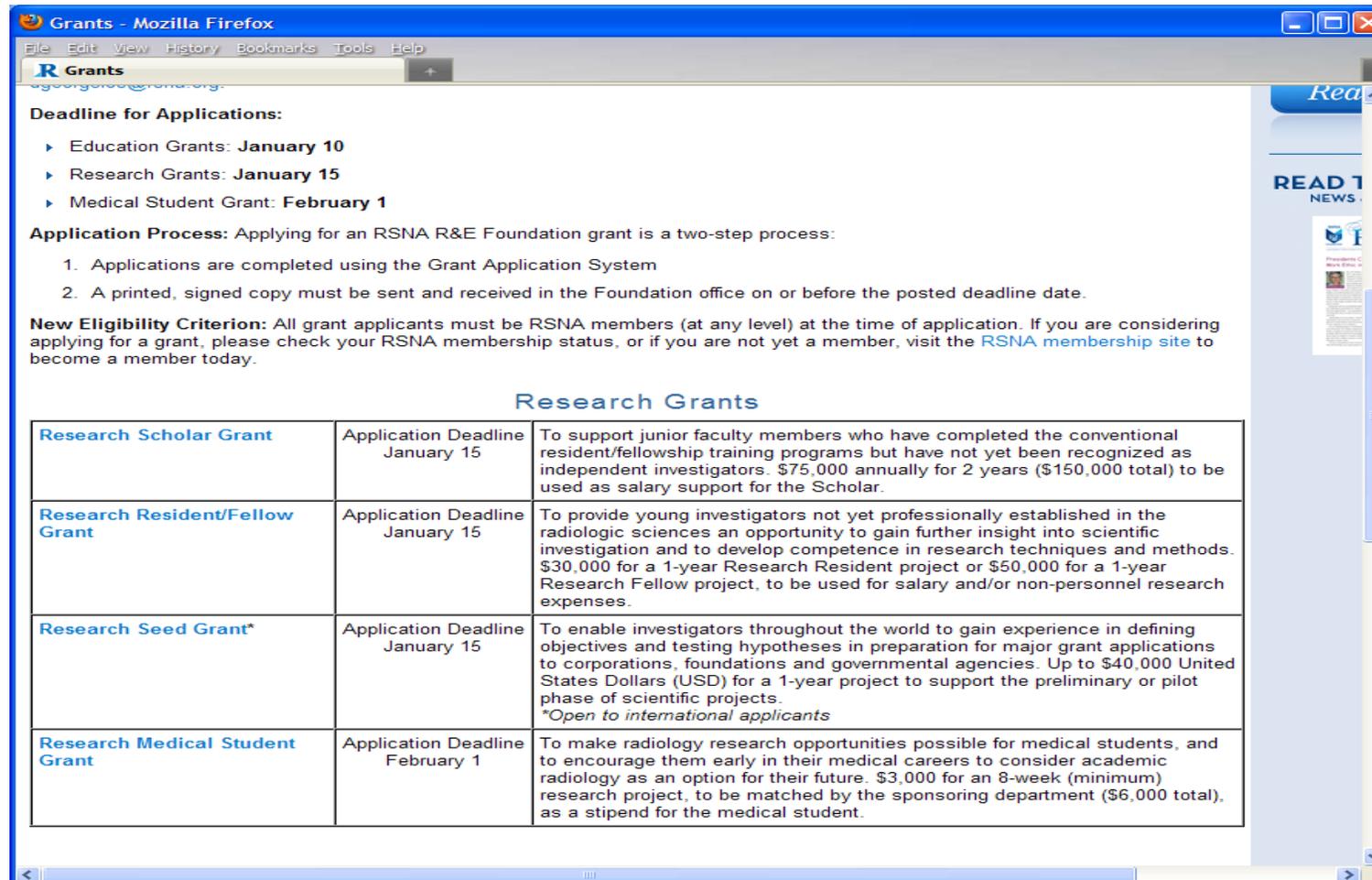


BWH Research Institute (BRI)



- Live Lunch Series
- Research Connection
Emails & Events
- Funding Opportunities

RSNA R&E Foundation Research Grants



Deadline for Applications:

- ▶ Education Grants: **January 10**
- ▶ Research Grants: **January 15**
- ▶ Medical Student Grant: **February 1**

Application Process: Applying for an RSNA R&E Foundation grant is a two-step process:

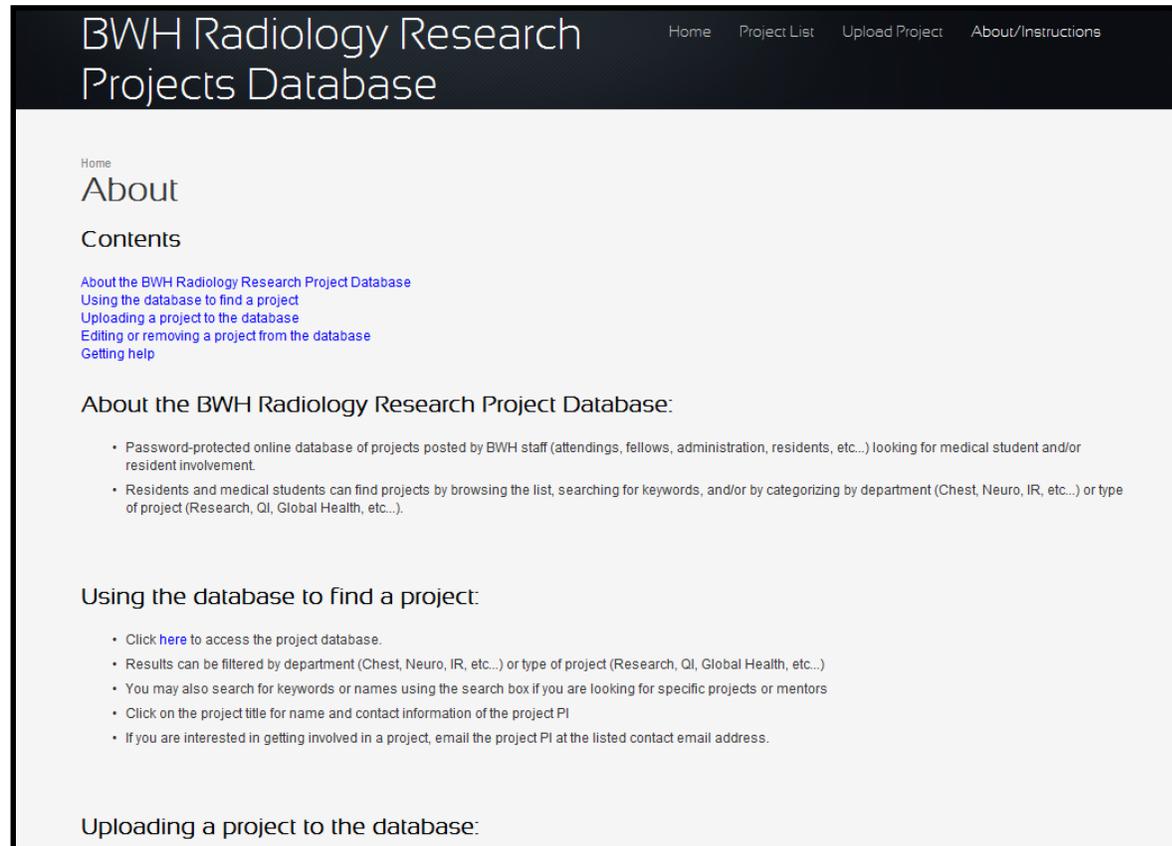
1. Applications are completed using the Grant Application System
2. A printed, signed copy must be sent and received in the Foundation office on or before the posted deadline date.

New Eligibility Criterion: All grant applicants must be RSNA members (at any level) at the time of application. If you are considering applying for a grant, please check your RSNA membership status, or if you are not yet a member, visit the [RSNA membership site](#) to become a member today.

Research Grants

Research Scholar Grant	Application Deadline January 15	To support junior faculty members who have completed the conventional resident/fellowship training programs but have not yet been recognized as independent investigators. \$75,000 annually for 2 years (\$150,000 total) to be used as salary support for the Scholar.
Research Resident/Fellow Grant	Application Deadline January 15	To provide young investigators not yet professionally established in the radiologic sciences an opportunity to gain further insight into scientific investigation and to develop competence in research techniques and methods. \$30,000 for a 1-year Research Resident project or \$50,000 for a 1-year Research Fellow project, to be used for salary and/or non-personnel research expenses.
Research Seed Grant*	Application Deadline January 15	To enable investigators throughout the world to gain experience in defining objectives and testing hypotheses in preparation for major grant applications to corporations, foundations and governmental agencies. Up to \$40,000 United States Dollars (USD) for a 1-year project to support the preliminary or pilot phase of scientific projects. <i>*Open to international applicants</i>
Research Medical Student Grant	Application Deadline February 1	To make radiology research opportunities possible for medical students, and to encourage them early in their medical careers to consider academic radiology as an option for their future. \$3,000 for an 8-week (minimum) research project, to be matched by the sponsoring department (\$6,000 total), as a stipend for the medical student.

Searchable Database to Match Trainees with Research Opportunities



The screenshot shows the homepage of the BWH Radiology Research Projects Database. The header includes the site title and navigation links: Home, Project List, Upload Project, and About/Instructions. The main content area features a sidebar with links to Home, About, and Contents. The main text provides an overview of the database, its purpose, and instructions on how to use it to find projects or upload new ones.

**BWH Radiology Research
Projects Database** Home Project List Upload Project About/Instructions

Home
About
Contents

[About the BWH Radiology Research Project Database](#)
[Using the database to find a project](#)
[Uploading a project to the database](#)
[Editing or removing a project from the database](#)
[Getting help](#)

About the BWH Radiology Research Project Database:

- Password-protected online database of projects posted by BWH staff (attendings, fellows, administration, residents, etc...) looking for medical student and/or resident involvement.
- Residents and medical students can find projects by browsing the list, searching for keywords, and/or by categorizing by department (Chest, Neuro, IR, etc...) or type of project (Research, QI, Global Health, etc...).

Using the database to find a project:

- Click [here](#) to access the project database.
- Results can be filtered by department (Chest, Neuro, IR, etc...) or type of project (Research, QI, Global Health, etc...)
- You may also search for keywords or names using the search box if you are looking for specific projects or mentors
- Click on the project title for name and contact information of the project PI
- If you are interested in getting involved in a project, email the project PI at the listed contact email address.

Uploading a project to the database:

<http://radiology.bwh.harvard.edu/research/project-list>

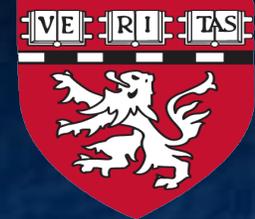
Contact Information

Patti Goldberger

pattig@bwh.harvard.edu

617-525-8758

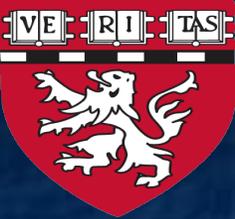
Office – One Brigham Circle, 3rd Floor



Brigham Radiology Orientation ***July 2, 2018***

Clinical Operations

Peter M. Doubilet, MD, PhD
Senior Vice Chair of Radiology



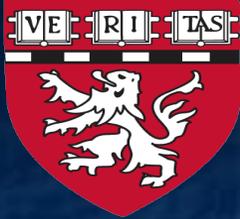
Brigham Radiology Sites of Clinical Operation

- Hospitals
 - Brigham & Women's Hospital
 - Dana Farber Cancer Institute
 - Faulkner Hospital
 - Outpatient Centers
 - 850 Boylston Street
 - Patriot Place
 - Harbor Medical
 - West Bridgewater MRI
 - Coolidge Corner Imaging
 - Vein Centers
 - Newton Corner
 - Foxboro
 - Professional (Interpretive Services) Only
 - Emergency Radiology ("NightWatch")*
 - Compass Medical*
 - Harvard Univ Health Service
- * multiple sites



Structure & Organization

Clinical Operations: BWH/DFCI



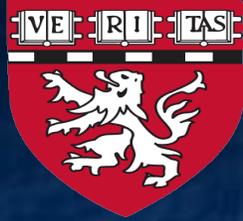
Professional Division	Division Chief (MD)
Chest	Andetta Hunsaker
Musculoskeletal	Stacy Smith
Angio/Interventional	Matthew Schenker
Breast	Catherine Giess
Nuclear Medicine	Marcelo Di Carli
Ultrasound	Carol Benson
Abdomen	Stuart Silverman
Emergency	Aaron Sodickson
Neuroradiology	Diego Nunez
Oncoradiology	Annick van den Abbeele



Modality	Clinical Director
X-Ray: Ambulatory	Michael Delvecchio
X-Ray: Diagnostic	Michael Delvecchio
Angiography	Rose Wach
Mammography	Keri-Leigh Doiron
Nuclear Medicine	Victor Gerbaudo
Ultrasound	Keri-Leigh Doiron
Computed Tomography*	Rose Wach
Magnetic Res. Imaging**	Stuart Hooton
DFCI	Greg Lefever

* Medical Director, CT: [Aaron Sodickson, MD]

** Medical Director, Clinical MRI:
Srinivasan Mukundan, MD

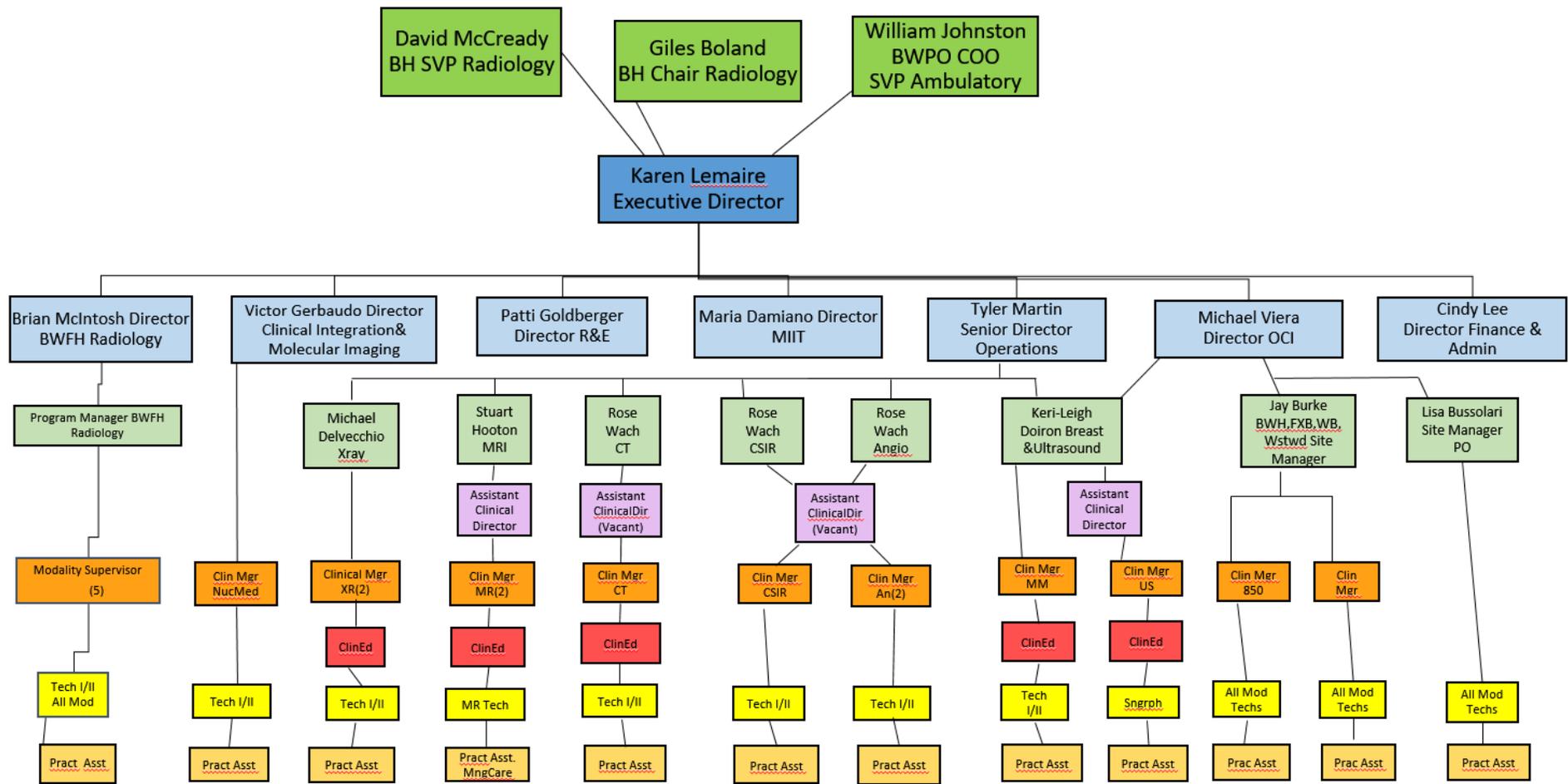


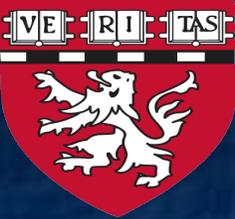
Structure & Organization

Clinical Operations: Other Hospitals & Sites

Hospitals & Professional Groups	Director (MD)
Faulkner Hospital	Stephen Ledbetter
Metro Boston Community Radiology Division	Jessie Chai

Site	Site Director
850 Boylston Street	Keri-Leigh Doiron
Patriot Place (Foxboro)	Jay Burke
West Bridgewater MRI	Jay Burke
Faulkner Hospital	Brian McIntosh
Coolidge Corner Imaging	Lisa Bussolari





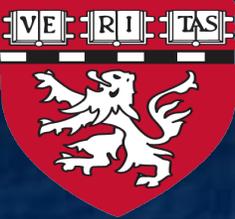
Radiologist: Clinical Functions

- Interpret diagnostic imaging studies
- Perform image-guided interventions
- Notify provider about abnormal/unexpected results
- Consult re patient care: appropriate test selection, ...
- Oversee/protocol studies
- Medical oversight of contrast administration & reactions
- Oversee & document compliance with legal & regulatory rules
- Provide information required for billing



Brigham Radiology Policies

Timeliness of Interpretation & Signing



■ Timeliness of Interpretation

- Cases completed by 4:30 pm M-F should be reviewed by a staff radiologist and dictated on the day of the examination
- All other cases should be reviewed by a staff radiologist and finalized within 24 hours of when the examination was completed

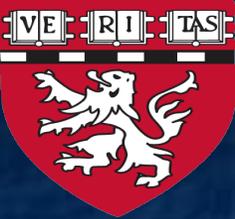
■ Timeliness of Signing

- $\geq 90\%$ signed by attending radiologist within 6 hours

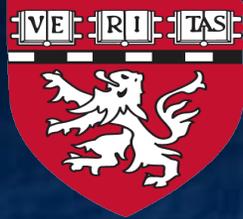


Brigham Radiology Policies

Notification of Abnormal Results

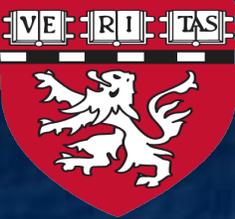


- *Verifiable* notification of the patient's healthcare provider is required when the radiologist determines that an imaging study has new and unexpected findings that could result in mortality or significant morbidity
- Notification timeline:
 - **Red alert**: Immediately life-threatening: <60 minutes
 - **Orange alert**: Urgent (needs Rx within 2-3 days): <3 hours
 - **Yellow alert**: Not urgent but needs evaluation: <15 days
- System: **Alert Notification of Critical Results (ANCR)**

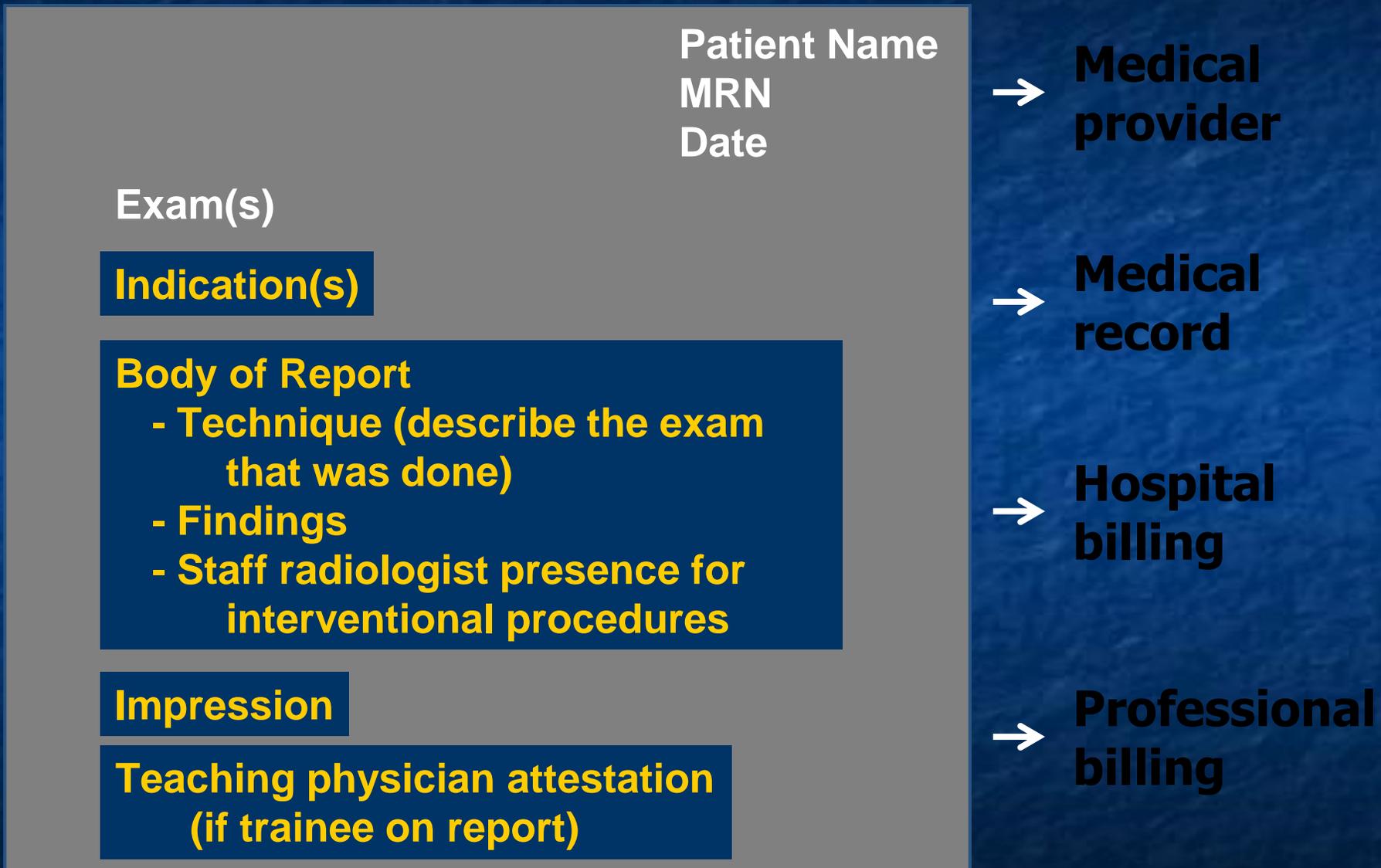


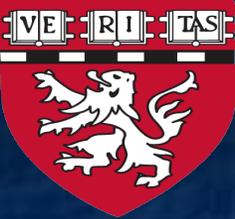
*The Radiology Report is **Our Product***

- **Medical Document for Referring Providers**
 - **Key Features:**
 - Accurate findings and conclusion
 - Rapid turnaround time
- **Compliance/Billing Document**
 - **Key Elements:**
 - Why the exam was done: Signs/Symptoms/Disease
 - What was done: Views/Contrast/Intervention
 - Physician presence for interventional procedures



The Radiology Report





The Radiology Report

Indication

- Indication must be patient symptoms, signs, or *known* disease related to the exam
- State as many indications as available
- For bilateral exam, indication(s) should be bilateral

The Radiology Report *Indication*

- **Acceptable**
 - "Right knee pain"
 - "Cough"
 - "Lung cancer" [if that diagnosis has been established]
- ***Unacceptable (except in conjunction with above)***
 - "Rule-out ...", "Suspected ...", "Possible ..."
 - "Biopsy guidance", "Thoracentesis guidance"
 - "Pain" (too vague; must state site, nature, ...)
 - "Cancer" (too vague; must state primary)

The Radiology Report

Indication

- “Medical necessity”
 - Medicare (and other medical insurers) will only reimburse for a medical service if they determine it to be medically necessary
 - That is, the indication code (ICD-10*) must “support” the exam code (CPT**)
 - Medical necessity is deemed to be present when the service is reasonable or necessary based on evidence-based standards of care
 - *Making up an indication in order to get reimbursed is fraud*

* International Classification of Diseases, version 10

** Current Procedural Terminology

The Radiology Report

Exam Performed & Physical Presence

- Document what was done
 - "CT scan was done with & without IV contrast"
 - "AP, lateral, & oblique C-spine show..."
- Document contrast type, dose, & route of administration (intravenous, intraarticular, intrathecal, ...)
- For interventional procedures:
 - "The teaching physician, Dr. XYZ, was present for the entire procedure"
 - "The teaching physician, Dr. XYZ, was present for the entire radiologic and key portions of the procedure, and was immediately available for the non-critical/key portions"



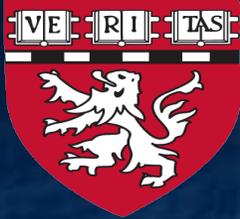
The Radiology Report

Teaching Physician Attestation

- If there is a trainee's name on a report, the report must contain an attestation statement
 - "I, the teaching physician, have reviewed the images and agree with the report as written"
 - The statement must be entered by the teaching physician him/herself



The *Perfect* Report



- **Medical Issues**
 - Accurate interpretation
 - Signed promptly
- **Billing & Compliance Issues**
 - Indication
 - Symptom/sign/known disease related to exam
 - ≥ 1 indication for each exam (or part thereof)
 - Body
 - Document what was done: contrast, extra views, ...
 - State findings (not just "No Δ from prior")
 - Include "presence" statement for interventional procedure
 - Include teaching physician attestation statement if trainee's name is on report
- **Correct Spelling & Grammar**