

# Harvard Medical School Curriculum Vitae

**Date Prepared:** 10/23/2017

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## Education

1981	LRCP & SI, MB BAO BCh	Royal College of Surgeons, Dublin, Ireland
1994	Program in Clinical Effectiveness	Harvard School Public Health
2004	Master of Arts	Harvard Medical School

## Postdoctoral Training

1981-1982	Intern	Flexible Internship, Surgery & Medicine	Richmond & St. Laurence Hospitals, Dublin, Ireland
1982-1984	Resident	Internal Medicine Residency	Federated Hospitals, Dublin, Ireland
1984-1988	Resident	Diagnostic Radiology	Loyola University of Chicago, IL
1988-1990	Fellow	Magnetic Resonance Imaging	Johns Hopkins Medical Institutions, Baltimore, MD

## Faculty Academic Appointments

1990-1991	Assistant Professor	Radiology	Johns Hopkins University School of Medicine, Baltimore, MD
1991-1997	Assistant Professor	Radiology	Harvard Medical School, Boston, MA
1997-2004	Associate Professor	Radiology	Harvard Medical School, Boston, MA
2004-	Professor	Radiology	Harvard Medical School, Boston, MA

2017-	Ferenc A. Jolesz Professor	Radiology	Harvard Medical School, Boston, MA
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**Appointments at Hospitals/Affiliated Institutions**

1990-1991	Attending Staff Radiologist	Radiology	Johns Hopkins Hospital
1990-1991	Attending Staff Radiologist	Radiology	Francis Scott Key Medical Center
1991-	Attending Staff Radiologist	Radiology	Brigham and Women's Hospital
1997-	Clinical Associate in Radiology	Radiology	Massachusetts General Hospital
2001-	Attending Staff Radiologist	Radiology	Dana-Farber Cancer Institute
2007-2017	Ferenc Jolesz Distinguished Chair	Radiology Research	Brigham and Women's Hospital

**Major Administrative Leadership Positions**

**Local**

1993-1997	Director, Body MRI	Brigham and Women's Hospital
1996-1999	Director, Radiology Technology Assessment Program	Brigham and Women's Hospital
1997-2006	Director, Clinical MRI	Brigham and Women's Hospital
1999-2003	Program Leader, DF/HCC Cancer Imaging Program	Dana-Farber/Harvard Cancer Center
2001-2003	Chair, Partners Radiology Research Committee	Partners Healthcare
2003-2006-	Director, Clinical Focused Ultrasound Program	Brigham and Women's Hospital
2006-	Co-Director of the Imaging Platform of Brigham Research Institute	Brigham and Women's Hospital
2006-	Director, Clinical IGT/NCIGT/AMIGO Program	Brigham and Women's Hospital
2007-	Vice-Chair of Research Department of Radiology	Brigham and Women's Hospital
2008-2011	Co-Director, BWH Imaging Program	Harvard Catalyst/CTSC
2015-	Medical Director, AMIGO BWH	Brigham and Women's Hospital
2017-	Ferenc Jolesz Chair, Radiology Research	Brigham and Women's Hospital

**Regional**

1988-1991	Co-Director, MRI Educational Program	Johns Hopkins Medical Institution
1990-1991	Chair, Grand Rounds Department of Radiology	Johns Hopkins Medical Institution
1990-1991	Director, MRI Fellowship Program	Johns Hopkins Medical Institution
1990-1991	Chair, Quality Assurance Committee Division of MRI	Johns Hopkins Medical Institution
1990-1991	Associate Director, Division of MRI	Johns Hopkins Medical Institution
1991	Acting Director, MRI Division	Johns Hopkins Medical Institution

**National and International**

1990-1991	Chair, Education Committee	Maryland Radiological Society
2001-2004	Chair, CT/MRI Committee	American College of Radiology Imaging Network (ACRIN)
2010-2013	Board of Trustees member	ISMRM

2015-16	Chair, Nominating Committee	International Society of Magnetic Resonance in Medicine (ISMRM)
2015-17	Treasurer, Executive Committee and Board of Trustees	ISMRM

## Committee Service

### Local

1992-2003	Member, Residency and Fellowship Selection Committee	Brigham and Women's Hospital
1992-1993	Member, Medical Staff Orientation Committee	Brigham and Women's Hospital
1993-	Member, BWH MRI Safety Committee	Brigham and Women's Hospital
1995-	Member, Technology Assessment Committee	Brigham and Women's Hospital
1997-	Member, Clinical MRI Oversight Committee	Brigham and Women's Hospital
1999-2002	Member, The BWH Mentoring Program Committee	Brigham and Women's Hospital
1999-	Member, The BWH Radiology Research Council	Brigham and Women's Hospital
1999-2003	Member, Partners Radiology Research Committee	Brigham and Women's Hospital
2001	Member, Partners Oncology Service Line Planning Leadership Group	Brigham and Women's Hospital
2001-	Member, Committee on Mentoring-Scholars in Clinical Science Program	Harvard Medical School
2001-	Member, BWH Cancer Center Executive Committee	Brigham and Women's Hospital
2003-	Member, Clinical Research Planning Committee	Brigham and Women's Hospital
2004-	Member, Clinical Investigation Committee	Brigham and Women's Hospital
2005	Member, Partners Radiology Research Council	Brigham and Women's Hospital
2006	Member, Biomedical Research Institute Research Oversight Committee	Brigham and Women's Hospital
2007-2010	Member, Promotions and Reappointment Committee	Harvard Medical School
2008-	Chair, Ad Hoc Committee for a nominee for Professor of Radiology	Harvard Medical School
2009-	Member, Participant and Clinical Interaction Resource (PCIR) Committee	Brigham and Women's Hospital
2009-	Member, DF/BWH Cancer Center Radiology Steering Committee	Brigham and Women's Hospital
2009-	Women's Reproductive Health Research Career Development	Brigham and Women's Hospital
2010-11	Member, Chief of Urology Search Committee	Massachusetts General Hospital
2010-11	Member, Search Committee for Professor of Surgery and Chief of Urology Division	Brigham and Women's Hospital
2010-	Member, BRI Research Oversight Committee (ROC) Oversight Committee	Brigham and Women's Hospital
2013-	Member, Clinical Trials Review Committee	Dana-Farber Cancer Institute
2013-	Member, Executive Committee for Clinical Research	Dana-Farber Cancer Institute
2015-	Member, Personalized Medicine Committee Chair Jeff Golden, MD	Brigham and Women's Hospital
2016	Member, Chief of Neurointerventional Division Search Committee	Massachusetts General Hospital

## Regional

1990-1991	Member, Imaging Fellowship Selection Committee	Johns Hopkins University
1998-2001	Member, Engineering Research Center - Center for Computer Integrated Surgical System and Technology	Johns Hopkins University

## National and International

2001-2004	Member, CT/MRI Committee	American College of Radiology Imaging Network (ACRIN)
2001-	Member, Advisory Board, G.E. Medical Systems Body MRI	General Electric Company
2005	Member, External Advisory Board, Image guided Therapy	General Electric Company
2006	Member, External Advisory Board, MR Imaging of Prostate	General Electric Company
2007	Member, Fellowship Selection Committee	Focused Ultrasound Surgery Foundation
2008	Member, Special Advisory Committee for Uterine Fibroids	Focused Ultrasound Surgery Foundation
2011-	Member, Data Safety And Monitoring Committee (DSMC)	ACRIN
2012-	Member, MR PI-RADS Steering Committee	American College of Radiology
2012-	Member, Data and Safety Monitoring Board DSMB	Eastern Cooperative Oncology Group (ECOG)-American College of Radiology Imaging Network or ECOG-ACRIN
2013-	Member, ASIST-DSMC Canada	Active Surveillance Magnetic Resonance Imaging-Data and Safety Monitoring Committee
2016-	Member, TMIST Diagnostic Imaging Fall Data Safety and Monitoring Committee (DSMC)	ECOG-ACRIN

## Professional Societies

1985-	Radiology Society of North America (RSNA)
1988-	International Society of Magnetic Resonance in Medicine (ISMRM)
1990-	Member, American College of Radiology
1991	Faculty, Introduction to Research Seminar, AARS/AUR/RSNA
1991	Member, American Association of Women Radiologist
1991	Member, American Association of Women Radiologist

1991	Member, Stauffer Award Committee Association of University of Radiologists
1992	Faculty, New England Roentgen Ray Society
1995-2000	Member and Co-author, Professional Self Evaluation Committee
1996	Member, Society for Health Services Research in Radiology
1996-2000	Faculty, Improving Research Environment in Radiology Departments RSNA Workshop
1999	Scientific-Advisor, Research and Education Foundation
2001	Member, Panel on Urological Imaging, Appropriateness Criteria Committee
2003-2005	Member, ISMRM Workshop Committee
2004-2005	Member, Subcommittee on Student Stipends
2005-2008	Member, AMPC-Scientific and Education Committee
2010-	Member, Vice Chairs of Research Committee
2010-2017 (2 terms)	Elected Member, Board of Trustees
2010-2011	Member, Subcommittee on Trainee Stipends
2011-2012	Member, Affiliated Sections- ISMRT Committee
2012	Session co-Moderator, 20 <sup>th</sup> ISMRM Meeting, Australia
2012	Chair of the Nominating Committee
2013-2017	Treasurer, Board of Trustees ISMRM
2014-2017	Member, RSNA Committee on Scientific Affairs
2017-2018	Member, MR PI-RADS Steering Committee

### **Grant Review Activities**

2003	BRTT Partnership Awards Proposal Review	Ohio Biomedical Research Society for Health Services Research in Radiology & Technology Transfer Commission Reviewer
2004	NIH Study Section NCI Review	NIH Ad Hoc Member
2006	NIH PAR 06-0406 in vivo Cellular and Molecular Imaging Centers Review	NIH Ad Hoc Member
2007-2011	NIH Medi Study Section Review	NIH Charter Member

2008	Harvard Catalyst Pilot Grants Review	Harvard Clinical and Translational Science Center Permanent Member
2009	Wellbeing of Women Research Grant Review	Ontario Institute for Cancer Research Reviewer
2010, 2012	ASIST Canadian Grant Review	ASIST Reviewer
2010-	Foundation for Focused Ultrasound Surgery Review	FFUS Reviewer
2013-	NIH Study Section Review IGT	Chair of Study Section
2014	Canada Foundation for Innovation (Medical Imaging) Review	CFI Reviewer
2015	Department of Defense Grant Review	DOD Reviewer
2015	Wellcome Trust, London Grant Review	Wellcome Trust Reviewer
2016	Canadian Foundation for Innovation Grant Review	CFI Reviewer
2017	Canadian Innovation Foundation Grant Review	CFI Chair of Review Committee

### Editorial Activities

1992-	<i>Radiology</i>
1993	<i>American Journal of Roentgenology</i>
1995-	<i>Radiographics</i>
1996-	<i>Journal of Magnetic Resonance Imaging</i>
1997-	<i>The Lancet</i>
1997	<i>Mosby Yearbook</i>
1997-	<i>Cancer</i>
2000-2001	<i>The Prostate Journal</i>
2000-	<i>Urology</i>
2000-	<i>The Journal of Urology</i>
2001-	<i>Academic Radiology</i>
2002-	<i>Gynecologic Oncology</i>
2003	<i>Journal of the American College of Radiology</i>
2007-	<i>Magnetic Resonance in Medicine</i>
2010	<i>European Urology</i>
2010	<i>British International Journal of Urology</i>
2013	<i>International Journal of Computer Assisted Radiology and Surgery</i>

### Other Editorial Roles

1997-2001	Associate Editor	The Prostate Journal
2000-2001	Member of Editorial Board	The Prostate Journal
2001-2003	Consultant to Editor	Radiology
2007	Member of Editorial Board	Journal of Magnetic Resonance Imaging

### Honors and Prizes

1975-1981	Honors: Biology, Pathology, Psychiatry, Pediatrics, Anesthetics, Medicine	Royal College of Surgeons, Dublin, Ireland
1977	Honors with Distinction: Biochemistry	Royal College of Surgeons, Dublin, Ireland

1980	Gold Medal & First Place: Obstetrics and Gynecology	Royal College of Surgeons, Dublin, Ireland
1991	Editor Recognition Award for Distinction: Reviewing	Radiology
1994-1996	Editor Recognition Award for Distinction: Reviewing	Radiology
1994-1996	Research Career Development Award	GE Radiology Research Academic Fellowship (GERRAF)
1995-1996	Special Distinction: Reviewing	Radiology
1995	Editor's Certification of Recognition: Reviewing	RSNA Scientific Exhibit
1995	Certificate of Merit: <i>Cum Laude</i> for RSNA Exhibit	RSNA Scientific Exhibit
1997	First Prize: <i>Right Ventricular Dysplasia: Evaluation of MRI Imaging Criteria.</i> Co-Authors: VL Ward, GT Sica, CM Tempany, KE Ellison, DF Adams	National Medical Association Section on Radiology
2001	Outstanding Student Paper Award to Andrew Tsai - <i>Model-based Curve Evolution Techniques for Image Segmentation.</i> Co-Authors: A Yezzi, WM Wells, CM Tempany, D Tucker, A Fan, E Grimson, A Willsky	IEEE Computer Society
2006	Edward M. Kennedy Award: Healthcare Innovation	CIMIT Image Guided Therapy Team
2010	Judah Folkman Prize: Clinical/Translational Science Research Award to Mentee -Shantanu Gaur - <i>Drug-eluting bead hepatic arterial chemoembolization in the treatment of carcinoid metastases to the liver.</i> Co-Authors: S Gaur, J Friese, CM Tempany, RA Baum	Harvard Medical School
2011	Partners in Excellence Award: Advanced Multi-modality Image Guided Operating (AMIGO) Room - Team Leaders: Clare Tempany, MD, and Ferenc A Jolesz, MD	Brigham and Women's Hospital
2012	Partners in Excellence Award: MRI Research Center Upgrade Team Member	Brigham and Women's Hospital
2013	Senior Fellow	International Society for Magnetic Resonance in Medicine (ISMRM)
2013	Distinguished Investigator Award	Academy of Radiology Research
2017	Fellow	American College of Radiology

## Report of Funded and Unfunded Projects

### Funding Information

#### Past

1988-1991	NIH/NCI: Radiology Diagnostic Oncology Group 2 National Diagnostic Imaging Trials - "CT/MRI of colorectal and pancreatic cancer" Co-Investigator
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- 1989 ICNMR: Johns Hopkins Medical Institutions  
 "Evaluation of the role of *in vivo* P 31 spectroscopy in detecting intracellular pH and relative amounts of phosphorus-containing compounds in renal allografts as possible markers for allograft rejection"  
 PI Tempany
- 1989-1991 Department of Radiology Seed Grant: Johns Hopkins Medical Institutions  
 "Role of MRI in evaluating BPH in an animal model"  
 PI Tempany
- 1989-1991 MERCK Research Laboratories MK 906#024-01  
 "The influence of Finasteride on the volume of the peripheral zones of the prostate in men with benign prostatic hyperplasia"  
 Co-Investigator
- 1989-1991 NIH/NCI: RDOG I  
 "National Diagnostic Imaging Trial-MRI evaluation of body and endorectal coil in staging of prostate carcinoma"  
 PI Tempany
- 1991-1995 AHCPR (PI McNeil, BJ)  
 "Enhanced accuracy of MRI for staging prostate cancer"  
 Co-Investigator
- 1992-1996 NIH/NCI: RDOG4 (National PI Kurtz, A)  
 National Diagnostic Imaging Trial – "Ovarian Cancer"  
 Site PI Tempany
- 1994-1996 GE-AUR (GERRAF)  
 Research Career Development Award  
 PI Tempany
- 1996-1998 Advanced Magnetics, Inc.  
 "Phase III study of *Combidex*, as a magnetic resonance imaging agent for the evaluation of lymph node disease"  
 Co-Investigator
- 1997-2001 Schering Plough Medical Research  
 "Prognostic significance of endorectal MRI in predicting outcome after combined radiation and androgen suppression for prostate cancer: A prospective CALBG Phase II study"  
 PI Tempany
- 1998-1999 Epix Medical  
 "Phase II trial of breast MR contrast agent (MS 325)"  
 Co-Investigator
- 1998- 2001 Schering Plough Medical Research  
 "Computed volumetrics of the prostate gland and tumors: CALBG Phase II study"  
 PI Tempany



2000-2005 NIH/NCI 2P30 CA06516-37 (PI Nathan D)  
Cancer Center Support Grant for the Cancer Imaging Program of the DF/HCC  
Program Leader

2000-2005 NIH T32 CA09536  
"Research training in imaging methods for cancer"  
Co-Investigator

2001-2002 Boston Scientific  
"Myomectomy vs. UAE trial. MRI evaluation of uterine leiomyomas"  
Co-Investigator

2001- 2003 Whitaker Foundation Award (PI Noby Hata)  
"Robot-assisted needle guidance system for MRI-guided prostate cancer"  
Co-Investigator

2001-2004 InSightec  
"MR-guided FUS of breast fibroadenomas"  
PI Tempany

2001-2004 NIH/AG R01 AG19513  
"MR guided prostate cancer diagnosis and brachytherapy"  
PI Tempany

2001-2004 Novartis Pharmaceuticals  
"Open-label pilot study of ST1571 prior to radical prostatectomy inpatient with newly  
diagnosed prostate cancer"  
Co-Investigator

2000-2006 InSightec Inc.  
Clinical Trial - "MR-guided FUS of uterine leiomyomas"  
PI Tempany

2003-2007 NIH R01 CA104976 NCI (PI Davazikos)  
"Target prostate biopsy using mathematical optimization"  
Co-Investigator

2005-2008 NIH M01 RR02635  
Brigham & Women's Hospital General Clinical Research Center (GCRC)  
Imaging Core Co-Leader

2005-2010 NIH 2R01 CA111288  
"Enabling technologies for MR guided prostate interventions"  
PI Tempany  
Bioengineering Research Partnership

2009-2011 AdMeTech/DOD, DAMD17-03-2-055  
"Molecular Imaging of Prostate Cancer Research"  
Site PI Tempany

2008-2012 NIH/NCRR: UL1 RR025758-01, PI Lee Nadler

Harvard Clinical and Translational Science Center  
Harvard Catalyst - Translational Imaging Consortium  
Site Consultant

- 2009-2012 NIH R01 CA109246-01  
“MR Guided Focused Ultrasound Surgery for Prostate Cancer”  
PI Tempany
- 2007-2013 NIH P01 CA067165, PI Ferenc A. Jolesz  
“MR Guided Therapy” (PI Jolesz) NCE  
Project Leader-Tempany
- 2011-2017 NIH R01 CA111288  
“Enabling technologies for MR guided prostate interventions”  
PI Tempany  
Bioengineering Research Partnership
- 2012-2017 NIH R01 CA160902  
“Advancement and Validation of Prostate Diffusion and Spectroscopic MRI”  
Co-Investigator
- 2014-2016 DPH 403516, Clinical Trial  
“Multi-parametric (mp) MRI and PI-RADS Standardization for Improved Diagnosis of Prostate Cancer”  
PI Tempany

**Current**

- 2010-2020 NIH P41 EB015898  
National Center for Image Guided Therapy (NCIGT)  
PI Tempany  
NCRR/NIBIB Director and Prostate Core Leader “Image Guided Therapy Center”
- 2015-2019 1U01HD087211-01 114059  
“Noninvasive real-time assessment of materno-fetal placental unit”  
PI Ellen Grant, MD, Children's Hospital  
Co-Investigator
- 2012-2018 4 R25 CA089017-14  
“Multidisciplinary Training Grant in Image Guided Therapy”  
PI Fiona Fennessy, MD, PhD, Dana-Farber Cancer Institute/Brigham and Women’s Hospital  
Co-Investigator

**Report of Local Teaching and Training**

**Teaching of Students in Courses**

- 1994 Boston University Medical Campus  
MRI of the Female Pelvis/Grand Rounds
- 1994 Mt. Auburn Hospital, Women’s Health Symposium  
MRI of the Female Pelvis

1994 Dana-Farber Cancer Institute, Grand Rounds  
MRI of Prostate Cancer

1994 Deaconess Hospital, Grand Rounds  
MRI of Prostate Cancer

1994 Norwood Hospital, Grand Rounds  
MRI of Prostate Cancer

1995 New England Roentgen Ray Society  
MRI of the Female Pelvis

1996 Dana-Farber Cancer Institute  
GU Oncology Grand Rounds

1996 Boston University  
MRI of GYN Malignancy

1996 Massachusetts General Hospital, Grand Rounds  
MRI of the Female Pelvis

1997 Mt. Auburn Hospital  
Prostate MRI

1997 HCHP, Tumor Board  
Prostate MRI

1998 Boston University  
MRI of the Pelvis

1998 Western Urological Society Fall Meeting  
Prostate MRI

1999 Mt Auburn Hospital, Grand Rounds  
MRI of the Pelvis

2001 New England Roentgen Ray Society  
Women's Imaging: MRI and MR Guided Interventions

2003 Beth Israel Deaconess Medical Center  
Female Pelvis

2004 Yale University  
MR-Guided Focused Ultrasound of Uterine Fibroid

2005 New York University Hospital  
Translational Research in Image-guided Therapy

2006 Rhode Island Hospital

## MR-Guided Focused Ultrasound Surgery MR Imaging and MR-Guided Interventions in Prostate Cancer

- 2008 MIT, HST.563  
Abdominal/Pelvis, Imaging Biophysics and Clinical Applications
- 2009 Biomedical Research Institute, BWH  
Making the Transition and Staffing Your Program/Moving to the Top: Establishing Your Research Program
- 2010 Beth Israel Deaconess Medical Center  
MR-guided HIFU in Abdominal/Pelvic Disease/Abdominal Imaging Section Lecture
- 2010 Abdominal/Pelvis, Imaging Biophysics and Clinical Applications  
HST.563, MIT
- 2011 New England Roentgen Ray Society  
MRI Prostate
- 2012 Massachusetts Prostate Cancer Coalition Annual Meeting  
MRI Prostate
- 2015 New England Roentgen Ray Society
- 2016 RCC-Harvard Medical Imaging Open House  
Imaging Innovations Image Guided Therapy
- 2017 Brigham and Women's Hospital  
Women's GYN Cancer Program (RSS33)

### **Clinical Supervisory and Training Responsibilities**

Since joining the faculty at BWH, I have been a member of the Abdominal Imaging Group with a primary focus in body MRI. In 1991, I established the Prostate MRI service. In 1993, I became the director of body MRI, and from 1997 to 2006 I was then the director of clinical MRI. I established new programs in prostate and female pelvic and obstetrical MRI. I have trained multiple staff, fellows, and MR technologists to support this MR clinical program. I was responsible for the management, productivity, and revenue enhancement for our MR fleet as it grew from 4 magnets to 12. This involved supervision of all technologists' inter-divisional oversight, quality control, and safety.

I now lead a large lab-based, NIH-funded team of investigators who pursue a wide range of clinical research projects in prostate cancer MR imaging, from pulse sequence development to outcomes research. We now have one of the largest clinical prostate and pelvic MR programs in the country with over 3,000 exams performed a year.

MR-guided prostate interventions. I established the first U.S. MR-(in-bore) guided prostate biopsy and MR guided prostate cancer brachytherapy programs. We have performed over 600 cancer treatments and over 700 biopsies to date. In 2010, we re-established this clinical program in the 3T wide bore magnet. In 2013, we performed the first MR guided cryotherapy for localized prostate

cancer. I also direct the program in clinical MR-guided Focused Ultrasound Surgery (FUS). We treat women with uterine fibroids, men with prostate cancer, and patients with bone metastases. This program was the first clinical FUS program in the U.S. We developed, designed, and tested the first FDA-approved application for symptomatic relief of uterine fibroids. Today, it collaborates with over 10 other programs in the U.S. Since then, we have established multiple other MRgFUS programs in bone metastases (pain palliation) and essential tremor and focal prostate cancer ablation.

In 2015, I became the PI of the NCIGT and director of AMIGO at BWH. I now lead both programs and direct the clinical activities of AMIGO-now in its 6<sup>th</sup> year having treated over 1,300 patients with multidisciplinary teams of physician leaders and translational researchers.

### **Laboratory and Other Research Supervisory and Training Responsibilities**

#### **2001-present Supervisor/Leader of Prostate Research Group**

##### **Original and Current Members**

##### **Current Position**

Robert Cormack, PhD	Faculty, DFCI/BWH Radiation Oncology, MA
Steven Haker, PhD	Vanderbilt
Robert Mulkern, PhD	Faculty, Children's Hospital-Boston, MA
William (Sandy) Wells, PhD	Faculty
Kelly Zou, PhD	Fellow, American Stat. Assoc. Accredited Prof. Statistician™; Sr. Dir. & Analytic Science Lead; Real World Data & Analytics (RWDnA); Patient & Health Impact (P&HI), Pfizer, NY
Stephan Maier, PhD	Faculty
Mehdi Moradi, PhD	Manager/Scientist, Medical Image Analysis and Machine Learning Research @ IBM Almaden Research Center, CA
Ian Chan, PhD	MIT
Anthony D'Amico, MD	Faculty, DFCI/BWH Radiation Oncology, MA
Agnieszka Szot-Barnes, MD	Unknown
Minna J. (So) Kohler, MD	Director, Rheumatology Musculoskeletal Ultrasound Program, MGH, MA
Nathan McDannold, PhD	Faculty
Junichi Tokuda, PhD	Faculty
Robert Caughey, BS	BWH
Joseph Roebuck, MD, PhD	Teleradiologist, Manatee Healthcare System, FL
Sarah Straus	2015 Masters Graduate, Worcester Polytechnic Institute, MA

Jalil Afnan, MD, MRCS	Diagnostic Radiology, Lahey Hospital and Medical Center, MA
Fiona Fennessy, MD	Faculty, DFCI/BWH
Yi (Jeffrey) Tang, MD	Gastroenterologist, Henry Ford Health System, MI
Sota Oguro, MD	Radiologist, Keio University School of Medicine, Tokyo, Japan
Nobuhiko Hata, PhD	Faculty
Andriy Fedorov, PhD	Faculty
Sang Eun (Sam) Song and	Assoc. Prof., UCF Department of Mechanical Aerospace Engineering, FL
Felipe Franco	Brazil
Lawrence Patrick Panych, PhD	Faculty
Thiele Kobus, MSc	Research Fellow, The Netherlands
Tobias Penzkofer, MD	Staff Radiologist, Berlin DK
Fernando Yamauchi, MD	Staff Radiologist, Brazil
Louise Greenberg, MEd, Clinical Trials Coord.	Retired
Ruth Dunne, MD	Consultant Radiologist, Beaumont Hospital, Dublin, Ireland
Daniel Glazer, MD	Radiologist, Abdominal Imaging Division, BWH, Boston, MA
Elmira Hassanzadeh, MD	Resident, Radiology, University of Illinois, IL
Peter Beckwith, BSc	Clinical Trials Coordinator
Mehdi Taghipour Fard Ardekani, MD	Intern Residency, University of Illinois, Chicago, IL
Parvin Mousavi, PhD	Visiting Research Scholar, Canada

**Formally Supervised Trainees**  
**Medical Students**

1989	Karl Wolff	John Hopkins University Consultant Radiologist, SKG Radiology, Australia
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1990	Fred Masoudi	John Hopkins University Cardiologist, University of Colorado Denver – Anschutz, Medical Campus, CO
2000-2004	Aditya Bharatha	University of Toronto Division Head of Neuroradiology, University of Toronto, Canada
2000-2004	Andrew Tsai	Harvard Medical School Pediatric Radiologist, Boston Children’s Hospital, Boston, MA
2009	Shantanu Gaur	Harvard Medical School Co-founder and CEO, Allurion, MA
2011-2014	John V. Hegde	Harvard Medical School Radiation Oncology Resident, UCLA, CA
2012-2014	John Phillips	Harvard Medical School Radiation Oncologist, DFCI, MA
2015	Erik Velez	University of California, San Francisco Medical Graduate, University of California, San Francisco, CA

**Radiology Clinical Research Fellows/JHU**

1990	Alex Chacko	John Hopkins University Unknown
1990	Phyllis Frostenson	John Hopkins University Diagnostic Radiologist, Central Imaging of Arlington, TX
1990	Joseph Paravanno	John Hopkins University Board Certified Radiologist, NV
1990	Christian Herold	John Hopkins University Chairman, Department of Radiology, Medical University of Vienna, Austria
1990	Maria A. Cova	John Hopkins University Director of Diagnostic Imaging, Cattinara Radiology, University of Trieste Integrate Health Authority, Italy
1990	Akira Kawashima	John Hopkins University Genitourinary Radiologist, Mayo Clinic, AZ
1990	Alain Rahmouni	John Hopkins University

Head of Medical Imaging Department, Henri Mondor Hospital, Paris, France

1990 Claudio Ricci  
John Hopkins University  
Radiologist, Institutes of Radiology, University of Trieste, Italy

**Urology Fellows/JHU**

1989 Ronald Morton  
John Hopkins University  
Chief Surgical Officer, American Medical Systems, Boston Scientific, MA

1989 Alan Burnett  
John Hopkins University  
Director, Basic Science Laboratory, Neuro-urology;  
Director, Male Consultation Clinic;  
Clinician-Scientist, James Buchanan Brady Urological Institute, IL

1989 Alan Partin  
John Hopkins University  
Chairman, Department of Urology;  
Urologist-in-Chief, Johns Hopkins Medical Institutions, IL

**OB/GYN Fellows/JHU**

1990 Joseph Wax  
John Hopkins University  
Sr. Researcher, Division of Maternal Fetal Medicine, Maine Medical Center/MaineHealth, ME

**Radiology Residents/Fellows – BWH/Current Positions**

1992 Lawrence Schwartz  
Chair, Department of Radiology Columbia University Medical Center, NY

1993 Julia Fielding  
Chief, Department of Abdominal Imaging, UT Southwestern Medical Center, TX

1994 Oliver Pomeroy  
Staff Radiologist, BWH, MA

1994 Ariane Neish  
Radiologist, Children's Diagnostic Imaging, GA

1995 Richard Tello  
Deceased

1995 Vivek David  
Radiologist, Tysons Corner Diagnostic Imaging, VA

1996 Susan Teeger  
Radiologist, Midtown East, NY

1997 Lawrence Steinbach  
Staff Radiologist, East Side Attleboro, MA



1998	Mark Pugach	Director, Next Generation Radiology, NY
1999	Jeffrey McTavish	Staff Radiologist, Sentara Virginia Beach General Hospital, VA
2000	David Cheng	Staff Radiologist, Advanced Radiology and Open MRI of New England, RI
2001	Vikas Kundra	Faculty Radiologist Director of Molecular Imaging MD Anderson Cancer Center, TX
2001	Maricella Contreras	Department of Radiology, Madigan Army Medical Center, WA
2002	Mark Fruitman	Staff Radiologist, St. Joseph's Hospital, Toronto, Canada
2003	Fiona Fennessy	Faculty Radiologist & Senior Physician; Cancer Imaging Program Fellowship Director, DFCI/BWH, MA
2003-2004	Syed Akbar	Staff Radiologist, Abdominal Imaging, Rush-Copley Medical Center, IL
2003-2004	Ramit Lamba	Staff Radiologist, Abdominal Imaging, UC Davis Medical Center, CA
2003-2004	Nikhil Ramaiya	Clinical Director, MRI, Abdominal Imaging, DFCI, MA
2003-2004	Servet Tatli	Radiologist, Department of Emergency and Hospital Medicine, Lehigh Valley Health Network, PA
2003-2004	Idelisa Torres-Berastain	Radiologist, Advanced Technology Radiology, FL
2004	Noushin Vahdat	Associate Staff, Diagnostic Radiology, Cleveland Clinic, OH
2004-2005	Carina Briggs	Staff Radiologist, University of Kentucky Medical Center, KY
2004-2005	Victoria Clague	Staff, Abdominal Imaging, Kaiser Permanente Medical Group, CA
2004-2005	Rashmi Nair	Staff, Abdominal Imaging, UK Health Care University of Kentucky, KY
2004-2005	Desencia Thomas	Faculty Radiologist, Southwestern Medical School, University of Texas, TX

2004-2006	Rahul Gupta	Staff Radiologist, Emory Radiology Clinic, GA
2004-2007	Raquel Oliva Alencar	Faculty Radiologist & Head, GI Fluoroscopy Abdominal Imaging and Intervention, BWH, MA
2005-2006	Munazza Anis	Staff Radiologist, Medical University of South Carolina, SC
2005-2006	Jeffrey Girshman	Radiologist, Manhattan Diagnostic Radiology, NY
2005-2006	Vincent Pelsser	Staff Radiologist, Jewish General Hospital, Montreal, Canada
2006-2007	Chris Sidden	Staff Radiologist, Emcare, TX
2006-2007	Frederico Souza	Director of Body Imaging Division, University of Mississippi Medical Center, MS
2006-2007	Wendy Landman	Faculty Radiologist, BWH, MA
2006-2007	Sejal Shah	Faculty Radiologist, Emergency Radiology, Beth Israel Deaconess Medical Center, MA
2007-2008	Lindsay Pearce	Staff Radiologist, Beverly Radiology Assoc., MA
2007-2008	Girish Raghunathan	Staff Radiologist, BWH, MA
2007-2008	Tatiana Rocha	Emergency Radiology, BWH, MA
2007-2008	Vikram Sahni	Faculty Radiologist & Associate Director, Abdominal Imaging and Intervention; Director, Abdominal and Pelvic MRI, BWH, MA
2007-2008	Shane Wheeler	Diagnostic Radiologist, Body Imaging, Radiology Imaging Associates, CO
2007-2008	Atif Zaheer	Associate Program Director, Diagnostic Radiology Residency; Diagnostic Radiology, John Hopkins Hospital, MD
2008-2009	Alicia Arnold	Radiologist, Private Practice, WI
2008-2009	Michael Baldwin	Pediatric Radiologist, Boston Children's Hospital, MA
2008-2009	Raul Galvez Trevino	Pediatric Radiologist, Valley Radiologist Ltd., AZ
2008-2009	Angela Tai	Radiologist, Abdominal Imaging, St. Paul, MN
2008-2009	Pieter Baeyens	Abdominal Radiologist, BWH, MA

2008-2009	Errol Colak	Faculty Radiologist, St. Michael's Hospital, Toronto, Canada
2008-2009	Fadi Habbab	Faculty Radiologist, McGill University, Montreal, Canada
2008-2009	Tereza Poghosyan	Radiologist, Thoraco-abdominal Imaging, GI and GU Imaging, Image-Guided Interventions and Breast Imaging, Valley Radiology, NC
2008-2009	Margarita Revzin	Diagnostic Radiologist, Private Practice, CT
2008-2009	Nisha Sainani	Faculty Radiologist, Abdominal Imaging and Intervention, BWH, MA
2010-2011	Dellano Fernandes	Staff Radiologist, Royal Inland Hospital, BC, Canada
2010-2011	Michael Hutchinson	Radiologist, Aurora Radiology Consultants, IL
2010-2011	Sunny Jaiswal	Faculty Radiologist Abdominal Radiologist, Ohio State University Medical Center, OH
2010-2011	Albert Parladé	Faculty Radiologist, Cleveland Clinic, FL
2010-2011	Atul Shinagare	Faculty Radiologist, BWH/DFCI, MA
2010-2011	Elliot Wasser	Faculty Radiologist, Cleveland Clinic, FL
2012-2017	Ruth Dunne	Consultant Radiologist, Beaumont Hospital, Dublin, Ireland
2012-2013	Loraine Wu	Radiologist, Informaticist, Healthcare Innovator, DC
2012-2013	Ayaz Aghayev	Faculty Radiologist, Section of CV Imaging BWH, MA
2012-2013	Vinit Khanna	Faculty Radiologist, University of Rochester Medical Center, NY
2012-2013	Ryan Muller	Diagnostic Radiologist, MedStar Health, MD
2012-2013	Karl Sayegh	Director, Cardiac CT, McGill University, Montreal, Canada
2012-2013	Santosh Selvarajan	Faculty Radiologist, Thomas Jefferson University Hospitals, PA
2013-2014	Mark Robbins	Radiologist; Founding Partners, American Radiology Technologies (ART), FL

2013-2014	Jeremy Duda	Radiologist, Central Maine Medical Center, ME
2013-2014	Edward Harter	Radiologist, OSF St. Anthony's Health Center, IL
2013-2014	Gevork Mnatzakanian	Faculty Radiologist, St. Michael's Hospital, Toronto, Canada
2013-2014	Jonathan Scamera	Faculty Radiologist, Boston Medical Center, MA
2013-2014	Karen (Shoebbotham) Salmieri	Faculty Radiologist, University Radiology Group, NJ
2013-2014	Sophie Tremblay-Paquet	Faculty Radiologist, CIUSSS Saguenay/Lac-Saint-Jean, Quebec, Canada
2014-2015	Daniel Glazer, MD	Faculty Radiologist, Head of Abdominal and Pelvic CT, Abdominal Imaging Division, BWH, MA
2015-	Sharath Bhagavatula, MD	Radiology Resident on Clinician Scientist Pathway, BWH
2015-	Jeffrey Guenette, MD	Radiology Resident on Clinician Scientist Pathway, BWH

#### **Surgical Planning Laboratory/Grant-funded Students, Research Fellows**

1999	Husain Dumanli, MD	Staff Radiologist, Turkey Department of Radiology, Zekai Tahir Burak Women's Health Education and Research Hospital, Turkey
1999	Andreas Schreyer, MD	Staff Radiologist, Germany Science Directorate, ESS; Chair, ICB; co-Proposer, BEER, Germany
1999	Masa Jinzaki, MD	Staff Radiologist, Japan Department of Diagnostic Radiology, Keio University School of Medicine, Japan
2000	Masanori Hirose, MD	Staff Radiologist, Japan Department of Radiology, School of Medicine, Showa University, Japan
2000	Adyitha Bharatha	Medical Student, Canada Department of Medical Imaging, Neuroimaging Div., St. Michael's Hospital, University of Toronto, Canada
2001	Jian Qing Zhang, MD	Research Fellow, China

		Department of Radiology, First Hospital of Wenzhou Medical College, China
2001	Ian Chan	Masters Student, MIT, MA Co-founder, Abpro now IELab, MA
2002	Agnieszka Szot-Barnes, MD	Research Fellow, Poland
2005	Philip Blumenfeld	Medical Student, NY Resident Physician, Department of Radiation Oncology, Rush University Medical Center, IL
2006	Patrick Wong	Medical Student, Canada CHUM, Canada
2008	Shu-Huei Shen, MD	Research Fellow, Taiwan Department of Radiology, Taipei Veterans General Hospital, Taiwan
2009-12	Ronit Machtinger	OB/GYN Attending, Israel Sr. Physician, IVF Unit, Department of OB/GYN, Sheba Tel Hashomer Medical Center, Israel
2010	Felipe Boschini Franco	Medical Student, Brazil School of Medicine of University of Sao Paulo, Brazil
2012-13	Tobias Penzkofer	Radiologist, Germany Charite – University Medicine, Berlin, Germany
2014-15	Elmira Hassanzadeh, MD	Research Fellow, Iran Surgery Resident, University of Illinois College of Medicine, IL
2015-	Lisanne Kok	Research Fellow, The Netherlands Student Medical Engineering, Department of Biomedical Engineering, University of Technology, Eindhoven, The Netherlands

#### **Image Guided Therapy R25 Training Grant Fellows**

2002	Vasu Brown, MD	Fellow in IGT and Web Media Founder, HollistonMD.com, Wound and Pain Management
2002	Michele Albert, MD	Fellow in IGT and Radiation Oncology

		Radiation Oncologist, Saint Anne's Hospital Regional Cancer Care, MA
2003	Minna So Kohler, MD	R25 Fellow in IGT Director of the Rheumatology Musculoskeletal Ultrasound Program, MGH; Co-director, Pilot Point-of-Care Ultrasound Curriculum, HMS, MA
2004	Agnieszka Szot-Barnes, MD	R25 Fellow in IGT
2004	Alexandra Stewart, MD	R25 Fellow in IGT/Radiation Oncology Consultant Oncologist, Royal Surrey County Hospital, UK
2005-2007	Alisa Suzuki-Han, MD	R25 Fellow in IGT Interventional Radiology Specialist, Southern California Permanente Medical Group, CA
2005-2007	Joseph Roebuck, MD	R25 Fellow in IGT Radiologist, University of Texas, Medical Branch, TX
2006-2007	Richard Gessman	R25 Fellow in IGT Radiologist, XRA Medical Imaging, NY
2006-2008	Jeremy Friese	R25 Fellow in IGT Co-founder and Chairman, Evidentia Health, Inc., MN
2007-2009	Jalil Afnan, MD	Fellow in IGT Physician, Lahey Hospital and Medical Center, MA
2008-	Sota Oguro, MD	Fellow in IGT Researcher, Department Radiology, Keio University, Japan
2008-2009	Balazs Lengyel	R25 Fellow in IGT Surgery Administrator, Westchester Medical Center, WMC Health, AZ
2008-2010	Caleb Farny	R25 Fellow in IGT Professor, College of Engineering, Boston University, MA
2008-2009	Phillip Jason White, PhD	R25 Fellow in IGT Researcher, Focused Ultrasound Lab, BWH, MA
2009-2010	Rivka Colen, MD	R25 Fellow in IGT Co-director, Quantitative Imaging Analysis Core; Department of Diagnostic Radiology, Division of

		Diagnostic Imaging; Head, Cancer Genome Atlas (TCGA) Imaging-Genomic Projects, University of Texas MD Anderson Cancer Center, TX
2009-2010	Giovanna Danagouliau	R25 Fellow in IGT Senior Scientist, Buckler Biomedical Sciences LLC, MA
2009-2010	Lauren O'Donnell, PhD	R25 Fellow in IGT Researcher, Surgical Brain-mapping and Lab of Mathematics in Imaging, BWH/HMS, MA
2010-2011	Scott Hoge, PhD	R25 Fellow in IGT Researcher, Lab of Mathematics in Imaging, BWH/HMS, MA
2013-2015	Pelin Ciris, PhD	R25 Fellow in IGT Researcher, Medical Imaging, Magnetic Resonance Imaging, Akdeniz University, Turkey
2015-2016	Melissa Mallory, MD	R25 Fellow in IGT Department of Surgery, DF/BW Cancer Center, MA
2015-2016	Daniel Glazer, MD	R25 Fellow in IGT Diagnostic Radiologist, Head of Abdominal and Pelvic CT, Abdominal Imaging Division, BWH, MA
2015-2016	Farzad Sedaghat, MD	R25 Fellow in IGT Abdominal Imaging Fellow

### **Research Doctoral Students**

1998-2006	Andrew Tsai, PhD	Massachusetts Institute of Technology Pediatric Radiologist, Boston Children's Hospital, MA
2001-2003	Ian Chan, PhD	Massachusetts Institute of Technology Co-founder, Abpro now IELab, MA
1999-2002	Elizabeth Kim	Massachusetts Institute of Technology Doctoral Student, UC Irvine, CA
2011-2013	Hao Su	Worcester Polytechnic Institute Research Scientist, Philips Research, NY
2015-	Peter A. Behringer	University of Lübeck, Germany Now: Product Market Manager Medical, Basler AG; Co-founder, Edison Glow, Germany
2015-2016	Christian Herz	University of Lübeck, Germany

Research Fellow, BWH

**Post Doctoral Fellows/BWH**

1999	Nobuhiko Hata, PhD	Director, Surgical Navigation and Robotics Lab; Core Lead, Guidance Project, National Center for Image-Guided Therapy, BWH, MA
2000	Steven J. Haker, PhD	Department of Radiology, Children's Hospital, Boston, MA
2000	Robert A. Cormack, PhD BWH/DFCI/HMS, MA	Department of Radiation Oncology,
2007	Junichi Tokuda, PhD	Lead Developer, OpenIGT Link; Project Co-Lead, Prostate Core, NCIGT; Team-player, Guidance Core, NCIGT; Team-player, MRI-Guided Transperineal Prostate Robot Project; Team-player, Surgical Navigation and Robotics Lab, BWH, MA
2008	Haytham Elhawary, PhD	Co-founder and CEO of Kinetic, a wearable device company
2014-2015	Elmira Hassanzadeh, MD	Tehran University of Medical Sciences, Tehran, Iran Clinical Resident, Department of Surgery/Radiology University of Chicago Medicine, IL
2015-2016	Mehdi Taghipour Fard Ardekani, MD	Johns Hopkins University Medical Institutions, MD Research Fellow, BWH, MA

**Faculty**

1997	Mitchell Rein, OB/GYN	Chief Medical Officer/Sr. V.P. Medical Affairs NSMC; Associate Gynecologist and Obstetrician, MGH; Chairman, MGH/North Shore Quality Committee, MA
1998	Julian Robinson, OB/GYN	Department of Obstetrics & Gynecology, BWH, MA
1999	Lore Schierlitz, OB/GYN	Honorary, Obstetrics and Gynecology, Royal Women's Hospital/Mercy, University of Melbourne, Australia
2000	Sara M. Durfee, MD	Radiologist, BWH, MA
2001	Ramin Khorasani, MD	Vice Chair, Department Radiology; Radiologist, MA
2003	Steven J. Haker, PhD	Department Radiology, Children's Hospital, Boston, MA



2002	Fiona Fennessy, MD, PhD	Senior Physician; Cancer Imaging Program Fellowship Director, DFCI/BWH; Project Co-Lead, Prostate Core, NCIGT, BWH, MA
2011	Mizuki Nishino Hatabu, MD	Staff Radiologist, DFCI/BWH, MA
2012	Ritu Gill, MD Radiology	Associate Radiologist; Director, Imaging Research, Lung Research Center; Director, Thoracic Imaging and Intervention, AMIGO; Associate Director, Surgical Imaging Innovation, Center for Surgical Innovation, BWH, MA
2014-	Barthi Khurana, MD	Faculty, Department of Radiology, BWH, MA
2014-	Krisztina Fischer, MD	Faculty, Department of Radiology, BWH, MA
2014-	Jayender Jagadeesan, PhD	Faculty, Department of Radiology, BWH, MA
2014-2017	Ehud J. Schmidt, PhD	Associate Professor, Department of Medicine-Cardiovascular, Johns Hopkins Medical Institutes, Baltimore, MD

### **Formal Teaching of Peers (e.g., CME and other continuing education courses)**

1988-1992	Principles and Practice of MRI Course <i>MRI of Male Pelvis &amp; MRI of Female Pelvis</i> Johns Hopkins University
1992	MRI/CT Update Postgraduate Course <i>MRI of Male Pelvis &amp; MRI of Female Pelvis</i> BWH/HMS
1993-1995	MRI/CT Update Postgraduate Course <i>MR Prostate</i> BWH/HMS
1994-1997	Women's Diagnostic Imaging Course <i>Pelvic MRI</i> Brigham and Women's Hospital
1995	MRI Clinical Update & Advanced Applications Course <i>MRI of the Abdomen; MRI of Male Pelvis/MRI of the Female Pelvis; MRI of the Breast</i> Harvard Medical School
1996	MRI Clinical Update & Advanced Applications Course <i>MRI of the Infertile Patient; Update on Breast MRI; MRI of Pelvic Neoplasms in Female Patient</i> Harvard Medical School
1996-1998	Urologic Cancer Course <i>MRI of the Prostate</i> Harvard Medical School

- 1996 MRI/CT Update Postgraduate Course  
*MRI of the Female Pelvis; MRI of the Prostate*  
BWH/HMS
- 1997-1998 MRI/CT Update Postgraduate Course  
*MRI of Prostate; MRI of Female Pelvis; Malignant & Benign*  
BWH/HMS
- 1998 MRI Clinical Update & Advanced Applications Course  
*MRI of the Female Pelvis; MRI of the Breast*  
Harvard Medical School
- 1999 MRI Clinical Update & Advanced Applications Course  
*MRI of the Female Pelvis; MRI of the Male Pelvis; MRI of the Liver and Adrenals*  
Harvard Medical School
- 1999-2000 MRI/CT Update Postgraduate Course  
*MRI of the Female Pelvis; MRI of the Prostate*  
BWH/HMS
- 2000 MRI Clinical Update & Advanced Applications Course  
*MRI of the Female Pelvis; MRI of the Breast*  
Harvard Medical School
- 2001-2006 Radiology Review  
*Pelvic CT/MRI*  
BWH/MGH
- 2001-2002 Ultrasound/Women's Imaging  
*MRI in Obstetrics*  
Brigham and Women's Hospital
- 2001 MRI/CT Update Postgraduate Course  
MR Imaging & Guided Interventions in the Prostate; MR of Malignant Disease of Female Pelvis  
BWH/HMS
- 2002-2003 Annual Symposium on Prostate Cancer  
Brigham and Women's Hospital
- 2002 MRI Clinical Update & Advanced Applications Course  
*MR Female Pelvis; MRI of Prostate; MRI of Renal and Adrenal*  
Harvard Medical School
- 2002 Urologic Cancer Course  
*Prostate Cancer; MRI for Biopsy and Staging*  
Harvard Medical School
- 2002 MRI/CT Update Postgraduate Course  
*MRI of the Male Pelvis*  
BWH/HMS
- 2002 SAWI Symposium  
*MRI of Cervical Cancer*  
Boston MA
- 2003 MRI Clinical Update & Advanced Applications Course  
*MRI of the Female Pelvis; Prostate MRI; MR Guided Interventions in the Pelvis*

Harvard Medical School

2003 *Female Pelvis*  
Beth Israel Deaconess Medical Center

2003-2005 MRI/CT Update Postgraduate Course  
*Prostate MR*  
BWH/HMS

2004 MRI Clinical Update & Advanced Applications Course  
*MRI of the Female Pelvis; Benign Diseases & MR of the Male Pelvis; MR-guided Interventions in the Pelvis*  
Harvard Medical School

2004 Practical Applications of Imaging Techniques  
*Benign Diseases of the Uterus; Cancer Staging of Gynecologic Disease; Focused Ultrasound and Fibroid Treatment; MRI of Pregnancy*  
Harvard Medical School

2004-2008 Urologic Cancer Course  
*MRI for Biopsy and Staging*  
Harvard Medical School

2005 MRI Clinical Update & Advanced Applications Course  
*Prostate Imaging; Female Pelvis & Ovary*  
Harvard Medical School

2005-2007 MR Sequences: Pelvis  
*Male Pelvis; Case Review: Pelvis Practical MR Imaging of the Abdomen and Pelvis*  
Harvard Medical School

2006 MRI Clinical Update & Advanced Applications Course  
*MRI of the Abdomen; MRI of the Male Pelvis/MRI of the Female Pelvis; MRI of the Breast*  
Harvard Medical School

2007 MRI Clinical Update & Advanced Applications Course  
*MRI of the Abdomen; MRI of Male Pelvis/MRI of the Female Pelvis; MRI of the Breast*  
Harvard Medical School

2008-2009 MRI/CT Update Postgraduate Course  
*MRI of the Prostate Gland*  
BWH/HMS

2009 MRI Clinical Update & Advanced Applications Course  
*MR of Female Pelvis-Benign Disease; MRI of the Female Pelvis-Malignant Disease; Prostate MR Role in Detection/Surveillance and Treatment; Image Guided Therapy: Emphasis on MR Guided Focused Ultrasound*  
Harvard Medical School

2009 MR Sequences: Pelvis  
*Prostate; Practical MR Imaging of the Abdomen and Pelvis*  
Harvard Medical School

2010 MRI Clinical Update & Advanced Applications Course

- MR of Female Pelvis-Benign Disease; MRI of the Female Pelvis-Malignant Disease; MR-guided Interventions in the Pelvis; MRI for Diagnosis & Staging of Prostate Cancer*  
Harvard Medical School
- 2010 MR Sequence: Pelvis  
*Practical MR Imaging of the Abdomen and Pelvis*  
Harvard Medical School
- 2010 15<sup>th</sup> Biennial Urologic Cancer Course  
*MRI for Biopsy and Staging*  
Harvard Medical School
- 2011 Practical MR Imaging of the Abdomen and Pelvis Postgraduate Course  
*MR Sequence: Pelvis; Female Pelvis: Malignant Diseases*  
BWH/HMS
- 2011 Overview of Clinical Imaging Modalities  
*CTSA Biomarkers and Imaging in Drug Development Course*  
Harvard Medical School
- 2012 16<sup>th</sup> Biennial Urologic Cancer Course  
*Advances in Multiparametric MRI for Diagnosis and Staging/Panel Discussion*  
Harvard Medical School
- 2012 Practical MR Imaging of the Abdomen and Pelvis MR/CT Update Postgraduate Course  
*MR Sequence: Pelvis; Female Pelvis: Malignant Diseases*  
BWH/HMS
- 2012 Division of Reproductive Endocrinology and Infertility Seminar Series  
*GYN Lecture – Radiologic Ablation of Fibroids*  
Brigham and Women’s Hospital
- 2013 Harvard Catalyst Imaging Program  
*Imaging in Clinical Translational Cancer Research*  
BWH/HMS
- 2014 Abdominal Imaging and Intervention Lecture Series  
*MR Fibroids*  
Brigham and Women’s Hospital
- 2014 17<sup>th</sup> Biennial Urologic Cancer Course  
*Advances in Multiparametric MRI for Diagnosis and Staging and Panel Discussion*  
Harvard Medical School
- 2014 MRI/CT Update Course  
*MRI of the Prostate*  
Brigham and Women’s Hospital
- 2015 Radiology Postgraduate Radiology Review *MR Prostate*
- 2016 18<sup>th</sup> Biennial Urologic Cancer Course  
*Advances in Multiparametric MRI for Diagnosis and Staging and Panel Discussion*

**Local Invited Presentations**

- 1994 Boston University Medical Campus Grand Rounds  
*MRI of the Female Pelvis*  
Boston, MA
- 1994 Mt. Auburn Hospital Women's Health Symposium  
*MRI of the Female Pelvis*  
Cambridge, MA
- 1994 Dana-Farber Cancer Institute Grand Rounds  
*MRI of Prostate Cancer*  
Boston, MA
- 1994 Deaconess Hospital Grand Rounds  
*MRI of Prostate Cancer*  
Boston, MA
- 1994 Norwood Hospital Grand Rounds  
*MRI of Prostate Cancer*  
Norwood, MA
- 1995 New England Roentgen Ray Society  
*MRI of the Female Pelvis*  
Waltham, MA
- 1996 GU Oncology Grand Rounds Prostate MRI  
Dana-Farber Cancer Institute, Boston, MA
- 1996 Boston University Grand Rounds  
*MRI of GYN Malignancy*  
Boston, MA
- 1996 Massachusetts General Hospital Grand Rounds  
*MRI of the Female Pelvis*  
Boston, MA
- 1997 Mt Auburn Hospital Grand Rounds  
*Prostate MRI*  
Cambridge, MA
- 1997 HCHP Tumor Board  
*Prostate MRI*  
Boston, MA
- 1998 Boston University Grand Rounds  
*MRI of the Pelvis*  
Boston, MA

- 1998 Western Urological Society Fall Meeting  
*Prostate MRI*
- 1999 Mt. Auburn Hospital Grand Rounds  
*MRI of the Pelvis*  
Cambridge, MA
- 2001 New England Roentgen Ray Society  
*Women's Imaging: MRI & MR Guided Interventions*  
Waltham, MA
- 2004 Yale University Grand Rounds  
*MR-Guided Focused Ultrasound of Uterine Fibroid*  
New Haven, NJ
- 2005 New York University Hospital Grand Rounds  
*Translational Research in Image-guided Therapy*  
New York, NJ
- 2006 Rhode Island Hospital Grand Rounds  
*MR-Guided Focused Ultrasound Surgery MR Imaging; MR-Guided Interventions in Prostate Cancer*  
Providence, RI
- 2009 Making the Transition and Staffing Your Program  
*Moving to the Top: Establishing Your Research Program*  
Biomedical Research Institute, BWH
- 2010 Abdominal Imaging Section Lecture  
*MR-guided HIFU in Abdominal; Pelvic Disease*  
Beth Israel Medical Center
- 2011 New England Roentgen Ray Society  
*MRI Prostate*  
Waltham, MA
- 2011 3<sup>rd</sup> Annual Prostate Cancer Awareness Day  
*Prostate imaging "where is our Manogram"*  
Massachusetts State House, Boston, MA
- 2012 15<sup>th</sup> Annual Massachusetts Prostate Cancer Symposium  
Massachusetts Prostate Cancer Coalition Annual Meeting  
*Prostate imaging "where is our Manogram"*  
Boston, MA
- 2014 Radiology Grand Rounds  
*Prostate MRI*  
South Shore Hospital, South Weymouth, MA
- 2015 Methods in Clinical Research Course  
*Imaging in Era of Targeted Therapy*

Dana-Farber Cancer Institute, Boston, MA

- 2015 Spring Oncology Symposium  
*Prostate MRI and image guided interventions*  
Saint Anne's Hospital, Dartmouth, MA
- 2015 BWH, MGH-Urologic Oncology Conference  
*Multi-parametric MRI -PIRADS Classification*  
Boston, MA
- 2015 DFCI-Seminar of Genitourinary Oncology  
*Prostate MR Update Including New PIRADS*  
Boston, MA
- 2016 BWH GYN Oncology Series  
*MRI characterization and staging of GYN malignancies*  
Boston, MA
- 2016 BWH/MGH Radiology Update Postgraduate Course  
*Prostate Imaging and PI-RADS*  
Boston Marriott Long Wharf, Boston, MA
- 2016 HMS Seminars in Genitourinary Oncology  
*MR Prostate and PIRADS*  
Boston, MA
- 2016 HMS 18th Biennial Jerome P. Richie Biennial Urologic Cancer Course  
*Advances in Multiparametric MRI for Diagnosis and Staging*  
*Panel Discussion and Q&A - Prostate Cancer: Epidemiology and Optimizing Detection*  
Boston, MA

## **Report of Regional, National and International Invited Teaching and Presentations**

### **Invited Presentations and Courses**

#### **Regional**

- 1995 Women's Imaging Symposium  
*MRI of Gynecological Malignancies*  
Norwalk Hospital, Norwalk, CT
- 1996 Albany Medical Center Grand Rounds  
*MRI of the Female Pelvis*  
Albany, NY
- 2008 18<sup>th</sup> Annual Robin C. Watson Lecture  
*Image Guided Intervention: Where Can the Future Lead?*  
Memorial Sloan-Kettering Cancer Center, New York, NY
- 2008 Boston Children's Hospital Faculty Research Talk/Grand Rounds  
*Overview of the Recent Advances; Future Vision for Image-Guided Diagnosis and Treatment of Cancer*  
Boston, MA

- 2008 Genitourinary Oncology Seminar Series  
*Prostate Imaging and Intervention Update*  
Dana-Farber Cancer Institute, Boston, MA
- 2008 CIMIT–ORF and Beyond Team  
*Glimpse at future imaging technologies and their role in surgery*  
Boston, MA
- 2012 NIH-NCBC Showcase Meeting, Testimonial Speaker  
National Institutes of Health, Bethesda, MD
- 2013 Harvard Catalyst–Advanced Imaging: Imaging in Clinical/Translational Cancer Research  
*Image-guided Therapy*  
Cambridge, MA
- 2013 Boston Scientific  
*Visualization for Surgical Applications*  
Marlborough, MA
- 2013 3<sup>rd</sup> Governance Board Meeting  
*Canon-BWH Collaboration*  
Cambridge, MA
- 2013 Physical Principles of Human Cancer Imaging Workshop  
*Interventionalist Perspective*  
Cambridge, MA
- 2014 BWH Research Day  
*Latest Developments in Generating the Imaging Phenotype*  
*Session Theme: Imaging, Session Title: A picture is worth a thousand words.*  
Boston, MA
- 2015 Mass. Medical Society Body MRI, NERRS Annual Refresher Course  
*MRI of the Prostate*  
Waltham, MA
- 2017 First Joint Center for Surgical Innovations & National Center for Image Guided Therapy  
Boston, MA
- 2017 MPCC Prostate Cancer 20<sup>th</sup> Anniversary Symposium  
*Prostate Cancer State of the Art – State of the Disease*  
Boston, MA
- 2017 Robo Healthcare Summit  
Boston, MA
- 2017 2017 American Brachytherapy Society Annual Conference  
Boston, MA
- 2017 Invited Faculty, World Interventional Oncology Conference  
Boston, MA



## National

- 1991 Loyola University Medical Center Grand Rounds  
*Clinical MRI*  
Chicago, IL
- 1995 University of Pennsylvania MRI Course  
*MRI of the Abdomen, Male Pelvis, Female Pelvis & Breast*  
Philadelphia, PA
- 1996 Memorial Hospital Grand Rounds  
*Radiology/Obstetric & Gynecology*  
Hollywood, FL
- 2000 University of CA at San Francisco MRI Course  
*MRI Prostate & MRI Female Pelvis*  
San Francisco, CA
- 2000 MUSC Savannah MRI Course  
*MRI of the Female Pelvis; MRI of the Male Pelvis; MRI of Malignant Disease of the Pelvis*  
Savannah, GA
- 2002 Loyola University of Chicago *Leon Love Lecture*  
*Prostate MRI*  
Maywood, IL
- 2002 University of CA at San Francisco Earl Miller Lecture  
*Pelvic MRI and Image Guided Interventions*  
San Francisco, CA
- 2002 ISMRM Workshop on Clinical Applications of Focused Ultrasound Surgery-Non-MRI vs. MRI  
*Uterine Fibroid*  
Cambridge, MA
- 2003 Texas Radiological Society Annual Meeting  
*MRI of Adrenals; MR-Guided FUS of Fibroids; MRI Prostate*  
Galveston, TX
- 2004 American Association for Cancer Research Meeting  
*Advances in Prostate Cancer Imaging: Diagnosis, Staging and Monitoring*  
Bonita Springs, FL
- 2004 Practical Applications of Imaging Techniques  
*Benign Diseases of the Uterus; Cancer Staging of Gynecologic Disease; Focused Ultrasound and Fibroid Treatment*  
Scottsdale, AZ
- 2004 CIMIT - Transforming Investigator Ideas into Medical Practice Case Studies  
Massachusetts General Hospital, Boston, MA
- 2005 Hospital of the University of Pennsylvania Grand Rounds

*MRI of Malignant Disease of the Female Pelvis; MRI of Leiomyomas and MRg Focused Ultrasound Surgery of Leiomyomas; MRI of Pelvic Image Guided Intervention; MRI of the Female Pelvis; MRI of the Prostate: Diagnosis, Staging and Treatment of Prostate Cancer*

Philadelphia, PA

- 2006 ISMRM Meeting 2006  
*MRI of Prostate Cancer: Diagnosis, Staging and Treatment*  
Seattle, WA
- 2006 University of Maryland Grand Rounds, Warres Lecture  
*MR Guided Interventions in the Pelvis*  
Baltimore, MD
- 2007 Stanford University Symposium  
*MR-guided High Intensity Focused Ultrasound*  
Stanford, CA
- 2007 *GERRAF program* Association of University Radiologists  
Denver, CO
- 2007 St. Jude's Medical Annual Imaging Symposium  
*Imaging Biomarkers* Memphis, TN
- 2008 MRI-guided Focused Ultrasound Surgery International Symposium  
*MR-guided High Intensity Focused Ultrasound*  
Washington, D.C.
- 2009 NYU School of Medicine Grand Rounds  
*MRI-Guided Prostate Biopsy; Role and Limitations of Conventional Imaging Techniques; Minimally Invasive Intervention for Localized Prostate Cancer*  
New York, NY
- 2009 9th International Congress on Genitourinary Malignancies  
*Prostate Imaging*  
Washington, D.C.
- 2011 NCIGT Workshop *Image guided therapy*  
Washington, D.C.
- 2011 12<sup>th</sup> Annual Meeting of the Society of Urologic Oncology in Conjunction with the World Urological Oncology Federation Extraordinary Opportunities for Discovery  
*Imaging Adjuncts to Improve Prostate Biopsy*  
Bethesda, MD
- 2012 3<sup>rd</sup> International Symposium *MR Guided FUS*  
Washington, D.C.
- 2013 ARRS Body MRI Faculty Annual Meeting  
*Body MRI male and female pelvis*  
Washington, D.C.

- 2013 6<sup>th</sup> NCIGT Workshop  
Washington, D.C.
- 2013 Brown University/Rhode Island Hospital Grand Rounds  
*Prostate MRI and case review*  
Providence, RI
- 2014 Scripps Research Institute Meeting  
*Advances in Prostate Cancer Diagnosis and Monitoring with Multi Parametric MRI*  
La Jolla, CA
- 2014 7<sup>th</sup> Annual W.B. Ingalls Memorial Prostate Health and Cancer Seminar  
The Prostate Cancer Dilemma: Tiger or Pussycat?  
*Advances in Prostate Cancer Diagnosis and Monitoring with Multi Parametric MRI*  
Jupiter, FL
- 2014 Prostate MRI and MRI-Targeted Procedures Conference: The Comprehensive Course  
Invited Faculty, IAME  
*Prostate Cancer, Pathology & PI-RADS "Current Therapies for Prostate Cancer";  
MRI-Targeted Biopsies "Overview" and "In bore"; Clinical Case Review Post Treatment  
Recurrence; Elevated PSA and Negative Biopsies; Clinical Case Review 15  
"Pseudoscreening": High Risk and No Biopsy; Radiation Therapy Planning; MRI  
Targeted Therapies*  
Las Vegas, NV
- 2014 RSNA's 100<sup>th</sup> Scientific Assembly and Annual Meeting  
*Interactive Game: Prostate MRI Using PI-RADS*  
Chicago IL
- 2014 RSNA's 100<sup>th</sup> Scientific Assembly and Annual Meeting  
*Multi-parametric MRI (including PIRADS)*  
Chicago, IL
- 2014 7<sup>th</sup> NCIGT Imaged Guided Therapy Workshop  
*MR Guided Prostate Interventions*  
Washington, D.C.
- 2015 RSNA's 101<sup>st</sup> Scientific Assembly and Annual Meeting  
*Prostate MRI Using PI-RADS (Prostate Imaging Reporting and Data System);  
Multi-parametric MRI (including PIRADS)*  
Chicago, IL
- 2016 8<sup>th</sup> NCIGT Workshop  
*NCIGT Leadership Perspective and Prostate MR and Image-guided Interventions*  
Washington, D.C.
- 2016 First Global Summit on Precision Diagnosis for Prostate Cancer Care  
*Radiology Perspective: Anatomic and Functional Imaging mpMRI and Ultrasound*  
Westin Copley Hotel, Boston, MA
- 2016 World Molecular Imaging Congress 2016

Keynote Lecturer; Jorge Barrio Lecture for Advances in Clinical Research  
Jacob K. Javits Convention Center, New York, NY

- 2016 International Prostate Imaging Symposium  
*T2-Weighted Imaging; PI-RADS; Case Reviews; Case Review-Biopsy*  
Chicago, IL
- 2016 RSNA's 102<sup>st</sup> Scientific Assembly and Annual Meeting  
*Prostate MRI in the PIRADS Era*  
GU Series Course Director  
Chicago, IL
- 2017 2<sup>nd</sup> International Prostate Imaging Symposium  
*T2-Weighted Imaging; PI-RADS; Case Reviews; Case Review-Biopsy*  
Chicago, IL
- 2017 9<sup>th</sup> NCIGT Workshop Image Guided Therapy  
*Image-Guided Interventions in AMIGO*  
Washington, D.C.
- 2017 Prostate MRI Course  
Reston, VA
- 2017 RSNA's 103<sup>rd</sup> Scientific Assembly and Annual Meeting  
*Prostate MRI in the PIRADS Era*  
GU Series Course Director  
Chicago, IL
- 2017 AASLD Livery Meeting  
*Radiologic progression in primary sclerosing cholangitis (PSC) by two-dimensional magnetic resonance cholangiopancreatography (MRCP): Prospective data from a randomized controlled trial*  
Autoimmune and Cholestatic Liver Disease – Poster Session  
Washington, D.C.
- 2017 AASLD Livery Meeting  
*A risk prediction score based on magnetic resonance cholangiopancreatography (MRCP) accurately predicts disease progression in patients with primary sclerosing cholangitis (PSC)*  
Presidential Plenary - Clinical Session  
Washington, D.C.
- 2017 AASLD Livery Meeting  
*Quantification of biliary tree volume in patients with PSC using three dimensional (3D) reconstruction of magnetic resonance cholangiopancreatography (MRCP): Clinical associations and prognostic significance*  
Autoimmune and Cholestatic Liver Disease – Poster Session  
Washington, D.C.

## International

- 1990 Royal College of Surgeons & University College Grand Rounds  
*Clinical MRI*  
Dublin, Ireland
- 1990 Radiology Society of Argentina  
*International Diagnostic Radiology Course, 5 Lectures*  
Argentina
- 1997 Annual Scientific Meeting, Royal College of Surgeons  
*Role of Prostate MRI in Men with Prostate Cancer*  
Dublin, Ireland
- 1997 Annual Scientific Meeting, Royal College of Surgeons  
*Comparative Value of Ultrasound, CT and MRI in Diagnosis and Staging of Ovarian Cancer*  
Dublin, Ireland
- 1999 International Diagnostic Radiology Course, 10 Seminars, 75 Minutes  
*MRI of Female Pelvis*  
Davos, Switzerland
- 2000 3<sup>rd</sup> Interventional MRI Workshop: *MR guided prostate interventions*  
Leipzig, Germany
- 2000 34<sup>th</sup> International Course of Radiology and Imaging  
*Prostate MRI; MRI of the Breast; MRI of Female Pelvis Benign Disease; MRI of the Female Pelvis Malignant Disease*  
Mexico City, Mexico
- 2002 New Horizons in Radiology Symposium  
*MRI Female Pelvis Benign; MRI Female Pelvis Malignant*  
Berlin, Germany
- 2003 37<sup>th</sup> International Course of Radiology and Imaging  
MRI Female Pelvis; MRI Male Pelvis; MRI in Obstetrics  
Mexico City, Mexico
- 2004 Radiology in Ireland  
*MRI of the Prostate; Image Guided Diagnosis and Treatment of Prostate Cancer; MR Diagnosis and MR Guided Focused Ultrasound Surgery of Uterine Fibroids; MRI of the Female Pelvis: Malignant Disease*  
Killarney and Dublin, Ireland
- 2005 Imaging and Interventional Procedures in Hepatocellular Carcinoma Liver and Disease at the Crossroads of Civilization East Meets West: *MR imaging and image guided interventions in the liver*  
Alexandria Library, Egypt
- 2005 University of Barcelona Grand Rounds  
*Image Guided Therapy of the Pelvis; MRI in Reproductive Medicine*  
Barcelona, Spain
- 2006 European Congress of Radiology

- MR Guided Focused Ultrasound for Uterine Fibroids*  
Vienna, Austria
- 2006 Practical Applications of New Imaging Techniques  
*MRI of the of the Male Pelvis; Focused Ultrasound Surgery on Leiomyomas*  
Brugge, Belgium
- 2006 *MR Guided Pelvic Interventions*  
Kaposvar, Hungary
- 2006 Royal College of Surgeons Grand Rounds  
*Image Guided Therapy*  
Dublin, Ireland
- 2007 17<sup>th</sup> APASL Conference  
*MR Guided Focused Ultrasound Surgery: A Novel Non-invasive Treatment for Focal Liver Disease*  
Kyoto, Japan
- 2007 Joint Annual Meeting ISMRM-ESMRMB  
*Advanced Body Imaging*  
Berlin, Germany
- 2008 *National Center for Image Guided Therapy: Mission and Organizational Overview*  
OR Leadership, Princess Margaret Hospital
- 2010 2010 MRI: Clinical Updates & Practical Applications  
*MR of Female Pelvis: Benign Diseases; MR of Female Pelvis: Malignant Diseases; MRI for Diagnosis and Staging; MR-guided Interventions in the Pelvis*  
Los Cabos, Mexico
- 2011 Clinical MRI Update Course  
*MRI of the Prostate; Image Guided Therapy; MRI Guided High Focused Ultrasound in the Abdomen & Pelvis*  
Rio de Janeiro, Brazil
- 2011 European MR Guided US Therapy Symposium  
*MRgFUS of Prostate Cancer*  
Rome, Italy
- 2012 Visiting Professor, Queen Mary Hospital-Hong Kong  
*Women's Imaging*  
Pok Fu Lam, Hong Kong
- 2012 SMRT, ISMRM Faculty Courses: *MRI of prostate cancer how I do it*  
Melbourne, Australia
- 2013 Visiting Professor, Visiting Professors' Program, McGill University  
*MR Prostate Update; MR of GYN Malignancy*  
Montreal, Canada
- 2013 Visiting Professor, German Association of University, Chairmen in Radiology  
*The Role of Radiology in the Field of Image Guided Therapy*

Tubingen, Germany

- 2013      Visiting Professor, UMCU Symposium 2013  
*MR-HIFU Applications: Uterine Fibroids*  
Utrecht, The Netherlands
- 2014      ISMRM & SMRT Faculty Course  
*Prostate MR*  
Milan, Italy
- 2014      10<sup>th</sup> Interventional MRI Symposium  
*MR-guided Prostate Interventions*  
Leipzig, Germany
- 2015      Visiting Professor, University of British Columbia Grand Rounds (Electrical and  
Computer Engineering, Radiologic and Urologic Sciences)  
*MR guided interventions technical challenges: A Radiologist's perspective; MR imaging  
and image guided interventions in Prostate cancer; The role of Multi-parametric MRI  
(including PIRADS) in prostate cancer detection, diagnosis and image guided  
interventions.*  
Vancouver, Canada
- 2015      25<sup>th</sup> Anniversary – Institute of Diagnostic Imaging and Radiation Oncology, Kaposvar  
University  
*Image guided therapy – a view from Boston.*  
Kaposvar, Hungary
- 2015      3<sup>rd</sup> European Symposium on Focused Ultrasound Therapy  
*1<sup>st</sup> Annual Ferenc A. Jolesz Oration in Focused Ultrasound*  
Prostate Panel – Difficult Cases, Complications, Where Next with Technology  
London, England
- 2016      Brain and Spine Institute [Institut du Cerveau et de la Moelle épinière (ICM)]  
*Image guided therapy advances in Oncology from the NCIGT*  
Paris, France
- 2015      MICCAI 2015  
Invited Keynote Plenary - *Image guided therapy advances in Oncology*  
Istanbul, Turkey
- 2016      MICCAI 2016  
Athens, Greece
- 2017      ISMRM 25<sup>th</sup> Annual Meeting and Exhibition  
Honolulu, Hawaii

## **Report of Clinical Activities and Innovations**

### **Current Licensure and Certification**

- 1982      Irish Medical Council Registration  
1988      American Board of Radiology Certification

## Report of Technological and Other Scientific Innovations

10/30/2001-12/17/2013 *Patent #:* 6,311,084 - Radiation seed implant method and apparatus.

## Report of Scholarship

### Publications

#### Original Articles

1. **Tempany CM.** Villous tumor. *IMJ Ill Med J.* 1985 Nov; 168(5):313, 52-3. PMID: 2867070.
2. **Tempany CM.** The Viewbox. Villous adenoma of duodenum. *IMJ Ill Med J.* 1986 Jan; 169(1):7, 45. PMID: 2869017.
3. Posniak HV, **Tempany CM**, Demos TC, Love L. Computed tomography of posterior pararenal and properitoneal metastases. *Urol Radiol.* 1988 Jan; 10(2):75-9. PMID: 3055632.
4. Cooper RA, **Tempany CM**, Farrell B. Conventional and computed tomographic sialography in evaluating disorders of the parotid gland. *Entechnology.* 1988 Sep; 20-35. PMID: 3271574.
5. Kawashima A, Fishman EK, Hruban RH, **Tempany CM**, Kuhlman JE, Zerhouni EA. Biliary cystadenoma with intratumoral bleeding: radiologic-pathologic correlation. *J Comput Assist Tomogr.* 1991 Nov-Dec; 15(6):1035-8. PMID: 1939756.
6. Kawashima A, Kuhlman JE, Fishman EK, **Tempany CM**, Magid D, Lederman HM, Winkelstein JA, Zerhouni EA. Pulmonary Aspergillus chest wall involvement in chronic granulomatous disease: CT and MRI findings. *Skeletal Radiol.* 1991 Jan; 20(7):487-93. PMID: 1754909.
7. Kronthal AJ, Kang YS, Fishman EK, Jones B, Kuhlman JE, **Tempany CM.** MR imaging in sclerosing mesenteritis. *AJR Am J Roentgenol.* 1991 Mar; 156(3): 517-9. PMID: 1899747.
8. **Tempany CM**, Rahmouni AD, Epstein JI, Walsh PC, Zerhouni EA. Invasion of the neurovascular bundle by prostate cancer: evaluation with MR imaging. *Radiology.* 1991 Oct; 181(1):107-12. PMID: 1887017.
9. Wolff KA, Herold CJ, **Tempany CM**, Parravano JG, Zerhouni EA. Aortic dissection: atypical patterns seen at MR imaging. *Radiology.* 1991 Nov; 181(2):489-95. PMID: 1924793.
10. Carter HB, Brem RF, **Tempany CM**, Yang A, Epstein JI, Walsh PC, Zerhouni EA. Nonpalpable prostate cancer: detection with MR imaging. *Radiology.* 1991 Feb; 178(2):523-5. PMID: 1987620.
11. Brem RF, **Tempany CM**, Zerhouni EA. MR detection of breast implants rupture. *J Comput Assist Tomogr.* 1992 Jan-Feb; 16(1):157-9. PMID: 1729297.
12. Mitchell DG, Palazzo J, Hann HW, Park CH, **Tempany CM**, Chako A, Rubin R. Mass-like hepatic hypertrophy: MRI findings with histologic correlation. *Magn Reson Imaging.* 1992 Jan; 10(4):541-7. PMID: 1501524.
13. Schiebler ML, Yankaskas BC, **Tempany CM**, Holtz P, Zerhouni EA. Efficacy of prostate-specific antigen and magnetic resonance imaging in staging stage C adenocarcinoma of the prostate. *Invest Radiol.* 1992 Aug; 27(8):575-7. PMID: 1385355.



14. **Tempany CM**, Morton RA, Marshall FF. MRI of the renal veins: assessment of nonneoplastic venous thrombosis. *J Comput Assist Tomogr.* 1992 Nov-Dec; 16(6):929-34. PMID: 1430444.
15. Rahmouni A, Yang A, **Tempany CM**, Frenkel T, Epstein J, Walsh P, Leichner PK, Ricci C, Zerhouni EA. Accuracy of in-vivo assessment of prostatic volume by MRI and transrectal ultrasonography. *J Comput Assist Tomogr.* 1992 Nov-Dec; 16(6):935-40. PMID: 1385499.
16. Silverman SG, Bloom DA, Seltzer SE, **Tempany CM**, Adams DF. Needle-tip localization during CT-guided abdominal biopsy: comparison of conventional and spiral CT. *AJR Am J Roentgenol.* 1992 Nov; 159(5):1095-7. PMID: 1414782.
17. Schiebler ML, Yankaskas BC, **Tempany CM**, Spritzer CE, Rifkin MD, Pollack HM, Holtz P, Zerhouni EA. MR imaging in adenocarcinoma of the prostate: interobserver variation and efficacy for determining stage C disease. *AJR Am J Roentgenol.* 1992 Mar; 158(3):559-62; discussion 63-4. PMID: 1738994.
18. Rahmouni A, **Tempany CM**, Jones R, Mann R, Yang A, Zerhouni EA. Lymphoma: monitoring tumor size and signal intensity with MR imaging. *Radiology.* 1993 Aug; 188(2):445-51. PMID: 8327695.
19. **Tempany CM**, Partin AW, Zerhouni EA, Zinreich SJ, Walsh PC. The influence of finasteride on the volume of the peripheral and periurethral zones of the prostate in men with benign prostatic hyperplasia. *Prostate.* 1993 Jan; 22(1):39-42. PMID: 7678931.
20. Schwartz LH, Seltzer SE, **Tempany CM**, Silverman SG, Piwnica-Worms DR, Adams DF, Herman L, Herman LT, Hooshmand R. Prospective comparison of T<sub>2</sub>-weighted fast spin-echo, with and without fat suppression, and conventional spin-echo pulse sequences in the upper abdomen. *Radiology.* 1993 Nov; 189(2):411-6. PMID: 8210368.
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22. Schwartz LH, Seltzer SE, Adams DF, **Tempany CM**, Piwnica-Worms DR, Silverman SG, Herman L, Herman LT, Hooshmand R. Effects of superparamagnetic iron oxide (AMI-25) on liver and spleen imaging using spin-echo and fast spin-echo magnetic resonance pulse sequences. *Invest Radiol.* 1994 Jun; 29 Suppl 2:S21-3. PMID: 7928234.
23. **Tempany CM**, Zhou X, Zerhouni EA, Rifkin MD, Quint LE, Piccoli CW, Ellis JH, McNeil BJ. Staging of prostate cancer: results of Radiology Diagnostic Oncology Group project comparison of three MR imaging techniques. *Radiology.* 1994 Jul; 192(1):47-54. PMID: 8208963.
24. Burnett AL, Allen RP, **Tempany CM**, Dover GJ, Brendler CB. Evaluation of erectile function in men with sickle cell disease. *Urology.* 1995 Apr; 45(4):657-63. PMID: 7716848.
25. **Tempany CM**, Masoudi FA, Marshall FF. The use of dynamic magnetic resonance imaging to evaluate orthotopic continent urinary diversion. *Urology.* 1995 May; 45(5):886-92. PMID: 7747382.
26. Chako AC, **Tempany CM**, Zerhouni EA. Effect of slice acquisition direction on image quality in thoracic MRI. *J Comput Assist Tomogr.* 1995 Nov-Dec; 19(6):936-40. PMID: 8537529.
27. Schwartz LH, Seltzer SE, **Tempany CM**, Silverman SG, Piwnica-Worms DR, Adams DF, Herman L, Herman LA, Hooshmand R. Superparamagnetic iron oxide hepatic MR imaging: efficacy and safety using conventional and fast spin-echo pulse sequences. *J Magn Reson Imaging.* 1995 Sep-Oct; 5(5):566-70. PMID: 8574043.

28. Silverman SG, Hillstrom MM, Doyle CJ, **Tempany CM**, Sica GT. Thrombophlebitic retroperitoneal collateral veins mimicking lymphadenopathy: MR and CT appearance. *Abdom Imaging*. 1995 Sep-Oct; 20(5):474-6. PMID: 7580789.
29. D'Amico AV, Whittington R, Malkowicz SB, Loughlin K, Schultz D, Schnall M, **Tempany CM**, Tomaszewski JE, Renshaw A, Wein A. An analysis of the time course of postoperative prostate-specific antigen failure in patients with positive surgical margins: implications on the use of adjuvant therapy. *Urology*. 1996 Apr; 47(4):538-47. PMID: 8638365.
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35. Fielding JR, Fox LA, Heller H, Seltzer SE, **Tempany CM**, Silverman SG, Steele G. Spiral CT in the evaluation of flank pain: overall accuracy and feature analysis. *J Comput Assist Tomogr*. 1997 Jul-Aug; 21(4):635-8. PMID: 9216774.
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- patients with primary abdominal and pelvic malignancies: radiographic-pathologic correlation. *AJR Am J Roentgenol.* 1999 May; 172(5):1347-51. PMID: 10227514.
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115. Loew W, Ciris PA, Wang W, Schmidt EJ, Dumoulin CL, **Tempany CM**, Tse ZTH. Novel Prostate Strain Imaging Platform with Endo-Rectal Probe Incorporating Tetrahedral MR-tracking and Balloon Compression. Poster. ISMRM 2014.
116. Penzkofer T, Tuncali K, Fennessy FM, Tokuda J, Fedorov A, Song SE, Hata N, **Tempany CM**. Transperineal in-bore 3T MRI Guided Prostate Biopsy in Active Surveillance Patients: Higher Prevalence of Anteriorly Located Positive Prostate Cancer Targets. ISMRM 2014.
117. Kobus T, Fedorov A, **Tempany CM**, Mulkern RV, Dunne R, Maier SE. Bi-exponential diffusion analysis in normal prostate and prostate cancer: transition zone and peripheral zone considerations. ISMRM 2015.
118. Ciris PA, Mulkern RV, Balasubramanian M, Damato AL, Seethamraju RT, Fairhurst J, Jolesz FA, **Tempany CM**, Schmidt EJ, Viswanatham AN. Gradient Echo Signal Decays in Gynecological Cancers Require a Gaussian Augmentation of the Mono-Exponential (GAME) Model: Preliminary Evaluation Post External Beam Radiation Therapy at 3T. ISMRM 2015.
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126. Velez E, Allard, CB, Tuncali K, Fedorov A, Kibel A, **Tempany-Afdhal, CM**. Pathologic Correlation between Transperineal in-bore 3-Tesla MR Imaging-Guided Prostate Biopsy and Radical Prostatectomy. RSNA 2015.
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131. Luo J, Turk EA, Bibbo C, Gagoski B, Vangel M, **Tempany-Afdhal CM**, Malpica N, Palanisamy A, Adalsteinsson E, Robinson JN, Grant PE. BOLD MRI of human placenta and fetuses under maternal hyperoxygenation in growth restricted twin pregnancies. ISMRM 2016.
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133. Taghipour M, Hassanzadeh E, Alessandrino F, Harisinghani M, **Tempany CMC**, Fennessy FM. Investigating the role of DCE-MRI, over T2 and DWI, in accurate PIRADS-v2 assessments of clinically significant peripheral zone prostate lesions, as defined at radical prostatectomy. ISMRM 2017.
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#### **Education Material/Scientific Exhibits**

1. **Tempany CM**, Keeling NPW. Review of our ERCP experiences. Presented at the Annual Meeting of the Federated Hospitals, Dublin 1984.
2. Olson M, Posniak H, **Tempany CM**, Dudiak C, Gomes G. MR imaging of the female pelvis. RSNA 1990; ARRS 1991.
3. Imanishi Y, Hou V, Chako AC, Zerhouni EA, **Tempany CM**. Evaluation of the pancreas by MR imaging. European Congress of Radiology 1991.

4. Saeki M, Pitt HA, **Tempany CM**. MRI of hilar cholangiocarcinoma. IHBPA & RSNA 1992.
5. **Tempany CM**, Bastier E, Corless C, Silverman SG, Loughlin KR. MR imaging of biopsy proven prostate cancer. New England AUA 1994.
6. Pomeroy OH, Mok P, Lester S, Adams DA, **Tempany CM**, Jolesz FA. Gadolinium enhanced MRI of core biopsy proven fibroadenomas: histological correlation. AUR 1995.
7. Mok PL, Pomeroy OH, **Tempany CM**, Adams DA, Frenna T. MR imaging of breast specimens. AUR 1995.
8. Pomeroy OH, **Tempany CM**, Hiramatsu H, Frenna TH, Koichi O, Jolesz FA. High resolution MRI of breast fibroadenomas using T<sub>2</sub>-weighted fat sat. ARRS 1995.
9. Hutcheson J, **Tempany CM**, Sica GT, Loughlin K. MRI in evaluation of penile cancer. NE-AUA 1995.
10. Tello R, Jacobson F, **Tempany CM**, Knapman M, Jakab M, Kikinis R, Rizzo R. Rapid cardiovascular MRI. ARRS 1996.
11. McAnearney S, Fedorov A, Joldes G, Hata N, **Tempany CM**, Miller K, Wittek A. The Effects of Young's Modulus on Predicting Prostate Deformation for MRI-guided Interventions. Int Conf Med Image Comput Assist Interv. 2010 Sep; 13(W5); Workshop on Computational Biomechanics for Medicine.
12. Kapur T, **Tempany CM**, Jolesz FA. The 3<sup>rd</sup> Image Guided Therapy Workshop; 3:1-87. Mar 8-9, 2010. Arlington, VA.
13. Kapur T, **Tempany CM**, Jolesz FA. The 4<sup>th</sup> Image Guided Therapy Workshop; 4:1-121. Oct 12-13, 2011. Arlington, VA.
14. Kapur T, **Tempany CM**, Jolesz FA. The 5<sup>th</sup> Image Guided Therapy Workshop; 5:1-70. Sep 22-23, 2012. Boston, MA.
15. Kapur T, **Tempany CM**, Jolesz FA. The 6<sup>th</sup> Image Guided Therapy Workshop; 6:1-87. Mar 21-23, 2013. Crystal City, VA.
16. Kapur T, **Tempany CM**, Jolesz FA. The 7<sup>th</sup> Image Guided Therapy Workshop; 7:1-60. Sep 18, 2014. Boston, MA.
17. Behringer PA, Herz C, Penzkofer T, Tuncali K, **Tempany CM**, Fedorov A. Open-source Platform for Prostate Motion Tracking during in-bore Targeted MRI-guided Biopsy. Int Conf Med Image Comput Assist Interv. 2015 Oct; 18(W5). Workshop on Clinical Image-based Procedures: Translational Research in Medical Imaging.
18. Kapur T, **Tempany CM**. *The 8<sup>th</sup> Image Guided Therapy Workshop*; 8:1-68. Mar 15-16, 2016. Bethesda, MD.
19. Kapur T, **Tempany CM**. *The 9<sup>th</sup> Image Guided Therapy Workshop*; 9:1-55. Mar 14-15, 2017. Bethesda, MD.