355 Main St.

Cambridge, MA 02142 Voice: (617) 575-3166 Email: vivianlee@verily.com

#### **Personal Data**

Citizenship United States of America

Married to Benedict Kingsbury

Children Four daughters

#### **Education**

Year	Degree	Field	Institution
1983-1986	B.A. (magna cum laude)	<b>Biochemical Sciences</b>	Harvard-Radcliffe Colleges
1986-1989	Ph.D. (D. Phil)	Engineering Science	Oxford University
1988-1992	M.D. (honors)	Medicine	Harvard Medical School
2004-2006	M.B.A. (valedictorian)	Business	New York University

#### **Internships and Residencies**

1992-1993	Internship in General Surgery, Duke University, North Carolina
1993-1997	Residency in Diagnostic Radiology, Duke University
1996-1997	Chief Resident, Diagnostic Radiology, Duke University

#### **Clinical Fellowship**

1997-1998 Fellow in Body Magnetic Resonance Imaging and Thoracic Imaging,

New York University Medical Center (NYUMC), New York

#### **Licensure and Certification**

1997	American Board of Radiology: Certificate in Diagnostic Radiology
1997	New York State Medical License: #206046 (exp)
2005	Michigan State Board of Medicine Physician License #1498139 (exp)
2011	Utah Medical License #8020279-1205

#### **Academic Appointments**

1 - c	Pomenes
1997-1998	Clinical Assistant Professor of Radiology, New York University School of Medicine
1998-2000	Assistant Professor of Radiology, NYU SoM
1998-2002	Director, Cardiothoracic MR Imaging, NYU SoM
2000-2004	Associate Professor of Radiology, NYU SoM
2002-2008	Vice Chair for Research, Department of Radiology, NYU SoM
2002-2004	Associate Professor of Neuroscience and Physiology, NYU SoM
2004-2011	Professor of Radiology and Neuroscience and Physiology, NYU SoM
2011-2018	Professor of Radiology (tenured), University of Utah
2011-2017	A. Lorris Betz Senior Vice President for Health Sciences
2011-2017	Dean, School of Medicine, University of Utah
2011-2017	Senior Vice-President for Health Sciences, University of Utah
2018-	Senior Lecturer, Department of Radiology (MGH), Harvard Medical School

#### **Hospital Appointments**

1997-1998 Clinical Assistant Attending, New York University Medical Center, New York

	Clinical Assistant Attending Bellevue Hospital Center, New York
1998-2011	Attending Physician, Body and Cardiovascular MRI, NYUMC
1998-2000	Assistant Attending, NYUMC, New York
	Assistant Attending, Bellevue Hospital Center, New York
2000-2004	Associate Attending, NYUMC, New York
	Associate Attending, Bellevue Hospital Center, New York
2004-2011	Attending, NYUMC, New York
	Attending, Bellevue Hospital Center, New York
2007-2011	Chief Scientific Officer and Senior Vice-President, NYUMC
2011-2017	Chief Executive Officer, University of Utah Health System
2018-	Senior Lecturer, Massachusetts General Hospital

#### **Affiliation Appointments**

2017- Senior Fellow, Institute for Healthcare Improvement (IHI), Cambridge, MA

#### **Employment/Major Administrative Responsibilities**

2018- President, Verily Health Platforms, Verily (an Alphabet/Google company)

Responsible for the strategic and operational leadership of Health Platforms at Verily, I work closely with Verily's clinical and engineering teams to develop products and platforms that support the successful transformation of health systems to value and advance the co-production of health with patients, their caregivers, and communities.

Co-CEO and Chair of the Board, Coefficient Board of Directors, Onduo Walgreens-Verily Joint Sterring Committee

#### Products Overseen and Launched:

- Onduo, assumed responsibility November 2019: Commercially available virtual diabetes clinic with integrated remote monitoring (blood glucose monitor/continuous glucose monitor, app, texting, videoconferencing, medical management, coaching dashboard)
  - o https://blog.verily.com/2019/12/onduo-and-scaling-virtual-care-model.html
- Verily Covid-19 Pathfinder, April 2020: a new set of tools that provide on-demand access to COVID-19 information directly from a hospital or health system website
  - o <a href="https://verily.com/stories/verily-covid-19-pathfinder/">https://verily.com/stories/verily-covid-19-pathfinder/</a>
  - o https://blog.verily.com/2020/04/verily-launches-pathfinder.html

# 2011 - 2017 A. Lorris Betz Senior Vice President for Health Sciences, University of Utah Dean, School of Medicine CEO, University of Utah Health Care

#### Major Administrative Initiatives

For 6 years, I was responsible for the academic health sciences campus and health system of the University of Utah, the flagship public university of the state, and the only academic medical center in the intermountain region of Idaho, Wyoming, Montana, western Colorado, eastern Nevada, and Utah. As one of two senior vice-presidents, I reported directly to the University President. My responsibilities included the Colleges and Schools of Medicine (for which I also served as Dean), Pharmacy, Nursing, Health, and Dentistry, together with research centers such as the Huntsman Cancer Institute, the John A. Moran Eye Center, and the NCATS-funded Center for Clinical and Translational Science. Our health care system included four hospitals, numerous clinical and research

specialty centers, a network of 12 neighborhood health centers, a health insurance plan, 18 regional hospital affiliates, and over 1,400 board certified physicians, as well as a university-owned spin-off, ARUP Laboratories, a leading national reference laboratory company. In my University of Utah roles, I was responsible for an annual budget that grew from \$2.1 billion to more than \$3.5 billion.

During my tenure, we recruited exceptional faculty and leaders and achieved superb results across all missions of the University. Building stronger relationships with our state legislature, we secured funding to increased the medical school class size from 82 to 125 students per year and established the first new academic School of Dentistry in the country in 25 years, thanks to generous philanthropic support (our first class graduated May 2017). We grew research programs across the campus, including a new Utah Genome Project and Precision Medicine Initiative (raising over \$50M in philanthropy and leading to over \$40M in new NIH funding within five years), a new Neuroscience Initiative, a new Department of Population Health Sciences in the School of Medicine, comprehensive designation for NCI-designated Huntsman Cancer Institute, and a new Center for Medical Innovation. Last year, under the leadership of outstanding new Deans, the College of Nursing was ranked #2 in NIH funding among all nursing schools in the nation, and the College of Pharmacy continued to be ranked in the top 5. A major initiative for our campus has been a \$500M campus transformation construction project slated for completion by 2022, for which over \$180M in state and private funds were committed by spring 2017. This project includes the new Neilsen Rehabilitation Hospital (funded through a \$47.5M gift) and Ambulatory Care Center (both underway), followed by demolition and construction of a new School of Medicine building. Clinically, our team led the University of Utah to recognition for its health care delivery system innovations that enable higher quality at lower costs and with higher patient satisfaction. In 2016, University of Utah was ranked #1 among university hospitals in quality and safety, making it the 7th year in a row that the system was ranked in the top 10, and ranked in the top 5 for ambulatory care (Vizient/University Healthsystem Consortium). In 2013, we secured a commercial insurance license and created a separate insurance company, University of Utah Health Plans, which grew from 60,000 to over 250,000 lives, primarily through employer contracts and notable profitability on the individual exchange as well.

2007- 2011 Vice Dean for Science, Chief Scientific Officer and Senior Vice-President, NYULMC

#### Major Administrative Initiatives and Achievements

As the inaugural Vice Dean for Science at NYULMC, my primary responsibilities were to support and grow the scientific community at NYU: strengthening core facilities and support services, enhancing research career development and mentoring, and serving as an advocate for research within NYU and externally. Initiatives included establishing a new philanthropically-funded Neurosciences Institute and recruiting its Director, launching six new Centers of Excellence and a new Center for Translational Science Institute (CTSI), upgrading core facilities and standardizing their operations, educational initiatives in grantsmanship, and a new physician scientist training program, creating mechanisms to encourage and support programmatic research, establishment of a new Center for Health Informatics and Bioinformatics and a new Department of Statistics and Epidemiology, both housed in a newly acquired research building for public health initiatives, and overseeing a number of operational initiatives in research administration. Our office oversaw the Institutional Review Board, Sponsored Programs Administration, Office of Clinical Trials, Office of Industrial Liaison, Department of Laboratory and

Animal Research, IACUC, Research Information Management, Institutional Biosafety Committee, and we co-supervise Research IT, Research Finance, Research Development, and Research Compliance. During my tenure, NYU ranking among NIH-funded schools of medicine increased from #36 to #26.

2002-2008 Vice-Chair for Research, Department of Radiology, NYUMC

#### Major Administrative Initiatives and Achievements

During my 5-year tenure, I helped create a research administration and infrastructure in Radiology that supports research productivity and external funding success through mentorship, seed grants, and fostering of intra- and inter-departmental collaborations. NYU Radiology, unranked in research funding a decade earlier, rose to a top tier Department in NIH research funding, with an active corps of clinical researchers, 20 dedicated research scientists and over 60 full-time research personnel.

#### **Awards and Honors**

Awards and	Honors
1983	National Merit Scholar
1983	U.S. Presidential Scholar
1983-1986	John Harvard Scholar, Harvard College
	Elizabeth Cary Agassiz Scholar, Radcliffe College
1984	Detur Prize, Harvard College
1985	Phi Beta Kappa (junior year)
1985	Women in Science Award, Radcliffe College
1986-1989	Rhodes Scholar, Oxford University
1992	Janet. M. Glasgow Memorial Achievement Citation, American Medical Women's Association
1992	Rose Seegal Prize, Harvard Medical School
1996	American Association for Women Radiologists Distinguished Resident Award
1998	Cum Laude Award, Society for Computed Body Tomography/Magnetic Resonance
1999	Cum Laude Award, Society for Computed Body Tomography/Magnetic Resonance
1999	Moncada Award, Society for Computed Body Tomography/Magnetic Resonance (PI: GA
	Krinsky)
2000	Lauterbur Award, Society for Computed Body Tomography/Magnetic Resonance
2001	Orloff Award, NYUMC
2001	Junior Investigator Award, Society for Computed Body Tomography/Magnetic
	Resonance
2001	Elected to Full Membership, Society for Computed Body Tomography/Magnetic
	Resonance
2001-2010	Elected to Best Doctors
2002	Cum Laude Award, Society for Computed Body Tomography/Magnetic Resonance
2002-2010	Elected to Board of Trustees (2002-2005), Executive Committee (2005-2010),
	International Society for Magnetic Resonance in Medicine (ISMRM)
2003, '05, '07	Radiology Editor's Recognition Award For Reviewing with Distinction
2005	Outstanding Teacher Award, International Society for Magnetic Resonance in Medicine
	Annual Meeting
2006	Cum Laude Award, Society for Computed Body Tomography/Magnetic Resonance (PI:
	G. Bennett)
2006	"40 under 40", New York's Rising Stars, Crain's New York Business
2006	Fellow of the International Society for Magnetic Resonance in Medicine
2006	Alpha Omega Alpha
2009	Chang-Lin Tien Education Leadership Award
	1

2009	Polytechnic Institute-NYU Innovator's Award
2010	UN Secretary General's Global Colloquium of University Presidents: Faculty
	representative with NYU President John Sexton
2010	International Society for Magnetic Resonance in Medicine Poster Award 1st Prize
	(Yamamoto et al)
2011	Dynamic Achiever Award for the Overseas Chinese Association; Westchester Hudson
	Valley, NY
2012	ISMRM Lauterbur Lecturer
2012	"Pathfinder" Salt Lake City Chamber of Commerce Women and Business awardee
2013	2013 Outstanding Asian Professional Award Recognition by Utah Asian Chamber of
2013	Commerce
2013	Becker's Hospital Review recognitions
2013	Top 20 hospital and health system leaders to follow on Twitter
	Top 125 Physician Leaders of Hospitals and Health Systems,
	Top 300 Hospital & Health System Leaders to Know
2014	Becker's Hospital Review recognition
2014	1
2014	Top 40 Smartest People in Healthcare Press Ganey Innovation Award
2014	•
2015 2015	American Society for Clinical Investigation, elected member
	National Academy of Medicine (formerly, Institute of Medicine), elected member
2015	Utah Cystic Fibrosis Foundation "Breath of Life" Award
2016	Utah Women's Leadership Celebration Honoree, Sundance Film Festival
2016	Outstanding Director, Utah Business magazine
2016	Commencement Speaker, John A. Burns School of Medicine, University of Hawai'i
2016	Becker's Hospital Review recognition
	10 Most Interesting People in Healthcare
2017	Utah Governor's Medal of Science and Technology
2017	Commencement Speaker, NYU Stern School of Business EMBA Program, New York
2017	Wilson Ko Memorial Lecture, Chinese American Medical Society Annual Meeting
2019	International Society for Magnetic Resonance in Medicine, Gold Medal
2019	Modern Healthcare 100 Most Influential People in Healthcare, Rank #11
2020	Modern Healthcare <u>Top 25 Minority Leaders</u>
2020	Modern Healthcare Top 50 Most Influential Clinical Executives
Institutional A	Awards and Honors
2017	Costs of Care/ABIM Creating Value Challenge winner for "Linking Quality and Costs –
	Team-based, Physician-led Care Redesign for Top 50 Medical Conditions", (Selected
	from over 80 submissions), June 2017
2016	Vizient/University Healthsystem Consortium Top Academic Health System in Quality
	and Safety: Ranked #1 among over 120 university hospitals
	Top 5 Ambulatory Care
	2- <b>F</b>
2015	AAMC Learning Health System Champion Research Award for "Implementation of
	Value Driven Outcomes (VDO) to Enhance Clinical Operations, Health Services
	Research, and Population Health in an Academic Health Enterprise", December 2015 (Y
	Anzai)
	·

2015 AAMC Learning Health System Pioneer Award for "Development of a standardized and

accepted process for implementing and evaluating Patient-Reported Outcomes (PROs)

within an Academic Health Enterprise, December 2015 (H Weeks)

2011-2017 University Healthsystem Consortium Top 10 Academic Health Systems in Quality and

Safety.

Overall Ranking: 2011 (#7), 2012 (#4), 2013 (#9), 2014 (#6), 2015 (#7), 2016 (#1)

Ambulatory Care: 2015 (#2), 2016 (#5)

**Major National and State Committee Assignments** 

2017- Defense Health Board, member 2017-

Health Care Delivery Subcommittee, Member 2017-

Pediatric Health Care Services report, released 9/17

National Institutes of Health

2000-2014 National Institutes of Health Study Sections

Ad hoc reviewer for National Heart, Lung and Blood Institute, April 2000

Reviewer for Bioengineering Research Partnerships, December 2001

Ad hoc reviewer for Diagnostic Imaging, February 2004

Ad hoc reviewer for NIDDK, August 2004

P50 Molecular Imaging Study Section, NCI, November 2006

Training Grant Study Section, NIBIB, February 2007

NIDDK Kidney Functions and Disease (ZRG1 RUS-C (03) S), July 2007

Challenge Grants: Distinguished Editorial Panel, July 2009

NIDDK F32, October 2010

NIH Translational/Clinical study section June 13, 2011

NIDDK KUH-Fellowship review committee October 12, 2012

NIDDK Pathobiology of Kidney Disease (PBKD) mail review, June 9, 2014

NIDDK Renal Physiology/Pathophysiology, ZRG1 DKUS C 05M Special

emphasis panel, Chair, July 18, 2014

2004-2014 NIH Medical Imaging (MEDI) Study Section

Charter member, Medical Imaging (MEDI) Chair, Medical Imaging (MEDI), 2008-2009

MEDI SEP (Conflicts), Dec 2010

Chair, Medical Imaging Investigation SEP (Conflicts), March 2013

Special Emphasis Panel/SRG ZRG1 DTCS-A, October 15, 2014

2009 NIH/NIDDK CRISP Study External Advisory Committee

2014-2018 NIH Council of Councils, member, extended 2017-2018

National Medical Research Council, Singapore

2010 National Medical Research Council, Singapore, Grant Review

New Zealand Heart Association

2010-11 Independent research grants review

Canadian Foundation for Innovation

2008 Integrated Review Group (IRG) for Large Scale Institutional Endeavours

component of Research Hospitals Fund

Cancer Research UK

2012 Cancer Imaging Centre grant review

Harvard Medic	
1989-1992	Admissions Committee Harvard Medical School (HST), Boston
Duke Universit	v ·
1996-1997	Graduate Medical Education Committee, Duke University
New York Univ	versity
2003-2007	Molecular Imaging Working Group, NYU
2007-2011	China House, Executive Committee, NYU
2008-2011	Academic Priorities Committee, NYU
2008-2011	Research Dean's Committee, NYU
NYU School of	Medicine and Medical Center
1999-2005	Transplant Surgery-Radiology Conference, NYUMC
2000-2001	NYU School of Medicine Curriculum Committee, NYU SoM
2001-2007	Radiology Resident Selection Committee, NYUMC
2001-2007	Radiology Research Committee Chair, NYUMC
2002-2003	Radiology Department MRI Efficiency Task Force, NYUMC
2003-2004	NYU Cancer Center Protocol Review and Monitoring Committee, NYUMC
2003-2007	NYU School of Medicine Admissions Committee, NYU SoM
2004-2005	NYU Clinical Research Administrative Task Force, Co-Chair with H. Abikoff, NYUMO
2004-2007	NYU Center for Biomedical Imaging, Operations Committee, Coil Safety Committee, Finance Committee, NYUMC
2006-2007	NYU Directors of Institutional Regulatory Offices (DIRO) Committee
2006	NYUMC Dean/CEO Search Committee
2006-2011	NYUMC Mentoring Program for Women Students Etin-Osa Osa, 2006-2007
2007-2011	Academic Affairs and Affiliates Subcommittee of NYULMC Board of Trustees
2009-2011	NYULMC LEAN Executive Steering Committee
2010-2011	"On the Same Page" Steering Committee
State of Utah	
2012-2015	Utah Health Advisory Council – State of Utah, Governor's appointee
University of U	Ttah
2012-2017	Skaggs Institute for Research – Class A Trustee
2012-2017	University of Utah Research Foundation – Executive Vice President
Memberships,	Offices and Committee Assignments in Professional Societies
1985-	Phi Beta Kappa; Member
1986-	American Association of Rhodes Scholars
1989-	Massachusetts Medical Society; Member
1993-	American Roentgen Ray Society; Member
1993-	Radiological Society of North America
	Board of Distinguished Scientific Advisors, 1998-2007
	Program Committee, Cardiovascular Section, 2001-2005
	Refresher Course Committee, Cardiovascular Chair, 2001-2004
	Refresher Course Committee, Cardiac Chair, 2005-2007

Radiographics Cardiac Imaging Panel, 2000-2002

American Association for Women Radiologists; Member

1994-

1997- International Society for Magnetic Resonance in Medicine (ISMRM)

Board of Trustees, 2002-2010, elected by the membership Board of Trustees Executive Committee 2004-2010

Vice-President, 2006-2007, elected by the membership

President-Elect 2007-2008

President 2008-2009

Past-President 2009-2010

International Society for Magnetic Resonance in Medicine Committee Roles, in addition to ex officio role in all committees 2008-2009

Scientific Program Committee 2003-2005, Vice-Chair 2003-2004

Scientific Program Committee Chair for 2005 (Miami Beach Meeting)

Safety Committee, 2002-2003

Meetings Coordination Committee, 2003-2005

Education Committee. 2004-2005

Finance Committee, 2004-6, 2008-2010

Ad Hoc Committee on Electronic Media, 2004-2005

Regional Organizing Committee, 2004-2005

Annual Meeting Program Committee, 2005-2009

Workshop and Study Group Committee Chair, 2006-2008

Governance Committee, 2006-2009, Chair, 2009-2010

Awards Committee and Chair, 2008-2010

Annual Meeting Abstract Reviewer, 2000-2004, 2006-2007

Junior Fellows Mentor, 2012-

# **Major Initiatives and Achievements in International Society for Magnetic Resonance in Medicine**

During my eight-year tenure on the Board and six-year tenure on the Executive committee of the Board of Trustees, as President 2008-2009, and as Scientific Program Chair for 2005, I mainly focused on (1) fiscal responsibility, (2) increasing the attractiveness of the Society to physician members and encouraging translational collaborations, and (3) sustainability initiatives. Our board launched a plan to address inadequate financial reserves in the Society through a multi-year planned contribution to the reserves, based on a newly developed multi-year financial forecast. This plan required discipline during the economic crisis of the 2008-2009 period, but even in that year during my Presidency, the Society was able to net \$650,000 through a combination of reduced expenditures and higher than expected revenues from the 2009 Honolulu Annual meeting. Both in the Annual Meeting and through a new Case-Based weekend educational program, we increased visibility of the Society to clinician members and developed a new Seed grant program for collaborative translational research. Through the ad hoc committee on sustainability, the International Society for Magnetic Resonance in Medicine has held its first "Virtual Conference" in 2009 and plans to extend this technology across educational and scientific formats.

1999-2002 New York Cardiovascular MR Society

Co-Founder and Convener of monthly meetings

2001- Society for Computed Body Tomography/Magnetic Resonance (SCBT/MR)

Elected to Membership

Research-Scientific Committee, 2004-2006, Co-Chair 2005-2006

2002-2011 American Heart Association

Council on Cardiovascular Radiology and Intervention, 2002-2011

	Diagnostic Radiology and Surgery Review Committee, October 2002, 2003
2000-2010	American College of Radiology
	MRI Accreditation Program, Cardiac MRI, 2000-2002, 2005-2010
2004-2010	New York Roentgen Society
	Secretary/Treasurer, 2004-2005
2006-	Alpha Omega Alpha
2007-2009	Foundation for the NIH, Biomarkers Consortium
2000	Metabolic Disorders Steering Committee, 2007-2009
2009	RSNA Research & Education Foundation Corporate Giving Subcommittee of the Fund Development Committee
2008-2010	American Board of Radiology MOC Examination Committee for Cardiac MRI
2008-2010	Academy for Medical Development and Collaboration (AmDEC)
2000 2011	Board of Directors, 2008-2011
	Chair, Scientific Advisory Committee, 2009-2011
2010 -2017	Association of American Medical Colleges (AAMC)
	Group on Research Advancement and Development (GRAND), AAMC Steering Committee, 2010-2012
	Advisory Panel on Research, Chair, 2012
	Award for Distinguished Research Selection Committee, member 2012, chair 2013
	Council of Deans Administrative Board, elected 1 year term (2013-14), 3 year term 2014-17
	Flexner Award Selection Committee, 2017
2012-2014	Radiology Selection Committee for the Alexander R. Margulis Award for Scientific Excellence
2012-2017	State of Utah Health Advisory Council, appointed by Utah Governor Gary Herbert
2013-2014	Association of Academic Health Centers, CEO Government Relations Working Group Association of Academic Health Centers, Board of Directors, 2014
2014-	Women of Impact, founding member
2014-	The Commonwealth Fund,
	Health Care Delivery System Reform Program, National Advisory Group, 2014-
2015	The Commonwealth Fund Board of Directors Member, 2018-
2015-	Massachusetts General Hospital Scientific Advisory Committee, 4 year term MGH Research Scholars Selection Committee 2017-2019
2015-2017	American College of Physicians, Internal Medicine, 2 <sup>nd</sup> Annual Teaching Value &
	Choosing Wisely Challenge, judge
2015-	The American Society for Clinical Investigation; Member
2015-2019	University of Pittsburgh School of Medicine Board of Visitors; Member
2015	Technical Advisory Committee, Robert Wood Johnson Foundation, Member
2015-	National Academy of Medicine, elected 2015
	Nominating Committee; Member, 2016-
	Strategic Planning Committee, Member 2017-
	Membership Committee, 2017- Vice Chair of Section 6 (Surgery, Anesthesiology, Radiology, Ophthalmology),
	2017-2019
	Chair of Section 6, 2019-
2016-	Society of Medical Administrators, Elected Member

## **Editorial Positions**

Editor-at-Large 2020-New England Journal of Medicine Catalyst

#### Journal Oversight Committee 2014-2020 JAMA, Journal Oversight Committee

#### Consulting Editor

2009-2012 Magnetic Resonance Imaging Clinics of North America, Elsevier, Co-Editor 2009-2010 Encyclopedia of Magnetic Resonance, John Wiley, Consulting Editor

#### Editorial Boards

2006-2017 Journal of Computer Assisted Tomography 2007-Journal of Magnetic Resonance Imaging 2014-Magnetic Resonance in Medicine

#### Ad Hoc Reviewer

The True Review	VCI
1997-	American Journal of Roentgenology
2001-	Journal of Magnetic Resonance Imaging
2001-	Journal of Thoracic and Cardiovascular Surgery
2001-	Journal of Investigative Medicine
2001-	NMR in Biomedicine
2002-	Lancet
2002-	Investigative Radiology
2002-	Radiology
2003-	American Journal of Neuroradiology
2003-	NMR in Biomedicine
2007-	Magnetic Resonance in Medicine
2008-	American Journal of Physiology – Renal

2015-**JAMA** 

#### **Industrial Relationships/Board Directorships**

1998-2003 Berlex Laboratories Speakers' Bureau, Visiting Professorships, Consultant  1999-2006 Siemens Medical Systems/Siemens Corporate Research Consultant (unpaid)  2014-2018 Merrimack Pharmaceuticals (MACK) Board of Directors, Compensation Committee (2014-2018), Audit Committee (2014-2015)  Zions First National Bank	2000-2004	Medscape.com Consultant
Consultant (unpaid)  2014-2018 Merrimack Pharmaceuticals (MACK) Board of Directors, Compensation Committee (2014-2018), Audit Committee (2014-2018)	1998-2003	
Board of Directors, Compensation Committee (2014-2018), Audit Committee (20	1999-2006	*
2014-2015 Zions First National Bank	2014-2018	Merrimack Pharmaceuticals (MACK) Board of Directors, Compensation Committee (2014-2018), Audit Committee (2016)
Board of Directors	2014-2015	

2015-Zions Bancorporation (ZION)

Board of Directors, Audit Committee (2015-16), Compensation Committee (2016-)

Chair, Compensation Committee (2017-)

#### **Boards and Community Organizations**

American Association of Rhodes Scholars: Selection Committees 1986-North Carolina Rhodes Scholar Selection Committee, 1992-1995 Southeast Regional Selection Committee, 1995

	Oklahoma Selection Committee, 1996 Northwest Regional Selection Committee 1996
	Connecticut Selection Committee, 1997
	New York Selection Committee, 1998-1999, 2001-2002, 2004, 2009, 2010
	New York Regional Committee, 2005
	District VIII, Selection Committee 2014
	District XIII, Selection Committee 2015-, District Secretary
1999-2002	Medical Advisory Board, Vital Images, Inc.
2000	Congressional Women's Health Forum
2008-2011	New York Empire State Stem Cell Board, New York State Department of Health
	Ethics Committee, advising on ethical issues related to disbursement of \$600m in
	research funds to stem cell research and education
2010-2014	The Rhodes Trust, Scholarship Committee
2012-2017	Rowland Hall Board of Trustees
2013-2017	BioUtah, Board of Directors
2014-	Association of American Rhodes Scholars, Board of Directors
Teaching Exp	orionae
	Division of Health Sciences and Technology, Harvard Medical School
1989-1992	Real Medicine (HST 230), Teaching Assistant, Harvard-MIT Division of Health Sciences
1,0,1,,2	and Technology, Harvard Medical School
1989	Quantitative Physiology: Organ Transport Systems (6.022J), Teaching Assistant, MIT
Duke Universit	•
1995-1997	Introductory MR physics lectures for Residents, Department of Radiology
Maria Vanla II.	
New York Univ	· ·
1997-2007 1997-2007	Body MR and Cardiothoracic Imaging Case Conferences for radiology residents (2-4/yr) Cardiothoracic Imaging Board Review for senior residents (3/yr)
1997-2007	Cardiology Fellows Teaching Conference
1998-2003	Medical Student Teaching Conferences (4 – 5/year)
1998-2007	MR Physics for Radiologists (24 - 32/year) for fellows and residents
2000	Urology Resident Teaching Conference, August 2000
2003	Introduction to Renal Physiology, First year medical student lecture
2005-2007	Body and Cardiovascular MRI, Principles of Biomedical Imaging, NYU
2006-07	Principles of MRI, 8 lecture series to NYU Radiology Residents
2009-2011	Introduction and Overview, NYU Grantsmanship Course for Faculty and Postdocs
	Oct 2009; Sept 2010, March 2011
	7. 1
University of U	
2013-2017 2014-2017	Why Health Care Reform is So Hard (8 lectures, School of Medicine, annually) Health Policy and Leadership (School of Medicine Course #7410), "The Education of
2014-2017	Future Health Professionals: Providing Skills to Help Them Lead the Transformation of
	Health Care" (Spring 2014, Spring 2015, Spring 2016)
2014-2017	Why Health Care Reform is So Hard (2 lectures, College of Nursing Course #3100
2011 2017	Nursing across systems and populations, Fall 2014, Spring 2016)
2014-2017	Guest Lectures for David Eccles School of Business MBA program, one lecture per
· · · · · ·	semester
2014-2017	Guest Lectures for David Eccles School of Business Physician Leadership program, one
	lecture per semester
2016-2017	Guest Lectures for David Eccles School of Business MHA Program, one lecture per year

4 1 7 -	A was Markey II.
	ctures Nationally  Price Transportance in Health Systems, Slean Program in Health Administration, Cornell
2016	Price Transparency in Health Systems. Sloan Program in Health Administration, Cornell University (Anthony J. German, Exec Director), Mar 11, 2016 (Best Lecture of the Year)
2018	Leading a Provider Organization. Value-Based Health Care, Short Intensive Program, Harvard Business School MBA program (Michael Porter and Bob Kaplan), Jan 16 2018
Special Pane	els and Round Tables
2016	Delivery System Reform Health IT, CEO Roundtable with Secretary of Health & Human
	Services Sylvia Mathews Burwell, Las Vegas
2015	Cancer Moonshot Conversation, led by Vice President Joe Biden
Mentoring o	f Radiology Faculty (*serve on Mentoring Committee)
2000-2005	Gary Israel, Assistant Professor of Radiology (Abdominal Imaging)
2001-2007	Nancy Fefferman, Assistant Professor of Radiology (Pediatric Radiology)*
2002-2006	Sandra Moore, Assistant Professor of Radiology (Musculoskeletal Radiology)
2004-2005	Rafael Rivera, Assistant Professor of Radiology (Pediatric Radiology)
2003-2008	Elizabeth Hecht, Assistant Professor of Radiology (Abdominal Imaging)*
2003-2009	Bachir Taouli, Assistant Professor of Radiology (Abdominal Imaging)*
2004-2007	Jane Ko, Assistant Professor of Radiology (Thoracic Imaging)*
2004-2008	Linda Moy, Assistant Professor of Radiology (Breast Imaging)*
2004-2011	Barbara Monvadi Srichai-Parsia, Assistant Professor of Radiology and Cardiology*
2005-2007	Matilde Inglese, Assistant Professor of Radiology (Research)*
2006-2007	Ray Lee, Assistant Professor of Radiology (Research)*
2006-2008	Youssef Zaim-Wadghiri, Assistant Professor of Radiology (Research)*
2006-2007	Vinay Pai, Assistant Professor of Radiology (Research)*
2006-2008	Dan Kim, Assistant Professor of Radiology (Research)*
2007-2011	Ruth Lim, Assistant Professor of Radiology*
2008- 2012	Hersh Chandarana, Assistant Professor of Radiology*
2009- 2011	Andrew Rosenkrantz, Assistant Professor of Radiology
2011-2013	Marta Heilbrun, Assistant Professor of Radiology
2011-2017 2011-2017	Glen Morrell, Assistant Professor of Radiology
2011-2017	Chris Hanrahan, Assistant Professor of Radiology Jeff Zhang, Associate Professor of Radiology
2011-	Jeff Zhang, Associate Professor of Radiology
35	
_	f Graduate Students, Residents, Post-Doctoral Fellows
	dent Supervisor
2005-2008	Ting Song, Columbia University School of Engineering
	Co-Supervisor with Andrew Laine, Columbia University
	Ph.D. Thesis "Quantitative Image Analysis of 4D MR Renography", awarded 6/08
2008-2012	Presently: GE Medical Systems  Hivens Atanasaya, Columbia University School of Engineering
2008-2012	Iliyana Atanasova, Columbia University School of Engineering
	Co-Supervisor with Andrew Laine, Columbia University Post-Doctoral fellowship, Harvard-MIT HST/Spain program (2012-2015)
2011-2017	Chris Conlin, Department of Bioengineering, University of Utah
2011-201/	Supervised by Dr. Jeff (Lei) Zhang
2011-2016	Marc Lindley, Department of Physics, University of Utah
2011-2010	Synamical by Dr. Dan Vim

Josh Kaggie, Department of Physics, University of Utah

Supervised by Dr. Dan Kim

2013-2014

2014-2017	Supervised by Drs. Glen Morrell and Dennis Parker Henry Eyring, Harvard Business School Served as collaborator, supporting Prof Bob Kaplan, supervisor	
	Prizes and Sc	cholarships Awarded to Graduate Student
	2006-2008	International Society for Magnetic Resonance in Medicine Stipend Award, Ting Song
	2008, '09, '11	International Society for Magnetic Resonance in Medicine Stipend Award, Iliyana Atanasova
	2010 2013	MR Angiography Club Student Stipend, Iliyana Atanasova International Society for Magenetic Resonance in Medicine Stipend Award, Josh Kaggie
	2013, '14	International Society for Magnetic Resonance in Medicine Stipend Award, Marc Lindley
	2013, '14	International Society for Magenetic Resonance in Medicine Stipend Award, Chris Conlin
Post-Doctoral Fellow Supervisor		
2005-2008	Louisa Bokach	
2006-2011	Lei (Jeff) Zhar	morial Sloan Kettering Cancer Center (2011) ng, Ph.D.
-010 -011	Presently, Asst	t Prof, University of Utah
2010-2011	Umer Khan, M	1.D. rnal medicine residency training (2011)
2010-2011	Ronn Walvick	• • • • • • • • • • • • • • • • • • • •
2010-2011	Hadrien Dyvor	
2011-2012	Tariq Gill, M.I	ow, Mt. Sinai Hospital, NY
2012-2015	Jason Mendes,	
2014-2015	Josh Kaggie, P	
	Presently, Post	t-doctoral Fellow, Cambridge UK
	<b>Prizes and Sch</b> 2006-2008	International Society for Magnetic Resonance in Medicine (ISMRM) Stipend Award, Louisa Bokacheva
	2007-2009	ISMRM Stipend Award, Lei (Jeff) Zhang
	2011	ISMRM Stipend Award, Umer Khan
	2011	ISMRM Stipend Award, Ronn Walvick
	2011-2013	ISMRM Junior Fellow, Lei (Jeff) Zhang
Medical Student Mentees (NYU)		<i>I</i> )
1998	Tejas S. Shind	
1999 2000		ng, Anthony T. Ton, Sora C. Yoon n, Tammy Sung, Douglas Martin
2000		r, Faminy Sung, Douglas Martin κ, Bernard Sajous
2002		, Daniel Resnick
2003	Jennifer C. Ch	
2005 2006	Samson Wong Etin-Osa Osa	
2000	Liii-Osa Osa	

Medical Student Mentees (University of Utah)

2014	Lorne Hofstett	ter (MD-PhD student)
Medical Stude 1998-1999 1998-2000 1999-2000 2000-2001 2000-2001 2001-2002 2001-2002 2002-2004 2003-2004 2004-2005 2009	98-2000 Anthony T. Ton** 99-2000 Sora Yoon, Ambrose J. Huang 00-2001 Tammy Sung, Daniel Resnick**, Joseph Morgan** 00-2001 Peter Lee**, Albert Einstein School of Medicine 01-2002 A. Jathavedam, S. Kim, J. Bernard Sajous**, Phoebe Dann, Joseph Golowa 01-2002 Calvin Lo, Albert Einstein School of Medicine 02-2004 J. Cha** 03-2004 A. Gupta** 04-2005 S. Heller**, Cornell-Weill Medical School	
	<b>Prizes and Sci</b> 2001-2002 2003-2004	Radiological Society of North America Medical Student Grant Scientific Advisor; Medical student: Daniel Resnick NYU General Clinical Research Center Student Scholarship Mentor; Medical student: Ankur Gupta
Radiology Res 1999-2004 2000-2004 2002-2004 2004-2005 2006-2007 2006-2009	Pari Pandharip Tejas Shinde Ambrose J. Hu Ke Lin Myra Finn Richard Do	
Radiology Res 1999-2000 2002-2004 2001-2002 2003-2004 2002-2004 2003-2007 2009- 2012	Ambrose J. Hu Meera Raghav J. Bernard Sajo Tejas Shinde,	aripande, Research resident**  uang**, Research Resident from Mallinckrodt Institute of Radiology van**, Research Resident from University of Connecticut ous**, Intern/Radiology Resident Resident ur**, Research Resident
	Prizes and Sci 2003-2004 2003 2003	Radiological Society of North America Radiology Resident Grant Scientific Advisor; Research Resident: Ambrose J. Huang International Society for Magnetic Resonance in Medicine Student Travel Stipend awarded to research resident, Ambrose J. Huang American Association for Women in Radiology Lucy Squire Distinguished Resident Award, Pari Pandharipande
Clinical Fello 1998-1999 1999-2000 2000-2001 2001-2002	Cary Yeh, Ber Frank Lombar Gavin Duke, J	n Yang do, Matt Reuss, Michael Lavelle oseph Veniero (Cleveland Clinic) noorn, Jonathan Barker

2002-2003	Winnie Hahn (Georgetown), Elizabeth Hecht (NYU, UPenn, COlumbia), Danny Kim (NYU)
2003-2004	Jerry Chang, Doug Rusnack, Jingbo Zhang (Memorial Sloan Kettering)
2004-2005	Deanna Chin, Daniel Moses (Sydney), Ravi Thakur
2005-2006	Stephen Drew, Ruth Lim (NYU), Tejas Parikh
2006-2007	Andy Harris (SFVA), Jason Jacobs, Sooah Kim (NYU)
2007-2008	Hersh Chandarana (NYU), Andrew Hardie, Mohit Naik
2008-2009	Kinh Gian (Memorial Sloan Kettering), Jignesh Patel, Andrew Rosenkrantz (NYU)
	Research Mentees (** Resulting in abstracts or publications)
1999-2000	Michael T. Lavelle, MRI Fellow**
2002-2003	Alan Shah, Cardiology Fellow
2002-2003	Winnie Hahn**, MRI Fellow
2002-2003	Elizabeth Hecht**, MRI Fellow
2003-2004	Jingbo Zhang**, MRI Fellow
2003-2004	Jerry Chang**, MRI Fellow
2005-2006	Ruth Lim**, MRI Fellow
2006-2007	Jason Jacob**, MRI Fellow
2006-2007	Andrew Harris, MRI Fellow
2007-2008	Hersh Chandarana**, MRI Fellow
0	and Other Mentees (** Resulting in abstracts or publications)
1998	Maria J. Diaz-Candamio**, Visiting Fellow, La Coruna Spain
2000-2001	Stephan Wetzel**, Visiting Scholar, Basel Switzerland
2005-2007	Chekema Prince**, Pre-Doctoral Research Assistant
2006	Vicky Rivas, University of Miami senior, Summer internship
2008-2009	Pierre-Hugues Vivier**, Research Fellow, France
2009-2011	Akira Yamamoto**, Visiting Fellow, Japan
	Prizes and Scholarships Awarded to Clinical Fellows
	2007 ISMRM Stipend Award, Jason Jacob
	2010 ISMRM Poster 1st Prize Award, Akira Yamamoto

#### **Teaching Awards**

1997	Department of Radiology Resident Teaching Award, Duke University
2005	Outstanding Teacher Award (Clinical MRI Course), International Society for Magnetic
	Resonance in Medicine (ISMRM) Annual Meeting, Miami
2011	Outstanding Teacher Award (Clinical MRI Course), ISMRM, Montreal
2012	Outstanding Teacher Award (Clinical MRI Course), ISMRM, Melbourne
2016	Sloan Program in Health Administration, Cornell University, Lecturer of the Year

#### **Major Radiology Research Interests**

My primary area of interest has been the development of MRI techniques to quantify renal function and diagnose renal disease noninvasively. My group concentrates on renovascular disease, hepatorenal syndrome and cirrhosis, and renal transplant dysfunction. Additionally, a second group is focused on the development of non-contrast-enhanced MR angiographic methods for imaging vascular diseases and the development of functional correlates such as perfusion and tissue oxygenation.

#### **Active Grants**

2016-2020 NIH R01-HL135242

"Stress-rest calf muscle perfusion: a functional diagnostic test for peripheral arterial disease (PAD)"

	Role: Consultant (formerly Co-Investigator 5% effort), PI: Jeff. L. Zhang
2017-2021	NIH R01-DK109349
Past Grants 1998-99	"Renal hypoxia in the development of glomerular fibrosis" Role: Consultant (formerly Co-Investigator 5% effort), PI: Jeff L. Zhang
	Radiological Society of North America Seed Grant "Comprehensive MR Evaluation of Patients with Suspected Renovascular Hypertension: Contrast-Enhanced MR Angiography and Enalaprilat-Enhanced Phase Contrast Flow Quantification and Renal Perfusion Studies" Role: Principal Investigator, \$25,000
2000-2001	Society of Thoracic Radiology Seed Grant "Contrast-Enhanced Cardiac MR Imaging for Evaluation of Myocardial Viability" Role: Principal Investigator, \$15,000
2001-2002	Nycomed-Amershan Research Grant "Volumetric Mn-DPDP-Enhanced Cholangiography to Define Intrahepatic Biliary Anatomy"
	Role: Principal Investigator, Contrast agent for 50 studies.
2001-2002	Society for Gastrointestinal Radiology Phillip Meyers Grant "Comprehensive MR Evaluation of Living Liver Transplant Donors" Role: Co-Investigator; PI: M. Lavelle
2000-2004	NIH K23 Career Development Award "Comprehensive MR Evaluation of Renovascular Disease" (DK02814-01) Role: Principal Investigator, 75% effort, Total direct costs \$615,474
2002-2004	NIH R03 Grant "Magnetic Resonance Renography: Validation Studies" (DK61599-01) Role: Principal Investigator; 10% effort (incl in K23 effort), Total direct costs \$168,584
2003-2004	NYU General Clinical Research Center Student Scholarship Grant to support medical student for one year dedicated to radiology research Role: Mentor; Medical student: Ankur Gupta, \$25,000
2003-2004	Radiological Society of North America Radiology Resident Grant Role: Scientific Advisor; Research Resident: Ambrose J. Huang, \$25,000
2000-2004	NIH NCI U01 (NYU 99-37) "An Evaluation of Chronic Thalidomide Administration in Patients Undergoing Chemoembolization for Unresectable Hepatocellular Cancer" Role: Co-Investigator; PI: A. Goldenberg
2000-2004	NIH NCI U01 (NYU 99-38) "Thalidomide for Unresectable Hepatocellular Cancer with Optional Interferon $\alpha$ 2a Upon Disease Progression" Role: Co-Investigator; PI: M. Volm
2003-2005	American Heart Association

"Preservation of Myocardial Function: Post-operative Infarction Associated with Onpump versus Off-pump Coronary Artery Bypass Grafting" Role: Co Investigator, 5%; PI: A. Shah (no cost extension through 2006) 2001-2006 NIH K23 Career Development Award "Cytokine Inhibition in Hepatocellular Carcinoma" (CA90584) Role: Consultant; PI: Jonathan Schwartz, Mt Sinai School of Medicine 2003-2009 NIH R01 "MR Angiography and Renography for Renovascular Disease" (DK063183) Role: Principal Investigator, 30% effort, Total direct costs \$1,878,449 2004-2010 NIH R01 "MRI Evaluation of Acute Renal Transplant Dysfunction" (DK067523) Role: Principal Investigator, 30% effort, Total direct costs \$1,578,113 2005-2009 NIH U01 "Prospective Investigation of Pulmonary Embolism Dx-III" (HL081593) Role: Co Investigator, 5%; PI: D. Naidich 2006-2009 American Heart Association Scientist Development Grant "Imaging Evaluation for Left Ventricular Thrombus in Patients with Systemic Embolism and Left Ventricular Dysfunction" Role: Mentor, 5% effort (no support); PI: Barbara Srichai Parsia 2010-2011 NIH G20 "MSB Central Animal Facility Renovation" (RR030901) Role: Principal Investigator (institutional role), \$9,339,773 + 10% state matching funds 2010-2012 RSNA Research Scholar Award "Evaluation and Prediction of Treatment Response in Liver Metastasis undergoing Chemotherapy with use of Dual Energy CT Iodine Quantification Technique" Role: Primary Mentor, 5% effort (no support); PI: Hersh Chandarana, \$150,000 2009-2013 NIH R01 "Aorta, Brain, and Kidney Structure and Function in the AGES-Reykjavik Study" (HL094898) Role: Consultant, 1% effort (no support); PI: Gary Mitchell 2008-2015 NIH R01 "Non-Contrast-Enhanced Peripheral MR Angiography" (HL092439) Role: Principal Investigator, 10% effort, Total direct costs \$2,312,618 2013-2015 Radiological Society of North America Research Scholar Grant "Real-time monitoring of renal hypoxia and hypoperfusion with quantitative MRI" Jeff L. Zhang, Principal Investigator Role: Scientific Advisor, 0% effort, Total direct costs \$152,000 2014-2015 National Kidney Foundation "Contrast induced kidney injury and its early assessment" Jeff L. Zhang, Principal Investigator

Role: Advisor, 1% effort, Total direct costs \$20,000

2010-2016 NIH R01

"MR Angiography and Renography for Renovascular Disease" (DK063183) Role: Principal Investigator, 10% effort, Total direct costs \$1,742,018

2010-2016 NIH R01

"Accurate Measurement of Renal Function in Cirrhosis" (DK088375) Role: Principal Investigator, 10% effort, Total direct costs \$1,698,111

# Lectures, Speakerships, Conference Contributions

# **HEALTH CARE**

# **Keynote Addresses and Lectures (Health Care/Technology)**

2020	"Innovating Patient Safety for All" Liftoff in Motion Speaker Series, Jewish Health Foundation, Pittsburgh, July 22, 2020
2020	"Big Data, AI and the Journey to Value Driven Care" AAAI (Artificial Intelligence) AI in Practice Keynote, February 12, 2020, New York
2020	"From Health Care to Whole Person Care" Harvard Business School Health Care Conference Keynote, with Tom X. Lee and Rob Huckman, February 9, 2020, Boston
2019	"A Conversation with Women Building Biotech's Future: Dr. Vivian Lee MD, PhD, MBA, and Dr. Charlene Stern, JD, PhD." ChIPs (Chiefs of Intellectual Property) Global Summit, Washington DC, September 26, 2019
2019	"Fixing Health Care, Powered by Machine Learning" ASNR Annual Conference Keynote, May 21, 2019
2019	"The Role of Technology in Addressing Disparities: Getting Beyond Expensive Gizmos and Cool Apps" with Bob Galvin, Trent Haywood, Jonathan Rothberg Yale Healthcare Conference, New Haven, CT, April 11, 2019
2019	"Improving Healthcare, At Scale" MIT Sloan Healthcare and Bioinnovations Conference Keynote, Feb 22, 2019, Boston
2018	"Engaging Physicians with Value Measurement Tools," with David Pryor, John Wong, Institute for Healthcare Improvement (IHI), Orlando, December 10, 2018
2018	"Improving Healthcare, At Scale" Top of Mind 2019, UPMC, December 6, 2018, Pittsburgh
2018	"Surveys, Sensors and Stories: A Vision for Value" Quality Talks, NCQA, Washington, D.C., October 22, 2018 (Ted style talk)
2018	"Leading the Transformation of Healthcare" Sound Physicians National Leadership Conference, Phoenix, AZ, May 9, 2018
2017	"Leading the Leaders" Wilson Ko Memorial Lecture, Chinese American Medical Society, November 4, 2017
2017	"Data-Driven Innovation: the Future of Health Care" Association of American Medical Colleges WGEA/WGSA Conference, Keynote Speaker, Feb 27, 2017, Salt Lake City, Utah

2016	"Health Care Transformation: Driving Value through Imaging" Radiological Society of North America: Annual Oration in Diagnostic Radiology, November 28, 2016, Chicago
2016	"Leading Leaders" Keynote, Elevate Women HFMA AAHAM Women's Forum Salt Lake City, October 13, 2016
2016	"The Transformation to Value Driven Health Care" Society of Computed Body Tomography & Magnetic Resonance, Keynote Speaker, September 18, 2016, Salt Lake City, Utah
2016	"Leadership, Data Science and Culture Change in Health" AcademyHealth Concordium 2016, Plenary Speaker, September 12, 2016, Arlington, Virginia
2016	"Leadership: A Conversation", Keynote, 1 <sup>st</sup> Annual Society of Asian Academic Surgeons, Stanford School of Medicine, Stanford, California, September 24, 2016
2016	"Finding A Better Way Toward Patient-Centered Care" Healthcare Financial Management Association National Institute, Las Vegas, Nevada, June 27, 2016
2016	"Leadership: Translating Challenge to Success" New England Journal of Medicine Catalyst, Rochester, Minnesota, June 2, 2016
2016	"Leading Change" Convocation Keynote Speaker, University of Hawaii School of Medicine, Honolulu, Hawaii, May 15, 2016
2016	"Value-Driven Innovation: The Future of Health Care" Association of American Medical Colleges Health Workforce Research Conference, Keynote Speaker, May 5, 2016, Chicago, Illinois
2016	"Transparency & Innovation" Press Ganey Leadership Summit, Salt Lake City, Utah, March 3, 2016
2016	"The Future of Academic Medicine" Association of American Medical Colleges Joint Professional Development Conference, Salt Lake City, Utah, March 3, 2016
2016	"Data Transparency and Health Care Transformation" Invited Presentation at the Global Health Security Initiative Ministerial Meeting, Sec Sylvia Burwell hosting, Washington, DC, February 25, 2016
2015	"Achieving and Maintaining Salary Equity for Improved Performance" Association of American Medical Colleges Annual Meeting, Baltimore, Maryland, November 7, 2015
2015	"Identifying the Key Indicators of Institutional Success in Academic Medicine"

	Association of American Medical Colleges Annual Meeting, Baltimore, Maryland, November 7, 2015
2015	"Data, Transparency & Engagement: Forces for Transformation in Academic Medicine" Society of Academic Anesthesiology Association Annual Meeting, Baltimore, Maryland, November 7, 2015
2015	"Health Care Transformation" National Science Foundation; Industry and University Cooperative Research Center, Center for Hybrid Multicore Productivity Research, Salt Lake City, Utah, November 4, 2015
2015	"Transparency and Physician-Driven Value Creation" Transparency Summit: Co-Hosted by University of Utah Health Care and Press Ganey, Denver, CO, March 5, 2015
2015	"Broadening our Perspectives Using Data: the Integration of Community Health and Public Health" Association of Departments of Family Medicine Annual Meeting, Savannah, GA, February 19, 2015
2015	"Innovation: The Future of Health Care" Robert Wood Johnson Foundation Clinical Scholars Annual Meeting, Seattle, WA, November 4, 2015
2014	"Transparency: Driving Transformation" Press-Ganey National Conference, Keynote, Orlando FL, November 4, 2014
2014	"Transparency: A Force for Engagement" Catholic Health Initiatives 2014 National Leadership Conference Keynote, Las Vegas, NV, October 24, 2014
2014	"Transparency: A Force for Engagement" Academy Health/RWJF meeting: Payment Reform: Honing the Models and Pushing the Boundaries, October 23, 2014, Chicago, IL
2014	"The Educational Mission in a Changing Health Care Delivery System: Stresses and Opportunities" Education of the Health Care & Science Workforce, Insitute of Medicine Interest Group Meeting, Washington, DC, October 19, 2014
2014	"How Do We Build Better Partnerships Between Patients and Providers?" MedX, TED-talk, Palo Alto, CA September 5, 2014
2014	"The Transformation from Volume to Value" MedCity News Keynote, Philadelphia, PA July 16, 2014
2014	"Creating a Value Driven Organization" [webinar] Academy Health, Robert Wood Johnson Foundation, June 16, 2014

2014	"Take Your Seat at the Leadership Table: A Dean's Perspective on How Advancement Professionals Can Be Key Drivers of Change in Academic Medicine" AAMC Group on Institutional Advancement, National Professional Development Conference Salt Lake City, UT March 27, 2014
2014	"Solving the Impossible Problems Facing Healthcare" AGM and CEO Workshop Keynote, Melbourne, Australia, March 21, 2014
2014	"Redesign of Healthcare" Global Group Meeting, Melbourne, Australia, March 20, 2014
2014	"Creating a Value Driven Organization" Robert Wood Johnson Foundation: Academy Health, Washington, D.C., February 29, 2014
2013	"Transparency Motivates Change" National Center for Healthcare Leadership, Chicago, IL, November 19, 2013
2013	"Preparing for a Post-Fee-for-Service World" AAMC Annual Meeting, Philadelphia, PA, November 3, 2013
2013	"Science to Society" American Physician Scientists Association Keynote, Chicago, IL, April 28, 2013
2013	"Moving Academic Medicine to Population Management" Association of Chiefs and Leaders of General Medicine, Denver, CO, April 24, 2013
2013	"Critical Analysis: Right Sizing the Research Enterprise" Association of American Medical Colleges Council of Deans annual meeting breakout session, Scottsdale, AZ, April 6, 2013
2012	"MRI: From Science to Society" Lauterbur Keynote Lecture. International Society for Magnetic Resonance in Medicine, Melbourne, Australia, April 20, 2012
2012	Martin Luther King Jr Celebration Keynote Address University of Utah, SLC, UT, January 18, 2012
2010	"Motivating Faculty For Maximum Performance: Encouraging Exceptional Faculty to do More, and Putting Non-Productive Faculty on Track" Vice Presidents of Research Executive Leadership Group, Association of Academic Health Centers, Washington D.C., Dec 7, 2010
2009	"Technology & Innovation: Engines for Biomedical Research" Polytechnic Institute Innovation Forum, NY, NY, September 28, 2009
2008	"Diversity in American Health Care: Agents of Change" Asian-Pacific-American Medical Student Association Annual Meeting, October 2008

Invited (Named) Lectureships, Grand Rounds, Visiting Professorships (Health Care/Technology)

2020	"Responding with Resilience" McMurtry Leadership Lecture Knight-Hennessy Scholars, Stanford University, May 15, 2020 (online)
2019	"Luminaries in Healthcare Leadership: An Evening with Dr. Vivian Lee" Weill Cornell, New York, April 18, 2019
2018	"Improving Healthcare, At Scale" Wake Forest Medical Center, Grand Rounds, Greensboro, NC, December 13, 2018
2018	"Technology & Health Care: Chasing what we do not understand" Eugene A. Stead Jr, MD Lecture, Duke Department of Medicine, Durham, NC November 9, 2018.
2018	"Transforming Health Care in Academic Medical Centers" AMSNDC (Association of Medical School Neuroscience Department Chairs), Panama, March 3, 2018
2017	"Transforming Health Care: Physician Leadership" UT Austin Dell Medical School, Austin, Texas, October 25, 2017
2017	"How Imaging can Drive Value in Health Care" Merrill C. Sosman Lecture, Brigham and Womens Hospital, September 12, 2017
2016	"Leading the Leaders" Leadership in Academic Medicine Lecture Series, University of Alabama School of Medicine, Birmingham, Alabama, December 8, 2016
2016	"Leading the Transformation of Health Care" Leadership Forum, Commonwealth Fund Mongan Fellowship in Minority Health Policy and Harvard Medical School, Keynote speaker, Cambridge, Massachusetts, September 13, 2016
2016	"The Transformation of US Health Care: Data, Transparency, and Innovation" Grand Rounds, Far Eastern Memorial Hospital, Taipei, Taiwan, July 8, 2016
2016	"Innovation: The Future of Health Care" Harvard Medical School Asian Pacific American Students Association, Boston, Massachusetts, June 13, 2016
2016	"Innovation: The Future of Health Care: Charles C. Leighton Memorial Lecture, University of Pennsylvania Leonard Davis Institute Health Policy Seminar Series, Philadelphia, Pennsylvania, April 8, 2016
Panel Contrib 2020	utions at National Conferences and Events (Health Care/Technology) "Physician scientist/scientist entrepreneurs using AI/Big Data" American Physician Scientist Association Resdent/Fellow/Junior Faculty Section, June 20, 2020, with Eric Topol, Anthony Chang.
2020	"Gender Equality in the Age of a Pandemic" Webinar

	Ellevate, hosted by Kristy Wallace, CEO, with panelists, Mita Mallick, Katica Roy, May 7, 2020.
2020	Value-Based Care in the COVID-19 Response: Forum on Accelerating Value-Based Payment for Healthcare, Webinar Hosted by Mark McClellan, Arnaud Bernaert with panelists, Bruce Broussard, Nancy Brown, Matthew Guilford, Joungho Kim, Thomas Moriarty, Thorsten Schlomm, Byrony Winn, April 24, 2020.
2020	Technology Solutions for Better Outcomes Consumer Electronics Show, with Amy Foley, Nicola Kamath, Jennifer Schneider, and moderated by Alan Lotvin, Las Vegas, NV, January 9, 2020
2019	Evaluating Value: How Should Success Be Defined and Measured US News Healthcare of Tomorrow Closing Keynote Session with panelists Seema Verma, Rachel Werner, Marvin O'Quinn, Vincent Nelson, and others, Washington DC, November 19, 2019
2019	Can Health Data Fuel Global Collaboration? Milken Institute Conference, Los Angeles April 30, 2019
2019	"HHS Roundtable on Sharing and Utilizing Health Data for AI Applications" Rapid presentations, Washington, DC, April 16, 2019
2019	"Health Innovation – Industry Innovation Panel" American Council for Technology-Industry Advisory Council (ACT-IAC) Washington DC, April 10, 2019
2019	"Consumer Healthcare and New Models of Care Delivery" World Medical Innovation Forum (Harvard), Boston, April 9, 2019
2019	"American Life Expectancy", Moderator, with Patrice Harris, Ben Miller, and Elizabeth Howell, Commonwealth Fund Bipartisan Congressional Retreat, Warrenton, VA, April 6, 2019
2019	"Closing Fireside Chat: The Next 10 years" Health Datapalooza, Boston, MA March 28, 2019
2019	"Plugging into Rural Healthcare Solutions," with Carrie Byington, Dan McCoy, Gregory Winfree, South by Southwest (SXS), Austin, March 12, 2019
2018	"Healthcare in the Era of Big Data: Opportunities and Challenges" with Brett Davis, Jacqueline Corrigan-Curay, Patrick Ryan, moderated by Mark Sheehan, New York Academy of Sciences, October 24-25, 2018
2018	"Dey: Ideas and Influence, and Interview with Rimjhim Dey, by Vivian Lee" Women of Impact, Washington DC, July 20, 2018
2018	"The Employers Strike Back: Towards a Real Market in Healthcare," with Bob Kaplan, David Asch, moderated by Karen Feinstein. Princeton Conference XV, Council on Health Care Economics and Policy, Princeton, NJ, May 22-24, 2018

2018	"Spreading and Sustaining the Choosing Wisely Campaign," with Daniel Wolfson, Mark DeRubeis, Frank Colangelo, Pittsburgh, PA, April 12, 2018	
2016	"Help from afar: the power of remote healthcare", with Hill Ferguson, Suneel Gupta, Ron Gutman, Rick Valencia, Fortune Brainstorm Health, San Diego, California, November 2, 2016	
2016	"We've got to talk about the dollars", with Jonathan Woodson, Fortune Braintsorm Health, San Diego, California, November 2, 2016	
2016	"Women Leaders: Progress and Promise", with Margaret Hamburg and Paula Johnson, 70 Years of Women at Harvard Medical School, Boston, Massachusetts, October 21, 2016	
2016	"Reinventing Medical School for the Next Generation of Doctors", with Clay Johnston, Aspen Ideas Festival, Aspen, Colorado, June 25, 2016	
2016	"The Future of Medicine", with Toby Cosgrove and Ken Davis, Aspen Ideas Festival, Aspen, Colorado June 23, 2016	
2016	"How Access to Public and Private Healthcare Data Can Empower Consumers", with Jeremy Stoppelman (Yelp CEO), Health Datapalooza, Washington, DC, May 9, 2016	
2016	"Incentivizing Great Research", Panel Member, American Society for Biochemistry and Molecular Biology Annual Meeting, San Diego, California, April 3, 2016	
2014	"Women of Impact: A Collective Impact Exercise to Fix Health Care's Broken Windows", Panel Member at AAMC Annual Leadership Conference, November 7, 2014, Chiago, IL	
2014	"Provider driven/quality data transparency" with Toby Cosgrove at the Innovation in Health Care Leadership conference (and simulcast), NEJM/Harvard Business Review, October 7, 2014, Boston, MA	
2014	"Harnessing Data to Better Involve Patients", MedX Panelist, September 2014, Palo Alto, CA	
2014	"Entrepreneurship in Digital Health", MedX, Panelist, September 2014, Palo Alto, CA	
State /Local Meetings and Event Panels, Lectures & Keynotes (Health Care/Academic Medicine)		
2017	"The Future of Health Care: A non-political discussion" Harvard Alumni Association, Salt Lake City Utah, Jan 12, 2017	
2014	"Profiles in Business Leadership" Utah Medical Association, Salt Lake City, Utah, April 24, 2014	
2013	Governor's Health Summit, Workforce Advisory Group, Panel member, September 2013, Salt Lake City, UT	

2012	MD4 Utah Life Science Summit, Panel member, November 2012, Salt Lake City, Utah
2012	Governor's Health Summit, Panel member, September 2012, Salt Lake City, Utah
2013	"Women in Science/Women in Leadership" Women of Water, Salt Lake City, Utah, April 4, 2013
2012	"Advancing Personalized Health Care through Innovation" Engineering Breakfast Forum, Alta Club, Salt Lake City, Utah, October 4, 2012
2012	"Making the Case for Diversity" Green River Conference on Corporate Governance Keynote, Salt Lake City, Utah, Sept 26, 2012
2012	"Ensuring Healthy Aging" Annual Conference of Aging Alliance keynote, Salt Lake City, Utah, September 25, 2012
2012	"Advancing Personalized Health Care through Innovation" Women's Tech Council, Salt Lake City, Utah, July 19, 2012
2012	"Advancing Personalized Health Care through Innovation" Town Club lecture, Salt Lake City, Utah, July 18, 2012
2012	"Engaging Chinese-Americans in the Health Care Revolution" Chinese Association for Science and Technology keynote, Salt Lake City, Utah, March 3, 2012
2012	"Innovations in Academic Medicine" Utah Women's Forum lecture, Salt Lake City, Utah, February 29, 2012

#### ACADEMIC RADIOLOGY (Radiology italicized)

2006

2008

Contributions at Society Meetings (Academic Radiology)		
1999	Moderator of Scientific Session on Cardiac Perfusion, RSNA	
2001	Moderator, "Clinical MR Angiography", International Society for Magnetic Resonance in Medicine	
2002	Moderator, "Renal Transplant Imaging" and "Cardiac MR", RSNA	
2003	Co-Organizer, "Cardiac MRI" Weekend course, International Society for Magnetic Resonance in Medicine (ISMRM)	
	Co-Organizer, "Emerging Body MRI" Morning categorical course, International Society for Magnetic Resonance in Medicine	
	Moderator, "Functional Renal MRI", International Society for Magnetic Resonance in Medicine	
2003	Moderator, "Functional Renal Imaging" and "Cardiac MR/CT", RSNA	
2005-2006	Organizer, "Clinical MRI for Physicians: From Physics to Protocols", Weekend course,	

International Society for Magnetic Resonance in Medicine

Moderator, "Cardiac Imaging (Multimodal)", RSNA Organizer and Moderator, "Clinical Science for Physicists and Engineers", morning categorical course

2009	Moderator, "Nephrogenic Systemic Fibrosis Update", International Society for Magnetic Resonance in Medicine Plenary
	Moderator, "Systemic Vascular Diseases", International Society for Magnetic Resonance in Medicine
	in Medicine Moderator, "MRA: Low Dose to No Dose", International Society for Magnetic
	Resonance in Medicine
2010	Moderator, "Peripheral MRA", MR Angiography Club
2011	Organizer and Moderator, "Clinical Needs and Research Promises: In Practice" Plenary, International Society for Magnetic Resonance in Medicine
	Tienary, International Society for Magnetic Resonance in Medicine
	ctureships and Visiting Professorships (Academic Radiology)
2019	52 <sup>nd</sup> Annual Hampton Lecture, Massachusetts General Hospital, Boston, MA
	"Imaging, Big Data, and the Journey to Value Driven Care," March 15, 2019
2018	Carl Ravin Lecturer; Radiology Grand Rounds, Duke University, Durham, NC
	"Artificial and Real Intelligence in Radiology" December 13, 2018
2014	Radiology Grand Rounds, Stanford University, Palo Alto, CA
2017	"Imaging all the People. Radiology in the Era of Health Care Reform", Jan 2014
2013	Visiting Professor, Grand Rounds, M.D. Anderson Cancer Hospital, Houston, Texas
	"MRI: From Science to Society"
2011	Visiting Professor, Mt Sinai School of Medicine, New York
	"Functional Imaging of the Kidneys: Clinical Applications", "Cardiac Case
	Conference", "Pelvic Case Conference", May 2011
2011	Visiting Professor, Case Western Reserve University, Cleveland
	"Non-Contrast-Enhanced MR Angiography", Mar 2011
2011	
2011	James L. Clements Lecturer in Abdominal Imaging, Emory University
	"Functional Imaging of the Kidneys: Clinical Applications", "Cardiovascular Case Conference", "Cirrhosis Case Conference" Mar 2011
	Conjerence, Christis Case Conjerence Mai 2011
2010	Visiting Professor, Yongsei University Cardiovascular Hospital
	"Non-Contrast-Enhanced MR imaging of the vasculature: New Frontiers", Oct 2010
2010	Visiting Professor, Auckland Institute of Technology, New Zealand
2010	"Technology and Innovation: Engines for Biomedical Research", August 2010
2010	Distinguished Visiting Professor, Auckland University, New Zealand
	"Renal MRI: Form to Function", August 2010
2010	Visiting Professor, Massachusetts General Hospital, Boston
	"Non-Contrast-Enhanced MR Angiography", "Cirrhosis: Case Conference", April 2010
2010	Visiting Professor, Johns Hopkins University, Department of Biomedical Engineering
2010	"Non-Contrast-Enhanced MR Angiography: New Frontiers", February 2010
	2010 - 100 mm. y 2010
2009	Visiting Professor, Mayo Clinic (Rochester), Departments of Radiology and Medicine

	"Renal MRI: Form to Function", —Non-Contrast-Enhanced MR Angiography", "Cirrhosis: Case Conference", November 2009
2009	Innovators Award Lecture, NYU-Polytechnic Institute, Brooklyn, NY "Technology & Innovation: Engines for Biomedical Research"
2006	Visiting Professor, Columbia University Division of Nephrology "Renal MRI: From Form to Function", October 2006
2006	Visiting Professor, University of Maryland "Renal MRI: Beyond Anatomy to Function" Grand Rounds, September 2006
2006	Visiting Professor, Yale University "Liver MRI: Cirrhosis", to the MRI Research Division "Renal MRI: From Form to Function", Grand Rounds, September 2006
2005	Visiting Professor, Columbia University "Renal MRI: Beyond Anatomy to Function", Resident Conference, October 2005
2005	Earl Miller Lecturer, University of California at San Francisco "Renal MRI: Moving Beyond Anatomy to Function", Resident Conference, August 2005
2005	Visiting Professor, Duke University "Cardiac MRI: State-of-the-Art" and Resident Case Conference, June 2005
2005	Renal Transplant Conference, NYU MR of Acute Renal Transplant Dysfunction, April 2005
2005	Nephrology Conference, NYU "Functional Renal MRI", April 2005
2003	Visiting Professor, Columbia University "Cardiac MR: State of the Art", Resident Case Conference, September 2003
2003	Visiting Professor, Downstate Medical Center "Peripheral MR Angiography: State-of-the-art", May 2003
2003	Nephrology Conference, NYU "MR Renography", Feb 2003
2002	Visiting Professor, Yale University Medical School "Volumetric MR Imaging of the Liver", May 2002
2002	Visiting Professor, New York Downstate Medical College "Cardiac MRI: Recent Advances", April 2002
2002	DC Metropolitan Radiological Society Cardiac MR Imaging: Recent Advances, March 2002
2001	Visiting Professor, Long Island Jewish Hospital

	Resident conferences and Grand Rounds, November 2001
2001	Visiting Professor, Hong King Hospital Authority Hong Kong Hospital Authority Commissioned Training Program for Radiologists Joint Meeting of the Hong Kong Society of Radiologists and the Hong Kong College of Radiologists, October 2001
2001	Visiting Professor, Beth-Israel Deaconess Hospital "Cardiac MRI: Recent developments", September 2001
2001	Visiting Professor, Long Island Hospital Grand Rounds and Resident Conference, June 2001
2001	Visiting Professor, University of Connecticut Grand Rounds and Resident Conference, April 2001
2001	Cardiology Grand Rounds, NYUMC "New Advances in Cardiovascular MR Imaging", January 2001
2001	Nephrology Grand Rounds, NYUMC "Comprehensive MR Evaluation of Renovascular Disease: Works in Progress", Jan 2001
1999	Visiting Professor, Department of Physiology and Biophysics, Cornell Medical School "A Comprehensive MR Evaluation of Renovascular Disease", March 1999
1998	Pulmonary Grand Rounds, Bellevue Hospital "Cardiothoracic Magnetic Resonance Imaging", June 1998
State, Nation 2015	al and International Conference Invited Lectures (Academic Radiology) International Society for Magnetic Resonance in Medicine Workshop on Non-Contrast Cardiovascular MRI "Cardiovascular MRA: The How & Why" (keynote), March 2015, Long Beach, CA
2012	UCAIR Symposium "MRI: From Science to Society" (keynote), November 2012, Salt Lake City, UT
2012	International Society for Magnetic Resonance in Medicine Annual Meeting Educational Faculty Speaker, "Goodbye to Gad: State-of-the-Art NCE-MRA", "Who Wants to be a Radiologist" Game Show presenter, May 2012, Melbourne, Australia
2012	International Society for Magnetic Resonance in Medicine Annual Meeting "MRI: from Science to Society" Lauterbur Lecture (keynote), May 2012, Melbourne, Australia
2011	Alta Club "MRI: From Science to Society", November 2011, Salt Lake City, UT

2011	International Society for Magnetic Resonance in Medicine Annual Meeting "Non-Contrast-Enhanced MRA", Weekend course, May 2011
2010	MR Angiography Club "Non-Contrast-Enhanced MRA: New Frontiers", Oct 2010
2010	15th Annual Turkish Society of Magnetic Resonance (TSMR) Meeting, Antalya "MR Measurements of Renal Function: New Techniques and Applications", "MRI of Focal Abnormalities in Cirrhosis: A Case-Based Approach", "Cardiac MRI: Physics to Protocols", "Non-Gd MRA", May 2010
2010	International Society for Magnetic Resonance in Medicine Annual Meeting "Functional Renal MRI", Scientific Session Overview speaker, May 2010
2008	International Society for Magnetic Resonance in Medicine Annual Meeting "Kidney Function and Failure", Morning Categorical, May 2008
2006	Radiological Society of North America Annual Meeting "Cardiac MRI: Physics to Protocols", "Parallel Imaging Made Easy", "MR Renography and Urography", Refresher Courses, November 2006
2005	American Society of Nephrology Annual Meeting "Modern Imaging Approaches to Evaluating Renal Function", November 2005
2005	Radiological Society of North America Annual Meeting "Cardiac MRI: Physics to Protocols", "Parallel Imaging Made Easy", Refresher Courses, November 2005
2005	International Society for Magnetic Resonance in Medicine Annual Meeting "Cardiac MRI—Protocols", Weekend course, May 2005 Outstanding Teacher Award
2005	Indian Radiological and Imaging Association "Comprehensive MRI of Kidney" and "MR-Technique and application in diffuse liver diseases", Agra, India, January 2005
2003	International Society for Magnetic Resonance in Medicine Annual Meeting "Functional Renal MRI", Advanced Body MR Course, July 2003
2002	International Society for Magnetic Resonance in Medicine Annual Meeting "Renal Function and Hypertension", Advanced Body MR Course "MRA Post-Processing", MR Angiography Course "Volumetric Body MRI", Emerging Body MRI Applications, May 2002
2001	International Society for Magnetic Resonance in Medicine Annual Meeting Advanced Body MR Course: "Hepatic MRI – Advanced 3D Imaging"

	Emerging Body Applications Course: "Perfusion MR in the Abdomen", April 2001
2001	Society of Cardiovascular and Interventional Radiology Plenary session: "Cardiac MRI: Use it or Lose it", March 2001
2000-2001	Radiological Society of North America Annual Meeting "Renal MR Angiography", Refresher Course, November 2000, 2001
2000	Royal Australia New Zealand College of Radiology Meeting "Volumetric MR Imaging of the Liver", "MRI/MRA of the Thoracic Aorta", "Preoperative Imaging of the Liver: What Your Surgeon Needs to Know", "Peripheral MR Angiography", "How to Optimise MR Angiography" (Workshop), October 2000
2000	New York Cardiovascular MR Society "Comprehensive MR Evaluation of Renovascular Disease", April 2000
2000	International Society for Magnetic Resonance in Medicine Annual Meeting "Cardiothoracic MRI", Introductory Clinical MRI Course, April 2000
1999-2001	Radiological Society of North America Annual Meeting "Practical Cardiac MR: Principles, Pearls and Protocols for Success"; Refresher Course, with D.A. Bluemke, November 1999, 2000, 2001
1999	International Society for Magnetic Resonance in Medicine Annual Meeting "Practical Cardiothoracic MRI"; Introductory Clinical MRI Course, May 1999
1999	Society for Magnetic Resonance Technologists, International Society for Magnetic Resonance in Medicine/SMRT Annual Meeting "Contrast-Enhanced Magnetic Resonance Angiography"; May 1999
1997	American College of Radiology, North Carolina Chapter "Parathyroid Gland Imaging Update", April 1997
<b>CME (Academ</b> 2010	ic Radiology) Lectures CT/MRI Head to Toe (NYU) "Focal Liver Lesions in Cirrhosis", December 2010
2010	Clinical MRI State of the Art (NYU) "Renal MRI: Form to Function", "Focal Liver Lesions: Case Based", October 2010
2010	Summer Radiology Symposium, Lake George, NY "Cardiac MRI: Principles to Practice", "Cardiac MRI: Case Conference", "Non-Gd MRA and NSF", "Renal MRI: Form to Function", June 2010
2009	Summer Radiology Symposium, Chatham, MA

	"Liver Masses: Case-based approach", "MR of Kidneys: Form to function", "Cardiac MRI: A Primer", "Non-Gd MRA and an Updates on NSF", "Pelvic MR: Cases", June 2009
2008	Summer Radiology Symposium, Chatham, MA "From Cirrhosis to HCC: The Challenges", "MR Evaluation of Renal Masses: A Case-Based Approach", "Cardiac MRI: Case Based Review", June 2008
2008	Clinical State-of-the-Art Lectures (NYU) "Renal MRA: From Anatomy to Function, MRI Program", "MRI of Focal Liver Lesions: A case based approach", September 2008
2007	Society for Computed Body Tomography/Magnetic Resonance 17th Summer Practicum, Banff, Canada "Cardiac MRI: Viability Imaging & Applications", "MR Flow in Cardiovascular Imaging", 'Peripheral MRA", August 2007
2007	University of Pennsylvania Martha's Vineyard Course "Cardiac MR: Practical Tips & Protocols", "Cardiac MR: Case Based Session", "Cutting Edge MRA: The Latest Advances", "MR of the Liver and Biliary System", "Vascular MR: Pearls and Pitfalls"
2007	Advances in MR & CT, 8th International Course, Barcelona "New Advances in Cardiac MRI: Parallel Imaging and 3T", "MRI of Cardiac Viability", "Phase Contrast Flow Quantification: Doppler MRI", "Case of the Day", May 2007
2007	Imaging Essentials on St. Maarten (NYU) "Cirrhosis and its Mimics", "MRCP: Techniques and Applications", "Renal MRI Problem Solving: A Case Based Approach", "Peripheral MRA: Techniques and Applications", April 2007
2006	National Diagnostic Imaging Symposium, Orlando "Cardiac MRI: Pearls and Principles", "Cardiac Viability", December 2006
2006	Using an Integrated Approach in Evaluating Cardiothoracic Disease (NYU) "Cardiac MRI: Practical Tips", "Cardiac Viability Using MRI", "Phase Contrast Flow Quantification: Doppler MRI", "Cardiac MRI: New Frontiers"
2006	Society for Computed Body Tomography/Magnetic Resonance 16th Summer Practicum, Quebec City "Cardiac MRI: Practical Tips and Protocols", "Body Imaging at 3T, "Is it as Good as 1.5T?", "Renal MRI and MRA", August 2006
2006	Imaging Essentials: From the Head to the Toe (NYU) "Renal Masses: Pearls and Pitfalls", "Pelvic MRI: Case Conference", "Cardiovascular Case Conference", "MRCP: Pearls and Pitfalls", February 2006
2005	CT/MRI Head to Toe (NYU) "MRI of Focal Liver Lesions: A Case Based Approach", December 2005
2005	MRI: Clinical State of the Art (NYU)

	"Renal MRI/MRA: A Case Based Approach", "MRI at 3T: Is it really twice as good? November 2005
2005	Frontiers in Body & Musculoskeletal Imaging (NYU) "Liver MRI in Practice: A Case-Based Approach", "Renal MRA: Practical Tips", "Cardiac MRI: What you need to know", "MRA of the Thoracic Aorta", "Cardiovascular MR Quiz", March 2005
2005	NYU Transplantation Conference (NYU) "Pre-Operative Evaluation of Living Liver Donor Candidates", February 2005
2005	Body Imaging Essentials in Costa Rica (NYU) "MR Imaging of Cirrhosis and its Mimics", "Renal Masses: Interpretation and Pitfalls", Body and Cardiovascular MRI Cases", "Peripheral MRI", "Recent Advances in Body MRI", "Practical Cardiac MRI", February 2005
2004	MRI: Clinical State of the Art (NYU) "Sense and Smash: Parallel Imaging Techniques for Body MRI", November 2004
2004	Clinical Cardiac Imaging 2004: CT AND MR (Harvard/MGH) "Cardiac MRI: What You Need to Know", "Cardiac MR Cases", "Doppler MRI: Phase Contrast MR", September 2004
2004	Society for Computed Body Tomography/Magnetic Resonance 14th Summer Practicum, Whistler, Canada "Practical Cardiac MRI", "MRA Pearls and Pitfalls", "Liver MRI: State of the Art", August 2004
2004	Summer Body and Musculoskeletal Imaging Conference (NYU) "Practical Cardiac MRI", "Cardiovascular MR Cases", "MR Angiography Pearls and Pitfalls", "Comprehensive Renal MRI", Banff, July 2004
2003	CT/MRI Head to Toe (NYU) "Practical Cardiac MRI", December 2003
2003	MRI/CT Update (Harvard-Brigham and Women's Hospital) "Liver MRI: State of the Art", "MR Angiography: Pearls and Pitfalls", "Practical Cardiac MRI"
2003	MRI: Clinical State of the Art (NYU) "Functional Renal MRI and MRA"; "Interesting Cardiovascular MR Cases", October 2003
2003	MRI in Clinical Practice, Snowmass (NYU) "Renal MR Angiography", "Practical Cardiac MRI: Principles and Pearls", "Pearls and Pitfalls of Gadolinium-enhanced MRA", "MR Venography", March 2003
2002	CT/MRI Head to Toe (NYU) "Renal MRA: More than just plumbing?", "MRCP", "Cardiac MR, The Basics Workshop", December 2002

2002	Society for Computed Body Tomography/Magnetic Resonance Noninvasive Cardiac and Vascular Imaging Symposium "Renal MRA", "Interesting Cardiac MR Cases", October 2002
2002	MRI: Clinical State of the Art (NYU) "Practical Cardiac MR Imaging", "Interesting Body MR Cases", October 2002
2002	Society for Computed Body Tomography/Magnetic Resonance 12th Summer Practicum "Basic Cardiac MR", "MR Venography", "Pelvic MR Workshop", August 2002
2001	CT/MRI Head to Toe (NYU) "The Comprehensive Renal MR Examination" The Morton A. Bosniak Lecture "Practical Cardiac MRI", "How to Optimize Body MRA" and "Cardiac MR Cases" Workshops, December 2001
2001	MRI: Clinical State of the Art (NYU) "Optimization of Gadolinium-Enhanced MRA" "Cardiac MR Imaging: Technique and Clinical Applications, Part 1", October 2001
2001	Advances in MR & CT, 6th International Course, Barcelona "Preoperative Imaging of the Liver-What Your Surgeon Needs to Know", "Comprehensive MR Evaluation of Renovascular Disease", "Cardiac MRI: New Practical Protocols", "Coronary `MRA/CTA and Calcium Scoring", "Workshop: Cardiac MRI", May 2001
2001	Imaging Ducts, Vessels, and Volumes: The New Approach "MRCP Biliary Tract", "MRI/MRA Thoracic Aorta", "Renal MRA", "Volumetric MR Imaging of the Chest", Verona, May 2001
2001	MRI in Clinical Practice, Snowmass (NYU) "MRI of the Liver: What Your Surgeon Needs to Know", "Pearls and Pitfalls of Gadolinium-Enhanced MRA", "Renal MR Angiography: A Comprehensive Evaluation", March 2001
2001	NYU Update in Liver Transplantation "MR Imaging of the Liver Donor", February 2001, with M.T. Lavelle
2000	CT/MRI Head to Toe (NYU) "Coronary CTA, Coronary MRA and Coronary Calcium Scoring", "Renal MRA", "Body MRI: Pearls and Pitfalls" Workshop with M.T. Lavelle, "Cardiac MRI" Workshop, December 2000
2000	MRI: Clinical State of the Art (NYU) "Renal MR Angiography: Comprehensive Evaluation of Renovascular Disease" "Practical Cardiac MR Imaging", September 2000
2000	NYU Update in Liver Transplantation "Pre-Transplant Imaging of the Recipient and Donor", with N. Rofsky, February 2000

1999	CT/MRI Head to Toe, (NYU) "Pre-Operative Imaging of the Liver: What Your Surgeon Needs to Know" "Body MRI: Pearls and Pitfalls Workshop", December 1999
1999	MRI: Clinical State of the Art (NYU) "Renal MR Angiography", "Cardiac MR", "Instructional Body MRI Cases" Workshop, October 1999
1998	MRI: Clinical State of the Art (NYU) "Practical Cardiac MR Imaging", "Instructional Cases in Body MR Imaging" Workshop, October 1998
1998	Radiology Review Course, University of Texas Southwestern "Renovascular Disease—Can MR do it all?", "MR Angiography of the Extremities", "Cardiothoracic MR Imaging", October 1998
1997	CT/MRI Head to Toe (NYU) "Techniques for Abdominal MR: Tricks of the Trade", December 1997
1997	MRI: Clinical State of the Art (NYU) "Interesting Cases Workshop", October 1997

#### **Bibliography**

#### **Peer-Reviewed Publications**

- 1. **Lee VS**, Tarassenko L, Bellhouse BJ. Platelet transfusion therapy: Platelet concentrate preparation and storage. J Lab Clin Med 1988; 111:371-83.
- 2. **Lee VS**, Tarassenko L. Absorption and multiple scattering by suspensions of aligned red blood cells. J Opt Soc Am (A) 1991; 8:1135-41.
- 3. **Lee VS**, Tarassenko L, Bellhouse BJ. Quantitative optical determination of the viability of platelet concentrates. J Biomed Eng 1992; 14:27-32.
- 4. **Lee VS**, Tarassenko L. An optical method for the determination of platelet count in platelet samples contaminated with red blood cells. J Biochem Biophys Methods 1992; 24:215-23.
- 5. Lee ET, Lee VS, Lu M, Russell D. Development of proliferative retinopathy in NIDDM. A follow-up study of American Indians in Oklahoma. Diabetes 1992; 41:359-67.
- 6. Lee ET, Lee VS, Kingsley RM, Lu M, Russell D, Asal NR, Wilkinson CP, Bradford RH Jr. Diabetic retinopathy in Oklahoma Indians with NIDDM. Diabetes Care 1992; 15:1620-27.
- 7. Lee JS, Lu M, Lee VS, Russell D, Bahr C, Lee ET. Lower-extremity amputation. Incidence, risk factors, and mortality in the Oklahoma Indian Diabetes Study. Diabetes 1993; 42:876-82.
- 8. **Lee VS**, Thompson NW, Cho KJ, Goldblum JR. High-output cardiac failure: An unusual manifestation of intravenous leiomyomatosis. Surgery 1993; 113:466-70.
- 9. **Lee VS**, Chari RS, Cucchiaro G, Meyers WC. Complications of laparoscopic cholecystectomy. Am J Surg 1993; 165:527-32.
- 10. **Lee VS**, Kingsley RM, Lee ET, Lu M, Russell D, Asal NR, Bradford RH, Wilkinson CP. The diagnosis of diabetic retinopathy Ophthalmoscopy versus fundus photography. Ophthalmology 1993; 100:1504-1512.
- 11. Lee VS, Paulson EK, Libby E, Flannery JE, Meyers WC. Cholelithoptysis and cholelithorrhea: Rare complications of laparoscopic cholecystectomy. Gastroenterology 1993; 105:1877-1881.
  Response to letter to Editor: Lee V, Meyers WC. An earlier report of cholelithoptysis. Gastroenterology 1994;106:1400.
- 12. Lee ET, Lee VS, Lu M, Lee JS, Russell D, Yeh J. Incidence of renal failure in NIDDM. The Oklahoma Indian Diabetes Study. Diabetes 1994; 43:572-579.
- 13. **Lee VS**, Patz EF Jr, Chen JTT. Atypical and unusual calcifications of the heart and great vessels: Imaging findings. AJR 1994; 163:1349-1355.
- 14. **Lee VS**, Provenzale JM, Fuchs HE, Osumi A, McLendon RE. Post-traumatic epidermoid cyst: CT appearance. J Comput Assist Tomogr 1995; 19:153-155.

- 15. **Lee VS**, Wilkinson RH Jr, Leight GS Jr, Coogan AC, Coleman RE. Hyperparathyroidism in high-risk surgical patients: evaluation with double phase technetium 99m-sestamibi imaging. Radiology 1995; 197:627-633.
  - Excerpted in the Yearbook of Nuclear Medicine, A. Gottschalk, ed., St. Louis: Mosby, 1997, p.130-132, with commentary by M.D. Blaufox.
- 16. **Lee VS**, Webb MS Jr, Martinez S, McKay CP, Leight GS Jr. Uremic leontiasis ossea: 'Bighead' disease in humans? Radiologic, clinical, and pathologic features. Radiology 1996; 199:233-240.
- 17. Smith TP, **Lee VS**, Hudson ER, Newman GE, Suhocki PV, McDermott VG, Stackhouse DJ. Prospective evaluation of pulmonary artery pressures during pulmonary angiography performed with low-osmolar nonionic contrast media. J Vasc Interv Radiol 1996; 7:207-212.
- 18. **Lee VS**, Flyer MC, Weinreb JC, Krinsky GA, Rofsky NM. Image subtraction in gadolinium-enhanced magnetic resonance imaging. AJR 1996; 167:1427-1432.
- 19. **Lee VS**, Spritzer CE, Leight GS Jr, Coogan AC. The complementary roles of fast spin-echo MR imaging and double-phase 99mTc-sestamibi scintigraphy for localization of hyperfunctioning parathyroid glands. AJR 1996; 167:1555-1562.
- 20. **Lee VS**, Martinez S, Coleman RE. Primary muscle lymphoma: Clinical and imaging findings. Radiology 1997; 203:237-244.
- 21. **Lee VS**, Spritzer CE, Carroll BA, Pool LG, Bernstein MA, Heinle SK, MacFall JR. Flow quantification using fast cine phase-contrast MR imaging, conventional cine phase-contrast MR imaging, and Doppler sonography: In vitro and in vivo validation. AJR 1997; 169:1125-1131.
- 22. **Lee VS**, Martinez S. Clinical vignette: Leontiasis ossea in secondary hyperparathyroidism. J Bone Min Research 1997; 12:1952-1953.
- 23. Lee VS, Spritzer CE. MR imaging of abnormal parathyroid glands. AJR 1998; 170:1097-1103.
- 24. **Lee VS**, Lee HM, Rofsky NM. Magnetic resonance angiography of the hand: A review. Invest Rad 1998; 33:687-698.
- 25. Krinsky GA, Kaminer E, **Lee VS**, Rofsky NM, Weinreb JC. The effects of apnea on timing examinations for optimization of gadolinium-enhanced MR angiography of the thoracic aorta and arch vessels. J Comput Assist Tomogr 1998; 22:677-681.
- 26. **Lee VS**, Rofsky NM, Krinsky GA, Stemerman DH, Weinreb JC. Single-dose breath-hold gadolinium-enhanced three-dimensional MR angiography of the renal arteries: Effects of injection rate, patient circulation time and breath-holding on study quality. Radiology 1999; 211:69-78.
- 27. Roche KJ, Krinsky G, Lee VS, Rofsky N, Genieser NB. Interrupted aortic arch: Diagnosis with gadolinium-enhanced 3D MRA. J Comput Assist Tomogr 1999; 23:197-202.
- 28. Diaz-Candamio MJ\*, Lee VS, Golimbu CN, Scholes JV, Rofsky NM. Intrafibular varix: MR diagnosis. J Comput Assist Tomogr 1999; 23:328-330.

- 29. Krinsky GA, Reuss PM, Lee VS, Carbognin G, Rofsky NM. Thoracic aorta: Comparison of single-dose breath-hold and double-dose nonbreath-hold gadolinium-enhanced three-dimensional MR angiography. AJR 1999; 173:145-50.
- 30. **Lee VS**, Hertzberg BS, Kliewer MA, Carroll BA. Assessment of stenosis: Implications of variability of Doppler measurements in normal-appearing carotid arteries. Radiology 1999; 212:493-498.
  - *Response to letter to Editor*: Sheiman R, **Lee VS**, Hertzberg BS, Kliewer MA, Carroll BA. Arterial doppler US: Disturbing conservation of erroneous terms (multiple letters). Radiology. 2000;217:919.
- 31. Krinsky GA, Lee VS, Rofsky NM, Roy M-C, Colvin S, Galloway A. Atypical presentation of dissection of the ascending aorta in young men with cystic medial necrosis: MR findings. Clin Imaging 1999; 23(5):289-294.
- 32. Rofsky NM, Lee VS, Laub G, Pollack MA, Krinsky GA, Thomasson D, Ambrosino MM, Weinreb JC. Abdominal MR imaging with a volumetric interpolated breath-hold examination. Radiology 1999; 212:876-884.
- 33. Davey NC, Smith TP, Hanson MW, Lee VS, Stackhouse DJ, Coleman RE. Ventilation-perfusion lung scintigraphy as a guide for pulmonary angiography in the localization of pulmonary emboli. Radiology 1999; 213:51-57.
- 34. Rofsky NM, Morana G, Adelman MA, Lee VS, Krinsky GA. Improved gadolinium-enhanced subtraction MR angiography of the femoropopliteal arteries: Reintroduction of osseous anatomic landmarks. AJR 1999; 173:1009-1011.
- 35. Stemerman DH, Krinsky GA, Lee VS, Johnson G, Yang BM, Rofsky NM. Thoracic aorta: Rapid black-blood MR imaging with half-Fourier rapid acquisition with relaxation enhancement with or without electrocardiographic triggering. Radiology 1999; 213:185-191.
- 36. Kutz SM, Lee VS, Tunick PA, Krinsky GA, Kronzon I. Atheromas of the thoracic aorta: A comparison of transeophageal echocardiography and breath-hold gadolinium-enhanced 3-dimensional magnetic resonance angiography. J Am Soc Echocardiography 1999; 12:853-858.
- 37. Shinde TS\*, **Lee VS**, Rofsky NM, Krinsky GA, Weinreb JC. Three-dimensional gadolinium-enhanced MR venographic evaluation of central veins in the thorax: Initial experience. Radiology 1999; 213:555-560.
- 38. **Lee VS**, Hertzberg BS, Workman MJ, Smith TP, Kliewer MA, DeLong DM, Carroll BA. Variability of Doppler US measurements along the common carotid artery: Effects on estimates of internal carotid arterial stenosis in patients with angiographically proved disease. Radiology 2000; 214:387-392. PMCID: 10671585
- 39. **Lee VS**, Rofsky NM, Ton AT, Johnson G, Krinsky GA, Weinreb JC. Angiotensin-converting enzyme inhibitor-enhanced phase-contrast MR imaging to measure renal artery velocity waveforms in patients with suspected renovascular hypertension. AJR 2000; 174:499-508.
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- 42. Tunick PA, Krinsky GA, Lee VS, Kronzon I. Diagnostic imaging of thoracic aortic atherosclerosis. AJR 2000; 174:1119-25.
- 43. **Lee VS**, Lavelle MT, Rofsky NM, Laub G, Thomasson D, Krinsky GA, Weinreb JC. Hepatic MR imaging with a dynamic contrast-enhanced isotropic volumetric interpolated breath-hold examination: Feasibility, reproducibility, and technical quality. Radiology 2000; 215:365-372. PMCID: 10796909
- 44. **Lee VS**, Martin DJ, Krinsky GA, Rofsky NM. Gadolinium-enhanced MR angiography: Artifacts and pitfalls. AJR 2000; 175:197-205. PMCID: 10882274
- 45. Diaz-Candamio MJ\*, Lee VS, Rofsky NM, Krinsky GA, Weinreb JC. Pelvic arteriovenous malformations: Gadolinium-enhanced three-dimensional MR angiography findings. Eur Radiol 2000; 10:1257-1260. PMCID: 10939485
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- 47. Krinsky GA, Lee VS. MR imaging of cirrhotic nodules. Abdom Imaging 2000; 25:471-482.
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- 57. Pandharipande PV\*, **Lee VS**, Morgan GR, Teperman LW, Krinsky GA, Rofsky NM, Roy MC, Weinreb JC. Vascular and extravascular complications of liver transplantation: Comprehensive evaluation with three-dimensional contrast-enhanced volumetric MR imaging and MR cholangiopancreatography. AJR 2001; 177:1101-1107.
- 58. **Lee VS**, Lavelle MT, Krinsky GA, Rofsky NM. Volumetric MR imaging of the liver and applications. Magn Reson Imaging Clin N Am 2001; 9:697-716. PMCID: 11694434
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### **Patents**

1. Inventors: **Vivian S. Lee**, Jian Xu

Title: Turbo spin echo-based acquisition with variable flip angle evolution and high resolution

Date issued: December 19, 2012 US Patent number 8,334,691

2. Inventors: Lei Zhang, Henry Rusinek, Vivian S. Lee

Title: System, Method and Computer-Accessible medium for utilizing cardiac output to improve measurement of tracer input function in dynamic contrast-enhanced magnetic resonance imaging

Date: April 3, 2009, full patent submitted April 2, 2010

Docket Number: 191236/ US

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