

CURRICULUM VITAE
TIMOTHY PATRICK MURPHY, M.D., FSIR
updated May 8, 2024

Address: 20 University Rd., Ste. 500
Cambridge, MA 02138

EMPLOYER

05/2018-present Summa Therapeutics, LLC
Cambridge, MA 02138
Chief Executive Officer

PAST EMPLOYER

7/1993-4/2018 Rhode Island Medical Imaging
Staff Interventional Radiologist

EDUCATION

Undergraduate:

09/81-05/87 Boston University
Six-year Medical Education Program
Cum laude
Boston, Massachusetts
B.A. and M.D.

Medical School:

07/83-06/87 Boston University
Six-year Medical Education Program
Boston, Massachusetts
B.A. and M.D.

Honorary Degree:

06/99 Brown University
Masters of Arts, Ad Eundum

POSTGRADUATE TRAINING:

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| Residency: 07/87–06/88 | Transitional Intern Cambridge Hospital Cambridge, Massachusetts |
| 07/88–06/92 | Resident Diagnostic Imaging Rhode Island Hospital Providence, Rhode Island |
| 07/91–06/92 | Chief Resident Department of Diagnostic Imaging Rhode Island Hospital Brown University School of Medicine |
| Fellowship: 07/92–06/93 | Fellow Vascular and Interventional Radiology Department of Diagnostic Imaging Rhode Island Hospital Brown University School of Medicine |

POSTGRADUATE HONORS AND AWARDS:

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| 1981 | National Merit Scholarship Finalist |
| 1991 | Certificate of Appreciation, Scientific Exhibit. “Acute and chronic arterial dissection: treatment by percutaneous angioplasty”. 91 st Annual Meeting of the American Roentgen Ray Society, Boston, Massachusetts. |
| 1991 | Certificate of Merit, Scientific Exhibit. “In vivo and in vitro evaluation of the LGM Filter.” 91 st Annual Meeting of the American Roentgen Ray Society, Boston, Massachusetts. |
| 1995 | Certificate of Merit, Scientific Exhibit. “Nonsurgical management of aortoiliac disease.” 95 th Annual Meeting of the American Roentgen Ray Society, Washington, D.C. |
| 1995 | Editor's Recognition Award, with distinction, <u>Radiology</u> |
| 1996 | Editor's Recognition Award, with distinction, <u>Radiology</u> |

- 1996 Distinguished Reviewer, Journal of Vascular and Interventional Radiology
- 1997 Distinguished Reviewer, Journal of Vascular and Interventional Radiology
- 1998 Distinguished Reviewer, Journal of Vascular and Interventional Radiology
- 2000 Examiner, Certificate of Added Qualifications in Vascular & Interventional Radiology, American Board of Radiology
- 2000 Examiner, American Board of Radiology Qualifying Examination
- 2002 Distinguished Committee Service Award, Committee on Coding and Nomenclature Commission on Economics, American College of Radiology, May 2002.
- 2002-2008 Councilor-at-large, Executive Council, Society of Interventional Radiology.
- 2004 Marquis Who's Who in Medicine and Healthcare, 5th edition, Marquis Who's Who, New Providence, N.J.
- 2011 Marquis Who's Who in America, 66th Edition, Marquis Who's Who, New Providence, N.J.
- 2003-2016 "America's Top Doctors", published by Castle Connolly, LTD, New York, New York.
- 2011-2018 "Best Doctor's In America", Best Doctors, Inc. Boston, Massachusetts.
- 2004- "National Register's Who's Who in Executives and Professionals", National Register, West Islip, NY.
- 2007- "Cambridge Who's Who Among Executives and Professionals in Teaching and Education", "Honors Edition". Cambridge Whos Who, Uniondale, New York.
- 2008 "America's Top Radiologists", Consumers' Research Council of America, www.consumersresearchcncl.org, Washington, D.C.

- 2009 Society of Interventional Radiology recognition for service on the PAD Coalition, Science Committee Chair
- 2010 “The Leading Physicians of The World”, International Association of HealthCare Professionals, International Association of Radiologists www.iaradiology.com, New York, New York.
- 2012 PAD Coalition’s 2012 PAD Coalition Research Award for the best research paper of 2011 in the field of peripheral arterial disease, for the manuscript titled, “Supervised Exercise Versus Primary Stenting for Claudication Resulting From Aortoiliac Peripheral Artery Disease : Six-Month Outcomes From the Claudication: Exercise Versus Endoluminal Revascularization (CLEVER) Study”. The PAD Coalition is a collaborative, multidisciplinary network of over 80 professional and public organizations united by one mission: to increase public and health professional awareness of peripheral artery disease. The Coalition created this award to recognize and celebrate the work of investigators and acknowledge outstanding research contributing to the understanding and treatment of PAD. A multidisciplinary committee selected the awards from qualifying research articles published in peer-reviewed literature.
- 2013 Journal of Vascular and Interventional Radiology Editor’s Award for Top Clinical Paper published in the journal in 2012, “Lower Extremity Endovascular Interventions for Medicare Beneficiaries: Comparative Effectiveness as a Function of Provider Specialty. J Vasc Interv Radiol, J Vasc Interv Radiol. 2011 Nov 21.” Zafar AM, Dhangana R, Murphy TP, Goodwin SC, Duszak R. Jr., Ray C. Jr., Manolov NE. PMID: 22217499
- 2013 American Registry “Vitals Top 10 Doctor Award”, awarded to less than 3% of doctors nationally. American Registry, Del Ray Beach, Florida.
- 2014 Co-author, “Abstract of the Year”, for *Novel molecular targeting of Necl 5 to prevent Intimal Hyperplasia and restenosis*, 2014 SIR 39th Annual Scientific Meeting. Muhamad Naeem, M.D., lead author.
- 2018 Journal of Interventional Medicine, Editorial Board. Minghua Li, Editor-in-Chief (Shanghai Sixth People’s Hospital, China).

PROFESSIONAL LICENSES AND BOARD CERTIFICATION:

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| 1988 | Diplomate National Board of Medical Examiners |
| 1990 | Rhode Island Medical License |
| 1992 | Diplomate American Board of Radiology |
| 1995 | Certificate of Added Qualification--Vascular and Interventional Radiology |
| 1998 | Rhode Island Controlled Substances Registration, #XXXX |
| 1998 | Federal DEA Registration, No. XXXXX6947 |
| 2000 | Massachusetts Medical License |

ACADEMIC APPOINTMENTS:

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| 07/92-06/93 | Assistant Instructor in Radiation Medicine Brown University School of Medicine |
| 07/93-06/95 | Clinical Assistant Professor Department of Diagnostic Imaging Brown University School of Medicine |
| 07/95-06/98 | Assistant Professor Department of Diagnostic Imaging Brown University School of Medicine |
| 05/98-06/05 | Associate Professor, Research Track Department of Diagnostic Imaging Brown University School of Medicine |
| 06/05-4/18 | Full Professor, Research Track Department of Diagnostic Imaging Alpert Medical School at Brown University |

HOSPITAL APPOINTMENTS

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| 07/93-04/18 | <u>Staff Radiologist</u> |
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- Women & Infants' Hospital
Providence, Rhode Island
- 07/93-04/18 Staff Radiologist
Division of Vascular and Interventional Radiology
Rhode Island Hospital
Providence, Rhode Island
- 1995-1996 Co-director, Vascular and Interventional Radiology Fellowship
Program, Rhode Island Hospital
Providence, Rhode Island
- 1995-1996 Co-director
Division of Vascular and Interventional Radiology
Rhode Island Hospital
Providence, Rhode Island
- 1996-2001 Director
Division of Vascular and Interventional Radiology
Rhode Island Hospital
Providence, Rhode Island
- 1996-2008 Director
Vascular and Interventional Radiology Fellowship Program
Rhode Island Hospital
Providence, Rhode Island
- 1996-2004 Co-director, Noninvasive Vascular Laboratory
Department of Diagnostic Imaging
Rhode Island Hospital
Providence, Rhode Island
- 2005-2018 Founder and Medical Director
Rhode Island Hospital Vascular Disease Research Center
(vdrc.lifespan.org)
- 2017-2018 Chair, Promotions Committee, Department of Diagnostic
Imaging, Warren Alpert Medical School at Brown University

OTHER APPOINTMENTS

Program Faculty Positions

- 1995 Program Co-chairman--Fifth Annual Southern New England Symposium on Peripheral Vascular Disease
- 1996 Program Co-chairman and Course Co-director--Sixth Annual Southern New England Symposium on Peripheral Vascular Disease. Newport, Rhode Island, August 16-18, 1997.
- 1997 Program Chairman, Course Co-director—Seventh Annual Symposium on Peripheral Vascular Disease. Newport, Rhode Island, August 15-17, 1997.

Program Faculty Positions

- 1997 Moderator, Scientific Session 16: Peripheral Vascular Disease: Grafting and Outcome Studies. Society of Cardiovascular and Interventional Radiology 22nd Annual Scientific Meeting, Washington, D.C. Tuesday, March 11, 1997.
- 1998 Program Chairman, Course Co-director—Eighth Annual Symposium on Peripheral Vascular Disease. Newport, Rhode Island, August 14-16, 1998.
- 1998 Coordinator, Aortoiliac Interventions Workshop, 23rd Annual Meeting of the Society of Cardiovascular and Interventional Radiology, San Francisco, CA, February 28-March 6, 1998.
- 1998-2000 Aortoiliac Interventions Workshop Coordinator, Society of Cardiovascular and Interventional Radiology Annual Meeting.
- 1999 Program Chairman, Course Co-director—Ninth Annual Symposium on Peripheral Vascular Disease. Newport, Rhode Island, August 13-15, 1999.
- 1999 Moderator, Scientific Session 01: Arterial Intervention. Society of Cardiovascular and Interventional Radiology 24th Annual Scientific Meeting, Orlando, FL. Sunday, March 21, 1999.
- 2000 Course Director, 10th Annual Brown University Symposium on Peripheral Vascular Disease: Diagnosis, Intervention and Surgery. Newport, Rhode Island, July 21-23, 2000.
- 2000 Moderator, Scientific Session 10: Iliac Interventions/Puncture Site Management. Society of Cardiovascular and

- Interventional Radiology 25th Annual Scientific Meeting, San Diego, CA. Monday, March 27, 2000.
- 2001 Moderator, Scientific Session 15: Renal/Visceral Vascular Disease: Evaluation, Recanalization Techniques. Society of Cardiovascular and Interventional Radiology 26th Annual Scientific Meeting, San Antonio, TX. Tuesday, March 6, 2001.
- 2008 Special Sessions: SS 302 - Renal artery intervention, CIRSE 2008 (Cardiovascular and Interventional Radiology Society of Europe Annual Meeting), Copenhagen, Denmark, September 13, 2008. Co-moderator Nicholas Chalmers, M.D., Manchester, U.K.
- 2008 Free Paper Session: FP 3006 "Renal artery intervention", CIRSE 2008 (Cardiovascular and Interventional Radiology Society of Europe Annual Meeting), Copenhagen, Denmark, September 17, 2008. Co-moderator, Jan Peregrin, M.D., Ph.D., Prague, Czech Republic.
- 2009 Moderator, How to Promote IR to Patients and Referring Physicians: PAD. Special Session: SS 2104, Cardiovascular and Interventional Radiology Society of Europe Annual Meeting, Lisbon, Portugal, Tuesday, September 22, 2009.
- 2010 Moderator, Research in Embolization. Global Embolization Symposium and Technologies (GEST). Saturday 8 May, 4 - 5:30 p.m., San Francisco, CA. Drs. Marc Sapoval, Jafar Golzarian, and Ziv Haskal, course directors.
- 2012 Moderator, "Lower Extremity Revascularization: What We Are, Where We're Going". Society of Interventional Radiology Annual Meeting, Wednesday, March 28th, 2012, San Francisco, CA.
- 2012 Moderator, Introduction of the Dotter Lecturer. Society of Interventional Radiology Annual Meeting, Monday, March 26th, 2012, San Francisco, CA.
- 2012 Moderator, Introduction of Gold Medal winners. Society of Interventional Radiology Annual Meeting, Tuesday, March 27th, 2012, San Francisco, CA.
- 2004 Steering Committee, CORAL Study ("Cardiovascular Outcomes with Renal Artery Lesions"). The CORAL Study is

a \$40 million, multiyear, multicenter clinical trial to compare renal artery stent placement with medical therapy for a cohort with refractory hypertension.

- 2004 Chair, Publications Committee, CORAL Study (see above).
- 2004 Co-chair, Intervention Methods Committee, CORAL Study (see above).
- 2004 Protocol Committee, CORAL Study
- 2004 Site Selection Committee, CORAL Study
- 2004 Interventional Committee, CORAL Study
- 2004 Chair, Publications and Ancillary Studies Committee, CORAL Study
- 2005 Chair, Interventional Credentialing Committee, CORAL Study
- 2004 Steering Committee, CORAL Study
- 2004 Co-principal investigator, CORAL (Cardiovascular Outcomes with Renal Atherosclerotic Lesions), NIH Operations Committee, CORAL Study, National Heart, Lung, & Blood Institute, 1 R01 HL071556-01
- 2005 Principal Investigator, R01 HL077221, NIH/NHLBI CLEVER Study (Claudication: Exercise Vs. Endoluminal Revascularization)
- 2005 Chair, Publications Committee, R01 HL077221, NIH/NHLBI CLEVER Study (Claudication: Exercise Vs. Endoluminal Revascularization)
- 2005 Chair, Revascularization Committee, R01 HL077221, NIH/NHLBI CLEVER Study (Claudication: Exercise Vs. Endoluminal Revascularization)
- 2005 Operations Committee, R01 HL077221, NIH/NHLBI CLEVER Study (Claudication: Exercise Vs. Endoluminal Revascularization)
- 2005 Steering Committee, R01 HL077221, NIH/NHLBI CLEVER Study (Claudication: Exercise Vs. Endoluminal Revascularization)

2004 SIR Representative to National Heart, Lung, & Blood Institute Peripheral Arterial Disease (PAD) Coalition to promote public health and awareness of peripheral arterial disease

2005 Chair, Scientific Committee, National Heart, Lung, & Blood Institute Peripheral Arterial Disease Coalition to promote public health and awareness of peripheral arterial disease

FDA Study Appointments

2006 Member, Data Safety and Monitoring Board (DSMB), EMPIRE (carotid artery stenting) Study (Sponsor: Guidant Corporation)

2008 Member, Data Safety and Monitoring Board (DSMB), ENDURANT Study (Sponsor: Medtronic Corporation)

2011 Member, Data Safety and Monitoring Board (DSMB), RESCUE Study (Sponsor: Medtronic Corporation)

2013-14 Chair, Data Safety and Monitoring Board (DSMB), Bard/Lutonix SFA ISR Study (Sponsor: Bard/Lutonix)

NIH Study Section

2009 Special Emphasis Panel/Scientific Review Group 2009/10 ZRG1 BST-M (58) R meeting, 07/20/2009-07/21/2009

Grant Reviewer

2009 Grant reviewer, ZonMw (the Netherlands organization for health research and development, Ministry of Health, Welfare and Sport (VWS) and the Netherlands Organization for Scientific Research (NWO))

2011 Heart Research UK, Translational Research Project Grants; “Low and high ankle brachial index in South Asians: cardiovascular risk factor associations”, TRP14/11, August, 2011.

Consulting

1999 *Current Concepts in Thrombolysis*, Consultants Conference. Sponsored by the Society of Cardiovascular and Interventional Radiology. August 9, 1999, New York, NY. Curtis Bakal, M.D., M.P.H., moderator.

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| 2000 | Consultant, Abbott Laboratories, North Chicago, IL |
| 2000 | Consultant, Guidant Corporation, Menlo Park, CA |
| 2000 | Consultant, Genentech Corporation, South San Francisco, CA |
| 2001 | Consultant, Bayer Pharmaceuticals |
| 2009 | AMAG Pharmaceuticals Advisory Board |
| 2011 | Consultant, Microvention/Terumo, Inc. |

Mentoring

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| 2001 | Mentor to medical student Nikki Ariaratnam for her Brown University Medical Student Research Award project “Retrospective Review of 500 Aortoiliac Stent Procedures”, \$1,500. |
| 2002 | Supervisor for medical student Nikki Ariaratnam’s Student Scholar in Cardiovascular Disease Stroke, awarded by the American Heart Association, \$2,000, for her research project, “Retrospective Review of 500 Aortoiliac Stent Procedures”. |

Society of Interventional Radiology Appointments

The Society of Interventional Radiology is the largest interventional radiology professional society in the world, with over 5,000 members

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| 2011 | President |
| 2010 | President-elect |
| 2009 | Secretary |
| 2003-2012 | Executive Committee |
| 2009-2012 | SIR Foundation Executive Council |

Editoria/Reviewer Activities

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| 1994-2001 | Reviewer, <u>Radiology</u> |
| 1995-2016 | Reviewer, <u>Journal of Vascular and Interventional Radiology</u> |

- 1998-2009 Editorial Board,
Journal of Vascular and Interventional Radiology
- 2000 Reviewer, Academic Radiology
- 2002 Reviewer, Journal of Vascular Surgery
- 2003 Reviewer, Cardiovascular and Interventional Radiology
- 2004 Reviewer, Circulation
- 2005 Reviewer, Health and Quality of Life Outcomes
- 2006 Reviewer, “Comparative Effectiveness of Management Strategies for Renal Artery Stenosis”, Prepared for:
Agency for Healthcare Research and Quality
U.S. Department of Health and Human Services
540 Gaither Road
Rockville, MD 20850
www.ahrq.gov
Contract No. 290-02-0022
Prepared by:
Tufts-New England Medical Center Evidence-based Practice Center, Boston, Massachusetts
- 2008 Reviewer, Lancet
- 2010 Reviewer, JAMA
- 2012 Reviewer, Atherosclerosis
- 2013 Abstract reviewer, American College of Cardiology’s 63rd Annual Scientific Session
- 2015 Reviewer, Journal of the American Society of Hypertension
- 2015 Reviewer, Journal of the American College of Cardiology

Miscellaneous

- 1999 Site coordinator, Society of Cardiovascular & Interventional Radiology “Legs for Life” program

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| 2004 | FDA IDE for use of Embospheres (Biosphere, Rockland, MA) to embolize massively enlarged prostate glands |
| 2006 | American College of Cardiology, Data Writing Standards Committee, Renal and Mesenteric Data Standards Group |
| 2006 | American College of Cardiology, Data Writing Standards Committee, Lower Extremity Data Standards Group |
| 2015-2021 | Member, State of Rhode Island Ethics Commission. The Rhode Island Ethics Commission is an independent, nonpartisan, and constitutionally mandated body empowered to enforce and administer a Code of Ethics, with authority over all elected and appointed government officials. Appointed by Governor Gina Raimondo. |

HOSPITAL COMMITTEES

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|-----------|--------------------------------------------------------------------------------|
| 1997-2008 | Procedure Review Committee |
| 1997-2004 | Bylaws Committee |
| 1991–1994 | Education Committee--Rhode Island Hospital Department of Diagnostic Imaging |
| 1996-1998 | Education Committee--Rhode Island Hospital Department of Diagnostic Imaging |

MEMBERSHIP IN SOCIETIES

| | |
|--------------|-------------------------------------------------------------------------|
| 1985-present | <u>Massachusetts Medical Society</u> |
| 1986-present | <u>American Medical Association</u> |
| 1992 | Credentials Committee, Resident Physician Section Annual Meeting (A-92) |
| 1987-present | <u>Rhode Island Radiological Society</u> |

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| 1998-2004 | Medicare Carrier Advisory Committee member, Rhode Island Radiological Society representative, Rhode Island Medicare |
| 2000-2001 | Treasurer |
| 2001-2002 | Secretary |
| 2002-2003 | Vice-President |
| 2003-2004 | President |
| 1988-2018 | <u>New England Roentgen Ray Society</u> |
| 1988-present | <u>American College of Radiology</u> |
| 1998-2002 | Coding and Nomenclature Committee |
| 2003 | American College of Radiology Chapter Leadership Meeting, Washington, D.C. |
| 2004 | American College of Radiology Chapter Leadership Meeting, Washington, D.C. |
| 2004-2005 | Alternate Councilor, ACR House of Delegates |
| 2005 | Guidelines and Standards Committee of the Interventional and Cardiovascular Radiology Commission, American College of Radiology |
| 2005-2008 | Councilor, ACR House of Delegates |
| 2005 | Fellow, American College of Radiology |
| 1990-2018 | <u>American Roentgen Ray Society</u> |
| 1992-present | <u>American Heart Association</u> |
| 2004-present | American Heart Association, Premium Professional Silver Heart Member (recognition for continued service) |
| 1992-present | Council on Cardiovascular Radiology |
| 2002 | Council on Clinical Cardiology |
| 2000-2006 | Cardiovascular Radiology Council, Committee on Peripheral Vascular Imaging and Intervention |
| 2003 | Fundraising committee for the American Heart Association's Rhode Island Heart Ball |
| 2000-2003 | Cardiovascular Radiology Council, Program Committee |
| 1999 | Abstract Reviewer, American Heart Association Scientific Sessions |
| 1998-2001 | Executive Committee, Council on Cardiovascular Radiology |
| 1999-2001 | Chair, Membership Committee, Council on Cardiovascular Radiology |
| 1998-2001 | Chair, Credentials Committee, Council on Cardiovascular Radiology |
| 1997-present | Membership Committee, Council on Cardiovascular Radiology |

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| 1996-present | Fellow--Council on Cardiovascular Radiology (this is an elected position which has been achieved by 181 of 1,234 members (15%)) |
| 2002-2008 | Council on Clinical Cardiology |
| 1992-present | <u><i>Society of Interventional Radiology</i></u> (Formerly Society of Cardiovascular and Interventional Radiology) |
| 1992 | Alternate Delegate to the American Medical Association-Resident Physician Section Annual Meeting (A-92) |
| 1992-1993 | Society of Cardiovascular and Interventional Radiology - delegate to the American Medical Association--Resident Physician Section |
| 1995 | Electronic Database Committee |
| 1996 | Fellow (this is an elected position which has been achieved by 190 members out of total membership of approximately 2,700 (7%)) |
| 1996-2008 | Fellowship Program Directors Group |
| 1996-2008 | Long-range Planning Committee |
| 1996-2008 | RUC Survey Committee, External Affairs Division |
| 1996-2002 | Economics/Physician Reimbursement Committee, External Affairs Division |
| 1997-2008 | Government Affairs & Health Care Policy Committee, External Affairs Division |
| 1997-2008 | Executive Council Advisory Committee |
| 1997-1999 | Chairman, Medicare Carrier Advisory Committee Working Group, Government Affairs Committee, External Affairs Division, |
| 1998 | Selection committee for Research Director for Cardiovascular and Interventional Radiology Research and Education Foundation (CIRREF) |
| 1998 | Grant reviewer for Cardiovascular and Interventional Radiology Research and Education Foundation (CIRREF) |
| 1998 | Abstract Reviewer for Scientific Sessions, 24 th Annual Meeting of the Society of Cardiovascular and Interventional Radiology |
| 1998-2008 | Standards of Practice Committee |
| 1998-2008 | Committee to Define Success and Complications, Standards Division |
| 1998-2008 | Education Material Committee, Education Division |
| 1998-2008 | Scientific Sessions Committee |
| 1999-2008 | Public Relations Committee |
| 1999 | Abstract Reviewer for Scientific Sessions, 25 th Annual Meeting of the SCVIR |
| 2003 | Chair, Clinical Practice Task Force |
| 2003 | SIR Executive Committee |
| 2004 | Councilor-at-large, Executive Council |
| 2004-2005 | Strategic Planning Committee |

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| 1992-1993 | <u><i>American Association of Academic Chief Residents in Radiology (A³CR²)</i></u> |
| 1993-2018 | <u><i>Association of University Radiologists</i></u> |
| 1993-2018 1996-2004 | <u><i>Rhode Island Medical Society</i></u> Public Laws Committee |
| 1994-present | <u><i>New England Society of Interventional Radiology</i></u> (formerly New England Society of Cardiovascular and Interventional Radiology) |
| 2001-2002 | President |
| 2003 | Board of Directors |
| 1998-2008 | <u><i>Association of Program Directors in Radiology</i></u> |
| 1999-2018 | <u><i>Fellow--Society for Vascular Medicine and Biology</i></u> |
| 2003-present | <u><i>American Association for the Advancement of Science</i></u> |
| 2006-present | <u><i>The Society for Clinical Trials</i></u> |

CORPORATE ACTIVITIES

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|--------------|---------------------------------------------|
| 2019-2020 | Medical Advisory Board, ImmunSYS |
| 2018-present | Chief Executive Officer, Summa Therapeutics |
| 2016-present | Medical Advisory Board, PAVMed |

PATENTS

US623505 -- Method of Stent-Graft System Delivery
(Atty. David J. Powsner, Nutter, McLennan & Fish, LLP)

US7998220 -- Methods for Treating Obesity
(Atty. Adam J. Cermak, Cermak Nakajima, LLP)

US10207085 -- Medical Drainage Catheter With Break-Away Tip and Extraluminal Retention Apparatus (*Pro se*)

US11278290 -- Methods for Treatment of Addiction-Reward Behaviors

(Atty. Shelly Guest Cermak, Cermak, Makajima & McGowan, LLP)

US11504508 -- Extended-tip Angioplasty Device and Method (*Pro se*)

US11717200 -- Ergonomic Suction Syringe and Methods of Use (*Pro se*)

U.S. FOOD AND DRUG ADMINISTRATION (FDA)

K230263 (May 26, 2023)—Finesse Injectable™ PTA Balloon Angioplasty Catheter

PUBLICATIONS (PEER-REVIEWED)

1. Murphy TP, Cronan JJ, Paoletta LP, Dorfman GS, Francis WW. Arterial rupture without balloon rupture during percutaneous transluminal angioplasty. *J Vasc Surg* 1987;6:528–530.
2. Murphy TP, Cronan JJ. Evolution of deep venous thrombosis: a prospective evaluation with US. *Radiology* 1990;177:543–548. PMID:2217798
3. Murphy TP, Dorfman GS, Yedlicka JW, McCowan TC, Vogelzang RL, Hunter D, Carver DK, Pinsk R, Castaneda-Zuniga W, Ferris EJ, Amplatz K. The LGM vena cava filter: objective evaluation of early results. *J Vasc Interv Radiol* 1991;2:107–115. PMID:1799739
4. Murphy TP, Dorfman GS, Segall M, Carney WI. Iatrogenic arterial dissection: treatment with percutaneous transluminal angioplasty. *Cardiovasc Intervent Radiol* 1991;14:302–306.
5. Murphy TP, Dorfman GS, Esparza AR, Duwaji MS, Smith WJ. Arteriosclerosis obliterans in an animal model. *Invest Radiol* 1992;27:1059-1063.
6. Murphy TP, Dorfman GS, Becker J. Preprocedure test use by interventional radiologists. *Radiology* 1993;186:213-220.
7. Cronan JJ, Murphy TP. A comprehensive review of vascular ultrasound for the intensivist. *J Intensive Care Med* 1993;8:188-201.
8. Beecham RP, Dorfman GS, Cronan JJ, Spearman MP, Murphy TP, Scola FH. Is bilateral lower extremity compression sonography useful and cost-effective in the

- evaluation of patients with suspected pulmonary embolism? *AJR* 1993;161:1289-1292. PMID:8249744
9. Murphy TP, Lambiase RE, Dorfman GS, Webb MS, Haas RA, Beecham RP. Effect of spontaneous splenorenal shunts on portal hemodynamics: limited regression of varices after TIPS. *J Vasc Interv Radiol* 1995;6(5):700-702.
 10. Murphy TP. Subintimal revascularization of chronic iliac artery occlusions. *J Vasc Interv Radiol* 1996;7:47-51.
 11. Murphy TP, Webb MS, Lambiase RE, Haas RA, Dorfman GS, Carney WI, Morin CJ. Percutaneous revascularization of complex iliac artery stenoses and occlusions using Wallstents: 3-year experience. *J Vasc Interv Radiol* 1996;7:21-27. PMID:8773970
 12. Ludwig DR, Murphy TP, Tung GA. General case of the day. *RadioGraphics* 1996;16:1231-1234. (Dr. Ludwig is a PGY-5 resident).
 13. Ahmed A, Murphy TP. Spiral basket for percutaneous embolectomy of the infrageniculate popliteal artery. *J Vasc Interv Radiol* 1997;8:71-73. (Dr. Ahmed is a PGY-3 resident).
 14. Sheeran SR, Hallisey MJ, Murphy TP, Faberman RS, Sherman S. Local thrombolytic therapy as part of a multidisciplinary approach to acute axillosubclavian vein thrombosis (Paget-Schroetter Syndrome). *J Vasc Interv Radiol* 1997;8:253-260.
 15. Hoffman A, Murphy TP. Septic arteritis causing iliac artery rupture and aneurysmal transformation of the distal aorta after iliac artery stent placement. *J Vasc Interv Radiol* 1997;8:215-219. (Dr. Hoffman is a PGY-3 resident).
 16. Murphy TP, Marks MJ, Webb MS. Use of a curved needle for true lumen re-entry during subintimal iliac artery revascularization. *J Vasc Interv Radiol* 1997;8:633-636.
 17. Murphy TP, Beecham RP, Kim HM, Webb MS, Scola F. Long-term follow-up after TIPS: Use of Doppler velocity criteria for detecting elevation of the portosystemic gradient. *J Vasc Interv Radiol* 1998;9:275-281. PMID:9540912
 18. Murphy TP, Ahmed AI, Webb MS. Results of aortoiliac stent placement in patients treated for intermittent claudication. *J Vasc Interv Radiol* 1998;9:421-428.
 19. Murphy TP, Webb MS. Percutaneous extravascular venous bypass for dialysis-related subclavian vein occlusion. *J Vasc Interv Radiol* 1998;9(6):935-939.

20. Gupta H, Murphy TP, Soares GM. Use of a puncture needle for recanalization of an occluded subclavian vein. *Cardiovasc Interv Radiol* 1998;21(6):508-511. (Dr. Gupta is a PGY-5 resident).
21. Murphy TP. Medical Outcomes Studies in peripheral vascular disease. *J Vasc Interv Radiol* 1998;9(6):1-11.
22. Hoffman AI, Lambiase RE, Haas RA, Rogg JM, Murphy TP. Acute vertebrobasilar occlusion: Treatment with high-dose intraarterial urokinase. *AJR* 1999;172:709-712.
23. Sheeran SR, Gestring ML, Murphy TP, Slaiby JM. Endovascular graft-related iliac artery infection. *J Vasc Interv Radiol* 1999;10:877-882.
24. Sheeran SR, Murphy TP, Khwaja A, Sussman SK, Hallisey MJ. Stent placement for treatment of mesenteric artery stenoses or occlusions. *J Vasc Interv Radiol* 1999;10:861-867.
25. Soares GS, Murphy TP. Transcaval TIPS: Indications and anatomic considerations. *J Vasc Interv Radiol* 1999;10:1233-1238.
26. Semba CP, Murphy TP, Bakal CW, Calis KA, Matalon TA. Thrombolytic therapy with use of alteplase (rt-PA) in peripheral arterial occlusive disease: review of the clinical literature. The Advisory Panel. *J Vasc Interv Radiol*. 2000 Feb;11(2 Pt 1):149-61.
27. Semba CP, Bakal CW, Calis KA, Grubbs GE, Hunter DW, Matalon TA, Murphy TP, Stump DC, Thomas S, Warner DL. Alteplase as an alternative to urokinase. Advisory Panel on Catheter-Directed Thrombolytic Therapy. *J Vasc Interv Radiol*. 2000 Mar;11(3):279-87.
28. Merport M, Murphy TP, Eglin TK, Dubel GJ. Fibrin sheath stripping vs. catheter exchange for the treatment of failed tunneled hemodialysis catheters: randomized clinical trial. *J Vasc Interv Radiol* 2000;11(9):1115-20.
29. Dubel GJ, Ferland RJ, Murphy TP, Frishman G. The emerging role of uterine artery embolization in the management of symptomatic uterine fibroids. *Med Health R I*. 2000 Oct;83(10):305-11.
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ABSTRACTS

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SCIENTIFIC EXHIBITS

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3. Murphy TP, Cronan JJ. Development of chronic venous changes after deep venous thrombosis: US correlation. 75th Scientific Assembly of the Radiological

- Society of North America, Chicago, Illinois 1989; and the 38th Annual Meeting of the Association of University Radiologists, Minneapolis, Minnesota 1990.
4. Soares GM, Murphy TP, Dorfman GS, Beecham RP, Carney WI, Haas RA. Nonsurgical management of aortoiliac disease. 80th Scientific Assembly of the Radiological Society of North America. Chicago, Illinois 1994, and the 95th Annual Meeting of the American Roentgen Ray Society, Washington, D.C., 1995 (certificate of merit).

ORIGINAL SCIENTIFIC PRESENTATIONS (PRESENTED BY DR. MURPHY)

1. Evolution of deep vein thrombosis: chronic venous changes can be distinguished from acute clot with US. 75th Scientific Assembly of the Radiological Society of North America. Chicago, Illinois 1989.
2. In vivo and in vitro evaluation of the LGM filter. 76th Scientific Assembly of the Radiological Society of North America. Chicago, Illinois 1990.
3. Arteriosclerosis obliterans in an animal model. 40th Annual Meeting of the Association of University Radiologists. Chicago, Illinois 1992.
4. Revascularization of complex iliac artery lesions using Wallstents. 66th Scientific Sessions of the American Heart Association. Atlanta, Georgia, November 1993.
5. Percutaneous revascularization of chronically occluded iliac arteries using thrombolysis and Wallstents. 19th Annual Meeting of the Society of Cardiovascular and Interventional Radiology Annual Meeting. San Diego, CA, March 1994.
6. Endovascular revascularization of diffusely diseased and chronically occluded iliac arteries with Wallstents. Society of Cardiovascular and Interventional Radiology 20th Annual Meeting. Ft. Lauderdale, FL. March 28, 1995.
7. Thrombolysis prior to stent placement for chronic iliac artery occlusions. 68th Scientific Sessions of the American Heart Association, Anaheim, California, November 13, 1995.
8. Thrombolysis prior to stent placement for chronic iliac artery occlusions. 81st Scientific Assembly of the Radiological Society of North America. Chicago, Illinois, November 28, 1995.
9. Medical Outcomes Study of patients who have undergone treatment for intermittent claudication, Scientific Session 343. Society of Cardiovascular and

- Interventional Radiology 22nd Annual Scientific Meeting, Washington, D.C.
Tuesday, March 11, 1997.
10. Utilization of renal artery interventions by Medicare beneficiaries in 1998. Scientific Session 15, Renal/Visceral Vascular Disease: Evaluation, Recanalization Techniques. Society of Cardiovascular and Interventional Radiology 26th Annual Scientific Meeting, San Antonio, TX. Tuesday, March 6, 2001.
 11. Severity of renal artery lesions in patients enrolled into the CORAL Trial. Cardiovascular and Interventional Radiology Society of Europe, Fall 2008 (abstract) [Alan Matsumoto, M.D., lead abstract author]
 12. Correlation of Treadmill Test Outcomes with Symptom Improvement After Treatment for Aortoiliac Claudication. Society of Interventional Radiology Annual Meeting, April 14, 2013, New Orleans, Louisiana.
 13. Long-Term Claudication Comparative Effectiveness Strategies of Care: Final 18 Month Outcomes from the CLEVER Study. Late-breaking Abstract, Society of Interventional Radiology Annual Meeting, April 16, 2013, New Orleans, Louisiana. Lowell Khan, M.D., and Sanjay Misra, M.D., moderators.
 14. Relationship of Albuminuria and Renal Artery Stent Outcomes in the CORAL Study. Society of Interventional Radiology Annual Meeting, Scientific Session, April 4th, 2016, Vancouver, B.C., Canada. Rob Lookstein, M.D., moderator.
 15. Relationship between albuminuria and renal artery stent outcomes: results of the cardiovascular outcomes with renal artery lesions (CORAL) randomized clinical trial. Murphy TP, Cooper CJ, Pencina KM, D'Agostino R, Massaro J, Cutlip DE, Jamerson K, Matsumoto AH, Henrich W, Shapiro JI, Tuttle KR, Cohen DJ, Steffes M, Gao Q, Metzger C, Abernethy WB, Textor SC, Briguglio J, Hirsch AT, tobe S, Dworkin LD. Cardiovascular and Interventional Radiology Society of Europe (abstract no. 70288), September 13, 2016, Barcelona, Spain.

INVITED PRESENTATIONS

National and International

1. Noninvasive vascular evaluation. Workshop. 19th Annual Meeting of the Society of Cardiovascular and Interventional Radiology Annual Meeting. San Diego, CA, March 1994.

2. Percutaneous Aortoiliac Reconstruction. Vascular Diagnosis and Treatment: Third Annual Symposium. Dallas, TX, November 5, 1994. Drs. Chet Rees and Frank Rivera, Course directors.
3. Thromboembolic disease and IVC filters. Vascular Diagnosis and Treatment: Third Annual Symposium. Dallas, TX, November 5, 1994. Drs. Chet Rees and Frank Rivera, Course directors.
4. Lysis, PTA, and stenting complex aortoiliac occlusive disease. The 1994 Symposium on Current Issues & New Techniques in Interventional Radiology. New York, New York, November 17, 1994. Drs. Jacob Cynamon and Thomas Sos, Course directors.
5. Endovascular Reconstruction of Iliac Artery Occlusions. The 7th Annual Symposium on Vascular Disease and Intervention. Miami Beach, FL, January 21-23, 1995. Dr. Barry Katzen, Course director.
6. Advanced TIPS workshop. Society of Cardiovascular and Interventional Radiology Annual Meeting. Ft. Lauderdale, FL, March 1995.
7. Percutaneous management of central venous obstruction within the thorax. Third Annual Symposium on current Issues and New Techniques in Interventional Radiology, New York, New York, November 15, 1995. Dr. Jacob Cynamon, Course director.
8. Vena cava filters: Redefining the indications in selected patient populations. Third Annual Symposium on current Issues and New Techniques in Interventional Radiology, New York, New York, November 15, 1995. Dr. Jacob Cynamon, Course director.
9. Role of lytic agents in the treatment of complex aortoiliac occlusive disease. 22nd Annual Symposium on Current Critical Problems, New Horizons and Techniques in Vascular and Endovascular Surgery, New York, New York, November 16, 1995. Dr. Frank Veith, Course director.
10. Advanced Vascular Intervention Workshop. Society of Cardiovascular and Interventional Radiology 21st Annual Meeting, Seattle, Washington, March 4, 1996.
11. Percutaneous management of aortoiliac insufficiency. Central New York Angiography Society, Syracuse, New York. May 9, 1996.
12. Hemodialysis access grafts. Interventional management of peripheral vascular disease. Houston, Texas, May 10, 1996. Albert E. Raizner, MD, Course director.

13. Noninvasive vascular testing. Symposium at Seaside, Seaside, Florida, October 2, 1996. Sponsored by Jackson Memorial Hospital, Quinton Dickerson, M.D., Course director.
14. Percutaneous management of aortoiliac insufficiency. Symposium at Seaside, Seaside, Florida, October 2, 1996. Sponsored by Jackson Memorial Hospital, Quinton Dickerson, M.D., Course director.
15. Update on TIPS. Mid-American Interventional Radiological Society, Kansas City, Missouri, October 12, 1996. Edward Siegel, M.D., President.
16. Percutaneous management of aortoiliac insufficiency. Mid-American Interventional Radiological Society, Kansas City, Missouri, October 12, 1996. Edward Siegel, M.D., course coordinator.
17. Internet Resources Workshop, W334i, Society of Cardiovascular and Interventional Radiology 22nd Annual Scientific Meeting, Washington, D.C., Sunday, March 9, 1997.
18. Advanced Vascular Intervention Workshop, W722, Society of Cardiovascular and Interventional Radiology 22nd Annual Scientific Meeting, Washington, D.C. Wednesday, March 12, 1997.
19. Percutaneous Therapy of PVD. Second Annual Vascular Intervention Conference. Sponsored by Lancaster General Hospital, Leigh S. Shuman, MD, Course Director. Saturday, October 11, 1997.
20. Noninvasive Evaluation of Peripheral Vascular Disease. Second Annual Vascular Intervention Conference. Sponsored by Lancaster General Hospital, Leigh S. Shuman, MD, Course Director. Lancaster, PA, Saturday, October 11, 1997.
21. Hemodialysis Access Maintenance. Grand Rounds, Broward General Hospital, Fort Lauderdale, Florida. Glenn Singer, M.D., Director of Medical Education, John Guben, M.D., host. Thursday, November 6, 1997.
22. Coding and Billing Workshop. Workshop, 23rd Annual Meeting of the Society of Cardiovascular and Interventional Radiology, San Francisco, CA, March 3rd, 1998. David Sacks, MD, coordinator.
23. Coding and Billing Workshop. Workshop, 23rd Annual Meeting of the Society of Cardiovascular and Interventional Radiology, San Francisco, CA, March 4th, 1998. David Sacks, MD, coordinator.

24. Aortoiliac Interventions Workshop (coordinator). Workshop, 23rd Annual Meeting of the Society of Cardiovascular and Interventional Radiology, San Francisco, CA, March 1st, 1998.
25. Aortoiliac Interventions Workshop (coordinator). Workshop, 23rd Annual Meeting of the Society of Cardiovascular and Interventional Radiology, San Francisco, CA, March 2nd, 1998.
26. Complications of Arterial Stent Placement. Plenary Session, 23rd Annual Meeting of the Society of Cardiovascular and Interventional Radiology, San Francisco, CA, March 2, 1998. Robert L. Vogelzang, MD, moderator.
27. PVD: Update on Endovascular Management. Surgical Grand Rounds, Peninsula Regional Medical Center, Salisbury, Maryland, May 19, 1998. Dr. Michael Marks, host.
28. Aortoiliac Insufficiency: PTA, Stents, and Stent-grafts. Second Annual Louisville Symposium on Vascular and Endovascular Therapy, Louisville, Kentucky, Saturday, September 19, 1998. Dr. Seyhan Senler, course director.
29. Aortoiliac Insufficiency: PTA, Stents, and Stent-grafts. Intervention Head to Toe, St. Dominic/Jackson Memorial Hospital, Sandestin, Florida, Saturday, October 24, 1998. Dr. Scott McPherson, program coordinator.
30. Vascular Stents: Current Concepts and Controversies. Special Focus Session (Plenary Session), 84th Annual Meeting of the Radiological Society of North America, Chicago, IL, December 1, 1998. Curtis W. Bakal, MD, moderator.
31. Coding and Billing Workshop. 24th Annual Meeting of the Society of Cardiovascular and Interventional Radiology, Orlando, FL, March 21st, 1999. Dr. David Sacks, coordinator.
32. Coding and Billing Workshop. 24th Annual Meeting of the Society of Cardiovascular and Interventional Radiology, Orlando, FL, March 24th, 1999. Dr. David Sacks, coordinator.
33. Intermittent Claudication: Iliac Intervention. Plenary Session, 24th Annual Meeting of the Society of Cardiovascular and Interventional Radiology, Orlando, FL, March 22, 1999. Dirk Vorwerk, MD, moderator.
34. Aortoiliac Interventions Workshop (coordinator). 24th Annual Meeting of the Society of Cardiovascular and Interventional Radiology, Orlando, FL, March 22nd, 1999.

35. Aortoiliac Interventions Workshop (coordinator). 24th Annual Meeting of the Society of Cardiovascular and Interventional Radiology, Orlando, FL, March 25th, 1999.
36. Iliac Stenting. Radiology Grand Rounds, Wilford Hall/Lackland Air Force Base, Brook Army Medical Center, San Antonio, TX. May 10, 1999.
37. Iliac Stenting: Stents and Technical Complications. Instructional Course, 99th Annual Meeting of the American Roentgen Ray Society, New Orleans, LA. May 11, 1999. Course director; Al Nemcek, faculty.
38. The Wallstent for Peripheral Vascular Disease: Applications and Technique. The Westin Osaka Hotel, Osaka, Japan; November 5, 1999, Dr. H. Uchida (Nara Medical University), moderator.
39. The Wallstent for Peripheral Vascular Disease: Applications and Technique. Hilton Tokyo, Tokyo, Japan; November 6th, 1999. Dr. Y. Nakajima (St. Marianna Medical University), moderator.
40. Aortic Stent-Grafts Workshop. 7th Annual Symposium on “Current Issues and New Techniques in Interventional Radiology”, New York, November 19th, 1999. Jacob Cynamon, M.D., and Curtis W. Bakal, M.D., M.P.H., symposium chairmen.
41. Aortoiliac Intervention: Broadening the Indications for Intermittent Claudication. 7th Annual Symposium on “Current Issues and New Techniques in Interventional Radiology”, New York, November 19th, 1999. Jacob Cynamon, M.D., and Curtis W. Bakal, M.D., M.P.H., symposium chairmen.
42. Coding & Billing WorkshopAortoiliac Interventions Workshop (coordinator). 25th Annual Meeting of the Society of Cardiovascular and Interventional Radiology, San Diego, CA, March 25th, 2000.
43. Aortoiliac Interventions Workshop (coordinator). 25th Annual Meeting of the Society of Cardiovascular and Interventional Radiology, San Diego, CA, March 30th, 2000.
44. Contemporary Strategies in Thrombolytic Therapy. Alpha Medica Teleconference, sponsored by Genentech. August 3, 10, 24, and September 6, 2000.
45. Billing and Coding Issues: Ask the Expert. Southeast Angiographic Society Annual Meeting, White Sulphur Springs, West Virginia. October 18-20, 2000; Drs. Alan Matsumoto and Denny Bartol, course directors.

46. Thrombolysis: An Update on Current Agents. Southeast Angiographic Society Annual Meeting, White Sulphur Springs, West Virginia. October 18-20, 2000; Drs. Alan Matsumoto and Denny Bartol, course directors.
47. Iliac Artery Occlusions: Endovascular Therapy. Southeast Angiographic Society Annual Meeting, White Sulphur Springs, West Virginia. October 18-20, 2000; Drs. Alan Matsumoto and Denny Bartol, course directors.
48. Recanalization Devices and Techniques. 26th Annual Meeting of the Society of Cardiovascular and Interventional Radiology, San Antonio, TX. Sunday, March 4, 2001. Curtis Bakal, M.D,MPH, moderator.
49. Aortoiliac Interventions: Instructional Course. American Roentgen Ray Society Annual Meeting, Seattle, WA, May 3, 2001. Drs. Timothy Murphy and Mahmood Razavi, course directors.
50. Aortoiliac Interventions: Quality of Life Issues. 14th Annual International Symposium on Endovascular Therapy (ISET). Miami Beach, FL, Tuesday, January 23, 2002. Barry T. Katzen, M.D., course director.
51. Renal Artery Intervention Workshop. 14th Annual International Symposium on Endovascular Therapy (ISET). Miami Beach, FL, Tuesday, January 23, 2002. Barry T. Katzen, M.D., course director.
52. Case Discussion Panel. Renal and lower extremity revascularization. 14th Annual International Symposium on Endovascular Therapy (ISET). Miami Beach, FL, Tuesday, January 23, 2002. Barry T. Katzen, M.D., course director.
53. Sharp Dissection Techniques for Chronic Iliac Artery Occlusions. 14th Annual International Symposium on Endovascular Therapy (ISET). Miami Beach, FL, Tuesday, January 23, 2002. Barry T. Katzen, M.D., course director.
54. Case Discussion Panel. Aortoiliac revascularization. 14th Annual International Symposium on Endovascular Therapy (ISET). Miami Beach, FL, Tuesday, January 23, 2002. Barry T. Katzen, M.D., course director.
55. Renal Artery Intervention: Analysis of Medicare Data. 14th Annual International Symposium on Endovascular Therapy (ISET). Miami Beach, FL, Wednesday, January 24, 2002. Barry T. Katzen, M.D., course director.
56. Invited Commentary, on Featured Abstract, “Declining Dose Study Using Reteplase To Treat Lower Extremity Arterial Occlusions”, Abstract Number 32, presenter Flavio Castaneda, MD. Scientific Session #: SS04 – Thrombolysis. 27th Annual Meeting of the Society of Cardiovascular & Interventional Radiology, Baltimore, Maryland, April 7, 2002.

57. Renovascular Interventions Workshop. 27th Annual Meeting of the Society of Cardiovascular & Interventional Radiology, Baltimore, Maryland, April 7, 2002.
58. Aortoiliac Interventions Workshop. 27th Annual Meeting of the Society of Cardiovascular & Interventional Radiology, Baltimore, Maryland, April 9, 2002.
59. Arterial Thrombolysis Workshop. 27th Annual Meeting of the Society of Cardiovascular & Interventional Radiology, Baltimore, Maryland, April 9, 2002.
60. Is Stenting the Most Definitive Treatment for Iliac Artery Obstruction? Current and Emerging Endovascular Therapies. Washington, D.C. May 31, 2002. Drs. Klemens Barth, John Laird, Renu Virmani, Dieter Lierman, and Satoshi Sawada, course directors.
61. Utilization and Current Indications for PTRAs and Renal Artery Stenting. Current and Emerging Endovascular Therapies. Washington, D.C. May 31, 2002. Drs. Klemens Barth, John Laird, Renu Virmani, Dieter Lierman, and Satoshi Sawada, course directors.
62. Aortoiliac Interventions. July 3, 2002. Boston Scientific Japan headquarters, Shinjuku Prefecture, Tokyo, Japan. Professor Yasuo Makajima, M.D., St. Marianna Medical University Radiology, Moderator.
63. Endovascular Grafts. July 3, 2002. Boston Scientific Japan headquarters, Shinjuku Prefecture, Tokyo, Japan. Professor Yasuo Makajima, M.D., St. Marianna Medical University Radiology, Moderator.
64. Aortoiliac Interventions. July 4, 2002. Hokkaido University, Department of Surgery. Professor Yasuda, M.D., Chief, Cardiovascular Surgery, Moderator.
65. Endovascular Grafts. July 4, 2002. Hokkaido University, Department of Surgery. Professor Yasuda, M.D., Chief, Cardiovascular Surgery, Moderator.
66. Aortoiliac Interventions. 8th Annual Japanese Endovascular Interventional Society Meeting, July 5th, 2002, Nara, Japan. Prof. Shukichi Sakaguchi, MD, Surgery, Mamamatsu Medical University, moderator.
67. Antiplatelet Agents in PVD. 10th Annual Meeting of the Interventional Radiology Society of Australasia. Cairns, Queensland, Australia. July 9th, 2002. Professor Kenneth Thomson, M.D., course director.
68. Aortoiliac Stenting for Quality of Life. 10th Annual Meeting of the Interventional Radiology Society of Australasia. Cairns, Queensland, Australia. July 9th, 2002. Professor Kenneth Thomson, M.D., course director.

69. Utilization and Current Indications for PTRAs and Renal Stenting. 10th Annual Meeting of the Interventional Radiology Society of Australasia. Cairns, Queensland, Australia. July 10th, 2002. Professor Kenneth Thomson, M.D., course director.
70. Sharp Instruments for Endoluminal Recanalization. 10th Annual Meeting of the Interventional Radiology Society of Australasia. Cairns, Queensland, Australia. July 11th, 2002. Professor Kenneth Thomson, M.D., course director.
71. Express LD Biliary Stent. Boston Scientific Annual Sales Meeting, Minneapolis, MN, July 17, 2002.
72. Aortoiliac Interventions. Boston Scientific Annual Sales Meeting, Minneapolis, MN, July 17, 2002.
73. Aortoiliac Interventions Workshop. 28th Annual Meeting of the Society of Interventional Radiology. March 28, 2003, Salt Lake City, Utah. Mahmood Razazvi, M.D., course director.
74. Commentary, on “Direct Intrahepatic Portosystemic Shunts”, featured abstract, presenter Brian Peterson, M.D.. March 29, 2003, 28th Annual Meeting of the Society of Interventional Radiology, Salt Lake City, Utah. Moderators Ernest Ring, M.D., Richard Baum, M.D.
75. Categorical course director, “Thrombolysis/Thrombectomy Devices”, March 29, 2003, 28th Annual Meeting of the Society of Interventional Radiology, Salt Lake City, Utah.
76. New Horizons in Thrombolysis. In categorical course, “Thrombolysis/Thrombectomy Devices”, March 29, 2003, 28th Annual Meeting of the Society of Interventional Radiology, Salt Lake City, Utah. Timothy P. Murphy, M.D., course director.
77. Thrombolysis Workshop. 28th Annual Meeting of the Society of Interventional Radiology. March 31, 2003, Salt Lake City, Utah. John Aruny, M.D., course director.
78. Renal Ischemia as a Predictor of Cardiovascular Morbidity. Plenary session. April 1, 2003, 28th Annual Meeting of the Society of Interventional Radiology, Salt Lake City, Utah. Alan Matsumoto, M.D., moderator.
79. SIR Clinical Practice Initiatives. SIR Corporate Advisory Meeting, Chicago, IL, September 9, 2003.

80. Endovascular Management of Aortoiliac Insufficiency. Seaside Endovascular Meeting, Destin, FL, October 10-11, 2003. William Routh, Course Director.
81. Practice Building in a Competitive Environment. Seaside Endovascular Meeting, Destin, FL, October 10-11, 2003. William Routh, Course Director.
82. Practice Development in a Competitive Environment. Gore Interventional Radiology Fellows Symposium. January 24th, 2004; Miami Beach, FL.
83. Reducing the Risks of Contrast-Induced Nephropathy: Current Strategies. The 2004 Charles J. Tegtmeier, MD Memorial Postgraduate Course—Management of Hypertension, Renal Insufficiency, and Atherosclerotic Renovascular Disease, March 5-6, Charlottesville, VA. Dr. Alan H. Matsumoto, Program Director.
84. Renal Artery Stenosis and Chronic Renal Insufficiency as Independent Predictors of Cardiovascular Morbidity. The 2004 Charles J. Tegtmeier, MD Memorial Postgraduate Course—Management of Hypertension, Renal Insufficiency, and Atherosclerotic Renovascular Disease, March 5-6, Charlottesville, VA. Dr. Alan H. Matsumoto, Program Director.
85. Aortoiliac Interventions Workshop. 29th Annual Meeting of the Society of Interventional Radiology. March 27, 2004, Pheonix, AZ. Mahmood Razazvi, M.D., course director.
86. Aortoiliac Interventions Workshop. 29th Annual Meeting of the Society of Interventional Radiology. March 29, 2004, Pheonix, AZ. Mahmood Razazvi, M.D., course director.
87. Renal Artery Stenosis and Cardiovascular Disease Risk. Internal medicine grand rounds, Fairfax Inova Hospital, April 27, 2004. Chief Medical Resident Tamar Taddei.
88. Radiological Society of North America Annual Meeting 2004: Moderator SSD20: Vascular Interventional (Vascular Stents and Stent-Grafts) . Chicago, IL, November 30, 2004.
89. Radiological Society of North America Annual Meeting 2004: Moderator SSG03: Vascular Interventional (Vascular MR Imaging). Chicago, IL, November 30, 2004.
90. Defining the Problem. Day 1, NIH/NHLBI CORAL (Cardiovascular Outcomes with Renal Atherosclerotic Lesions) Study Pre-Enrollment Investigator's Meeting, January 14-15, Miami, FL.

91. CORAL Eligibility Criteria. Day 2, NIH/NHLBI CORAL (Cardiovascular Outcomes with Renal Atherosclerotic Lesions) Study Pre-Enrollment Investigator's Meeting, January 14-15, Miami, FL.
92. CORAL Publications/Ancillary Studies. Day 1, NIH/NHLBI CORAL (Cardiovascular Outcomes with Renal Atherosclerotic Lesions) Study Pre-Enrollment Investigator's Meeting, January 14-15, Miami, FL.
93. Renovascular Disease: The Role of IR in Diagnosis, Treatment and Management. Society of Interventional Radiology Annual Meeting, Workshop, Sunday, April 3rd, 2005, New Orleans, LA.
94. How Does Renal Intervention Compare to Medical Management Alone ? Society of Interventional Radiology Annual Meeting, Plenary Session, Friday, April 1st, 2005, New Orleans, LA. Moderator: Alan Matsumoto, M.D.
95. Recommendations for Appropriate Renal Vascular Imaging at the Time of Coronary Angiography. American Heart Association Scientific Sessions, Special Session 03, Renal Vascular Disease: A Time to Focus on Proper Identification and Treatment of High-Risk Individuals. November 14, 2005, Dallas, Texas. Moderator: Lance Dworkin, M.D.
96. Renovascular Interventions Workshop. Society of Interventional Radiology Annual Meeting, Sunday, April 2, 2006, Toronto, Ontario, Canada. Co-moderator: Dr. Michael Bettman.
97. Clinical Interventional Radiology. Moderator, Plenary Session: Society of Interventional Radiology Annual Meeting, Sunday, April 2, 2006, Toronto, Ontario, Canada. Dr. Gregory Soares, co-moderator.
98. Evolution of IR: Where are we going? Plenary session, Society of Interventional Radiology Annual Meeting, Sunday, April 2, 2006, Toronto, Ontario, Canada. Drs. Timothy Murphy and Gregory Soares, moderators.
99. "Cilostazol Procedures". CLEVER Study Investigator's Meeting, June 16-17, Minneapolis, MN. Alan Hirsch, M.D., Study Chair, Timothy P. Murphy, M.D., Principal Investigator.
100. "Noninvasive Testing". CLEVER Study Investigator's Meeting, June 16-17, Minneapolis, MN. Alan Hirsch, M.D., Study Chair, Timothy P. Murphy, M.D., Principal Investigator.
101. "Revascularization Methods". CLEVER Study Investigator's Meeting, June 16-17, Minneapolis, MN. Alan Hirsch, M.D., Study Chair, Timothy P. Murphy, M.D., Principal Investigator.

102. "Site Monitoring". CLEVER Study Investigator's Meeting, June 16-17, Minneapolis, MN. Alan Hirsch, M.D., Study Chair, Timothy P. Murphy, M.D., Principal Investigator.
103. "Publications". CLEVER Study Investigator's Meeting, June 16-17, Minneapolis, MN. Alan Hirsch, M.D., Study Chair, Timothy P. Murphy, M.D., Principal Investigator.
104. "Work Description for PIs, Research Coordinators, Exercise Staff, and Budget". CLEVER Study Investigator's Meeting, June 16-17, Minneapolis, MN. Alan Hirsch, M.D., Study Chair, Timothy P. Murphy, M.D., Principal Investigator.
105. "CORAL's Greatest Cases!", CORAL (Cardiovascular Outcomes with Renal Atherosclerotic Lesions) Study Annual Meeting, Nashville, TN September 15, 2006. Dr. Joseph Shapiro, moderator.
106. "Recruitment Strategies: Radiology Perspective", CORAL (Cardiovascular Outcomes with Renal Atherosclerotic Lesions) Study Annual Meeting, Nashville, TN September 15, 2006. Dr. Joseph Shapiro, moderator.
107. "Interventional Treatment", PAD Coalition/NIH launch of "Stay in Circulation" Public Health Awareness Campaign, Press Briefing, National Press Club, Washington, D.C. September 19, 2006. Dr. Alan Hirsch, moderator.
108. "Vascular Clinical Trials: CORAL, CLEVER and Evidence-Based Vascular Care", Abbott Northwestern Hospital Cardiology Conference, Monday, October 23, 2006. Dr. Alan Hirsch, moderator.
109. "The National Peripheral Arterial Disease Public Education Campaign: Your Roles Defined". Minneapolis "Vascular Masters Series" lecture, Minneapolis, MN. Dr. Alan Hirsch, moderator.
110. "Design of the CLEVER Trial: Should Claudicants Be Treated?". Advanced Interventional Management (AIM) Symposium, November 13, 2006, New York, NY. Jacob Cynamon, M.D., course director.
111. "How to Be Competitive in Interventional Radiology Practice", Visiting Professorship, Baylor Medical Center, Houston, TX, December 13, 2006. Dr. Pedro Diaz, Moderator.
112. Live Case Panel, Femoral Artery Interventions. International Symposium on Endovascular Therapy 2007, January 30, 2007. Dr. Barry Katzen, Moderator.

113. Update on the CORAL Trial. International Symposium on Endovascular Therapy 2007, January 30, 2007. Dr. Shawn Samuels, Moderator.
114. Update on the CORAL Trial. Society of Interventional Radiology Annual Meeting, Seattle, WA. March 2, 2007. Alan Matsumoto, M.D., moderator; Ziv Haskal, M.D., course director.
115. Embolic Protection in Renal Arteries: Sham or Save? (debate). Society of Interventional Radiology Annual Meeting, Seattle, WA. March 2, 2007. Alan Matsumoto, M.D., moderator; Ziv Haskal, M.D., course director.
116. What is the Evidence on Femoropopliteal Interventions? Society of Interventional Radiology Annual Meeting, Seattle, WA. March 3, 2007. James Benenati, M.D., moderator; Ziv Haskal, M.D., course director.
117. Renal Angioplasty: Beneficial or Hazardous? UCSF Vascular Symposium, April 26th, 2007. Drs. Linda Reilly and Joseph Rapp, course directors.
118. Medicare Evidence Development & Coverage Advisory Committee (MedCAC) 7/18/2007 - Percutaneous Transluminal Angioplasty (PTA) and Stenting of the Renal Arteries. Registered speaker as representative of Society of Interventional Radiology.
119. Renal Artery Stenting: We Don't Know it Works. American Heart Association Scientific Sessions 2007, Cardiovascular Seminar CVS.60, "What's New in Peripheral Vascular Intervention I", November 4, 2007. Orlando, Florida. Antoinette Gomes, M.D. and Christopher White, M.D., moderators.
120. Femoral Recanalization: Stents, Cryo, Subaerial, Atherectomy. American Heart Association Scientific Sessions 2007, Cardiovascular Seminar CVS.60, "What's New in Peripheral Vascular Intervention I", November 4, 2007. Orlando, Florida. Antoinette Gomes, M.D. and Christopher White, M.D., moderators.
121. IR Personnel Crisis: Is It Real And What Can Be Done About It? Advance Interventional Management (AIM) Symposium, November 12, 2007. New York, New York. Jacob Cynamon, course director.
122. Why the Hype About PAD: What is the Evidence? Torrance Memorial Medical Center, Torrance, CA. December 4th, 2007. Dr. Mark Lurie, course director.
123. Why the Hype about PAD: What is the Evidence? Orange County Medical Society, Orange, CA. December 5th, 2007. Dr. Mahmood Razavi, course director.

124. Session I: Town Hall Meeting: Innovation in the United States, Is it Going Elsewhere? 20th International Symposium on Endovascular Therapy. January 21, 2008, Hollywood, Florida. Dr. Barry Katzen, course director.
125. Live Case Demonstration Panel. 20th International Symposium on Endovascular Therapy. January 21, 2008, Hollywood, Florida. Dr. Barry Katzen, course director.
126. Controversies Affecting the Economics of Renal Stenting. 20th International Symposium on Endovascular Therapy. January 21, 2008, Hollywood, Florida. Dr. Barry Katzen, course director.
127. Coffee with the Experts II: Treatment of Renal Artery Stenosis. 20th International Symposium on Endovascular Therapy. January 22, 2008, Hollywood, Florida. Dr. Barry Katzen, course director.
128. Update on Management of Aortoiliac Insufficiency. Categorical Course at Society of Interventional Radiology 33rd Annual Scientific Meeting, Washington, D.C. March 15, 2008, Mahmood Razavi, M.D., course director.
129. Peripheral Arterial Disease: What We Don't Know About What We Do Today. Plenary Session, Society of Interventional Radiology 33rd Annual Scientific Meeting, Washington, D.C. March 15, 2008, Michael Dake, M.D., course director.
130. PAD Interventions in 2008: Who Is Doing Them, Where Does IR Fit In and What's Going On in SIR. Plenary Session, Society of Interventional Radiology 33rd Annual Scientific Meeting, Washington, D.C. March 15, 2008, James Benenati, M.D., course director.
131. Renovascular Interventions Workshop. Society of Interventional Radiology 33rd Annual Scientific Meeting, Sunday, March 16, 2008, Washington, D.C., Tom Sos, M.D., course director.
132. Renal Percutaneous Transluminal Angioplasty Stents Are the Preferred Treatment of Renal Arterial Stenosis—Antagonist. American College of Cardiology 57th Annual Scientific Session March 30th, 2008, Chicago, IL, Drs. Mark Creager and John Cooke, course directors.
133. PAD: Claudication & Interventions on the Superficial Femoral and Popliteal Arteries: Interventional Therapy vs. Best Medical Therapy. 2008 Joan L. and Julius H. Jacobson Research Initiatives in Vascular Disease Conference, sponsored by the Society for Vascular Surgery. April 10th, 2008, Washington, D.C. Dr. Mark Davies, course director.

134. Latest Recommendations for Claudication: Update on the NIH Trials. 8th Hawaii Vascular Symposium. April 25th, 2008, Kapolei, Hawaii. Dr. Elna Masuda, course director.
135. Renal Artery Stenting SHOULD NOT be used widely: update on the CORAL Trial. 8th Hawaii Vascular Symposium. April 26th, 2008, Kapolei, Hawaii. Dr. Elna Masuda, course director.
136. Management of Peripheral Arterial Disease and Claudication: What is the Evidence? NIH CLEVER Study. Internal Medicine Grand Rounds, Ochsner Clinic, New Orleans, Louisiana, May 1st, 2008. Dr. Chris White, moderator.
137. How to Attract Patients for PVD Interventions. Special Session 35; CIRSE 2008 (Cardiovascular and Interventional Radiology Society of Europe Annual Meeting), Copenhagen, Denmark, September 13, 2008. Marc Sapoval, M.D. (Paris, France), and Patrick Haage, M.D. (Wuppertal, Germany), moderators.
138. Clinical Research in PAD: Separating Yourself from the Competition. Categorical Course, "PAD Practice: What Works". Society of Interventional Radiology 34th Annual Meeting, San Diego, CA, March 8th, 2009. Dr. Mahmood Razavi, moderator.
139. Clinical Research in PAD: Separating Yourself from the Competition. Categorical Course, "PAD Practice: What Works". Society of Interventional Radiology 34th Annual Meeting, San Diego, CA, March 8th, 2009. Dr. Mahmood Razavi, moderator.
140. "Scientific" Evidence: The Importance of Randomization. Joint Symposium with Society of Vascular Medicine, "Medical Management of Peripheral Arterial Disease: What the IR Needs To Know About Exercise, Lipids, Antiplatelet Agents and More". Society of Interventional Radiology 34th Annual Meeting, San Diego, CA, March 8th, 2009. Drs. James Benenati and Alain Drooz, course directors.
141. Research Outside "Academia". Plenary session, "IR Research to (Better) Practice". Society of Interventional Radiology 34th Annual Meeting, San Diego, CA, March 8th, 2009. Dr. Gordon McLennan, moderator.
142. PVD III: Renovascular Disease: Diagnosis, Treatment and Management. Workshop, Society of Interventional Radiology 34th Annual Meeting, San Diego, CA, March 8th, 2009.
143. Renovascular Hypertension. Medical Grand Rounds, Abington Memorial Hospital, Abington, PA. March 25th, 2009.

144. Late-breakers, Emerging Therapies and New Peer-Review Trials. Society for Vascular Medicine 20th Annual Scientific Sessions, Denver, CO, May 14th, 2009, Dr. Judith Regensteiner, Moderator.
145. Controversies in Renal Artery Stent Placement. Society for Vascular Medicine 20th Annual Scientific Sessions, Denver, CO, May 14th, 2009, Dr. Alan Drooz, Moderator.
146. Renal Artery Stenosis: Treatment Options in 2009. Combined Cardiology and Nephrology Grand Rounds, SUNY Stony Brook Medical Center, August 6, 2009. Dr. Allen Jeremias, moderator.
147. Renal Artery Stenosis and the Ischemic Kidney: What is a significant stenosis? Special Session: SS 304, Cardiovascular and Interventional Radiology Society of Europe Annual Meeting, Lisbon, Portugal, September 19, 2009. Drs. Jan Peregrin and Jean-Paul Beregi, moderators.
148. How to Promote IR to Patients and Referring Physicians: PAD. Special Session: SS 2104, Cardiovascular and Interventional Radiology Society of Europe Annual Meeting, Lisbon, Portugal, Tuesday, September 22, 2009. Drs. Timothy Murphy and Leo Lampmann, moderators.
149. PAD/CLEVER: What Is The Best Treatment For Claudication? 2009 Vascular Symposium: A Day with the Experts. Friday, October 16, 2009. Forsyth Medical Center Conference Center, Winston, North Carolina. Dr. Dan Golwyn, moderator.
150. Intermittent Claudication: What Have We Learned From The Randomized Trials? 17th Annual Advanced Interventional Management (AIM) Symposium, New York, NY, November 19, 2009. Jacob Cynamon, M.D. course director; Shawn Samuels, M.D., moderator.
151. What Have We Learned From The Randomized Renal Artery Stent Trials? 17th Annual Advanced Interventional Management (AIM) Symposium, New York, NY, November 19, 2009. Jacob Cynamon, M.D. course director; David Trost, M.D., moderator.
152. Update on the CLEVER Trial. Presented During: Session IV: Symposium on Peripheral Artery Disease (PAD) - Focus on Aorto-iliac Disease. The International Symposium on Endovascular Therapy (ISET 2010), Hollywood, FL. Barry Katzen, M.D., course director.
153. Update on the CLEVER Trial. Presented During: Session IV: Symposium on Peripheral Artery Disease (PAD) - Focus on Aorto-iliac Disease. The International Symposium on Endovascular Therapy (ISET 2010), Monday, January 18, 2010. Hollywood, FL. Barry Katzen, M.D., course director.

154. What Are the Current Data Supporting PTRA and Stenting? Presented During: Concurrent Session G: Renal and Visceral Intervention. The International Symposium on Endovascular Therapy (ISET 2010), Wednesday, January 20, 2010. Hollywood, FL. Barry Katzen, M.D., course director.
155. What Do Negative Randomized Control Trials for Renal Artery Stenosis Mean and will CORAL be different? Society of Interventional Radiology Annual Meeting, Plenary Session, Saturday, March 13, 2010, Dr. Alan Matsumoto, Moderator.
156. Vigorous Debate of the Year's Most Controversial Papers: As Vascular Surgeons Demonstrably Have Better Outcomes and Fewer Complications Than Interventional Radiologists Performing Endovascular Procedures, and Hence Such Procedures Should Only Be Performed by Vascular Surgeons. Antagonists view, debate with Dr. Mohammad Eslami. Society of Interventional Radiology Annual Meeting, Plenary Session, Wednesday, March 17, 2010, Dr. Shaun Samuels, Moderator.
157. Aortoiliac Interventions Workshop. Society of Interventional Radiology Annual Meeting, Tampa, FL. Monday, March 15th, 2010, Dr. Sanjoy Kundu, Moderator.
158. Antiplatelet Agents in PAD. In Antiplatelet agents, Antihypertensives, Lipid Management, and Anticoagulation Workshop. Wednesday, March 17th, 2010, Dr. Gloria Huang, Moderator.
159. Contemporary Design and Implementation of a Claudication Trial. In "Current Research on the Effective Treatment of Claudication" Symposium, Society for Vascular Surgery Annual Meeting, June 12, 2010, Boston, Massachusetts. Drs. Michael Stoner and Thomas Forbes, moderators.
160. Management of PAD and Claudication: Does Everyone Need a Stent? St. Joseph's Hospital CME program, June 17, 2010, Orange California. Dr. Mahmood Razavi, moderator.
161. CORAL and ASTRAL Trials. International Symposium on Endovascular Therapy (ISET) 2011. Miami Beach, FL, January 18, 2011, Dr. Barry Katzen, course director.
162. CORAL Trial: Will it Provide Answers and What Is the Current Status? International Symposium on Endovascular Therapy (ISET) 2011. Miami Beach, FL, January 19, 2011, Dr. Barry Katzen, course director.
163. Aortoiliac Interventions Workshop. Society of Interventional Radiology Annual Meeting, Chicago, IL. Monday, March 28th, 2011, Dr. Sanjoy Kundu, Moderator.

164. Ongoing Peripheral Vascular Randomized Clinical Trials: CLEVER, CORAL, and ATTRACT. New England Society of Interventional Radiology, Tuesday, October 11, 2011. Boston, MA. Dr. Greg Walker, President.
165. Renal Artery Stenting: Is there an Indication for this Procedure and What is the Evidence? Presented During: In Depth Endovascular Management of PAD: Outcomes Data, Clinical Management and Controversies. Society of Interventional Radiology Annual Meeting, Saturday, March 24th, 2012, San Francisco, CA. Jim Benenati, M.D., Jafar Golzarian, M.D., moderators.
166. Pro: Renal Artery Angioplasty and Stenting Remains a Beneficial Option with Valid Indications. Presented During: Hot Topics Debate. Society of Interventional Radiology Annual Meeting, Tuesday, March 27th, 2012, San Francisco, CA. Dr. Daniel Sze, M.D., moderator.
167. Iliac Stenting Versus Exercise : Results of the NIH-sponsored CLEVR Trial. Presented During: Care Changing Clinical Trials. Society of Interventional Radiology Annual Meeting, Wednesday, March 28th, 2012, San Francisco, CA. Dr. Mahmood Razavi, M.D., moderator.
168. Should we Stent the Renal Artery or Not? Update on CORAL and Summary of Randomized Trials. Presented During: Care Changing Clinical Trials. Society of Interventional Radiology Annual Meeting, Wednesday, March 28th, 2012, San Francisco, CA. Dr. Mahmood Razavi, M.D., moderator.
169. Claudication: To Intervene or Not? Presented During: Lower Extremity Revascularization: What We Are, Where We're Going. Society of Interventional Radiology Annual Meeting, Wednesday, March 28th, 2012, San Francisco, CA. Dr. Timothy Murphy, M.D., moderator.
170. Iliac Stenting Versus Exercise: Results of the NIH-sponsored CLEVR Trial. UCSF Vascular Symposium 2012, April 26, 2012, San Francisco. Dr. Michael Conte, Course director. Drs. Timothy Murphy and Christopher Owens, moderators.
171. “Current Status and Future Development of Interventional Radiology in Asia-Pacific Countries”, panel discussion. Asia-Pacific Congress of Cardiovascular and Interventional Radiology, June 1, 2012, Kobe, Japan. Dr. Shozo Hirota, President.
172. Recent Advancement of IR for Renovascular Hypertension”. Asia-Pacific Congress of Cardiovascular and Interventional Radiology, May 31, 2012, Kobe, Japan. Dr. Shozo Hirota, President.

173. “Correlation of Treadmill Test Outcomes With Symptom Improvement After Treatment for Aortoiliac Claudication”. Concurrent Session I: Abstracts & Late Breaking Trials. International Symposium on Endovascular Therapy, January 18, 2013, Miami, FL. Barry Katzen, M.D., course director.
174. “Bariatric Covered Stent: Modulation of Visceral Blood Flow to Treat Obesity”. Concurrent Session I: Abstracts & Late Breaking Trials. International Symposium on Endovascular Therapy, January 18, 2013, Miami, FL. Barry Katzen, M.D., course director.
175. “Contemporary Approach to PTRAs and Stenting”. Concurrent Session IV: Hypertension, Renal and Visceral Interventions. International Symposium on Endovascular Therapy, January 18, 2013, Miami, FL. Barry Katzen, M.D., course director.
176. “Centers of Excellence”. Debate. Society of Interventional Radiology Annual Meeting, “Controversies in IR”, April 17, 2013, Daniel Sze, M.D., course director.
177. “Working with Hospital Administration: Creating Partnerships with IR”. Introduction to IR and the SIR. Hospital administrators’ symposium, Society of Interventional Radiology Annual Meeting, New Orleans, LA, April 15, 2013, Alda Tam, M.D., course director.
178. “Role Of Covered Stents To Treat Obesity By Modulating Visceral Blood Flow”. Monday, November 18, 2013, New York, NY. Jacob Cynamon, M.D., program director.
179. “Can Obesity Be Controlled With Visceral Covered Stents To Control Blood Flow?” VEITH Symposium, Wednesday, November 20, 2013, New York, NY. Frank Veith, M.D., program director.
180. “Is Intervention For Claudication Indicated?” AIM Symposium, Thursday, November 21, 2013, New York, NY. Jacob Cynamon, M.D., program director.
181. Renal Intervention Workshop. AIM Symposium, Thursday, November 21, 2013, New York, NY. Jacob Cynamon, M.D., program director.
182. Innovation, Macroeconomics, and the Future of Minimally Invasive Therapies. Plenary Session, 40th Annual Scientific Meeting of the Society of Interventional Radiology, March 1, 2015. Mahmood Razavi, M.D., moderator.
183. Renovascular and Mesenteric Occlusive Disease. Symposium at 40th Annual Scientific Meeting of the Society of Interventional Radiology, March 1, 2015, course moderator (co-moderator, Thomas Sos, M.D.).

184. CORAL Overview: Are There Subgroups That Benefit from Stenting? 40th Annual Scientific Meeting of the Society of Interventional Radiology, March 1, 2015, moderators Timothy Murphy, M.D., Thomas Sos, M.D.
185. Supervised Exercise and Endovascular Intervention for Claudication: Competing Strategies or Complementary Solutions? American Heart Association 2016 Scientific Sessions, New Orleans, LA, November 15, 2016. Alan Hirsch, M.D., moderator.
186. Medical Management and Exercise: What You Need to Know. 41st Annual Meeting of the Society of Interventional Radiology, March 5th, 2017, Washington, D.C.. Self-Assessment Module on Aortoiliac Insufficiency. Moderators: John Kaufman, M.D., and Robert Abraham, M.D.
187. Deep Vein Thrombosis: Putting Patients First: Panel Discussion. 41st Annual Meeting of the Society of Interventional Radiology, March 5th, 2017, Washington, D.C.. Moderator: Michael Jaff, D.O.
188. Dilemmas in hypertension and comorbidities: Renal artery stenosis and uncontrolled hypertension. European Society of Cardiology Congress 2017. August 27, 2017. Moderators: RE. Schmieder (Erlangen, DE), J. Dalal (Mumbai, IN).
189. Still Crazy After All These Years. 34th Annual Charles T. Dotter Memorial Lecture (keynote address at the Society of Interventional Radiology annual meeting), Suresh Vedantham, M.D., moderator. March 18, 2018, Los Angeles, CA.
190. Experience with the IR Venture Forum. CIRSE 2019. IRT 2606 - IRs: From the angiosuite to industry boardrooms and the road to innovation. Gregory Makris, M.D., course director.
191. Medical Device Technology for Percutaneous Revascularization of Peripheral Arterial Disease. USPTO Patent Examiner Technical Training Program, TC3700 PETTP Technology Fair, Alireza Nia, course director.

INVITED PRESENTATIONS (cont)

Regional

1. Percutaneous treatment of aortoiliac disease. 3rd Annual Southern New England Symposium on Peripheral Vascular Disease. Newport, Rhode Island, August 13, 1993. Course director Gary S. Dorfman, M.D.
2. Percutaneous aortoiliac revascularization. New England Roentgen Ray Society. Boston, MA, February 1994.
3. Percutaneous aortoiliac revascularization. New England Society of Cardiovascular and Interventional Radiology. Boston, MA, March 1994.
4. Thrombolysis in arterial occlusions. Nashua Memorial Hospital. Nashua, New Hampshire, June 23, 1994. (Abbott Laboratories, North Chicago, IL, Speaker's bureau).
5. Endovascular reconstruction of aortoiliac occlusive disease. 4th Annual Southern New England Symposium on Peripheral Vascular Disease. Newport, Rhode Island, August 13, 1994. Course director Gary S. Dorfman, M.D.
6. Percutaneous portosystemic shunts: Indications and establishing a follow-up program. Fifth Annual Southern New England Symposium on Peripheral Vascular Disease, Newport, RI, August 6, 1995. Course director Gary S. Dorfman, M.D.
7. Percutaneous management of aortoiliac insufficiency. Fifth Annual Southern New England Symposium on Peripheral Vascular Disease, Newport, RI, August 6, 1995. Course director Gary S. Dorfman, M.D.
8. Noncoronary thrombolysis. Contemporary Issues in Emergency Medicine, Newport, RI, August 16, 1995.
9. Vascular stents. New England Roentgen Ray Society, Boston, Massachusetts, March 15, 1996.
10. Percutaneous management of aortoiliac insufficiency. Connecticut Angiography Society, Farmington, Connecticut, April 2, 1996. Dr. Harry Chu, President.
11. Percutaneous Management of Aortoiliac Insufficiency. Sixth Annual Southern New England Symposium on Peripheral Vascular Disease. Newport, Rhode Island, August 16-18, 1996. Course directors: Timothy P. Murphy, M.D., Gary S. Dorfman, M.D.
12. Medical Outcomes Studies in peripheral vascular disease. Seventh Annual Symposium on Peripheral Vascular Disease. Newport, Rhode Island. August 15-

- 17, 1997. Course directors Timothy P. Murphy, M.D., and Wilfred I. Carney, Jr., M.D.
13. Hemodialysis access maintenance. Seventh Annual Symposium on Peripheral Vascular Disease. Newport, Rhode Island. August 15-17, 1997. Course directors Timothy P. Murphy, M.D., and Wilfred I. Carney, Jr., M.D.
 14. The role of stents in aortoiliac insufficiency. Seventh Annual Symposium on Peripheral Vascular Disease. Newport, Rhode Island. August 15-17, 1997. Course directors Timothy P. Murphy, M.D., and Wilfred I. Carney, Jr., M.D.
 15. Mesenteric and portal venous noninvasive testing. Seventh Annual Symposium on Peripheral Vascular Disease. Newport, Rhode Island. August 15-17, 1997. Course directors Timothy P. Murphy, M.D., and Wilfred I. Carney, Jr., M.D.
 16. Aortoiliac insufficiency: angioplasty vs. stents vs. stent-grafts. Eighth Annual Symposium on Peripheral Vascular Disease. Newport, Rhode Island, August 14-16, 1998. Course directors Timothy P. Murphy, M.D., and Wilfred I. Carney, Jr., M.D.
 17. New techniques for dialysis access preservation. Eighth Annual Symposium on Peripheral Vascular Disease. Newport, Rhode Island, August 14-16, 1998. Course directors Timothy P. Murphy, M.D., and Wilfred I. Carney, Jr., M.D.
 18. Renal Intervention: How I do it. Ninth Annual Symposium on Peripheral Vascular Disease. Newport, Rhode Island, August 13-15, 1999. Course directors Timothy P. Murphy, M.D., and Wilfred I. Carney, Jr., M.D.
 19. Aortoiliac Intervention: How I do it. Ninth Annual Symposium on Peripheral Vascular Disease. Newport, Rhode Island, August 13-15, 1999. Course directors Timothy P. Murphy, M.D., and Wilfred I. Carney, Jr., M.D.
 20. An Update on Peripheral Arterial Disease: What We Know and What We Don't Know. Third Annual Coastal Medical CME Seminar. September 27, 2007. Newport, RI. Dr. Larry Schoenfield, course director.
 21. Renal arterial hypertension. 10th Annual Brown University Symposium on Peripheral Vascular Disease: Diagnosis, Intervention and Surgery. Newport, Rhode Island, July 21, 2000. Course directors: Timothy P. Murphy, M.D., and Wilfred I. Carney, Jr., M.D.
 22. Use of tPA (Alteplase) for peripheral arterial thrombolysis. 10th Annual Brown University Symposium on Peripheral Vascular Disease: Diagnosis, Intervention and Surgery. Newport, Rhode Island, July 23, 2000. Course directors: Timothy P. Murphy, M.D., and Wilfred I. Carney, Jr., M.D.

23. Practice Development in a Competitive Environment. New England Society of Interventional Radiology. January 13, 2004; Boston, MA. Thomas Dykes, M.D., President.
24. Risk Factors and Evaluation of the PAD Patient. Current Trends & Technologies in Medicine, Orthopedics, & Podiatric Surgery. Newport, RI, May 5, 2007. Dr. Robb Mothershed, moderator; Dr. A. Louis Jimenez, Chairman.
25. Lower Limb Ischemia Journal Club: What We Know (And What We Don't). Current Trends & Technologies in Medicine, Orthopedics & Podiatric Surgery, Newport, Rhode Island, May 2nd, 2008. Dr. Richard Reuter, course director.

GRANTS

1. Research Project #0616-02-92: Evaluation of a Rotating Angioplasty Device in Rabbits and Swine. Burrton Medical, Inc., \$32,373, in 1991-1992. Co-investigator.
2. Research Project #7481: Intraarterial Urokinase Therapy Utilizing a Recombinant Urokinase in the Treatment of Peripheral Arterial Thromboembolic Occlusions. Abbott Laboratories, \$230,400 in 1991-1993. Co-investigator.
3. Research Project #0074: Recombinant Urokinase vs. Operative Intervention for Acute Lower Limb Arterial Occlusion. Abbott Laboratories, \$6,345.00 in 1993-1994. Co-investigator.
4. Research Project #7384-01-94: Feasibility of Endovascular AAA Repair in Swine. W.L. Gore & Associates, \$4,000.00 beginning in January 1994. Principal Investigator.
5. Research Project #7669-01-95: Possis Angiojet Rheolytic Thrombectomy System Clinical Protocol. Possis Medical, Inc, \$7,650.50 for 2 years beginning June 1995. Site principal investigator, National Co-Investigator.
6. Research Project #96-0165: Outcomes Study of Endovascular Stent Placement for Intermittent Claudication. Cardiovascular and Interventional Radiology Research and Education Fund (CIRREF) grant, \$10,000.00. June 1, 1996 to May 30, 1997. Principal Investigator.
7. Continuation of Research Project #96-0165: Outcomes Study of Endovascular Stent Placement for Intermittent Claudication. Cardiovascular and Interventional Radiology Research and Education Fund (CIRREF) grant, \$10,288.39. June 1, 1997 to May 30, 1998. Principal Investigator.
8. Research Project #7082-01-97: Wallgraft Endoprosthesis with PET Covering and the Unistep LS Delivery System. Schneider (USA), Inc., Minneapolis, Minnesota. \$43,912.84. Site principal investigator, National Co-Investigator. June 27, 1997 to May 31, 1998.
9. Health Services Research in Renal Artery Revascularization Services: Utilization by Medicare Beneficiaries 1996-2000. Cardiovascular and Interventional Radiology Research and Education Fund (CIRREF), \$14,700, December, 2001 through November, 2002.

10. Prostate Embolization for Massive Benign Prostatic Hypertrophy (BPH). Phase I clinical trial. Investigator-initiated IDE by Dr. Murphy. Sponsor: Biosphere (Rockland, MA). November 2003.
11. A phase II, Multicenter, Open-Label, Dose-Escalation Study to Evaluate the Safety and Activity of Alfimeprase in Patients with Acute Peripheral Arterial Occlusion. Sponsor: Nuvelo (Sunnyvale, CA). Site investigator. November 2003. \$205,406.
12. 1 R01 HL071556-01 The CORAL Study: Cardiovascular Outcomes with Renal Artery Lesions. Co-principal investigator, 35% effort. National Heart, Lung, and Blood Institute, funding notification March 2004. Total award \$12.9 million, subcontract \$818,839.
13. RESIST Study (Abciximab and AngioGruar in Renal Artery Stenting). Sponsor: Medical College of Ohio/Cordis, Inc. Chris Cooper, M.D., Principal Investigator. \$46,600. November 2003.
14. CREST (Carotid Revascularization vs. Endarterectomy Stenting Trial): National Institutes of Health/National Institute of Neurological Disorders and Stroke, 3/1/2005, up to \$227,400 (per enrollment). Site Principal Investigator.
15. R01 HL077221--Principal Investigator, 20% effort, CLEVER Study (Claudication: Exercise Vs. Endoluminal Revascularization)—National Heart, Lung, and Blood Institute, funding notification August 15, 2005, \$5.7 million.
16. Supplement to R01 HL077221 Claudication: Exercise Vs. Endoluminal Revascularization (CLEVER), The National Institutes of Health (NIH) Office of Research on Women's Health (ORWH), August 15, 2006, \$125,000. To study sex-based differences in outcomes in the CLEVER Study.
17. Society of Interventional Radiology Foundation Clinical Fellowship Research Training Program. Three years beginning 2007, \$30,000.
18. Population-based Examinations to Determine Ankle-brachial Indexes (PEDAL Study). Principal investigator, \$95,000, Bristol-Myers Squibb Sanofi Aventis.
19. 1 R01 HL088476-01--Pharmacomechanical Catheter-Directed Thrombolysis for Acute DVT-ATTRACT Trial. Steering Committee, National Heart, Lung, and Blood Institute, \$143,426.30, Suresh Vedantham, M.D., Principal Investigator.

UNIVERSITY TEACHING ROLES

1. Biomed 629: General Introduction to Radiology

Brown University School of Medicine

I provide a one-hour formal lecture during this cycle and interact directly with the students rotating in the department.

2. Biomed 633 - Vascular and Interventional Radiology

Brown University School of Medicine

1996-2001 – Director

Supervision, instruction and didactic lectures regarding the introduction to general vascular and interventional radiology procedures. Mentoring of medical students interested in participating in research projects.