

CURRICULUM VITAE

NAME: **RICHARD J. GRAY, MD, FSIR**

ADDRESS: Research Committee Chair 5/2017-present

Medical Advisory Board

Azura Vascular Care

Richard.Gray@AzuraCare.com

240-350-8113 cell phone

Medical Director 2008-2023

Azura Vascular Care of Pennsylvania

7959 Bustleton Avenue

Philadelphia, PA

CardioVascular Coalition 2015-2018

Board of Directors

Consultant Medical Advisory Board 2015-2017

Fresenius Vascular Care

Secretary 2004-2007

Board of Directors

Center Radiology, PC

Washington Hospital Center

110 Irving Street, N. W.

Washington, D. C., 20010

Co-Director 2000-2008

Center for Vascular Care

Washington Hospital Center

Section Director 2000-2007

Interventional Radiology 1994-1996

Washington Hospital Center

Research and Education Director 1997-1999

Interventional Radiology

Washington Hospital Center

Section Co-Director 1989-94

Interventional Radiology

Washington Hospital Center

ACADEMIC
APPOINTMENTS

Associate Professor of Clinical Radiology 2005-2008
Georgetown University School of Medicine

Georgetown University 2005-2008
Fellowship Program Director

Clinical Associate Professor of 1993-2000
Radiology
Howard University Hospital
Washington, D. C.

Editorial Board, Journal of Vascular 1997 - 2004
and Interventional Radiology

I.R. Fellowship Founder, Director 1991-2008
Washington Hospital Center
Washington, D. C.

Reviewer: Journal of Vascular and 1990-2004
Interventional Radiology

Clinical Associate Professor 1993-1996
of Radiology
Uniformed Services University
of the Health Sciences
F. Edward Hebert School of Medicine
Bethesda, Maryland

Associate Professor of 1987-89
Cardiovascular Radiology
Cornell University Medical College
New York, New York

EDUCATION:

ANGIOGRAPHY & M. D. Anderson Hospital and 1986-87
INTERVENTIONAL Tumor Institute
FELLOWSHIP Houston, Texas

CT/ULTRASOUND Loyola University Medical Center 1985-86
FELLOWSHIP Maywood, Illinois

RESIDENCY Loyola University Medical Center 1982-85
Lenox Hill Hospital
New York University

INTERNSHIP	Stamford Hospital, Stamford, CT	1981-82
MEDICAL SCHOOL	Cornell University Medical College New York, NY	1977-81
UNIVERSITY	Syracuse University, Syracuse, NY	1972-76
MARITAL STATUS	Married to Denise Nahow Gray, Physical Therapist, August 27, 1988 Daughter: Alexis 28 years Son: Austin 21 years	
HOBBIES	Skiing, Hiking, Backpacking, Weight-training Bicycling Cub Scout Den Leader, Bucks County 2008-2013 Boy Scout Ass't Scoutmaster Bucks Cty 2013-2018	
CERTIFICATION	CAQ Interventional Radiology American Board of Radiology National Board of Medical Examiners	Nov, '97, Dec '07 June '86 July '82
LICENSURE	Pennsylvania New Jersey Virginia New York Connecticut Illinois (inactive)	
AWARDS	"Best Doctors in America" 2011,2013,2017, 2019 "Best Physicians for Women" in 2013 Philadelphia Life Magazine "Top Doctor" in Washingtonian Magazine 2005, 2008 Fellow, Society of Interventional Radiology 1998 Distinguished Reviewer Awards from JVIR: 1994,'95,'96,'97 Phi Beta Kappa Summa cum laude American Institute of Chemists Award: Top-ranked Graduating Chemistry Major	
PROFESSIONAL ORGANIZATIONS	Society of Interventional Radiology American College of Radiology	

PROFESSIONAL COMMITTEES	MACRA Clinical Subcommittee Hemodialysis Access Creation Peripheral Vascular Disease Management Acumen LLC	5/201- 2020
	Mid-Atlantic Renal Coalition	2003-2008
	National Leadership Group (NLG) National Vascular Access Improvement Initiative	2003
	Interventional Nephrology Task Force, SCVIR	2000-2001
	Hemodialysis Workshop Coordinator SCVIR annual meeting	1998-2001
	Standards of Practice Committee, SCVIR	1998
	President, V.P., Treasurer Chesapeake IR Society	1996-1998
	Chair, Dialysis Subcommittee of the Technology Assessment Committee, SCVIR	1994-1998
	Chair, Interventional Radiology Committee, ACR Local Chapter	1996
	Fellowship founder, Program Director Committee, SIR	1991-2008
HOSPITAL COMMITTEES	Clinical Improvement Committee	2003-2008
	Bylaws Committee	2002-2008
	Operations Committee Center for Vascular Care	2001-2008
	Coordinator, Interventional Radiology Quality Assurance Program	1990-2008
	Medical Director, PICC Committee	2001-2006

Program Committee, Center for Vascular Care Annual Symposium	2000-2006
Venous Thromboembolic Task Force	2001
Medlantic Institutional Review Board	1996 - 2000
Research Committee	1996 – 2001
Program Committee, Annual Symposium on Atherosclerosis	1994 - 1999
Co-Chair, Dialysis Access Symposium Program Committee	1995
Task Force: Critical Pathways for Lower Extremity Ischemia	1994, '95
LBA Health Care Management Task Force	1995
Vascular Access Task Force	1994

RESEARCH

Full-time employment as Research Chemist Assistant at Syracuse Research Corporation, Syracuse, New York 1976-77.

CONSULTANT (past and present)

Angiotech Pharmaceuticals
 Baxter
 Bard Peripheral Technologies
 Boston Scientific
 Centocor
 Genentech
 Gore DSMB for REVISE AVF Endoprosthesis Trial
 Microvena
 Omnisonics
 SherineMed

PUBLICATIONS

1. Raimann JG, Waldron L, Koh E, Miller GA, **Gray RJ**, Kotanko P. Meta-analysis and commentary: Preemptive correction of arteriovenous access stenosis. *Hemodialysis International*, Letter to Editor 2017.
2. **Gray RJ**, Altman SA, Vesely T, et al. ACR–SIR Practice Guideline for Endovascular Management of the Thrombosed or Dysfunctional Dialysis Access 2009.
3. **Gray RJ**, Varma J, Brown L, Cho S. Pilot Study of CryoPlasty with Use of PolarCath™ Peripheral Balloon Catheter System for Dialysis Access. *JVIR* 2008; 19: 1460-1466
4. **Gray RJ**. Cephalic Arch Stenosis: Angioplasty Techniques Are the First Line Therapy. *J Vasc Access* 2007; 8: 148-149.
5. **Gray RJ**. AV Shunt Angioplasty – Are Patency Results Good Enough? *J Vasc Access* 2006; 7: 175-176.
6. **Gray RJ**. Cephalic Arch Stenosis: Just Another Venous Lesion that Responds to Angioplasty. *J Vasc Access* 2006; 7: 170-171.
7. **Gray RJ**. Rupture Due To Intervention Can Be Salvaged With Prolonged PTA with/without Stenting. *J Vasc Access* 2006; 7: 175-176.
8. **Gray RJ**. Flow Measurements Should Be the Goal for Adequate Technical Success. *J Vasc Access* 2006; 7: 187-190.
9. **Gray RJ**. “1997 DOQI: Five Things It Got Right” *J Vasc Access* 2005; 6: 149.
10. Sidawy AN, **Gray RJ**, Besarab A, et al. Recommended standards for reports dealing with arteriovenous hemodialysis accesses. *J Vasc Surg* 2002; 35:603-610.
11. Trerotola SO, **Gray RJ**, Sacks D, Martin LG. Commentary: Society of Vascular Surgery arteriovenous access reporting standards. *JVIR* 2002; 13:227-228.
12. *Interventional Care of the Hemodialysis Patient: It’s About Quality*. Trerotola SO, **Gray R**, Brunner M, Altman S. *JVIR* 2001; 12: 1253-1255.

13. Patel N, Sacks D, Patel R, Moresco KP, Ouriel K, **Gray RJ**, et al. SCVIR reporting standards for the treatment of acute limb ischemia with use of transluminal removal of arterial thrombus. *JVIR* 2001; 12:559-570.
14. **Gray RJ**, Levitan A, Buck D, Brown LC, Sparling Y, Fessahaye A, Gupta A. Percutaneous Fibrin Sheath Stripping Versus Urokinase Infusion for Malfunctioning Well-Positioned Central Venous Dialysis: A Prospective Randomized Trial. *JVIR* 2000; 11:1121-1129.
15. **Gray RJ**. Angioplasty and Stents for Peripheral and Central Venous Lesions. *Techniques in Vascular and Interventional Radiology* 1999; 2:189-198
16. **Gray RJ**, Sacks D, Trerotola S, et al. Reporting Standards for Percutaneous Interventions in Dialysis Access. *JVIR* 1999; 10:1405-1415
17. Aruny JE, Lewis CA, Cardella JF, Cole PE, Davis A, Drooz AT, Grassi CJ, **Gray RJ**, et al. Quality improvement guidelines for percutaneous management of the thrombosed or dysfunctional dialysis access. *JVIR* 1999; 10: 491-498.
18. Smith BM, **Gray RJ**, Laird JR, Kohlman-Trigoboff D, DeForty D, Stanford JL. Management of the femoral artery after transluminal repair of abdominal aortic aneurysms. *Vascular Surgery* 1999; 33: 589-593.
19. Rundback JH, **Gray RJ**, Sugarbaker P. Intraperitoneal Chemotherapy for Treatment of Peritoneal Surface Malignancy. *Seminars in Interventional Radiology* 1998; 15: 407-414.
20. **Gray RJ**. The Role of Stent Deployment for Central and Peripheral Venous Stenosis in Hemodialysis Access. *Seminars in Dialysis* 1998; 11(6): 365-373.
16. **Gray RJ**. The Role of Atherectomy in Failing Dialysis Access. *Seminars in Dialysis* 1998; 11(6): 360-364.
17. **Gray RJ**. Regarding "Prospective randomized comparison of surgical versus endovascular management of thrombosed dialysis access grafts" *J Vasc Surg* 1998;27:392-93 (letter).
18. **Gray RJ**, Trerotola SO. Commentary on "Quality Improvement Guidelines for percutaneous management of thrombosed or dysfunctional dialysis access." *Abstracts of Clinical Care Guidelines, A Joint Commission Newsletter.* 1998;10(7):12-13.
19. Rundback JH, **Gray RJ**, Rozenblit G, et al. Renal Artery Stent Placement for the Management of Ischemic Nephropathy. *JVIR*, 1998; 9:413-420.

20. **Gray RJ.** Percutaneous Intervention for Permanent Hemodialysis Access - A Review. *JVIR.* 1997; 8:313-327.
21. Jelinek JS, Kransdorf MJ, **Gray RJ**, Aboulafia AJ, Malawer MM. Percutaneous Transpedicular Biopsy of Vertebral Body Lesions. *SPINE*, 1996;21:2035-2040.
22. **Gray RJ.** Notice of Duplicate Publication. *JVIR* 1995;6:657 (letter)
23. **Gray RJ**, Horton K, Dolmatch B., et al. Use of Wallstents for hemodialysis access-related venous stenoses and occlusions untreatable with balloon angioplasty. *Radiology* 1995;195(2):479-484.
24. Dolmatch B, **Gray RJ**, Horton K, Rundback J. Directional atherectomy in stenotic peripheral artery bypass grafts. *JVIR* 1995;6:105-113.
25. Dolmatch B, Cooper B, Chang P, **Gray RJ**, Horton K. Percutaneous Hepatic Venous Reanastomosis in a Patient with Budd-Chiari Syndrome. *CVIR* 1995;18:46-49.
26. **Gray RJ**, Rundback J, Horton K, Dolmatch B. Ergonomic vascular access needle with blood containment capability. *JVIR* 1995;6:115-118.
27. Dolmatch B, **Gray RJ**, Horton K. "Will iatrogenic pulmonary embolization be our pulmonary embarrassment?", *Radiology* 1994;191:615-617. (editorial)
28. **Gray RJ**, Billingham M, Dolmatch B, Horton K. Early results of Pullback atherectomy treatment for hemodialysis access: A Phase I trial. *JVIR*, 1994;5:581-586.
29. **Gray RJ**, Dolmatch B, Horton K, et al. Migration of Palmaz stents following deployment for hemodialysis access. *JVIR* 1994;5:117-120.
30. Rundback J, **Gray RJ**, Buck D, et al. Fluoroscopically guided peritoneal catheter placement for intraperitoneal chemotherapy. *JVIR* 1994;5:161-165.
31. Steves M, Vidal-Jove J, Sugarbaker P, **Gray RJ**, et al. Pre-operative radiological evaluation of the liver by computed tomographic portography in patients with hepatic tumors. *The American Surgeon* 1992;58:608-612.
32. **Gray RJ**, Dolmatch B, Buick M. Early results of directional atherectomy treatment for hemodialysis access. *JVIR*, 1992;3:497-503.
33. **Gray RJ**, Intriere L, Dolmatch B. Combined retrograde - antegrade ureteral stent passage: salvage procedure for a ureteral leak. *JVIR* 1992;3:557-8.

34. Hammer D, Schwab L, **Gray RJ**. Massive hemoptysis from thoracic actinomycosis successfully treated by embolization. CHEST, 1992;101:1442-3.
35. **Gray RJ**, Yedlicka J, Cormier M, Moncada R. Catamenial pneumothorax: case report and literature review. Journal of Thoracic Imaging, 1987;2:2.
36. Yedlicka J, **Gray RJ**, Cormier M, Moncada R. CT of superior vena cava obstruction. Journal of Thoracic Imaging, 1987;2:2.
37. Banerjee S, Sikka HC, **Gray RJ**, et al. Photodegradation of 3,3'-Dichlorobenzidine. Environmental Science and Technology, 1978;12:1425-7.

SCIENTIFIC PAPER PRESENTATIONS

1. **Gray, RJ**, Chaudhuri S, Han H, McLaughlin N, Miller G, Sor M. Chest port placement in freestanding outpatient vascular access centers. Presented ASDIN 2024.
2. Azar E, **Gray RJ**, Richard HM. Change in dialysis catheter tip position with changes in body position. WHC poster, May 2003.
3. Otitoju F, **Gray RJ**, Buck DR, et al. Superselective embolization for Gastrointestinal Bleeding. Presented SIR, 2003
4. Otitoju F, **Gray RJ**, Buck DR, Horton KM. Superselective embolization for Gastrointestinal Bleeding. WHC poster, May 2002
5. Budd-Chiarre Syndrome WHC poster, May 2002
6. Haskal ZJ, Schumann E, McClennan G, Vesely T, Berman S, **Gray RJ**. Multicenter Phase I Results of a PTFE Stent Graft for Hemodialysis Graft Anastomotic Stenoses. SCVIR, 2002
7. Vesely TM, Palestrant AM, Schubert P, **Gray RJ**. Use of the aSpire™ covered stent for the treatment of hemodialysis graft related stenoses. JVIR 2002; 13: S38-39. presented SCVIR.
8. Khan A, **Gray RJ**, Buck D, et al. Tibial Angioplasty: A 7-Year Experience. Poster, SCVIR 2000.
9. **Gray RJ**, Trerotola S, Fueredi G. Wallstent Hemodialysis Central Venous Trial. JVIR 1999;10(2): 227. Featured abstract SCVIR, 1999
10. Smith BM, **Gray RJ**, Laird JR, Kohlman-Trigoboff D, DeForty D, Stanford JL. Management of the femoral artery after transluminal repair of abdominal aortic

aneurysms. Society for Clinical Vascular Surgery '99 .

11. **Gray RJ**, Gupta A, Fessahaye A, et al. Percutaneous fibrin sheath stripping versus Urokinase for malfunctioning central dialysis catheters. *JVIR* 1998;9(1):S164. Presented SCVIR.
12. **Gray RJ**, Horton K, Dolmatch B, et al. Wallstents for Hemodialysis Access. RSNA '94.
13. **Gray RJ**, Horton K, Dolmatch B, Rundback J, Aquino A. Results of Wallstenting for the Failing Hemodialysis Access. Symposium on Dialysis Access IV, 5/94.
14. Jelinek J, Kransdorf M, **Gray RJ**, Aboulafia A, Malawer M. Transpedicular Biopsy of Vertebral Body Lesions. ARRS Annual Meeting, 1994.
15. **Gray RJ**, Rundback J, Horton K, Dolmatch B. Ergonomic vascular access needle - results of a Phase I clinical trial. *JVIR* 1994;5:39 (abstr.). Presented SCVIR.
16. **Gray RJ**, Dolmatch B, Horton K. Early results of pullback Atherectomy treatment for hemodialysis access: A Phase I trial. *JVIR* 1994;5:50 (abstr.). Presented SCVIR.
17. Rundback J, **Gray RJ**, Buck D, et al. Fluoroscopically guided peritoneal catheter placement for intraperitoneal chemotherapy. *JVIR* 1993;4:19-20 (abstr.). Presented SCVIR.
18. **Gray RJ**, Horton K, Dolmatch B. Wallstents for hemodialysis access. *JVIR* 1993;4:57 (abstr.) Presented SCVIR.
19. **Gray RJ**, Dolmatch B, Horton K. Early results of endoluminal stenting for hemodialysis access. *Radiology* 1992;185(P):134 (abstr.) Presented RSNA.
20. **Gray RJ**, Dolmatch B. Early results of atherectomy treatment for hemodialysis access. *JVIR* 1991;2:44 (abstr.) Presented SCVIR.
21. Barnhill M, Malawer M, Priebat D, **Gray RJ**, et al. Surgical impact of a short course of induction intra-arterial Cisplatin and intravenous infusion Adriamycin for unresectable high-grade soft-tissue sarcomas of the extremities. Presented ASCO, 1992.
22. Dolmatch B, **Gray RJ**. Directional atherectomy for treatment of stenotic lower extremity bypass grafts: initial results and follow-up. *JVIR* 1992;3:38. Presented SCVIR.

23. **Gray RJ**, Carrasco H, Wallace S. Intra-arterial chemotherapy for pelvic osteosarcomas. *Radiology* 1987;165(P):64 (abstr.) Presented RSNA.

BOOKS, BOOK CHAPTERS

1. **Gray, RJ**. Sands J. Henry M. Editor Dialysis Access: A Multidisciplinary Approach. Lippincott, Williams and Wilkins, in preparation for 2008.
2. **Gray, RJ**. Sands J. Editor Dialysis Access: A Multidisciplinary Approach. Lippincott, Williams and Wilkins, 2002.
3. **Gray RJ**. Central Vein Lesions: Diagnosis and Management. In: Dialysis Access: A Multidisciplinary Approach. Ed. Gray, RJ, Lippincott, Williams and Wilkins, 2002; 184-196.
4. **Gray RJ**. Management of Catheter Malfunction. In: Dialysis Access: A Multidisciplinary Approach. Ed. Gray, RJ, Lippincott, Williams and Wilkins, 2002; 290-299.
5. Vorwerk D, **Gray RJ**, Crain MR. Endoluminal Grafts. In: Dialysis Access: A Multidisciplinary Approach. Ed. Gray, RJ, Lippincott, Williams and Wilkins, 2002; 363-370.
6. Waksman R, **Gray RJ**. Vascular Brachytherapy. In: Dialysis Access: A Multidisciplinary Approach. Ed. Gray, RJ, Lippincott, Williams and Wilkins, 2002; 371-380.
7. **Gray RJ**, Levitan A, Buck D, Brown LC, Sparling Y, Fessahaye A, Gupta A. Percutaneous Fibrin Sheath Stripping Versus Urokinase Infusion for Well-Positioned Central Venous Dialysis Catheters That Malfunction: A Prospective Randomized Trial. In: Henry ML, Ferguson RM. Vascular Access for Hemodialysis VI: Precept Press, W. L. Gore and Associates. 2001.
8. **Gray RJ**. Radiologic Interventions of the Failing Graft. In: Henry ML, Ferguson RM. Vascular Access for Hemodialysis VI: Precept Press, W.L. Gore and Associates. 1999;21-28.
9. **Gray RJ**. Endovascular Stenting in Hemodialysis Access. In: Henry ML, Ferguson RM. Vascular Access for Hemodialysis V: Precept Press, W. L. Gore and Associates. 1997;218-223.

10. **Gray RJ.** Central Venous Stenosis in Hemodialysis Patients. SCVIR Syllabus: Venous Interventions. Society of Cardiovascular and Interventional Radiology. 1995;123-135.
11. **Gray RJ,** Horton K, Dolmatch B. Wallstents for the Failing Hemodialysis Access. In: Henry ML, Ferguson RM. Vascular Access for Hemodialysis IV: Precept Press, WL Gore and Associates. 1995;231-248.
12. Dolmatch B, **Gray RJ,** Horton K, Rundback J. Diagnostic Imaging in the Evaluation of Aortic Disease. In: Lindsay J, Diseases of the Aorta. Philadelphia: Lea and Febiger. 1994;197-250.
13. Dolmatch B, Horton K, **Gray RJ,** Rundback J. Imaging Studies Used for Aortic Evaluation. In: Lindsay J., Diseases of the Aorta. Philadelphia: Lea and Febiger. 1994;179-195.
14. Dolmatch B, Rundback J, Horton K, **Gray RJ.** Percutaneous Treatment of Aortic Disease. In: Lindsay J., Diseases of the Aorta. Philadelphia: Lea and Febiger. 1994;299-306.

INVITED LECTURES

1. “Interesting Dialysis Cases” Azura Vascular Care Annual Physician Meeting, Virtual meeting, 11/23
2. “Interesting Dialysis Cases” Fresenius Vascular Care Annual Physician Meeting, Hollywood FL, 10/16
3. “Clinically Timed Evaluations Overview” Fresenius Vascular Care Annual Physician Meeting, Orlando, FL, 10/15
4. “What is New in the Field of Dialysis Management?” Advanced Interventional Management, Montefiore Medical Center, NY, NY. 11/14
5. “Hot Topics in Dialysis Access” Fresenius Vascular Care Annual Physician Meeting, Chicago, IL 11/14
6. “Hot Topics in Dialysis Access” “Should We be Checking Labs? Regulations?” Fresenius Vascular Care Annual Physician Meeting, Philadelphia, PA 10/13
7. “Uterine Fibroid Embolization” Chestnut Hill Hospital Family Practice Grand Rounds 6/11
8. “Percutaneous Management of Central Venous Stenoses” “Advanced Interventional Management, Montefiore Medical Center, NY, NY 11/10

9. Catheter Related Central Venous Stenosis” Advanced Interventional Management, Montefiore Medical Center, NY, NY 11/09
10. “Picture Archiving and Communication Systems” American Society of Diagnostic and Interventional Nephrology, 2/09
11. “Cephalic Arch Stenosis: Angioplasty Techniques Are the First Line Therapy” Controversies in Dialysis Access, UT Southwestern Medical Center, 10/07
12. “AV Shunt Angioplasty – Are Patency Results Good Enough?” Controversies in Dialysis Access, UT Southwestern Medical Center, 10/07
13. “Endovascular Interventions for Dialysis Access: Increasing AVF Prevalence” Advances in Cardiovascular Radiation Therapy IV. Washington, D.C., 3/07
14. “Cephalic arch stenoses are just another venous stenosis that responds to angioplasty” Controversies in Dialysis Access, UT Southwestern Medical Center, 11/06
15. “Rupture due to intervention can be salvaged with prolonged PTA with/without stenting” Controversies in Dialysis Access, UT Southwestern Medical Center, 11/06
16. “Flow measurements should be the goal for adequate technical success following AV graft angioplasty” Controversies in Dialysis Access, UT Southwestern Medical Center, 11/06
17. “Retrievable IVC Filters” Baltimore Interventional Radiology Technologist Chapter of AVIR 10/06
18. “Increasing AVF Prevalence: Role of the Interventionalist” Mid-Atlantic Renal Coalition, Washington, DC
19. “Timing and Placement of Catheters to Reduce Long-term Sequella” Advances in Cardiovascular Radiation Therapy IV. Washington, D.C., 4/06
20. “1997 DOQI: Five Things It Got Right” Controversies in Dialysis Access, UT Southwestern Medical Center, 12/05
21. “Society of Interventional Radiology: Dialysis Access” Controversies in Dialysis Access, UT Southwestern Medical Center, 12/05
22. “Hemodialysis Interventions” Scientific Session moderator. SIR Annual Meeting 2005

23. "Complex Dialysis Access Interventions" Advances in Cardiovascular Radiation Therapy VIII. Washington, D.C., 2/05
24. Lessons Learned: "Impossible Access" Moderator, Categorical Course SIR Annual Meeting 3/04
25. "Management of Central Venous Lesions in Dialysis Patients " Advanced Interventional Management, Montefiore Medical Center, NY, NY 11/03
26. "Central Catheters Workshop" Advanced Interventional Management, Montefiore Medical Center, NY, NY 11/03
27. Lessons Learned: Complex Central Venous Access" Moderator, Categorical Course SIR Annual Meeting 3/03
28. "Superficial Venous Insufficiency" Baltimore Interventional Radiology Technologist Chapter of AVIR. 10/03
29. "Beyond Angioplasty: Stents, Covered Stents, Brachytherapy" Dialysis Access Categorical Course, SCVIR Annual Meeting 4/02
30. "Beyond Angioplasty: Stents, Covered Stents, Brachytherapy" Dialysis Access Symposium, SCVIR Annual Meeting 3/01
31. "A-V Graft Stenosis", Advances in Cardiovascular Radiation Therapy IV. Washington, D.C., 2/01
32. "Dialysis Angioplasty and Stents: Scientific Session Moderator" SCVIR 3/01
33. "Lessons Learned: Hemodialysis" Categorical Course SCVIR 3/01
34. "Dialysis Angioplasty and Stents: Moderator" SCVIR 3/00
35. "Dialysis Access Intervention", SCVIR Workshop, San Jose, CA. 3/00
36. "Mechanical Thrombectomy", SCVIR Workshop, San Jose, CA. 3/00.
37. "Treatment of Dialysis-Related Stenoses: Stents, Covered Stents and Beyond" Venous and Hemodialysis Access Symposium at Keystone, CO Indiana University 2/00

38. "A-V Graft Stenosis", Advances in Cardiovascular Radiation Therapy IV. Washington, D.C., 2/00
39. "Stents for Central and Peripheral Hemodialysis Related Stenoses", Pittsburgh Interventional Society, 2/00
40. "Stents for Central and Peripheral Hemodialysis Related Stenoses", Toledo Interventional Society, 1/00
41. "Central Venous Stenosis: To Stent or Not to Stent", Current Issues and New Techniques in Interventional Radiology IV. Montefiore Medical Center, New York, NY 11/00
42. Endovascular Stents for Abdominal Aortic Aneurysms", New Minimally Invasive Approaches to Vascular Disease Symposium, Harbor Hospital, Baltimore MD 5/99
43. "The Nephrologist's Best Friend", Federal Nephrology Association, Bethesda, MD 5/99
44. "Dialysis Access Intervention", SCVIR Workshop, Orlando, FL. 3/99
45. "Mechanical Thrombectomy", SCVIR Workshop, Orlando, FL. 3/99.
46. "Stents for Central and Peripheral Hemodialysis Related Stenoses", Venous and Hemodialysis Access Symposium at Keystone, CO Indiana University 2/99.
47. "A-V Graft Stenosis", Advances in Cardiovascular Radiation Therapy III. Washington, D.C., 2/99
48. "Stents for Dialysis Access Venous Stenoses", internet webcast sponsored by Boston Scientific, 1/99.
<http://webevents.broadcast.com/bostonscientific/vascularsym>
49. "Management of the Poorly Functioning Central Venous Access", Current Issues and New Techniques in Interventional Radiology IV. Montefiore Medical Center, New York, NY 11/98
50. "Radiologic Interventions in Dialysis Grafts", Symposium on Dialysis VI. Ohio State University. Miami, Florida 5/98.
51. "Dialysis Access - Scope of the Problem", Advances in Cardiovascular Radiation Therapy II. Washington, D.C., 3/98

52. "Dialysis Access Intervention", SCVIR Workshop, San Francisco, CA. 3/98
53. "Mechanical Thrombectomy", SCVIR Workshop, San Francisco, CA. 3/98.
54. "Prevention and Management of Central Venous Stenosis", Venous and Hemodialysis Access Symposium at Keystone, CO Indiana University 2/98.
45. "Thrombolysis for Peripheral Vascular Disease", Cardiovascular Training and Education Center. Washington, D.C., 10/97.
46. "New Concepts in Angiography", Cardiovascular Training and Education Center. Washington, D.C., 10/97.
47. "Percutaneous Management of Dialysis Access Grafts", Cardiovascular Training and Education Center. Washington, D.C., 10/97.
48. "Mechanical Thrombectomy for Peripheral Arterial Applications: Devices and Results", Transcatheter Cardiovascular Therapeutics, Washington, D.C., 9/97.
49. "Percutaneous Intervention for Hemodialysis Access", Richmond Angiography Society. 5/97.
50. "Renovascular Hypertension", Symposium on Atherosclerosis. Washington, D.C., 5/97.
51. "Dialysis Access Intervention", SCVIR Workshop 3/97.
52. "Prevention and Management of Central Venous Stenosis", Venous and Hemodialysis Access Symposium at Keystone, CO Indiana University 2/97.
53. "Venous Angioplasty and Stenting for Hemodialysis Access", First Northeastern Conference on Vascular Access for Hemodialysis, SUNY at Brooklyn/Columbia Presbyterian Medical Center, New York, New York, 10/96.
54. "Endovascular Stenting in Hemodialysis Access", Symposium on Dialysis Access V. Ohio State University, Tucson, Arizona, 5/96.
55. "Dialysis Access Intervention", SCVIR Workshop. 3/96.
56. "Lower Extremity Ischemia" (panel discussion), Symposium on Atherosclerosis. Washington, D.C., 5/96.

57. "Percutaneous Intervention for Hemodialysis Access", Walter Reed Hospital, 11/95.
58. "Endovascular Grafts", Symposium on Atherosclerosis. Washington, D.C., 5/95.
59. "Percutaneous Intervention in Hemodialysis Access", Dialysis Access Symposium. Washington, D. C., 4/95.
60. SCVIR Workshop - "Dialysis Access Intervention", Fort Lauderdale, Florida, 3/95.
61. "Arterial and Venous Lower Extremity Duplex", Vascular Lab Practicum. Washington, DC, 10/94.
62. "New Concepts in Angiography", Symposium on Atherosclerosis. Washington, D.C., 5/94.
63. "Dialysis Access - An Interventional Radiologist's Perspective", Vascular Symposium. Muhlenberg Center for Circulatory Disease, Bethlehem, Pennsylvania, 1/94.
64. "Catheter-Directed Lysis for Venous Thrombosis", Thrombolysis Symposium. Washington, D.C., 4/93.
65. "Percutaneous Intervention for Hemodialysis Access", Thrombolysis Symposium, Washington, D.C., 4/93.
66. "Atherectomy for hard to treat lesions", Dialysis Access Salvage Symposium, Methodist Hospital, Indianapolis, Indiana, 5/92.
67. "Percutaneous Intervention in Hemodialysis Access", Medical Society of the District of Columbia, 12/91.
68. "Balloon Angioplasty - Need for Alternative Treatment", Atherectomy Symposium, Washington, D.C., 4/91.
69. "Directional Atherectomy and Hemodialysis Access", Atherectomy Symposium, Washington, D.C., 4/91.
70. "Angiographic Diagnosis and Management of Pelvic Trauma", Metropolitan Washington Chapter of the American College of Surgeons Annual Meeting, 3/91.
71. "Percutaneous Intervention in Hemodialysis Access", Transplant Department Services Annual Dinner Conference, Washington, D.C., 3/90.

CLINICAL PROTOCOLS - PRINCIPLE INVESTIGATOR

1. Alteplase Infusion for Dialysis Catheter Malfunction (Genentech, Inc unrestricted Grant, IND # BB 10995)
2. Cryoplasty for Hemodialysis Access Related Stenoses (Cryovascular, Inc unrestricted grant)
3. Smartstent versus Wallstent for Dialysis-Related Central Vein Stenoses (BSCI, unrestricted grant)
4. Wallgraft versus Wallstent/PTA for complex iliac stenosis and occlusion (BSCI). Completed.
5. ASPIRE Covered Stent for Hemodialysis (Vascular Architects). Completed.
6. Covered Stent for Hemodialysis Access (Impra) Completed.
7. Biolink Dual Lumen Port for Hemodialysis (Biolink)
8. Cordis 6F Hydrolyzer Thrombectomy Catheter Study. Phase III. (Johnson & Johnson). Completed.
9. Cordis 7F Hydrolyzer Thrombectomy Catheter Study - Phase II. (Johnson & Johnson). Completed.
10. Aneurix Abdominal Aortic Aneurysm Endovascular Prosthesis - Phase II (Co-Primary Investigator, Medtronic). Completed.
11. Wallstent venous endoprosthesis vs. Balloon angioplasty for hemodialysis access related peripheral venous stenoses/occlusions - Phase II. (Schneider, Inc.). Completed.
12. Wallstent venous endoprosthesis for hemodialysis access related central venous stenoses/occlusions - Phase II. (Schneider, Inc.). Completed.
13. Percutaneous fibrin sheath stripping vs. Thrombolytic infusion for functional restoration of occluded central venous dialysis catheters. (Abbott). Completed.
14. Side branch cannulation of the thoracoacromial or inferior epigastric artery for intra-arterial chemotherapy through an implanted port. (Not funded)

15. MR Angiography for Critical Ischemia - Randomized Trial with DSA Angiography. (Medlantic Research Foundation)
16. Palmaz Femoro-Popliteal Stent Trial - Phase II. (Johnson and Johnson) Study terminated by Vendor.
17. Amplatz Thrombectomy Device for Vessel Occlusions. (Microvena) A Phase II Trial. Completed
18. Ergonomic Vascular Access Needle (Arrow, Inc.) - A Phase I Trial. Published.
19. Pull Back Atherectomy Catheter for Hemodialysis Access (Arrow, Inc.) - A Phase I Trial. Published.
20. Pull Back Atherectomy Catheter in Peripheral Arteries (Arrow, Inc.) - A Phase II Trial. Completed.
21. Metallic Stents for Hemodialysis Access. (Not funded) Published
22. Directional Atherectomy for Hemodialysis Access. (Devices for Vascular Intervention) Published

CLINICAL PROTOCOLS - CO-INVESTIGATOR

1. RELAX (Centocor) Cordis Randomized Iliac Stent Project (CRISP-US).
2. Hemobahn Endovascular Prosthesis vs PTA for SFA obstructive disease.
3. High Dose Rate Brachytherapy Radiation for Prevention of Restenosis Following Angioplasty of Femoropopliteal Arteries. A Prospective Double-blind, Randomized Multicenter Study.
4. Carotid Stent Supported Angioplasty (CSSA) - Phase II Registry. (Johnson and Johnson)
5. A Randomized Study to Evaluate the Safety and Efficacy of Renal Artery Stenting Compared to Balloon Angioplasty Alone. (Johnson and Johnson)
6. Transjugular Intrahepatic Portosystemic Shunts. (Not funded)
7. Recombinant Urokinase versus Operative Intervention as Initial Therapy for Acute Lower Limb Arterial Disease. (Abbott) Completed.

8. Palmaz Renal Artery Stent Trials - Phase II. Completed. (Johnson and Johnson)
- 9 Wallstent Prosthesis Phase II Trial - Stenting of subtotally occluded iliac and femoral arteries. (Schneider, Inc.) Published.
10. Assessment of the Wallstent in Treating Tracheobronchial Strictures (Schneider, Inc.) Completed.
11. Multi-Center Study of Recombinant Human Urokinase in Lower Extremity Arterial Thrombosis and Embolism. (Abbott) Completed.
- 12 Intravascular Ultrasound and Acute Arterial Trauma. (CVIS) Completed.
13. Intravascular Ultrasound Evaluation of Tumor Vascular Invasion. (CVIS) Completed.
15. Balloon Expandable Intraluminal Stent for Subtotally Occluded Iliac Arteries (Johnson and Johnson). Phase II. Published.

AMERICAN ACCESS CARE PRESENTATIONS

1. Uterine Fibroid Embolization” Philadelphia Area Churches Community Health event 3/11
2. “Endovascular Care” American Access Care of Pennsylvania Diversified Grand Opening. 4/10
3. “Increasing AVF Prevalence” American Access Care of Pennsylvania ESRD Grand Opening. 3/10

WASHINGTON HOSPITAL CENTER PRESENTATIONS

4. “Venous Insufficiency” Calvert Memorial Hospital 4/07
5. “Venous Insufficiency” Center for Vascular Care 3/06
6. “Upper Extremity Deep Venous Thrombosis” Medical Oncology Research Meeting 12/03
7. “Management of Dialysis Access” Center for Vascular Care 10/03

8. "Arteriographic Anatomy" Center for Vascular Care 3/03
9. "Budd-Chiari" Center for Vascular Care 2/03
10. "Contrast Nephropathy" Center for Vascular Care 1/03
11. "Central Vein Lesions: Diagnosis and Management" Surgery Grand Rounds. 5/02
12. "Thrombolysis is the Treatment of Choice for Deep Vein Thrombosis; Debate" Center for Vascular Care Annual Meeting. 5/02
13. "Dialysis Outcomes Quality Initiative" Center for Vascular Care 3/02
14. "Renal Embolization" Center for Vascular Care. 3/02
15. "Contrast Nephropathy" Center for Vascular Care. 9/01
16. "Gastrointestinal Bleeding - Angiographic Diagnosis and Management" Gastroenterology Grand Rounds, 5/01
17. "Endovascular Grafts Are the Treatment of Choice for AAA; Debate" Center for Vascular Care, Washington, D.C. 5/01
18. "Gastrointestinal Bleeding - Angiographic Diagnosis and Management" Washington Hospital Center, Snowmass, CO 2/01
19. "Radiologic Management for the Malfunctioning Dialysis Catheter." Controversies in Medicine. Washington Hospital Center, Snowmass, CO 2/01
20. "Endovascular Grafts Are the Treatment of Choice for AAA; Debate" Center for Vascular Care, Washington, D.C. 5/00
21. "Risk Reduction for Catheter Angiography" Center for Vascular Care, Washington, D.C. 5/00
22. "Radiologic Interventions for Dialysis Access" Controversies in Medicine. Washington Hospital Center, Telluride, CO 2/00
23. "Endovascular Grafts for Abdominal Aortic Aneurysms", Cardiovascular Training and Education Center. Washington, D.C., 2/99.
24. "Endovascular Grafts for Abdominal Aortic Aneurysms", Controversies in Medicine. Washington Hospital Center, Courcheval, France 2/99

25. "Endovascular Grafts for Abdominal Aortic Aneurysm", Surgery Grand Rounds, 7/97
26. "Percutaneous Intervention for Hemodialysis", Nephrology Medical Staff, 12/96.
27. "Interventional Radiology in Thromboembolic Disease", Medicine CPC, 9/96
28. "Dialysis Access Intervention", Nephrology Grand Rounds, 7/96.
29. "Interventional Radiology in Acute Trauma", 1/95, 4/95, 8/95, 4/96.
30. "Vascular Interventional Radiology Update -1995", Vascular Surgery Grand Rounds, 7/95.
31. "Renovascular Hypertension", Medical Grand Rounds, 5/95.
32. "Transjugular Intrahepatic Portosystemic Shunts (TIPS)", Combined Medicine-Surgery Gastrointestinal Conference, 8/94.
33. "Renovascular Hypertension", Nephrology Grand Rounds, 6/94.
34. "Embolization for Renal Cell Carcinoma", Urology-Oncology Conference. 3/94, 3/96.
35. "Percutaneous Management for Hemodialysis Access", Thrombolysis for Phlebothrombosis." Renal Grand Rounds, 6/93.
36. "Interventional Radiology in the Cancer Patient", Department of Surgery Grand Rounds, 6/93.
37. "Transjugular Intrahepatic Portosystemic Shunts", Combined Medicine-Surgery Gastrointestinal Conference, 3/93.
38. "Renovascular Hypertension-Role of Balloon Angioplasty", ICU/CCU Annual Update. 7/92.
39. "Hemobilia", Combined Medicine-Surgery Gastrointestinal Conference. 4/92.
40. "Percutaneous Intervention in Hemodialysis Access", Transplant Grand Rounds. 5/94, 3/92, 11/89.
41. "Devices for Peripheral Vascular Intervention", ICU/CCU Annual Update. 9/91.
42. "Gastrointestinal Bleeding - Angiographic Diagnosis and Management", Medical Grand Rounds. 7/90, 10/89.

43. "Renal Angioplasty", Chairman's Rounds. 5/90.
44. "Percutaneous Transplant Renal Artery Angioplasty", Transplant Grand Rounds. 5/89.