



Vascular Surgery Residency at the University of Wisconsin

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Associate Professor of Surgery

Program Director, Vascular Surgery

Division of Vascular Surgery

University of Wisconsin, Madison



Departmental Leadership



Rebecca M. Minter, MD
A.R. Curreri Distinguished Professor
Chair, Department of Surgery



John E. Rectenwald, MD
Susan Behrens MD (Class of 1975)
Surgery Education Chair
Vice Chair of Education
Interim Chair, Division of Vascular Surgery



Girma Tefera, MD
Professor, Division of Vascular Surgery
Vice Chair of Global Surgery

Program Leadership



Paul D. DiMusto, MD
Associate Professor
Program Director, Vascular Residency
& Fellowship



Kyla M. Bennett, MD
Associate Professor
Associate Program Director, Vascular
Residency & Fellowship

Vascular Training Programs

- Fellowship started in 1999; Integrated residency established with ACGME approval in 2009.
- *Designed to produce surgeons who can provide comprehensive care to the vascular patient and be expected to fully participate in the rapid expansion of the field of vascular surgery, both clinically and academically.*

Our Mission...

- To train the **future leaders** in Vascular Surgery
 - Compassionate physicians
 - Technical excellence
 - Mature judgement
 - Leadership skills
 - Research experience



What's Special about Vascular Training at Wisconsin?

- Breadth of advanced clinical experience
- Depth of faculty experience across fields
- Diversity of training backgrounds of the faculty
- Commitment to resident education
 - Progressive educational opportunities
- Commitment to resident research and academic development
- Commitment to development of leadership skills
- 50/50 Complex open/endovascular case mix



Global Vascular Surgery: Addis Ababa, Ethiopia

- Began in 2018
- The first vascular residency in Africa (outside South Africa)
- Opportunity for PGY-4 Vascular resident to rotate for 1 month when UW faculty present.
- Board approval to count towards training.



Programs and Clinical Trials

- Limb Salvage Angioplasty Program
- Hemodialysis Access
 - Percutaneous AV Fistula
- Thoracic Outlet Syndrome
- Complex Thoracic Endograft Program
- Fenestrated EVAR Program
- BEST CLI Trial
- GORE® TAG® Thoracic Branch Endoprosthesis (TBE)
- GORE TAMBE Trial
- CREST 2 Trial; CEA vs CAS vs Medical Management

Vascular Surgery Residency - Sites

- Four integrated sites:
 - University Hospital
 - William S. Middleton VA Hospital (connected by corridor)
 - Meriter Hospital (10 minute drive)
 - Arbor Gate Vein Clinic (15 minute drive)
- Affiliated Rotation:
 - UW Health Northern Illinois - Swedish American Hospital in Rockford, IL
 - Private practice, community vascular surgery rotation

MAJOR CLINICAL FACILITIES

- UW Hospital - 505 beds
- Meriter Hospital - 450 beds
- Veterans Hospital - 90 beds
- American Family Children's Hospital - 87 beds
- East Madison Hospital - 56 beds



UW Health Main Campus



University Hospital



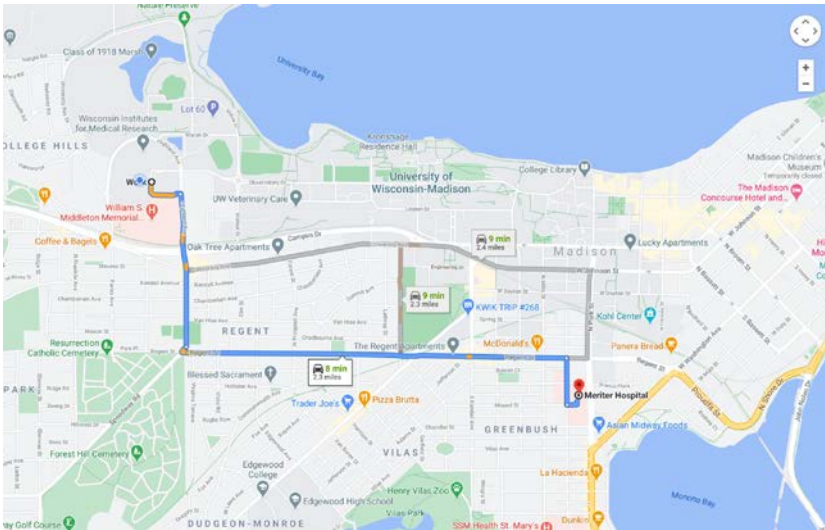
- Tertiary referral center
- Hybrid operating room
- Dedicated OR Team
- Cardiovascular Anesthesia
- Closed SICU
- Dedicated IMC/general care floor
- Vascular lab
- Any vascular operation can be done here
- Faculty are “on service” for the week
- Two APPs during the week, one on weekends

VA Hospital

- Hybrid Operating Room
- Weekly Clinic
- Vascular Lab
- Almost all vascular procedures done here
 - Complex aortic surgery done at the University
- Inpatient and outpatient APP support



Meriter Hospital



- Community hospital
 - JOA with UW
- Dedicated Vascular Service
 - Senior vascular trainee and general surgery PGY 3
 - APP support during the week
 - APP, general surgery, and vascular lab residents help cover weekends
- Peripheral endovascular, dialysis access, varicose vein, carotid endarterectomy
- Faculty “on service” for a week

UW Health Northern Illinois, SwedishAmerican Hospital



- 357 beds
- New ICU and moderate care tower
- New Women and Children's tower
- Level II Trauma Center
- 3 vascular surgeons and 2 APPs
- 75 miles from Madison
- Practice the spectrum of community vascular surgery
- Complex procedures referred to Madison

Rotations - Overview

- PGY 1 year – Clinical
 - 13 four-week rotations
 - 10 Core, 2 Vascular Surgery, 1 Cardiology
- PGY 2 year – Clinical
 - 22 weeks Core and 30 weeks Vascular
- Research Years 1 & 2 – Academic Development
 - Weekend Coverage
- PGY 3 year - Clinical
 - 12 weeks Core and 40 weeks Vascular
- PGY 4 and PGY 5 - Clinical
 - All vascular, all the time!
- 3 weeks of vacation each year

Core Rotations

- Core General Surgery:
 - Surgical Intensive Care 3 months
 - Trauma 3 months
 - Night Float 2 months
 - CT-ICU 1 month
 - General Surgery 7 months
 - Core Surgical subspecialties:
 - Plastic Surgery 1 month
 - Otolaryngology 1 month
- 18 months**

Core Surgery Training

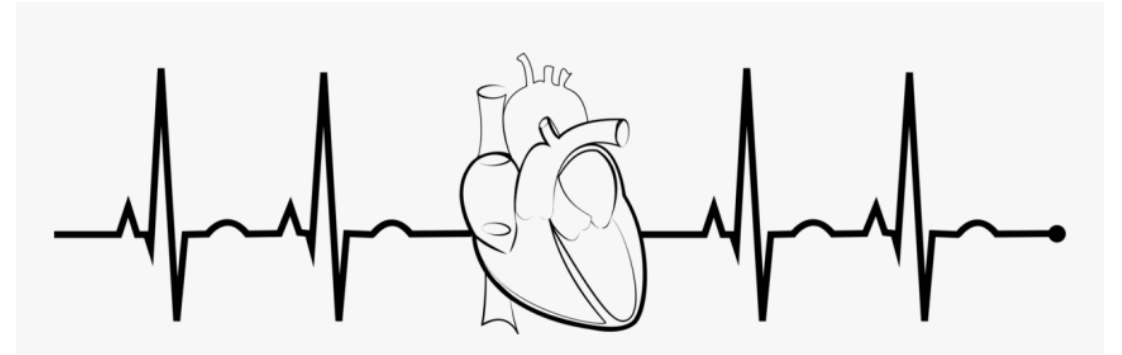
- Excellent working relationship with general surgery
 - You get same training as the general surgery residents
 - Simulation labs, Intern Surgical Olympics, central line training
- Specialized core surgery conferences
- Resident Evaluation by core faculty
- Call:
 - Intern year – night float system
 - ICU – in house call (typically q4)

Cardiology Rotation PGY1

A focused exposure to consultative cardiovascular medicine, echocardiography and nuclear myocardial perfusion imaging stress testing.

2 weeks with the UW Hospital Cardiology Consult Service, and spending 1 week each reading studies in the UW Hospital Echocardiography Laboratory and Nuclear Cardiology Laboratory.

Will function on each service in a role equivalent to a first year cardiovascular medicine fellow

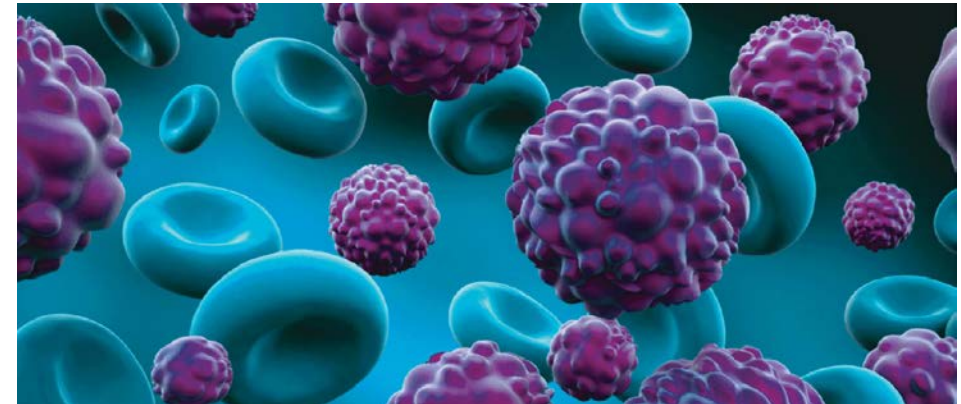


Junior Resident Vascular Rotations

- Junior vascular resident on the UW vascular team working with Gen Surg PGY 1 and Vascular PGY 4 & 5/fellows
- See consults, develop therapeutic plans, perform endovascular and open interventions and follow up the patients
- Gain experience in endovascular and open interventions
- Perform general vascular cases eg. CEA, femoral to popliteal bypass, CFA endarterectomy, EVAR, amputations and assist with complex open aortic reconstructions
- Participate in weekly VA clinics
- Dialysis Access Rotation PGY 2 year
- Vein Clinic Rotation PGY 3 year
- Call: Typically take 1 night of senior call from home during the week when on vascular surgery rotations with senior backup
- Work every other weekend with primary call (from home) Saturday night

Academic Development Time (2 years, between PGY 2/3)

- 2 years of Academic Development Time is required for the Vascular Surgery Residency
- Division of Vascular Surgery has funded faculty researchers!
 - NIH, AHA, PCORI, NPCRC, etc.
- Basic Science - AAA - Dr. Liu
- Outcomes - WiSOR
- Data and Data Analysis - Dr. Bennett
- AAA - Dr. Yamanouchi
- Global Surgery - Dr. Tefera
- Bioethics, Studies to change clinical practice - Dr. Schwarze



Venous Disease Rotation

- Arbor Gate Vein Clinic
- Office-based and hospital operating room-based interventions
- Minimally invasive techniques, and the postoperative care of patients with venous disorders
- Hands on venous imaging in the vascular lab
- Also participate in vein care during Meriter Hospital rotations



Senior Vascular Rotations

- **UW Vascular Service (12 months total)**

- 6 two-month blocks over the PGY 4 & 5 years
 - Senior residents work opposite the fellows (ACGME rule)
- Vascular PGY 2 or 3 also on service
- General Surgery PGY 1
- Inpatient APP support
- Artis Pheno Hybrid Operating Suite at UH
- Do the range of vascular surgery – particularly complex open, endovascular and hybrid procedures
- Night and weekend call q4 from home – shared with the other senior trainees
- Trauma team sees the ER consults at night and staffs them directly with the faculty

Senior Vascular Rotations

- **Meriter Rotation (6 months total*)**
- 3 two-month blocks as chief over the PGY 4 & 5 years
 - General surgery PGY3 and APPs
- Responsible for covering vascular cases at Meriter, particularly endovascular cases (mostly PAD)
- 1 month rotation with IR at UH
- Hemodialysis Access creation and endovascular procedures
- Vein care
- Open arterial cases
- Time for research, vascular lab work and additional vein care opportunities
- Ethiopia rotation would be during this time
- Share night and weekend call with the other senior residents (q4)
- Vascular Clinic at UW Health 1 S Park at least 1 day/wk

Senior Vascular Rotations

- **VA Rotation (6 months total)**
- 3 two-month blocks as chief over the PGY 4 & 5 years
 - APPs, occasional general surgery PGY1
- Responsible for running the service
 - Faculty rotate by the day
- Complete range of vascular surgery cases
- Run the outpatient clinic with faculty supervision (1 day/week)
- Share night and weekend call with the other senior residents (q4)

Vascular Call

- PGY 1 – Night float with GS residents (2 months)
- PGY 2&3
 - On core rotations
 - ICU, in-house every fourth night
 - On vascular rotations
 - Back-up call from home for in-house night-float intern one night a week
 - Every other weekend with Saturday night primary call from home
- PGY 4&5
 - Backup night-float intern from home every 4th night during week
 - Work every 4th weekend (in rotation with other senior trainees)
 - Weekend Midlevel NP support at UH

Overall Schedule

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
	Jun 24 - Jul 2	Jul 3 - Jul 9	Jul 10 - Jul 16	Jul 17 - Jul 23	Jul 24 - Jul 30	Jul 31 - Aug 6	Aug 7 - Aug 13	Aug 14 - Aug 20	Aug 21 - Aug 27	Aug 28 - Sep 3	Sep 4 - Sep 10	Sep 11 - Sep 17	Sep 18 - Sep 24	Sep 25 - Oct 1	Oct 2 - Oct 8	Oct 9 - Oct 15	Oct 16 - Oct 22	Oct 23 - Oct 29	Oct 30 - Nov 5	Nov 6 - Nov 12	Nov 13 - Nov 19	Nov 20 - Nov 26	Nov 27 - Dec 3	Dec 4 - Dec 10	Dec 11 - Dec 17	Dec 18 - Dec 24	Dec 25 - Dec 31	Jan 1 - Jan 7	Jan 8 - Jan 14	Jan 15 - Jan 21	Jan 22 - Jan 28	Jan 29 - Feb 4	Feb 5 - Feb 11	Feb 12 - Feb 18	Feb 19 - Feb 25	Feb 26 - Mar 3	Mar 4 - Mar 10	Mar 11 - Mar 17	Mar 18 - Mar 24	Mar 25 - Mar 31	Apr 1 - Apr 7	Apr 8 - Apr 14	Apr 15 - Apr 21	Apr 22 - Apr 28	Apr 29 - May 5	May 6 - May 12	May 13 - May 19	May 20 - May 26	May 27 - Jun 2	Jun 3 - Jun 9	Jun 10 - Jun 16	Jun 17 - Jun 23
PGY1	Vascular			Cardiology			Anesthesia			NF (VVT)			Plastics			Blue			Meriter			Transplant			Orange			EGS			EMH			Vascular			NF (VVT)															
PGY2	Trauma Day		SICU		UW				Trauma Day		SICU		UW				EGS				Access			UW			SICU		Trauma Day																							
PGY3	Veins		UW		Meriter GS				UW				OTO		Plastics		UW				VA		CTICU		VA		UW																									
PGY4	Meriter			VA		UW				VA				UW				Meriter		IR		Ethiopia		UW																												
PGY5	VA			Meriter		UW				Meriter				UW				Rockford		VA			UW																													
Fellow 1				UW		Meriter			VA		UW				VA				UW				IR		Ethiopia		Meriter																									
Fellow 2	UW				VA			Meriter		UW				Meriter				UW				UW				Rockford			VA																							
Research Residents	RESEARCH																																																			

- UW Vascular Surgery
- General Surgery
- Meriter
- VA Vascular Surgery
- Ethiopia
- Vasc Access
- Rockford
- IR
- Veins

Didactic Curriculum

- Follow the Vascular SCORE (VSCORE) for our weekly didactic curriculum
 - Topics/schedule known in advance to allow for pre-reading
 - Interactive lectures given by faculty and residents
- Indications and M&M conference alternate weekly
- Monthly multi-disciplinary Complex Aortic Disease Conference
- Faculty-sponsored Monthly Journal Club
- Monthly simulation sessions – FEVS curriculum
- UCLA/SVS Vascular Review Course in September of PGY4
- RPVI Prep and Exam (Division covers cost)

Vascular Conferences

- Tuesday morning
 - 6:30-7:30am Teaching conference – VSCORE Curriculum
- Wednesday morning
 - 7:00-8:00am M&M and Indications
 - 7:20-8:20am 10 required Department Grand Rounds throughout the year
 - 8:20-9:20am Departmental Didactic Hour
- Complex Aortic Disease Conference with CT Surgery
 - 5:00-6:00pm first Thursday of the month
- Monthly Journal Club
 - 6:30pm third Thursday of the month
- Conferences are hybrid

Case Numbers - Vascular

		BR	AU	AL	ST
Category	Minimum	Total	Total	Total	Total
Vascular Procedures					
Abdominal	30	55	90	78	78
Cerebrovascular	25	47	55	67	41
Peripheral	45	140	181	148	111
Complex	10	63	68	92	66
Endovascular Diagnostic	100	304	284	228	255
Endovascular Therapeutic	80	148	246	256	262
Endovascular Aneurysm Repair	20	53	54	77	50
Major/Minor Vascular Procedures					
Major Vascular Procedures	250	474	706	678	600
Minor Vascular Procedures	0	478	500	547	417
Total Major/Minor Vascular Procedures	0	952	1206	1225	1017

Case Numbers – General Surgery

General Surgery Procedures	BR	AU	AL	ST
Skin, Soft tissue and Breast	5	16	41	28
Head and Neck	0	1	4	6
Alimentary Tract	0	5	32	32
Abdominal (GS)	7	20	64	53
Liver	0	0	2	2
Pancreas	0	0	1	0
Endocrine	0	1	3	3
Trauma	1	9	21	4
Trauma Non-Operative	0	0	0	0
Thoracic	0	2	9	14
Pediatric	0	0	0	0
Plastic	1	9	7	6
Laparoscopic - Basic	1	0	14	29
Endoscopy	0	0	2	1
Laparoscopic - Complex	0	0	5	7

What Our Graduates Are Doing:

- **Brigitte Smith, MD**, University of Wisconsin School of Medicine
 - Academic Practice, University of Utah
- **Jessica Secor, MD**, Boonshoft School of Medicine at Wright State University
 - Private Practice, Peoria, Illinois
- **Elena Rinehardt, MD**, University of Washington School of Medicine
 - Private practice Seattle, Washington
- **Christopher McAninch, MD**, St. Louis University School of Medicine
 - Private Practice, Minneapolis, Minnesota
- **Jason Le, MD**, Chicago Medical School at Rosalind Franklin University
 - Private Practice, Appleton, Wisconsin
- **Shruthi Thiagarajasubramanian, MD**, Michigan State University SOM
 - Academic Practice, Alleghany Medical Center, Pittsburgh, PA
- **Alex Leung, MD**, Boston University School of Medicine
 - Private Practice, Denver, Colorado
- **Andrea Um, MD**, Sanford School of Medicine of University of South Dakota
 - Private Practice, Lincoln, Nebraska
- **Brooks Rademacher, MD**, University of Rochester School of Medicine and Dentistry
 - Community Practice, Peoria, Illinois

Contact Information

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<https://www.surgery.wisc.edu/education-training/residencies/vascular-surgery-residency/>

