

0/5 versus 5/2 Vascular Training Paradigms

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Definition

- Vascular surgery is the surgical specialty involving disease of the arterial, venous, and lymphatic circulatory systems, exclusive of those circulatory vessels intrinsic to the heart and intracranial vessels.
- Knowledge base in
 - Diagnosis of vascular disease
 - Comprehensive medical management of vascular disease
 - **Dissection and control of blood vessels**
 - Reconstructive vascular surgical and endovascular techniques
- Also
 - Teach this information to others
 - Provide leadership within their organizations
 - Conduct or participate in research in vascular disorders
 - Demonstrate self-assessment of their outcomes

Integrated Pathway

Training Requirements

- Prerequisites
 - Completion of an MD or DO
- Length of training
 - 5 years
- Cases
 - 500 total operations
 - 200 major vascular reconstructive
- Board certification
 - Vascular Surgery

Integrated Pathway

Training Requirements

- Training overview
 - 2 years of core surgical education
 - Pre- and Post-operative evaluation and care
 - Critical care and trauma management
 - Basic technical experience in skin and soft tissue, abdomen and alimentary track, airway management, laproscopic surgery, and thoracic surgery
 - 3 years of concentrated vascular surgery
 - Final year chief resident responsibility on vascular surgery service at an integrated institution

Independent Pathway

Training Requirements

- Prerequisites
 - Completion of a minimum of 3 years of general surgery education with progressive responsibility
- Length of training
 - 5-7 years
- Cases
 - 200 major vascular reconstructive
- Board certification
 - General Surgery
 - Vascular Surgery

Independent Pathway

Training Requirements

- 5 + 2 Pathway
 - 2 years of concentrated vascular surgery
 - Completion of a general surgery residency
 - Vascular surgery training does not have to be at same institution as general surgery
- 4 + 2 Pathway
 - 2 years of concentrated vascular surgery
 - Completion of 4 years of general surgery residency
 - 1 year of credit for vascular surgery is given during general surgery training
 - Vascular surgery training must be at same institution as general surgery
- 3 + 3 Pathway
 - 3 years of concentrated vascular surgery
 - Completion of 3 years of general surgery residency
 - Vascular surgery training must be at same institution as general surgery

Curriculum

Didactic

- Fundamental sciences
 - Anatomy
 - Biology
 - Embryology
 - Microbiology
 - Physiology
 - Pathology
 - Pathophysiology
- Care of patients with vascular disease
- Clinical/Basic Science research
 - Critical thinking
 - Design of experiments
 - Evaluation of data
- Technological advances

Curriculum

Clinical

- Pre- and Post-operative management
 - Determination of diagnosis
 - Provision of pre-operative care
 - Selection and accomplishment of appropriate operative procedure
 - Direction of post-operative care
 - Accomplishment of sufficient follow-up to understand the course of the disease and the outcome of the treatment
- Vascular imaging modalities
 - Non-invasive vascular laboratory
 - CT, MRI Scanning
 - Angiography
- Operative experience
 - Sufficient number and distribution of cases that reflect adequate representation of the current trends in order to achieve adequate operative skill and surgical judgment

Integrated versus Independent Pathway

What do I choose?

- No matter what, I will be a vascular surgeon!
- Do I want to also be a general surgeon?
- What are my research goals?
- Am I concerned about years of training?
- Am I competitive for a spot?
- What will other surgeons think of me?

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Integrated Pathway

Match Data

	2009	2010	2011
# Positions Offered	19	22	30
# US Allopathic Seniors	32	39	47
# Total Applicants	66	72	80
Positions Per US Allopathic Seniors	0.6	0.6	0.6
Positions Per Total Applicants	0.3	0.3	0.4
# Positions Filled by US Allopathic Senior	15 (78.9)	19 (86.4)	29 (96.7)
# Position Filled by Total Applicants	19 (100)	21 (95.5)	29 (96.7)
# Unfilled Positions	0	1	1

Independent Pathway

Match Data

	2009	2010	2011
# Positions Offered	121	113	120
# US Graduates Applying	81	79	88
# Total Applicants	112	113	131
Positions Per US Graduate	1.5	1.4	1.4
Positions Per Total Applicant	1.1	1.0	0.9
# Positions Filled by US Graduate	75 (62)	76 (67.3)	79 (65.8)
# Positions Filled by Total Applicant	102 (84.3)	103 (91.2)	113 (94.2)
Number of Unfilled Positions	19	10	7

**Who is Applying to Vascular
Surgery? A Comparison of
Demographics of 0+5 versus 5+2
Applicants**

Zayed MA; Dalman RL; Lee JT

Department of Surgery
Stanford University Medical Center

Results

	0+5 Program (127)	5+2 Program (122)	P Value
% Women	36.2%	25.4%	.07
Age	28.8	26.9	< .001
Additional degrees	29.9%	18.0%	.038
AOA	26.8%	20.5%	NS
Surgery Honors	48.0%	40.2%	NS
% Top quartile	40.3%	27.9%	.06
# Publications	3.6	1.3	< .001
Mean Step 1/2/3	226	219	.004

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A Survey of SVS Members and Surgery Department Chairs on the Integrated 0+5 Vascular Surgery (VS) Training Program

Leake A, MD; Kiguchi M, MD; Switzer G, PhD; Mitchell
E, MD; Makaroun M, MD; Chaer RA, MD

Division of Vascular Surgery
University of Pittsburg Medical Center
Oregon Health & Science University

Results

	SVS Members (%)	Chairpersons (%)
Prepared for clinical practice	67	56
Level of maturity	32	28
More complete vascular specialist	28	20
Superior endovascular skills	43	33
Inferior endovascular skills	9	14
Superior open skills	9	11
Inferior endovascular skills	63	83
Would interview	88	86
Would hire	83	72

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