THE UNIVERSITY
OF
SOUTHERN CALIFORNIA
PROGRAM
IN
VASCULAR SURGERY
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OVERVIEW

The University of Southern California (USC) Program in Vascular Surgery is a two year experience conducted at the University of Southern California Health Sciences Campus (USC University Hospital – USCUH and Los Angeles County+USC Medical Center – LAC+USCMC) in Los Angeles, and Huntington Memorial Hospital (HMH) in Pasadena, California. The first year is focused on providing a thorough and in depth endovascular and noninvasive vascular laboratory experience. During this first year the resident with faculty oversight will also be engaged in clinical research. The second year is structured around open vascular surgery, ambulatory care, and inpatient care at USCUH and HMH.

The Vascular Surgery faculty at all hospitals who are responsible for Vascular Surgery resident education are full time faculty of the University of Southern California. The Vascular Surgery resident rotations are three months in duration and designed to provide the resident with a balanced education in index Vascular Surgery procedures; complex, redo and unusual procedures; endovascular procedures; and invasive and noninvasive diagnostics for vascular disease.

At HMH, the Vascular Surgery resident is exposed to a large volume of open reconstructive vascular procedures. The resident team consists of a PGY I, and PGY II or III general surgery resident along with the Vascular Surgery resident. The hospital has an active emergency room and is a Level II Trauma Center. As the major provider of acute care services in the west San Gabriel Valley, a diverse experience in vascular problems of an urgent and emergent nature is available to the Vascular Surgery resident. The hospital has a busy noninvasive vascular laboratory, which is directed by the USC Vascular Surgery faculty and an endovascular experience.

At USC Health Sciences Campus, the Vascular Surgery resident will be the senior resident on Vascular Surgery at USCUH which also includes either a PGY I or II general surgery resident. USCUH is a major referral center, providing the resident with experience in complex and re-do Vascular Surgery procedures. Vascular Surgery faculty also perform a wide range of endovascular procedures at both USCUH and LAC+USCMC, including aortic stent grafts, percutaneous angioplasty/stents and diagnostic angiography. The USCUH also has an active ICAVL accredited noninvasive vascular laboratory directed by USC Vascular Surgery faculty.

I. BACKGROUND AND ADMINISTRATIVE ORGANIZATION

The USC Program in Vascular Surgery was accredited by the Residency Review Committee in Surgery on July 1, 2000. The Vascular Surgery Program at USC is conducted through the Department of Surgery at the Keck School of Medicine of USC. Dr. Fred Weaver the Chief of Vascular Surgery makes policy, appoints personnel, and directs the program. The training program utilizes the facilities of USC Health Sciences.
Campus (USCUH and LAC+USCMC) and Huntington Memorial Hospital. The attending staff at all hospitals are fulltime faculty in the USC Division of Vascular Surgery

II. INPATIENT VASCULAR SURGERY SERVICES

The Vascular Surgery service at the USCUH is a separate unit with an average census of ten patients. The service is composed of the Vascular Surgery resident and a PGY I surgical resident. At HMH, the Vascular Surgery service is also a separate entity with an average census of 15 patients. The service is comprised of the Vascular Surgery resident and a PGYII or III general surgery resident as well as a PGY I surgical resident. The Vascular Surgery resident has senior resident level operating and patient care responsibility. The attending is scrubbed at the operating table to teach, direct, and assume ultimate surgical responsibility. The goal is for the Vascular Surgery resident to receive a broad case experience which includes exposure to the difficult, the unusual, and redo vascular procedures and the associated patient care.

III. AMBULATORY EXPERIENCE

While at USCUH, the Vascular Surgery resident is expected to attend the Tuesday Vascular Surgery clinic located on the 5th floor of the Healthcare Consultation Center from 9:00 a.m. to 5:00 p.m. During rotations at HMH, the Vascular Surgery resident ambulatory experience is on Wednesday from 9:00 a.m. to 5:00 p.m. at the Pasadena Office of Dr. Steven Katz or Dr. Roy Kohl. This ambulatory experience gives the resident an opportunity to see patients both pre and postoperatively with attending surgeons.

IV. VASCULAR LABORATORY

The Vascular Diagnostic Laboratories are physically located in the hospital at USCUH, HMH and LAC+USC. The Vascular Surgery resident will interpret all vascular studies at USCUH with attending vascular surgeon supervision. The Vascular Surgery resident will provide a preliminary interpretation based on videotape review that will be confirmed and signed by the attending. During the first year of the residency, at least one day a week is spent performing duplex and physiologic studies which is supervised by the USCUH Technical Director. The vascular surgery resident (PGY VI) also organizes the Quarterly Vascular Lab Q/A with the assistance of the USCUH Technical Director.

At the completion of the residency, the Vascular Surgery resident will have obtained knowledge concerning the physiologic basis of laboratory testing, the performance of vascular studies, the application of laboratory testing for the evaluation and management of patients undergoing vascular repair, and the interpretation of laboratory tests results. This educational objective will be accomplished predominantly during the USCUH rotation and augmented by experience at HMH and LAC+USC. At the completion of the residency the Vascular Surgery resident will be a candidate for Registered Vascular Technologist certification.
V. ANGIOGRAPHY/ENDOVASCULAR PROCEDURES

The Vascular Surgery resident will become proficient and comfortable with arterial and venous angiograms as well as the indications for angiography through hands on experience. Performing and interpreting angiograms is woven into the program at both USCUH and HMH such that the Vascular Surgery resident performs >100 diagnostic angiograms and 50 endovascular procedures during the residency. The Vascular Surgery resident will be involved with a wide variety of endovascular procedures including carotid angiography endografts, angioplasties and stent placement.

VI. ROUNDS AND CONFERENCES

A. USCUH AND HMH VASCULAR SURGERY ATTENDING ROUNDS

Attending rounds are made daily with the on-call faculty member. In addition, formal attending rounds with all Vascular Surgery faculty, housestaff and medical students occur once a week. Residents as well as medical students should be prepared to review pertinent diagnostic studies and give bedside patient presentations.

B. VASCULAR SURGERY PREOP CONFERENCE

While at USCUH the Vascular Surgery resident will present patients scheduled for a vascular procedure in the coming week. These selected cases are presented to an audience of faculty, housestaff, medical students and other clinical staff each Thursday from 8:00 a.m. to 9:30 a.m. at LAC+USC Room 9241. The Socratic method of teaching will be used and the resident is expected to understand and justify the preop surgical plan.

C. VASCULAR SURGERY MORBIDITY AND MORTALITY CONFERENCE

The morbidity and mortality (M & M) from the Vascular Surgery services at USCUH, HMH, and LAC+USC are discussed. The Vascular Surgery resident is responsible for presenting all cases of M & M on his/her service along with pertinent diagnostic studies. (1st Thursday of each month from 6:00 p.m. to 8:00 p.m. at HMH, Surgical Conference Room, 2nd floor, East Tower.)

D. LAC+USC VASCULAR SURGERY WALK ROUNDS

LAC+USC bedside walk rounds begin at 7:00 a.m. on ward 10-800. Vascular Surgery preop conference follows immediately thereafter at approximately 8:00 a.m. in room 9241

E. VASCULAR SURGERY JOURNAL CLUB

Articles from the recent Vascular Surgery literature are reviewed by Vascular Surgery housestaff. Selection and assignment of specific articles to be digested, summarized and discussed by the residents on the Vascular Surgery service is done by a member of the full time faculty. The Vascular Surgery resident is encouraged to research and discuss recent articles which may be related to his/her assigned article. (3rd Thursday of the month, 6:00 p.m. to 8:00 p.m., Health Care Consultation Center, 4th floor conference room, suite 409.)
F. VASCULAR LABORATORY QUALITY ASSURANCE

The results of vascular lab studies performed for the past quarter are reviewed and compared to the angiographic findings. Discrepancies between the noninvasive study and angiogram are discussed with a focus on technique and criteria used for interpretation. (Once a quarter, 5th Thursday of the month, Health Care Consultation Center, 4th floor conference room, suite 409)

G. BASIC SCIENCE CURRICULUM

Many aspects of the basic science of Vascular Surgery are covered in the previously described conferences. In addition, a specific Vascular Surgery curriculum is part of the resident experience. A series of nine basic lectures comprise the curriculum. Presenters include Division faculty, School of Medicine faculty and the Vascular Surgery resident. The Basic Science conference occurs the 4th Thursday of the month, 6:00 p.m. to 8:00 p.m., Health Care Consultation Center, 4th floor conference room, suite 409.

H. DIVISION RESEARCH INITIATIVES

Progress on ongoing studies and research presentations comprise the Conference activities. (4th Thursday of the month, 5:00 p.m. to 6:00 p.m., Health Care Consultation Center, 4th floor conference room, suite 409)

I. ANNUAL REVIEW COURSE IN VASCULAR SURGERY

The annual Vascular Surgery review course at UCLA occurs in the fall of each year. Attendance at this course is part of the Vascular Surgery curriculum. The Vascular Surgery resident is free of clinical responsibilities during that week.

J. USC SURGERY GRAND ROUNDS

This conference is held every Saturday morning from 9:00 a.m. to 10:30 a.m.. Topics of interest in the discipline of surgery, including Vascular Surgery, are presented. (Saturday, September-May, 9:00 a.m. to 10:30 a.m., Doheny Vision Research Center)

K. USC DEPARTMENT OF SURGERY MORBIDITY AND MORTALITY

A review of M&M occurs weekly for the surgical services in the USC Program in Surgery. Vascular Surgery M&M is discussed at this conference approximately once a month before an audience of surgical faculty, housestaff and medical students. (Friday morning, 8:00 a.m. to 9:30 a.m., LAC+USC MC, Room 1645)

L. HMH SURGERY MORBIDITY AND MORTALITY

A review of M&M occurs weekly for the surgical services in the HMH Program in surgery. Vascular Surgery M&M is discussed at this conference approximately once a month before an audience of surgical faculty, housestaff and medical students. (Thursday mornings, 7:00 a.m., Doctor’s Dining Room at HMH)

M. HMH MEDICINE AND SURGERY GRAND ROUNDS

This conference is held once a month on Thursday morning from 9:00 a.m. to 10:00 a.m. Topics of interest in the discipline of surgery, including Vascular Surgery are presented. (3rd Thursday of the month, 8:00 a.m., Braun Auditorium)
VII. SUPERVISING LINES OF RESPONSIBILITY FOR THE VASCULAR SURGERY RESIDENT

The PGY VI resident will spend six months in the USC UH vascular laboratory, which is an ICAVL laboratory, interpreting the studies and providing a preliminary report prior to faculty signoff. All ultrasound-based studies will be interpreted using videotape review of each individual case. The resident will also spend Thursday scanning in the vascular laboratory under the supervision of the Technical director of the USCUH vascular laboratory. In this capacity, the resident is expected to, by the end of the first year, have an appreciation and functional expertise in performance and interpretation of noninvasive vascular studies. The first-year resident is expected to participate in all endovascular cases performed on the USC Health Sciences campus, including those cases at USC University Hospital and LAC+USC Medical Center. In that capacity, the resident will have the primary responsibility for preoperative evaluation of the patient, developing a therapeutic plan of endovascular intervention in consultation and input of the faculty, performance of the endovascular intervention, and follow-up of the patient. In addition to the above activities, the resident will provide clinical support when needed and asked for at LAC+USC MC and USCUH for care of the vascular surgery patient. The resident will attend the Rancho Los Amigos Vascular Clinic on a weekly basis, seeing patients who may need a referral either to USCUH or LAC+USC MC. The resident is responsible for participating in journal club as assigned, presenting cases at Morbidity and Mortality and Vascular Surgery Preop conferences, providing basic science lectures as assigned and organizing, with the assistance of the vascular lab technical director, the vascular lab Q/A conference.

The PGY VII resident functions as the chief resident on the USCUH and HMH Vascular Surgery Services. In that role, the Vascular Surgery resident as supervised by the attending staff has a primary responsibility for the preoperative assessment/care, the operative procedure and the postoperative care of each patient on the service. The Vascular Surgery resident can expect to have a significant role in all cases in which he or she scrubs. It is expected that the Vascular Surgery resident will have read about the procedure prior to coming to the OR and developed a surgical plan. The Vascular Surgery resident is expected to make rounds twice daily on all service patients and direct resident subordinates in the duties of patient care. The postoperative care of the patient is a primary responsibility of the Vascular Surgery resident with patient care concerns promptly communicated to the appropriate attending. The Vascular Surgery resident is responsible for participating in journal club as assigned, presenting cases at Morbidity and Mortality and Vascular Surgery Preop conferences, and providing basic science lectures as assigned.

XI ROTATION SCHEDULE

The first year of the residency (PGY VI) is spent at the USC Health Sciences Campus and is comprised of endovascular activity at USCUH and LAC+USCMC, a USCUH vascular laboratory experience and Clinical Research. As a PGY VII the Vascular Surgery resident alternates between USCUH and HMH in three-month blocks.
Rotations at USCUH include vascular laboratory experience while the rotations at HMH include experience with endovascular procedures.

XII DUTY HOURS AND ON-CALL RESPONSIBILITIES

The Vascular Surgery resident call is by beeper or at home. In house call is not required, with the exception of those clinical situations where patient care concerns or instability dictate that the resident stay in house. Even though the on call responsibilities are not burdensome, the program is committed to providing the Vascular Surgery resident with time free of patient care responsibilities on a periodic basis. While on call the resident is responsible for discussing any patient care concerns or consults with the on call faculty. During the week (Monday-Thursday) faculty call begins at 5:00 p.m. Week-end call commences 4:00 p.m. Friday and ends 7:00 a.m. Monday morning. The week-end on call surgeon will coordinate cases and rounds with the Vascular Surgery resident. Rounds on every patient will be made by the on-call team everyday. Any week end calls or consults received by the Vascular Surgery resident for surgeons not on call should be referred to the on call surgeon.

XIII. DRESS CODE FOR VASCULAR SURGERY RESIDENT

The following dress code has been established for the Vascular Surgery resident. The Vascular Surgery resident is expected to adhere to the code, which is intended to project to patients and visitors the professionalism they expect.

1. All attire should be both clean and clean appearing.
2. Men’s Attire: Shirt and tie, slacks, white uniform jacket or coat.
3. Women’s Attire: Dresses, skirts or slacks and blouses, white uniform jackets or coats.
4. Unacceptable Clothes: Stained, soiled appearing clothes, open necked shirts, polo shirts, blue jeans, shorts, stained or dirty running shoes, sandals.
5. Operating Room Attire: Hospital policy forbids anyone from wearing these clothes (scrubs) off the hospital grounds.

There are certain obvious exceptions to the above which include the following:

1. When seeing patients in the Emergency/Admitting areas or while on night call duty.
2. In the operating rooms and adjacent areas.

In all circumstances, white coats are recommended whenever direct contact with patients is anticipated.
A competent vascular surgery resident must have a dedication to self-study, patient care and professionalism. The primary **GOAL** of the USC program in Vascular Surgery is to prepare the trainee to function as a qualified practitioner of vascular surgery. The residency experience is designed to provide a foundational understanding of vascular disease and Vascular Surgery which encourages professional growth and lifelong learning.

**COMPETENCY BASED OBJECTIVES OF THE SURGICAL RESIDENCY**

**PATIENT CARE**
1. Demonstrate the ability to gather essential and accurate patient information.
2. Make informed decisions about diagnostic and therapeutic interventions.
3. Efficiently complete and direct patient care activities.
4. Acquire clinical and technical skills as demonstrated by an appropriate diagnostic workup of vascular disease with a full understanding of the tests to be ordered, the differential diagnosis, the management plan, the necessary vascular surgical procedures and the preoperative and postoperative care required both short and long term.

**MEDICAL KNOWLEDGE & SKILLS**
1. Arterial and venous pathophysiology and pathology.
2. Arterial and venous surgical anatomy and exposures.
3. Identification and management of risk factors of atherosclerotic vascular disease.
4. Non-atherosclerotic vascular disease evaluation and management.
6. Treatment options for vascular maladies, including endovascular therapeutics.
7. Details of Vascular Surgery procedures including suture, graft materials and instrumentation.
12. Interpretation of diagnostic vascular studies, including duplex, physiologic testing, angiograms, CT and MR.
13. Perform standard noninvasive vascular tests (carotid and venous duplex).
15. Perform endovascular procedures, angiography and endovascular therapeutic interventions using catheters and guidewires.
16. Perform nonreconstructive vascular procedures, venous ablative, angioaccess, thoracic outlet.

**PRACTICE BASED LEARNING**
1. Pursue a personal program of self-study and professional growth with guidance from the teaching staff and program director. An understanding of the etiology, pathogenesis, pathophysiology, diagnosis and management of vascular disorders is absolutely necessary. This will allow for sound surgical judgment which relies on knowledge, rational thinking and the surgical literature.
2. Develop ability to analyze critically the vascular literature in order to practice evidence based medicine.
3. Complete research project on selected topic in vascular surgery and apply new knowledge to surgical practice.
4. Participate and assist in organization of daily rounds, preop conference, vascular lab conference, morbidity and mortality conference, journal club research conference and the basic science curriculum.
5. Carry out patient management decisions in consultation with attending staff.
6. Participate in general surgery resident and medical student teaching.

**PROFESSIONALISM**
1. Participate in compassionate patient care maintaining the highest moral and ethical values with a professional attitude. The resident should be sensitive to the needs and feelings of others, including the patient's family members, allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.
2. Demonstrate respect, compassion and integrity in the care of patients on a daily basis
3. Show sensitivity to patients culture, age, gender and disabilities

**INTERPERSONAL RELATIONSHIPS AND COMMUNICATION**
1. Create and sustain a therapeutic and ethically sound relationship with patients.
2. Work effectively with other members of the medical team including allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.
3. Maintain professional interactions with other health care providers and hospital staff.
4. Provide leadership and organization of the Vascular Surgery clinical services.
5. Develop appropriate judgment and good communication skills.

**SYSTEMS BASED PRACTICE**
1. Understand how the health care organization affects vascular surgery practice.
2. Demonstrate cost effective health care.
3. Know how to partner with health care managers and allied health personnel to improve health care.
4. Follow established practices, procedures, and policies of the Department of Surgery and Division of Vascular Surgery at all hospitals.
6. Completion of medical records, operative notes and other patient care related documentation in a timely, accurate and succinct manner.
7. Understand principles of vascular surgery and laboratory quality assurance practices.

These goals are fostered in an environment of progressively graded clinical and operative experience and responsibility. Within the limits of variability found in a clinical practice an equivalent experience will be afforded each resident, under the guidance and supervision of qualified teaching staff. In so doing the resident will exercise mature surgical judgment and operative skills which prepares him/her to provide independent care to patients with vascular disease. The final assessment of whether these objectives are being achieved is made by the faculty of the USC Division of Vascular Surgery.

HUNTINGTON MEMORIAL HOSPITAL VASCULAR SURGERY ROTATION (PGY VII)

The goal of the vascular surgery rotation at Huntington Memorial Hospital is to provide the vascular surgery resident a comprehensive clinical and operative experience in a large community hospital with an emphasis on:

1. Receiving referrals from cardiologists, pulmonologists, and primary care givers and participating in the clinical decisions to operative therapy.
2. Ambulatory clinical experience and decision making concerning operative and non-operative intervention for vascular disease.
4. Interpretation of noninvasive laboratory studies, CT scans of the thorax, abdomen/pelvis, MRI, MRA of head and neck, and diagnostic angiography.
5. Participating in preoperative counseling of patients including explanation of procedures, risks, expected clinical course and outcome.
6. Evaluation of vascular surgery emergencies, i.e. ruptured aortic aneurysms, acute limb ischemia.
7. Obtaining conduits for bypass surgery including cephalic, basilic greater and lesser saphenous veins.
11. Exposure to complex vascular procedures such as redo carotid and extremity revascularization; suprarenal, thoracoabdominal aneurysms.
12. Learning the types of prosthetic vascular conduits, autogenous conduits, vascular suture, and instrumentation.
14. Cardiac, renal, pulmonary postoperative support.
15. Postoperative vascular assessment.
18. Patient discharge from hospital and disposition.
19. Interfacing with other specialists and primary care givers in postoperative care.
20. Diagnosis and management of deep venous thrombosis, pulmonary embolism, hypercoaguable states.
21. Assessment of limb ischemia and nonoperative management.
22. Knowledge of limitations and advantages of endovascular procedures.

USC UNIVERSITY HOSPITAL VASCULAR SURGERY ROTATION (PGY VII)

The goals of the Vascular Surgery rotation at USC Health Sciences Campus is for the Vascular Surgery resident to master the basic and advanced aspects of the diagnosis and management of vascular disease. This is accomplished by performing:

1. Ambulatory experience in faculty clinics.
2. Comprehensive vascular assessment.
3. Interpreting angiograms, noninvasive vascular lab studies, CT Scans of head, thorax and abdomen/pelvis; MRI, MRA of extra, intracranial circulation.
5. Assessing indications for endovascular procedures.
6. Deciding whether surgical revascularization, endovascular therapy or nonoperative management is appropriate.
7. Performing extremity bypasses, uncomplicated aortic aneurysms and carotid procedures.
8. Exposure to selected complex vascular procedures such as redo limb bypasses and carotid procedures, juxta, supra and thoraco abdominal aneurysms.
10. Knowing prosthetic and autogenous grafts, suture and vascular surgery instrumentation.
12. Performing endovascular procedures including angiography, peripheral angioplasty and stenting procedures.

ENDOVASCULAR ROTATION (PGY VI)

The goal of the endovascular experience is the acquisition of technical skill and interpretation of diagnostic angiography and endovascular intervention by:

1. Knowledge of the basic principles of radiation safety, including the concepts of time, distance, and shielding in limiting patient and staff radiation exposures.
3. Experience with diagnostic angiography of the cerebral, abdominal and extremity vessels, including arteriography and venography.
4. Knowledge of the various techniques and mechanism of action of endovascular intervention, including balloon angioplasty, intravascular stent and stent-graft placement, atherectomy, thrombolysis, percutaneous thrombectomy, transcatheter occlusion, and intravascular foreign body retrieval.
5. Knowledge of the indication for and expected results of the above interventions.
6. Experience with percutaneous arterial and venous access, including femoral, brachial, and popliteal punctures in retrograde and antegrade fashion.
7. Familiarity with various contrast agents, including iodinated contrast, carbon dioxide, and gadolinium.
8. Familiarity with basic endovascular instruments, including catheters, guidewires, catheter-mounted balloons, balloon-expandable and self-expanding intravascular stents and stent-grafts, infusion catheters, and embolization coils.
10. Experience and proficiency with selective catheterization.
11. Knowledge of various closure methods at vascular access sites.
12. Knowledge of the complications of vascular access and endovascular interventions, and experience with management of these conditions.

**VASCULAR LABORATORY (PGY VI)**

The goal of vascular laboratory education is to impart knowledge and technical skill in the performance and interpretation of noninvasive doppler/ultrasound/physiologic assessments of the vascular system by knowledge of the physiology of bloodflow and the physics of ultrasound and doppler.

1. The interpretation of extremity arterial and venous physiologic studies
2. The interpretation of carotid, renal, visceral, aortic and extremity arterial duplex studies using videotape review.
3. The interpretation of vena cava and venous duplex studies using videotape review.
4. Hands on intraoperative and diagnostic scanning experience..
5. Understanding the indications, accuracy and diagnostic utility of specific noninvasive vascular tests.

Obtaining the knowledge to implement and coordinate a vascular laboratory quality assurance program.
EVALUATION SYSTEM

PURPOSE OF THE EVALUATION SYSTEM

The purpose of the evaluation is to provide information on Vascular Surgery resident performance for the following reasons:

1. To make decisions on individual Vascular Surgery resident promotion.
2. To provide data to specific boards for certification.
3. To write letters of recommendation.
4. To identify Vascular Surgery resident deficiencies and initiate corrective measures to assist the Vascular Surgery resident in his/her professional development as a vascular surgeon.
5. To identify strengths and weaknesses of the teaching program and faculty in order to improve the Vascular Surgery resident educational experience.

METHODOLOGY OF EVALUATION

The factors used to evaluate Vascular Surgery resident progress and competency include:

1. Clinical rotation evaluations, completed quarterly.
2. Conference attendance.
4. Quality and timeliness of record keeping.
5. Adherence to policies and procedures of the Department of Surgery Division of Vascular Surgery and affiliated hospitals and institutions.
6. Education of medical student and surgical residents.
7. Clinical Research Project

CLINICAL ROTATION EVALUATION

The rotation evaluation forms are designed to assess the performance of the Vascular Surgery resident in categories of clinical performance, knowledge, technical skills, personal/professional behaviors, and scholarly activity.

Evaluations are completed following each rotation for individual teaching faculty. Acceptable and unacceptable levels of performance for each category are determined.

Vascular Surgery residents will be asked to evaluate faculty teaching and clinical rotations after each rotation. This feedback will be used to improve faculty teaching performance and educational value of the clinical rotations.

REQUIRED CONFERENCES

Satisfactory attendance is an indication of the motivation of the Vascular Surgery resident toward his/her surgical education. Required conferences occur Thursday evenings and include Vascular Surgery Morbidity and Mortality Conference, Journal Club, Basic Science and Research conference. While at USCUH the Vascular Surgery resident is also expected to present weekly at the Vascular Surgery Preop Conference held Thursday mornings. Attendance at ancillary surgical conferences are not required but strongly encouraged.
MEDICAL RECORDS
Vascular Surgery resident attention to record keeping is expected. Residents should not have more than five undictated operative reports or five incomplete medical records at either HMH or USCUH. Vascular Surgery residents violating this limit will be suspended from clinical duties until records are completed. The Vascular Surgery Resident is responsible for dictated notes on all vascular surgery in house consults. It is also the responsibility of the Vascular Surgery resident to assure that the History and Physical, as well as Discharge Summary of each patient admitted to the Vascular Surgery Service is completed by the junior surgical housestaff on the Vascular Surgery service. Records not dictated by the junior housestaff prior to rotating off service will become the responsibility of the Vascular Surgery resident.

RESIDENT TEACHING
The effectiveness of the Vascular Surgery resident, as a teacher and role model to the surgical residents and medical students, will be evaluated. A willingness to teach and provide direction to students and surgical housestaff is expected.

MID YEAR and ANNUAL EVALUATION

The Program Director will formally meet with the Vascular Surgery resident every six months to provide a summary of resident performance evaluations, offer suggestions as to how performance may be improved, and solicit suggestions from the resident as to how the educational experience can be improved. Additional meetings will be arranged as needed. Serious deficiencies in clinical performance refractory to correction, severe ethical transgressions, poor record keeping or egregious violations of hospital policy can result in dismissal. The residents rights in the event of dismissal are detailed in the USC/LAC+USC GME handbook.
USC DIVISION OF VASCULAR SURGERY  
Vascular Surgery Rotation Evaluation

Resident ___________________________________________ PGY VI_____ PGY VII_____

Service  Endo/Vasc.Lab  USCUIH or HMH  Rotation 1 2 3 4

Instructions: Please evaluate the above rotation based on your recent experiences. Circle the appropriate response. Use the following criteria for evaluation:

Criteria:  5 – One of the best
           4 – Better than most
           3 – Average
           2 – Below average
           1 – One of the worst

INTELLECTUAL ENVIRONMENT

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<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Endovascular teaching and technical skills</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
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</tbody>
</table>

Comments: ___

WORK ENVIRONMENT

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office, computer resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational resources (library, internet, etc.)</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Food, hospital facilities</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Residency office support</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Comments: ___

OVERALL EVALUATION OF ROTATION  5 4 3 2 1
USC DIVISION OF VASCULAR SURGERY
Faculty Evaluation Form

Name of Staff ___________________________ Date of Evaluation ____________________

Instructions: Please evaluate the above faculty member based on your recent experience. Circle the appropriate response. Use the following criteria for evaluation.

Criteria: 5 – He/She demonstrates this trait a great deal of the time.
        4 – He/She demonstrates this trait frequently.
        3 – He/She demonstrates this trait occasionally.
        2 – He/She hardly ever demonstrates this trait.
        1 – He/She never demonstrates this trait.
        0 – Unable to evaluate (infrequently or never seen in this setting).

<table>
<thead>
<tr>
<th>Criterion</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaches effectively at the bedside</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaches effectively in the clinic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaches effectively in the OR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provides feedback to residents about their performances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Available to residents for discussion of patient problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses evidence based medicine to support views on patient evaluation and management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attends and contributes to teaching conferences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stimulates house staff to attain personal and professional goals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall teaching performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Comments (strengths and weaknesses)
### USC DIVISION OF VASCULAR SURGERY

**Competency-Based Resident Evaluation**

**Resident:** ___________________________________   **PGY VI** _______ **PGY VII** _______

**Service:** USCUH ___ HMH ___ Endovascular/Vasc. Lab ___   **Rotation Dates:** _____________

<table>
<thead>
<tr>
<th>ACGME COMPETENCIES</th>
<th>Unacceptable</th>
<th>Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient Care</strong></td>
<td>1 2 3 4 5 6</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>1. Communicates and counsels effectively with patients and their families</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>2. Gathers essential and accurate patient information</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>3. Makes informed decisions about diagnostic and therapeutic interventions</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>4. Works well with other health professionals to provide patient focused care</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>5. Efficiently completes patient care activities</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
</tbody>
</table>

**AREAS FOR IMPROVEMENT**

Judgment____, Clear and complete written records____, Patient management____, Use of Diagnostic Tests ____, Preoperative care___, Postoperative Care___, Clinic____, Other______________________________

**Medical Knowledge/Technical Skills**

<table>
<thead>
<tr>
<th>Unacceptable</th>
<th>Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6</td>
<td>1 2 3 4 5 6</td>
</tr>
</tbody>
</table>

1. Demonstrates investigatory and analytical clinical thinking | 1 2 3 4 5 6 |
2. Knows and applies basic and clinically supportive sciences appropriate to surgery | 1 2 3 4 5 6 |
3. Knowledgeable vascular anatomy/physiology | 1 2 3 4 5 6 |
4. Formulates appropriate differential diagnosis | 1 2 3 4 5 6 |
5. Economy of motion | 1 2 3 4 5 6 |
6. Three dimensional, recognition of vascular anatomy | 1 2 3 4 5 6 |
7. Ability to plan sequences for vascular procedures | 1 2 3 4 5 6 |
8. Instrument/suture/graft material selection, knowledge | 1 2 3 4 5 6 |
9. Catheter, guidewire skills | 1 2 3 4 5 6 |

**AREAS FOR IMPROVEMENT**

Vascular Physiology____, Vascular Anatomy____, Differential Diagnosis____, Risk Factor Management____, Non-Atherosclerotic Disease____, Treatment Options___, Other__________________________

Economy of motion____, Precision in use of scissors____, Suturing___, Instrument/Suture selection____, Efficiency in use of traction/counter traction____, Vascular anatomy____, Suture, Graft materials____, Catheter, Guidewire skills____, Surgical plan___, Other__________________________

**OVERALL THIS ROTATION**

**PASS**

**FAIL**

16
### Practice-Based Learning, Improvement and Teaching

<table>
<thead>
<tr>
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<th>Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

1. Is able to utilize evidence from scientific studies related to patients’ health problems
2. Is able to apply research knowledge to the appraisal of clinical studies
3. Facilitates the learning of students and other health care professionals
4. Demonstrates enthusiasm in teaching medical students
5. Demonstrates enthusiasm in teaching other residents
6. Is an effective teacher who can convey important scientific and patient-care principles

**AREAS OF IMPROVEMENT:**
- Analytical skills
- Research Project
- Evidence Based Practice
- Resident/Student Teaching

### Interpersonal and Communication Skills

<table>
<thead>
<tr>
<th>Unacceptable</th>
<th>Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

1. Creates and sustains a therapeutic and ethically sound relationships with patients
2. Works effectively and directs members of the medical team, residents and students
3. Professional interactions always maintained with health care workers

**AREAS OF IMPROVEMENT:**
- Communication skills
- Team Leadership
- Relationship with other health professionals
- Attitude

### Professionalism

<table>
<thead>
<tr>
<th>Unacceptable</th>
<th>Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

1. Demonstrates respect, compassion and integrity
2. Demonstrates a sensitivity to patients culture, age, gender, and disabilities

**AREAS OF IMPROVEMENT:**
- Communication skills
- Team Leadership
- Relationship with patients/families

### Systems-Based Practice

<table>
<thead>
<tr>
<th>Unacceptable</th>
<th>Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

1. Understands how the health care organization is affected by their practice
2. Practices cost-effective health care
3. Advocates for quality patient care
4. Knows how to partner with health care managers to improve health care

**AREAS OF IMPROVEMENT:**
- Communication skills
- Cost Effective Care
- Relationship with other health professionals
- Attitude
- Medical Records
Please comment on this resident’s major STRENGTHS

Please comment on areas for IMPROVEMENT

This evaluation was based on casual daily observation.

This evaluation was based on:
Extensive observation_____, Moderate observation____, Occasional observation____

X_____________________________________
Faculty Signature
VACATIONS AND LEAVE TIME

Two weeks (2) of vacation (14 days) are permitted during the academic year.

The resident must submit, to the Program Director or Coordinator, the vacation request form at least thirty (30) days prior to the requested time off for vacations less than seven (7) days and at least ninety (90) days prior to the requested time off for vacations seven (7) or more days. Approval of vacation requests are at the discretion of the Program Director and take into account patient care and coverage. Failure to receive approval prior to taking vacation and/or failure to return to work at the end of an approved vacation may be cause for disciplinary action that may result in termination.

In addition to the two weeks mentioned above, the resident will also be free of clinical responsibilities in order to attend the UCLA conference, the National Vascular meetings, and the APDVS Resident meeting.
### VACATION REQUEST FORM

**DIVISION OF VASCULAR SURGERY**

<table>
<thead>
<tr>
<th>Reason For Leave</th>
<th>Vacation Day(s)</th>
<th>Personal Day(s)</th>
<th>Sick Day(s)</th>
<th>Business Day(s)</th>
<th>Other</th>
</tr>
</thead>
</table>

*PLEASE DESCRIBE: ________________________________________________________________

FIRST DATE OF REQUESTED LEAVE: _______________________ TIME: ______________

LAST DATE OF REQUESTED LEAVE: _______________________ TIME: ______________

EMPLOYEE SIGNATURE: __________________________________

APPROVED BY:

- Immediate Supervisor / Attending Faculty
  - _______________________ Date

- Administrative Director
  - _______________________ Date

- Chairman / Program Director
  - _______________________ Date

---

**FOR OFFICE USE ONLY**

COVERAGE: ________________________________________________________________________________________________

OTHER REQUESTS FOR SAME PERIOD: _________________________________________________________________________

COMMENTS: _________________________________________________________________________________________________

<table>
<thead>
<tr>
<th>ACCURALS</th>
<th>VACATION</th>
<th>PERSONAL</th>
<th>SICK</th>
<th>BUSINESS</th>
<th>OTHER</th>
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</thead>
<tbody>
<tr>
<td>DAYS REMAINING</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
SALARY AND BENEFITS

Each resident receives a document entitled, Your Benefits, along with their offer of employment. This document outlines various conditions that will apply to them during their training, such as health insurance, retirement plans, life insurance, child care programs, etc.

Salary:
- Resident GY – VI: $4,437.20/mo
- Resident GY – VII: $4595.88/mo

Benefits:
- Meals: Meals are provided while on duty.
- Parking: Parking is available to all postgraduate physicians for a nominal fee.
- Professional Liability Insurance: Professional Liability Coverage (Malpractice Insurance) is provided without cost to the physician.

Health & Welfare

MEDICAL PLANS

USC Network
- Type: PPO Medical Plan
- Monthly Rates for 2001: Employee only: $44.00; Employee +1: $80.00; Employee +2 or more: $114.00
  - Useful links:
    - http://www.usc.edu/go/uscnetwork
    - www.usc.edu/go/usc-care
    - http://www.usc.edu/health/index.html

USC Network II
- Type: PPO Medical Plan (70% coverage for out-of-network services)
- Rates for 2001: Employee: $238.00; Employee +1: $480.00; Employee +2 or more: $688.00
  - Useful links:
    - http://www.usc.edu/go/uscnetwork
    - www.usc.edu/go/usc-care

Kaiser
- Type: HMO, Staff Model
- Rates for 2001: Employee: $25.00; Employee +1: $50.00; Employee +2 or more: $71.00
  - Customer Service: 800-464-400; (Spanish) 800-788-0616

PacifiCare
- Type: HMO, IPA Model
- Rates for 2001: Employee: $26.00; Employee +1: $50.00; Employee +2 or more: $71.00
  - Phone Information: 800624-8822; or 800-442-8833 [TDD]
CaliforniaCare
Type: HMO, IPA Model
Rates for 2001: Employee: $23.00; Employee +1: $46.00; Employee +2 or more: $64.00

Alternative Plan "C"
Type: Supplemental welfare plan for employees with medical coverage under another health plan. The plan provides vision, dental, additional accident and possibly life insurance coverage, and outpatient prescription drug coverage.

Vision Service Plan (VSP)
Type: Vision Plan
Rates for 2001: Employee: $6.67; Employee +1: $10.49; Employee + 2: $14.82

Useful links: www.VascularSurgeryP.com

Member Services: 800-877-7195

Other Welfare Benefits:
Pre-tax Payment Accounts: Dependent Care & Health Care

PPA's are made possible by Section 125 of the Internal Revenue Code. PPA's are a way to set aside money to pay certain expenses and save on current taxes. When you set aside amounts in PPA's and draw on them only for qualifying expenses, you never pay federal, state, or Social Security tax on the amount set aside. There are two different accounts, one for unreimbursed medical expenses: Health Care PPA; and one for costs associated with caring for dependents of two working parents: Dependent Care PPA.


Supplemental Life Insurance:
Type: Term Life Insurance employee may purchase up to five times annual base pay. Maximum: $2,500,000. Coverage is reduced to 65% at age 65 and 50% at age 70. Insurance is portable.
Dependent Term Life insurance is available in amounts of $5,000, $10,000, or $20,000.

<table>
<thead>
<tr>
<th>AGE</th>
<th>Supplemental Life Rates:</th>
<th>AMOUNT</th>
<th>RATE/per month</th>
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<tbody>
<tr>
<td>Under 25</td>
<td>.045</td>
<td>$5,000</td>
<td>$.67</td>
</tr>
<tr>
<td>25 - 29</td>
<td>.050</td>
<td>$10,000</td>
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<tr>
<td>30 - 34</td>
<td>.065</td>
<td>$20,000</td>
<td>3.07</td>
</tr>
<tr>
<td>35 - 39</td>
<td>.080</td>
<td>$25,000</td>
<td>4.62</td>
</tr>
<tr>
<td>40 - 44</td>
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<td>$30,000</td>
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<td>45 - 49</td>
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<tr>
<td>50 - 54</td>
<td>.230</td>
<td>$40,000</td>
<td>11.11</td>
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<tr>
<td>55 - 59</td>
<td>.430</td>
<td>$45,000</td>
<td>16.02</td>
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<td>60 - 64</td>
<td>.660</td>
<td>$50,000</td>
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<td>65 - 69</td>
<td>$1.100</td>
<td>$55,000</td>
<td>30.03</td>
</tr>
<tr>
<td>Over 70</td>
<td>$1.350</td>
<td>$60,000</td>
<td>36.04</td>
</tr>
</tbody>
</table>
Personal Accident Insurance:
Type: In addition to the $10,000 of accidental death insurance the University provides each employee at no cost. Personal accident insurance from $25,000 to $500,000 can be purchased for employee alone; or employee and family. This plan pays a benefit if insured should die or suffer a loss of eyesight or limb as a result of an accident.

Travel Assistance & Emergency Evacuation insurance is included in the plan at no additional cost.

Benefit Amounts: You may elect a Benefit Amount in $25,000 increments from $25,000 to $500,000, not exceeding 10 times Annual Base Salary.
Employee Cost: $.018 per $1,000 of coverage
Employee & Family: $.030 per $1,000 of coverage

CNA Long Term Care Insurance:
Type: Benefits from this plan help pay the cost of nursing home care, convalescent care, or home health care for patients requiring special care due to illness, injury, or the natural aging process. This is a tax qualified plan in which employee and spouse can select different levels of coverage. Rates available with automatic inflation protection or without. All premiums returned if participant dies before age 65.

Rates for 2001: Rates vary by age; consult Office of Benefits Administration
Customer Service: 800-528-4582
Useful Links: http://www.cnaltc.com

AFLAC Cancer Expense Protection Insurance:
Type: The USC medical plans cover the medical treatment costs for cancer. This plan pays benefits to cover those extra costs which occur when there is a serious illness. Benefits are paid directly to the employee, and regardless of any other type of insurances.

Rates for 2001:

<table>
<thead>
<tr>
<th></th>
<th>One Adult</th>
<th>Single parent family (1 Adult with children)</th>
<th>Family (Adults with or without children)</th>
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</thead>
<tbody>
<tr>
<td>Level 2:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$2,000 First</td>
<td>$27.60</td>
<td>$35.90</td>
<td>$47.80</td>
</tr>
<tr>
<td>Level 3:</td>
<td>$5,000 First</td>
<td>$30.70</td>
<td>$40.90</td>
</tr>
</tbody>
</table>

Customer Service: Steve Hanson 213-625-7375
Useful Links: http://www.aflac.com
Other USC Sponsored Benefits:

Worker’s Compensation
Telephone: 213-740-6205
Useful Links: http://srm.usc.edu

Disability Benefits
USC Disability Office: 213-740-5875
VPA: 800-495-2315
Useful Links: http://srm.usc.edu

Unemployment Insurance
Telephone: 213-740-6203
Useful Links: http://srm.usc.edu

Social Security Benefits
Social Security (FICA - OASDI) and Medicare (FICA - Medicare)
Telephone: 800-772-1213
Useful Links: http://www.ssa.gov

Retirement Plans
Basic Retirement Program for Faculty and Staff & Supplemental Retirement Plan
Type: Defined Contribution Plan. Information on investment choices:
FIDELITY: 800-343-0860; http://wps.fidelity.com/non-profits
PRUDENTIAL: 800-458-6333; http://www.prudential.com
TIAA/CREF: 800-842-2776; http://www.tiaa-cref.org
SUNAMERICA: 800-871-2000x6872; http://www.sunamerica.com
VANGUARD: 800-523-1188; http://www.vanguard.com

Support Staff Retirement Program
Type: Defined Benefit Plan
Information: 213-740-2768
# Directory

## Hospitals

<table>
<thead>
<tr>
<th>Hospital Name</th>
<th>Address</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>USC University Hospital</td>
<td>1500 San Pablo Street, Los Angeles, CA 90033-4612</td>
<td>323-442-8500</td>
</tr>
<tr>
<td>Huntington Memorial Hospital</td>
<td>100 West California Blvd., Pasadena, CA 91105</td>
<td>626-397-3664</td>
</tr>
<tr>
<td>LAC+USC Medical Center</td>
<td>1200 North State Street, Los Angeles, CA</td>
<td>323-226-2622</td>
</tr>
<tr>
<td>Methodist Hospital of Southern California</td>
<td>3000 West Huntington Drive, Arcadia, CA 91066-6016</td>
<td>626-445-4441</td>
</tr>
<tr>
<td>San Gabriel Valley Medical Center</td>
<td>430 West Las Tunas, San Gabriel, CA 91776</td>
<td>626-289-5454</td>
</tr>
<tr>
<td>Good Samaritan Hospital</td>
<td>1225 Wilshire Boulevard, Los Angeles, CA 90017-2395</td>
<td>213-977-2121</td>
</tr>
</tbody>
</table>

## Offices

<table>
<thead>
<tr>
<th>Office Name</th>
<th>Address</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>USC Center for Vascular Care</td>
<td>USC University Hospital, 1510 San Pablo St., Suite 514, Los Angeles, CA 90033-4612</td>
<td>323-442-5932</td>
</tr>
<tr>
<td>Pasadena Office</td>
<td>Huntington Memorial Hospital, 10 Congress St., Suite #504, Pasadena, CA 91105</td>
<td>626-792-1211</td>
</tr>
<tr>
<td>LAC+USC Medical Center</td>
<td>1200 North State St., #9442, Los Angeles, CA</td>
<td>323-226-5816</td>
</tr>
<tr>
<td>Arcadia Office</td>
<td>Methodist Hospital of So. California, 622 West Duarte Road, #102, Arcadia, CA 91007</td>
<td>626-792-1211</td>
</tr>
</tbody>
</table>

- **USC University Hospital**: 1500 San Pablo Street, Los Angeles, CA 90033-4612
- **Huntington Memorial Hospital**: 100 West California Blvd., Pasadena, CA 91105
- **LAC+USC Medical Center**: 1200 North State Street, Los Angeles, CA
- **Methodist Hospital of Southern California**: 3000 West Huntington Drive, Arcadia, CA 91066-6016
- **San Gabriel Valley Medical Center**: 430 West Las Tunas, San Gabriel, CA 91776
- **Good Samaritan Hospital**: 1225 Wilshire Boulevard, Los Angeles, CA 90017-2395

- **USC Center for Vascular Care**: USC University Hospital, 1510 San Pablo Street, Suite 514, Los Angeles, CA 90033-4612
- **Pasadena Office**: Huntington Memorial Hospital, 10 Congress Street, Suite #504, Pasadena, CA 91105
- **LAC+USC Medical Center**: 1200 North State Street, #9442, Los Angeles, CA
- **Arcadia Office**: Methodist Hospital of So. California, 622 West Duarte Road, #102, Arcadia, CA 91007
Vascular Laboratories

**USC University Hospital**
1500 San Pablo Street, Lower Level
Los Angeles, CA 90033
**Lab:** 323-442-8794
Fred A. Weaver, M.D.
Medical Director
  Office: 323-442-5988
  FAX: 323-442-5735
Susana Perese, RVT
Technical Director
  Office: 323-442-5917
  FAX: 323-442-8973

**Huntington Memorial Hospital**
100 W. California Blvd.
Pasadena, CA 91109
**Lab:** 626-397-8464
Steven Katz, M.D.
Medical Director
  Office: 626-792-1211
  FAX: 626-792-3144
Gayle Hurt, RVT
Technical Director
  Office: 626-397-8464
  FAX: 626-397-2175

**LAC+USC**
1200 State Street
Los Angeles, CA 90033
**Lab:** 323-226-4816
Vincent Rowe, M.D.
Medical Director
  Office: 323-226-5816
  FAX: 323-226-8019
Arutunyan, Arsen, RVT
Dan Brewer, RVT
Technical Support
  Office: 323-226-4618
  FAX: 323-226-3087
FACULTY

**Fred A. Weaver, M.D.**  
Professor of Surgery  
Chief, Division of Vascular Surgery  
Office: 323-442-5907  
Pager: 213-704-2582  
FAX: 323-442-5735  
e-mail: fweaver@surgery.usc.edu

**Douglas B. Hood, M.D.**  
Assistant Professor, Surgery  
Assistant Professor, Radiology  
Director, EndoVascular Therapies  
Office: 323-442-5885  
Pager: 213-919-7351  
FAX: 323-442-5735  
e-mail: dhood@surgery.usc.edu

**Steven G. Katz, M.D.**  
Associate Professor  
Clinical Surgery  
Office: 626-792-1211  
Pager: 626-245-3943  
FAX: 626-792-3144  
e-mail: skatz@surgery.usc.edu

**Roy D. Kohl, M.D.**  
Associate Professor  
Clinical Surgery  
Office: 626-792-1211  
Pager: 626-245-3942  
FAX: 626-792-3144  
e-mail: rkoahl@surgery.usc.edu

**Vincent L. Rowe, M.D.**  
Assistant Professor  
Surgery  
Office: 323-226-5816  
Office: 323-442-5951  
Pager: 213-704-7380  
FAX: 323-226-8019  
e-mail: vrowe@surgery.hsc.usc.edu

**Albert E. Yellin, M.D.**  
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Selected Readings

ANEURYSM


**ARTERITIS**


**BASIC SCIENCE**


**CARDIAC EVALUATION**


CEREBROVASCULAR


duplex criteria to identify 70% internal carotid artery stenosis. *J Vasc. Surg*,

51. Moore WS, Kempezinski RF, Nelson JJ, et al. Recurrent Carotid Stenosis,
Results of the asymptomatic carotid atherosclerosis study. *Recurrent Carotid,

52. Terramani TT, Roe VL, Hood DB, et al. Combined carotid endarterectomy and


54. Warlow C. Randomised trial of endarterectomy for recently symptomatic
carotid stenosis: Final results of the MRC European carotid surgery trial

55. Barnett HJ, Taylor DW, Eliasziw M, Et al. Benefit of carotid endarterectomy in
patients with symptomatic moderate or severe stenosis. *N Engl J Med*,

56. Paciaroni M, Eliasziw M, Sharpe BL, et al. Long-Term clinical and angiographic
outcomes in symptomatic patients with 70% to 99% carotid artery stenosis.


58. Kasper GC, Wladis AR, Lohr JM, et. Carotid thromboendarterectomy for recent

**DIABETES MELLITUS**


60. Atkinson MA and Maclaren NK. The pathogenesis of insulin-dependent

61. Clark, Jr CM and Lee DA. Prevention and treatment of the complications of

**ENDOVASCULAR**


**EXTREMITY**


**RENAral ARTERY**


**REPORTING STANDARDS**


**VASCULAR SURGERY PRACTICE AND ECONOMICS**


**THORACIC OUTLET**


**TRAUMA**


VENOUS


BOOKS


VASCULAR CARE

PREOPERATIVE EVALUATION

I. CAROTIDS - EXTRACRANIAL
   A. Careful history for localizing symptoms.
   B. Duplex Scan - Carotid
   C. MRI of head for symptomatic patients.

II. AORTIC AND LOWER EXTREMITY OCCLUSIVE DISEASE
   A. Document symptoms, walk patient or toe lifts in patients with claudication.
   B. Lower extremity arterial evaluation, exercise Doppler pressure and waveforms in claudicators only.
   C. Arteriogram
      1. Aorta, pelvis BIL runoffs-in-patients with diminished femoral pulses or femoral bruits; or if microembolic manifestations present, always full arteriogram
      2. Femoral - in absence of above and with normal femoral pulse, no iliac femoral Bruits.

IV. VISCERAL ARTERY
   A. In addition to AP aortogram-need lateral aortogram always.

V. RENAL ARTERY-OCCLUSIVE. All patients to obtain:
   A. Weight kg
   B. Screen for pheochromocytoma, urine 24 hour collection for VMA, metanephrines.
   C. 24-hour urine creatinine clearance.
   D. Isotopic renogram for flow, function and GFR.
   E. Renal artery duplex scan.
   F. Aortogram

VI. GENERAL
   A. For all arteriograms, hydrate pre-study, unless patient has history of congestive heart failure.
   B. Prior to all arteriograms, assess renal function, i.e., serum creatinine and BUN, inquire about iodine hypersensitivity.
   C. If positive, iodine allergy.
      1. Premed with steroids, cimetidine, benadryl prior to study.
      2. Use Nonionic contrast.

PERIOPERATIVE ORDERS

I. CAROTIDS - EXTRACRANIAL
   A. NPO p MN
B. ASA 1 tab PO night before and morning of OR
C. Cefazolin 1 gm on call to OR
D. Continue all antihypertensive and cardiac medications on schedule, i.e., do not withhold on day of operation.
E. Type and screen
F. Perioperative
   1. Arterial line S.G., C.V.P. line as indicated
   2. Nipride to keep BP sys S<160
   3. continue ASA
   4. Cefazolin 1 gm Q 8 hr x 3
   5. Neuro check Q 1 hr
   6. Continue cardiac and antihypertensive medications
G. Intraop Duplex Scan.
H. All patients to be awake and neurologically intact prior to leaving OR

II. ABDOMINAL AORTA, RENAL, VISCERAL
A. NPO p MN
B. Cefazolin 1 gm on charts to OR.
C. Continue antihypertensive and cardiac medications on day of operation
D. Clear liquids day prior to OR. Phospho-SODA Buffered saline 45 cc p.o. at 12 noon.
E. T & C 6 units PRBC's for aneurysms.
   T & C 4 units PRBC's for occlusive.
F. Cell Saver for all aortic cases.
G. Pre-Op arterial blood gas.
H. Weigh pre-op.
I. Perioperative
   1. Arterial line, central for S.G. line
   2. Foley
   3. Continue preop medications (antihypertensive and cardiac); continue postop IV or S.L. if possible.
   4. Cefazolin for 24 hours.
   5. Keep BP sys <160 with nipride
   6. Vascular pulse check especially femorals and pedals q 1 hr.

III. LOWER EXTREMITY
A. NPO p MN
B. Cefazolin 1 gm on chart to OR
C. ASA 1 tab PO night before and in AM
D. Continue cardiac and antihypertensive meds.
E. Type and screen
F. Culture all open lesions on extremity. In addition to cefazolin tailor antibiotics to culture and sensitivities.
G. Perioperative
   1. Arterial line Central or S.G. line
   2. Foley
   3. Continue meds as above
4. Vascular check Q 1 hr.
5. Cefazolin and others at least 24 hrs.

H. Intraop duplex scan vein grafts.

**DISCHARGE AND FOLLOW-UP**

I. CAROTIDS -EXTRACRANIAL
   A. MEDS:
      ASA 1 tab QD
   B. Discharge:
      Clinic appt within two weeks.
   C. Long Term:
      Carotid duplex scan Q 6 mos for 1 year, then annually

II. AORTIC OCCLUSIVE AND ANEURYSMS
   A. MEDS:
      ASA 1 tab QD
   B. Discharge:
      Clinic appt within two week
   C. Long Term:
      ABD Duplex to evaluate for aortic/graft false aneurysm Q 6 months for first year then annually

III. LOWER EXTREMITY
   A. MEDS:
      ASA 1 tab QD
   B. Discharge:
      Clinic appt within two weeks
      Instruct patient and family in wearing of elastic ACE wrap and avoiding prolonged dependency of leg.
   C. Long Term:
      Clinic visits q3 mos.
      Duplex scan of graft 1 month, then q3 mos. for first 12 mos.
      If no abnormalities q 6 mos x 1 yr → q 9 mos. X 1 yr → q 12 mos.

IV. RENAL
   A. MEDS:
      ASA 1 tab qd
   B. Discharge:
      Clinic appt within two weeks.
   C. Long Term:
      Clinic visits BUN/Cr, Renal Duplex q 6 mos x 1 yr then annually
VASCULAR PEARLS

I. PRE-OPERATIVE CARE AND PLANNING
   a. Talk to the attending before starting an operation about the set-up. It might not always be easy but it will save a lot of grief when he walks in the room.

   B. ANGIOGRAMS
      1) Optimize renal status before angiograms. Do not rush to the squirts. Most acute thrombosis in the face of long standing disease will do fine with some heparin while awaiting creatinines, etc.
      2) If renal function is bad (cr. > 2.0), use CO\textsubscript{2} angio as much as possible, except obviously in the arch and extracranial vessels.
      3) Be careful with IV fluids. Vascular patients have a bad habit of going into CHF. Most do fine with heparin locks.
      4) POUND ON YOUR INTERN IF HE/SHE PUTS IVASCULAR SURGERY INTO ARM VEINS. THAT'S WHY GOD GAVE VASCULAR PATIENTS HAND VEINS.
      5) Use a little discretion before calling cardiology. If there is no reason to expect silent ischemia (asymptomatic infarct on ekg), or a recent MI. THINK twice.
      6) Have a plan before you present the patient to the attending.
      7) The VASCULAR SURGERY resident calls staff, no one else. He/she sees the patient and films before calling.

II. THE OPERATING ROOM
   A. Don’t prep like a pansy. Everyone gets a good wide scrub with all wound edges being toweled and sheeted.

   B. Two suckers and bovies for any case that might be double teamed.

   C. Specific operations

   CAROTIDS
   A. Setup
      1) Roll transversely under the shoulders
      2) Extend the head and rotate to the opposite side (use donut under head if necessary)
      3) Keep hair out of the field (surgilube or cap)
      4) Prep
      5) Use four towels to drape, use towel clips
         a. parallel and just above the mandible
         b. vertical over the trachea
         c. along the clavicle
         d. vertical from clavicle to ear, be sure earlobe is exposed.
      6) Side sheets, the up sheet, but leave down so assistant can come in from above. Keep anesthesia out of way!
      7) Smooth sheet to cover lower part of field.
8) One bovie, one sucker.

B. Operation
   1) Incision along medial border of SCM
   2) Through platysma to expose IJ vein, with carotid lying beneath it.
   3) Watch out for the vagus nerve, hypoglossal nerve.
   4) Get out the CCA (not too much unless indicated), the ICA, and the origin of the ECA.
   5) Umbilical tapes around each vessel
   6) Be sure shunts are in the room

C. Postop
   1) You must wait in the room to be sure patient is moving all extremities.
   2) Normally, discharge patient on post-op. Day #1 unless there is a complication

LOWER EXTREMITY
A. Set-up
   1) Be sure to use protective padding under buttocks, feet and arms!!!
   2) Place two sheets under the leg.
   3) Place groin towel, only if you need access to both groins, sew in towel using separate gloves and instruments and then throw them off field. If only using one groin, use 3-4 small towel clips.
   4) Towel under buttocks.
   5) Towel vertical over lateral aspect of wound, then towel over lower abdomen. Hold in place with towel clips.
   6) Glove the foot. If open lesion, exclude from sterile field with Ioban drape
   7) Two side sheets, two up sheets, smooth sheet below.
   8) Two suckers, two bovies, one set at each incision
   9) Bump above knee when working infrageniculate, bump below knee with suprageniculate

B. Operation
   1) Use springs, not other self-retaining spreaders. Be sure you get the springs with the right angle where the points contact the tissue (Dr. Weaver’s).
   2) For femoral and other major large vessels (>5mm), use umbilical tapes and vascular clamps, not vesi-loops (note pronunciation). Do not place umbilical tapes around a vessel after you dissect it out. Wait until the entire dissection is completed and it’s time to give the heparin.
   3) Don’t cut collaterals. Occlude them gently with a vascular clip such that you can remove the clip at the end of the case.
   4) Saphenous vein
a. When harvesting the saphenous vein, it lies just over the investing fascia, two fingerbreadths lateral, two fingerbreadths inferior to the public tubercle.
b. Don’t tie the branches right on the vein where they will kink. If you do, prepare to hate yourself.
c. Expose the whole length of the vein before beginning to harvest. Then ligate and divide branches. Before dividing the ends, heparinize.
d. Use the inner aspect of the marking pen to mark the patted dry surface of the vein in order to prevent twisting.

5) Don’t raise flaps. Most complications are wound problems. Stay right on the vein and keep the tissue edges moist. When you close, don’t pull too tight on the sub-cuticular sutures. (this closure is preferred to staples).

6) Steri-strips are not necessary.

AORTAS attendings love these, so if you don’t screw up, be prepared to have a good time.

A. SETUP (prep out both groins in all aortic cases)
   1) Have the vascular retractor ready (OMNITRACT).
   2) Foley, NG tube mandatory
   3) Heel and buttock padding
   4) Tuck both arms
   5) Prep above nipples, table line to table line laterally, and to the knees (only need to prep the anterior thighs unless you may be doing an additional procedure –ie, fem-pop).
   6) Sew in groin towel again, change gloves when done.
   7) Use five towels (house configuration)
      a. Transverse across thighs
      b. Up each side
      c. One above each costal margin (like rooftop)
      d. No towel clips, two IOBANS
   8) Smooth sheet to cover lower part of field
   9) Two bovies and suckers, one at each hip

B. ABDOMEN
   1) Pack the "dukey tube" out of the abdomen.
   2) Mobilize the ligament of Treitz and start the aortic dissection at this level, not at the iliac bifurcation.
   3) ALWAYS REPERITONEALIZE THE AORTA. If adequate retroperitoneal tissue is not available, get omentum or rectus abdominus for coverage. Do not leave it bare or you risk an aortoenteric fistula
C. GROINS
1) For dissecting out the common femoral artery, do not use a vertical incision, but head toward the A.S.I.S. superiorly. Don't dissect out more SFA than you need, especially if you are going to anastomose to the common femoral.
2) In groins with no pulse, find the inguinal ligament and follow it to find the common femoral artery, it is easiest to find the artery at the ligament.
3) There is a vein anterior to the Common femoral artery under the inguinal ligament - watch for it when making tunnels or dissecting superiorly (the vein of BRACHT). The Lateral circumflex vein (of EXUME) is draped around the take off of the profunda, be careful.

D. EMERGENCY EMBOLECTOMIES
1) If done through a groin incision, do a longitudinal arteriotomy through the common femoral artery, unless the vessel is entirely normal. Otherwise you can cause or miss an intimal dissection that you will not be able to see through a transverse incision.
2) Use vein or fabric patch to close the arteriotomy if any question of narrowing.

E. TRAUMA
1) Good luck!!!
2) For popliteals, avoid dividing the entire knee and adductor canal musculature unless necessary. Remember that as the suprageniculate popliteal artery exits the adductor canal, it's in the breeze.
   a. Give mannitol prior to reperfusion.
   b. Don't do knee-jerk fasciotomies, there's a good chance it won't be necessary. You'll have to check the compartment pressures a few times post-op to see if they're becoming tense. WHEN IN DOUBT, DO FASCIOTOMIES.
   c. If you do perform a fasciotomy, skin graft at that setting unless you have a good reason not to.
3) Vein tends to be better received than prosthesis for interposition, but primary repair is best.
4) Post-op, elevate the legs: ankle above knee above groin above chest.

F. RANDOM PEARLS
1) DISSECT BY SMALL BITES WITH THE SCISSORS, NO SPREADING!!! (I'd rather you cut the vessel than tear it).
2) Low dose aspirin is good. Take backs are bad. Retroperitoneal aortic ruptures do not need to be made normotensive by our ER colleagues before induction of anesthesia. It's really a bummer when the systolic goes up just before the abdomen really starts to distend.
3) Vascular Surgery does the amputations. The Malt atlas has good descriptions and they are actually very fun cases.
   a. All the distal amputations; forefoot, Symes, BKA are based on a strong posterior flap. Wrap this way around the bone so that it is almost redundant. Otherwise, when you extend the next more proximal joint, the muscle retracts posteriorly, the bone pushes on the skin, and you've got another case for M&M.
4) Pray for good junior residents.
5) Pray even harder for a good intern.
6) Groin hematomas go back to the OR when discovered.
7) Groins really can be made dry prior to closing, even on heparin, really. If concerned about persistent oozing, leave a closed suction drain.
8) Gentamicin is bad. Third generation cephalosporin is good.
9) Criticism tends to be a bit painful, but educational. Don't let it get you down.

DISCLAIMER:
THIS MANUAL, "Vascular Pearls," VERSION 5 IS IN NO WAY MEANT TO BE AN ALL INCLUSIVE GUIDE TO THE CARE OF THE VASCULAR PATIENT. SEVERAL OTHER IMPORTANT REFERENCES INCLUDE:

1. THE REMAINDER OF THE PACKET INCLUDES DETAILED PRE-OPERATIVE STEPS FOR ALL THE MAJOR VASCULAR CASES. BE SURE YOUR INTERNS ARE FAMILIAR WITH IT AS WELL.
2. THE MALT ATLAS, AN EXCELLENT REFERENCE FOR AMPUTATIONS.
3. CURRENT THERAPY IN VASCULAR SURGERY. A CONCISE, EASY TO READ TEXT COVERING MOST OF THE PROBLEMS YOU WILL SEE ON THE SERVICE.
4. I WOULD STRONGLY ADVISE OBTAINING A COPY OF ALL THE REPRINTS FROM DR. WEAVER ON VASCULAR SURGERY. THIS IS THE WAY WE DO IT, FROM TRAUMA TO ELECTIVE CARE. YOU WILL BE ASKED ABOUT THEM, SO READ THEM!!!
I. FACULTY AND STAFF

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   Steven G. Katz, M.D., Associate Professor of Clinical Surgery
   Roy D. Kohl, M.D., Associate Professor of Clinical Surgery
   Vincent L. Rowe, M.D., Assistant Professor of Surgery
   Albert E. Yellin, M.D., Professor of Surgery, Associate Chief of Staff,
      LAC+USC Medical Center
   Hong Yu, Ph.D., Assistant Professor of Research

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   Karen Quiroz, Medical Assistant
   Chyrle Whalen, RN, CCRN

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   John Logan, R.V.T., Technical Director, LAC+USC Vascular Laboratory
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   Valerie Joy Hunt, M.S.N., R.N., CS

D. ADMINISTRATIVE STAFF:
   Amanda Amaya, Medical Secretary
   Maria Gil, Medical Secretary
   Roberta Giolli, CPA, Business Administrator
   Judith Gonzales, Account Representative-Billing and Collections
   Rose Kassardjian, Medical Secretary
II. Division of Vascular Surgery

Treatment of Abdominal Aortic Aneurysms - The USC Division of Vascular Surgery’s first aortic stent graft for treatment of an abdominal aortic aneurysm was placed on March 6, 2000 at USC University Hospital. 31 stent grafts have been successfully placed as of 12/31/01. The USC Center for Vascular Care continues to see an increase in the number of cases referred for evaluation of this procedure as more physicians become aware of its availability at USC.

Endovascular Program – The USC Division of Vascular Surgery has provided an increasing amount of endovascular treatments in 2001. Total endovascular activity has increased 31% from 2000. As a result, the USC Division of Vascular Surgery has developed a clinical fellowship specifically for endovascular training.

In addition, the USC Center for Vascular Care has expanded its endovascular program to Huntington Memorial Hospital. The need for this is exemplified in the number of diagnostic and treatment procedures performed. The first endovascular procedure performed by USC Center for Vascular Care at Huntington Memorial Hospital was on October 5, 2001. From that time through December 31, 2001, the Center has performed 48 endovascular procedures.

First Endovascular Fellow – The USC Division of Vascular Surgery’s first vascular fellow started on July 1, 2001. His experience has included that in the newer technology available with endovascular procedures as well as research pursuits.

Clinical Studies – The USC Division of Vascular Surgery was awarded five clinical studies in year ending December 31, 2001. This includes one which is an NIH subcontract and one NIH in which vascular surgery faculty is co-investigator.

Discovery Health – USC Division of Vascular Surgery was highlighted on Discovery Health Channel which initially aired in August 2001. The piece followed the diagnosis and treatment of a patient with an abdominal aortic aneurysm.

5th Annual Max R. Gaspar Symposium – This year’s symposium brought world renowned surgeon Lazar J. Greenfield, M.D. as the Gaspar Visiting Professor.
Dr. Greenfield is the inventor of the Greenfield Vena Cava Filter and has published what is considered a recognized leader among surgical textbooks.

USC University Hospital Lunch and Learn Presentations – USC Division of Vascular Surgery faculty presented on the subjects of Abdominal Aortic Aneurysms and Hypertension at two lectures sponsored by USC University Hospital which brought in members of the surrounding communities.


Division of Vascular Surgery

Articles


Book Chapters


IV. Offices Held by faculty members in scientific societies and professional organizations during the last year.

Division of Vascular Surgery

Roy D. Kohl, M.D.
American College of Surgeons, Membership Committee Chairman

Vincent L. Rowe, M.D.
American College of Surgeons, Young Surgeons Representative for Southern California Chapter
National Kidney Foundation of Southern California Board of Directors

Fred A. Weaver, M.D.
Southern California Chapter of the American College of Surgeons, Secretary-Treasurer
Los Angeles Surgical Society, President

Albert E. Yellin, M.D.
Los Angeles Academy of Medicine, Alternate Councilor
President's Council
Salerni Collegium, Board of Directors
Society of Graduate Surgeons, Board of Directors
Recorder

Hong Yu, Ph.D.
International Consultant to Department of Surgery, Zhejiang University, China,

V. Editorships and Associate Editorships: role and journal name for the past year.

Vincent L. Rowe, M.D.
Medicine, OB/GYN, Psychiatry, and Surgery. E-Medicine Online Textbook

Fred A. Weaver, M.D.
The American Surgeon
Annals of Vascular Surgery
MVP Video Journal of General Surgery

Albert E. Yellin, M.D.
Editorial Board, International Vascular Surgery
Contributing Editor, Physician’s Journal Update

VI. University and School of Medicine Service
Faculty who serve on university-wide committees or the Academic Senate

Albert E. Yellin, M.D.
Attending Staff Association Executive Committee, 1977 – present
Joint Liaison Committee, LAC+USC Professional Service Agreement, 1977 - present
USC-UH Healthcare Consultation Center Committee, 1991- present
VII. Please list faculty who serve on School of Medicine Committees, as Task Force Chairs, or in administrative roles in the School

Fred A. Weaver, M.D.
Executive Committee of the Graduate Medical Education Committee.

Albert E. Yellin, M.D.
USC-UH Interdisciplinary Practices Committee, 1991 - present
Los Angeles County+USC Medical Center Scientific Conduct Committee, 1998 - present
Institutional Bio-Safety Committee, 2000 - present
University Pathology Association Board of Directors, 2000 - present

VIII. Please list faculty who provide outstanding service to the Community through Outreach Programs (describe the program briefly)

Vincent L. Rowe, M.D.
Received the Outstanding Community Service Award from Operation Reach Back, a group formed to recognize community achievements.

AboKin: African Education Mission Project – Group provides missionary work focused on training ministries in Africa.

Dialysis de Honduras - This organization has established hemodialysis centers in two cities in Honduras. Dr. Rowe volunteers to perform hemodialysis access procedures, revise access and train existing surgeons to on procedures to improve surgical outcomes and reduce complications.

IX. Programs and projects on which faculty are working with colleagues or others outside the United States, as well as collaborations with major US institutions.

A Prospective Clinical Evaluation of Artegraft® Bovine Vascular Graft Compared to ePTFE Vascular Grafts in Hemodialysis Access- Artegraft Corporation

A Double-Blind Randomized, Placebo-Controlled Study to Assess the Efficacy and Safety of Circulase for the Treatment of Critical Leg Ischemia-Welfide International Corporation
Insulin and Sarcopenia in the Elderly, National Institute of Health

Interactive Effects of Fat and Amino Acid Intake on Muscle Proteins in the Elderly, National Institute of Health

XII. Educational Activities

Undergraduate Keck School of Medicine (graduate and undergraduate courses/programs offered during the past year)

New Frontiers in the Management of Venous Disease, The Fifth Annual Max R. Gaspar Vascular Disease Symposium: The topic for the symposium concerned the management and treatment of venous disease, and had 150 participants. This year’s visiting professor was Lazar J. Greenfield, M.D., Professor and Chairman, Department of Surgery, and Frederick A. Coller Distinguished Professor of Surgery at the University of Michigan Medical School was the Gaspar Visiting Professor. Dr. Greenfield is the inventor of the Greenfield vena cava filter, and delivered at lecture on “Current Surgical Management of Upper Extremity Effort Thrombosis” at the symposium and “Caval Filter Protection for Pulmonary Embolism:” for the Gaspar Lecture.

Technological Innovations in the Management of Venous Disease: One one-day course, held in the Department of Surgery Surgical Skills Lab provided an overview of minimally invasive technological innovations in the management of chronic venous disease allowing surgeons to gain experience with the application of current techniques for the management of varicose veins, chronic venous insufficiency and caval interruption. Specific didactic and hands on sessions occurred for SEPS, radio frequency occlusion (VNUS) and caval filter placement.

Principles of Endovascular Surgery: Basic Skills and Techniques: One two-day courses, held in the Department of Surgery Surgical Skills Lab provided an overview of endovascular surgery, basic principles of angiography and radiation safety, and an overview of basic endovascular technology. In vivo sessions offered the participant the opportunity to practice various endovascular techniques under faculty supervision.

LAC+USC Vascular Conference: This is a two-hour, multidisciplinary (Surgery, Radiology, Neurology, Cardiology) conference that includes bedside rounds and classroom discussions of patients with peripheral vascular disease at LAC+USC Medical Center. (Weekly)
USC University Hospital Teaching Rounds: Hospital bedside rounds are held once per week with attending staff and residents in Vascular Surgery at USC University Hospital. (Weekly)

Vascular Morbidity and Mortality Conference: Review of vascular patient complications with residents on the vascular surgery service and attending staff. Held at Huntington Memorial Hospital. (Monthly)

Journal Club: Residents review assigned articles, summarizing the salient features including study design and results, followed by open discussion by those in attendance. Organized by Douglas Hood, M.D. and attended by Division faculty, clinical staff and residents currently on the Vascular Surgery Service. Held at the Healthcare Consultation Center. (Monthly)

Q/A- Non invasive Vascular Lab: NVL Q/A meetings are held quarterly and attended by all technical and medical staff from USCUH, LAC+USC, Huntington Memorial Hospital, Chapman Medical Center and St. Luke Medical Center. These meetings are held to review accuracy of NVL exams as well as other proposed changes in operation and protocol for vascular labs at all institutions. Held at the Healthcare Consultation Center. (Quarterly)

XII. Where students, residents and fellows who have completed training during the past year are going

The Division of Vascular Surgery’s first vascular surgery resident joined a private practice vascular surgery group in the San Fernando Valley.

XIII. Highlights of Clinical Practice—Brief description of clinical services offered, any new services begun or locations developed

Treatment of Abdominal Aortic Aneurysms-The USC Division of Vascular Surgery’s first aortic stent graft for treatment of an abdominal aortic aneurysm was placed on March 6, 2000 at USC University Hospital. 31 stent grafts have been successfully placed as of 12/31/01. The USC Center for Vascular Care continues to see an increase in the number of cases referred for evaluation of this procedure as more physicians become aware of its availability at USC.

Endovascular Program – The USC Division of Vascular Surgery has provided an increasing amount of endovascular treatments in 2001. Total endovascular
activity has increased 31% from 2000. As a result, the USC Division of Surgery has developed a clinical fellowship specifically for endovascular training.

In addition, the USC Center for Vascular Care has expanded its endovascular program to Huntington Memorial Hospital. The need for this is exemplified in the number of diagnostic and treatment procedures performed. The first endovascular procedure performed by USC Center for Vascular Care at Huntington Memorial Hospital was on October 5, 2001. From that time through December 31, 2001, the Center has performed 48 endovascular procedures.

First Endovascular Fellow – The USC Division of Vascular Surgery’s first vascular fellow started on July 1, 2001. His experience has included that in the newer technology available with endovascular procedures as well as research pursuits.

Clinical Studies – The USC Division of Vascular Surgery was awarded five clinical studies in year ending December 31, 2001. This includes one which is an NIH subcontract and one NIH in which vascular surgery faculty is co-investigator.

Discovery Health – USC Division of Vascular Surgery was highlighted on Discovery Health Channel which initially aired in August 2001. The piece followed the diagnosis and treatment of a patient with an abdominal aortic aneurysm.

5th Annual Max R. Gaspar Symposium – This year’s symposium brought world renowned surgeon Lazar J. Greenfield, M.D. as the Gaspar Visiting Professor. Dr. Greenfield is the inventor of the Greenfield Vena Cava Filter and has published what is considered a recognized leader among surgical textbooks.
DIVISION WEB SITE
The USC Vascular Surgery Residency Training Program endeavors to comply with the ACGME requirements for the selection of candidates for our program. The process begins well over a year in advance of the academic year being considered. In accord with the ACGME requirements on resident selection, the USC Vascular Surgery Training Program selects from among the eligible applicants on the basis of preparedness, ability, aptitude, academic credentials, communication skills, and personal qualities such as motivation and integrity. We do not discriminate with regard to sex, race, age, religion, color, national origin, disability or veteran status.

APPLICATION PROCESS

A standard letter (Sample attached) is mailed to the inquiring applicants which identifies the particular information required.

1. Curriculum Vitae
2. Personal Statement
3. Universal Application (copy is sent, if needed)
4. Transcripts and Dean’s Letter from medical school
5. Three or more letters of recommendation
6. USMLE Step I and II scores

Applications are received beginning September 1 through February 15 of the preceding year.

SELECTION COMMITTEE AND PROCESS

A committee of three to four faculty members reviews all of the applicants and score them (Sample Score Sheet attached). The selection committee is composed of faculty in the Division of Vascular Surgery.

The following basic requirements are confirmed for all applicants upon initial review of the applications:

1. Graduates of ACGME accredited medical schools in the United States and Canada.
2. All Graduates of medical schools outside the United States and Canada have a current valid certificate from Educational Commission for Foreign Medical Graduates (ECFMG), or a full and unrestricted license to practice medicine in the United States.
3. All Graduates of medical schools outside the United States have completed a Fifth Pathway program provided by an LCME-accredited medical school.

4. All Graduates must comply with the requirements for licensure by the medical Board of California.

Each committee member then separately reviews in depth those applicants that meet the above criteria. The applicants are then ranked. The sample score sheet indicates the various areas that are reviewed such as scores, research background, etc. After all the applicants are evaluated, a selection committee meeting is arranged to decide which applicants will be invited for interview.

Letters of invitation are then mailed requesting a response within two weeks. Letters are also sent out shortly after notifying those applicants who were not selected for interview. After all responses are returned and those who are actually coming for interview are identified, the agenda and other information are sent to those interviewees.

INTERVIEW PROCESS

Interviews are completed by the end of April each year in order to comply with the National Resident Matching Program’s schedule. On the day of interview, the attached agenda is generally followed. The day begins with a meeting of all interviewees, faculty and current residents, followed by morning interviews. At noon, lunch in the Faculty Center is arranged to include interviewees, faculty and current residents, followed by a short tour of the campus and facilities. After the tour, afternoon interviews continue until all applicants have been interviewed individually by each faculty participant. There could be as many as five or six faculty participating. At the end of the day, the faculty convene again to discuss their individual recommendations and ranking is decided. A sample agenda is attached, as well as an interview Evaluation Form.

NATIONAL RESIDENT MATCHING PROGRAM (NRMP)

The USC Vascular Surgery Residency Training Program participates each year in the NRMP match. Attached is a sample of the schedule that is followed during the course of our selection process. After the NRMP has received the Program ranking lists and the Applicant ranking lists, they send the results usually no later than June of the preceding academic year.

Upon receipt of the results, letters of congratulations are sent to those who match with our program, as well as, letters of regret to those who did not. (Samples attached).
## USC VASCULAR SURGERY RESIDENCY TRAINING PROGRAM
### APPLICATION AND SELECTION PROCESS

<table>
<thead>
<tr>
<th>TASK</th>
<th>COMPLETION DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Register Program with NRMP office via the WEB</td>
<td>December, 2002</td>
</tr>
<tr>
<td>Deadline for accepting applications</td>
<td>February 14, 2003</td>
</tr>
<tr>
<td>Faculty reviews applications and selects candidates for personal interview</td>
<td>February 3-14, 2003</td>
</tr>
<tr>
<td>Invitations for candidate interviews sent; letters of regret to those applicants not selected</td>
<td>February 17-28, 2003</td>
</tr>
<tr>
<td>Candidate interviews and “Thank you” letters to interviewees</td>
<td>March 15 March 22 2003</td>
</tr>
<tr>
<td>Final selection completed;</td>
<td>May 9, 2003</td>
</tr>
<tr>
<td>Final date for Rank Order Submission via the WEB</td>
<td>May 14, 2003</td>
</tr>
<tr>
<td>Notification of Match Results to Program Directors and Applicants via the WEB</td>
<td>June 04, 2003</td>
</tr>
<tr>
<td>Program sends letter of appointment to matched applicants who should sign and return</td>
<td>June 6-30, 2003</td>
</tr>
<tr>
<td>Letters of regret to unmatched interviewees not selected</td>
<td>June 6, 2003</td>
</tr>
</tbody>
</table>
USC VASCULAR SURGERY  
Applicant Faculty Review Form

Applicant Name: __________________________________ Date of Review:___________

Residency Program: ________________________________ Years:___________________

Medical School: __________________________________ Years:___________________

USMLE STEP I: ________________________ STEP II: _____________________________

ABSITE PBY 1_______, 2_______, 3_______, 4_______, 5_______, 6_______, 7_______

<table>
<thead>
<tr>
<th>Chairman's Letter</th>
<th>5 Chairman's Letter Outstanding</th>
<th>4</th>
<th>3 Chairman's Letter Average</th>
<th>2</th>
<th>1</th>
<th>0 No Chairman's Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Letters of Recommendation</td>
<td>5 Consistently Outstanding With Superlatives</td>
<td>4</td>
<td>3 Average with The Usual Letters Adjectives</td>
<td>2</td>
<td>1</td>
<td>Letters identify Significant Weaknesses</td>
</tr>
<tr>
<td>Personal Statement</td>
<td>5 Creative Unique Superbly Written</td>
<td>4</td>
<td>3 Average Personal Statement</td>
<td>2</td>
<td>1</td>
<td>Among the Worst, Poorly Written</td>
</tr>
<tr>
<td>Dean’s Letter</td>
<td>5 80 – 100% ile</td>
<td>4</td>
<td>3 40-59%ile</td>
<td>2</td>
<td>1</td>
<td>Bottom 20% ile</td>
</tr>
<tr>
<td>Research Experience</td>
<td>2 At least one peer review Publication</td>
<td>1 No peer review Publications but Time spent in research</td>
<td>0 No research experience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Evaluation</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Faculty signature________________________________________ Date:________________________
APPLICATION PROCESS  cont’d

USC
VASCULAR SURGERY
RESIDENCY TRAINING PROGRAM
CANDIDATE INTERVIEW FORM

APPLICANT NAME: ______________________________________________________

INTERVIEWER: _______________________________________________________

DATE OF INTERVIEW: _________________________________________________

Please rate the applicant in the seven categories listed below according to the following criteria:

5 - Among the best I have seen (top 20th percentile)
4 - Strong in this area (60-80%)
3 - Average rating (40-60%)
2 - Weak in this area (20-40%)
1 - Unacceptable in this area (lowest 20th percentile)

APPEARANCE  Neat, appropriate and appears comfortable  5  4  3  2  1

COMMUNICATION SKILLS  Shows initiative in conversation, fluent oral expression, listens attentively  5  4  3  2  1

MATURITY  Professional attitude with positive life experiences  5  4  3  2  1

SELF CONFIDENCE  Poised without arrogance  5  4  3  2  1

APPARENT ABILITY TO WORK EFFECTIVELY WITH OTHERS  Appears to be a team player, cooperative attitude, eager to assume both teacher and learner roles  5  4  3  2  1

COMPATIBILITY WITH OUR PROGRAM  The kind of resident you would be pleased to have on your service  5  4  3  2  1

OVERALL RATING:  5  4  3  2  1

COMMENTS:
_______________________________________________________________________
_______________________________________________________________________

FACULTY SIGNATURE: _________________________________________________
Date

Name
Address
City

Dear

Your application for the University of Southern California Vascular Surgery Residency Training Program has been reviewed and we are pleased to invite you to interview with our faculty on _________________________. Since we are only interviewing a few candidates for our single available position in 2002, it is essential that you advise us as soon as possible if you plan to attend the interview. Please complete the attached response form and fax it to Kathy Pollock at 323-442-5735 as soon as possible.

If you do decide to accept our invitation for an interview, an agenda will be sent to you in the next few days. Please do not hesitate to contact my office if you have any questions..

Sincerely,

Fred A. Weaver, MD
Chief, Division of Vascular Surgery
USC VASCULAR SURGERY RESIDENCY TRAINING PROGRAM

NAME__________________________________________________

ADDRESS_______________________________________________

________________________________________________________

PHONE/FAX______________________________________________

____Yes, I will attend the interview session on ______________

____No, I will not be able to attend the interview session.

________________________________________________________

(signature)

PLEASE FAX TO 323-442-5735 AS SOON AS POSSIBLE.
Date

Name
Address
City

Dear

Your application for the University of Southern California Vascular Surgery Residency Program has been received and reviewed. There were so many well-qualified applicants interested in our program that the decision was very difficult. Regrettably, I must inform you that you were not selected for interview.

We do however appreciate your interest in our program. Good luck in your future endeavors.

Sincerely,

Fred A. Weaver, MD
Chief, Division of Vascular Surgery
Date

Name
Address
City

Dear

We are most pleased that you have matched with the University of Southern California Program for your vascular surgery residency training. Your academic background and diversified training is extraordinary, and we are confident that you will be an asset to our residency program.

Please confirm your acceptance of the residency appointment by signing and returning this letter to the address listed below.

We look forward to having you participate in our residency program beginning July 1, 200.

Sincerely,

Fred A. Weaver, MD
Chief, Division of Vascular Surgery

ACCEPTED ___________________________ DATE _____________________

(name of resident)
Dear

Congratulations on your match with _______________________________. Although we are very happy for you, we would have been most pleased if you had matched with USC.

You were one of the stronger candidates considered for our program. We were surely impressed with your credentials and your demeanor during the interview process.

____________, best wishes with your residency at ______________, as well as any other future endeavors, both personal and professional.

Sincerely,

Fred A. Weaver, MD
Chief, Division of Vascular Surgery