CVCTA Education

The Advantages of PVCTA Training

Dear colleague,

Cardiovascular specialists are becoming increasingly interested in complementing their cardiac CT angiography practice with training and certification in peripheral vascular CT angiography (PVCTA). Since the announcement of the PVCTA training guidelines in September 2007, hundreds of clinicians have found training in PVD to be an important and cost-effective endeavor. There are numerous benefits for your patients and for your clinical practice. In this article, I will cover some of the advantages of training in PVCTA and describe the road to becoming certified to perform and read PVCTA cases.

Atherosclerosis is a systemic disease and it is known that up to 50% of patients with coronary artery disease have co-existing peripheral vascular disease (PVD). PVD is often under-appreciated and under-diagnosed by physicians. Taking the time to assess patients for PVD is important and beneficial. Some practices already have robust PVD programs in place including an interventional component. Many more have limited involvement in this area. For Cardiology practices that have not been involved with PVD, this is an excellent time to become more involved. A PVD program can attract many more patients to your practice, open up new revenue streams, and provide a more comprehensive solution for your patients and your medical community.

PVCTA is an excellent platform around which you can start a PVD program or grow your existing program. 16 and 64 slice CT machines provide highly impressive images of the peripheral vasculature, and in many centers PVCTA is completely replacing invasive angiography. If you have already trained to Level 2 in cardiac CTA and have some proficiency with 3D workstations, then picking up PVD will be relatively straightforward. Students often find that using their existing cardiac CT skills and expanding them into new territories is both worthwhile and fun. When taught as part of a highly structured and comprehensive program, you can learn or re-learn PV anatomy easily and understand the clinical implications and treatment pathways.

The physicians I have taught are surprised by the incredible amount of anatomic detail you can see with PVCTA. Compared to Cardiac CTA, the peripheral arteries are not in motion, are larger and are less tortuous in general. That means we get very high quality images of atherosclerosis and other pathology. The sensitivity and specificity of PVCTA are both above 95%, when compared to invasive angiography. Of course the big difference is that with PVCTA, we can see into the vessel walls and characterize the plaque, whereas an invasive angiogram only looks at the lumen. The ability to assess and characterize different types of plaque is becoming more important in choosing more targeted medical and interventional therapies. In addition, we can evaluate stents, stent grafts and other interventions because of the larger size of these devices in the periphery.

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Programs that are currently performing Cardiac CTA have found it necessary to adopt PVCTA as well. The Deficit Reduction Act has dramatically impacted reimbursement for all imaging procedures making it much more difficult to make your CT program break even. PVCTA adds a new revenue stream without any increase in costs or any need for new equipment.

Reimbursement for PVCTA has also been established for a significant amount of time, so you should not encounter the variability in reimbursement we see with Cardiac CTA. For this reason, many practices are finding that a solid PVCTA program can be the centerpiece of a PVD program which can also be a profit center for a cardiology practice.

The ACC has issued competency guidelines for PVCTA that are reasonable and attainable with a focused and efficient effort. Just as in cardiac CT, there is a certain knowledge base and skill set which you must master. The guidelines stipulate that one must review 50 mentored cases with a Level 3 instructor, with an additional 100 cases passively reviewed on video. We feel these guidelines may result in under training because they do not stipulate a mix of pathology or anatomy and there should be more mentoring. Therefore, our class mentors you to 150 cases with a wide variety of anatomy and pathology. These high quality standards are similar to what propelled our Cardiac CTA class to be the most popular training program in the US.

Our programs are designed for subject mastery, time efficiency and minimizing costs. We teach PVCTA in a very systematic fashion. The pre-course component includes a number of didactic lectures that help you learn the core knowledge necessary for expertise in PVD. These lectures include a review of PV anatomy, acquisition, how to use the workstation, and a step-by-step guide to our PVD review system. There is an onsite component in which you will move through multiple PVD cases with a Level 3 instructor. The emphasis in this portion is on learning a systematic review methodology. This systematic approach for each vascular territory will ensure comprehensive evaluation as well as time-efficiency in reading the studies when you are back in the clinic. The program is divided up based on six main anatomic areas; thoracic aorta, arch and carotids, aortic and mesenteric, runoff and upper extremities. There is a good balance of cases that we will review in each of these areas.

Once you have our system down, you will finish the course at home with our specialized MedMind software, which has already been used by over 400 cardiac CTA students. This software simulates the classroom environment in that you will be given a case complete with clinical history, have to review it on your workstation, and will then commit to a diagnosis. Our software then coaches you based on your responses. Finally, you will watch an expert reviewing the case completely. We have also developed our own segmentation model for all of the peripheral vascular beds, helping you to organize and understand the anatomy and pathology better.

When you have completed our course you will have exceeded the ACC/AHA competency requirement for PVCTA by 200% and will have confidence in performing and interpreting these studies. In addition, your interpretation speed and accuracy will improve dramatically so that you truly develop expertise in PVCTA. As physicians progress through the course we typically see 300-400% increases in reading speed.

In conclusion, if you are trained in Cardiac CTA, we encourage you to attend our Peripheral Vascular CTA course. Classes are held in San Francisco as well as many other parts of the country. If you have a large group of clinicians who are interested in training with us, ask us about coming to your site for training.

Sincerely,

Tony DeFrance, M.D. and the CVCTA Education Team

CVCTA Education
325 Sacramento Street
San Francisco, CA 94111
(415) 772-0908
(415) 772-5686 fax
www.cvcta.com