The Vascular Education Foundation was established to increase awareness of the dangers and severity of vascular disease through the education of both the community and healthcare professionals.



Summer 2019

Major Breakthrough in Treatment of Carotid Artery Disease

A new, FDA-approved procedure to treat carotid artery disease dramatically reduces the risk of stroke during and after carotid angioplasty and stenting (CAS). TransCarotid Artery Revascularization, or TCAR, is minimally-invasive, results in less nerve damage, lower risk of infection and reduces the risk of both stroke and heart attack in your patients.



When your patient complains of bouts of dizziness, confusion or blurred vision, or has experienced passing loss of coordination, weakness or numbness, especially in one side of the body, you may diagnose a mini-stroke or a transient ischemic attack (TIA). Because 1 in 3 people experiencing a TIA will have a fullblown stroke, usually within a year after the TIA, your patient must be screened immediately. Your patient may have carotid artery disease.

The carotid arteries run along either side of the neck and can be felt just below the angle of the jaw. These arteries deliver the oxygen-rich blood necessary for brain function.

You may also send your patient for an ultrasound or angiogram when you hear an abnormal sound, or bruit, through a stethoscope placed on the neck or when your patient has disease risk factors such family history, high blood pressure, diabetes, obesity or tobacco use. You may also suggest a screening if your patient has peripheral artery disease or vascular disease somewhere else in the body.

Carotid artery disease, or carotid artery stenosis, occurs when the arteries are narrowed by atherosclerosis, a build up of plaque containing cholesterol, fat, calcium, proteins and waste. When the disease progresses to 70% or more narrowing, this places your patient at risk of having a stroke.

Each year, about 15 million people world-wide experience a stroke. About one-third of strokes are caused by carotid artery disease, and 80% of all strokes are



035" extra support guidewire, dilator and Uber Flex™ arterial sheath designed in combination for atraumatic vessel entry.
 Angled-tip Uber Flex™ arterial sheath maintains coaxial position in lumen for smooth interventional device delivery and optimized flow reversal.

3. Uber Flex™ arterial sheath includes outer stopper with suture grooves and hub eyelets for sheath stability.

4. Extended working channel for interventional device delivery enhances transcarotid ergonomics away from image intensifier.
5. Shorter length 57cm EN ROUTE Transcarotid Stent delivery system optimizes working area and reduces stored energy for precise stent deployment.

6. Dynamic flow controller modulates reverse flow rate and integrated, 200µ filter captures embolic debris.

7. Percutaneous Venous Return Sheath completes the circuit and returns filtered blood to the patient.

preventable.

To prevent a life-altering stroke, carotid artery disease must be treated. Referring your patient to a vascular surgeon ensures that treatment is determined by your patient's test results, current health and medical history, as only a vascular surgeon can perform both surgical options or interventional options.

For decades, carotid endarterectomy (CEA) has been the "gold standard" of treatment. During this 90-minute to 2-hour surgical intervention, the vascular surgeon will first use a plastic tube to reroute blood flow to ensure the brain continues to receive oxygen. The surgeon will make a 8-10 cm incision in the patient's neck where the blockage has been located, then open the carotid artery. The plaque will be removed from the artery and the artery repaired. The surgeon will then restore blood flow to the brain along its natural path.

Some patients, however, are not candidates for CEA, due to previous neck surgeries, radiation to the neck, having a higher surgical risk or unusual physiology; these patients have been treated with transfemoral carotid angioplasty and stenting (CAS).

Trransfemoral CAS is an inferior treatment option for carotid artery disease; only 17% of patients undergo a CAS procedure. The vascular surgeon inserts a catheter into the femoral or brachial artery, and guides it via x-ray through the aorta to the carotid artery. Contrast materials are injected through the catheter to determine the exact location and severity of blockage. When identified, a balloon is inflated, compressing the plaque against the artery wall, and then a stent is placed to hold the newly widened artery open.

Transfemoral CAS has an

associated 4% risk of stroke, compared to surgery which has just a 1% risk of stroke.

With the recent invention of TCAR, the high risk of heart attack and stroke during and after CAS has been drastically reduced, with excellent clinical data to support results.

In a TCAR procedure, your patient's vascular surgeon will make a small incision just above the clavicle. A puncture is made into the carotid artery and a small tube is placed inside the artery, which is connected to the transcarotid neuro-protection system (NPS). The NPS temporarily directs blood flow away from the brain and captures plaque debris that dislodges from the artery. This dangerous debris is diverted away from the brain, preventing a stroke from happening. The blood is then filtered and returned to the femoral vein through a second tube placed in the groin. While the brain is protected during this temporary flow reversal, a stent is placed in the carotid arterv to stabilize the plaque and help prevent against future stroke. The blood flow is then returned to normal and the NPS is removed.

The patient can be treated using a local anesthesia. Any disease in the aorta, aortic arch and the origin of the cartoid arteries is entirely avoided and the femoral artery is left untouched. The procedure takes approximately 40 to 80 minutes.

Your patient will recover more quickly. There is less risk for nerve damage, heart attack, bleeding and stroke.

TCAR has been clinically proven as a less-invasive alternative to CEA. Patients who are not candidates for CEA now have a significantly better choice of procedure. Over 10,000 TCAR procedures have been performed around the globe since its introduction in 2016.

It's important to note that the TCAR procedure requires the training, experience and skills of a vascular surgeon. A vascular surgeon is the only fellowshiptrained specialist who has the skills and ability to solely perform open surgeries, minimallyinvasive endovascular (stenting) procedures and complicated hybrid procedures such as TCAR. Because of these comprehensive skills, your vascular surgeon will provide unbiased recommendations and treatment, based on the individual needs of your patient.

Talk to your vascular surgeon partner to ensure that your patient is getting the new gold standard of care with the use of the TCAR procedure.

When you have questions, reach out to vascular surgeon Dr. Eugene Tanquilut at 708-305-0248.

He will be happy to explain how TCAR works and why it may be the best choice for your patient.



Eugene Tanquilut, DO Sanjeev Pradhan, MD



Saadi Alhalbouni, MD

Dr. Tanquilut, Dr. Pradhan and Dr. Alhalbouni are board-certified, award-winning vascular and endovascular surgeons serving the Chicago Southland.

When you have questions about carotid artery disease, TCAR or carotid endarterectomy, Vascular Specialists is here to provide the answers.



815-824-4406 vascspecialists.org

Olympia Fields 20060 Governors Drive, Suite 102

> Orland Park 16527 S. 106th Court



vasculareducationfoundation.org

20060 Governors Drive, Suite 102 Olympia Fields, IL 60461

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Dr. Tanquilut is the President of Vascular Specialists and has participated in numerous research studies, published papers and is a widely-requested speaker.



About the author, Dr. Eugene Tanguilut

Award-winning and recognized as a Vitals Top 10 Doctor and a Patient's Choice Doctor, **Dr. Eugene Tanquilut** is boardcertified in both vascular and endovascular surgery. He earned Vascular and Endovascular Fellowships at Cleveland Clinic.

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Ajit Kumar, MD

discussing medical and cardiac clearance for the vascular patient

Reserve your seat with Dana

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