



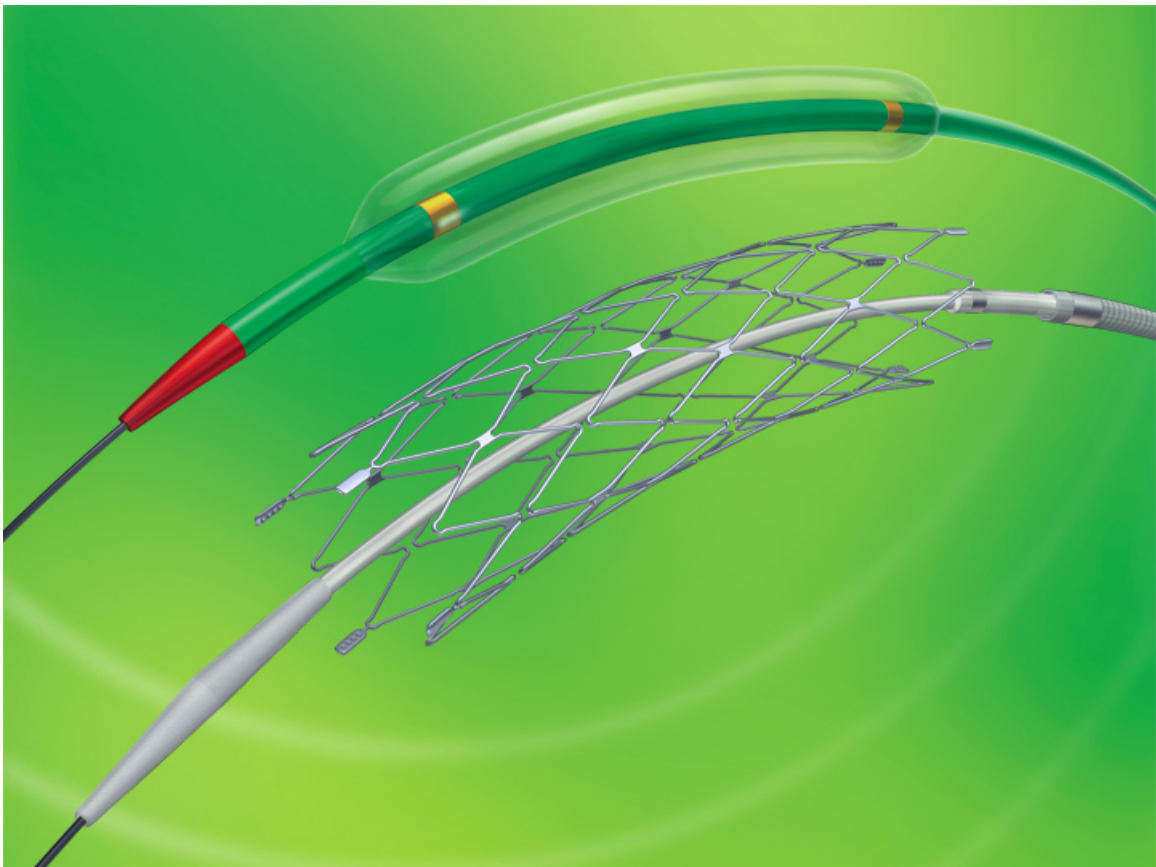
### *INTERVENTIONAL NEURORADIOLOGY IN RICHMOND*

***Radiology Associates of Richmond*** is pleased to highlight *Interventional Neuroradiology* as one of their unique subspecialty sections. Interventional neuroradiology deals with minimally invasive endovascular treatment of vascular diseases of the brain, head and neck, and spine. Commonly treated conditions include aneurysms, vascular malformations, tumors, and vaso-occlusive disease. The interventionalist navigates from within the vascular system to study and treat these abnormalities. In many cases interventional neuroradiology techniques are used as an adjunct or alternative to conventional open surgery, to facilitate the treatment of previously untreatable or difficult lesions. Dr Spinos, a member of RAR since 1984, and Chief of Radiology at CJW Medical Center, is based at the Johnston-Willis campus of CJW. He is Richmond's only Interventional Neuroradiologist. He sees office patients there as well as performs neurovascular procedures at the ultramodern 2 million dollar neurovascular facility pictured above.

**Stroke Treatment** Stroke is the third leading cause of death in the United States, and a significant cause of morbidity. If early

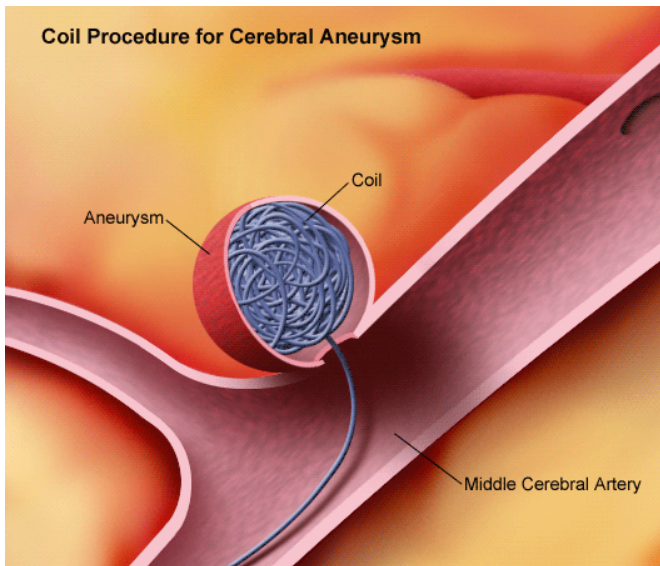
intervention is performed, neuro-endovascular techniques can allow significant improvement in stroke outcomes.

**Intraarterial Thrombolysis for Acute Stroke** – Newer techniques of direct intraarterial thrombolytic infusion (direct delivery of “clot busting” medicine) into occluded brain blood vessels can improve opening of these cerebral vessels. Mechanical thrombectomy techniques, such as the “Merci Retriever”, for blood clot removal are also available. Dural venous sinus thrombosis and central retinal artery occlusions are also amenable to endovascular thrombolytic therapy.



**Balloon Angioplasty and Stenting** – Recent advances in stent and balloon technology have expanded revascularization possibilities in the carotid, vertebrobasilar, and intracranial circulations. These procedures can be performed when surgical therapy is difficult, or not feasible (as in the intracranial circulation). Carotid stenting is commonly performed for appropriate patients with carotid blockages at the neck. Dr Spinos is also the first and only accredited physician in the Richmond area using the innovative “Wingspan Stent” for intracranial stenotic lesions (brain artery blockages) at the CJW-Johnston-Willis Campus.

**Treatment of Aneurysms** In 1991, Guglielmi detachable coil (GDC) embolization was introduced as an endovascular alternative to surgical clipping of intracranial aneurysms. Since the mid-90's, Dr Spinos has been performing this procedure here in Richmond. It involves the careful transarterial placement of tiny platinum coils into the aneurysm sac, so as to occlude the aneurysm, thus preventing rupture and hemorrhage.



**Arteriovenous Malformations** These complicated lesions often require some combination of multimodality therapy, including Gamma knife therapy, endovascular embolization, and surgical removal. Embolization can reduce the size of, and flow through the lesion so as to facilitate surgical resection or increase the efficacy of radiation. Rarely, these lesions can be cured with embolization alone.

**Tumor Embolization** Many tumors are amenable to preoperative embolization, wherein their blood supply is reduced or eliminated so as to facilitate surgical resection. Embolization results in shorter surgeries, decreased blood loss, and diminished transfusion requirements. Juvenile angiofibromas, glomus tumors, meningiomas, and other vascular tumors of the head and neck, brain, and spinal column are amenable to this therapy.

**Kyphoplasty/Vertebroplasty** Spine fractures are extremely common in the setting of osteoporosis. There is an estimate of nearly one million fractures of the spine (vertebra) annually. These result in significant back pain, disability and often depression of the patient and may require as much as 4-6 months to heal resulting in significant

lifestyle change in the affected individual. Kyphoplasty and Vertebroplasty are remarkable minimally invasive procedures that are over 90% effective in reversing the more severe symptoms and allow for early, near immediate ambulation of these patients.

