Top Ten Things to Know
Indications for the Performance of Intracranial Endovascular Neurointerventional Procedures

1. While there have been reductions in stroke-related mortality in the past decade, stroke is still the 5th leading cause of death in the US (about 130,000 per year), and almost 800,000 cases of stroke annually.

2. Large vessel occlusion (LVO) disproportionally affects acute ischemic stroke (AIS) morbidity and mortality, leaving survivors with dependent disabilities and contributing to the large costs associated with this type of stroke. The cost of LVO strokes has been estimated to be greater than $50 - $60 billion annually.

3. The purpose of this scientific statement is to review current information on the efficacy and safety of intracranial endovascular interventional treatment of cerebrovascular diseases and to elucidate key aspects for best practice.

4. Since the 2009 version of this statement, this has become a rapidly evolving field with new devices and techniques expanded to several disease states allowing for minimally invasive procedures improving the safety of these therapies.

5. Also, since the 2009 statement, there have been substantial changes in the endovascular treatment of acute stroke, intracranial stenosis, cerebral aneurysms, and cerebral vascular malformations.

6. While IV alteplase is the gold standard treatment for AIS, the success rate for recanalization of LVO is rather low (distal internal carotid artery 4.4%, M1 segment of the middle cerebral artery (MCA) 32.3%, the M2 segment MCA 30.8% and basilar is 4%). Because of this, there should be no delay after the administration of IV alteplase to vascular imaging and then endovascular therapy.

7. This statement reviews the prior negative trials of endovascular stroke intervention, with lessons learned, discusses the recent positive randomized clinical trial for endovascular stroke intervention and discusses the extension of the time and tissue window for endovascular stroke intervention.

8. The treatment of cerebral aneurysm, subarachnoid hemorrhage, intracranial arteriovenous malformations, dural arteriovenous fistulas, cerebral venous thrombosis, and idiopathic intracranial hypertension are discussed in this comprehensive statement.

9. This statement reviews the treatment by embolization of intracranial and head and neck neoplasms.

10. With the rapidly changing world of endovascular neurointerventional treatments, these treatment modalities are becoming increasingly more important in the treatment of acute ischemic stroke (especially in those with an LVO), and in other diseases where minimally invasive procedures hold promise for better efficacy and safety for patients.