

# C

## Carotid Angiography

Nathan D. Zasler<sup>1</sup> and Paul E. Kaplan<sup>2</sup>

<sup>1</sup>Concussion Care Centre of Virginia, Ltd,  
Richmond, VA, USA

<sup>2</sup>Capitol Clinical Neuroscience, Folsom, CA,  
USA

### Synonyms

[Angio](#)

### Definition

Angiography is the evaluation of the blood vessels of the central nervous system and associated cervicocerebral vasculature via radiographic imaging of intravascular contrast media injected prior to the imaging procedure. Femoral or axillary non-selective approaches can be used to catheterize the aortic arch or selective means employed to catheterize the carotid artery. Digital subtraction, computed tomography (CT) scanning, and MRI techniques can be applied as adjunct imaging techniques once contrast is injected. Obstructions, stenosis, aneurysms, and A-V malformations can be identified through this technique. Finer and more selective views are accomplished by using micro-catheters. Some of the disease entities studied include ischemic cerebrovascular disease, aneurysms, vascular malformations, neoplasms, and

brain injuries. Angiography is the test of choice for arterial dissections and pseudoaneurysms which may be associated with classic signs of pain, bruits, and/or cranial nerve palsies. Carotid angiography is also useful for imaging of carotid-cavernous fistulas which if not found early can cause blindness and may present with an ocular bruit, scleral injection, and ocular proptosis.

### Current Knowledge

Can be part of the evaluation process of patients with cerebrovascular disease or traumatic vascular insult.

### Cross-References

- ▶ [Angioma](#)
- ▶ [Glioma](#)
- ▶ [Hemangioma](#)
- ▶ [Hemiplegia](#)

### References and Readings

- <http://www.radiologyinfo.org/en/info.cfm?pg=angiocerebral>. Accessed 10 Apr 2016.
- Ahn, S. O., Prince, E. A., & Dubel, G. J. (2013). Basic neuroangiography: Review of technique and perioperative patient care. *Seminars in Interventional Radiology*, 30(3), 225–233.
- Kaufmann, T. J., & Kallmes, D. F. (2008). Diagnostic cerebral angiography: Archaic and complication-prone or here to stay for another 80 years? *AJR. American Journal of Roentgenology*, 190(6), 1435–1437.