The Cerefy® Atlas of Cerebral Vasculature (1st edition)

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The Cerefy® Atlas of Cerebral Vasculature was created by a group headed by Professor Wieslaw L. Nowinski at the Biomedical Imaging Lab, Singapore. It is an interactive electronic atlas that provides extensive and precise displays of the cerebral arteries and veins in 3-dimensional (3D) drawings. The atlas is a sequel to the *Cerefy Atlas of Brain Anatomy*, a similar work published by the same group in 2006, which focuses on the 3D organization of functional networks of neuroanatomy[1]. Currently available neurovascular atlases are limited in their presentation because it is difficult to convey the complex 3D arrangement of the human cerebral vasculature in 2D formats. This task is especially challenging since parts of cerebral vessels are almost always hidden behind nearby parenchymal structures[2]. Advances in vascular imaging such as magnetic resonance angiogram (MRA) and computed tomography angiogram (CTA) facilitate the 3D depiction of cerebral vasculature. The *Cerefy® Atlas* is a 3D cerebrovascular modeling tool that consists of 365 parenchymal vessels derived from a time-of-flight MRA and labeled with names and diameters in all head positions. The model is co-registered with MRI and MRA scans in 3D space, so that one can explore cortical anatomy along with vascular anatomy and readily measure distances between vascular and parenchymal structures.

The interface is highly user-friendly and efficient. In addition to detailed demonstration of anatomic structures, the atlas also contains a vast amount of background information, precise descriptions of vascular variations, and many useful references. There are 215 pages of text and 100 images included in the atlas. Moreover, the atlas even includes a “test” mode for self-assessment. It can serve as a unique and valuable learning companion to more traditional neurovascular anatomic texts for both physicians and researchers in neurosciences.

References:

1. BOOK REVIEW: Cerefy Atlas of Brain Anatomy. *Am J Neuroradiol* **27**, 946-947 (2006).
2. Nowinski, W.L. Three-dimensional presentation of cerebral vasculature facilitates greater understanding. *ECR TODAY* (2009).

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