Neurovascular ultrasound increases the reliability of assessing occlusive cerebrovascular disease, including the detection of instable carotid plaques, the delineation of cerebral perfusion and therapeutic options such as ultrasound-enhanced sonothrombolysis. Written by international experts, this publication provides the reader with the present knowledge and future research directions of diagnostic and therapeutic neurovascular ultrasound. The first chapters deal with physical and technical principles of ultrasound, arterial wall imaging, endothelial function testing and modern assessment of atherosclerotic obstruction of the carotid and vertebro-basilar systems. Subsequently, typical ultrasound findings in cervical artery dissection, dural fistula, glomus tumor and vasculitis are reported. The book concludes with the description of diagnostic and therapeutic transcranial ultrasound and clinical applications of transcranial Doppler monitoring as well as the presentation of future developments.

Neurologists, angiologists and radiologists will find a valuable source of up-to-date information on this fascinating, essentially non-invasive technique, which allows real-time assessment of the human cerebral vessels.