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Nota di contenuto	Introduction -- Part I - Vascular anatomy and Basic hemodynamics -- 1. Anatomy of cerebral circulation system -- 2. Basic Principles of hemodynamics -- Part II - Basic principles of non-invasive vascular diagnostic -- 1. Basic principles of Ultrasound diagnostics -- 2. Principles of extracranial arterial and venous ultrasound examination -- 3. Principles of Computed Tomography and Computed Tomography angiography -- 4. Principles of Magnetic Resonance Imaging and Magnetic Resonance angiography -- 5. CTA and MRA- Postprocessing and Data Analysis -- Part III - Cerebral ischemia -- 1. Stroke (Epidemiology, Pathophysiology, Risk-factors, Types, Imaging) -- 2. CT / MRI perfusion in Acute stroke—94 -- Part IV - Pathologies of extracranial vessels -- 1. Atherostenosis and thrombosis of extracranial vessels -- 2. Common Carotid Artery Intima-media layer changes -- 3. Structural characteristics of atherosclerotic plaque -- 4. Surgical treatment and endovascular revascularization of carotid stenosis -- 5. Deformation of extracranial arteries -- 6. Takayasu's arteritis -- 7. Subclavian steal effect -- 8. Dissection of extracranial

arteries -- 9. Aneurism and pseudoaneurism of extracranial arteries -- 10. Congenital variations of extracranial arteries -- 11. Pathological findings in the jugular veins -- Part V - Methods of non-invasive functional examination of cerebrovascular system -- 1. Detection of cerebral microemboli -- 2. Assessment of cerebrovascular reactivity .

#### Sommario/riassunto

This book is a state of the art guide to the diagnosis of extracranial vascular pathologies with modern noninvasive neuroimaging and vascular imaging techniques. The opening sections provide a thorough introduction to arterial and venous anatomy, basic hemodynamics, and the principles of noninvasive vascular diagnostics, including by means of color Doppler ultrasound, CT and CT angiography (356- and 640-slice systems), and MRI and MR angiography (1.5 and 3 T). The main body of the book is devoted to the use of these methods to image cerebral ischemia and a wide variety of extracranial arterial and venous anomalies and pathologies. Neuroimaging and vascular imaging diagnostic criteria are clearly identified with the aid of many high-quality images, and the advantages and disadvantages of each modality for each pathology are explained. Information is also presented on etiology, pathophysiology, and other relevant aspects. A concluding section discusses the role of complementary noninvasive functional tests. The book will be a valuable resource for neurologists, angiologists, neuroradiologists, neurosurgeons, trainees, and all physicians who care for patients with cerebrovascular diseases.