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Nota di contenuto	1. Introduction to Stem Cell Therapy and its Application in Vascular Diseases -- 2. Types And Origin of Stem Cells -- 3. Stem Cell Delivery Techniques for Stroke and Peripheral Artery Disease -- 4. The Ethical Challenges of Stem Cell Therapy in Vascular Disorders -- 5. Bone Marrow-Derived Cells: from the Laboratory to the Clinic -- 6. Angiogenesis: Perspectives From Therapeutic Angiogenesis -- 7. Stem Cell Therapy for Diabetic Foot Ulcers -- 8. Venous Foot and Leg Ulcers -- 9. Induced Pluripotent Stem Cell-Derived Vascular Smooth Muscle Cells for Vascular Regeneration -- 10. Mesenchymal Stem Cell and Hematopoietic Stem Cell Transplantation for Vasculitis -- 11. Mesenchymal Stem Cell and Endothelial Progenitor Cell Transplantation for Buerger's Disease -- 12. Changing the Course of Peripheral Arterial Disease Using Adult Stem Progenitor Cells -- 13. Stem Cell Delivery for the Treatment of Arteriovenous Fistula Failure -- 14. Stem Cell Therapy to Improve Acute Myocardial Infarction Remodeling -- 15. Stem Cell Therapy for Stroke -- 16. Use of Stem Cells in the Treatment of Erectile Dysfunction -- 17. Stem Cell Therapy for Ophthalmic Vascular Disease -- 18. Stem Cell Therapy Delivery in Liver Disease -- 19. Stem Cell Therapy for Lymphedema.

Sommario/riassunto

Vascular diseases are the leading cause of death worldwide. Distinguished clinical and surgical approaches have attempted to overcome its morbidity and mortality; still 17.9 million people die every year due to vascular affections. Stem cell therapy has emerged as a promising therapeutic strategy. Stem cells synthesize and secrete cytokines that promote cell recruitment, immunomodulation, extracellular matrix remodeling, angiogenesis, and neuroregeneration, all of which promote regeneration. Besides that, stem cells are also capable of differentiating in various cell types, being employed in tissue engineering. Preclinical and clinical investigations have reported efficacy of stem cell therapy for various vascular diseases. Even though results are encouraging, the studies demonstrate variation in stem cell type and origin, route and protocol for administration, and concomitant use of other treatment strategies, impairing easy interpretation of results and clinical application. The purpose of this book is to compile and comprise the current state of the evidence regarding stem cell therapy for each vascular disease, elucidating possible clinical applications. More than an objective guide for readers on the use of this novel treatment strategy, this publication will advocate for stem cell therapy use and development and will be of significant interest to physicians in a wide range of disciplines as well as researchers.
