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Nota di contenuto	Part I. Cardiovascular Calcification -- Chapter 1. Pathology of Arterial and Valvular Calcification -- Chapter 2. Developmental Pathways in Cardiovascular Calcification -- Chapter 3. Differential Mechanisms of Arterial and Valvular Calcification -- Chapter 4. Calcification in Aortic Valve Replacement -- Chapter 5. Role of Extracellular Vesicles in Cardiovascular Calcification -- Chapter 6. Biomechanics, Mechanobiology, and Cardiovascular Calcification -- Chapter 7. Cardiovascular Calcification in Diabetics -- Chapter 8. Cardiovascular Calcification in Chronic Kidney Disease -- Chapter 9. Cardiovascular Calcification in Peripheral Artery Disease -- Chapter 10. Cardiovascular Calcification in Pediatrics and Progeria -- Chapter 11. Imaging of Early Calcification -- Chapter 12. Calcification Paradox – Bone vs Vascular Calcification -- Chapter 13. Clinical Trials in Cardiovascular

Calcification -- Part II. Ectopic Calcification -- Chapter 14. Calcification in the Brain -- Chapter 15. Calcification in the Kidney -- Chapter 16. Calcification in the Liver and Lungs -- Chapter 17. Placental Calcification in Newborns and its Clinical Implications -- Chapter 18. Breast Cancer Microcalcification -- Chapter 19. Calcification Following Traumatic Blast Injury -- Part III. Bone Mineralization -- Chapter 20. Extracellular Matrix and Mineralization in Skeletal Development -- Chapter 21. Cellular Contributors to Bone Homeostasis -- Chapter 22. Biomechanics and Mechanobiology in Bone Remodeling -- Chapter 23. Osteogenesis Imperfecta and Congenital Disorders -- Chapter 24. Therapeutic Strategies for Pathological Bone Remodeling.

Sommario/riassunto

The book covers the basic science and clinical aspects of cardiovascular calcification and bone mineralization. Cardiovascular calcification is the leading predictor of cardiovascular morbidity and mortality, with a predictive value more significant than blood lipid levels. The presence of calcific mineral in cardiovascular tissues alters biomechanical performance, increasing workload on the heart and potentiating atherosclerotic plaque rupture and subsequent heart attack and stroke. This book examines the role of calcification in cardiovascular disease covering topics such as calcification in the atherosclerotic plaques and aortic valves arteries and valves, aortic valve replacement, peripheral artery disease, imaging of early calcification and target discovery. In addition, various forms of ectopic calcification as well as mechanisms of bone mineralization are discussed. Cardiovascular Calcification and Bone Mineralization is an essential resource for clinicians, researchers, and other medical professionals in cardiology, pathology, and biomedical engineering.