Record Nr. UNINA9910410043003321 Autore King Martin W **Titolo** Coronary Artery Disease and The Evolution of Angioplasty Devices // by Martin W. King, Tushar Bambharoliya, Harshini Ramakrishna, Fan Zhang Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2020 **ISBN** 3-030-42443-X Edizione [1st ed. 2020.] Descrizione fisica 1 online resource (78 pages) Collana SpringerBriefs in Materials, , 2192-1091 Disciplina 616.123 Soggetti **Biomaterials** Biomedical engineering Cardiology Blood-vessels - Surgery Heart - Surgery Biomedical Engineering and Bioengineering Biomedical Engineering/Biotechnology Vascular Surgery Cardiac Surgery Lingua di pubblicazione Inglese Materiale a stampa **Formato** Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Chapter1. Epidemiology and Risk Factors -- Chapter2. Definitions and Basic Mechanism of Coronary Artery Disease (CAD) -- Chapter 3. Coronary Microvascular Dysfunction (CMD) -- Chapter 4. Diagnosis of Coronary Artery Disease -- Chapter 5. Treatment of Coronary Artery Disease -- Chapter6. Evolution of Angioplasty. Sommario/riassunto In this concise but authoritative book, the authors take the reader through the epidemiology, risk factors and the basic mechanism of coronary artery disease. In addition, they explain how coronary microvascular dysfunction can lead to angina, even after successful angioplasty following a heart attack. The methods for diagnosis and the options for treatment are explained, ending with a discussion of the

evolution of coronary angioplasty from balloon catheters to novel, fully resorbable polymeric drug eluting stents. Enclosed is a list of currently

available commercial devices, as well as a listing of experimental products under research and development, so that readers can appreciate the serious nature of this disease and have an understanding of how the medical device sector is attempting to address this major healthcare problem. Globally in 2010, ischemic heart disease was the cause of 13.3% of all deaths. In the US alone, the direct medical costs from coronary artery disease and stroke are currently estimated to be \$126 billion per year, and are expected to rise to \$309 billion by 2035.