Vascular Mechanics and Pathology

Mano J. Thubrikar
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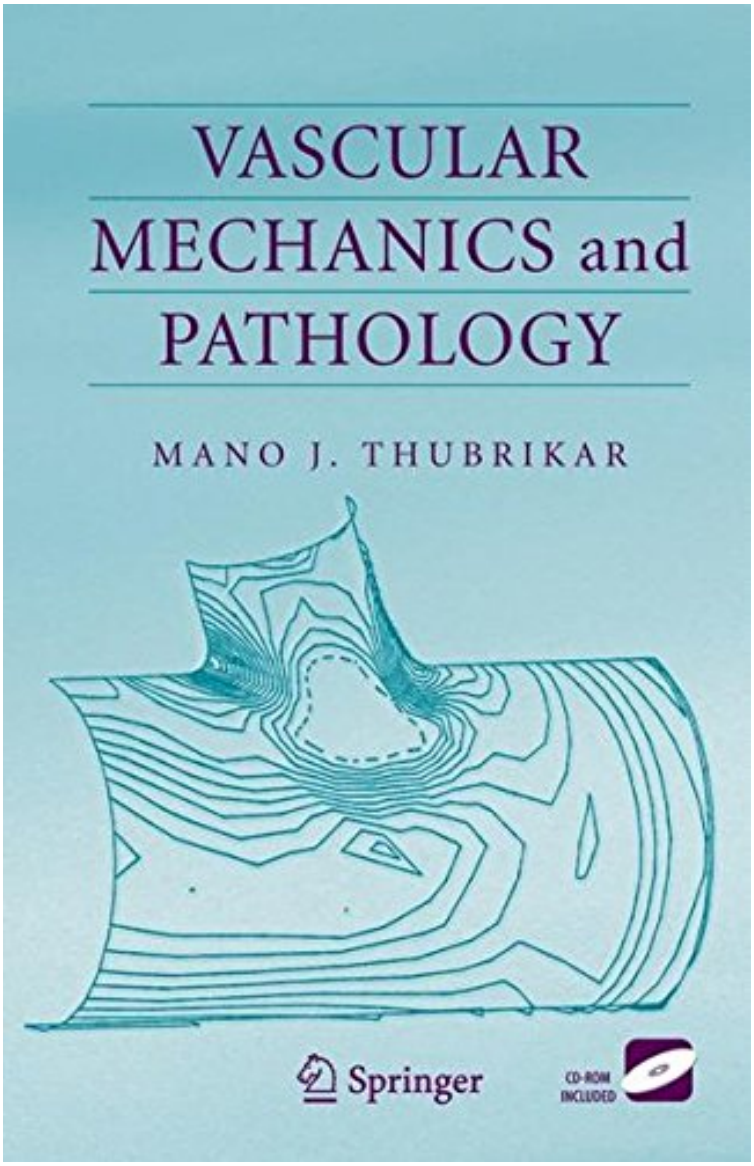

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Mano J. Thubrikar : Vascular Mechanics and Pathology before purchasing it in order to gage whether or not it would be worth my time, and all praised Vascular Mechanics and Pathology:

The purpose of the book is to bring the two disciplines - vascular mechanics and pathology - together. In addition, the

book bridges the gap in our knowledge and enhances engineering applications in medicine. This cutting-edge work presents the use of veins as arterial grafts and discusses the role of vein valves in graft stenosis. The book illustrates aneurysm formation, growth, and rupture, using pressure vessel principles. This new work details the investigation of, amongst other topics, aortic dissection, showing for the first time that the aortic root mechanics plays a vital role in the development of this pathology.

From the Back CoverVascular Mechanics and Pathology Mano J. Thubrikar, PhD, FAHA. Opening new doors for interdisciplinary research, Vascular Mechanics and Pathology establishes a correlation between vascular mechanics and pathology that could lead to the reduction of vascular diseases, as well as the development of new treatments. Vascular Mechanics and Pathology focuses on the artery and arterial diseases. As the fundamental functions of the artery are to serve as a conduit of blood flow and as a container of blood pressure, Vascular Mechanics and Pathology describes both the general principles and the occurrence of stress concentration at the pressure vessel junctions and examines the role of beta-blockers in the reduction of atherosclerosis and related complications. This cutting-edge work presents the use of veins as arterial grafts and discusses the role of vein valves in graft stenosis. Vascular Mechanics and Pathology illustrates aneurysm formation, growth, and rupture, using pressure vessel principles. This new work details the investigation of, amongst other topics, aortic dissection, showing for the first time that the aortic root mechanics plays a vital role in the development of this pathology. Key topics: Atherosclerosis Structure and Mechanics of the Artery Pressure Vessel Principles Pressure Vessel Intersections Stress Concentration in the Artery Endothelial Cells and Low Density Lipoproteins at the Branch Smooth Muscle Cells and Stretch Stress Reduction and Atherosclerosis Reduction The Vein Graft Anastomosis Anastomotic Aneurysms and Anastomotic Intimal Hyperplasia Intracranial Aneurysms Aortic Aneurysms Aortic Dissection Vascular Mechanics and Pathology is essential reading for cardiovascular researchers, surgeons, cardiologists, pathologists, radiologists, neurosurgeons, anatomists, students in biomedical engineering, and manufacturers of medical devices. About the Author: Dr. Mano J. Thubrikar has been with Edwards Lifesciences since December 2004. Previously, he was the Director of the Biomedical Engineering Program at the Heineman Medical Research Center at Carolinas Medical Center, Charlotte, NC. Dr. Thubrikar is a recipient of the Research Career Development Award from the National Institute of Health, the Certificate of Merit awarded by the New York Academy of Medicine, and the Minna-James Heineman Stiftung Research Award for Outstanding Research Achievements in the area of Life Sciences. About the AuthorDr. Mano J. Thubrikar has been with Edwards Lifesciences since December 2004. Previously, he was the Director of the Biomedical Engineering Program at the Heineman Medical Research Center at Carolinas Medical Center, Charlotte, NC. Dr. Thubrikar is a recipient of the Research Career Development Award from the National Institute of Health, the Certificate of Merit awarded by the New York Academy of Medicine, and the Minna-James Heineman Stiftung Research Award for Outstanding Research Achievements in the area of Life Sciences.