1. Record Nr. UNINA9910491026503321

Titolo	Precision medicine in cardiovascular disease prevention / / Seth S. Martin, editor
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2021] ©2021
ISBN	3-030-75055-8
Descrizione fisica	1 online resource (200 pages)
Disciplina	616.105
Soggetti	Cardiovascular system - Diseases - Prevention Malalties del cor Medicina preventiva Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Intro -- Preface -- Acknowledgments -- Contents -- 1 Social Determinants -- Social Determinants of Health and Cardiovascular Care: A Historical Perspective -- Landmark Reports on Health Disparities: Relevance to CVD -- Role of SDOH in Cardiovascular Care: Ignored for Far Too Long -- Current State of CVD Disparities in the US -- SDOH, 'Traditional' Risk Factors and Current Models of CVD Care -- SDOH and CVD: A Review of Current Literature -- SDOH: A Domain-Based Analysis -- Economic Stability -- Current Evidence and Pathways -- Summary -- Education -- Current Evidence and Pathways -- Summary -- Neighborhood and Physical Environment -- Current Evidence and Pathways -- Summary -- Food -- Current Evidence and Pathways -- Summary -- Community and Social Context -- Current Evidence and Pathways -- Summary -- Healthcare -- Current Evidence and Pathways -- Summary -- Conclusions -- References -- 2 Biomarkers -- Introduction -- Lipid Biomarkers and Cardiovascular Risk -- Low-Density Lipoprotein Cholesterol -- Estimation of LDL-C in Precision Medicine -- There is More Than LDL-C: LDL Particles and Apolipoprotein B -- Non-High-Density Lipoprotein Cholesterol (non-HDL-C): The "Poor Man" apoB? -- Maximizing the Use of the Standard

Lipid Panel: The Total Cholesterol to HDL-C Ratio -- Residual Risk and Lipoprotein-Related Risk Beyond LDL: Triglyceride-Rich Lipoproteins -- Lipoprotein (a)-ready for Prime-Time Use? -- Non-Lipid Cardiac Biomarkers in Risk Stratification of Asymptomatic Patients -- Cardiac Biomarkers of Wall Stress and Myocardial Injury -- Factors Affecting Biomarker Interpretation -- Cardiac Troponin and Cardiovascular Risk -- Cardiac Biomarkers in Hypertension -- Cardiac Biomarkers in Aortic Stenosis -- Cardiac Biomarkers in Heart Failure -- HsCRP -- GlycA -- Galectin-3 -- Lp-PLA2 -- Hepatocyte Growth Factor -- Fibrinogen -- Adipokines.
Sex Hormones -- Conclusions -- References -- 3 Genetics -- Introduction -- Rare Variation Highlights Novel Disease Pathways -- Background -- Relevance for Cardiovascular Prevention -- Leveraging Common Variant Genomics to Understand Disease Pathophysiology -- Background -- Relevance for Cardiovascular Prevention -- Mendelian Randomization Can Help Us Understand Causal Relationships -- Background -- Relevance for Cardiovascular Prevention -- Polygenic Risk Scores Can Improve Risk Prediction -- Background -- Relevance for Cardiovascular Prevention -- Conclusions and Future Perspectives -- References -- 4 Atherosclerosis Imaging -- Traditional Risk Scores and Individualized Risk Assessment -- Proposed Tools for Personalizing Risk Estimation -- Serum Biomarkers and Genetics: Pros and Cons -- Coronary Artery Calcium -- CAC Imaging -- CAC Scoring -- Early Data -- Major Population-Based Studies -- MESA -- Heinz Nixdorf -- Rotterdam Study -- Meta-Analysis -- CAC in Guidelines -- Shared Decision-Making -- Risk Re-Classification Through CAC -- CAC Future Directions -- CAC Score=0 -- CAC Predicting Non-CVD Outcomes -- Risk Estimators Incorporating CAC Scores -- Coronary Computed Tomography Angiography -- Technology -- Characterization of Atherosclerotic Plaque -- Scoring/Measuring -- Evidence for Clinical Outcome -- CCTA Versus CAC -- Extra-Coronary Atherosclerosis Imaging -- Carotid Artery Ultrasound -- Ultrasound Carotid Plaque Imaging -- CT-Detected Extra-Coronary Atherosclerosis -- Magnetic Resonance Imaging -- Tests for Myocardial Ischemia -- Structural Imaging -- Echocardiography -- Cardiac Magnetic Resonance -- Diagnostic Accuracy of Cardiac Imaging -- Conclusion -- References -- 5 Digital Health -- Introduction -- Consumer Connected Health &amp -- Tracking -- Heart Rate Monitoring and Arrhythmia Detection -- Blood Pressure Tracking.
Weight Tracking and Management -- Medication Adherence Support and Tracking -- Physical Activity and Exercise Tracking -- Diet and Nutrition Tracking -- Digital Biomarker Tracking -- Digital Health Coaching -- Overview of Digital Health Coaching -- Exercise Health Coaching -- Smoking Cessation Coaching -- Blood Pressure Control Coaching -- Blood Glucose Control Coaching -- Transformation of Healthcare Delivery -- Outpatient Clinic (Chronic Condition Management and Prevention) -- Inpatient (Acute Care) -- Center-Based Services (Post Acute Care) -- Conclusions -- References -- 6 Artificial Intelligence and Machine Learning -- Preventive Cardiology, the Past and the Future -- Artificial Intelligence, Machine Learning, and Deep Learning -- Applications in the Cardiovascular Care -- Coronary Artery Disease -- Heart Failure -- Atrial Fibrillation -- Sudden Cardiac Death -- Polygenic Risk Scores in the Era of Machine Learning -- A Dynamic Approach to Prevention -- Limitations and Future Directions -- Disclosures -- References -- 7 Novel Research Designs -- Introduction -- History of RCTs -- Benefits of RCTs -- Limitations of RCTs -- Micro-randomized Trials -- Summary of the Design -- Pros and Cons -- MRT Example -- N-of-1 -- Summary of the Design -- Pros and

Cons -- Example of N-of-1 Trials -- Patient Centered Participatory Research/User Centered Design -- Summary of Design -- Pros and Cons -- Example of PD -- Site-Less/Digital Clinical Trials -- Summary of Design -- Pros and Cons -- Example of a Site-Less Design -- Stepped Wedge Trial -- Summary of Design -- Pros and Cons -- Example of Stepped Wedged Trial Design -- Summary/Conclusion -- References -- 8 Shared Decision Making -- Shared Decision Making: The Introduction -- The Role of Shared Decision Making in Personalizing Care -- Shared Decision Making Highlighted in the ACC/AHA Guidelines.
Statin Use in Primary Prevention -- Shared Decision Making: The Transition from the Population to Individual Level -- Shared Decision Making in Clinical Practice -- Shared Decision Making-Discussing Patient Risk -- When Shared Decision Making Feels Like Shared Decision Guessing -- Selective Use of Coronary Artery Calcium Measurements -- When 'Plan A' Fails, Lean on Shared Decision Making -- Statin Associated Side-Effects -- Ezetimibe, PCSK9-Inhibitors, Icosapent Ethyl &amp -- Bempedoic Acid -- Shared Decision Making Beyond Statins and LDL-C Lowering Therapies -- Aspirin -- Blood Pressure -- Anticoagulation -- Conclusion -- References -- Index.