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Nota di contenuto	Cover; Title; Copyright; Contents; Contributors; Preface; References; Video Captions; Share Cardiovascular Genetics and Genomics in Clinical Practice; Part I: Genetics and Genomics: The Basics; Chapter 1: Mendelian Genetics; Take Home Points; Mendel's Laws; Modes of Inheritance; Methods Used to Determine Modes of Inheritance; Clinical Utility of Genetic Information; Glossary; References; Chapter 2: Genetics of Complex Traits; Take Home Points; Quantitative Traits; Familial Aggregation; Measuring Familial Aggregation; Concordance Versus Discordance; Allele Sharing; Twin Studies Concordance of MZ Versus DZ Twins Twins Reared Apart; Limitations of Twin Studies; Heritability; Conclusions; References; Chapter 3: Genome-Wide Association Studies; Take Home Points; Why do we Need GWAS?; Genetic Basis of GWAS; Simple GWAS; Beyond GWAS Basics: Challenges and Limitations; Limitations of GWAS; Using GWAS Results; GWAS Success in Cardiovascular Disease; Summary; Glossary; References; Chapter 4: Bioinformatics; Take Home Points; Following Up on Linkage Analyses; Following Up on Genome-Wide Association Studies; Obtaining Information on Candidate Genes Characterizing DNA Variants Found within Genes References; Chapter 5: Epigenetics; Take Home Points; DNA Methylation; Histone Modifications; Challenges and Opportunities for Human CVD Epigenetic Studies; References; Chapter 6: MicroRNAs; Take Home Points;

MicroRNA Structure and Function; MicroRNA and Cardiac Function; MicroRNA as Biomarkers; MicroRNA Therapeutics; Conclusions; References; Chapter 7: Gene Expression; Take Home Points; Microarray Technology; Quality Control; Data Normalization; Data Analysis; Ontology and Pathway Analysis; Validation and Meta-Analysis; Conclusions; References

Chapter 8: Whole-Exome and Whole-Genome SequencingTake Home Points; Overview of Exome Chip, WES, and WGS Technologies; Available Strategies for the Conduct of WES Studies; Application of WES to Cardiovascular Disease; Next-Generation Sequencing Technologies for Clinical Diagnostics; Future Directions; Conclusions; References;

Chapter 9: Gene-Environment Interactions; Take Home Points; Defining Interactions; Investigating Interactions: Study Design; Investigating Interactions: Statistical Power; Gene-Environment Interactions in Cardiovascular Disease

The Promise and Challenges of Gene-Environment Interaction ResearchSummary; References; Chapter 10: Genetic Counseling; Take Home Points; Definition of Genetic Counseling; The Power of the Pedigree and Family Health History; Risk Assessment Beyond Basic Mendelian Principle; Psychosocial Counseling; Genetic Counselors in Cardiovascular Practice; Cardiovascular Genetic Testing; Partners in Practice; Conclusions; References; Part II: Genetics of Cardiovascular Disorders/Traits; Chapter 11: Blood Pressure Genomics; Take Home Points

Case Study: Severe Monogenic Hypertension-An Application of Whole-Exome Sequencing

Sommario/riassunto

Cardiovascular Genetics and Genomics in Clinical Practice presents clinical cases to illuminate basic concepts of cardiovascular genetics and genomics as practitioners encounter them in day-to-day practice. The unique use of real-world case discussions facilitates the memorization and understanding of basic principles, which can be more readily applied to actual cases. Cardiovascular Genetics and Genomics in Clinical Practice features a step-by-step learning process that begins with an easy-to-understand ""primer"" of basic scientific concepts regarding cardiovascular genetics and genomics fol
