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Disciplina	616.07
Soggetti	Pathology Oncology Laboratory medicine Human genetics Neoplasms - genetics Pathology, Molecular - methods Genomics - methods Oncology Laboratory Medicine Human Genetics
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Nota di contenuto	Practicing Pathology in the Post-Genomic Era: Challenges and Opportunities -- Current Massively Parallel Sequencing Technologies: Platforms and Reporting Considerations -- Emerging Next-Generation Sequencing Technologies -- Transcriptome Sequencing (RNA-Seq) -- miRNA Expression Assays -- Circulating Tumor Cells: Enrichment and Genomic Applications -- Circulating Cell-Free DNA for Molecular Diagnostics and Therapeutic Monitoring -- Genomic Pathology: Training for New Technology -- Clinical Implementation of Next Generation Sequencing (NGS) Assays -- Regulatory and Reimbursement Issues Related to Genomic Testing Services -- Patents and Proprietary Assays -- Ethical Issues in Clinical Genetics and Genomics -- Transitioning Discoveries from Cancer Genomics Research Laboratories into Pathology Practice -- Bioinformatics Tools in Clinical Genomics --

Next Generation Sequencing for Single-Gene Analysis -- Next-Generation Sequencing for Gene Panels -- Implementation of Exome Sequencing Assay -- Implementation of Genome Sequencing Assays -- Clinical Information Systems in the Era of Personalized Medicine -- Reporting Clinical Genomic Assay Results and the Role of the Pathologist -- Genomic Applications in Hematologic Oncology -- Genomic Applications in Brain Tumors -- Genomic Applications in Head and Neck Cancers -- Genomic Applications in Thyroid Cancer -- Genomic Applications in Salivary Gland Tumors -- Genomic Applications in Breast Carcinoma -- Genomic Applications in Pulmonary Malignancies -- Genomic Applications in Colorectal Carcinoma -- Genomic Applications in Pancreatic and Gastric Tumors -- Molecular Pathology of Genitourinary Cancers: Translating the Cancer Genome to the Clinic -- Genomic Applications in Gynecologic Malignancies -- Genomic Applications in Epithelial Ovarian Malignancies -- Genomic Applications in Soft Tissue Sarcomas -- Genomic Applications in Melanoma -- Genomic Applications in Inherited Genetic Disorders -- Sequencing Cell Free DNA in The Maternal Circulation to Screen for Down Syndrome, Other Common Trisomies and Selected Genetic Disorders -- Genomic Applications in the Clinical Management of Infectious Diseases -- Pharmacogenomics: Success and Challenges -- The Human Microbiome in Health and Disease.

Sommario/riassunto

This book provides the most up-to-date comprehensive discussion of established and emerging genomic technologies and their clinical implementation in molecular diagnostics. As in its first edition, the book places significant emphasis on implementation roadmaps for various clinical assays including single gene, gene panel, transcriptome sequencing, circulating tumor cells and cell-free DNA sequencing, whole exome, and whole genome assays. Detailed guidance on the central role of the pathologist in the interpretation, reporting, and clinical integration of genomic tests is provided. Expert opinions to help navigate growing compliance, reimbursement, legal and ethical issues are shared in dedicated chapters. Genomic Applications in Pathology provides a comprehensive resource for practicing molecular pathologists, general and sub-specialized practicing anatomic and clinical pathologists, as well as pathology trainees. The wider target audience continues to include oncologists, geneticists, and other medical and surgical clinicians.
