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Nota di contenuto	Genomic Strategies for Personalized Cancer Therapy -- Blood-based biomarkers for the diagnosis and prognosis of cancer -- Application of circulating cell free DNA for personalized cancer therapy -- Prognostic Implications of EGFR, p53, p16, cyclin D1, Bcl-2 in Head & Neck Squamous Cell Carcinoma (HNSCC) -- Predictive and prognostic markers for cancer medicine -- Dual Energy Imaging in Precision Radiation Therapy -- The role of Big Data in personalized medicine.
Sommario/riassunto	"Most medical treatments have been designed for the "average patient." As a result of this "one-size-fits-all-approach," treatments can be very successful for some patients but not for others. This is changing with the emergence of precision medicine, an innovative approach to disease prevention and treatment that takes into account individual differences in people's genes, environments, and lifestyles. Precision medicine gives clinicians tools to better understand the complex mechanisms underlying a patient's health, disease, or condition, and to better predict which treatments will be most effective. Precision or personalized medicine in cancer treatment was once a buzzword, but it is finally becoming a reality with recent advances in imaging, genetic, and biological sciences. The importance of interpatient and intratumor variability has long been recognized, but realistic opportunities to take these into account in cancer care have emerged only recently. Innovations in patient characterization through genomics, proteomics,

and metabolomics have opened new avenues to personalize cancer treatment in ways that were not possible before. Furthermore, advances in quantitative assessment of therapeutic response, as provided by functional and molecular imaging, have been critical in the implementation of precision medicine paradigm in radiation oncology. This book will be a comprehensive review of science and technology making precision medicine possible for radiation oncology, current examples and future direction"--
