

MOLECULAR DIAGNOSIS OF CANCER : APPLYING UNDERSTANDING OF CANCER GENETICS FOR ITS EARLY DETECTION AND MANAGEMENT

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Cancer is a complex disease that varies widely in terms of its causes, development and progression. In recent years the application of molecular techniques to the study of cancer has revolutionized the diagnosis and management of this malignant disease. The human genome sequencing has provided fundamental structural information about all human genes. Having all the genes on the table allow us to systematically study them globally as candidate biomarkers for cancer. In addition, the advent of high throughput technologies, including cDNA microarrays and mass spectrometry, have allowed thousands of measurements to be performed in short periods of time. The development of powerful bioinformatic approaches, to combine this information into meaningful output, has further contributed enormously to these new technologies. Thus the atmosphere in the field of cancer research is full of optimism. It is likely that these new resources and technologies will facilitate the discovery of new cancer biomarkers with improved sensitivity and specificity.
