Cancer Genome And Tumor Microenvironment

Oncogenes and tumor suppressor genes had been traditionally studied in the context of cell proliferation, differentiation, senescence, and survival, four relatively cell-autonomous processes. Consequently, in the late 80s-early 90s, neoplastic growth was described largely as an imbalance between net cell accumulation and loss, brought about through mutations in cancer genes. In the last ten years, a more holistic understanding of cancer has slowly emerged, stressing the importance of interactions between neoplastic and various stromal components: extracellular matrix, basement membranes, fibroblasts, endothelial cells of blood and lymphatic vessels, tumor-infiltrating lymphocytes, etc. The commonly held view is that changes in tumor microenvironment are soft-wired , i.e., epigenetic in nature and often reversible. Yet, there exists a large body of evidence suggesting that well-known mutations in cancer genes profoundly affect tumor milieu. In fact, these non-cell-autonomous changes might be one of the primary reasons such mutations are preserved in late-stage tumors. EAN/ISBN : 9781441907110 Publisher(s): Springer, Berlin, Springer, New York Discussed keywords: Krebs (Krankheit) Format: ePub/PDF Author(s): Thomas-Tikhonenko, Andrei

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