

Global Cancer 2019: The old and the new in medical cancer therapy- Daniel Gandia, National University of Buenos Aires, Argentina

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Medical cancer treatment has evolved during a geometric manner since Gilmanes Mechlorethamine introduction into the bedside. Chemotherapy was born and rapidly proved its worth in several tumors and different clinical settings. Initially the brilliant results were seen in hematologic malignancies, namely complete remissions in some sorts of leukemias and lymphomas and posteriorly in solid tumors it changed the natural disease history in osteosarcoma, becoming adjuvant methotrexate the new overall survival drug during this malignancy. Many pediatric and young adults? Tumors comported complete remissions with chemotherapy, rendering them as curable diseases. As this, seminoma became the primary example of a curable cancer model within advanced solid tumors (Cisplatin was the gladiator here). Even when the primary clinical test became from the sixties, during the seventies Oncologists took an interest within the after surgery chemo in carcinoma . Two pivotal trials (US and Europe), continue showing that even nearly 40 years after, the general survival advantage of adjuvant chemo during this disease is impressive. As many like chemo, hormonotherapy proved and still prove its worth in postmenopausal carcinoma women. Adding to the before, two milestones in chemo history are the role of chemo in larynx organ preservation and its positive role within the colorectal cancer adjuvant setting. Taking as a profit chemo radio sensitizer power, the role of concomitant chemotherapy and radiotherapy came up to age: Head neck, rectal cancer, anal cancer only to say some tumor topographies

amenable to the present combined approach with organ preservation objectives. As time passed, new techniques in molecular imaging created new magic little bullets named them small molecules and leading this to the creation of the target or directed cancer therapy. The druggable targets here are inner cellular membrane and cytosolic proteins, mainly tyrosine kinases and mutant DNA segments and/or mutant oncogenes. As some tumors to be treated with them, were historically chemo-insensible, the important benefit in renal cancer and melanoma became notorious. Tumor metastatic shrinkage became a reality in these before-mentioned malignancies. Cesar Milstein Nature 1975 Letter (discovery of the Monoclonal Antibodies) was the road to the gorgeous landscape that's Immune Oncology today. We treat patients with vaccine, leading this to impressive clinical leads to melanoma, lung, kidney, lymphomas then on. Cellular Immunology is weakened in cancer but there are some molecules that block T Lymphocytes surface, in order that they couldn't attend the tumor target to eat them. This novel sort of treatment, de-block the lazy lymphocytes. Within the road of Immunology there are other-related-immune-novel compounds in trials and also new vaccines. within the future and not thus far , we'll cure still difficult-to-treat sorts of advanced cancer. Currently we've some tumor tissue complaints like tumor heterogeneity that results in cellular and clinical tumor resistance. Genomics and Proteomics are helping us with this and are currently at the bedside. within the meantime, at the bench side is Gene therapy. Cancer is especially a DNA-disease and targeting what's correct can show us the long and winding road to a particular cure of this still deadly disease.