
Tumour immunology

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- 65 - The host of a malignant tumour was found to be active against the process of malignant induction and progression. It offers immunologic defences against the emerging malignant process (Old and Boyse, 1973). It was shown that prognosis in many types of carcinoma was related to the degree of lymphoid infiltration in the primary tumour and the presence of sinus histiocytosis in the draining lymph nodes (Block et al., 1955 & 1956). However the general aims of immunodiagnosis and immunotherapy of cancer are not new. They are rooted in the 19th century studies of Von Behring on diphtheria antitoxin and of Héricourt and Richet on antisera against sarcoma. Paul Ehrlich, the patron saint of the field, argued at the turn of the century for the use of "bodies which possess a particular affinity for a certain organ as a carrier by which to bring therapeutically active groups to the organ in question" (Weinstein, 1984). The manipulation of the immune system might result in the regression of malignant tumours is a compelling idea that has stimulated scientific experimentation for > 80 years.

- 66 - At the turn of the century, Coley attempted to stimulate resistance to human tumours by the administration of bacteria and bacterial toxins. In 1940, Gross discovered that mice could be immunized against a tumour that developed in a mouse of the same strain. At that time this work received little notice. In the 1950s, Prehn and Mink demonstrated the existence of tumour specific transplantation antigens on chemically induced murine neoplasms. By 1970, some daring investigations were using immunomodulating agents to treat human cancers. By 1980 the results of hundreds of clinical immunotherapy trials had been published. Yet in 1984, the only fair and accurate evaluation of human cancer immunotherapy is that its efficacy is unproven and uncertain. Is cancer immunology one of mistaken ideas deserving of nothing more than a few lines in a text book on the history of science? or have we expected too much, too soon from tumour immunology and has its clinical application been hasty and premature? The better understanding of basic immunology will lead to successful application of tumour immunology to clinical medicine. (~anstrangelo, 1984).