

NEW DIRECTIONS IN CANCER MANAGEMENT

INTRODUCTION

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During the past 50 years or so, cancer chemotherapy has achieved a measure of success in the sense that it is now possible, in some patients with some types of tumors, to achieve complete remission by the use of cytotoxic agents and to keep patients tumor-free with good quality of life for prolonged periods of time. Despite being able to cause these apparent "cures", cancer chemotherapy with so-called cytotoxic agents has major limitations due to the relatively poor selectivity of antitumor action of these drugs and the fact that resistance to them occurs.

Therefore even a limited degree of resistance at the tumor site is sufficient to impact clinical resistance because it cannot be overcome by increasing drug dose without increasing an unacceptable toxicity.

In recent years significant progress has been achieved in developing so-called target oriented drugs in applying new immunotherapy approaches and in clarifying the relationship between tumor cells and their microenvironment in attempts to discover novel sites of intervention.

Target oriented drugs are aimed at affecting factors in tumor cells that are uniquely essential for the survival of these cells. In the recent past, most effects were focussed on inhibiting specific sites along signal transduction pathways, from receptor to the nucleus, with special emphasis on several tyrosine kinases. Now the positions have broadened and increasing emphasis is given to mechanisms of transcription and epigenetic controls as potential sites for future intervention. It is expected that new drugs will be developed based on these sites of intervention provided that specificity of inhibition of desired genes can be assured.

Immunotherapy is making major progress based on the clarification of the mechanism of immune response to tumors, on the mechanism of tumor escape and on the tumor induced suppression of immunity. In this Symposium some of these areas of future intervention on tumor immunity will be discussed.

The relationships between tumor and its microenvironment is a subject of great interest at this time. These relationships include the action of host defense or inflammatory cells, angiogenesis related phenomena as well as the action of factors from the microenvironment that affect the pathophysiology of the cancer cells to mention a few areas of interest. This is a rapidly developing area of research which is bound to provide new sites of intervention in the future.

The above areas of current and expected development of new types of therapy for different types of cancer will be discussed at this meeting. In terms of clinical investigation, particular emphasis will be given to hematological diseases because of the special interest of our hosts in Argentina.

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