Introduction

Intrinsic and acquired resistance to chemotherapy is a serious problem for many cancer patients. Cancer cells appear to have the capacity to generate variants resistant to any anticancer drug. Tumours, and even individual cancer cells, can exhibit multiple mechanisms of resistance simultaneously. In order to overcome resistance it may be necessary to achieve a high rate of tumour cell kill before multiple resistance mechanisms can develop, and/or to develop therapies which simultaneously target several resistance mechanisms. Mechanisms of resistance described so far include 'bulk' mechanisms (e.g. related to blood and drug supply, and to oxygenation), mechanisms relating to population cell kinetics, and mechanisms at the cellular level including altered expression of drug target proteins, drug transporter proteins, drug metabolising enzymes, and proteins which regulate cell death pathways. This volume brings together up-to-date reviews on all of these aspects written by researchers actively involved in their topic. It is a completely new book, different from its predecessor *Multiple Drug Resistance in Cancer – Cellular, Molecular and Clinical Approaches* (Kluwer, 1994). Most of the topics and contributors are new, and chapters on the same topics are included only in cases where there have been significant research developments in the interim period. I hope that this volume will bring together different ideas and approaches, and help to encourage their integration to generate new treatments which will cure more cancer patients.

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