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| Nota di contenuto | Preface; Contents; Chapter 1 Effect of Chemotherapy on the Tumor Microenvironment and Anti-tumor Immunity; 1.1 Introduction; 1.2 Mechanisms of Cell Death Induced by Anti-cancer Therapy; 1.2.1 Apoptosis; 1.2.2 Non-apoptotic Cell Death; 1.2.3 Morphological vs Functional Classification of Cell Death; 1.3 Immunogenicity of Cell Death; 1.4 Biochemical Features of Immunogenic Cell Death; 1.4.1 Calreticulin Exposure; 1.4.2 Heat Shock Proteins (HSPs); 1.4.3 HMGB1 and TLR Interactions; 1.4.4 ATP Release and Activation of the NLRP3 Inflammasome; 1.4.5 Autophagy-Dependent Immune Responses 1.5 Effects of Chemotherapy on the Immune System1.5.1 Immune-Suppressive Effects; 1.5.1.1 Lymphopenia; 1.5.1.2 Non-immunogenic Cell Death; 1.5.2 Immune-Stimulatory Effects; 1.5.2.1 Enhanced Antigen Delivery and Presentation; 1.5.2.2 Homeostatic Proliferation; 1.5.2.3 Regulatory T Cells; 1.5.2.4 Myeloid Derived Suppressor Cells (MDSCs); 1.5.2.5 DNA-Damage Response and Activation of the Innate Immune System; 1.5.2.6 Gemcitabine; 1.5.2.7 5-Fluorouracil (5FU); 1.5.3 Immune-Modulatory Effects of Targeted Agents; 1.5.3.1 Imatinib; 1.5.3.2 Sunitinib and Sorafenib; 1.6 Conclusion; References Chapter 2 Hyperthermia, the Tumor Microenvironment and Immunity2. 1 Introduction; 2.2 Hyperthermia; 2.2.1 Fever Range Heating (FRH); 2.2.2 Hyperthermia Range Heating; 2.2.3 Ablation Range Hyperthermia; |

Sommario/riassunto

The growing knowledge on tumor-immune response interactions and on the tumor microenvironment did not translate so far into better control of cancer by anti-tumor vaccination. The percentage of patients who benefited from vaccination strategies is still too small to justify their general use. It is the aim of this book to present an alternative to the conventional approach of developing injected tumor vaccines to activate anti-tumor immunity, which will fight cancer. It is argued that in situ tumor ablation (destruction) that involves tumor antigen release; cross presentation and the release of danger associated molecular patterns (DAMPs) can make the tumor its own cellular vaccine. Tumor ablation methods using chemicals, radiation, photodynamic therapy, cryoablation, high-temperature, radiofrequency, high intensity focused ultrasound, and electric-based ablation have been developed for focal tumors. In this book experts will deal with two main topics: I. What are the principles of the various ablation modalities, and II. How each method affects the tumor cells and their microenvironment, and how these effects are responsible for the induction of specific anti-tumor immunity. The aims of this book are thus: 1. Familiarize the readers with various methods of in situ tumor ablation. 2. Review the literature and stimulate comparisons on the efficacy of different ablation methods for the treatment of tumors of different histotypes. 3. Review the literature on the effects of various ablation methods on systemic and local anti tumor immunity and on other manifestations of the interactions of tumors with their microenvironment. 4. Stimulate comparative studies on the immunostimulatory effects of different ablation modalities.