

1. Record Nr.	UNINA9910163538103321
Autore	Abhishek D. Garg
Titolo	Immunogenic Cell Death in Cancer: From Benchside Research to Bedside
Pubbl/distr/stampa	Frontiers Media SA, 2016
Descrizione fisica	1 electronic resource (145 p.)
Collana	Frontiers Research Topics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>Classically, anti-cancer therapies have always been applied with the primary aim of tumor debulking achieved through widespread induction of cancer cell death. While the role of host immune system is frequently considered as host protective in various (antigen-bearing) pathologies or infections yet in case of cancer overtime it was proposed that the host immune system either plays no role in therapeutic efficacy or plays a limited role that is therapeutically unemployable. The concept that the immune system is dispensable for the efficacy of anticancer therapies lingered on for a substantial amount of time; not only because evidence supporting the claim that anti-cancer immunity played a role were mainly contradictory, but also largely because it was considered acceptable (and sometimes still is) to test anticancer therapies in immunodeficient mice (i.e. SCID/athymic mice lacking adaptive immune system). This latter practice played a detrimental role in appreciating the role of anticancer immunity in cancer therapy. This scenario is epitomized by the fact that for a long time the very existence of cancer-associated antigens or cancer-associated 'danger signaling' remained controversial. However, over last several years this dogmatic view has been considerably modified. The existence of cancer-associated antigens and 'danger signaling' has been proven to be incontrovertible. These developments have together paved way for the establishment of the attractive concept of "immunogenic cell death" (ICD). It has been established that a restricted class of</p>

chemotherapeutics/targeted therapeutics, radiotherapy, photodynamic therapy and certain oncolytic viruses can induce a form of cancer cell death called ICD which is accompanied by spatiotemporally defined emission of danger signals. These danger signals along with other factors help cancer cells undergoing ICD to activate host innate immune cells, which in turn activate T cell-based immunity that helps eradicate live (or residual) surviving cancer cells. The emergence of ICD has been marred by some controversy. ICD has been criticized to be either experimental model or setting-specific or mostly a concept based on rodent studies that may have very limited implications for clinical application. However, in recent times it has emerged (through mainly retrospective or prognostic studies) that ICD can work in various human clinical settings hinting towards clinical applicability of ICD. However a widespread consensus on this issue is still transitional. In the current Research Topic we aimed to organize and intensify a discussion that strives to bring together the academic and clinical research community in order to provide a background to the current state-of-the-art in ICD associated bench-side research and to initiate fruitful discussions on present and future prospects of ICD translating towards the clinical, bedside reality.
