Dokumenttyp: journal article

Autor(en) des Beitrags: Gaipl, Udo S; Multhoff, Gabriele; Scheithauer, Heike; Lauber, Kirsten; Hehlgans, Stefanie; Frey, Benjamin; Rödel, Franz

Titel des Beitrags: Kill and spread the word: stimulation of antitumor immune responses in the context of radiotherapy.

Abstract: Besides the direct, targeted effects of ionizing irradiation (x-ray) on cancer cells, namely DNA damage and cell death induction, indirect, nontargeted ones exist, which are mediated in large part by the immune system. Immunogenic forms of tumor cell death induced by x-ray, including immune modulating danger signals like the heat shock protein 70, adenosine triphosphate, and high-mobility group box 1 protein are presented. Further, antitumor effects exerted by cells of the innate (natural killer cells) as well as adaptive immune system (T cells activated by dendritic cells) are outlined. Tumor cell death inhibiting molecules such as survivin are introduced as suitable target for molecularly tailored therapies in combination with x-ray. Finally, reasonable combinations of immune therapies with radiotherapy are discussed.

Zeitschriftentitel / Abkürzung: Immunotherapy

Jahr: 2014

Band: 6

Heft / Issue: 5

Seiten: 597-610

Sprache: eng