Special Issue

New Insights in Radiotherapy: Bridging Radiobiology and Oncology

Message from the Guest Editors

Radiotherapy has long been used to treat or alleviate various types of cancer. This Special Issue aims to highlight recent advances in the evaluation of physical and biological factors that lead to radiation-induced radiobiological effects, including the immunological effects of radiotherapy, the normal tissue-sparing effect enhanced by FLASH radiotherapy, the bystander effect via synaptic transmission, and radiation-induced lethality on different types of cancers at the organismic, tissue, and cellular levels. Topics of interest include the association of radiation beam quality with the abscopal effect through the activation of the systemic immune response and immunogenic cell death, tissue-specific responses to different irradiation regimens, parameters in mediating radiation effects to non-irradiated neurons, and the modulatory effect of LET on the radiationinduced lethality of different types of cancers. We invite contributions that provide insights into novel biological pathways, biophysical mechanisms, radioprotection and radiosensitization strategies, and regulatory considerations to ensure the appropriateness and safety of medical radiation applications.

Guest Editors

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Deadline for manuscript submissions

30 November 2025



an Open Access Journal by MDPI

Impact Factor 3.9 CiteScore 6.8 Indexed in PubMed



mdpi.com/si/237968

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