



Reactive Oxygen Species in Photodynamic Therapy (PDT) and Radiation Therapy (RT)

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Message from the Guest Editors

Reactive oxygen species (ROS) play a key role in photodynamic therapy and radiation therapy, especially given the increased interest in FLASH-RT in the latter field. The continuously increasing capability that can be achieved by new generations of dosimetric tools is making it feasible to quantify ROS more directly, via various means. This evolution has set the stage for us to understand the role of ROS in PDT and RT.

In FLASH-RT, there is an awareness of the potential importance of ROS in demonstrating the difference between killing a tumor and damaging normal tissue. Given the plurality of imaging techniques available for initial staging, each clinical challenge can be met with a tailored image guidance solution.

This Special Issue aims to provide an up-to-date overview of the most recent (technical) advances in the field of ROS modeling and detection. For a variety of cancers and interventions, we will cover the in vivo and in vitro uses of innovative technique to detect ROS for a wide range of modalities. Translational efforts and works that demonstrate the benefits for patients are of particular interest.





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Message from the Editor-in-Chief

It has been recognized in medical sciences that in order to prevent adverse effects of "oxidative stress" a balance exists between prooxidants and antioxidants in living systems. Imbalances are found in a variety of diseases and chronic health situations. Our journal *Antioxidants* serves as an authoritative source of information on current topics of research in the area of oxidative stress and antioxidant defense systems. The future is bright for antioxidant research and since 2012, *Antioxidants* has become a key forum for researchers to bring their findings to the forefront.

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