

## Special Issue

# Recent Perspectives on Mechanisms of Radiation-Mediated DNA Damage Induction and Response in Cancers

### Message from the Guest Editors

The area of DNA damage response (DDR) has been expanding over the past decades providing important insights into cellular mechanisms of DNA damage recognition, signalling and repair. Radiotherapy is a cornerstone for treatment of various types of cancer. Since radiation kills tumor cells by damaging their DNA understanding the molecular mechanisms of DDR in tumor cells opens new avenues for improvement of radiotherapy. In this regard, an alteration in DNA damage signaling can result in radiation resistance and tumor progression. In contrast, a dependence of cancer cells on specific DDR pathways can be targeted to improve the efficacy of radiation. Notably, multiple epigenetic signaling pathways facilitating DDR have been identified providing an additional layer of DDR regulation that can be exploited for sensitizing cancer to radiation. All of these aspects of radiation-induced DNA damage and response mechanisms will be addressed in our Special Issue providing perspectives for the future development of radiotherapy.

### Guest Editors

Prof. Dr. Marikki Laiho

Division of Molecular Radiation Sciences, Johns Hopkins School of Medicine, Baltimore, MD, USA

Dr. Michael Goldstein

Department of Radiation Oncology and Molecular Radiation Sciences, Johns Hopkins School of Medicine, Baltimore, MD, USA

### Deadline for manuscript submissions

closed (31 March 2024)



## Cancers

an Open Access Journal  
by MDPI

Impact Factor 4.4  
CiteScore 8.8  
Indexed in PubMed



[mdpi.com/si/159254](https://mdpi.com/si/159254)

*Cancers*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[cancers@mdpi.com](mailto:cancers@mdpi.com)

[mdpi.com/journal/  
cancers](https://mdpi.com/journal/cancers)





# Cancers

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.4  
CiteScore 8.8  
Indexed in PubMed



[mdpi.com/journal/  
cancers](https://mdpi.com/journal/cancers)



## About the Journal

### Message from the Editor-in-Chief

*Cancers* is an international online journal addressing both clinical and basic science issues related to cancer research. The journal is publishing in Open Access format, which will certainly evolve to ensure that the journal takes full advantage of the rapidly changing world of information and knowledge dissemination. It publishes high-quality clinical, translational, and basic science research on cancer prevention, initiation, progression, and treatment, as well as other related topics, particularly to capture the most seminal studies in the rapidly growing area of immunology, immunotherapy, and tumor microenvironment.

---

### Editor-in-Chief

Prof. Dr. Samuel C. Mok

Department of Gynecologic Oncology and Reproductive Medicine, The University of Texas MD Anderson Cancer Center, Houston, TX 77030, USA

---

### Author Benefits

#### Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Embase, CAPlus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q2 (Oncology) / CiteScore - Q1 (Oncology)