Special Issue

Senescent Cells and Cancer Therapy

Message from the Guest Editor

Senescence is a natural stress response mechanism characterized by stable cell cycle arrest and secretion of pro-inflammatory factors, stromal components, and other molecules, known as senescence-associated secretory phenotype (SASP). Many types of cancer treatments, including radiation, chemotherapy, and targeted therapies, can leave behind senescent tumor cells. Paradoxically, therapy-induced senescence (TIS) and SASP can have both tumor-promoting and tumor-suppressing properties depending on the cellular context and inducing stimuli. For instance, TIS halts tumor cell proliferation. However, senescent cells can sometimes escape growth arrest leading to post-therapy tumor recurrence. Similarly, inflammatory mediators secreted by senescent cells can facilitate tumor immuno-surveillance. On the other hand, SASP can facilitate tumor infiltration with immune cell subsets that promote tumor growth and metastasis. Moreover, TIS and SASP have been linked with therapy side effects. Therefore, while induction of senescence may benefit patients in the short term, prompt removal of senescent cells may present a path toward improved treatment outcome.

Guest Editor

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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.

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