

Tentative Outline

Special Thematic Issue for Current Cancer Therapy Reviews

The Role of the Stromal-Hematopoietic Complex in the Development of the Tumor Process

Guest Editor: Katerina Bruslova

Aims & Scope:

The regulation of hemopoiesis depends on the state of the mesenchymal microenvironment and regulatory factors. Function of hematopoietic stem cell (HSCs) is associated with niches of bone marrow. Tumor-derived factors and therapeutic interventions disrupt structural and regulatory properties of the stem cell niche, resulting in niche invasion by hematopoietic malignancies. The stroma has been demonstrated to have crucial roles in tumorigenesis, cancer progression, metastasis, and therapy resistance. The bone marrow microenvironment, specific genetic and epigenetic abnormalities in cancer cells could contribute greatly to acquired drug resistance and metastasis tumor. Tumor-derived exosomes are recognized as a critical determinant of the tumor progression and drug resistance. The being developed of therapies that target the mechanisms by which stromal cells contribute to successful tumorigenesis. The expression levels of MDR/metastasis-associated genes are regulated by numerous microRNAs (miRNAs/miRs). The role of microvesicle - mediated microRNA transfer converts non-cancer stem cells into cancer stem cells is considered. Targeting specific drivers of desmoplasia, such as cancer associated fibroblasts, either enhances or halts tumor growth and progression. The role of fibrosis is revealed in cancer progression. Tumor cells can destroy bone stromal elements and to transformer into pathological osteolytic or osteoblastic lesions. Interactions of tumor, immune, and mesenchymal stromal/stem cells (MSCs) have been recognized as crucial for understanding tumorigenesis. The study of the state of the stromal-hemopoietic complex and its effect on the development of chemoresistance and the metastasis tumor in patients will provide an opportunity to disclose mechanisms of oncogenesis and to justify the choice of therapy.

Keywords: Stem cell, Stroma, Hematopoiesis, Microenvironment, Tumorigenesis, Endocrine system, Metastases, Drugs Resistance.

Subtopics:

- Mesenchymal stem cells
- Bone, cartilage, stromal progenitor
- Leukemia stem cell niche, microenvironment, interactions
- Hematopoietic bone marrow niche, bone microenvironment
- Leukemia cells, microenvironment, AML
- Extracellular matrix proteins, glycosaminoglycans, stromal cells, acute myeloid

Schedule:

- Manuscript Submission Deadline: September 2019
- Peer Review Due: October 2019
- Revision Due: December 2019
- Notification of Acceptance by the Guest Editor: January 2020

Contacts:

Guest Editor:

Dr. Katerina Bruslova

Department of Radiation Hematology for children, National Research Center for Radiation Medicine of the National Academy of Medical Sciences of Ukraine, 53, [Yuriy Illenko](#), str., Kyiv, 04050, Ukraine

Email: katerina142@ukr.net