

Tentative Outline

Special Thematic Issue for Current Cancer Therapy Reviews

Stromal: Hemopoietic Complex and its role in the development of Malignant Diseases of the Blood System

Guest Editor: Katerina Bruslova

Aims & Scope:

The regulation of hemopoiesis depends on the state of the mesenchymal microenvironment and regulatory factors. The mesenchymal stem cells (MSC) have the property of self-renewal and form niches for the mobilization of hematopoietic stem cells (HSC), their proliferation and differentiation. The relationship between MSC and HSC determines the course of the malignant process and the results of chemotherapy in patients. It is shown that megakaryocytes affect the proliferation of HSC. MSC in patients with leukemia contribute to the growth of tumor substrate and chemoresistance. The stroma of the microenvironment, the structure of the organic and mineral composite bone tissue and their endocrine regulation in norm and in malignant diseases of the blood system is being studied. The fibroblasts affect the structure of collagen and the imbalance of amino acids, bone density, which can contribute to the development of fibrosis, tumor growth and metastases. In the regulation of the stromal-hemopoietic complex, an important role is played of endocrine system. In children with hypocortisolemia in the debut of acute leukemia the efficiency of colony formation of stromal fibroblasts of bone marrow was reduced. Discusses the problems of resistance in patients with acute leukemia to treatment by corticosteroids. The study of the functional state of the stromal-hemopoietic complex and its effect on the development of chemoresistance in patients will provide an opportunity to disclose mechanisms of oncogenesis, to formulate criteria for the prognosis of the tumor process and to justify the choice of tactics of therapy.

Keywords: Oncogenesis, mesenchymal stromal cells, regulation, fibroblasts, bone density, chemoresistance, criteria of prognosis.

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: June 2019
- Peer Review Due: July 2019
- Revision Due: August 2019
- Notification of Acceptance by the Guest Editor: September 2019

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