

## 263. BIOMARKERS IN OVARIAN CANCER

**Rahela Manoli**

Scientific adviser: Silvia Stratulat, Associate Professor, Department of Biochemistry and clinical Biochemistry, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Elucidation of the most frequent biomarkers in ovarian cancer.

**Materials and methods:** The study was based on the analysis of biographical sources from 2007-2014.

**Discussion results:** One of the major challenges in cancer research is the identification of stable biomarkers, which can be routinely measured noninvasively in easily accessible samples. Ovarian cancer is one such disease that would benefit from improved diagnostic markers. Ovarian cancer is the leading cause of death from gynecological malignancy in the western world. One way to facilitate early detection of ovarian cancer is through screening, but currently available diagnostic tools, including ovarian cancer biomarkers and clinical imaging, lack sufficient specificity and sensitivity for implementation in a population-based screening program.

**Conclusions:** The ability to sensitively and specifically predict the presence of early disease and its status, stage and Associated therapeutic efficacy has the potential to revolutionize ovarian cancer detection and treatment and to greatly improve the quality of life and survival rates of ovarian cancer patients.

**Key words:** ovarian cancer, diagnosis, biomarker, early detection.

## 264. THE ROLE OF GLUTATHIONE IN CANCER DEVELOPMENT AND CHEMORESISTANCE

**Daniela Mirzac**

Scientific adviser: Tatiana Timercan, University Assistant, Department of Biochemistry and Clinical Biochemistry, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Glutathione (GSH) is a tripeptide produced by the liver and has the ability (among others) to remove a wide range of toxins, including those produced by heavy metals, alcohol, smoking, radiation and cancer chemotherapy. Elevated GSH levels were detected in various types of tumors, along with high levels of GSH-related enzymes, such as  $\gamma$ -glutamylcysteine ligase (GCL) and  $\gamma$ -glutamyl-transpeptidase (GGT), GSH-transporting export pumps. This makes the neoplastic tissues more resistant to chemotherapy. Therefore, the GSH system attracted the attention of scientists as a possible target for medical intervention against cancer progression and chemoresistance.

**Materials and methods:** The presentation represents an extensive literature review and is based on relevant scientific articles regarding the subject from medical databases.