Joint 16th International Symposium on Trace Elements in Man and Animals (TEMA-16), 12th Conference of the International Society for Trace Element Research in Humans (ISTERH 2017) and 13th Conference of the Nordic Trace Element Society (NTES 2017)

Saint-Petersburg, Russia, 26–29 June, 2017

Organizers
Russian Society for Trace Elements in Medicine (RUSTEM)
TEMA Parent Committee
Trace Element Institute for UNESCO
ISTERH
NTES

Co-organizers
Enshi government, Enshi, Peoples' Republic of China
RUDN University, Moscow, Russia
ITMO University, St. Petersburg, Russia

Conference Chair
Anatoly V. Skalny, MD, PhD, DSc, Prof., RUSTEM President

Co-Chairs
Xin Gen Lei, PhD, Prof., TEMA Parent Committee
Mary L'Abbe, PhD, Prof., TEMA Parent Committee
Ana Pejović-Milić, PhD, Prof., ISTERH President
Jan Aaseth, MD, PhD, Prof., NTES President

General Secretary
Alexey A. Tinkov, MD, PhD
The biogenous macroelements and trace elements in the time of formation of malignant neoplasm in women of an industrial region

L.A. Kovalchuk¹, A.A. Tarkhanov², A.E. Tarkhanova³, N.V. Mikshevich⁴

¹ Ural Branch of the Russian Academy of Sciences Institute of Plant and Animal Ecology, Russia
² Sverdlovsk Regional Oncology Center, Ural State Medical University, Russia
³ Ural Municipal Hospital, Ural State Medical University, Russia
⁴ Ural State Pedagogical University, Yekaterinburg, Russia

E-mail address: kovalchuk@ipae.uran.ru (L.A. Kovalchuk).

Objectives: To estimate of the biogenous elements in the time of formation of malignant neoplasm in patients.

Methods: Research was based on the inspection of somatic healthy women (n = 18), of women with benign breast tumor classified as mammary gland fibroadenoma (n = 19) and women with breast cancer (n = 20).

Results: It was found that women had the hypoglycemia and lower contents of total protein and albumin during disease of fibroadenoma and breast cancer. The content of the essential elements in women with breast cancer cases compared to the control was lower: Ca – 70%, Cu – 73% (p = 0.005). Concentration of Fe has increased by 6.4 times, Zn by 2.2 times (p = 0.003). The Cd and the Pb levels in the blood increased by 2 times, the Sr level increased by 3 times (p < 0.05) compared to the somatically healthy women.

http://dx.doi.org/10.1016/j.jtemb.2017.03.320