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Role of Some Trace Elements in Breast Cancer Receiving Chemotherapy

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Abstract : This study aim to examine changes in serum concentration of trace elements; cobalt (Co), germanium (Ge), molybdenum (Mo), nickel (Ni), vanadium (V), and magnesium (Mg) in breast cancer patients and control group, in addition to establish of databases in the Iraqi population. The study was included 40 patients with breast cancer and 50 healthy subjects. Serum concentrations of trace elements were measured by flame atomic absorption spectrophotometer. Statistical analysis of data demonstrated significant decrease ($p<0.001$) in Co, Ge and Mg concentrations in patients with breast cancer when compared with healthy. The study showed a significant increase ($p<0.001$) in Ni and V concentration in patients with breast cancer when compared with healthy. The results showed no change in concentration of Mo in breast cancer patients as compared to healthy. In conclusion, essential elements Mg and trace elements Co, Ge, Ni and V may play a central role in the pathogenesis of breast cancer.
Key words: Trace elements, Mg, Co, Ge, Ni, V breast cancer, , atomic absorption spectrophotometer.

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