

CLINICAL UTILITY OF SERUM GALECTIN-1 IN EGYPTIAN BREAST CANCER PATIENTS

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Introduction: Galectin-1 is over-expressed in human breast cancer cells, compared to none or limited expression in benign hyperplasia or normal cells. It is secreted in the extracellular space of cancer cells and tumour-associated endothelial cells.

Aim: We aim to investigate the diagnostic and prognostic value of serum Gal-1 in breast cancer patients.

Subjects & Methods: 100 newly diagnosed patients with different stages of breast cancer, who were not subjected to chemotherapy or radiotherapy and 100 healthy females as control were included. Serum Gal-1 and CA15-3 was assayed by ELISA, and micro particle enzyme immunoassay respectively. The association of galectin-1 with CA15-3 and clinic pathological variables was evaluated.

Results: Gal-1 and CA15-3 levels were significantly higher in patients than controls. Gal-1 was significantly increased in breast cancer patients who have advanced TNM stage and positively correlated with tumour size and grade. Significant positive correlations between Gal-1 and CA15-3 levels in breast cancer patients were found. The combination of the two markers resulted in improved sensitivity (85.2 % instead of 83.3 %) and specificity (61 % to 64 %) than using Gal-1 alone and improvement of CA15-3 sensitivity from 33 % to 85.2 %.

Conclusion: Our results suggest that Gal-1 can be used as a screening and prognosis biomarker for breast cancer.

Biography

Loaa Tag Eldeen has completed her Phd from Suez Canal University. She is an Assistant professor of Biochemistry and Molecular biology, Faculty of Medicine, Suez Canal University, Ismailia, Egypt since April 2013. She has published more than ten papers in reputed journals and supervising more than 20 Masters and PhD thesis.

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