Iman Mamdouh Talaat et al., Breast Can Curr Res 2017, 2:5 (Suppl)
DOI: 10.4172/2572-4118-C1-011

Evaluation of immunohistochemical staining of securin and Ki-67 in invasive breast carcinoma using semi-quantitative method and immunoratio®: A comparative study

Iman Mamdouh Talaat, Nagwa Youssef Oweiss, Nada Mahmoud Soliman Yakout and **Abbas Mohammed Omar**
Alexandria University, Egypt

Pituitary Derived Tumour-Transforming Growth Protein (PTTG) (Securin) plays critical role in cell cycle and overexpression is associated with chromosomal instability and poor clinical outcome. Securin and Ki-67 immunohistochemical staining was performed on tissue microarray sections representative of 145 patients diagnosed with invasive breast carcinoma from 2005 to 2011. Semi-quantitative methods as well as ImmunoRatio® (an open source plugin within ImageJ software for offline image analysis) were used for immunostaining assessment. Only 118 cases had representative tissue cores out of 145 cases. The 118 cases were categorized into 2 groups according to their clinical outcome; the first group (G1) (n=77) comprised patients who were disease-free while the second group (G2) (n=41) included patients with recurrence and/or metastasis at the end of 24 months follow up duration. Lymphovascular invasion, perinodal fat infiltration, nodal status, ER status, HER-2 status and molecular subtypes showed risk association with clinical outcome (p(MC)=0.005*, p=0.004*, p(MC)=0.001*, p=0.044*, p=0.025*, p (MC) =0.005*) using chi-square test. Both securin and Ki-7 labelling indices (LIs) obtained by visual counting were significantly higher in the second group (p=0.006*). While only securin LIs acquired by image analysis were significant. Cut off points for the tested markers were identified using Receiver Operator characteristics (ROC) curves. Areas under curve (AUCs) were compared for these methods of assessment. Securin assessment by visual counting was the most accurate (AUC=0.775) in identifying patients who will likely suffer from recurrence or distant metastasis. The present results suggest that securin may have superior value to ki-67 in identifying invasive breast carcinoma patients with poor clinical outcome.

Biography

Iman Mamdouh Talaat is working in Alexandria University in Egypt. Her research interest includes Invasive breast carcinoma, breast cancer therapies.

italaat@sharjah.ac.ae

Notes: