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## Survivin and livin expression as prognostic markers in the primary breast cancer and their lymph node metastases

Adam Elzagheid<sup>1,2</sup>, Khaled Abdulmola<sup>3</sup>, Fatma Emaetig<sup>1,4</sup>, Sara Glessa<sup>1</sup> and Kari Syrjänen<sup>5,6</sup>

<sup>1</sup>University of Benghazi, Libya

<sup>2</sup>Biotechnology Research center, Libya

<sup>3</sup>Al Zawiya University, Libya

<sup>4</sup>University of Misurata, Libya

<sup>5</sup>Biohit Oyj, Finland

<sup>6</sup>Teaching and Research Institute Barretos Cancer Hospital, Brazil

**Aim:** To assess the prognostic significant of survivin and livin protein expression in primary invasive breast cancer and in metastatic breast cancer to lymph node.

**Material & Methods:** The present study consists of archival samples from 78 patients of invasive breast cancer during 2010-2014 diagnosed at Misurata Cancer Center, Misurata, Libya. Tumor biopsies were analyzed for expression of survivin and livin by immunohistochemical, different grading systems were tested for survivin and livin expression.

**Results:** Survivin expression in primary breast cancer shows a significant correlation between survivin expression and site of tumor ( $P=0.021$ ), higher expression of survivin was in patients without recurrence ( $p=0.036$ ), survivin expression correlated significantly with unifocal tumor ( $P=0.001$ ), Moreover HER-2 negative tumor express survivin more than HER-2 positive tumor ( $P=0.047$ ). There was no significant difference in survivin expression as regards histological grade, histological type, lymph node status, tumor stage, TNM classification, estrogen, progesterone receptors, distance metastases, chemotherapy, radiotherapy, hormone replacement, vascular invasion, surgical margin, positive family history. Livin expression in primary breast cancer shows a significant correlation ( $P=0.025$ ) with positive family history. There was no significant association with other clinicopathological parameters. We further studied the association of survivin and livin expression with secondary breast cancer (lymph node metastases), we found that primary tumor show higher survivin expression (82%) compared with secondary breast cancer (34%) while livin expression did not differ between the primary (71%) and secondary breast cancer (84%).

**Conclusion:** Survivin expression in primary breast cancer is significantly associated with parameters of good prognosis. Livin expression in primary breast cancer is significantly associated with positive family history of breast cancer.

### Biography

Adam Elzagheid is a Professor at Biocology Research Centre (BTRC), acting as a General Director of BTRC, Tripoli, Libya. He has worked as a Dean of Faculty of Medicine, Benghazi University, Benghazi, Libya, Head of Department of Pathology, Faculty of Medicine, University of Benghazi. Post-doctoral Fellow and Research Associate at University of Turku, Faculty of Medicine, Oncology and Pathology Departments, Turku, Finland.

elzagheid@yahoo.com

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