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## MiR-10b, miR-133a, miR-155 and miR-639 as non-invasive potential biomarkers in breast cancer

Amal Fawzy<sup>1</sup>, Ossama A Mansour<sup>1</sup>, Ahmed I Abulsoud<sup>1</sup>, Mohamed Badr<sup>1</sup>, Reham A A Elshimy<sup>1</sup>, Ahmed Ismail<sup>1</sup>, Hesham A M El-Mahdy<sup>1</sup> and Amr M Ali<sup>2</sup>

<sup>1</sup>Cairo University, Egypt

<sup>2</sup>BeniSwif University, Egypt

**Background:** Among women, the second leading cause of death worldwide is the breast cancer (BC). MicroRNAs (miRNAs) expression participates in breast cancer.

**Objectives:** The purpose of this study is to investigate the expression of miRNA-10b, miR-133a, miR-155 and miR-639 in breast cancer and study their correlation with clinicopathological features and tumor suppressor protein (p53) concentration.

**Material & Methods:** The four miRNAs levels were measured in serum using quantitative real-time PCR (QRT-PCR) and (p53) concentration by enzyme-linked immunosorbent assays (ELISA) in women with breast cancer (n=60) and healthy controls (n=80).

**Results:** In this study miRNA-10b, miRNA-155, and miRNA-639 were overexpressed while miR-133a had down expression in the serum of breast cancer patients compared to control serum. P53 had no significant correlation with any of the studied miRNAs. A significant association was observed between miR-10b and human epidermal growth factor-2 (HER-2) (P=0.046), miR-155 with lymph node involvement (P=0.05), and between miR-133a and tumor grade (P=0.039).

**Conclusion:** These miRNAs have a significant signature in the pathogenesis of breast cancer and can be used as non-invasive molecular biomarkers for breast cancer detection.

rehamelshimy@gmail.com