

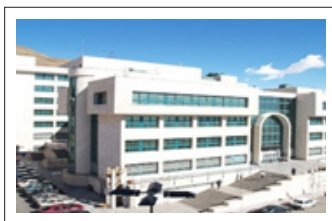
Evaluation of ASXL1 and its derived circRNA expression in the liquid biopsy in breast cancer



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ABSTRACT

Circular RNAs (circRNAs) as a family of non-coding RNAs are recognized their regulatory roles in gene expression in developmental diseases and cancers. It has been reported that circRNAs have different expression in all cancers and could be used as a new biomarker for diagnosis. Furthermore, their expression in exosome from the liquid biopsy is more interested nowadays. However, the effect of circRNAs in breast cancer (BC) is still unknown. The bioinformatic survey is important in the screening of circRNAs. So, the aim of this study is to determined potential CircRNAs in metastasis using bioinformatic survey with CIRI2 on GEO data set GSE58708. Based on this survey ASXL1 and its derived circRNA were chosen. The expression level of them will be examined in serum derived exosomes of 60 metastatic and non-metastatic BC patients by using Real-time PCR. Exosomes were extracted from serum samples and were confirmed by DLS and Western Blot. The role of ASXL1 in epithelial-mesenchymal transition (EMT) regulation and metastasis was determined in previous studies. ASXL1, its tumor suppressor function, prevents the transformation of epithelial cells to mesenchymal cells. In conclusion, the result of this study may declare the role of this CircRNA in early diagnosis of metastasis in BC patients.



BIOGRAPHY

Sara Kolahdouzan is an MSc student in Genetics at Islamic Azad University of Science and Research and is doing her thesis in breast cancer research center, Motamed cancer institute, Tehran, Iran under the supervision of Dr. Rezvan Esmaeili.

International Conference on Oncology and Cancer, Webinar | June 02, 2020

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Citation: Sara Kolahdouzan, Evaluation of ASXL1 and its derived circRNA expression in the liquid biopsy in breast cancer, International Conference on Oncology and Cancer, Webinar, June 02, 2020, 06