Evidences on physical activities effect on breast cancer: Epigenetics prospective

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Worldwide, breast cancer is the second leading cause of death in females exhibiting a significant global health burden. Piling evidences based on the reversibility nature of the epigenetics effects like physical activity and dietary habits may play a pivotal role in disease manifestation. Among the most effective intervention that has an effect on cancer is the physical activity in which at moderate levels showed to reduce the risk of death from breast cancer and many other chronic diseases. Studies have showed high and low intensity supervised multimodal intervention exercises reduced cancer patients' fatigue, muscular strength and improved patients' wellbeing. Based on gene methylation expression data of breast cancer patients undergoing randomized clinical trial exercise revealed reduction in gene methylation of tumor suppressor genes is in association with overall survival. Herein, this study gives an overview on the predisposition of such exogenous epigenetic effects of physical activities on the potential reversibility and preventive possibilities of breast cancer.

Biography
Manal Humaid Al Khanbashi has completed her PhD as joint collaboration between Sultan Qaboos University, Oman and Karolinska Institute, Sweden and currently working as a Lecturer in Higher College of Technology, Oman. She has developed some interests in the fields of methylation and miRNA expression changes in response to external factors like treatment, diet and physical activities as epigenetics elements in breast cancer. She has few publications in miRNA expression in locally advanced breast cancer in response to chemotherapy treatment. She initiated the "amaware" initiative for public awareness on healthy lifestyle, breast cancer, fitness and healthy diet (through workshops and social media).

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