

The iron woman: mamographic density, physical activity, and breast cancer

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Abstract

Physical activity is a modifiable lifestyle risk factor in prevention of breast cancer. It is well established that regular physical activity is associated with a reduced risk of breast cancer. A meta-analysis found that physically active women have 12% reduced risk of breast cancer compared to the inactive women. Mammographic density (MD) is a strong risk factor for breast cancer. Physical activity been hypothesized to reduce breast cancer risk through several mechanisms, including weight loss, obesity prevention, reduced sex hormone exposure, reduced levels of insulin and insulin-like growth factor exposure, induced immune system function, and mechanism of DNA repair. Some of these factors, such as alteration in the metabolism of endogenous hormones, are suggested to influence MD. MD is increasingly being used as a biomarker of breast cancer risk, as it is one of the strongest risk factors. MD refers to the amount of radiologically dense breast consisting of epithelial or stromal tissue that appears light on a mammogram, whereas fat tissue appears dark on a mammogram. The goal of our study is to investigate a link of regular physical activity with MD and risk factor association to breast cancer.

Biography

Noelle Cutter is an associate professor and director of the First Year Experience at Molloy College. By training, she is a scientist in the field of molecular biology where she has dedicated her career to studying alternative treatment options for patients diagnosed with cancer. Dr. Cutter takes a unique and passionate approach to working with patients. She is an advocate for cancer care and works closely within the athletic community. Over the last decade, researchers have made great strides in understanding cancer but finding cures has still been difficult. In an ever-changing world sometimes a new approach to solving this problem is necessary. Dr. Noelle Cutter is most interested in the role that exercise and nutrition play in stopping tumors from growth and metastasis. By doing so, she hopes to be able to treat patients more efficiently.



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