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Review Article

Risk Profiling in Breast Cancer and the Role of Lifestyle Modification: An Analytical Perspective

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ABSTRACT

Breast cancer is the most common cancer occurring in women. In addition to the hereditary factors that lead to this type of cancer there are a variety of lifestyle factors which affect both the risk of occurrence and the outcome of the condition. This brief review presents an overview of the breast cancer risk profiling and discusses the importance of maintaining healthy lifestyle habits for its prevention. Personalized risk assessment based on one's family history, genetic factors, reproductive history, breast density and the exposure to other modifiable risk factors allows early identification of people at high risk of developing the disease. Physical exercise, healthy weight, proper nutrition, moderation in alcohol consumption, non-smoking and the stress reduction have proven to reduce the risk and improve survivorship from the condition.

INTRODUCTION

The development of breast cancer results from the interplay of several genetic, hormonal, environmental and the lifestyle factors. Although aging and genetic predisposition can not be altered

there are numerous well-documented risks that are avoidable. Sedentary behavior, obesity and poor diet in the population have led to increased occurrence of this disease. This highlights the importance of preventative approaches focused on the healthy lifestyles.

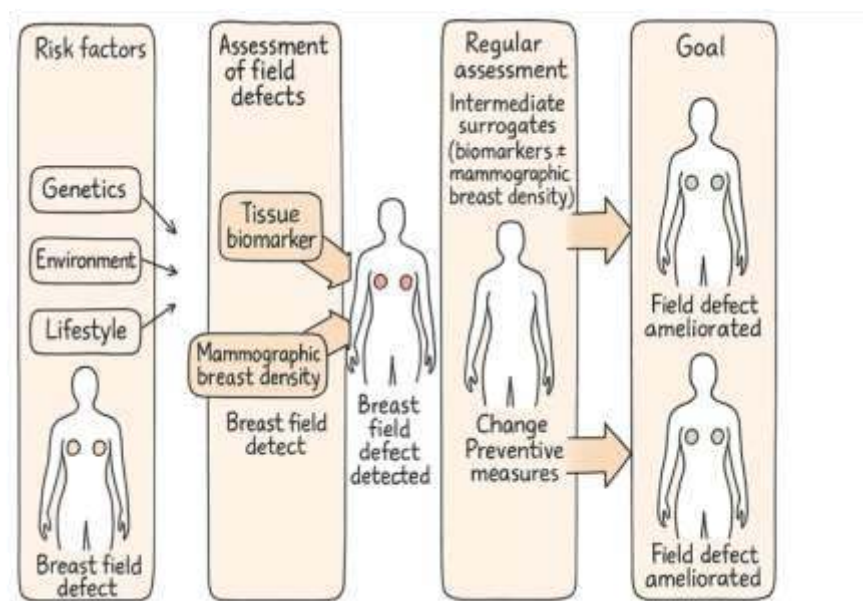
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Risk Profiling:

Current risk assessments combine the clinical risk factors with the biomarkers to determine the likelihood of a patient developing breast cancer. Key risk factors are age, family history, presence of mutations in BRCA1 and BRCA2, among others as well as a reproductive history, breast density and the hormonal factors. Risk assessments can be used by health professionals to individualize screening programs and make the genetic counseling recommendations for at-risk patients.

Lifestyle Modification:

There are several lifestyle modifications that can be effective at any stage of breast cancer development. Physical activity positively affects insulin sensitivity, inflammation and the immunity. A Mediterranean diet correlates with good metabolic health and lowers risk factors for the cancer. Staying within the normal weight range is especially important for postmenopausal women due to production of additional estrogen in fat tissue.



CONCLUSION

Prevention of breast cancer involves proper risk evaluation along with behavioral modification in terms of the lifestyle. The combination of personalized screening and healthy diet along with regular exercise, maintaining weight, not smoking, drinking less alcohol and stress relief can serve as an effective method for the prevention.

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