Promoting Breast Health Through Education on Estrogen Metabolism Enhancement Using the 2:16 α Hydroxyestrone Ratio and Diindolylmethane

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Abstract

Cancer is the second leading cause of death, and breast cancer is the leading cause of cancer death for women (CDC, 2011). Many health care providers are unaware of new approaches to breast cancer risk prevention. Emerging evidence indicates that estrogen metabolism, or the way in which the body detoxifies these estrogens, impacts the risk for breast cancer. Metabolites, or the end products of estrogen metabolism, can be tested in urine or serum. Laboratory results show a ratio of 2-OHE: 16α-OHE1, also known as the 2:16 ratio, the estrogen metabolic index (EMI), or estrogen metabolic ratio (EMR). High 2-OHE has been associated with reduced breast cancer risk while high 16α-OHE1 has been associated with increased risk. It is now possible for women to lower their risk of breast cancer by being tested for this ratio and, if appropriate, to favorably impact it using a nutritional intervention, Diindolylmethane (DIM). The purpose of this project is to increase health care provider’s awareness and utilization of the 2:16 ratio and DIM in an effort to promote breast health reducing breast cancer risks. This project will serve as an initial step for future development of evidence based practice guidelines for a primary prevention approach to breast health.