

## **BREAST CANCER AND BMI: ROLE OF L-CARNITINE IN PREDICTION OF ANSWER TO TREATMENT AND OUTCOME OF TUMOR IN PATIENTS WITH OBESITY**

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Increasing the effectiveness of antitumor therapy in breast cancer patients who take L-carnitine during preoperative systemic antitumor therapy compared with patients receiving standard neoadjuvant systemic antitumor therapy served as a prerequisite for studying possible antitumor mechanisms of L-carnitine. The positive effect of L-carnitine is due to the transfer of palm-n-fatty acid through the inner membrane into the mitochondrial matrix, which contributes to the formation of a significant number of ATP molecules. It has also been shown that L-carnitine can have a double protective effect, enhancing the energy dynamics of the cell and inhibiting the hyperexcitability of the cell membrane, making it an ideal tool for the prevention and treatment of complications of antitumor therapy and concomitant metabolic disorders. This work summarizes the results of epidemiological and clinical studies on the use of L-carnitine in the treatment of breast cancer.