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Diet, black olive oil and breast cancer recovery in Northern Cyprus: An exploratory study

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Introduction: The incidence of breast cancer (BC) in Northern Cyprus (NC) is higher than seen internationally. There is little extant literature on the influence of diet on breast cancer recovery in Cyprus. Black olive oil (BOO), a product of NC that is distinct in its manufacturing processes, is widely consumed in NC. The aim of the current study was to investigate the influence of dietary factors, including BOO on BC recovery in NC. **Methods:** Two groups of patients, those who were undergoing active treatment (AT), and those who had completed treatment for BC at least three years previously (CT), at two hospitals in NC were invited to take part in the study. N = 140 participants were recruited. At their first scheduled visit in the study period, participants' food frequency information, Mediterranean diet score and 24 h recall were taken. BC biomarker (CA15-3 and CEA) levels were taken at the same appointment and retrospective CA15-3 and CEA levels from the visit 3 months previously were extracted from patient records. Participants' change in biomarker level was calculated. Appropriate descriptive and influential statistics were used to link changes in biomarkers to dietary intake. **Results:** A significantly higher consumption of monounsaturated fatty acid (MUFA) ($p = 0.036$) and oleic acid ($p < 0.014$) was found in those who had improved CEA in AT and CT groups, and MUFA and oleic acid consumption was higher in those with improved CA15-3 in the AT group ($p \leq 0.01$). Those who had improved CA15-3 in AT group ate less BOO than those whose marker had not improved. **Conclusions:** Despite multiple confounding factors, further investigation into diet and BC biomarkers is warranted in BC recovery in N. Cyprus. <http://dx.doi.org/10.1016/j.eujim.2015.09.045>