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Cardiorespiratory Fitness and Cancer in Women

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The preventive role of cardiorespiratory fitness (CRF) in cancer is not well established among women. **PURPOSE:** The current study sought to evaluate the association between CRF, cancer incidence and cancer mortality in women. **METHODS:** Maximal exercise testing was performed in pilot cohort of 184 women (59.3±15.2 years) free from malignancy at baseline who were followed for a mean of 12±6.9 years. Multivariate Cox hazard analyses were conducted for all-type cancer incidence and cancer mortality. Population Attributable Risks (PAR) and Number Needed to Treat (NNT) were determined for low CRF (<5 METs). **RESULTS:** During the follow-up, 11.4% were diagnosed with cancer and 3.2% died from cancer. CRF was inversely associated with cancer outcomes. For every 1 MET higher CRF there was a 19% reduction in cancer incidence [Hazard Ratio (HR) 0.81, 95% Confidence Intervals (CI) (0.68 to 0.96), p=0.016] and a 38% reduction in cancer mortality [HR 0.62, 95%CI (0.42 to 0.92), p=0.017]. The PARs% and NNT for low CRF were 12.3% and 16.6% and 5 and 9 for cancer incidence and cancer mortality, respectively. **CONCLUSIONS:** Higher CRF is associated with lower risk for cancer incidence and cancer mortality in women, suggesting a potential protective benefit of CRF in cancer prevention. Eliminating low CRF as a risk factor would potentially prevent considerable cancer morbidity and mortality and reduce its associated societal-economic burden. Achieving CRF of ≥5 METs could be a cost-effective strategy for primary cancer prevention programs. Future prospective, larger cohorts are needed to ascertain these findings.