

# 25<sup>th</sup> WORLD CANCER CONFERENCE

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## Does low volume high-intensity interval training elicit superior benefits to continuous low to moderate-intensity training in cancer survivors?

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It is generally recommended that exercise form part of the standard of care for all cancer survivors, however, the optimal evidence-based clinical exercise guidelines for cancer survivors are currently not clear. The aim of this study was to determine the effectiveness of low volume high-intensity interval training (LVHIIT) and continuous low to moderate-intensity exercise training (CLMIT) on health outcomes in cancer survivors. Sedentary cancer survivors (n=75) within 24 months of diagnosis, aged 51±12 y were randomised into three groups for 12 weeks of LVHIIT (n=25), CLMIT (n=25) or control group (n=25). The LVHIIT group performed 7 x 30s intervals ( $\geq 85\%$  predicted maximal heart rate), the CLMIT group performed continuous aerobic training for 20 min ( $\leq 55\%$  predicted maximal heart rate) on a stationary cycle, 3 times per week. An interaction effect ( $p=0.01$ ) for waist circumference in the LVHIIT group was found. The LVHIIT group had larger improvements in emotional well-being compared to the other groups ( $p<0.01$ ). Participants in the CLMIT and LVHIIT group demonstrated improvements in physical and functional well-being ( $p< 0.01$ ). LVHIIT elicited greater benefits in improving waist circumference and emotional well-being compared to the other groups in this study. Exercise positively impacted body composition, white blood cell count (WBC) and haemodynamic variables, without any adverse effects. Future research should explore the mechanisms involved in the changes reported in this study, so that clinicians can provide clinically relevant evidenced-based exercise prescription for cancer survivors.

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