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## Taxane Based Chemotherapies Impact on Balance and VO<sub>2</sub> in Female Cancer Survivors

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**Purpose:** The purpose of this study was to determine if taxane based chemotherapies have an impact on VO<sub>2</sub> and or balance versus non-taxane based chemotherapies in female cancer survivors. **Methods:** Twenty-six females (Avg. 58.11 years 29-72), enrolled in a cancer rehabilitation program underwent a treadmill assessment of VO<sub>2</sub> and four measures of balance (TUG, 4stage, sittostand, 6MWT). **Results:** No differences were found in measures of balance or VO<sub>2</sub> between those who received taxane based chemotherapies vs. non-taxane based chemotherapies ( $p > 0.05$ ). Significant increases in HR ( $t=10.71$ ,  $p=0.000$ ) and Dyspnea ( $t=5.96$ ,  $p=0.000$ ) occurred with significant correlations between pre-exercise ( $r=0.605$ ,  $p=0.001$ ) and post-exercise ( $r=0.729$ ,  $p=0.001$ ) Dyspnea and RPE. Trends in associations between TUG and 6MWT ( $p=0.073$ ), 4stage and VO<sub>2</sub> ( $p=0.057$ ), 6MWT and 4stage ( $p=0.08$ ) were also observed. Significant positive correlation between 6MWT and VO<sub>2</sub> ( $r=0.487$ ,  $p=0.012$ ) and a negative correlation between %change in Dyspnea and VO<sub>2</sub> ( $r=-0.474$ ,  $p=0.014$ ) were found. A negative correlation between pre-exercise HR and 6MWT speed ( $r=-0.441$ ,  $p=0.027$ ) and strong positive correlation between 6MWT distance and 6MWT Speed ( $r=0.968$ ,  $p=0.000$ ). 6MWT distance moderately predicted VO<sub>2</sub> ( $r=0.487$ ,  $F=7.461$   $p=0.012$ ). **Conclusion:** The data does not support the hypothesis that taxane based chemotherapies affect VO<sub>2</sub> values, or measures of balance. However, trends suggest a larger population might detect an association among the balance measures and VO<sub>2</sub> and therefore perhaps detect a difference. Expected changes and associations between RPE and Dyspnea were found, with lower scores likely associated with higher fitness as evidenced by negative correlation between %change in Dyspnea, 6MWT speed and pre-exercise HR and 6MWT speed and distance.