Taxane Based Chemotherapies Impact on Balance and VO$_2$ 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$_2$ 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$_2$ and four measures of balance (TUG, 4stage, sittostand, 6MWT). **Results:** No differences were found in measures of balance or VO$_2$ 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$_2$ (p=0.057), 6MWT and 4stage (p=0.08) were also observed. Significant positive correlation between 6MWT and VO$_2$ (r=0.487, p=0.012) and a negative correlation between %change in Dyspnea and VO$_2$ (r = -0.474, p=0.014) were found. A negative correlation between pre-exercise HR and 6MWT speed (r=-441, p=0.027) and strong positive correlation between 6MWT distance and 6MWT Speed (r=.968, p=0.000). 6MWT distance moderately predicted VO$_2$ (r=0.487, F=7.461 p=0.012). **Conclusion:** The data does not support the hypothesis that taxane based chemotherapies affect VO$_2$ values, or measures of balance. However, trends suggest a larger population might detect an association among the balance measures and VO2 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.