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# Physical activity and quality of life five years after in-person Alberta Cancer Exercise (ACE) participation.

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**Background**
Exercise oncology programs demonstrate short-term benefits for physical function and quality of life (QOL); however, evidence supporting long-term survivorship outcomes remains limited.
**Purpose**
To describe five-year survivorship health status, physical activity (PA), and QOL among participants who completed 12-week in-person exercise programming for the Alberta Cancer Exercise (ACE) study from 2017 to 2019 (pre-COVID).
**Methods**
Participants who enrolled in ACE and were eligible for follow-up (i.e., not withdrawn or lost to follow-up) were invited to complete an optional survey five years from baseline program entry (n = 1,194 eligible). Outcomes included self-reported PA, health, symptoms, and QOL; descriptive analyses summarized five-year outcomes. Multivariable general linear models examined associations between PA status at five years and EQ-5D-5L visual analogue scale (VAS) scores, adjusting for age, sex, baseline VAS score, cancer type, and five-year treatment status.
**Results**
A total of 563 of 1,194 eligible participants (47.1%) completed the five-year follow-up (mean age 63.0 years; 73.7% female). Similar to baseline, breast cancer accounted for 45.5% of the participants, followed by hematologic (13.2%) and genitourinary cancers (9.9%); 18.5% were receiving active cancer treatment at follow-up. At baseline, 146 of 522 (28.0%) were meeting PA guidelines compared to 226 of 522 (43.3%) at five years ($p < 0.001$). Baseline EQ5D-5L VAS scores based on five-year PA classification were 72.3 (+/- 15.3), 68.7 (+/-15.6), 66.5 (+/-18.0) across active, insufficiently active and completely inactive groups respectively. At five-year follow-up, participants meeting PA guidelines (”active”) reported significantly better overall self-rated health scores than those insufficiently active or completely inactive (five-year adjusted means: 80.4 vs 74.8 vs 65.9; $p < 0.001$).
**Conclusions**
Despite some improvement in PA, long-term maintenance was inconsistent, suggesting a need for ongoing support. Achieving or maintaining guideline-level PA was strongly associated with better long-term QOL (additional symptom and physical function outcomes will be presented).

## Keywords

survivorship, exercise, quality of life, health status.

## Conflict of Interest & Ethical Approval

yes

## Abstract submitters declaration

yes

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