Point in Time *FitSTEPS for Life* Improves Quality of Life for Persons with Cancer

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Significance

- Substantial physical and psychological benefits
- Majority of studies short duration
- Majority of studies tightly controlled
- Reimbursement challenges
- Exercise considerations for persons with cancer preclude general exercise facilities
**Background**

**Kinesiology Science**
- Oxygen consumption
- Bone density
- Metabolic changes
- Hemodynamic changes

**Exercise and Cancer Science**
- Prevention
- Fatigue

**5-Year Study (Haas et al., 2012)**
- Significant improvement in first 3 months
To determine the effects of a community-based program of exercise on the QOL of persons with cancer over time

To establish a point in time that exercise influences QOL in cancer survivors.
Inclusion Criteria

- All cancer types
- Any stage
- Physician referred
- Liability waiver
Measurements

- Demographic data
- SF-8 Medical Outcomes Survey
- Baseline, 1-, 2-, 3-, 6-, 9-, and 12-month
Exercise Intervention

- Individualized
- Monitored
- Treadmill walking
- Upper / lower body stretching and strengthening
- Core muscle strengthening
Procedures

- Physician referral
- Consent
- Baseline evaluation
- Individualized program prescribed
- Two times per week
- Pre-exercise assessment
- Monitored
- Post-exercise assessment
- 10% increase per week
- Phone calls
Referred Participants \((n = 1,076)\)
517 active; 562 inactive

- No significant differences:
  - Age
  - Gender
  - Education
  - Household
  - Financial status
  - Cancer type
  - Stage of disease
Participant Differences
Active versus Inactive

- Demographic
  - Employment

- Co-morbid conditions
  - Arthritis

- Cancer treatment
  - Chemotherapy
Results: Demographic (n = 513)

- Mean age = 62.36 (range 24-93)
- Female (76%)
- Caucasian, non-Hispanic (76%); African-American (17%); Hispanic (5%); Asian (2%)
- Live with adult (67%)
- Educated (96% high school or higher)
- Financially stable (83%)
- Not working (57%)
## Results: Demographic

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Breast</td>
<td>47%</td>
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<tr>
<td>Lung</td>
<td>6%</td>
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<tr>
<td>Prostate</td>
<td>8%</td>
</tr>
<tr>
<td>Colorectal</td>
<td>8%</td>
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<tr>
<td>Lymphoma</td>
<td>6%</td>
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<tr>
<td>Other</td>
<td>25%</td>
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<table>
<thead>
<tr>
<th>Stage</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>I</td>
<td>22%</td>
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<tr>
<td>II</td>
<td>29%</td>
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<tr>
<td>III</td>
<td>13%</td>
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<tr>
<td>IV</td>
<td>13%</td>
</tr>
<tr>
<td>Unknown</td>
<td>23%</td>
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</tbody>
</table>
Results: Demographic

Co-morbidities (70%):
- Heart disease (13%)
- Lung disease (7%)
- HTN (47%)
- Diabetes (17%)
- Arthritis (33%)
- Renal disease (2%)

Require assistive device for mobility (9%)

In treatment (33%)
## SF-8 Significant Correlations

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>Finan</th>
<th>Heart Dis</th>
<th>Lung Dis</th>
<th>DM</th>
<th>Arthr</th>
<th>Asst Dev</th>
<th>Chem</th>
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<td>-.201**</td>
<td>-.081**</td>
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<td>-.260**</td>
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p<.05; p<.01
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<tr>
<th>Component Score</th>
<th>F</th>
<th>Significance</th>
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<tbody>
<tr>
<td>Physical Health</td>
<td>5.58</td>
<td>&lt;.001***</td>
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<tr>
<td>Mental Health</td>
<td>6.31</td>
<td>&lt;.001***</td>
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</tbody>
</table>
SF-8 Physical Health Component Score
(n=513)
SF-8 Mental Health Component Score
(n=513)
Limitations

- Different types of cancer
- Varying points along disease trajectory
- Differing treatments
- Co-morbidities
- Attrition
- Variable dose delivery
Discussion

- Supports previous research
- Supports SCT (effectiveness of targeted program, social support)
- Suggests influence of exercise occurs within first month
- Change sustainable over time
What questions do you have?