Feasibility and Utility of Quality of Life Measures in Inpatient Cancer Rehabilitation

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Background

- In 2019, 1,762,450 new cancer cases and 606,880 cancer deaths are projected to occur in the United States.[1]
- While survival rates are improving, patients are left with physical, cognitive, and psychological impairments that compromise quality of life (QOL).[2,3]
- The European Organization for Research and Treatment of Cancer patient-reported Quality of Life Questionnaire (EORTC QLQ-C30) and Brief Fatigue Inventory (BFI) are established quality of life measures and optimal instruments to assess cancer-related fatigue for people with cancer.[4-7]
- The Shirley Ryan AbilityLab is an inpatient rehabilitation hospital that admits people with cancer regularly along the continuum of their cancer experience.
- The inpatient setting has demonstrated improvements in cancer related QOL regardless of cancer type and stage.[2,3,8]

The purpose of this study was to investigate feasibility and utility of the EORTC QLQ-C30 and the BFI in an inpatient cancer rehabilitation clinical setting.

Methods

Convenience sample over 4 month period of 13 inpatients (N=12 due to one lost to acute leave of absence) with primary or secondary cancer diagnosis

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Physical Therapists (PTs) administered pre-test of EORTC QLQ-C30 and the BFI within first week of admission

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Physical Therapists discussed concerns with patients, reviewed goals, USUAL CARE

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Physical Therapists administered post-test of EORTC QLQ-C30 and the BFI within 1-3 days before discharge

Patient Demographics (N=12)	
Average age	66.8
Female (N)	8 (66.7%)
Type of Cancer (N)	
Lung	2
Brain	2
Lymphoma/Leukemia	2
Skin	2
Breast	1
Ovarian	1
Bladder	1
Prostate	1
Average length of stay (days)	20.1±8.5
Average time between pre/post test (days)	15.4±6.3

Measures

Quality of Life: EORTC QLQ-C30 has 15 subscales falling within 3 domains (global health status, functioning, symptoms).
Fatigue: BFI is summarized using a summary score of 9 questions.

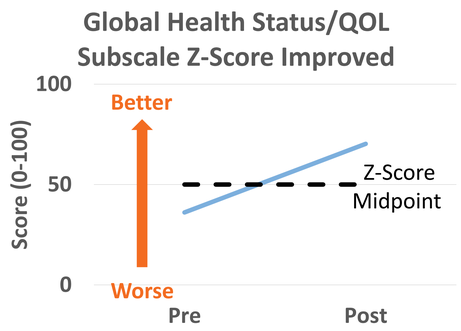
Analysis

Standardized scores for each subscale were calculated using the procedures outlined in the EORTC-C30 Scoring Manual version 3.0. Paired *t*-tests were used to identify significant differences.

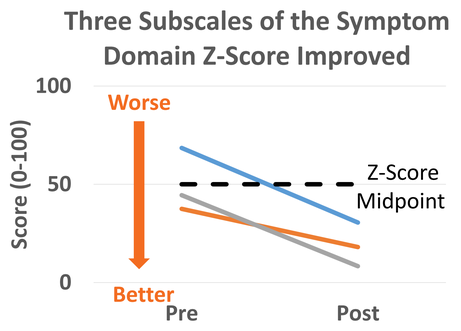
Summary of Key Findings:

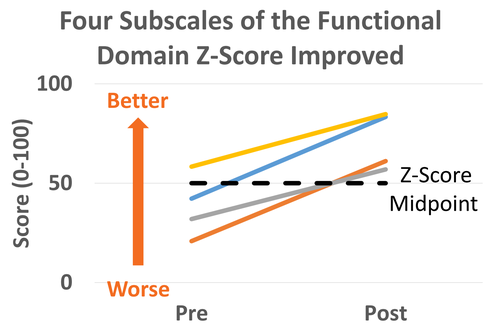
- **Both the EORTC QLQ-C30 and the BFI appear to be useful, and sensitive to change in the inpatient rehabilitation setting regardless of patient diagnosis and length of stay, but difficult for PTs to administer during clinical care time.**
- **Therapists felt both tools helped to establish tailored interventions, goal setting, referrals, resources, and education for patients along the continuum of cancer care, but PTs questioned which team member should complete the screening.**

Eight Subscales of the Quality Life Measure Demonstrated Significant Change in Inpatient Cancer Rehabilitation



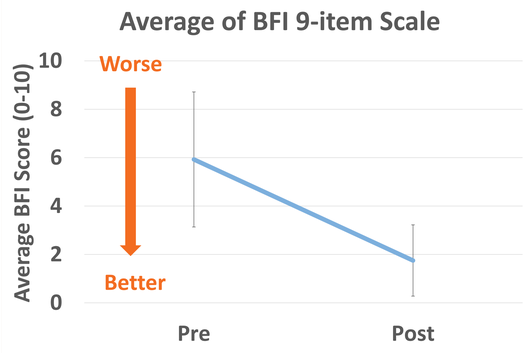
On average, global health status/QOL increased from pre- to post-test. Three patients' scores decreased or stayed the same, and nine patients' scores increased.





No Significant Change: Symptoms (Insomnia, Dyspnea, Nausea/Vomiting, Constipation, Diarrhea); Function (Financial Difficulties, Cognitive Functioning)

Brief Fatigue Inventory



Utility Results

- Fatigue symptom was responsive to change on both assessments.
- The EORTC QLQ-C30 required adjustment to meet the level of function in inpatient rehab (walk vs wheelchair).
- Subscales relevant to physical and emotional function were responsive to change based on established minimal clinically important differences (MCIDs) in lung cancer that range from 5-14 points.[9]

Feasibility Results

- Measures took ~ 15-30 mins to complete.
- Approximately 25% of assessments were completed during clinical treatment time.
- Both assessments helped to review patient goals and identify clinical needs.
- Self-study time needed to learn the tools.
- PTs questioned whether symptom-related QOL screening should be done by PT, physiatrists, or care managers in inpatient cancer rehabilitation.

Future Directions and Limitations

- In the EORTC QLQ-C30, the statistically significant changes exceeded conservative estimates of MCIDs in brain and lung cancer, but more research needs to be done in cancer rehabilitation measurement.[9,10]
- Determine the roles of interdisciplinary team in QOL and fatigue screening in inpatient cancer rehabilitation.
- Future inpatient rehabilitation screening should investigate optimal frequency for reassessment related to phase of cancer care and development of pathways for care based on results to optimize outcomes.

References

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