Inpatient Rehabilitation for a Cancer Survivor Following a Lumbar Spinal Fusion Secondary to a Pathological Fracture: A Case Report

Nicole Marczak, B.S., Doctor of Physical Therapy Student, and Amy J. Litterini, PT, DPT
Doctor of Physical Therapy Program, University of New England, Portland, Maine

Background

- Pathologic fractures are considered a skeletal-related event of bone metastasis.[1]
- Bone metastases indicate a shorter prognosis with the survival rate varying from 6-53 months, depending on the primary type of cancer.[2]
- Indications for surgery include spinal instability, vertebral collapse with or without neurologic deficit and intolerable pain that is not responsive to conservative
- Palliative physical therapy (PT) is provided to the patient and their family to offer education, optimize their functional independence and provide comfort and support.

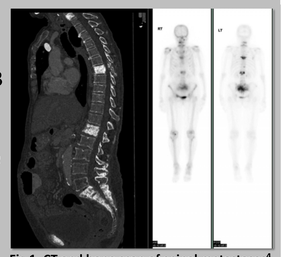


Fig 1. CT and bone scan of spinal metastases[4]

Purpose

The purpose of this case report was to describe the plan of care for a man with advanced cancer to bone status-post lumbar spinal fusion prior to initiation of cancer treatment.

Case Description

- 66 year old male diagnosed with Cancer of Unknown Primary
- Past Medical History: cervical spondylosis, chronic obstructive pulmonary disease (COPD) and emphysema, lumbar disc degeneration, diabetes mellitus type II (DM), hypertension, hyperlipidemia, obesity and current tobacco user (two packs per week)
- Underwent tumor debridement and a spinal fusion from T12-L4 secondary to vertebral collapse and intolerable pain

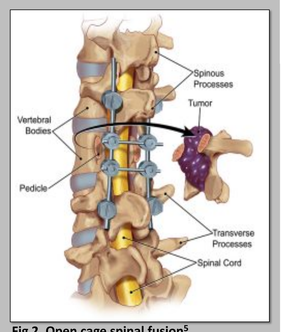
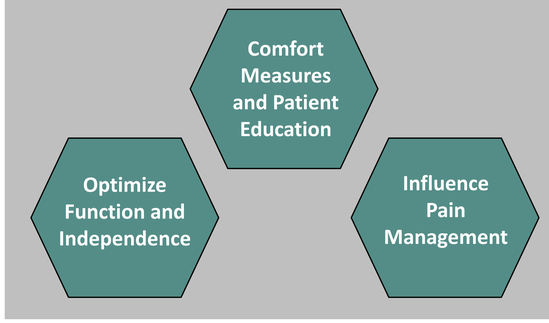
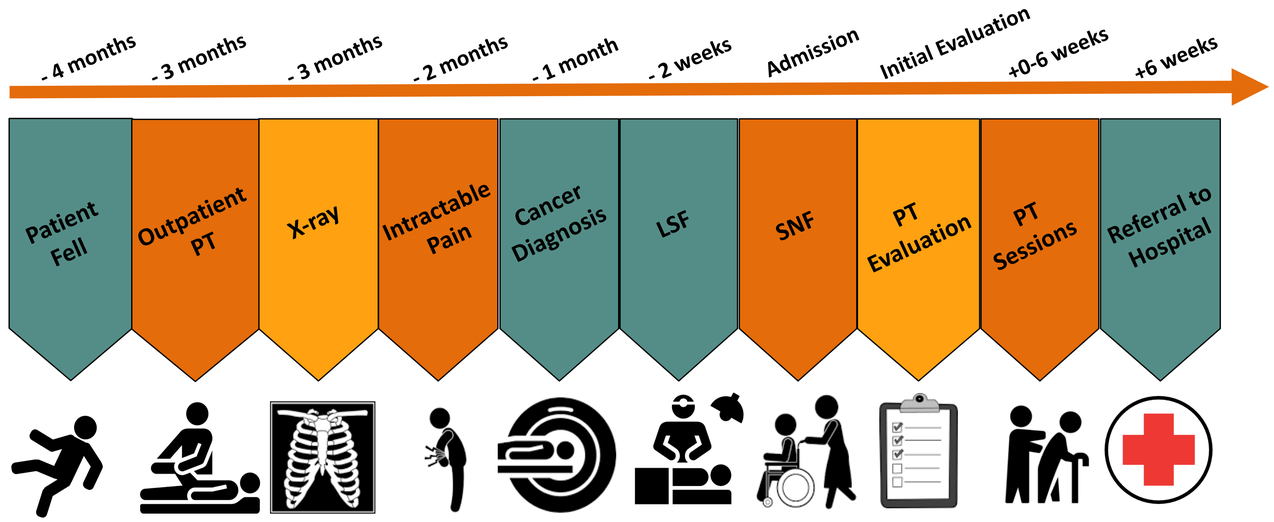


Fig 2. Open cage spinal fusion[5]

Principles of Palliative Rehabilitation



Timeline of Events



PT = physical therapy. LSF = lumbar spinal fusion. SNF = skilled nursing facility.

Interventions

Gait Training

- Front wheeled walker
- Single point cane
- Uneven outdoor surfaces

Therapeutic Activity

- Bed mobility
- Transfer training
- Patient education

Neuromuscular Re-education

- Sitting balance
- Standing balance
- Muscle activation

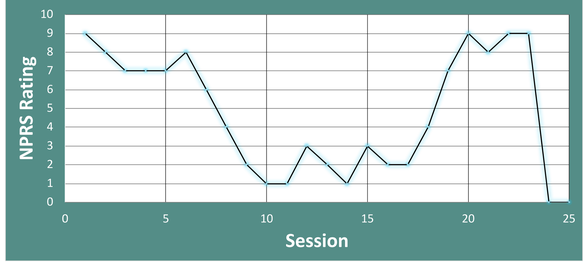
Therapeutic Exercise

- Open-chain
- Closed-chain
- Strengthening

Functional Outcomes

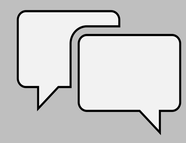
Short-term outcomes: 2 weeks	Long-term outcomes: 4 weeks
1. Patient will be able to perform all functional transfers and bed mobility with supervision to increase patient's safety and independence.	1. Patient will achieve all functional transfers and bed mobility with modified independence to decrease his reliance on caregivers.
2. Patient will be able to ambulate with front wheeled walker for 300' with supervision to assist him in community activities.	2. Patient will be able to ascend/descend 3 stairs with bilateral hand rails with supervision to perform safe, functional household activities.

Numeric Pain Rating Scale Throughout POC



Discussion & Conclusion

- Improvements in lower extremity strength, functional mobility and pain management were seen over six weeks.
- Survivors of advanced cancer can benefit from palliative care PT to manage symptoms.
- Appropriate monitoring is required due to the potential for a rapid change in presentation.
- Communication among the interprofessional team is critical.



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Contact Information

Address all correspondence to Nicole Marczak at nmarczak@une.edu

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