

SURVIVORSHIP, AT WHAT COST? UNDERSTANDING FINANCIAL TOXICITY IN PATIENTS WITH HEAD AND NECK CANCER

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INTRODUCTION

Head and neck cancer poses a significant economic burden to healthcare systems and patients. Multimodal treatment regimens and complex surgical treatments cause disproportionate financial toxicity in survivors of head and neck cancer treatment.

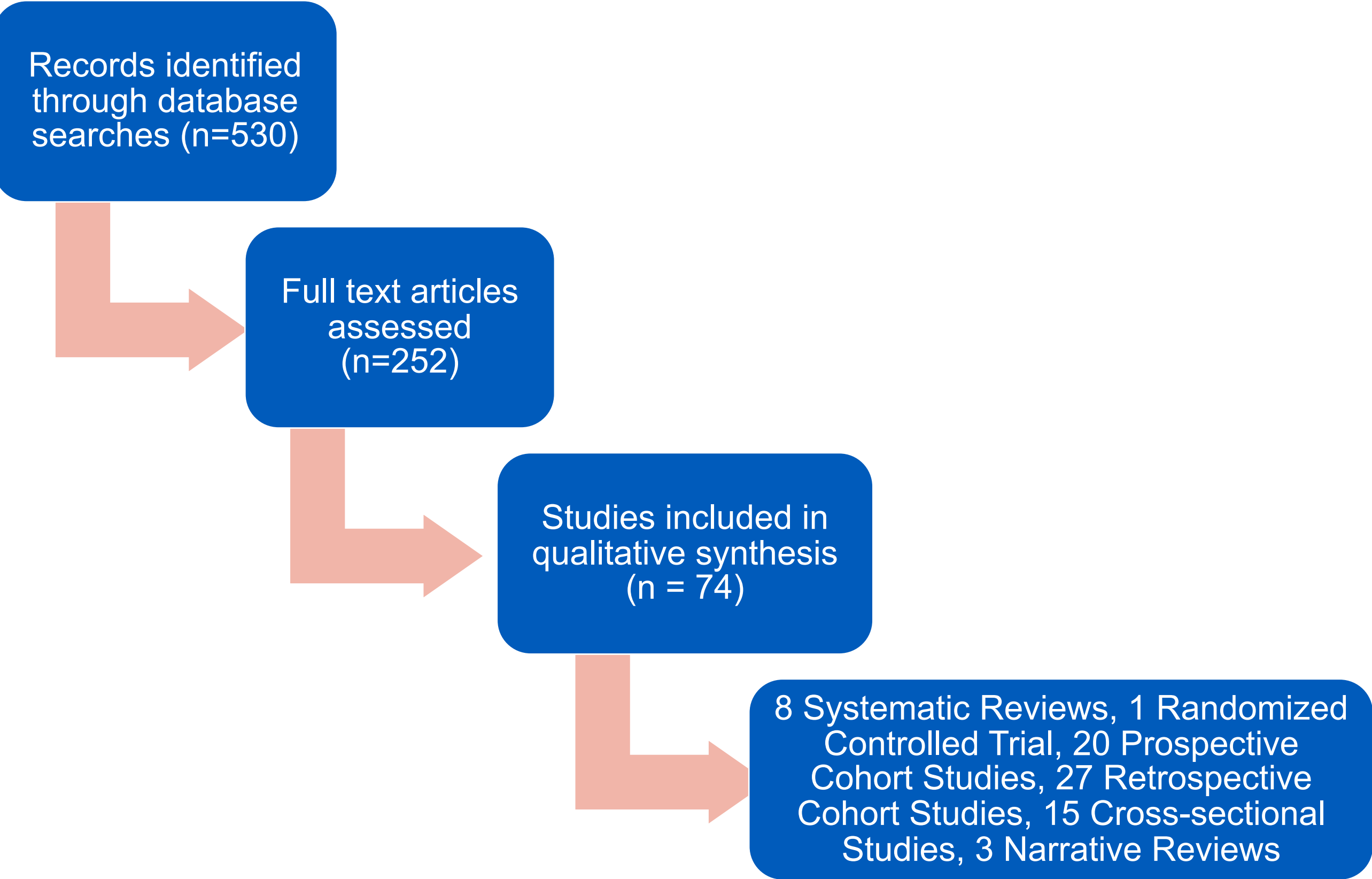
Objectives

- (1) inform the reader about factors contributing to financial toxicity (FT) among US HNC patients
- (2) describe screening tools for FT in cancer patients
- (3) provide existing evidence and recommendation for use of these tools in the care of HNC patients
- (4) discuss mitigation strategies

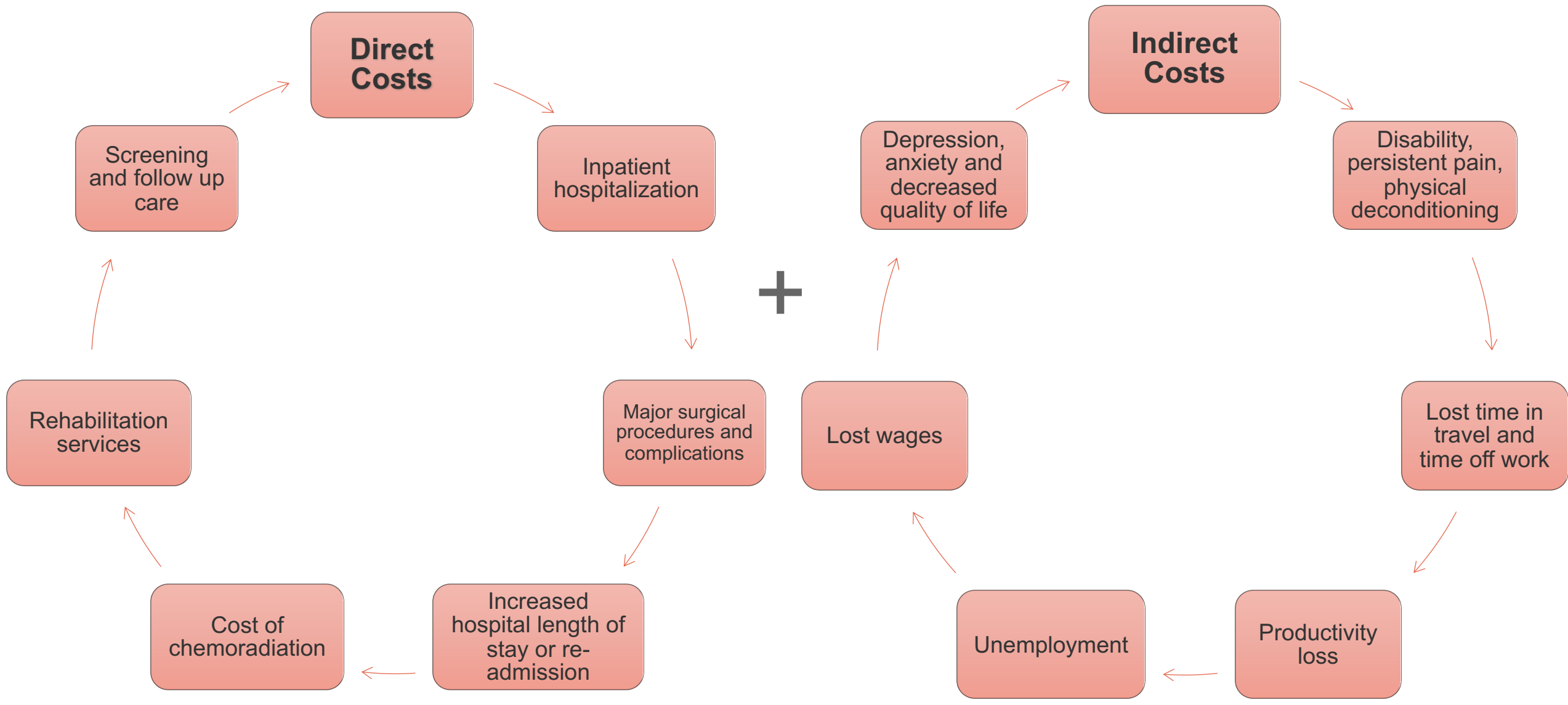
METHODS

Evidence Review

- An electronic search of PubMed, Embase, Cochrane Library, and Web of Science databases was conducted to identify articles published during any time frame until March 2021 describing financial toxicity in patients with HNC.



RESULTS



A Financial toxicity is multifactorial and encompasses the summation of both direct and indirect costs associated with cancer treatment.

Direct Costs

- Inpatient services
- Long hospitalization
- Major surgical procedures
- Complications of chemotherapy, radiation, or infection
- Higher stage cancers
- Number of treatment modalities
- Laryngeal neoplasms
- Re-admissions
- Need for rehabilitation services
- Outpatient physician visits and surveillance protocols

Indirect Costs

- Premature morbidity and mortality
- Lower odds of employment
- Reduced earnings
- Productivity losses
- Risk of disability and dysfunction
- Stage 3 or 4 disease, smokers, depression, higher pain scores, received radiation or chemotherapy, had a more recent cancer diagnosis
- More appointments, cost of travel, lost time
- Negative effects on work schedule

Name of Instrument	Instrument Summary	Population the instrument was validated in	Characteristics	6 Domains						Citation
				Active financial	Passive financial	Psycho-social	Response seeking	Support seeking	Coping with care	
The COmprehensive Score for financial Toxicity (COST)	11 question survey Each item scored on Likert scale from 0-4 Range of possible scores: 0-44 Some items require reverse scoring Lower score indicates greater toxicity	COST was validated in patients with advanced (TNM stage IV) solid organ cancers who were treated with chemotherapy	Measures costs, resources, and psychosocial concerns.	x	x	x	-	-	-	De Sousa et al. ^{1,2}
Financial Index of Toxicity (FIT)	9 question survey Each item scored between 0 and 1 Range of possible scores: 0-100 Higher score indicates greater financial toxicity	Validated in Canada in patients with HNC of multiple stages who received various treatment modalities	Measures financial stress, financial strain, and lost productivity after cancer treatment	x	x	x	-	-	-	Hueniken et al. ³

B Summary of questionnaire instruments developed to measure an individual's financial well-being. The instruments are further classified by inclusion of 6 domains as described by Witte et al. including active financial spending (e.g., spending in relation to household income), use of passive financial resources (e.g. selling property, using loans or savings), psycho-social response (e.g., patient concerns, social environment), support seeking (e.g., seeking financial assistance), coping with care (e.g., nonadherence to treatment plan, not taking medications as prescribed), coping with ones' lifestyle (e.g., decreasing leisure activities and hobbies).

Instrument	Evidence	Recommendation	Grade
The Comprehensive Score for financial Toxicity (COST)	4 level 2 studies ^{1,2,4,5}	The COST survey can be used during and after treatment of head and neck cancer to identify patients experiencing financial toxicity.	B
		The COST survey is likely to be useful as a screening tool to identify patients at increased risk of financial toxicity before treatment initiation.	C
Financial Index of Toxicity (FIT)	2 level 2 studies ^{3,6}	The FIT survey can be used during and after treatment of head and neck cancer to identify patients experiencing financial toxicity.	B
		The FIT survey is likely to be useful as a screening tool to identify patients at increased risk of financial toxicity before treatment initiation.	C

C Recommended tools for measuring financial toxicity in head and neck cancer patients according to literature evidence. Grades of recommendation: A, based on consistent level 1 studies; B, based on consistent level 2 or 3 studies or extrapolations from level 1 studies; C, based on level 4 studies or extrapolations from level 2 or 3 studies; D, based on level 5 evidence or inconsistent or inconclusive studies of any level.

Mitigation Strategies

- Early treatment interventions
- Social worker counseling on lifestyle changes
- Prophylactic therapy – ex: swallowing therapy
- Telemedicine
- Increase patient education and early referrals for financial advising
- Support groups
- Survivorship programs and multi-disciplinary clinics
- Rehabilitation services including targeted vocational rehab

CONCLUSION

- More widespread use of screening and measurement tools to diagnose FT in cancer patients will help raise awareness and identify individuals in need of intervention.
- Continued research aimed at prospective surveillance of cancer patients in the survivorship period is needed to provide evidence-based recommendations to address financial toxicity.
- Mitigating negative effects caused by the economic burden of cancer care will likely help to improve the quality of life for future cancer survivors.

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