

ACS Cancer Conference 2025

March 12-14 | Phoenix, AZ

Maximizing Patient Outcomes in Cancer: The Intersection of Prehab, Rehab, and Survivorship Exercise

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Disclosures

- Chris Wilson
 - Co-editor of Oncology Rehabilitation: A Comprehensive Guidebook for Clinicians from Elsevier in 2023
- Stephanie Lockingen
 - Nothing to disclose

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The Evidence Base for Physical Therapy

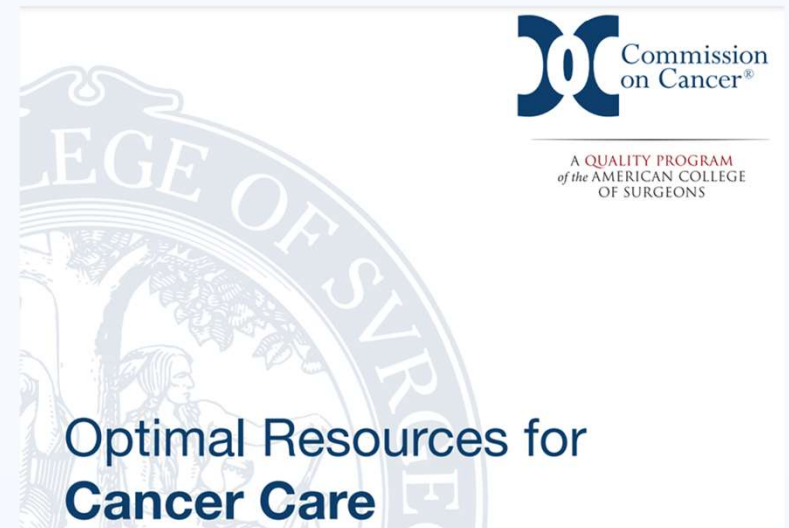
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CoC Standard¹

4.6 Rehabilitation Care Services

Definition and Requirements

Policies and procedures are in place to guide referral to appropriate rehabilitation care services on-site or by referral. Rehabilitation care is patient-centered care that optimizes patient functional status and quality of life through preventive, restorative, supportive, and palliative interventions. The availability of rehabilitation care services is an essential component of comprehensive cancer care, beginning at the time of diagnosis and being continuously available throughout treatment, surveillance, and, when applicable, through end of life.



Clinical Practice Guidelines

- At least 69 clinical practice guidelines include exercise or rehabilitation²
 - Only 20% of oncology care providers are aware of the CPGs
- In a study by Nadler et al. regarding exercise promotion in people with cancer³
 - 69% not aware of any exercise guidelines for people with cancer
 - ACSM guidelines were not recognized
 - 22% knew of the Cancer Care Ontario (CCO) guideline

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Exercise and Rehabilitation Guidelines⁴

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Exercise Guidelines for Cancer Survivors: Consensus statement from International Multidisciplinary Roundtable

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Exercise and Rehabilitation Guidelines⁵

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REVIEW ARTICLE

Clinical practice guideline and expert consensus recommendations for rehabilitation among children with cancer: A systematic review

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Kim Lipsey MLIS⁴ | Allison A. King MD, MPH, PhD^{5,6}

Exercise and Rehabilitation Guidelines⁶

Original Article

Clinical Practice Guidelines for Breast Cancer Rehabilitation

Syntheses of Guideline Recommendations and Qualitative Appraisals*

Susan R. Harris, PhD, PT¹; Kathryn H. Schmitz, PhD, MPH²; Kristin L. Campbell, PhD, PT¹;
and Margaret L. McNeely, PhD, PT³

BACKGROUND: Despite strides in early detection and management of breast cancer, the primary treatments for this disease continue to result in physical impairments for some of the nearly 3 million people diagnosed annually. Over the past decade, evidence-based clinical practice guidelines (CPGs) have been developed with goals of preventing and ameliorating these impairments. However, translation of these guidelines into clinical practice needs to be accelerated. **METHODS:** Relevant health science databases (2001-2011) were searched to identify CPGs on breast cancer rehabilitation for the following impairments: upper extremity restrictions, lymphedema, pain, fatigue, chemotherapy-induced peripheral neuropathy, treatment-related cardiotoxicity, bone health, and weight management. **RESULTS:** Recommendations from 19 relevant CPGs were first summarized by impairment within tables; commonalities across guidelines, within each impairment, were then synthesized within the article. The CPGs were rated using the Appraisal of Guidelines for Research and Evaluation II (AGREE II); wide variability was noted in rigor of development, clarity of presentation, and stakeholder involvement. The most rigorous and comprehensive of those rated was the adult cancer pain guideline from the Scottish Intercollegiate Guidelines Network. **CONCLUSIONS:** Based on a large body of evidence published in recent years, including randomized trials and systematic reviews, there is an urgent need for updating the guidelines on upper extremity musculoskeletal impairments and lymphedema. Furthermore, additional research is needed to provide an evidence base for developing rehabilitation guidelines on management of other impairments identified in the prospective surveillance model, eg, arthralgia. *Cancer* 2012;118(8 suppl):2312-24. © 2012 American Cancer Society.

KEYWORDS: clinical practice guidelines, breast cancer, rehabilitation, qualitative appraisal.

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Exercise and Rehabilitation Guidelines⁷



PRACTICE GUIDELINE

Exercise for people with cancer: a clinical practice guideline

R. Segal MD,* C. Zwaal MSc,[†] E. Green RN,[‡] J.R. Tomasone PhD,[§] A. Loblaw MD MSc,^{||} T. Petrella MD,[#]
and the Exercise for People with Cancer Guideline Development Group

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Exercise and Rehabilitation Guidelines⁸

SPECIAL COMMUNICATIONS

Roundtable Consensus Statement

American College of Sports Medicine Roundtable on Exercise Guidelines for Cancer Survivors

EXPERT PANEL

Kathryn H. Schmitz, PhD, MPH, FACSM
Kerry S. Courneya, PhD
Charles Matthews, PhD, FACSM
Wendy Demark-Wahnefried, PhD
Daniel A. Galvão, PhD
Bernardine M. Pinto, PhD
Melinda L. Irwin, PhD, FACSM
Kathleen Y. Wolin, ScD, FACSM
Roanne J. Segal, MD, FRCP
Alejandro Lucia, MD, PhD
Carole M. Schneider, PhD, FACSM
Vivian E. von Gruenigen, MD
Anna L. Schwartz, PhD, FAAN

to physical functioning and quality of life are sufficient for the recommendation that cancer survivors follow the 2008 Physical Activity Guidelines for Americans, with specific exercise programming adaptations based on disease and treatment-related adverse effects. The advice to “avoid inactivity,” even in cancer patients with existing disease or undergoing difficult treatments, is likely helpful.

In 2009, the American Cancer Society (ACS) estimated that there were nearly 1.5 million new cases of cancer diagnosed in the United States and just more than 500,000 people who died from the disease (76). Currently, there are close to 12 million cancer survivors in the United States, and this number grows each year (66,70,122). Improved prognosis on the basis of earlier detection and newer

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CA CANCER J CLIN 2021;71:149–175

A Systematic Review of Rehabilitation and Exercise Recommendations in Oncology Guidelines

Nicole L. Stout, DPT, CLT-LANA ^{1,2}; Daniel Santa Mina, PhD ^{3,4}; Kathleen D. Lyons, ScD, OTR ^{5,6};

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Why rehab?

- 38.2% of cancer survivors reporting unmet needs impacting social and vocational roles¹⁰⁻¹¹
- Individuals with advanced cancer
 - 33-50% have concerns with basic ADLs
 - 50-70% have difficulty with instrumental ADLs¹²
- Missed workdays 2.87x higher for people with cancer¹³
- 49% of survivors felt their non-medical needs were not met
 - Only 1-2% of individuals were treated for cancer-related disability¹⁴
- 67% of survivors live with cancer as a chronic condition¹⁵
 - Long-term pain
 - Fatigue
 - Physical and functional deficits

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Integration of Oncology Rehabilitation

- Evidence that rehabilitation interventions are effective¹⁶
 - Prehab, throughout treatment, and into survivorship
- Positive effects on tolerance of cancer treatment¹⁷
- Impact of intervention improved when the program was supervised vs unsupervised¹⁷
- Intervention is nuanced requiring consideration of many factors¹⁷
 - Health status
 - Clinical history
 - Functional abilities of the patient
 - Ongoing oncologic interventions

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Cancer Rehab Integration Recommendations¹⁵⁻¹⁶

1. Provide screenings for rehabilitation needs
2. Utilize objective assessments of functional status
3. Offer prehabilitation as appropriate
4. Develop practice guidelines for screening and referral
5. Expand education for providers and patients regarding education and training on oncology rehabilitation
6. Increase awareness of services provided and potential benefits

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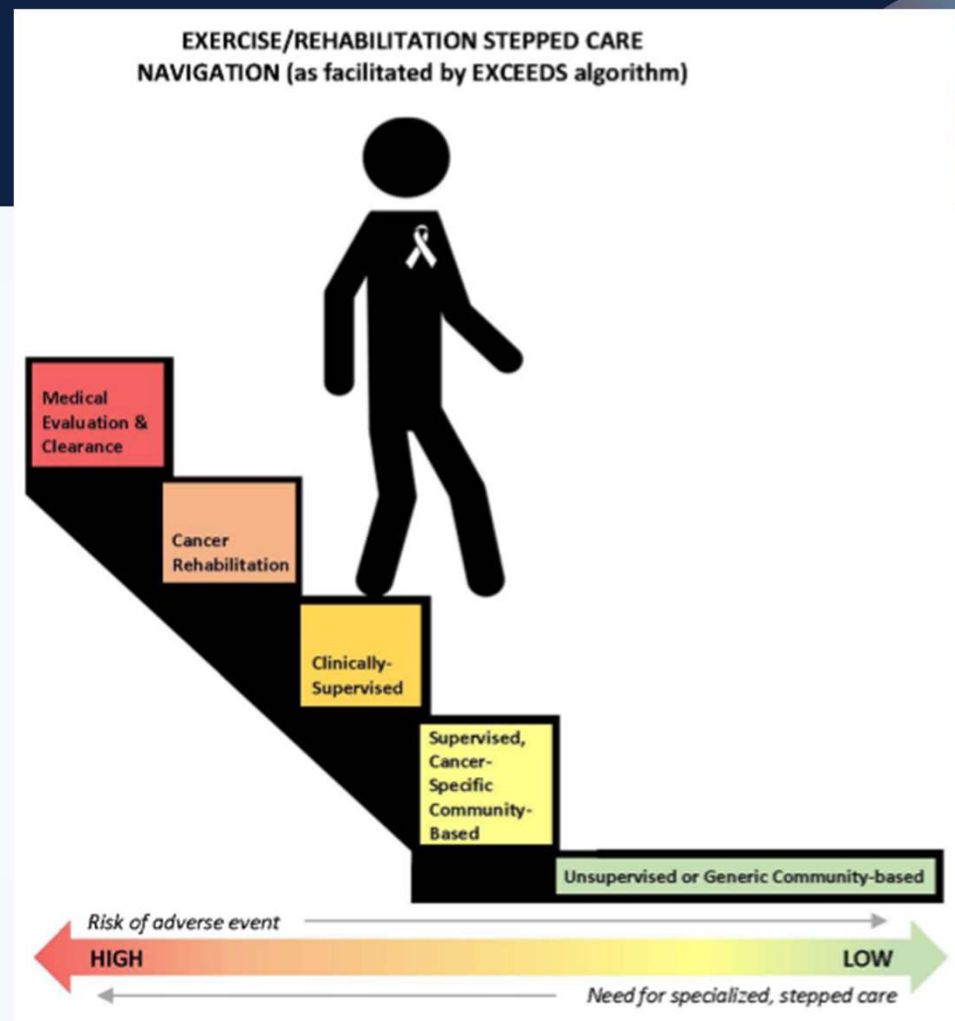
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Impairments, Interventions and Results

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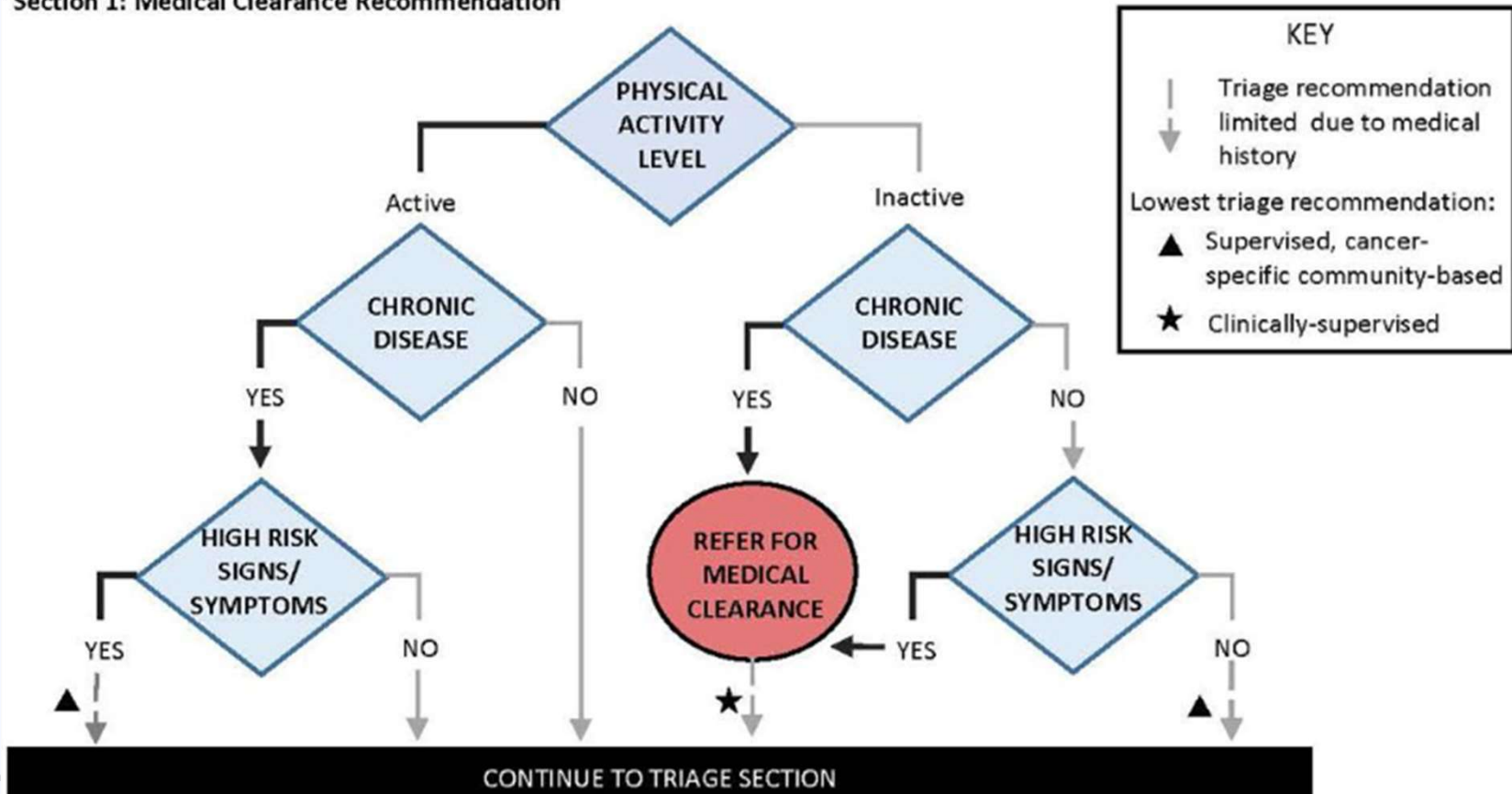
Stepped Care



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Everyone Needs Exercise, Who Needs Rehab?

Section 1: Medical Clearance Recommendation



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Goal Oriented Rehabilitation

- Impairment-driven cancer^{2,18}
 - Impairments cause disability
 - Impairments impact current functional levels
- Most likely to benefit are pts who are experiencing ADL difficulties (ADLs)^{2,18}
- Objectives of PT are to^{2,18-19}
 - Minimizing treatment sequelae
 - Prevent complications from treatment
- Short term goals^{2,18-19}
 - Improve physical function
 - Reduce symptom burden
 - Improve/maximize independence and safety
- Long term goals^{2,18-19}
 - Improve functional status
 - Improve quality of life

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CIPN and falls²¹

- Impaired tactile sensitivity, vibration, and joint position sense are linked to higher fall rates.
- Walking aids and orthoses help reduce gait irregularity in peripheral neuropathy.
- Gait speed and stride length are better predictors of fall risk than self-reported symptoms of CIPN.
- Balance and postural exercises improve functional stability and walking in adults with peripheral neuropathy.
- Strength and balance training should be progressively challenged for effective fall prevention.

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Value Based Oncology Rehabilitation

Payment and Sustainability

- Rehab services are billable if working toward impairments and functional limitations.
- Rx must require a licensed therapist's or assistant's skill.
- Unskilled maintenance or home programs may not be billable.
- Brief screenings and consultations are usually not billable.²⁴
- Consider the new service line or patient access.
- Therapists should avoid proceeding to a full evaluation after a screen.
- Productivity expectations should be considered.
- Initial investment costs and unbillable time (e.g., tumor boards, MDCs) require strategic planning.

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Thank you

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