

The Importance of Lifestyle and Fitness After a Cancer Diagnosis

A practical, evidence-based approach to integrating physical activity into cancer care

Jessica M. Ruff, MD, MA, MSPH
Aultman Cancer Center Symposium

Disclosures and learning objectives

Financial Disclosure

I have no relevant financial relationships to disclose.

AI Use Disclosure

- AI tools were used to support preparation of this presentation.
 - OpenEvidence assisted with evidence search and literature summarization.
 - ChatGPT assisted with organization, wording, and speaker-note development.
- All clinical content, citations, interpretations, and final recommendations were verified, edited, and approved by the presenter.
- No patient-identifiable information was entered into AI tools.

Learning objectives

- Describe the evidence supporting physical activity for symptoms, function, and selected survival outcomes after cancer diagnosis.
- Identify when patients may begin self-directed activity versus when they need rehabilitation, physical therapy, or trained exercise support.
- Apply a practical workflow to assess, recommend, and refer patients for physical activity support.

Lifestyle Medicine



Lifestyle is broad. Today's focus is physical activity and fitness.

Why this focus

Robust guideline support for symptom management, function, and quality of life.

What this is not

A full review of nutrition, sleep, tobacco, alcohol, body weight, or every cancer-specific exercise prescription.

What you can take back

A clinical pathway for making physical activity guidance clearer, safer, and easier to act on.

Core question: How do we move from “exercise matters” to “patients know what to do next”?

The gap is not whether exercise matters.

The gap is whether patients receive a usable next step.

56.8%

of patients reported that
exercise was addressed
at most or some oncology
visits

14.7%

We referred to an exercise
program

WHY IT REMAINS HARD

Time, safety questions,
limited training, and
unclear referral pathways
can keep evidence from
becoming routine care.

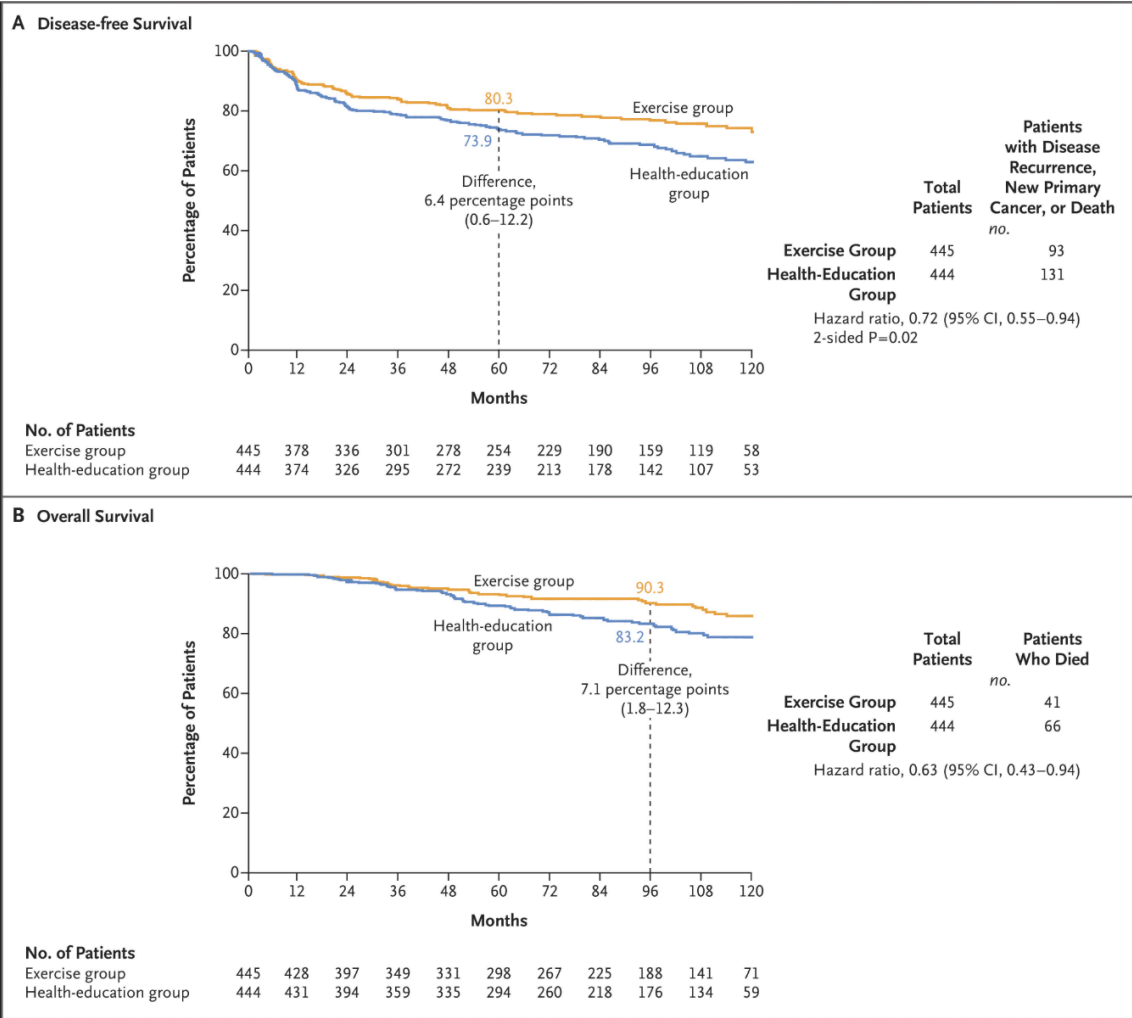
Your recommendations matter!

	I Have Made Changes to Exercise Habits to Improve Cancer Outcomes		
	Yes	No	P
Asked about current exercise	78.6%	69.1%	<.001
Advised to exercise	79.6%	69.0%	<.001
Referred to exercise program	83.7%	73.0%	<.001

DR. GLAUCOMFLECKEN EXPLAINS



CHALLENGE changed the survival conversation in colon cancer.



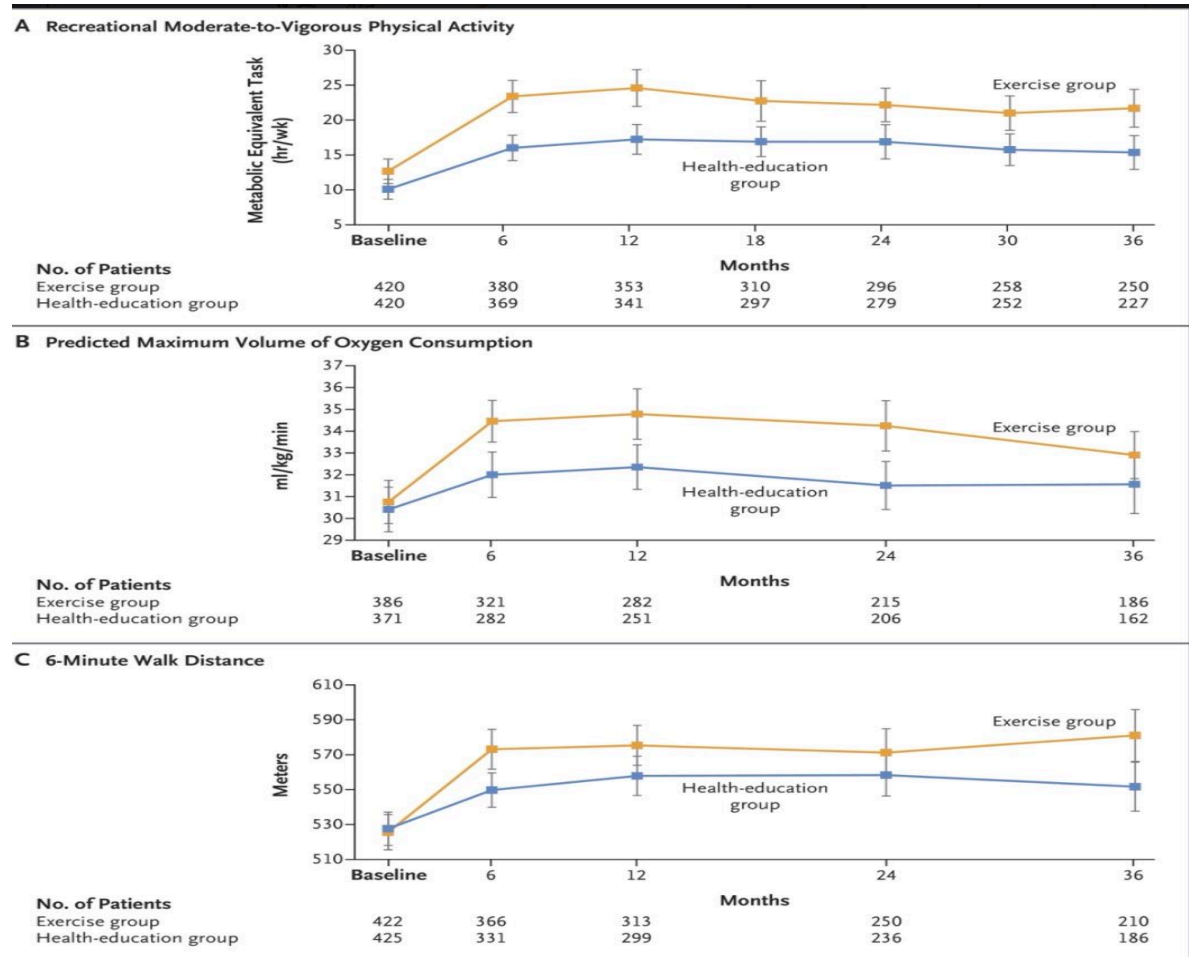
What to take from CHALLENGE

- The intervention included repeated behavioral support and supervised-to-remote exercise over 3 years.
- Participants increased activity and improved fitness, walking distance, and physical functioning.

Supported behavior change is part of the treatment effect.

Behavior change was sustained—and measurable.

The exercise arm separated from health education in activity, fitness, walking capacity, and physical function.



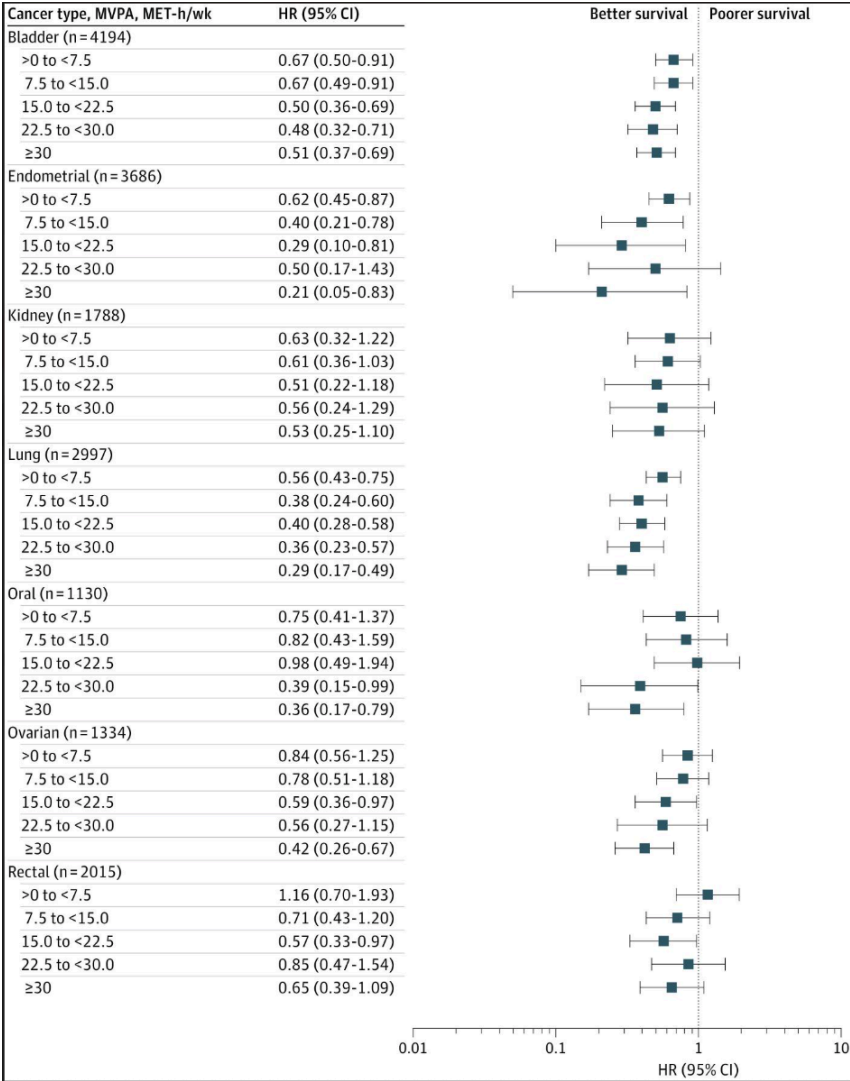
Why this matters for practice

- Exercise prescriptions work better when paired with support, monitoring, and a plan to adapt.
- Fitness and function are near-term outcomes patients can experience before any survival benefit is apparent.
- Your role may be to initiate the conversation and connect the patient to the right next step—not to deliver the full intervention yourself.

Beyond colon cancer: the signal is broad, but the evidence is not all the same.

What is strongest and most actionable

- CHALLENGE provides randomized survival evidence in a specific colon-cancer setting.
- Randomized evidence supports improvements in fatigue, physical function, fitness, strength, quality of life, and mood.
- Guidelines recommend individualized aerobic and resistance exercise during and after treatment.



For most patients, the first benefits are symptomatic and functional.



Fatigue

Exercise is a guideline-supported, first-line nonpharmacologic intervention for cancer-related fatigue.



Function & fitness

Aerobic and resistance exercise improve cardiorespiratory fitness, strength, and physical function.



Quality of life & mood

Exercise improves quality of life and can reduce anxiety and depressive symptoms.



Treatment-related effects

Evidence supports tailored exercise for several treatment-related adverse effects; complexity warrants individualized assessment.

Don't make patients wait until “after treatment” to talk about movement.

Guidelines: start where the patient is, then progress.

A practical interpretation

- Avoid inactivity. Any movement can be a meaningful starting point.
- Use moderate-intensity aerobic activity and resistance training when appropriate; progress based on symptoms, function, and tolerance.
- Add balance-focused work for older adults and patients with fall risk.
- The guideline target is not an all-or-nothing entry requirement.

Start low. Make it specific. Build from success.



National
Comprehensive
Cancer
Network®

NCCN Guidelines Version 2.2026

Survivorship: Physical Activity

[NCCN Guidelines Index](#)
[Table of Contents](#)
[Discussion](#)

EXAMPLES OF PHYSICAL ACTIVITY ^a		
Light Exercise (No noticeable change in breathing pattern) • Activity-promoting video game • Bowling • Child care • Leisurely biking at 5 miles/hour or less • Light housework (light sweeping, dusting) • Playing catch • Restorative yoga • Tai chi • Walking (slow)	Moderate Exercise (Can talk, but not sing) • Ballroom/line dancing • Baseball, softball, volleyball • Biking on level ground or with few hills • Doubles tennis • General gardening • Moderate-intensity yoga (ie, Vinyasa) • Pickleball • Pilates • Using a manual wheelchair • Water aerobics • Walking (brisk)	Vigorous Exercise (Can say a few words without stopping to catch a breath) • Aerobic/fast dancing • Biking faster than 10 miles/hour • Boxing • Heavy gardening • High-intensity yoga • Hiking uphill • Jogging • Jumping rope • Martial arts • Pickleball • Running • Running sports (basketball, hockey, soccer) • Singles tennis • Stair climbing • Swimming (fast pace or laps) • Walking (race paced)

^a National Heart, Lung, and Blood Institute (https://www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/phy_act.htm) and the Compendium of Physical Activities (<https://pacompendium.com>) and U.S. Department of Health and Human Services. Move Your Way. Washington, DC: U.S. Department of Health and Human Services. <https://health.gov/moveyourway>. Accessed March 19, 2026.

Note: All recommendations are category 2A unless otherwise indicated.

Version 2.2026, 04/08/26 © 2026 National Comprehensive Cancer Network® (NCCN®). All rights reserved. NCCN Guidelines® and this illustration may not be reproduced in any form without the express written permission of NCCN.

Continued

SPA-B
1 OF 2

Source image supplied by presenter: NCCN Survivorship: Physical Activity v2.2026, SPA-B-1. Use subject to CME-provider / NCCN permissions confirmation.

Safety is not a reason to avoid the conversation. It is a reason to tailor the next step.

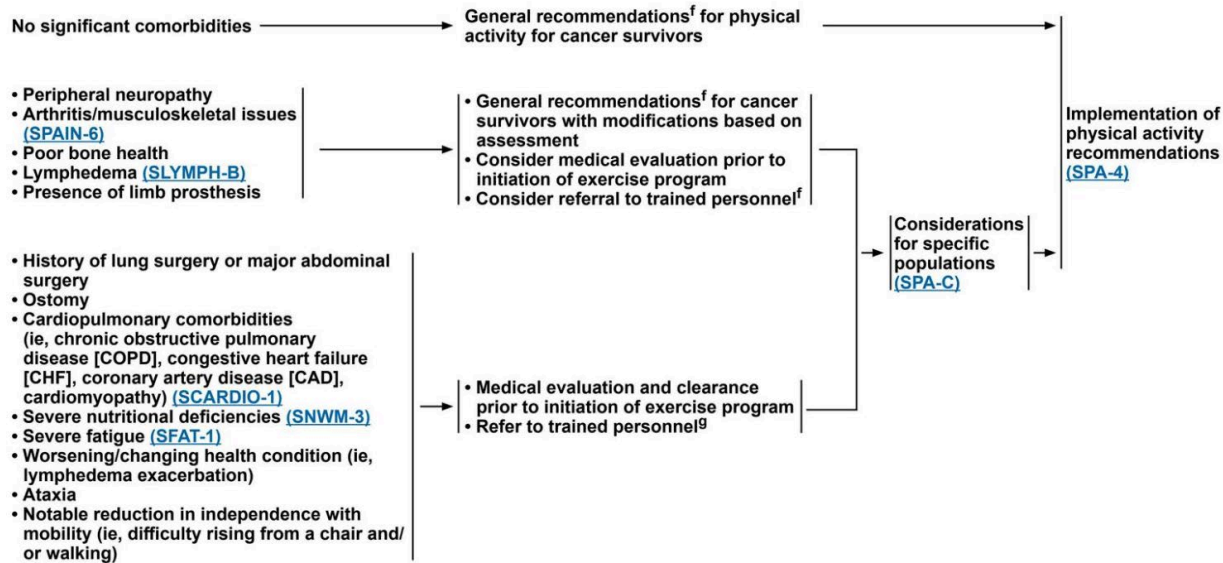


NCCN Guidelines Version 2.2026 Survivorship: Physical Activity

[NCCN Guidelines Index](#)
[Table of Contents](#)
[Discussion](#)

RISK ASSESSMENT FOR PHYSICAL ACTIVITY-INDUCED ADVERSE EVENTS

COMORBIDITIES



^f General Principles of Physical Activity (SPA-1).

^g Trained personnel can include physical and occupational therapists, certified exercise professionals, and physical medicine and rehabilitation clinicians. Specialized training in working with survivors is available for both physical therapists and exercise professionals: ACSM (<https://acsm.org/certification/professional-resources/profindex/>) and American Physical Therapy Association (APTA) Oncology section (<https://oncologypt.org>).

Note: All recommendations are category 2A unless otherwise indicated.

Version 2.2026, 04/08/26 © 2026 National Comprehensive Cancer Network® (NCCN®). All rights reserved. NCCN Guidelines® and this illustration may not be reproduced in any form without the express written permission of NCCN.

SPA-3

Use a risk-informed approach

- Stable, ambulatory patients without major concerns may begin with a clear, incremental plan.
- Neuropathy, fall risk, frailty, pain, major deconditioning, cardiopulmonary concerns, or bone disease often warrant more individualized assessment or trained support.
- New or worsening symptoms should trigger reassessment—not abandonment of movement as a topic.

A practical clinical workflow: assess, recommend, and refer.

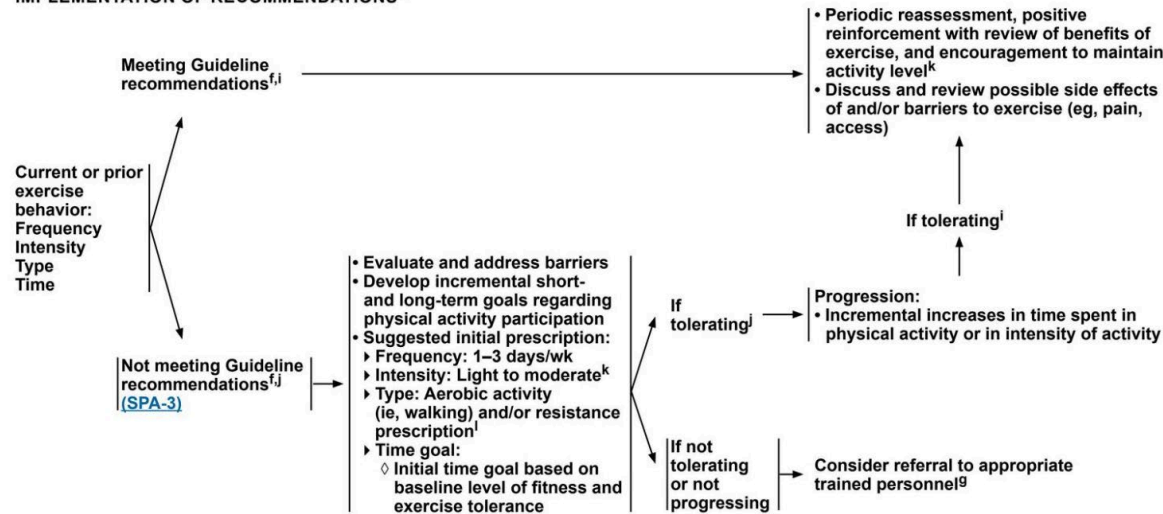


National
Comprehensive
Cancer
Network®

NCCN Guidelines Version 2.2026 Survivorship: Physical Activity

[NCCN Guidelines Index](#)
[Table of Contents](#)
[Discussion](#)

IMPLEMENTATION OF RECOMMENDATIONS^h



^f [General Principles of Physical Activity \(SPA-1\)](#).

^g Trained personnel can include physical and occupational therapists, certified exercise professionals, and physical medicine and rehabilitation clinicians. Specialized training in working with survivors is available for both physical therapists and exercise professionals: ACSM (<https://acsm.org/certification/professional-resources/profindex/>) and APTA Oncology section (<https://oncologypt.org>).

^h Reproduced and adapted with permission from Jones LW, Eves ND, Peppercorn J. Pre-exercise screening and prescription guidelines for cancer patients. *Lancet Oncol* 2010;11:914-916.

ⁱ If tolerating minimum guideline recommendations, consider encouragement of variation within exercise program or physical activities.

^j Patients with comorbidities may need additional evaluation before doing more rigorous activity.

^k [Examples of Physical Activity and Strategies to Increase Physical Activity \(SPA-B\)](#).

^l [Guidance for Resistance Training Recommendations \(SPA-A\)](#).

Note: All recommendations are category 2A unless otherwise indicated.

Version 2.2026, 04/08/26 © 2026 National Comprehensive Cancer Network® (NCCN®). All rights reserved. NCCN Guidelines® and this illustration may not be reproduced in any form without the express written permission of NCCN.

SPA-4

The practical workflow

- 1 Assess current activity, barriers, symptoms, and function.
- 2 Recommend an incremental, patient-specific next step.
- 3 Refer to trained personnel when the patient needs more support or cannot safely progress.

A recommendation is not a pathway.

“Try to stay active.”

Clinically well-intentioned. Operationally incomplete.

How active? Safe with what symptoms? On treatment days? Where? Who can help? What if it stops working?



“Here is your next step.”

Specific • Safe • Reachable • Adaptable

“Based on what you told me, start here. Here is who will help you adjust the plan if symptoms change.”

The implementation gap begins before the patient ever has a chance to “adhere.”

CLEAR: Is this recommendation usable for the patient?



Clarify

Do they know what this means and why it matters?



Locate

Can they find where to go, who to call, or what to schedule?



Evaluate

Can they tell whether this guidance applies to them right now?



Act

Can they complete the step without unnecessary friction?



Recover

Do they know what to do when treatment, symptoms, or life disrupt the plan?

Case: 67-year-old receiving chemotherapy

- Fatigue and reduced walking capacity
- Mild peripheral neuropathy
- Fear of falling
- No clear exercise plan or referral destination
- “I know I should exercise, but I do not know what is safe.”

Clarify

“Movement can help fatigue and preserve function. We will tailor it to you.”

Locate

Give a named referral destination, contact, or structured program—not a vague URL.

Evaluate

Neuropathy and fear of falling support a more individualized assessment or trained referral.

Act

Start with one realistic, low-friction step that fits treatment-day capacity.

Recover

Name who to call when symptoms worsen, treatment changes, or the plan falls apart.

Make the next step visible in the workflow.

1

Assess

Ask about current activity, symptoms, functional barriers, and patient goals.

2

Recommend

Give an incremental, specific recommendation matched to the patient's current capacity.

3

Refer

Connect patients to trained support when they need assessment, supervision, adaptation, or accountability.

Referral Options to Consider

- Oncology rehabilitation / physical therapy / PM&R for individualized assessment or higher complexity
- Cancer-trained exercise professionals for lower-risk, supervised exercise support
- ACSM Moving Through Cancer Exercise Program Directory
- LIVESTRONG at the YMCA
 - North Canton YMCA — Cancer Survivorship Programs
- Local Support Organizations
 - <https://stewartscaringplace.org/cancer-support/group-fitness/>

What to take back to clinic on Monday.

1

Physical activity is evidence-based supportive cancer care—not an optional afterthought.

2

The strongest broadly applicable evidence is for symptoms, function, fitness, and quality of life; randomized survival evidence is now established in a defined colon-cancer population.

3

The next step is not “talk about exercise more.” It is to make the next step clear, safe, reachable, and adaptable.

This week: identify one referral destination and one workflow trigger in your clinic.

Selected references

- Courneya KS, et al. Structured Exercise after Adjuvant Chemotherapy for Colon Cancer. N Engl J Med. 2025.
- Ligibel JA, et al. Exercise, Diet, and Weight Management During Cancer Treatment: ASCO Guideline. J Clin Oncol. 2022.
- Campbell KL, et al. Exercise Guidelines for Cancer Survivors: Consensus Statement from International Multidisciplinary Roundtable. Med Sci Sports Exerc. 2019.
- NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®): Survivorship: Physical Activity. Version 2.2026.
- Stout NL, et al. An Exercise Oncology Clinical Pathway: Screening and Referral for Personalized Exercise Prescription. PM&R. 2020.
- ACSM / Exercise is Medicine. Moving Through Cancer resources and exercise-program directory.

CHALLENGE changed the survival conversation in colon cancer.

But it tested a structured, supported behavior-change intervention—not a one-time reminder to exercise.

Phase III randomized trial

- 889 patients with resected stage II–III colon cancer after adjuvant chemotherapy.
- Three-year structured exercise and behavioral-support program versus health education.
- Target: increase aerobic activity by ≥ 10 MET-hours/week.

Key outcomes

5-year disease-free survival	80.3% vs 73.9%
	HR 0.72 (95% CI, 0.55–0.94)

8-year overall survival	90.3% vs 83.2%
	HR 0.63 (95% CI, 0.43–0.94)

Interpretation: landmark randomized evidence of improved disease-free and overall survival in this defined colon-cancer population.