

Moving forward: Strategies for general practitioners to encourage physical activity in people living with and beyond cancer

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PHYSICAL ACTIVITY (PA; ie any movement produced by skeletal muscles requiring energy expenditure)¹ and exercise (ie planned, structured and repetitive PA for the purpose of improving health and maintaining fitness)¹ have numerous benefits for people diagnosed with cancer. Those affected by cancer who engage in PA have been shown to have improved sleep quality, muscle mass and cardiorespiratory fitness, and a reduced risk of cancer recurrence and mortality.² PA accumulated in both supervised and home-based settings has been shown to mitigate cancer-related fatigue, one of the most common debilitating symptoms in patients during and after treatment.^{3,4} Participating in PA can provide psychological benefits by reducing symptoms of anxiety and depression, which is a significant benefit for those facing the uncertainty that comes with a cancer diagnosis.⁵ PA is even safe and effective for patients facing challenging clinical trajectories, including improving postoperative functional capacity and reducing hospital complication rates in those presurgery ('prehabilitation'),⁶ and improves quality of life, fatigue, fitness and strength in patients living with advanced or

palliative cancers.⁷ However, with 67% of cancer survivors not meeting PA guidelines,⁸ it is important and timely that the 151,000 Australians diagnosed with cancer annually are supported to increase their PA.⁹

There are urgent calls from national oncology organisations to embed PA into healthcare starting from diagnosis, including primary care (Table 1).^{10,11} Australia is well positioned to be the first country globally to successfully embed PA into cancer care. Australia developed the first exercise-oncology position statement¹⁰ and federally funds physiotherapy and exercise physiology services that deliver PA programs for chronic diseases, including cancer. Given the growing evidence base, this article was created to support general practitioners (GPs) to promote PA for their patients during and after cancer. This is in addition to encouraging GPs to provide resources and support within the limited consultation time frame and be equipped with knowledge of available health professionals and programs for referrals, as indicated.

GPs play an integral role in shared cancer follow-up care and are well positioned to implement PA through informing patients about the benefits of PA, supporting them to overcome any barriers and become active, and referring those patients in need to exercise professionals experienced in cancer care.

Given the significant barriers that GPs face with time and competing priorities within consultations, we recommend evidence-based interventions, including brief advice or counselling on the benefits of PA, with supporting written or video material (eg from the Cancer Council), a PA prescription, differentiation between different PA intensities and/or referral to an exercise professional or program (Box 1).^{10,12-18} Simple recommendations include starting a comfortably paced walking program, progressing to brisk walking. Informing patients about the benefits of even small amounts of vigorous PA (ie four minutes of brisk walking) throughout the day is another simple tool to reduce cancer mortality risk by 30%.¹⁶ Some patients might benefit by monitoring their steps using pedometers or other wearables. GPs can monitor and create step targets that are incremental and agreed with the patient. Given the lower mortality risk for every increasing 2000-step interval up to 10,000 steps/day,¹⁷ patients can benefit by achieving smaller targets to their own capabilities. Other inexpensive suggestions for aerobic exercise include stair climbing, swimming and incorporating hills into walking routes, and suggestions for resistance exercise include chair squats, lifting tin cans and using resistance bands. Free mobile phone applications (eg Google Fit) can be



Table 1. Summary of physical activity and cancer guidelines

Guideline	Year, phase	Recommendation
Clinical Oncology Society of Australia ¹⁰	2018 (updated in 2020) All phases	<ul style="list-style-type: none"> All health professionals working with people with cancer to discuss the role of PA in cancer recovery Recommend their patients progress towards and maintain participation in: <ul style="list-style-type: none"> at least 150 min of moderate-intensity or 75 min of vigorous-intensity aerobic physical activity (eg walking, jogging, cycling, swimming) each week two to three resistance exercise (ie lifting weights) sessions each week involving moderate- to vigorous-intensity exercises targeting the major muscle groups Refer their patients to a health professional who specialises in the prescription and delivery of PA (ie accredited exercise physiologist or physiotherapist with experience in cancer care)
American Society of Clinical Oncology ¹¹	2022 During treatment	<ul style="list-style-type: none"> Oncology providers should recommend aerobic and resistance PA to all patients during active treatment Oncology providers might recommend preoperative PA for patients undergoing surgery for lung cancer to reduce the LOS and postoperative complications

LOS, length of hospital stay; PA, physical activity.

Box 1. Practical tips to increase patients' physical activity

- Introduce the concept that both physical activity (PA) and exercise are beneficial, including both aerobic and resistance PA.¹⁰ A guide for discussing PA in consultations is provided on pages 77–79 of the *Red book* (9th edition).¹² The Cancer Exercise Toolkit (<https://cancerexercisetoolkit.trekeeducation.org/>) provides resources for general practitioners regarding PA for people affected by cancer, including screening, safety, referral letters and other practical considerations.
- Direct patients to available online resources, such as written¹³ or video material¹⁴ from the Cancer Council, or the *Exercise & cancer* eBook by Exercise & Sports Science Australia.¹⁵
- Encourage patients to increase their physical activity, starting with 5 min per day and progressing weekly.¹⁶ Examples include:
 - aerobic PA: brisk walking, stair climbing, swimming, cycling
 - resistance PA: chair squats, wall push ups, lifting tin cans, resistance bands.
- Discuss technology to monitor PA, including pedometers, to increase daily step counts by 2000 step increments over time up until 10,000 daily steps,¹⁷ or use free mobile phone applications (eg Google Fit [<https://play.google.com/store/apps/details?id=com.c25k&hl=en&gl=US>], Couch to 5K [<https://play.google.com/store/apps/details?id=com.google.android.apps.fitness&hl=en&gl=US>]).
- Differentiate between the three main PA intensities: light, moderate and vigorous. These can be measured using the rate of perceived exertion scale,¹⁸ measuring heart rate or by using the talk test below:
 - light: able to talk and sing comfortably during exercise
 - moderate: able to talk but not sing comfortably during exercise
 - vigorous: neither able to talk nor sing comfortably during exercise.
- Assess PA barriers and consider referral to an exercise professional or community program.¹⁰

other useful tools to motivate patients to become active.

Patients might present with numerous barriers to initiating PA, including treatment-related side effects, fatigue and uncertainty about which type of PA program will be safe and beneficial for them.¹⁹ These patients might benefit from closer and individualised support from Australia's growing workforce of accredited exercise physiologists (AEPs) and physiotherapists, whereas patients with more complex medical needs can be considered for referral to a sport and exercise physician (Box 2). Such exercise professionals are qualified to safely prescribe PA to clinical populations, with examples of exercise programs commonly prescribed in cancer care focusing on managing treatment side effects, such as debilitating cancer-related fatigue,²⁰ or improving balance and stability deficits caused by chemotherapy-induced peripheral neuropathy.²¹ Services might be offered in person or through telehealth, which can be beneficial for some regional communities and immunocompromised patients, while those with poor internet access or no access to physical programs can utilise the Get Healthy NSW Cancer Support Program with free health coaching over the telephone (Table 2).

AEP and physiotherapy sessions are subsidised by enhanced primary care programs. However, with only five sessions provided annually across all allied health, this is insufficient for people with multimorbidities (eg those who need dietetics or podiatry), and the rebate might not fully cover the cost. Many private health insurers fund exercise professionals. However, for patients without private health insurance, affording exercise professionals might be more onerous. Importantly, there are numerous free and subsidised community PA programs for people living with or beyond cancer that can be accessed through GP referral or self-referral (Table 2). Thus, one recommendation is to concurrently encourage self-directed PA and offer referral into a community program (eg Cancer Council and parkrun).

Given that referral pathways between tertiary cancer and community exercise professionals and programs are not established nationwide, GPs are in a pivotal position to bridge this gap when patients

Table 2. Examples of free or subsidised physical activity programs for cancer survivors available in 2023

Program name	Organisation	Duration	Location (delivery)
Get Healthy NSW – Cancer support program	NSW Government	10 phone calls with a health coach over 6 months	NSW (telephone)
Encore breast cancer exercise and information program	YWCA Australia	2-h session/week for 8 weeks	NSW and Western Australia (online in English, Mandarin or Cantonese, or face to face)
Life Now exercise	Cancer Council Western Australia	2 1-h sessions/week for 12 weeks	Western Australia (online or face to face)
Life Now yoga	Cancer Council Western Australia	1-h session/week for 6 weeks	Western Australia (online or face to face)
Cancer Education Programs	Cancer Council Victoria	1-h session/week for 8–12 weeks	Victoria (face to face)
Choices Cancer Support Centre	The Wesley Hospital	Varies based on program	Queensland (face to face)
Active & Healthy cancer wellness program	Gold Coast Council	1-h session/week for 8 weeks	Queensland (face to face)
ENRICHing Survivorship program	Cancer Council ACT	2-h sessions/week for 8 weeks	Canberra (face to face)
Complementary therapy programs: yoga, Pilates and exercise physiology	Cancer Council Tasmania	1-h session/week for 6 weeks	Tasmania (face to face or online)
Breast cancer rehabilitation and reconditioning oncology programs	Calvary Central Districts Hospital	1–2 1-h sessions/week for 8–9 weeks	Adelaide (face to face)
Exercise programs in BCNA's service finder	Breast Cancer Network Australia	Numerous programs available	Numerous locations around Australia (face to face)
Healthy Darwin ^A	City of Darwin	Numerous programs available	Darwin (face to face)
Live Life Get Active ^A	Live Life Get Active	Numerous programs available	Australia-wide (face to face and online)
parkrun ^A	parkrun	5-km walk or run every Saturday morning	464 locations around Australia

^AThe program is not cancer specific, and referral should be considered for those without complex medical needs, who have a history of exercise or who are overseen by a qualified exercise professional.

ACT, Australian Capital Territory; BCNA, Breast Cancer Network Australia; NSW, New South Wales.

transition to community care by discussing, recommending and referring PA. This aligns with Australian guidelines, where all health professionals are recommended to promote PA to people diagnosed with cancer within the constraints of our healthcare system.¹⁰ Given exercise interventions can lower the economic burden of chronic disease (\$10.50 benefit for every \$1 spent),²² there has never been a better time to harmonise available services and resources to assist the 151,000 Australians diagnosed with cancer annually to become physically active.⁹

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Box 2. Practical tips for referring patients to programs, identifying barriers and following up patients regarding their physical activity

Referrals

If considering referring patients for a community-based physical activity (PA) program, general practitioners (GPs) can search an online directory of accredited exercise physiologists (www.essa.org.au/find-aep) and physiotherapists (<https://choose.physio/find-a-physio>), searching by location and selecting 'cancer' as a field of interest.¹⁰ Patients with more complex medical needs can be considered for referral to a sport and exercise physician (www.acsep.org.au/).

Identifying barriers

We suggest GPs ask patients about personal perceived barriers to PA when discussing, recommending and considering referral to an exercise professional and/or exercise program. Barriers to PA commonly reported in people affected by cancer include fatigue, pain, treatment side effects, access to facilities, financial considerations, kinesiophobia (fear-avoidance beliefs), low motivation and multimorbidity.¹⁸ These barriers should be considered in the design and implementation of a PA program managed between a GP and exercise professional.

Follow-up

In follow-up consultations, the GP should continue to provide ongoing support to the patient regarding their PA, including identifying any new barriers and exploring whether adjustments are needed to their PA recommendations and whether referral to an exercise professional is required. If the patient is already receiving support from an exercise professional, the GP can request that the exercise professional provide progress reports of the exercise program and assessments.

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