



Exercise Prescription and Modification Considerations

Cancer related consideration	Exercise modification
Bony Metastases	<ul style="list-style-type: none"> • Consider location of bony metastases and limit loading of bone metastases site • Avoid excessive spinal flexion, extension and rotation; clarify with medical team need for bracing • Monitor for increasing functional pain – refer on for medical evaluation • Avoid manual muscle testing in affected limb • Exercise as tolerated as limited by pain (Lancet) • Minimise fall or impact risk
Lymphoedema	<ul style="list-style-type: none"> • Mixed aerobic and resistance training recommended • Under controlled circumstances, exercise does not exacerbate lymphoedema • No strong evidence to support wearing compression garments during exercise however it is known to be safe and is generally recommended or left to patient preference (Maltser, Campbell) • No need to wear compression garment during hydrotherapy • Monitor for signs of redness, erythema, pain, new onset or exacerbation of swelling – refer for medical management
Haematological Cancers	<ul style="list-style-type: none"> • Review blood pathology results as able • Consider avoiding group exercise if significantly immune-compromised • Minimise falls risk • See Safety Reference Table under 'Exercise Prescription' for more specific considerations
Stomas	<ul style="list-style-type: none"> • Empty ostomy bag prior to exercise • Start resistance training with low resistance and progress slowly (risk of parastomal hernia) • Monitor and correct form to manage intra-abdominal pressure – observe for bulging or feelings of pressure • If participating in contact sports – consider wearing an ostomy protector



PICC line or Portacath (Peripherally inserted central catheter)	<ul style="list-style-type: none">• No available evidence suggesting that exercise can cause PICC damage or dislodgement during• May cause some discomfort or unpleasant sensation during arm movement• Change dressings over PICC if they become soiled during exercise• Ensure that PICC is fully covered or take care to avoid catching it on anything• Slowly introduce upper limb exercises if the patient is anxious about using the arm with the PICC inserted
Peripheral Neuropathy and Balance Deficits	<ul style="list-style-type: none">• Assess stability, balance and gait prior to exercise• Consider alternative aerobic exercise (stationary bike, arm ergo) rather than walking if neuropathy is affecting gait stability• Seated versus standing resistance exercises• Monitor discomfort in hands when holding weights/equipment and modify as able• Prescribe balance exercises with close monitoring of safety• Minimise falls risk
Poor Bone Density	<ul style="list-style-type: none">• Minimise falls risk• Consider period of moderate to high intensity resistance exercise prior to introducing impact loading• Functional weight bearing exercise, progressively increased impact loading as appropriate



References:

Campbell KL, Winters-Stone KM, Wiskemann J, May AM, Schwartz AL, Courneya KS, Zucker DS, Matthews CE, Ligibel JA, Gerber LH, Morris GS, Patel AV, Hue TF, Perna FM, Schmitz KH. Exercise Guidelines for Cancer Survivors: Consensus Statement from International Multidisciplinary Roundtable. Medicine and Science in Sports and Exercise, 2019 Nov;51(11): 2375-2390.

Hayes SC, Newton RU, Spence RR, Galvao DA. The Exercise and Sport Science Australia position statement: Exercise medicine in cancer management. Journal of Medicine and Sport, 2019 Nov;22(11):1175-1199

Reference: Santa Mina DS, Langelier D, Adams SC, Alibhai SMH, Chasen M, Campbell KL, Oh P, Jones JM, Chang E. Exercise as part of routine cancer care. Lancet Oncol. 2018 Sep;19(9):e433-e436