An assessment of study characteristics, quality and reporting in cancer prehabilitation literature: a scoping review

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Supplementary Material 3:

Table 1) Cancer Prehabilitation Study Characteristics

Author	Participants (N)	Cancer Site	Study Design	Inclusion Criteria	Treatment Type
Allen et al.,2022	54	Oesophageal	Randomised Control Trial	• Living with locally advanced esophagogastric cancer. • Scheduled for neoadjuvant therapy and an esophagogastrostomy or total gastrectomy. • Aged ≥18 years of age. • Had no CPET contra-indications for exercise. • Physically able to perform a CPET and the exercise intervention. • Not pregnant. • Had the capacity to give informed consent.	Surgery Neoadjuvant Chemotherapy
Baima et al.,2017	60	Breast	Two-arm parallel study	• Diagnosed with breast cancer. • Had no diagnosis of adhesive capsulitis or a history of shoulder arthroplasty (ipsilateral to cancer site). • Scheduled for surgery.	Surgery Neoadjuvant Chemotherapy
Berkel et al., 2022	57	Colorectal	Randomised Control Trial	• Diagnosed with colorectal cancer or premalignant colorectal lesions (polyps with grade I-III dysplasia that could not be removed endoscopically) • Scheduled for elective colorectal resection. • Aged ≥60 years • Estimated life expectancy >6 months. • Scored ≤7 METs on the veterans-specific activity questionnaire (VSAQ) • Willing and able to perform community-based prehabilitation at a physical therapy practice in the same area as their hospital. • Able to perform a CPET. • Low aerobic fitness score at the baseline CPET (VO2 at the VAT <11 mL/kg/min).	Surgery Neoadjuvant Chemotherapy Neoadjuvant Radiotherapy
Blackwell et al., 2019	40	Urological	Randomised Control Trial	• The multidisciplinary team had decided to operate for urological cancer. • A treatment plan had been prescribed by the treatment team. • It was feasible to complete a baseline assessment, 10 or more HIIT sessions, and a reassessment 72 h before the operation.	Surgery
Boereboom et al.,2019	18	Colorectal	Pre-post Study	• Colorectal cancer patients who were recommended surgery without neoadjuvant treatment. • Had the capacity to provide informed consent. • Between 18 and 98 years of age. Had no contraindications to exercise (according to the American Thoracic Society CPET Guidelines).	Surgery
Brahmbhatt et al., 2020	28	Breast	Pre-post Study	• Diagnosed with stage I–III breast cancer. • Scheduled for mastectomy or lumpectomy. • Had a surgical waiting period of ≥3 weeks. • Proficient in English.	Surgery

				• Between the ages of 18 and 80 years. • Had not/were not receiving neoadjuvant treatment. • Had no medical contraindications to exercise. • Had not been diagnosed with an active shoulder pathology.	
Burke et al., 2013	10	Rectal	Pre-post Study	• Had completed neo-adjuvant preoperative chemoradiotherapy (NACRT). • Scheduled an exercise training programme at Aintree University Hospital. Scheduled for elective cancer resection. • Able to perform exercise. • Had the capacity to provide informed consent. • Were ≥18 years of age.	Surgery Neoadjuvant Chemotherapy Neoadjuvant Radiotherapy
Cavalheri et al., 2018	151	Lung	Pre-post Study	• Adults with proven or suspected non-small cell lung cancer. • Had no contraindication that would restrict participation or the completion of a maximal CPET.	Surgery
Chen et al., 2017	116	Colorectal	Randomised Control Trial	• Elderly patients scheduled for colorectal cancer surgery. • Received clearance to participate from a clinician.	Surgery
Christensen et al., 2019	50	Gastro-oesophageal	Non-Randomised Control Trial	• Adults diagnosed with histologically verified, resectable gastro-oesophageal cancer. • Aged between 18 and 80 years. • Had no contra-indications to operability based on imaging. • Not pregnant. • Had no other known malignancy requiring active treatment. • Were eligible for neoadjuvant treatment. • Had a World Health Organisation-defined performance status lower than 1. • Had no physical or mental disabilities that could restrict their capacity to complete physical testing or exercise. • Able to read and understand Danish.	Surgery Neoadjuvant Chemotherapy Neoadjuvant Radiotherapy
Ferreira et al., 2021	95	Lung	Two arm parallel study	• Consecutive adult patients scheduled for curative resection of nonmetastatic colorectal cancer • Able to speak English or French • Had no premorbid conditions that contraindicated exercise	Surgery
Gillis et al., 2014	77	Colorectal	Two arm parallel study	• Consecutive adult patients scheduled for curative resection of nonmetastatic colorectal cancer • Able to speak English or French • Had no premorbid conditions that contraindicated exercise	Surgery
Halliday et al., 2021	67	Multiple/N.S	Pre-post Study	• Diagnosed with a resectable oesophageal or gastro-oesophageal junctional adenocarcinoma.	Surgery Neoadjuvant Chemotherapy
Huang et al., 2016	26	Multiple/N.S	Pre-post Study	• Consecutive patients that were referred to the hospital centre's prehab exercise programme between September 2012 and August 2014. • Had completed baseline and post-prehabilitation CPETs. • Had proceeded to surgery following the prehab programme. • Exercise commenced after completing the first CPET.	Surgery

Jensen et al., 2016	107	Bladder	Randomised Control Trial	• Scheduled for radical cystectomy because for muscle invasive bladder cancer or high-risk non-muscle-invasive bladder cancer. • Had no mental or cognitive disorders, voiding dysfunctions, or neuromuscular diseases.	Surgery
Jones et al., 2007	20	Lung	Pre-post Study	• Consecutive patients with suspected stage I-IIIA non-small-cell lung cancer (NSCLC). • Scheduled candidates for primary surgery. • Had no uncontrolled hypertension, cardiac/pulmonary disease. • Had a forced expired volume ≥ 1.1L. • Had a diffusion capacity for carbon monoxide ≥ 70% predicted. • Had no contraindications to exercise training.	Surgery
Loughney et al., 2019(a)	24	Multiple/N.S	Pre-post Study	• Aged ≥ 18 years. • Scheduled for surgical treatment. • Had no known history of uncontrolled cardiovascular conditions, muscular or cognitive deterioration, mental illness, or a cognitive disability that may prevent participation.	Surgery
Loughney et al., 2021(b)	11	Prostate	Pre-post Study	• Men diagnosed with prostate cancer. • Aged ≥ 18 years. • Scheduled for surgery. • Had no contraindications to exercise. • Had no known uncontrolled cardiovascular conditions, significant skeletal muscle, orthopaedic, or neurological condition, or cognitive decline, significant mental illness or a cognitive disability that may prevent participation.	Surgery
Machado et al., 2023 (a)	14	Lung	Pre-post Study	• Consecutive patients (≥18 years) scheduled for surgical treatment of suspected or confirmed lung cancer (clinical stage IIIA or less), with a waiting time for surgery of at least two weeks from baseline assessment, • Had received medical clearance to exercise. • Had no diagnosed metastatic cancer; or physical/mental disabilities that contraindicated exercise training or physical testing, • Must not have performed combined aerobic and resistance training over the previous month.	Surgery
Machado et al., 2023 (b)	41	Lung	Randomised Control Trial	• Patients (≥18 years) scheduled for surgical treatment of suspected or confirmed lung cancer (clinical stage IIIA or less), with a waiting time for surgery of at least two weeks from baseline assessment. • Had received medical clearance to exercise. • Had no diagnosed metastatic cancer; or physical/mental disabilities that contraindicated exercise training or physical testing, • Must not have performed combined aerobic and resistance training over the previous month.	Surgery
Mayo et al., 2011	133	Colorectal	Two arm parallel study	• Aged ≥ 18 years. • Referred for elective resection of benign or malignant colorectal lesions, or for colonic reconstruction of non-active inflammatory bowel disease. • Had an ASA health status grade < 4 • Had no co-morbid medical conditions that may deter their ability to perform exercise.	Surgery
Minnella et al., 2020(a)	42	Colorectal	Two arm parallel study	• Consecutive patients referred for non-metastatic colorectal cancer resection. • A provisional operative date that allowed a 4-week exercise programme.	Surgery

				• Aged ≥ 18 years. • Had an ASA physical status of ≤ 3. • Had no comorbid conditions that contra-indicated the exercise or nutritional programme. • Had no diagnosed cardiovascular disease, physical or cognitive disabilities, or end-stage organ dysfunction. • Proficient in either English or French.	
Minnella et al., 2021(b)	70	Bladder	Randomised Control Trial	• Aged ≥ 18 years. • Scheduled for elective radical cystectomy for nonmetastatic bladder cancer. • Had no known medical conditions that precluded safe training. • Had no known unstable cardiovascular disease, end-stage organ dysfunction, disabling orthopaedic, neuromuscular, or psychiatric diseases. • Had an ASA physical status of ≤ 3. • Had a 4-week window before the planned surgery date.	Surgery
Ngo-Huang et al., 2019	50	Pancreatic	Pre-post Study	• Scheduled for pancreatectomy for biopsy-positive pancreatic cancer. • Had a treatment plan including preoperative chemotherapy and/or chemoradiation. • English fluency. • Telephone access. • Willing to engage in follow-up calls every 2 weeks. • Willing to maintain daily exercise logs. • Had no known unstable cardiac or pulmonary disease or symptomatic cardiac disease (New York Heart Association functional class III or IV). • Had no acute musculoskeletal injury or fracture, intense pain (numeric rating ≥7 out of 10), or other disease that precluded unsupervised exercise.	Surgery Chemotherapy Radiotherapy
SantaMina et al., 2018	86	Prostate	Randomised Control Trial	• Men between 40–80 years of age. • Diagnosed localised prostate cancer. • Scheduled for radical prostatectomy. Proficient in English or French. • Had no contraindications to exercise.	Surgery
Singh et al., 2017(a)	12	Rectal	Pre-post Study	• Scheduled for surgery for localised rectal cancer. • Had no acute illness. • Had no known musculoskeletal, cardiovascular, or neurologic disorder that could inhibit exercise. • Had received medical clearance from their general practitioner.	Surgery
Singh et al., 2023(b)	41	Prostate	Two arm parallel study	• Had no acute illness, • Had no diagnosed musculoskeletal, cardiovascular, or neurological disorder that would preclude exercise.	Surgery
Wood et al., 2016	40	Multiple/N.S	Pre-post Study	• Scheduled for autologous or allogeneic transplant. • Had a treatment plan that would accommodate a 6-week exercise intervention. • Had not received erythropoiesis-stimulating agents in the 4 weeks preceding enrolment. • Had no comorbid illness that may preclude exercise.	Chemotherapy Radiotherapy Hematopoietic cell transplantation

(N.S =Not specified)