

Package of interventions for
Rehabilitation

Module 7

Malignant neoplasm



World Health
Organization

Package of interventions for rehabilitation

Module 7 Malignant neoplasm



**World Health
Organization**

Package of interventions for rehabilitation. Module 7. Malignant neoplasm

(Package of interventions for rehabilitation. Module 1. Introduction – Module 2. Musculoskeletal conditions – Module 3. Neurological conditions – Module 4. Cardiopulmonary conditions – Module 5. Neurodevelopmental disorders – Module 6. Sensory conditions – Module 7. Malignant neoplasm – Module 8. Mental health conditions)

ISBN 978-92-4-007125-4 (electronic version)

ISBN 978-92-4-007126-1 (print version)

© World Health Organization 2023

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited, as indicated below. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: “This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition”.

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization (<http://www.wipo.int/amc/en/mediation/rules/>).

Suggested citation. Package of interventions for rehabilitation. Module 7. Malignant neoplasm. Geneva: World Health Organization; 2023 (Package of interventions for rehabilitation). Licence: CC BY-NC-SA 3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at <http://apps.who.int/iris>.

Sales, rights and licensing. To purchase WHO publications, see <https://www.who.int/publications/book-orders>. To submit requests for commercial use and queries on rights and licensing, see <https://www.who.int/copyright>.

Third-party materials. If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

General disclaimers. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by WHO to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO be liable for damages arising from its use.

Contents

1 Package of interventions for rehabilitation for cancer	1
1.1 About cancer	1
1.2 Content of the Package of interventions for rehabilitation for cancer	3
1.3 Members of the working groups	20
1.4 References	21
Annex 1. Glossary of assessments and interventions	23
Annex 2. Summary of declarations of interest and how these were managed	33
Web Annex: Literature reviews and evidence tables	
https://apps.who.int/iris/bitstream/handle/10665/370401/9789240071278-eng.pdf	

1 Package of interventions for rehabilitation for cancer

1.1 About cancer

Cancer is a generic term for a large group of diseases that can affect any part of the body. One defining feature of cancer is the rapid creation of abnormal cells that grow beyond their usual boundaries and which can then invade adjoining parts of the body and spread to other organs. Cancer is a leading cause of death worldwide. Cancer most commonly occurs in the breast, lung, colon, rectum and prostate. Incidence rises dramatically with age, most likely due to a build-up of risks for specific cancers that increase with age. Risk factors include genetic predisposition, tobacco use, alcohol consumption, unhealthy diet, physical inactivity, air pollution and chronic infections. Many cancers can be cured if detected early and treated effectively; some can also be prevented by avoiding risk factors and implementing prevention strategies (1).

Cancer and its treatment (surgical, radiation therapy, or chemotherapy) may affect different organ systems and psychological health. As a result, people diagnosed with cancer may experience a variety of physical, cognitive and psychological problems that include, but are not limited to, pain, fatigue, changes in bowel or bladder habits, physical deconditioning, anxiety and depression. As a result, functioning is often severely limited in cancer survivors, as is their quality of life and that of their families and care providers.

Role of rehabilitation in cancer

It is estimated that in 2019, 18 million people worldwide were living with any type of cancer and associated problems in functioning that could benefit from rehabilitation (2). Rehabilitation for cancer survivors is a key component in the management of the disease and the complications related to its treatment; it is an essential health strategy to support people in achieving and maintaining optimal levels of functioning, independence, and quality of life. Interventions for cancer rehabilitation help to lessen the side effects of cancer and its treatment, such as physical, cognitive, and psychological problems (3). Specific interventions for rehabilitation address, for example, pain, fatigue, cognitive functions, oedema, motor and movement functions and thus help to restore functioning and support cancer survivors to become and stay as independent as possible. Furthermore, interventions for rehabilitation aim to support cancer survivors to re-engage in meaningful activities, such as education, vocation and social life (4).

Target population for the Package of interventions for rehabilitation for cancer

This *Package of interventions of rehabilitation for cancer* is intended to be used in rehabilitation for children and adults with malignant neoplasms (International Classification of Diseases, 11th revision (ICD-11): 02B–02E Malignant neoplasms, except primary neoplasms of lymphoid, haematopoietic, central nervous system or related tissues; 2A00–2A0Z Neoplasms of brain or central nervous system; 2A20–2B3Z Neoplasms of haematopoietic or lymphoid tissues) of any specification and location. The interventions included in this package address the aspects of functioning that are relevant to any kind of malignant neoplasms, however they do not address aspects of functioning that relate to specific types of cancer.

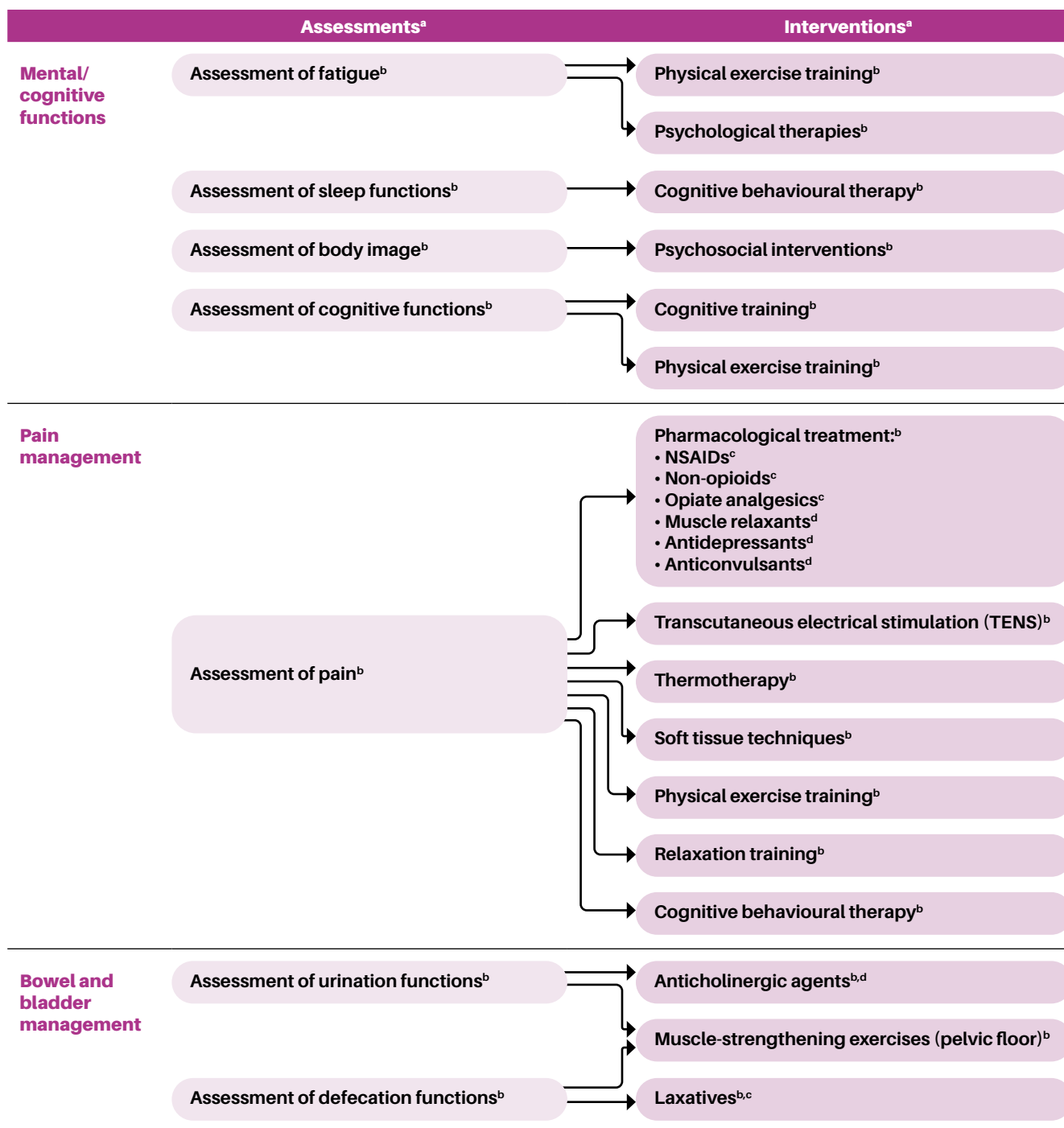
Important links to other WHO products relevant for the care of people with cancer:

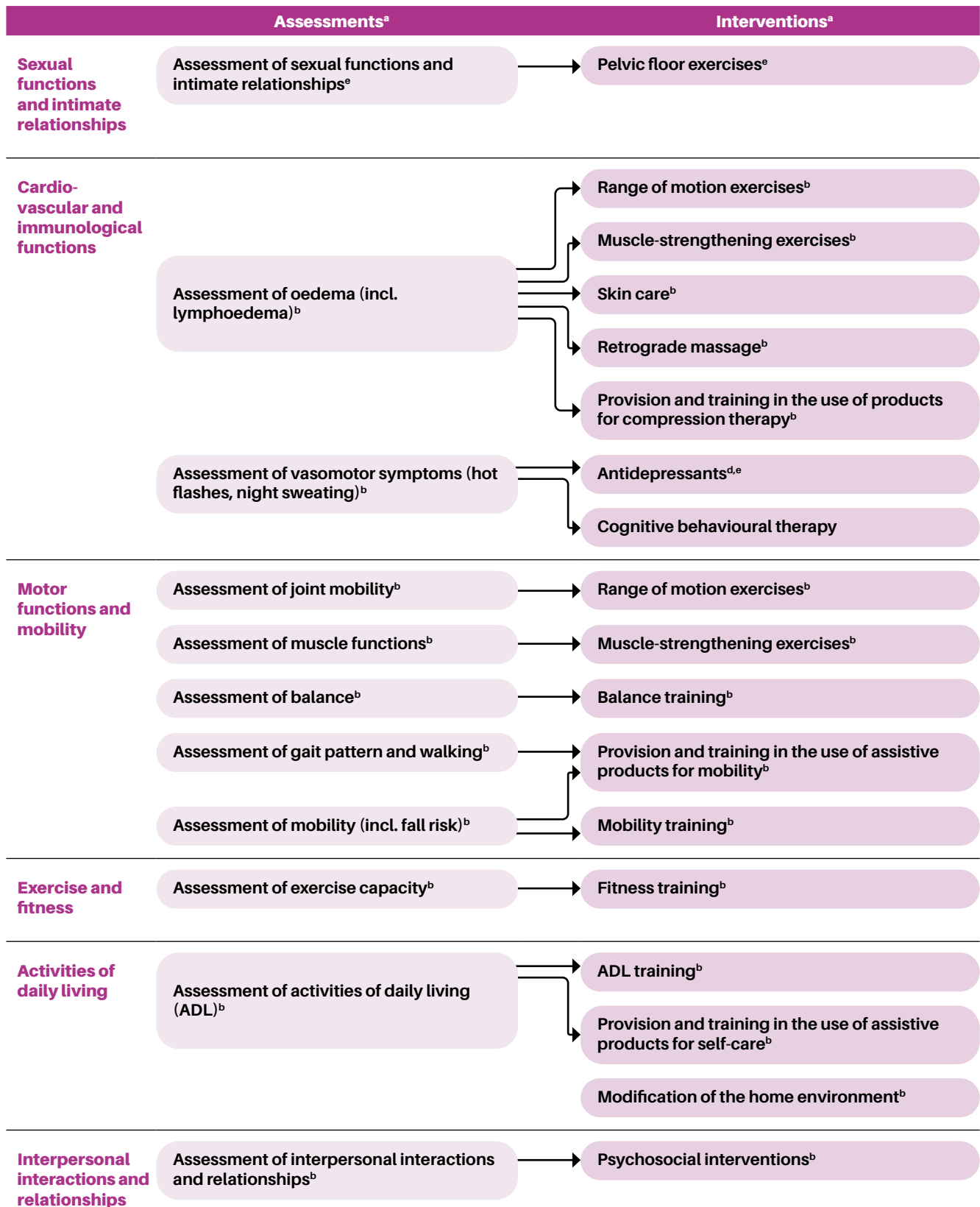
- *CureAll framework: WHO global initiative for childhood cancer. Increasing access, advancing quality, saving lives (5).*
- *WHO report on cancer: setting priorities, investing wisely and providing care for all (6).*
- *WHO guidelines for the pharmacological and radiotherapeutic management of cancer pain in adults and adolescents (7).*
- *WHO framework for strengthening and scaling-up of services for the management of invasive cervical cancer (8).*
- *Setting up a cancer centre: a WHO-IAEA framework (9).*
- *WHO Package of Essential Noncommunicable (PEN) disease interventions for primary health care (10).*
- *Integrated care for older people: guidelines on community-level interventions to manage declines in intrinsic capacity (ICOPE) (11).*
- *mhGAP intervention Guide for mental, neurological and substance use disorders in non-specialized health settings: mental health GAP Action Programme (mhGAP) – version 2.0 (12).*
- *WHO Model List of Essential Medicines (13).*

1.2 Content of the Package of interventions for rehabilitation for cancer

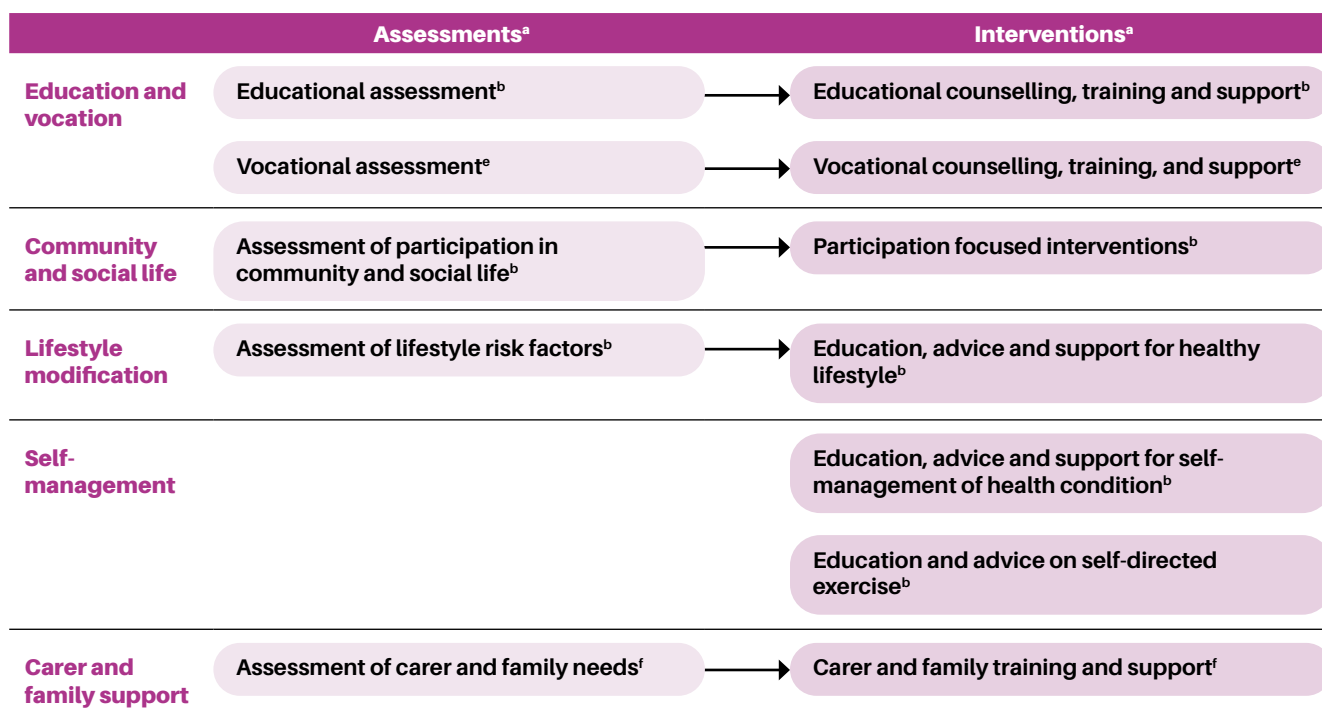
Overview of the interventions for rehabilitation in cancer

Functioning interventions





[cont.]



^a See Annex 1 for definitions of assessments and interventions.

^b Children, adolescents and adults with any cancer.

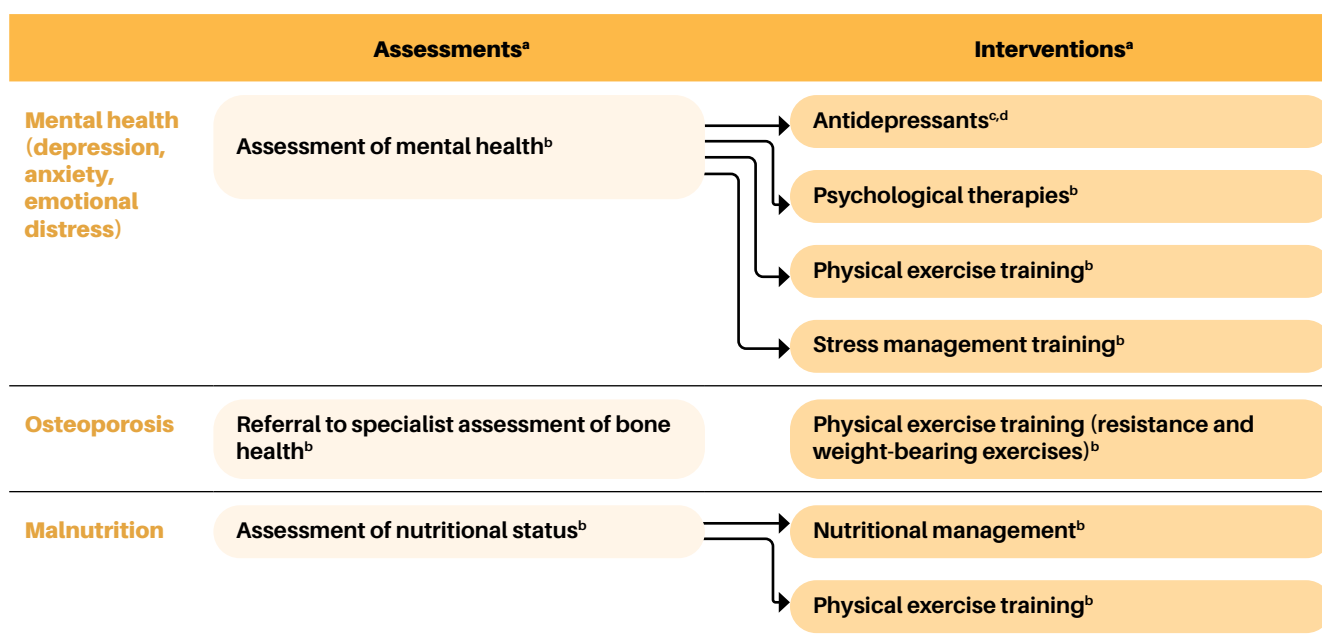
^c Medicines are included in WHO Model List of Essential Medicines (13).

^d Medicine is included in WHO Model List of Essential Medicines (13) for another indication.

^e Adolescents and adults with cancer.

^f Carers and family members of children, adolescents and adults with cancer.

Interventions for the prevention and treatment of secondary conditions related to cancer



^a See Annex 1 for definitions of assessments and interventions.

^b Children, adolescents and adults with any cancer.

^c Adults with cancer and moderate to severe depression.

^d Medicines are included in WHO Model List of Essential Medicines (13).

Overview of the resources required for rehabilitation in cancer

Functioning interventions

	Intervention	Session time (mins)	Material resources			Occupations (rehabilitation specialists)
			Assistive products	Equipment	Consumables	
Mental/cognitive functions	Target: Fatigue (energy and drive)					
	Assessment of fatigue	15	-	-	-	<ul style="list-style-type: none">• Psychologist• Specialist medical practitioner/PRM physician
	Physical exercise training	30	-	<ul style="list-style-type: none">• Timer• Exercise mats• Resistance bands• Weights• Cycle ergometer (arm or leg)	-	<ul style="list-style-type: none">• Physiotherapist
	Psychological therapies	60	-	-	-	<ul style="list-style-type: none">• Psychologist
	Target: Sleep functions					
	Assessment of sleep functions	15	-	-	-	<ul style="list-style-type: none">• Psychologist• Specialist medical practitioner/PRM physician
	Cognitive behavioural therapy	60	-	-	-	<ul style="list-style-type: none">• Psychologist
	Target: Body image					
	Assessment of body image	20	-	-	-	<ul style="list-style-type: none">• Psychologist• Specialist medical practitioner/PRM physician
	Psychosocial interventions	60	-	-	-	<ul style="list-style-type: none">• Nursing professional• Occupational therapist• Psychologist• Social work and counselling professional

	Intervention	Session time (mins)	Material resources			Occupations (rehabilitation specialists)
			Assistive products	Equipment	Consumables	
Mental/cognitive functions	Target: Cognitive functions					
	Assessment of cognitive functions	60	-	<ul style="list-style-type: none">• Computer/tablets with software• Cognitive test equipment• Timer	-	<ul style="list-style-type: none">• Occupational therapist• Psychologist• Specialist medical practitioner/ PRM physician
	Cognitive training	30	-	<ul style="list-style-type: none">• Computer/tablets with software• Everyday objects• Timer• Workbooks	-	<ul style="list-style-type: none">• Occupational therapist• Psychologist
	Physical exercise training	30	-	<ul style="list-style-type: none">• Timer• Exercise mats• Resistance bands• Weights• Cycle ergometer (arm or leg)	-	<ul style="list-style-type: none">• Physiotherapist
Sensation of pain	Target: Sensation of pain					
	Assessment of pain (incl. sensations related to sensory functions)	30	-	-	-	<ul style="list-style-type: none">• Physiotherapist• Specialist medical practitioner/ PRM physician
	Pharmacological treatment	5	-	-	<ul style="list-style-type: none">• Nonsteroidal anti-inflammatory drugs (NSAIDs)• Non-opioids (incl. Acetaminophen)• Opiate analgesics• Muscle relaxants• Antidepressants (incl. Duloxetine)• Anticonvulsants	<ul style="list-style-type: none">• Specialist medical practitioner/ PRM physician
	Transcutaneous electrical stimulation (TENS)	10	-	<ul style="list-style-type: none">• TENS supply kit	<ul style="list-style-type: none">• Electrodes and alcohol swabs• Replaceable sticky electrode pads• Gel	<ul style="list-style-type: none">• Occupational therapist• Physiotherapist
	Thermotherapy	10	-	<ul style="list-style-type: none">• Hot and cold packs• Towels	-	<ul style="list-style-type: none">• Occupational therapist• Physiotherapist

	Intervention	Session time (mins)	Material resources			Occupations (rehabilitation specialists)
			Assistive products	Equipment	Consumables	
Sensation of pain	Soft tissue technique	15	-	<ul style="list-style-type: none"> • Treatment table • Pillow • Foam rollers /wedges 	<ul style="list-style-type: none"> • Massage lotion 	<ul style="list-style-type: none"> • Occupational therapist • Physiotherapist
	Physical exercise training	30	-	<ul style="list-style-type: none"> • Timer • Exercise mats • Resistance bands • Weights • Cycle ergometer (arm or leg) 	-	<ul style="list-style-type: none"> • Physiotherapist
	Relaxation training	30	-	<ul style="list-style-type: none"> • Exercise mats • Pillow • Foam rollers/wedge 	-	<ul style="list-style-type: none"> • Occupational therapist • Physiotherapist • Psychologist
	Cognitive behavioural therapy	60	-	-	-	<ul style="list-style-type: none"> • Psychologist
Bowel and bladder management	Target: Urination functions					
	Assessment of urination functions	20	-	-	-	<ul style="list-style-type: none"> • Nursing professional • Specialist medical practitioner/ PRM physician
	Anticholinergic agents	5	-	-	<ul style="list-style-type: none"> • Anticholinergic agents 	<ul style="list-style-type: none"> • Specialist medical practitioner/ PRM physician
	Target: Defecation functions					
	Assessment of defecation functions	20	-	-	-	<ul style="list-style-type: none"> • Nursing professional • Specialist medical practitioner/ PRM physician
	Laxatives	5	-	-	<ul style="list-style-type: none"> • Laxatives 	<ul style="list-style-type: none"> • Specialist medical practitioner/ PRM physician
	Target: Urination and defecation functions					
	Muscle-strengthening exercises (pelvic floor)	20	-	<ul style="list-style-type: none"> • Vaginal balls for Kegel exercises 	<ul style="list-style-type: none"> • Gel • Gloves • Lubricant • Tissues 	<ul style="list-style-type: none"> • Nursing professional • Physiotherapist

	Intervention	Session time (mins)	Material resources			Occupations (rehabilitation specialists)
			Assistive products	Equipment	Consumables	
Sexual functions and intimate relationships	Target: Sexual functions and intimate relationships					
	Assessment of sexual functions and intimate relationships	45	-	-	-	<ul style="list-style-type: none">• Psychologist• Specialist medical practitioner/ PRM physician
	Pelvic floor exercises	20	-	<ul style="list-style-type: none">• Vaginal balls for Kegel exercises	<ul style="list-style-type: none">• Gel• Gloves• Lubricant• Tissues	<ul style="list-style-type: none">• Nursing professional• Physiotherapist
Cardiovascular and immunological functions	Target: Oedema control					
	Assessment of oedema (including lymphoedema)	10	-	<ul style="list-style-type: none">• Measuring tape	-	<ul style="list-style-type: none">• Nursing professional• Occupational therapist• Physiotherapist• Specialist medical practitioner/ PRM physician
	Range of motion exercises	15	-	<ul style="list-style-type: none">• Treatment table	-	<ul style="list-style-type: none">• Occupational therapist• Physiotherapist
	Muscle-strengthening exercises	20	-	<ul style="list-style-type: none">• Treatment table• Weights• Resistance bands• Exercise mats	-	<ul style="list-style-type: none">• Occupational therapist• Physiotherapist
	Retrograde massage	30	-	<ul style="list-style-type: none">• Treatment table• Pillows• Foam rollers/wedges	<ul style="list-style-type: none">• Compression bandages• Massage lotion	<ul style="list-style-type: none">• Occupational therapist• Physiotherapist

	Intervention	Session time (mins)	Material resources			Occupations (rehabilitation specialists)
			Assistive products	Equipment	Consumables	
Cardiovascular and immunological functions	Skin care	15	-	-	<ul style="list-style-type: none"> • Lotion/moisturizer • Gauze • Dressings • Alcohol wipes • Gloves 	<ul style="list-style-type: none"> • Nursing professional • Specialist medical practitioner/ PRM physician
	Provision and training in the use of products for compression therapy	15	• Compression garments/ bandages	-	-	<ul style="list-style-type: none"> • Nursing professional • Occupational therapist • Physiotherapist
	Target: Vasomotor-related symptoms (hot flashes and night sweating)					
	Assessment of vasomotor symptoms	10	-	-	-	• Specialist medical practitioner/ PRM physician
	Antidepressants	5	-	-	• Oral antidepressant drugs	• Specialist medical practitioner/ PRM physician
	Cognitive behavioural therapy	60	-	-	-	• Psychologist
Motor functions and mobility	Target: Joint mobility					
	Assessment of joint mobility	10	-	<ul style="list-style-type: none"> • Treatment table • Goniometer • Measuring tape 	-	<ul style="list-style-type: none"> • Occupational therapist • Physiotherapist
	Range of motion exercises	15	-	• Treatment table	-	<ul style="list-style-type: none"> • Occupational therapist • Physiotherapist
	Target: Muscle power functions					
	Assessment of muscle functions	20	-	<ul style="list-style-type: none"> • Treatment table • Handheld dynamometer 	-	<ul style="list-style-type: none"> • Occupational therapist • Physiotherapist • Specialist medical practitioner/ PRM physician

Intervention	Session time (mins)	Material resources			Occupations (rehabilitation specialists)
		Assistive products	Equipment	Consumables	
Muscle-strengthening exercise	20	-	<ul style="list-style-type: none"> • Treatment table • Weights • Resistance bands • Exercise mats 	-	<ul style="list-style-type: none"> • Occupational therapist • Physiotherapist
Target: Involuntary movement reaction functions					
Assessment of balance	20	-	<ul style="list-style-type: none"> • Timer • Measuring tape 	-	<ul style="list-style-type: none"> • Occupational therapist • Physiotherapist • Specialist medical practitioner/ PRM physician
Balance training	20	-	<ul style="list-style-type: none"> • Balance board/cushion • Steps • Exercise mats • Timer 	-	<ul style="list-style-type: none"> • Occupational therapist • Physiotherapist
Target: Gait pattern functions					
Assessment of gait pattern and walking	30	-	<ul style="list-style-type: none"> • Timer • Measuring tape 	-	<ul style="list-style-type: none"> • Physiotherapist
Target: Mobility					
Assessment of mobility	30	-	-	-	<ul style="list-style-type: none"> • Occupational therapist • Physiotherapist
Mobility training	30	-	<ul style="list-style-type: none"> • Exercise mats 	-	<ul style="list-style-type: none"> • Occupational therapist • Physiotherapist
Provision and training in the use of assistive products for mobility	30	<ul style="list-style-type: none"> • Canes/sticks/tetrapod • Crutches, axillary/elbow • Rollators • Walking frames/walkers • Wheelchair (manual or electrical) • Front table (for wheelchair) • Pressure cushion • Tricycle (arm- or leg-powered) 	-	-	<ul style="list-style-type: none"> • Occupational therapist • Physiotherapist

	Intervention	Session time (mins)	Material resources			Occupations (rehabilitation specialists)
			Assistive products	Equipment	Consumables	
Exercise and fitness	Target: Exercise tolerance functions					
	Assessment of exercise capacity	30	-	<ul style="list-style-type: none">• Timer• Cycle ergometer (arm or leg)• Heart rate monitor	-	<ul style="list-style-type: none">• Physiotherapist• Specialist medical practitioner/ PRM physician
	Fitness training	30	-	<ul style="list-style-type: none">• Cycle ergometer (arm or leg)• Exercise mats• Resistance bands• Weights• Exercise ball• Timer	-	<ul style="list-style-type: none">• Physiotherapist
Activities of daily living	Target: Activities of daily living (ADL)					
	Assessment of ADL	30	-	<ul style="list-style-type: none">• Utensils for activities of daily living	-	<ul style="list-style-type: none">• Occupational therapist• Physiotherapist
	ADL training	30	-	<ul style="list-style-type: none">• Utensils for activities of daily living• Assistive products for toileting• Adapted eating and drinking products• Assistive products for dressing	-	<ul style="list-style-type: none">• Occupational therapist• Physiotherapist
	Provision and training in the use of assistive products for ADL	30	<ul style="list-style-type: none">• Assistive products for toileting• Adapted eating and drinking products• Assistive products for dressing	-	-	<ul style="list-style-type: none">• Occupational therapist• Physiotherapist
	Modification of the home environment	60	<ul style="list-style-type: none">• Handrail/grab bars• Ramps portable	<ul style="list-style-type: none">• Measuring tape	-	<ul style="list-style-type: none">• Occupational therapist• Physiotherapist

	Intervention	Session time (mins)	Material resources			Occupations (rehabilitation specialists)
			Assistive products	Equipment	Consumables	
Interpersonal interactions and relationships	Target: Interpersonal interactions and relationships					
	Assessment of interpersonal interactions and relationships	30	-	-	-	<ul style="list-style-type: none">• Occupational therapist• Psychologist
	Psychosocial interventions	60	-	-	<ul style="list-style-type: none">• Information materials (e.g. flyers, brochures)	<ul style="list-style-type: none">• Nursing professional• Occupational therapist• Psychologist• Social work and counselling professional
Education and vocation	Target: Education					
	Educational assessment	60	-	<ul style="list-style-type: none">• School-related tools and equipment	-	<ul style="list-style-type: none">• Occupational therapist• Social work and counselling professional• Special educator
	Educational counselling, training and support	60	-	<ul style="list-style-type: none">• School-related tools and equipment	<ul style="list-style-type: none">• Information materials (e.g. flyers, brochures)	<ul style="list-style-type: none">• Occupational therapist• Social work and counselling professional• Special educator
	Target: Work and employment					
	Vocational assessment	90	-	<ul style="list-style-type: none">• Work-related tools and equipment	-	<ul style="list-style-type: none">• Occupational therapist• Social work and counselling professional
	Vocational counselling, training, and support	60	-	<ul style="list-style-type: none">• Work-related tools and equipment	<ul style="list-style-type: none">• Information materials (e.g. flyers, brochures)	<ul style="list-style-type: none">• Occupational therapist• Social work and counselling professional

	Intervention	Session time (mins)	Material resources			Occupations (rehabilitation specialists)
			Assistive products	Equipment	Consumables	
Community and social life	Target: Participation in community and social life					
	Assessment of participation in community and social life	20	-	-	-	<ul style="list-style-type: none">• Occupational therapist• Social work and counselling professional
	Participation focused interventions	60	-	<ul style="list-style-type: none">• Equipment for sport and recreational activities	-	<ul style="list-style-type: none">• Occupational therapist• Physiotherapist• Social work and counselling professional
Lifestyle modification	Target: Healthy lifestyle					
	Assessment of lifestyle risk factors	20	-	<ul style="list-style-type: none">• Measuring tape• Scale weight	-	<ul style="list-style-type: none">• Dietitian and nutritionist• Nursing professional• Occupational therapist• Physiotherapist• Psychologist• Specialist medical practitioner/PRM physician
	Education, advice and support for healthy lifestyle	45	-	-	<ul style="list-style-type: none">• Information materials (e.g. flyers, brochures)	<ul style="list-style-type: none">• Dietitian and nutritionist• Nursing professional• Occupational therapist• Physiotherapist• Psychologist• Specialist medical practitioner/PRM physician
Self-management	Target: Self-management					
	Education, advice and support for self-management of disease	45	-	-	-	<ul style="list-style-type: none">• Dietitian and nutritionist• Nursing professional• Occupational therapist• Peer counsellor• Physiotherapist• Psychologist• Specialist medical practitioner/PRM physician
	Education and advice on self-directed exercise	45	-	-	<ul style="list-style-type: none">• Information materials (e.g. flyers, brochures)	<ul style="list-style-type: none">• Occupational therapist• Physiotherapist

	Intervention	Session time (mins)	Material resources			Occupations (rehabilitation specialists)
			Assistive products	Equipment	Consumables	
Carer and family support	Target: Carer and family support					
	Assessment of carer and family needs	30	-	-	-	<ul style="list-style-type: none">• Nursing professional• Occupational therapist• Psychologist• Social work and counselling professional
	Carer and family training and support	45	-	-	<ul style="list-style-type: none">• Information materials (e.g. flyers, brochures)	<ul style="list-style-type: none">• Nursing professional• Occupational therapist• Physiotherapist• Psychologist• Social work and counselling professional

ADL: activity of daily living; NSAID: non-steroidal anti-inflammatory drug; PRM: physical and rehabilitation medicine; TENS: transcutaneous electrical stimulation.

Interventions for the prevention and treatment of secondary conditions related to cancer

	Intervention	Session time (mins)	Material resources			Occupations (rehabilitation specialists)
			Assistive products	Equipment	Consumables	
Mental health	Target: Mental health (in particular depression, anxiety, emotional distress)					
	Assessment of mental health	60	-	-	-	• Psychologist • Specialist medical practitioner/PRM physician
	Antidepressants	5	-	-	• Oral antidepressants	• Specialist medical practitioner/PRM physician
	Psychological therapies (incl. cognitive behavioural therapy)	60	-	-	-	• Psychologist
	Physical exercise training	30	-	• Timer • Exercise mats • Resistance bands • Weights • Cycle ergometer (arm or leg)	-	• Physiotherapist
	Stress management training	30	-	-	-	• Psychologist
Osteoporosis	Target: (Prevention of) osteoporosis					
	Referral to specialist assessment of bone health	5	-	-	-	• Specialist medical practitioner/PRM physician
	Physical exercise training (resistance and weight-bearing exercises)	30	-	• Timer • Exercise mats • Resistance bands • Weights • Cycle ergometer (arm or leg)	-	• Physiotherapist

	Intervention	Session time (mins)	Material resources			Occupations (rehabilitation specialists)
			Assistive products	Equipment	Consumables	
Malnutrition	Target: (Prevention of) malnutrition (weight loss/weight gain)					
	Assessment of nutritional status	20	-	<ul style="list-style-type: none">• Scale weight (wheelchair accessible)• Measuring tape	-	<ul style="list-style-type: none">• Dietitian and nutritionist• Nursing professional• Specialist medical practitioner/ PRM physician
	Nutritional management	30	-	-	<ul style="list-style-type: none">• Nutritional supplements• Nutritional diary	<ul style="list-style-type: none">• Dietitian and nutritionist• Nursing professional• Specialist medical practitioner/ PRM physician
	Enteral/parenteral nutrition	15	-	<ul style="list-style-type: none">• Feeding tubes• Feeding machine (pump)	<ul style="list-style-type: none">• Food thickeners• Syringes	<ul style="list-style-type: none">• Nursing professional• Specialist medical practitioner/ PRM physician
	Physical exercise training	30	-	<ul style="list-style-type: none">• Timer• Exercise mats• Resistance bands• Weights• Cycle ergometer (arm or leg)	-	<ul style="list-style-type: none">• Physiotherapist

PRM: physical and rehabilitation medicine.

Summary of the required material resources and workforce

Material resources

Assistive products (for prescription)	Equipment (for service facilities)	Consumables (for service facilities)
Products for self-care <ul style="list-style-type: none"> Adapted eating and drinking products Assistive products for dressing Assistive products for toileting Compression garments/bandages Products for mobility <ul style="list-style-type: none"> Canes/sticks/tetrapod Crutches, axillary/elbow Rollators Tricycle (arm- or leg-powered) Walking frames/walkers Wheelchair (manual or electrical) Front table (for wheelchair) Handrail/grab bars Pressure cushion Ramps portable 	Specific for assessment <ul style="list-style-type: none"> Cognitive test equipment Goniometer Handheld dynamometer Heart rate monitor Measuring tape Scale weight (wheelchair accessible) For interventions <ul style="list-style-type: none"> Adapted eating and drinking products Assistive products for dressing Assistive products for toileting Utensils for activities of daily living Everyday objects Computer/tablets with software Workbooks Vaginal balls for Kegel exercises Feeding machine (pump) Feeding tubes Treatment table Foam rollers/wedges Pillows Hot and cold packs Towels TENS Supply kit Resistance bands Weights Exercise mat Exercise ball Balance board/cushion Steps Cycle ergometer (arm or leg) Timer Equipment for sport and recreational activities School-related tools and equipment Work-related tools and equipment 	<ul style="list-style-type: none"> Alcohol wipes Compression bandages Dressings Food thickeners Gauze Gel Gloves Information materials (e.g. flyers, brochures) Lotion/moisturizer Lubricant Massage lotion Nutritional diary Replaceable sticky electrode pads Syringes Tissues Medicines <ul style="list-style-type: none"> Anticholinergic agents Anticonvulsants Antidepressants (incl. Duloxetine) Laxatives Muscle relaxants Non-opioids (incl. Acetaminophen) Nonsteroidal anti-inflammatory drugs (NSAIDs) Nutritional supplements Opiate analgesics

TENS: transcutaneous electrical stimulation.

Workforce

Overview of rehabilitation specialists qualified to deliver interventions for rehabilitation for cancer (in alphabetical order)

- Dietitians and nutritionists
- Nursing professionals
- Occupational therapists
- Physiotherapists
- Psychologists
- Social work and counselling professionals
- Special educators
- Specialist medical practitioners/PRM physicians

PRM: physical and rehabilitation medicine.

1.3 Members of the working groups

The following experts have contributed to the development of the *Package of interventions for rehabilitation for cancer* along the different development steps and using the listed clinical practice guidelines and Cochrane systematic reviews. See Annex 2 for a summary of declarations of interest.

Members of the technical working group

Kathleen LYONS (Occupational therapist, United States of America (USA)); Daniel SANTA MINA (Kinesiologist, Canada); Julie K SILVER (PRM physician, USA); Nicole STOUT (Physiotherapist, USA).

Members of the development group

Jide AFOLABI (Physiotherapist, Ireland); Jai Prakhsh AGARWAL (Radiation oncologist, India); Cynthia AKUOKO (Nurse, Ghana); Naomi ALGEO (Occupational therapist, Ireland); Anna CAMPBELL (Exercise physiologist, United Kingdom of Great Britain and Northern Ireland); Nnenna CHIGBO (Physiotherapist, Nigeria); Margaret FITCH (Nurse, Canada); Jack FU (PRM physician, USA); David FUEHRER (Consumer representative, USA); Nicolas HART (Exercise physiologist, Australia); Melissa HENRY (Psychologist, Canada); Hasmukh JAIN (Oncologist, India); Tezer KUTLUK (Oncologist, Turkey); Ellil Mathiyan LAKSHAMANAN (Consumer representative, Singapore); Catalina LOPERA (Physiotherapist, Colombia); Sara MARTINEZ RIOS (Consumer representative, Spain); Monica PINTO (PRM physician, Italy); Dagmara POPRAWSKI (Oncologist, Australia); Silvina MONTILLA (Occupational therapist, Argentina); Enrique SOTO-PEREZ-DECELIS (Oncologist, Mexico); Nicole STOUT (Physiotherapist, USA); Irma M VERDONCK-DE LEEUW (Psychologist, Speech and language pathologist, Netherlands (Kingdom of the)); Patsy YATES (Nurse, Australia); Andrés ZANETTA (Consumer representative, Chile).

Members of the peer review group

Atifa BULDIC-BESIC (Consumer representative, Bosnia and Herzegovina); Deirdre CONNOLLY (Occupational therapist, Ireland); Csaba László DEGI (Oncologist, Romania); Jacqueline DROUIN (Physiotherapist, USA); Alberta Delali DZAKA (Nurse, Ghana); Bahija GOUIMI (Consumer representative, Morocco); Ileana HOWARD (PRM physician, USA); Kathrin KIRCHHEINER (Psychologist, Austria); Wendy Wing Tak LAM (Nurse, China); Joanne LEWIS (Occupational Therapist, Australia); Amy LITTERINI (Physiotherapist, USA); Christine MAHEU (Nurse, Canada); Lize MAREE (Nurse, South Africa); Erna NAVARRETE (Occupational therapist, Chile); Maria PAPAGEORGIOU (Consumer representative, Greece); Ranjit Kaur PRITAM SINGH (Consumer representative, Malaysia); Gillian PRUE (Physiotherapist, Ireland); Oliver RICK (Oncologist, Germany); Abu SIDHANE (Physiotherapist, United Kingdom); Sean SMITH (PRM physician, USA); Leslie WALTKE (Physiotherapist, USA).

1.4 References

1. Cancer. Geneva: World health Organization; 2022 (<https://www.who.int/news-room/fact-sheets/detail/cancer>, accessed December 2022).
2. Cieza A, Causey K, Kamenov K, Wulf Hansons S, Chatterji S, Vos T. Global estimates of the need for rehabilitation based on the Global Burden of Disease study 2019: a systematic analysis for the Global Burden of Disease Study 2019. *Lancet*. 2021;396:2006–17.
3. Stout N, Santa Mina D, Lyons K, Robb K, Silver J. A systematic review of rehabilitation and exercise recommendations on oncology guidelines. *CA Cancer J Clin*. 2021;71(2):149–75.
4. What is cancer rehabilitation? Atlanta: American Cancer Society; 2022 (<https://www.cancer.org/treatment/survivorship-during-and-after-treatment/be-healthy-after-treatment/what-is-cancer-rehabilitation.html>, accessed December 2022).
5. CureAll framework: WHO global initiative for childhood cancer. Increasing access, advancing quality, saving lives. Geneva: World Health Organization; 2021 (<https://apps.who.int/iris/handle/10665/347370>, accessed December 2022).
6. WHO report on cancer: setting priorities, investing wisely and providing care for all. Geneva: World Health Organization; 2020 (<https://apps.who.int/iris/handle/10665/330745>, accessed December 2022).
7. WHO guidelines for the pharmacological and radiotherapeutic management of cancer pain in adults and adolescents. Geneva: World Health Organization; 2018 (<https://apps.who.int/iris/handle/10665/279700>, accessed December 2022).
8. WHO framework for strengthening and scaling-up of services for the management of invasive cervical cancer. Geneva: World Health Organization; 2020 (<https://apps.who.int/iris/handle/10665/337539>, accessed December 2022).
9. Setting up a cancer centre: a WHO-IAEA framework. 2022 (<https://www.iaea.org/publications/15052/setting-up-a-cancer-centre-a-who-iaea-framework>, accessed December 2022).
10. WHO Package of Essential Noncommunicable (PEN) disease interventions for primary health care. Geneva: World Health Organization; 2020 (<https://apps.who.int/iris/handle/10665/334186>, accessed December 2022).
11. Integrated care for older people: guidelines on community-level interventions to manage declines in intrinsic capacity (ICOPE). Geneva: World Health Organization; 2017 (<https://apps.who.int/iris/handle/10665/258981>, accessed December 2022).
12. mhGAP intervention guide for mental, neurological and substance use disorders in non-specialized health settings: mental health GAP Action Programme (mhGAP) – version 2.0. Geneva: World Health Organization; 2016 (<https://apps.who.int/iris/handle/10665/250239>, accessed December 2022).
13. WHO Model List of Essential Medicines. Geneva: World Health Organization; 2021 (<https://apps.who.int/iris/handle/10665/345533>, accessed December 2022).

Annex 1. Glossary of assessments and interventions

For each assessment and intervention included in the *Package of interventions for rehabilitation*, short descriptions are provided to help understand each specific action.

A1.1 Assessments

Assessment	Description of the assessment
Assessment of activities of daily living	Activities of daily living (ADL) are tasks regularly performed as part of self-care activities (e.g. washing, caring for body parts, toileting, dressing, eating and drinking and looking after one's health), or instrumental activities (e.g. household tasks, acquisition of goods and services, and managing communication, relationships and finances). The assessment of ADL (including initial screening to determine the need for comprehensive assessment) uses interviewing, observation and standardized self-reported questionnaires to determine the presence and/or severity of the limitations in ADL, ascertain their impact on functioning, and inform care planning, including the need for referral or follow-up.
Assessment of balance	For balance or postural control, sensory (vestibular, somatosensory and visual) information is processed to inform a muscular response that allows maintenance of a body position. The assessment of balance (including initial screening to determine the need for comprehensive assessment) uses observation and standardized balance tests to determine the presence and/or severity of impairments in balance and related risk of falls, ascertain their impact on functioning, and inform care planning, including the need for referral or follow-up.
Assessment of body image	Body image refers to the mental function related to the representation and awareness of one's body. Impairments include phantom limb sensation or feeling too fat or thin, for example. Assessment of body image (including initial screening to determine the need for comprehensive assessment) uses interviewing, observation and standardized self-reported questionnaires to determine the presence and/or severity of problems with body image perception, ascertain their impact on functioning, and inform care planning, including the need for referral or follow-up.
Assessment of carer and family needs	The role of carer often presents a huge burden that may result in overstrain and health issues. The assessment of carer and family needs uses interviewing and standardized self-reported questionnaires to determine the physical, mental and emotional needs, and the person's knowledge and skills to provide care. It also assesses the need for referral to comprehensive assessment and treatment if required.
Assessment of cognitive functions	Cognitive functions comprise mental functions such as consciousness, orientation, attention, memory, sensory perception, language, abstraction, organization, planning, insight, judgment, calculation and problem-solving. The assessment of cognitive functions (including initial screening to determine the need for comprehensive assessment) uses observation, interviewing, standardized self-reported questionnaires or standardized cognitive tests to determine the presence and/or severity of impairment in mental functions, ascertain their impact on functioning, and inform care planning, including the need for referral or follow-up.

Assessment	Description of the assessment
Assessment of defecation functions	Defecation is the physiological process to eliminate wastes and undigested food as faeces. The assessment of defecation (including initial screening to determine the need for comprehensive assessment) uses interviewing, physical examination and diagnostic test such as barium enema, to determine the presence and/or severity of impairment in defecation functions, ascertain their impact on functioning, and inform care planning, including the need for a referral or follow-up.
Assessment of exercise capacity	Exercise capacity is the ability to increase oxygen uptake above that at rest. Exercise tolerance relates to an individual's exercise capacity to endure exercise or to achieve a maximum workload. The assessment of exercise capacity (including initial screening to determine the need for comprehensive assessment) uses self-reported questionnaires and rating scales and standardized maximal exercise tests (e.g. walking, ergometer or treadmill testing) to determine the presence and/or severity of reduced exercise capacity, ascertain their impact on functioning, and inform care planning, including the need for referral or follow-up.
Assessment of fatigue	Fatigue describes extreme and prolonged feelings of tiredness, triggered by physical or mental activities, which extend beyond normal tiredness. Fatigue often relates to the experience of stress, sleep disturbances, use of medication, or physical or mental disorders. The assessment of fatigue (including initial screening to determine the need for comprehensive assessment) uses interviewing, standardized self-reported questionnaires and rating scales to determine the presence and/or severity of fatigue, ascertain their impact on functioning, and inform care planning, including the need for referral or follow-up.
Assessment of gait pattern and walking	Walking is the ability to move along different surfaces for short or long distances and at different speeds. Unrestricted and safe walking requires, among other factors, an intact gait pattern, which describes the specific sequences of limb and joint movements during walking. The assessment of gait pattern and walking (including initial screening to determine the need for comprehensive assessment) uses observational gait analysis and the measurement of walking speed and walking distance to determine the presence and/or severity of limitations in gait and walking, ascertain their impact on functioning, and inform care planning, including the need for referral or follow-up.
Assessment of interpersonal interactions and relationships	Maintaining basic and complex interpersonal interactions and relationships depends on the level of physical and mental functioning, social skills and specific situation of the individual and the people who relate to the individual. The assessment (including initial screening) can be conducted by observation, interviewing or using standardized self-reported questionnaires.
Assessment of joint mobility	Joint mobility is the range through which a joint can be moved actively or passively. Joint mobility is determined by motor functions, structures of the joint and flexibility of soft tissue. The assessment of joint mobility (including initial screening to determine the need for comprehensive assessment) uses observation and standardized measurements using equipment (e.g. goniometer, inclinometer, tape measures) to determine the presence and/or severity of impairments in joint mobility, ascertain their impact on functioning, and inform care planning, including the need for referral or follow-up.
Assessment of lifestyle risk factors	Lifestyle risk factors relate to health behaviours that are associated with an increased risk of morbidity and mortality (tobacco use, excessive intake of alcohol, physical inactivity and unhealthy nutrition). The assessment of lifestyle risk factors (including initial screening to determine the need for comprehensive assessment) uses interviewing and standardized self-reported questionnaires to determine the health risks related to lifestyle, ascertain their impact on health and functioning, and inform care planning, including the need for referral or follow-up.

Assessment	Description of the assessment
Assessment of mental health	Mental health has intrinsic and instrumental value, helping people to connect (e.g. having positive relationships, sense of belonging), function (e.g. applying cognitive skills, learn new skills), cope (e.g. deal with stress, understanding and managing emotions) and thrive (e.g. feeling good, finding purpose in life). The assessment of mental health (using initial screening to determine the need for comprehensive assessment) uses interviewing and standardized self-reported questionnaires to determine the presence and/or severity of psychosocial health issues, ascertain their impact on functioning, and inform care planning, including the need for referral or follow-up.
Assessment of mobility	Mobility comprises several activities, such as transferring, or changing body position, and moving around indoors and outdoors either by walking, with the help of an assistive product (e.g. a wheelchair), or by using different means of transportation. Thus, for the assessment (including initial screening) of mobility, the activities most relevant for the individual are selected. The assessment of mobility (including initial screening to determine the need for comprehensive assessment) uses interviewing, observation and standardized tests to determine the presence and/or severity of limitations in mobility and related fall risk, ascertain their impact on functioning, and inform care planning, including the need for referral or follow-up.
Assessment of muscle functions	Muscle functions refer to the force (maximal force = strength, force x velocity = power) generated by the contraction of a muscle or muscle groups. The assessment of the function of specific muscles or muscle groups (including initial screening to determine the need for comprehensive assessment) uses standardized tests either with the use of equipment (e.g. handheld dynamometry, isokinetic devices) or without (e.g. manual muscle testing), to determine the presence and/or severity of muscle weakness, ascertain their impact on functioning, and inform care planning, including the need for referral or follow-up.
Assessment of nutritional status	Nutritional status describes the state of the body in relation to the consumption and utilization of nutrients and can be classified as well-nourished or malnourished (under- or over-nourished). The assessment of nutritional status uses anthropometric measures to assess body composition (measurement of weight, height, body mass index, body circumferences and skinfold thickness), laboratory tests to assess biochemical parameters, clinical assessment of comorbid conditions and interviewing to assess dietary practices. Assessment aims to ascertain the impact of the nutritional status on health and functioning, and inform care planning, including the need for referral or follow-up.
Assessment of oedema	Oedema (e.g. peripheral or lymphoedema) describes an abnormal fluid volume in the circulatory system or in the interstitial space. The assessment of oedema (including initial screening to determine the need for comprehensive assessment) uses a physical examination (including inspection, palpation, circumference measurements) to determine the presence and/or severity of oedema, ascertain their impact on functioning, and inform care planning, including the need for referral or follow-up.
Assessment of pain	Pain is an unpleasant sensory or emotional experience associated with, or resembling that associated with, actual or potential tissue damage. Pain can be differentiated into nociceptive or neuropathic pain (including phantom limb pain) and into acute (short-term) or chronic (longer than 3 months) pain. The experience of pain often relates to specific physical activities as well as to psychological factors. The assessment of pain (including initial screening to determine the need for comprehensive assessment) needs to integrate a biopsychosocial perspective, including the assessment of the location, nature and intensity of pain, aggravating and easing factors, pain-related coping, and interference with activities and social determinants. The assessment of pain uses interviewing, standardized self-reported questionnaires, rating scales and physical examination (e.g. pain provoking tests) to determine the presence and/or severity of pain, ascertain their impact on functioning, and inform care planning, including the need for referral or follow-up.

Assessment	Description of the assessment
Assessment of participation in community and social life	Community and social life performance refers to the person's level of participation in various social and community life activities (e.g. sport, recreation and leisure, religion and spirituality, or political life). The assessment of participation in community and social life uses interviewing and standardized self-reported questionnaires to determine the presence and/or severity of restrictions in participation and inform care planning, including the need for referral or follow-up.
Assessment of sexual functions and intimate relationships	Sexual functions refer to the mental and physical functions related to the sexual act, including the arousal, preparatory, orgasmic and resolution stages. Intimate relationship functions refer to the person's ability to create and maintain close or romantic relationships with another person, such as husband, wife or sexual partners. The assessment (including initial screening) uses interviewing, physical examination or standardized self-reported questionnaires to determine the presence and/or severity of problems related to sexual functions and intimate relationships, and inform care planning, including the need for referral or follow-up. The romantic partner may be involved in the assessment.
Assessment of sleep disturbances	Sleep disturbances can relate to the experience of stress, existence of health conditions (e.g. mental health disorders), or presence of independent disorders such as insomnia, sleep apnoea, narcolepsy, restless legs syndrome and rapid eye movement (REM) sleep behaviour disorder. The assessment of sleep functions uses interviewing and brief standardized self-reported questionnaires to identify the potential presence of sleep disturbances, ascertain their impact on functioning, and inform rehabilitation planning, including the referral to specialist services if needed.
Assessment of urination functions	Urination is the process of discharging urine from the urinary bladder. The assessment of urination functions (including initial screening to determine the need for comprehensive assessment) uses interviewing, physical examination and specific diagnostic tests to determine the presence and/or severity of impairment in urination functions, ascertain their impact on functioning, and inform care planning, including the need for a referral or follow-up.
Assessment of vasomotor symptoms	Vasomotor symptoms (VMS) such as hot flashes and night sweating are usually symptoms related to menopause, and are considered as a form of temperature dysfunction. However, VMS are also common side-effects of cancer treatment (chemotherapy and adjuvant hormone therapy). VMS can have a negative impact on quality of life. Assessment of VMS uses interviewing to determine the presence and/or severity of hot flashes and night sweating, ascertain their impact on functioning, and inform care planning, including the need for referral or follow-up.
Educational assessment	Educational assessment aims to describe a person's capacity to participate in educational activities (school readiness, skills and competencies related to learning and applying knowledge) and/or a person's performance at school or university. During the educational assessment, information is collected on the individual's capacity, and/or performance, to complete expected or assigned tasks, organize themselves, work cooperatively with classmates, and take directions from teachers. The educational assessment (including initial screening to determine the need for comprehensive assessment) uses interviewing, standardized self-reported questionnaires, observation or specific tests to determine the capacity to participate in educational activities and/or the presence and/or severity of difficulties at kindergarten/school/university, ascertain their impact on functioning, and inform care planning, including the need for referral or follow-up.

Assessment	Description of the assessment
Vocational assessment	Vocational assessment aims to describe a person's vocational goals, capacity to work (general work readiness, skills and competencies for specific occupations) and/or a person's occupational performance at the current workplace. During the vocational assessment, information is collected on the individual's capacity, and/or performance, to complete expected or assigned tasks, organize themselves, work cooperatively with colleagues, take directions from supervisors, or supervise others. The vocational assessment (including initial screening to determine the need for comprehensive assessment) uses interviewing, standardized self-reported questionnaires, observation or specific tests to determine the capacity to work, and/or the presence and/or severity of difficulties at work, ascertain their impact on functioning, and inform care planning, including the need for referral or follow-up.

A1.2 Interventions

Intervention	Description of the intervention
ADL training	Activities of daily living (ADL) are tasks regularly performed as part of self-care activities (e.g. washing, caring for body parts, toileting, dressing, eating and drinking and looking after one's health), or instrumental activities (e.g. household tasks, acquisition of goods and services, and managing communication, relationships and finances). The training is directed towards an individual's goal to improve independence in daily living and consists of education, advice, and training techniques in the context of functional tasks. These techniques are practised repetitively under the guidance or assistance of a health worker and, if feasible, self-directed by the patient following education and advice on the appropriate exercises.
Anticholinergic agents	Prescription and/or administration (if injection) of the medicine and providing education and advice on the safe intake or administration (if self-directed) and potential adverse effects of the medicine.
Antidepressants	Prescription and/or administration (if injection) of the medicine and providing education and advice on the safe intake or administration (if self-directed) and potential adverse effects of the medicine.
Balance training	For balance or postural control, sensory (vestibular, somatosensory and visual) information is processed to inform muscular responses that allow maintenance of a body position. Balance training aims to improve balance, motor control and coordination in order to improve movement-related activities (e.g. sitting, walking) and to reduce risk of falling. Balance exercises utilize different strategies (e.g. dual tasking, cueing) and are performed repetitively, with a specific level of difficulty (e.g. one-leg standing), for a specific period of time (e.g. 60 seconds). Balance training is guided or assisted by a health worker and, if feasible, performed self-directed following education and advice on the appropriate exercises.
Carer and family training and support	Carer and family training and support entail providing education and advice about the health condition, strategies and tasks relevant for the care and support of the person in the rehabilitation process. Training and support also aim to equip carers and families with knowledge, skills and resources to cope with their role successfully without developing health issues themselves. Carer and family training and support during the rehabilitation of the person in need comprise provision of information, resources, individual counselling, or support groups also involving peer counsellors.
Cognitive behavioural therapy	Cognitive behavioural therapy (CBT) is a psychological therapy that combines cognitive components (aimed at thinking differently, for example through identifying and challenging unrealistic negative thoughts) and behavioural components (aimed at doing things differently, for example by helping the person to do more rewarding activities). CBT includes exercises, education and advice to help the person to develop appropriate coping skills to be applied in challenging situations.

Intervention	Description of the intervention
Cognitive training	Cognitive functions include orientation, attention, memory, abstraction, organization, planning, calculation and problem-solving. Cognitive training includes exercises and tasks designed to restore, retrain or compensate for impaired cognition. It consists of education, advice, and training techniques in the context of functional tasks. Under the guidance or assistance of a health worker, techniques are practised repetitively and, if feasible, performed self-directed by the patient following education and advice on the appropriate exercises.
Education and advice on self-directed exercise	Education on self-directed exercises entails providing information on exercises relevant for the improvement or maintenance of functioning and the prevention of health conditions. The individual advice aims to identify and discuss those exercises that best address the existing impairments, limitations or risks and to develop an exercise programme that is appropriate to facilitate adherence and a regular schedule to be maintained.
Education, advice and support for healthy lifestyle	Education on healthy lifestyle entails providing information on behaviours that aim to promote health and prevent disease, such as regular physical activity, healthy nutrition and avoiding substance use (alcohol, tobacco, drugs). The individual advice aims to identify and discuss strategies that best address the existing needs to achieve and maintain a healthy lifestyle. Support is provided to help the person in the rehabilitation process to change behaviours (e.g. increase health behaviours, stop risk behaviours) to achieve and maintain a healthy lifestyle. The education, advice and support for a healthy lifestyle can be performed in one-to-one or group sessions.
Education, advice and support for the self-management of the health condition	Education on self-management entails providing information about tasks relevant for the self-management of medical, emotional and social aspects related to the prevention of, or coping with, a health condition. The individual advice aims to identify and discuss those strategies which help to enhance the self-management skills that best suit the needs and capabilities of an individual to maintain or achieve independence and optimal participation in daily life. Support is provided whenever a person is not able to self-manage the issues related to the health condition. Support may also be provided by peers through sharing the same experiences or challenges as the person in the rehabilitation process, and supporting the person in the rehabilitation process in the development of self-management skills and coping strategies to achieve and maintain optimal functioning and well-being. The education, advice and support for self-management can be performed in one-to-one or group sessions.
Educational counselling, training and support	Educational activities are activities that are accomplished in the context of education (kindergarten, school, university). Educational counselling supports an individual during school enrolment or return to school or to identify new educational goals and opportunities. Educational training is directed to achieve school enrolment, the return to, or maintenance at, school or university through learning (compensatory) strategies to perform the required tasks, taking into consideration functioning limitations or potential health risks. The training consists of education, advice and practising functional tasks and is guided or assisted by a health or social worker or (special) educator. Educational support (also sometimes referred to as "supported education") provides individual support to an individual at kindergarten, school or university to sustain long-term participation at school or university, usually involving the school, (special) educators or social workers.
Enteral nutrition	Enteral nutrition (or tube feeding) is defined as the delivery of nutrients beyond the oesophagus via feeding tubes placed in the nose, the stomach or the small intestine. Enteral nutrition is applied to ensure sufficient intake of nutrients and, thus, to prevent malnutrition.
Fitness training	Fitness training includes aerobic (e.g. walking, cycling) and anaerobic exercises (e.g. muscle-strengthening exercises) with the sufficient amount of intensity, duration and frequency to improve exercise capacity and strength. Exercises to improve flexibility and coordination (e.g. stretching, balance exercises) complete a fitness programme. The fitness training is guided by a health worker and, if feasible, performed self-directed by the patient following education and advice.

Intervention	Description of the intervention
Laxatives	Prescription and/or administration (if injection) of the medicine and providing education and advice on the safe intake or administration (if self-directed) and potential adverse effects of the medicine.
Mobility training	Mobility comprises several activities, such as transferring, or changing, the body position, and moving around indoors and outdoors, either walking, with the help of an assistive product (e.g. a wheelchair) or using different means of transportation. Mobility training involves teaching and practising repetitive tasks and goal-directed exercises, along with, when necessary, compensatory strategies and training in the use of assistive products for mobility (e.g. training in wheelchair skills) to achieve the best possible mobility that is independent and safe. Mobility training is usually guided or assisted by a health worker and, if feasible, performed self-directed following education and advice on the appropriate exercises.
Modification of the home environment	<p>The structure, layout, furniture and lighting of a home can facilitate or hinder functioning. Modification of the home environment may involve varying degrees of intervention that address environmental barriers and maximize safety, independence and performance of activities of daily living. These may include:</p> <ul style="list-style-type: none"> • providing general advice and guidance on home modifications (including without seeing the home); • assessment of the home environment (i.e. visiting the home); • documenting/reporting structural and non-structural changes that are recommended, which may include drafting construction plans when relevant; • making environmental changes in the home, such as removing fall hazards, inserting visual cues, or moving items to make them more readily accessible; and/or • referring to appropriate service providers to conduct work beyond the scope of the health worker.
Muscle-strengthening exercises (pelvic floor)	Muscle-strengthening exercises aim to improve maximal muscle strength, muscle endurance and muscle mass. The exercises are performed regularly (e.g. 3 x week), at a certain dosage (e.g. with up to 80% of maximal power, 3 x 12 repetitions). The exercises (isometric or dynamic) are performed against gravity or resistance (e.g. body weight, weights, resistance bands), guided or assisted by a health worker and, if feasible, performed self-directed following education and advice on the appropriate exercises.
Nutritional management	Nutritional (or dietary) management aims to achieve and maintain an appropriate nutritional status and supply of necessary nutrients in people with (or at risk for) malnutrition. Malnutrition refers to undernutrition, overweight or micronutrient-related malnutrition. Nutritional management includes diet modification, provision of adequate nutritional supplements (oral or enteral feeding) or modification of food and fluid consistency to ensure safe food intake. Nutritional management includes education and advice on the appropriate diet.
Participation focused interventions	A variety of activities (e.g. recreational or sports activities) present important opportunities to participate in communities and social life. Participation-focused interventions utilize such activities and integrate approaches that help to improve a person's skills to perform the activities with the overall goal to achieve optimal (re)integration and participation. Under guidance or assistance, different types of activities are offered and tried out (often as structured group activities), if feasible, with the participation of family members or friends.
Pelvic floor exercises	Pelvic floor exercises aim to optimize the functions of the pelvic floor muscles to improve sexual functions. The exercises (e.g. "Kegel exercises") comprise those to both strengthen and to relax the pelvic floor muscles. Regular pelvic floor exercise (including education and advice on exercises) is planned according to an individual's need, guided or assisted by a health worker and, if feasible, performed self-directed following education and advice on the appropriate exercises.
Pharmacological treatment	Prescription and/or administration (if injection) of the medicine and providing education and advice on the safe intake or administration (if self-directed) and potential adverse effects of the medicine.

Intervention	Description of the intervention
Physical exercise training	A variety of physical exercises (e.g. aerobic or strengthening exercises, balance or coordination exercises, mind-body exercises), with or without weight-bearing, are suitable to improve exercise capacity, muscle strength, joint mobility, voluntary movement, balance, gait and walking, as well as helping to reduce pain and fatigue. Regular physical exercise training (including education and advice on exercises) is planned according to an individual's needs, guided or assisted and, if feasible, performed self-directed following education and advice on the appropriate exercises.
Provision and training in the use of assistive products for compression therapy	Assistive products for compression therapy comprise stockings (pieces of clothes that fit tightly around a body part), garments or bandages. Compression therapy supports blood vessel functions (e.g. to maintain blood pressure) and also helps to reduce oedema and scarring. Provision includes identification of the specific needs of the individual, as well as the selection, manufacture or modification, and adjustment of the compression garment. Following provision, the user will be trained in the garment's use and care.
Provision and training in the use of assistive products for mobility	The provision of assistive mobility devices (e.g. walking aids, transfer aids, manual or electrical wheelchairs with pressure cushions) support people to mobilize in different environments. Provision includes identification of the specific needs of the individual, as well as the selection, manufacture or modification, and adjustment of the appropriate device. Following provision, the patient will be trained in the use and care of the products.
Provision and training in the use of assistive products for self-care	The provision of assistive products for self-care (e.g. products for toileting, washing, grooming, dressing, eating) that support people to improve and maintain their level of functioning and independence in daily living. Provision includes identification of the specific needs of the individual, as well as the selection, manufacture or modification, and adjustment of the appropriate product. Following provision, the patient will be trained in the use and care of the products.
Psychological therapies	Psychological therapy uses different psychological approaches (e.g. psychoanalytical or psychodynamic therapies, behavioural or cognitive therapies, and integrative or holistic approaches) that help the client to eliminate or control symptoms and, thus, to improve psychosocial functioning in people with mental illnesses (e.g. depression, anxiety, stress disorders) or emotional difficulties (e.g. difficulties in coping with daily life). Psychological therapy is conducted in an individual, family, couple or group setting and is applied through conversation between health worker and client(s).
Psychosocial interventions	Psychosocial interventions aim to achieve and maintain optimal psychosocial functioning using person-centred approaches that address psychological, social, personal, relational and vocational problems. Psychosocial interventions consider both the primary symptoms (e.g. distress) and the related limitations and problems in performing activities or participating in community and social life (e.g. restrictions at the workplace) and thus comprise, for example, cognitive behavioural therapy, mindfulness-based cognitive therapy, peer support or family interventions).
Range of motion exercises	Range of motion exercises are active, assisted or passive movements applied to a joint or limb, which can reduce muscle stiffness, pain, and swelling. Range of motion exercises also reduce the risk for deep venous thromboembolism through activating a muscle pump, and improve joint mobility by reducing the shortening of capsules and ligaments. The exercises are guided or assisted by a health worker and, if feasible, performed self-directed by the person following education and advice on the appropriate exercises.
Referral to specialist assessment	Selecting the appropriate service, preparing relevant information, and organizing the referral of the person to, and requesting feedback from, the required specialist services.

Intervention	Description of the intervention
Relaxation training	Relaxation training targets subjective experiences of pain, stress and anxiety and also body functions such as muscle tension or heart functions (blood pressure, heart rate). Relaxation training comprises a variety of approaches such as progressive muscle relaxation, guided imagery, biofeedback, or deep breathing exercises. The training is guided by a health worker and, if feasible, performed self-directed following education and advice on the appropriate exercises.
Retrograde massage	Retrograde massage is a specific massage technique that aims to reduce oedema. The technique stimulates lymphatic flow and reabsorption of the lymphatic fluid into the bloodstream.
Skin/wound care	Skin/wound care comprises a range of measures to prevent damage of the skin or to support wound healing, such as the cleaning of wounds and application of wound dressings, with regular monitoring of the progress of the wound healing along with education and advice. Skin/wound care is performed by a health worker and, if feasible, supported by the patient, caregiver, or family member after receiving training in the appropriate methods.
Soft tissue techniques	Soft tissue techniques comprise a variety of specific techniques (e.g. massage, muscle energy or trigger point technique, myofascial release) that aim to improve the tone and flexibility of muscles and soft tissue and can help to increase joint mobility or reduce pain.
Stress management training	Stress management refers to the ability to cope with the physical, psychological and emotional effects of pressure, emergencies or other stressors. Stress management training uses different approaches (e.g. psychological, relaxation or mindfulness exercises) that aim to develop or improve skills to successfully cope with stressful situations. Stress management training commonly includes education, advice and training in specific exercises and the use of specific techniques.
Thermotherapy	Thermotherapy (heat or cold) is applied to reduce pain, increase blood flow or reduce inflammation or oedema. Heat or cold is administered, for example, by hot or cold packs, towels, cold air or sprays by a health worker or, if feasible, by the person themselves after education and advice on appropriate application and potential associated risks.
Transcutaneous electrical nerve stimulation (TENS)	Transcutaneous electrical nerve stimulation (TENS) is the therapeutic application of pulsed electrical nerve stimulation through the skin. It is primarily used for pain control in people across a range of acute and chronic pain conditions.
Vocational counselling, training and support	Vocational activities are activities that are accomplished in the context of the specific occupation of an individual. Vocational counselling supports an individual during return to work or to identify new vocational goals and opportunities. Vocational training is directed towards achieving a return to, or maintenance at, work through learning (compensatory) strategies to perform the required tasks, taking into consideration functioning limitations or potential health risks. Training consists of education, advice, and practising functional tasks and is guided or assisted by a health or social worker. Vocational support provides individual support to an individual at the workplace to sustain long-term employment, usually involving the employer, supervisors or co-workers.

Annex 2. Summary of declarations of interest and how these were managed

All members of the technical working groups, development groups and peer review groups completed and submitted a WHO Declaration of Interests form and signed confidentiality undertakings prior to starting the work related to the group. The WHO Department of Noncommunicable Diseases reviewed and assessed the submitted declarations of interest and performed an internet search to identify any obvious public controversies or interests that may lead to compromising situations. If additional guidance on management of any declaration or conflicts of interest had been required, the department would have consulted with colleagues in the WHO Office of Compliance, Risk Management and Ethics. If deemed necessary, individuals found to have conflicts of interest, financial or non-financial, would have been excluded from participation on any topics where interests were conflicting. The management of conflicts of interest was reviewed throughout the process. No conflict of interest was identified.

A2.1 Technical working group members

Name	Expertise	Disclosure of interest	Assessment of disclosed interest
Kathleen LYONS	Occupational therapist	None declared	N/A
Daniel SANTA MINA	Kinesiologist	Employment; research funds; non-monetary support; public position; travel payments	Not significant
Julie K SILVER	PRM physician	None declared	N/A
Nicole STOUT	Physiotherapist	Consultancy	Not significant

A2.2 Development group members

Name	Expertise	Disclosure of interest	Assessment of disclosed interest
Jide AFOLABI	Physiotherapist	None declared	N/A
Jai Prakash AGARWAL	Radiation oncologist	None declared	N/A
Cynthia AKUOKO	Nurse	None declared	N/A
Naomi ALGEO	Occupational therapist	Employment; research funds; non-monetary support	Not significant
Anna CAMPBELL	Exercise physiologist	Employment; copyrights for training materials	Not significant
Nnenna CHIGBO	Physiotherapist	None declared	N/A
Margaret FITCH	Nurse	Consultancy	Not significant

Name	Expertise	Disclosure of interest	Assessment of disclosed interest
Jack FU	PRM physician	Public position; paid speaker travels and honorarium	Not significant
David FUEHRER	Consumer representative	None declared	N/A
Nicolas HART	Exercise physiologist	Employment; research funds; non-monetary support	Not significant
Melissa HENRY	Psychologist	None declared	N/A
Hasmukh JAIN	MD (Oncologist)	None declared	N/A
Tezer M KUTLUK	MD (Oncologist)	None declared	N/A
Ellil Mathiyan LAKSHAMANAN	Consumer representative	None declared	N/A
Catalina LOPERA	Physiotherapist	None declared	N/A
Sara MARTINEZ RIOS	Consumer	None declared	N/A
Monica PINTO	PRM physician	None declared	N/A
Dagmara POPRAWSKI	MD (Oncologist)	None declared	N/A
Silvina MINTILLA	Occupational therapist	Employment	Not significant
Enrique SOTO-PEREZ-DECELIS	MD (Oncologist)	None declared	N/A
Nicole STOUT	Physiotherapist	Consultancy	Not significant
Irma M VERDONCK-DE LEEUW	Psychologist, Speech and language pathologist	Research funds; non-monetary support	Not significant
Patsy YATES	Nurse	Research funds; public position	Not significant
Andrés ZANETTA	Consumer representative	None declared	N/A

A2.3 Peer review group members

Name	Expertise	Disclosure of interest	Assessment of disclosed interest
Atifa BULDIC-BESIC	Consumer representative	None declared	N/A
Deirdre CONNOLLY	Occupational therapist	None declared	N/A
Csaba László DEGI	Psychologist	None declared	N/A
Jacqueline DROUIN	Physiotherapist	Public position; paid speaker travels and honorarium	Not significant
Alberta Delali DZAKA	Nurse	None declared	N/A
Bahija GOUIMI	Consumer representative	None declared	N/A
Ileana HOWARD	PRM physician	None declared	N/A
Kathrin KIRCHHEINER	Psychologist	Employment; research funds	Not significant
Wendy Wing Tak LAM	Nurse	None declared	N/A

Name	Expertise	Disclosure of interest	Assessment of disclosed interest
Joanne LEWIS	Occupational therapist	Employment; research funds; consultancy	Not significant
Amy LITTERINI	Physiotherapist	Public position; paid speaker travels and honorarium	Not significant
Christine MAHEU	Nurse	None declared	N/A
Lize MAREE	Nurse	None declared	N/A
Erna NAVARRETE	Occupational therapist	None declared	N/A
Maria PAPAGEORGIOU	Consumer representative	None declared	N/A
Pritam Ranjit Kaur SINGH	Consumer representative	Employment; consultancy	Not significant
Gillian PRUE	Physiotherapist	None declared	N/A
Oliver RICK	Medical doctor	Public position	Not significant
Abu SIDHANE	Physiotherapist	None declared	N/A
Sean SMITH	PRM physician	None declared	N/A
Leslie WALTKE	Physiotherapist	Employment; consultancy; paid speaker other than travels and honorarium	Not significant

