Webinar slides, 23 Nov 2020:

"Staying Active with Bone Metastases – What You Need to Know"

This webinar was designed for people living with bone metastases and their family members. It is also suitable for health professionals and others with an interest in exercise for people living with bone metastases.

This webinar was proudly supported by:

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All Ireland Institute of Hospice and Palliative Care

Irish Cancer Society

Trinity College Dublin
The University of Dublin

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Staying Active with Bone Metastases

What you need to know.

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ST. JAMES'S HOSPITAL

Trinity St. James's Cancer Institute

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AIIHPC
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Hospice and Palliative Care

Irish Cancer Society

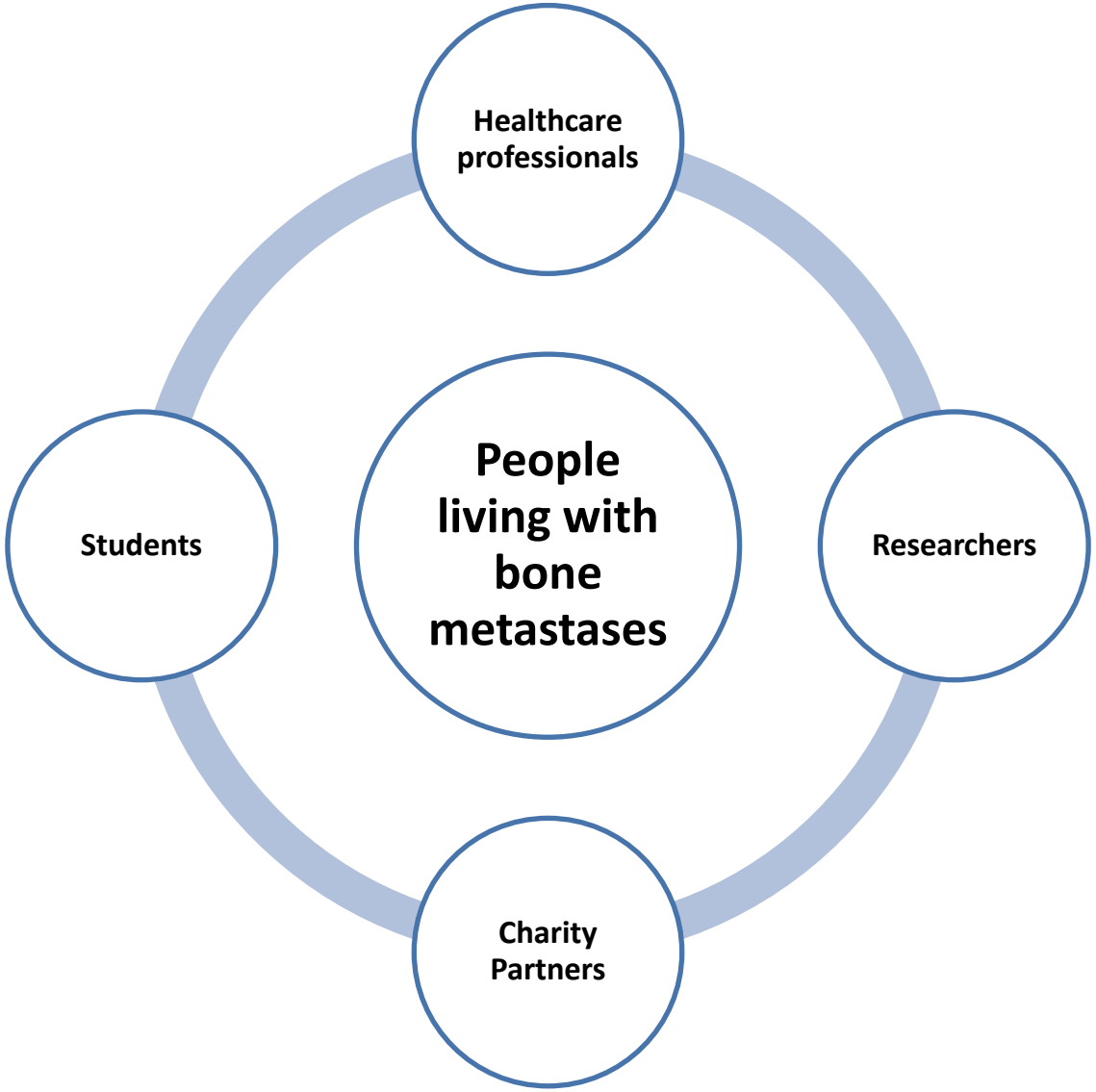
Dr Emer Guinan

Dr Grainne Sheill

Agenda

1. **Benefits of exercise for people with bone metastases**

2. **Hints and tips for exercising with bone metastases**



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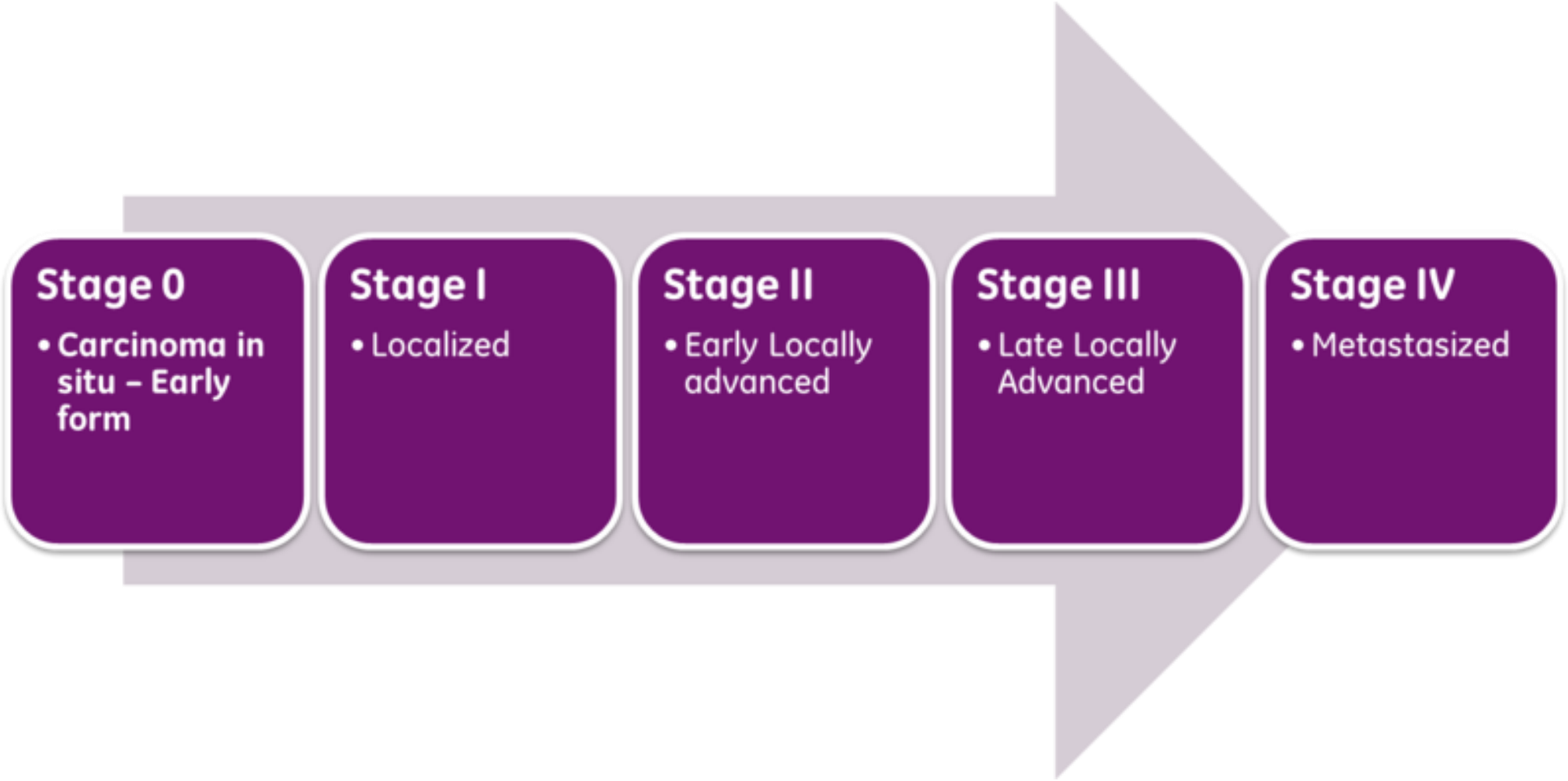
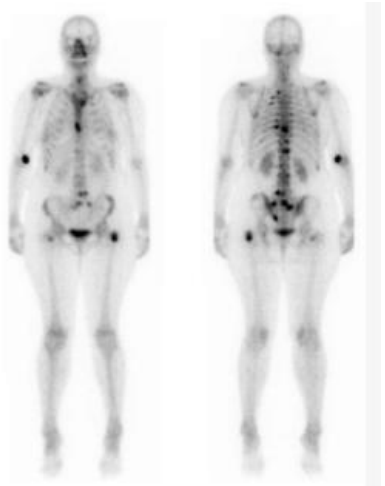
Benefits of Exercise for People with Bone Metastases

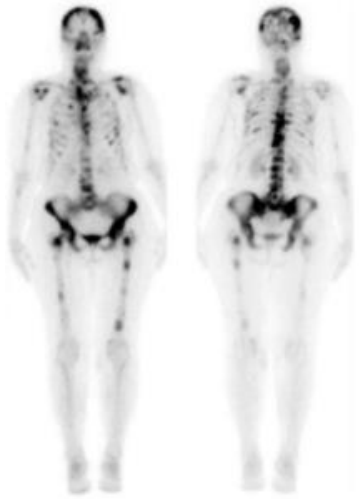
Introduction



Bone Metastases

- Frequent complication of advanced breast, prostate and lung cancer
- The incidence of bone metastases varies with different primary cancer tumours
- Axial skeleton most common site of bone metastases
- With increased life expectancy of this patient group, the incidences of skeletal metastasis continues to increase, with more than **1.5 million people** worldwide living with bone metastases





Patients Living with Advanced Cancer in Ireland

Age at end 2015	Females	Males	Total
<30	222	259	481
30-49	1,006	938	1,944
50-69	3,302	3,287	6,589
70+	2,782	3,475	6,257
Total	7,312	7,959	15,271

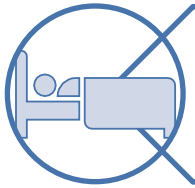
Numbers of living cancer patients diagnosed with stage IV/Metastatic Cancer in Ireland at the end of 2015 (NCR)

Bone Metastases: Impact on Physical Health

Muscle weakness

Lower physical functioning

Reduced physical activity levels



Fatigue

PM&R

WILEY

Narrative Review

Considerations for Exercise Prescription in Patients With Bone Metastases: A Comprehensive Narrative Review

Gráinne Sheill MSc, Emer M. Guinan PhD, Nicola Peat MSc, Juliette Hussey PhD

First published: 21 February 2018 | https://doi.org/10.1016/j.pmrj.2018.02.006 | Citations: 17

Bone Metastases and Rehabilitation

Disease and Treatment Side-Effects

Muscle impairment

Fatigue

Deconditioning

Physical Rehabilitation and Physical Activity

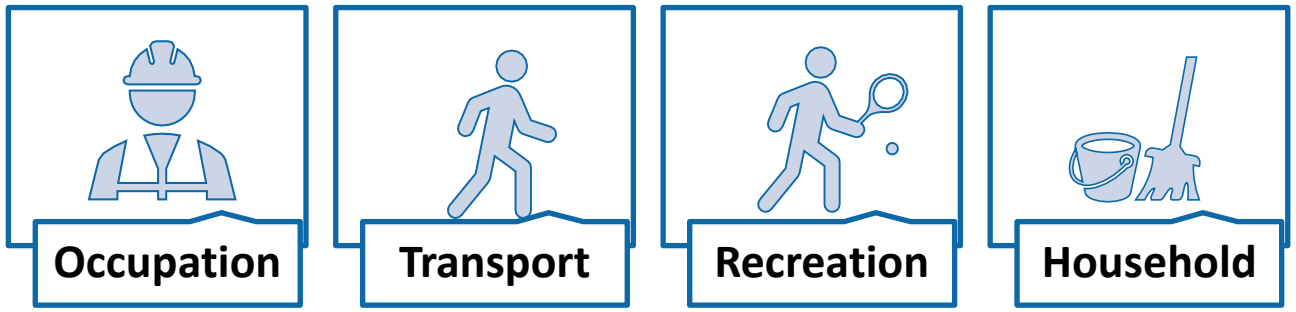
Increased functional capacity

Reduced Fatigue

Improved QOL

What is physical activity? What is exercise?

Physical activity is any bodily movement that produced by the skeletal muscle which results in energy expenditure.

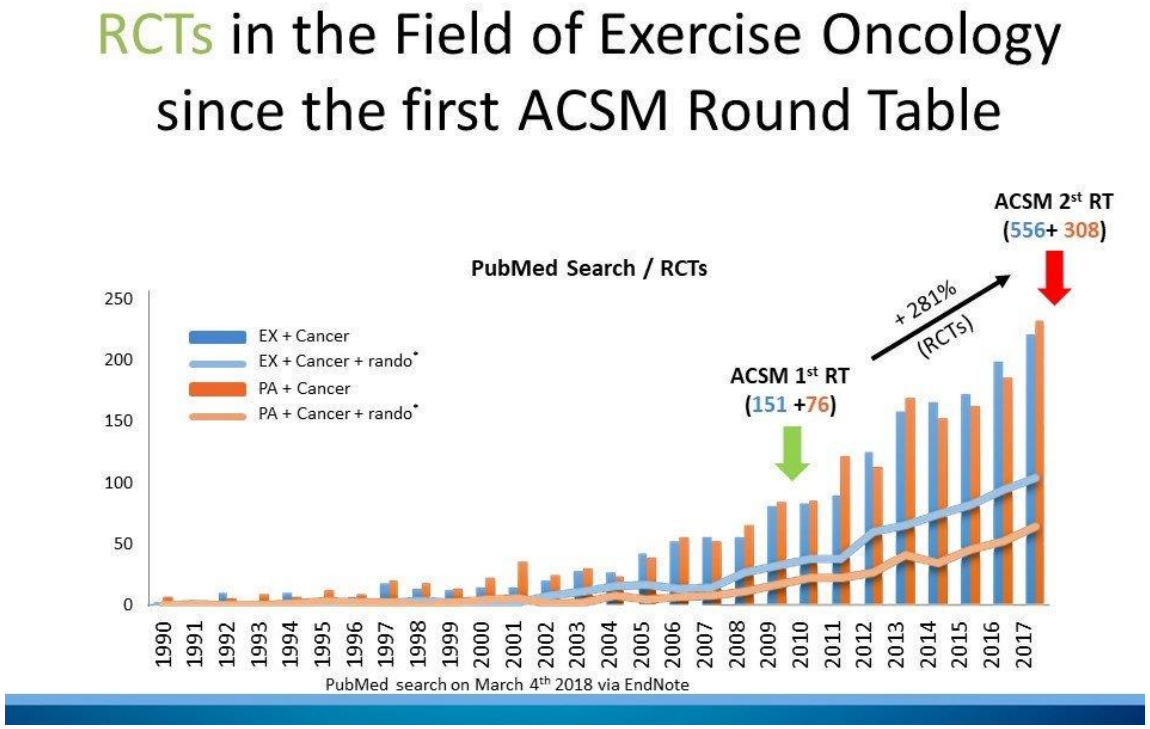


Exercise is a sub-type of physical activity that is planned structured and repetitive for the purposes of maintaining fitness.

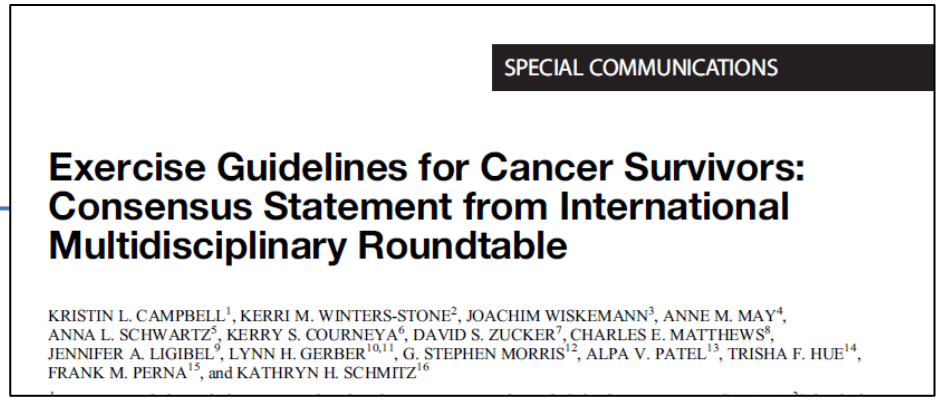
Exercise and Cancer

Historically…….

The Changing Landscape



Benefits of Physical Activity


SPECIAL COMMUNICATIONS

Exercise Guidelines for Cancer Survivors: Consensus Statement from International Multidisciplinary Roundtable

KRISTIN L. CAMPBELL[1], KERRI M. WINTERS-STONE[2], JOACHIM WISKEMANN[3], ANNE M. MAY[4], ANNA L. SCHWARTZ[5], KERRY S. COURNEYA[6], DAVID S. ZUCKER[7], CHARLES E. MATTHEWS[8], JENNIFER A. LIGIBEL[9], LYNN H. GERBER[10,11], G. STEPHEN MORRIS[12], ALPA V. PATEL[13], TRISHA F. HUE[14], FRANK M. PERNA[15], and KATHRYN H. SCHMITZ[16]

<u>Strong Evidence</u> for Improvements in:

- Health Related Quality of Life
- Fatigue
- Lymphoedema
- Physical Function
- Anxiety and Depressive Symptoms

Benefits of Physical Activity in Bone Metastases

Emerging Evidence for Improvements in:

- Exercise behaviour
- Aerobic fitness
- Muscle strength
- Walking speed
- Muscle mass

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Narrative Review

Considerations for Exercise Prescription in Patients With Bone Metastases: A Comprehensive Narrative Review

Gráinne Sheill MSc, Emer M. Guinan PhD, Nicola Peat MSc, Juliette Hussey PhD

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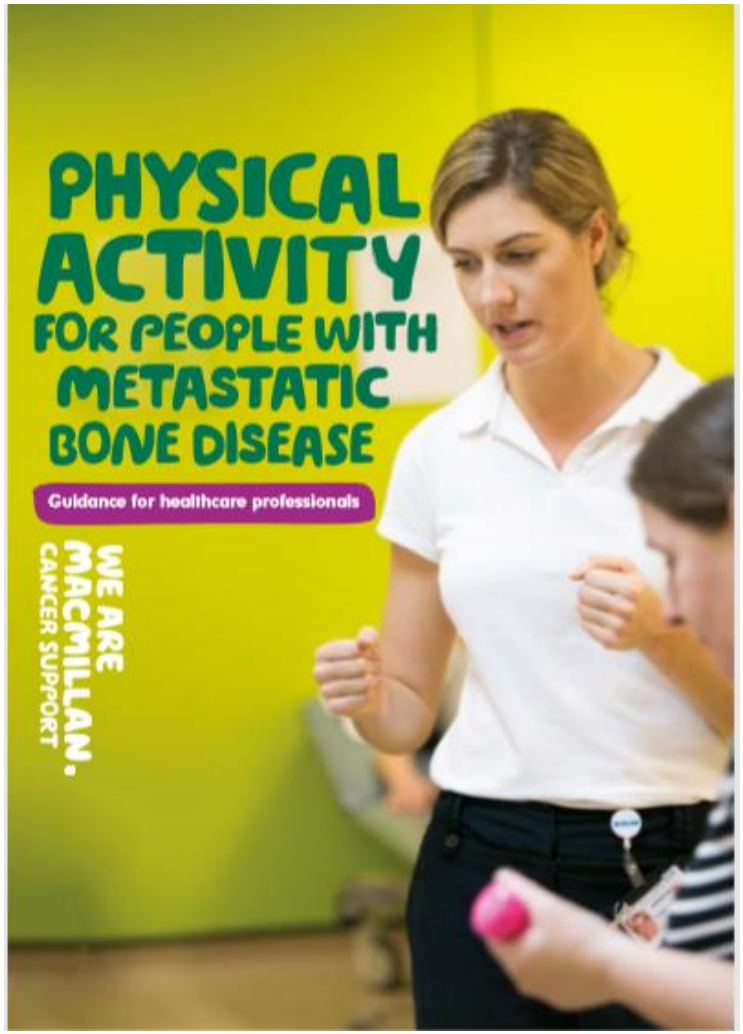
Professionally supervised aerobic and resistance exercise programmes report;

- High levels of patient tolerance, acceptability and adherence.
- No adverse events
- Symptoms such as fatigue and bone pain not aggravated.

Exercise in Metastatic Bone Disease



Key messages:

1 Although it is important to minimise the risk of fracture in patients with MBD, this should not mean avoiding physical activity. **Physical activity within the capabilities of the person should be promoted.**

2 People with MBD should be informed about the benefits of physical activity and encouraged to be as active as realistically possible within their capabilities and in accordance with their values and goals. ***They should receive training on how to self-monitor for signs and symptoms.***

Exercise Participation Patterns

Impaired Health

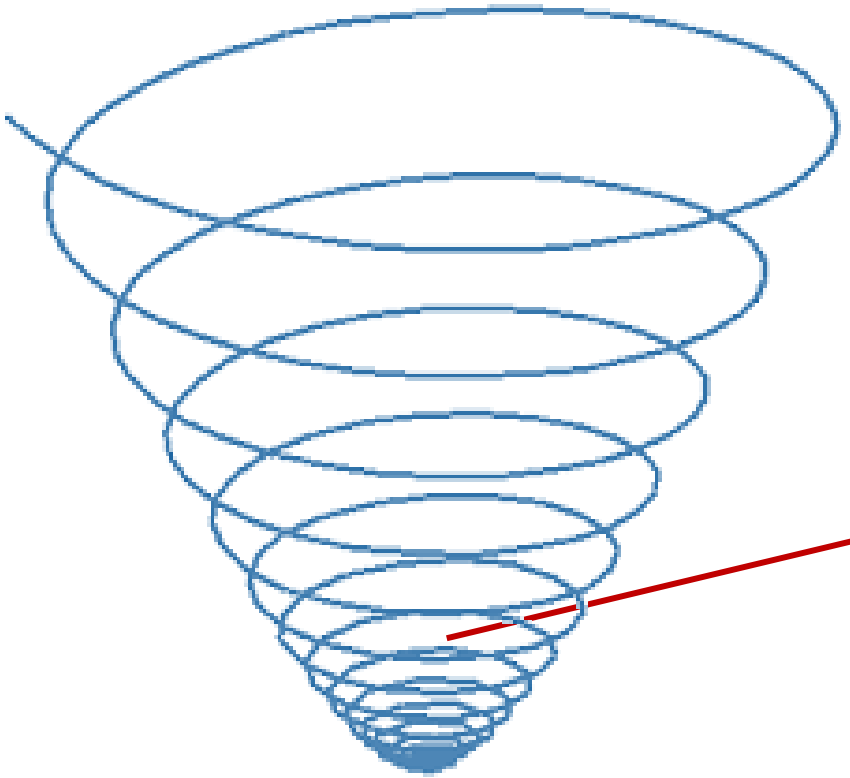
Inactivity

Altered body composition
More fat, less muscle
Increased risk of CVD and other health problems

Deconditioning

Disability

Multimorbidities



Optimal physical functioning

Increased physical activity

Exercise counselling

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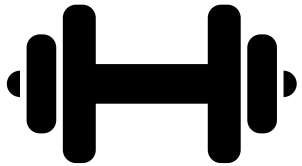
Hints and Tips for Exercising with Bone Metastases

ACSM Exercise Guidelines for Cancer Survivors

To alleviate symptoms, choose:

Aerobic Exercise
3 x per week
30-60 minutes
Moderate Intensity

and / or



Strength Exercise
2 x per week
2 sets / 8–15 reps
60% 1RM

(Campbell et al. 2019)

Moderate Intensity Aerobic Exercise

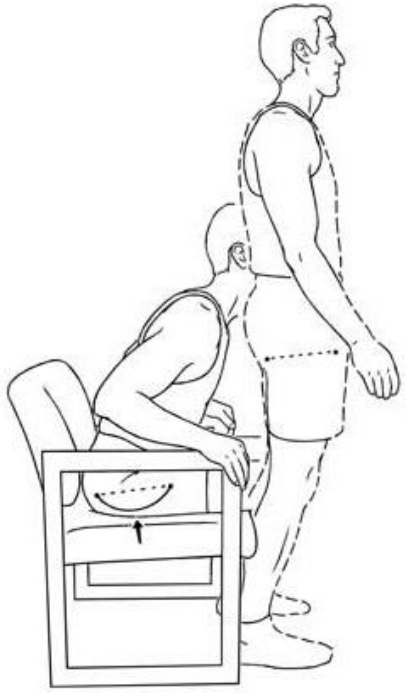
Exercise Intensity

A little hot, a little sweaty, a little out of breath

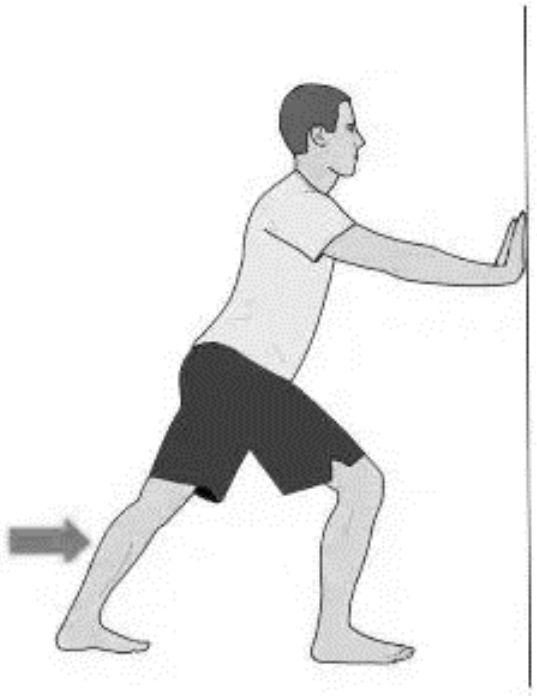
7	very, very light
8	
9	very light
10	
11	fairly light
12	
13	somewhat hard
14	
15	hard
16	
17	very hard
18	
19	very, very hard
20	

Other Types of Exercise

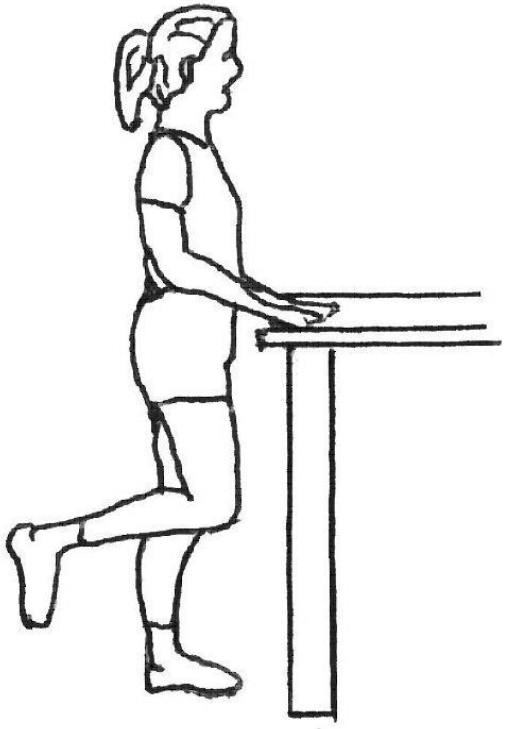
Strength



Flexibility



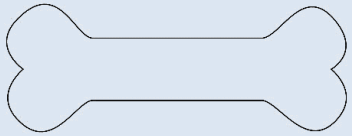
Balance



(Cormie et al. 2013)

Special Considerations?

Treatment Side Effects



Bone Health

Activity Levels

Comfort is Key……

Soreness Vs Pain

Lessons Learned: Trinity Exercise Oncology Group

ExPeCT

'I didn't know whether to exercise or not.' (P 02)

'I started getting hospital appointments and all that kind of stuff and it put me onto a different cycle and I stopped doing the regular exercise'
(P 01)

'It was that pain along the bottom of my back that was really stopping me a lot' (P 02)

'Those hormones, you know you feel very down with them' (P 11)

'The chemo was the turning point. No energy. I would walk around the corner with the dog and I would be flat.'
(P 14)

Emerging Evidence

Key consensus points:

a) **Medical guidance** is recommended prior to commencing structured exercise for all individuals with bone lesions.

b) The primary objective of exercise professionals for seeking medical guidance is to **obtain medical information** (e.g., bone scan reports) to guide clinical decision making for exercise prescription and for overall patient care and safety.

c) Exercise professionals most commonly approach **medical oncologists** or **radiation oncologists** for medical guidance.

d) Exercise professionals should **collect information** on the number, location and type of bone lesion(s), level of bone pain and any other bone-related symptom.

Where to start?

Where to start?

- Start slowly and set goals
- Pick the exercises you like and that are comfortable
- Pick a suitable time and place
- Exercise with others
- Begin gradually and build it up e.g 10, 20, 30 minutes
- Keep a diary or use a pedometer and aim to increase the number of steps you take each day

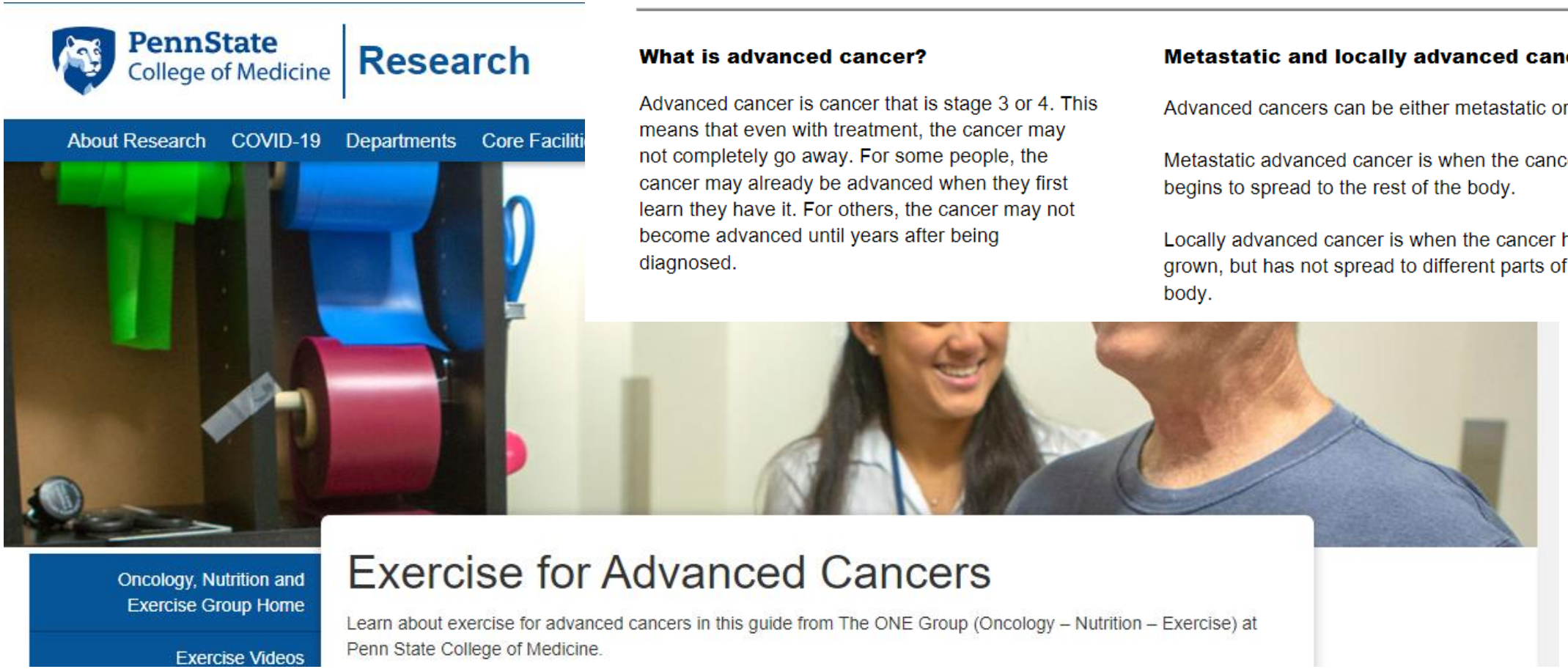
Avoid inactivity.

Some exercise is better than none, more is better than less.

Summary

- All types of physical activity is important, particularly for anyone with a cancer diagnosis
- Physical activity is considered safe for patients with people with bone metastases
- A physical assessment by an exercise specialist will help to determine what is the best exercise for you
- Any new pain should be flagged with your medical team
- Anyone with bone metastases should avoid inactivity and be as active as comfortable!

Further Information



EXERCISE AND CANCER

Exercise for advanced cancers

PennState College of Medicine

What you should know

What is advanced cancer?

Advanced cancer is cancer that is stage 3 or 4. This means that even with treatment, the cancer may not completely go away. For some people, the cancer may already be advanced when they first learn they have it. For others, the cancer may not become advanced until years after being diagnosed.

Metastatic and locally advanced cancers

Advanced cancers can be either metastatic or local.

Metastatic advanced cancer is when the cancer begins to spread to the rest of the body.

Locally advanced cancer is when the cancer has grown, but has not spread to different parts of the body.

Further Information

Webpage:
https://www.tcd.ie/medicine/physiotherapy/research/exercise-oncology.php

Email: exerciseoncology@tcd.ie

Ex-MET: Exercise prescription in patients with bone metastases: Identifying clinical tools to overcome clinician concerns regarding skeletal related event

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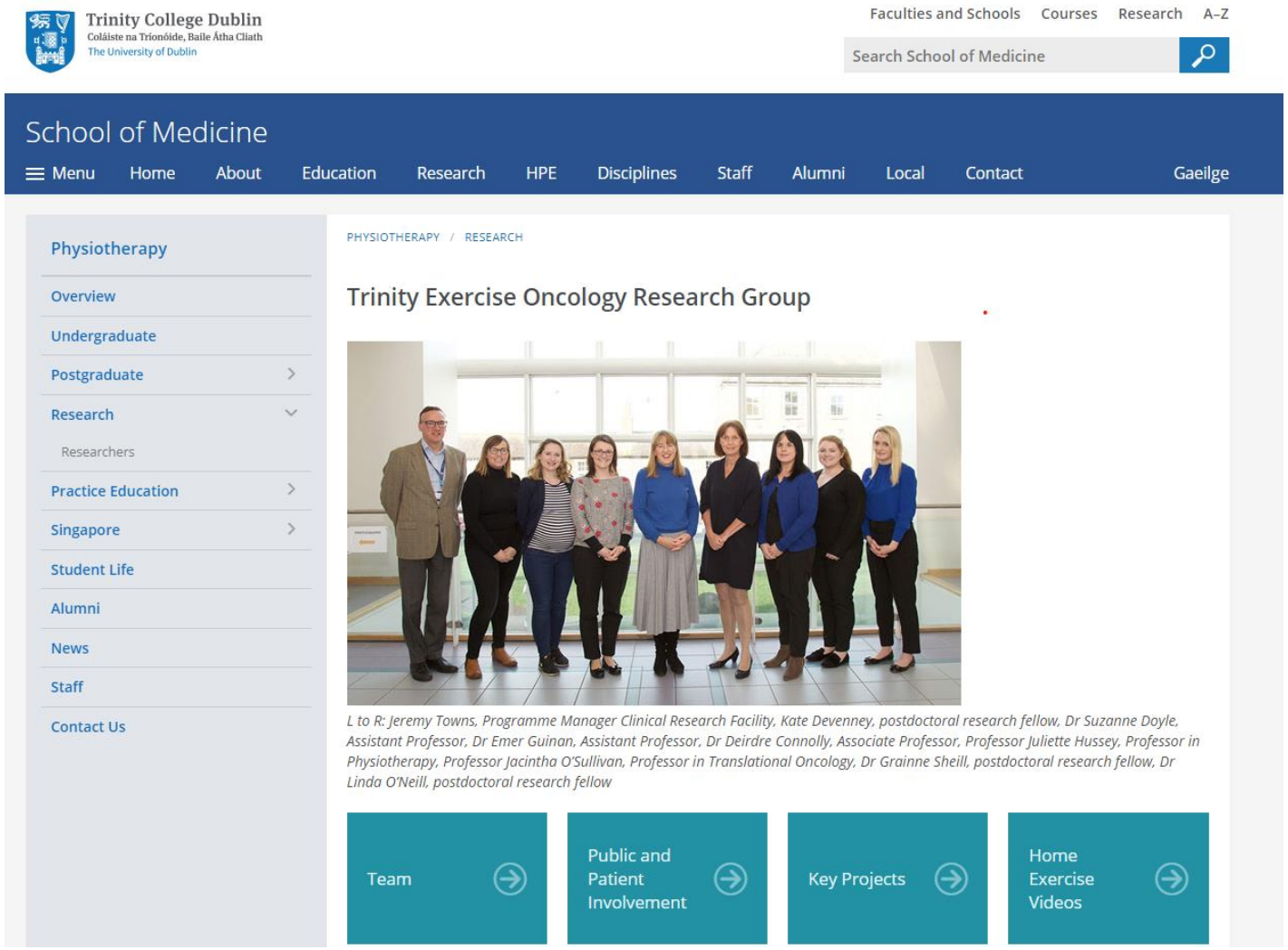

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Support Services

- www.cancer.ie
- Daffodil Centres
- Support Line
- Survivor Support programme (peer to peer)

Our Daffodil Centre in St. Vincent's Hospital, Dublin

Contact our Support Line

Our Support Line is open Monday-Friday, 9.00am-5.00pm to help anyone affected by cancer

cancernurseline@irishcancer.ie

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