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Advanced Radiation
Therapy



susan g.
komen.
ITALIA



PER LA LOTTA
AI TUMORI
DEL SENO



CENTER FOR
INTEGRATIVE
ONCOLOGY

The integrative therapies in oncology

Gemelli



STEFANO MAGNO, MD

11/10/2023

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Joint Commission International



BEST HOSPITALS 2023
Newsweek
L'OSPEDALE IN ITALIA
statista
POLICLINICO UNIVERSITARIO A. GEMELLI

No conflict to declare

Integrative Therapies in Oncology

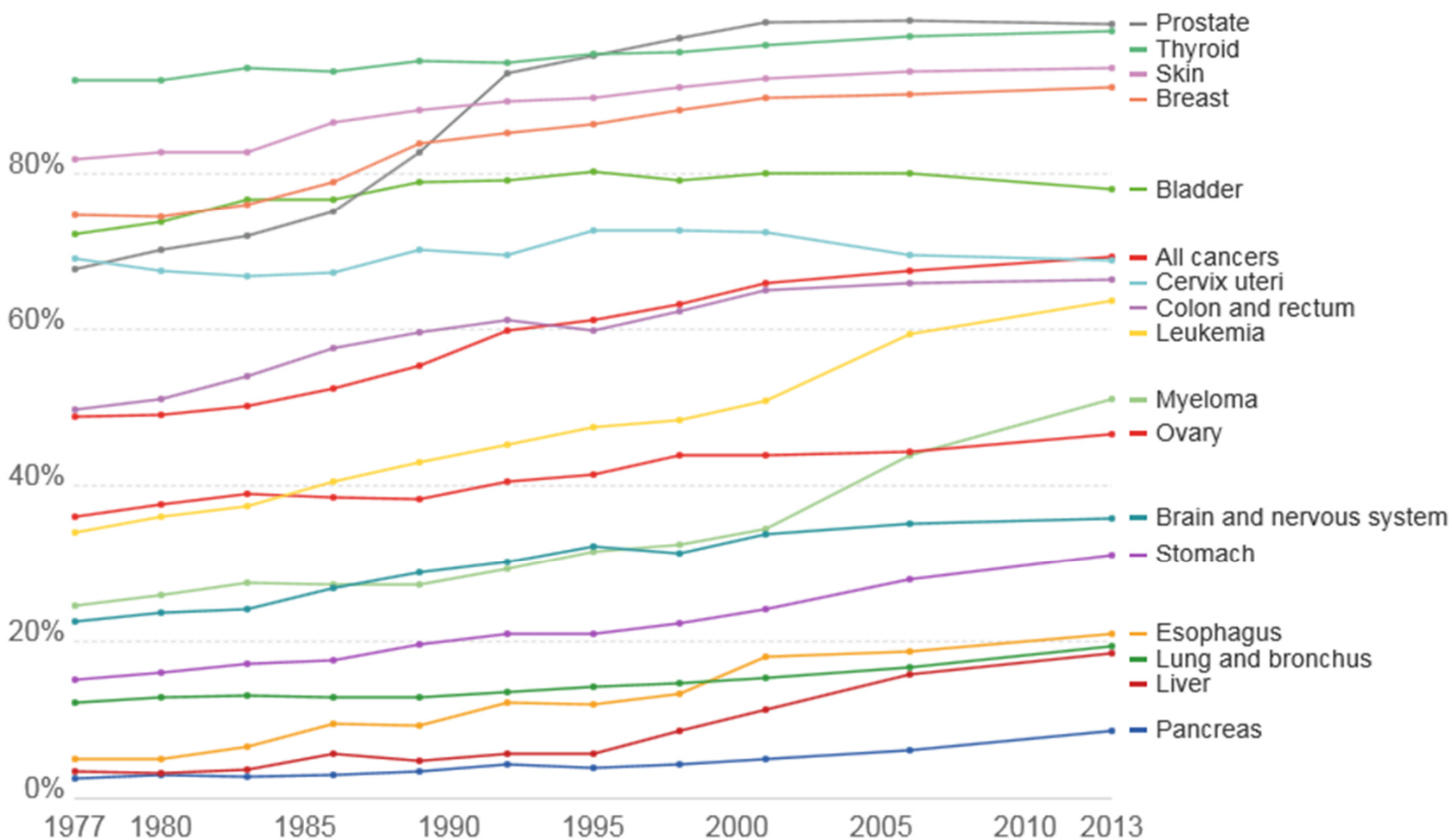
Treatments provided alongside the conventional anticancer therapies that, through **psychological support, lifestyles** and evidence based **complementary approaches** are aimed at **improving wellbeing, reduce side effects and risks of recurrence**

Why should we need integrative therapies in oncology?

Five-year cancer survival rates in the USA, All races, total



Percentage of cancer patients surviving at least five years since diagnosis, by cancer type. This data is available to view by sex and race.



Source: National Cancer Institute

OurWorldInData.org • CC BY-SA

REVIEW ARTICLE

Dan L. Longo, M.D., *Editor*

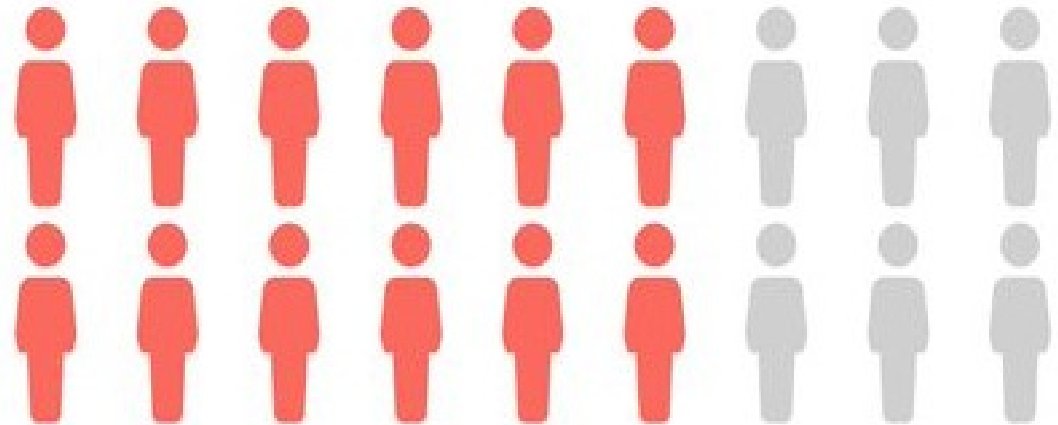
Cancer Survivorship

Charles L. Shapiro, M.D.

ADVANCES IN CANCER SCREENING AND EARLY DETECTION, IMPROVEMENTS in therapeutics, and supportive care all contribute to decreasing cancer mortality. Figure 1 shows the changing demographic characteristics of the cancer population from 1975 through 2040. There will be an estimated 20 million cancer survivors in 2040, the majority of whom will be in their 60s, 70s, or 80s.

Every health care provider will encounter cancer survivors. This review is primarily intended for primary care physicians, obstetrician–gynecologists, midlevel providers, and subspecialists who have patients who are cancer survivors. The review also serves as a primer for surgeons, radiotherapists, and medical oncologists who may not be familiar with the broad topic of survivorship. At present, the care of cancer survivors is often an afterthought, tends to be fragmentary, and is not well integrated into the mainstream of cancer care. Also, the best models for providing



The number of survivors of cancer is growing worldwide due to ageing populations and improved early detection and treatment



At least two-thirds of survivors have physical, psychological, health information, and supportive care needs that are not recognised or well managed in current care models

Review

Evidence-based approaches for the management of side-effects of adjuvant endocrine therapy in patients with breast cancer

Maria Alice Franzoi MD^a, Elisa Agostinetti MD^{a,b}, Marta Perachino MD^{c,d},
Lucia Del Mastro MD^{d,e}, Evandro de Azambuja MD^a, Ines Vaz-Luis MD^f,
Prof Ann H Partridge MD^g, Matteo Lambertini MD^{c,d}  



Journal of Clinical Oncology®

An American Society of Clinical Oncology Journal

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ASCO SPECIAL ARTICLES

Integrative Medicine for Pain Management in Oncology: Society for Integrative Oncology-ASCO Guideline

OI



TABLE 3. Summary of Recommendations

Integrative Intervention	Type of Recommendation	Quality of Evidence	Level of Obligation	Benefit/Harm	Strength of Recommendation
AI-related joint muscle pain					
Acupuncture/acupuncture	Evidence based	Intermediate	Should	Benefit outweighs harm	Moderate
Breathing exercises Hatha and restorative yoga postures Meditation	Evidence based	Low	May	Benefit outweighs harm	Weak
General cancer pain/musculoskeletal pain					
Acupuncture/acupuncture	Evidence based	Intermediate	May	Benefit outweighs harm	Moderate
Reflexology	Evidence based	Intermediate	May	Benefit outweighs harm	Moderate
Massage	Evidence based	Low	May	Benefit outweighs harms	Moderate
Yoga	Evidence based	Low	May	Benefit outweighs harm	Weak
Guided imagery + PMR	Evidence based	Low	May	Not assessable	Weak
CIPN					
Acupuncture/acupuncture	Evidence based/informal consensus	Low	May	Not assessable	Weak
Reflexology	Evidence based	Low	May	Benefit outweighs harm	Weak
Procedural pain					
Hypnosis	Evidence based	Intermediate	May	Benefit outweighs harm	Moderate
Surgical pain					
Acupuncture/acupuncture	Evidence based/informal consensus	Low	May	Benefit outweighs harm	Weak
Music therapy	Evidence based	Low	May	Benefit outweighs harm	Weak
Pain during palliative care					
Massage	Evidence based	Intermediate	May	Benefit outweighs harms	Moderate

Abbreviations: AI, aromatase inhibitor; CIPN, chemotherapy-induced peripheral neuropathy; PMR, progressive muscle relaxation.

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AMERICAN SOCIETY OF CLINICAL ONCOLOGY

NATIONAL CANCER OPINION SURVEY 2018 KEY FINDINGS



4,887
U.S. adults

20%*
have / had cancer

Alternative Medicine: Widespread Misconceptions

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NATIONAL CANCER OPINION SURVEY 2018 KEY FINDINGS

Nationally
representative
survey

4,887
U.S. adults

20%*
have / had cancer

Alternative Medicine: Widespread Misconceptions



A surprising number of Americans believe that cancer can be cured solely through alternative therapies

Nearly **4 in 10** Americans



38% of caregivers to cancer patients

22% of people who have/had cancer

Younger people are most likely to hold this view

47%

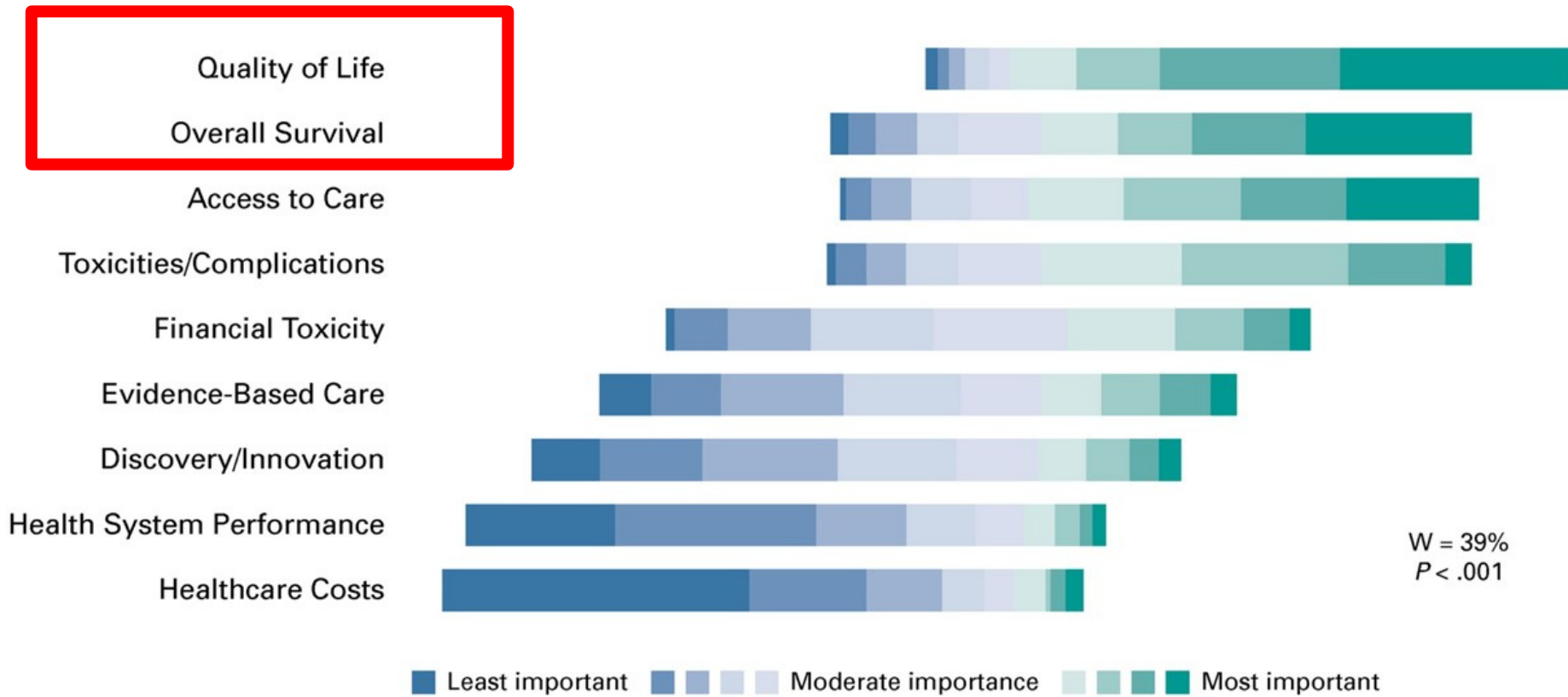
of people ages 18-37

21%

of people ages 72+

Gene

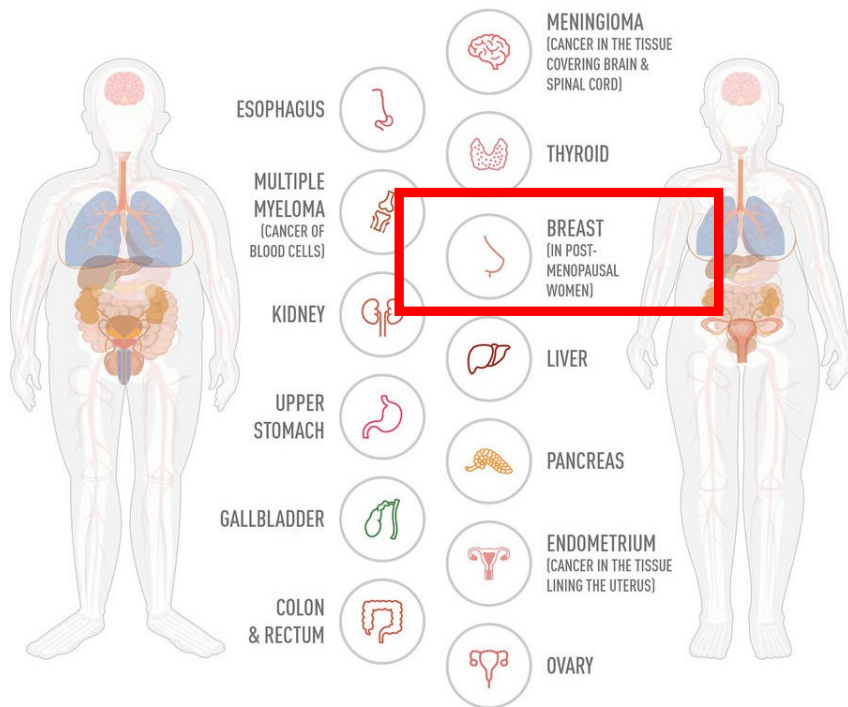
Survival and Quality of life



Why diet and physical activity are key in oncology?

Body weight and cancer

OBESITY INCREASES THE RISK OF 13 CANCER TYPES¹



OBESITY AFFECTS EVERY ASPECT OF THE CANCER CONTINUUM

PREVENTION & RISK



Obesity is associated with an increased risk of developing multiple types of cancer

DETECTION & DIAGNOSIS



Obesity can affect the feasibility and quality of medical imaging

TREATMENT



Obesity can influence the effectiveness of cancer drugs and complicate surgery

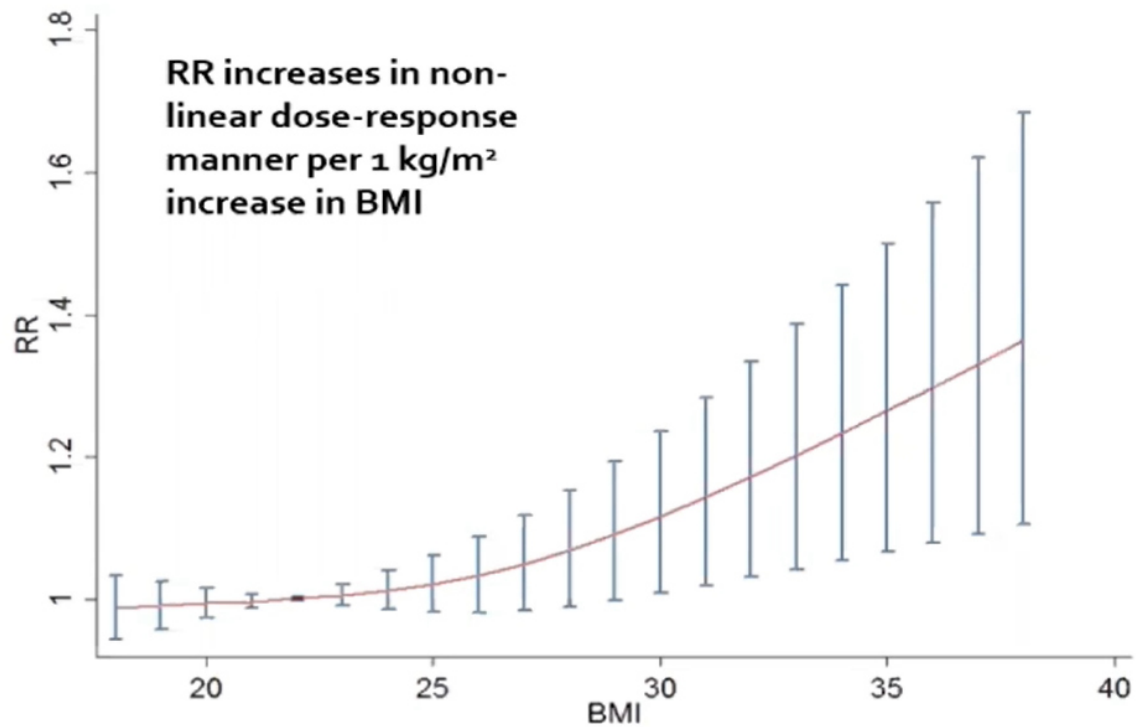
SURVIVORSHIP



Obesity may worsen quality of life and increase risk of cancer recurrence

Body weight and breast cancer

Risk of ER+ postmenopausal breast cancer



Body weight and breast cancer

BODY FATNESS AND WEIGHT GAIN AND THE RISK OF CANCER					
WCRF/AICR GRADING		DECREASES RISK		INCREASES RISK	
		Exposure	Cancer site	Exposure	Cancer site
STRONG EVIDENCE	Convincing			Adult body fatness	Oesophagus (adenocarcinoma) 2016 ¹ Pancreas 2012 ¹ Liver 2015 ² Colorectum 2017 ³ Breast (postmenopause) 2017^{1,3} Endometrium 2012 ^{1,5} Kidney 2015 ¹
	Probable	Adult body fatness	Breast (premenopause) 2017^{1,3}	Adult weight gain	Breast (postmenopause) 2017 ³
LIMITED EVIDENCE	Limited – suggestive	Body fatness in young adulthood	Breast (premenopause) 2017 ^{3,6} Breast (postmenopause) 2017 ^{3,6}	Adult body fatness	Mouth, pharynx and larynx 2018 ¹ Stomach (cardia) 2016 ² Gallbladder 2015 ^{2,7} Ovary 2014 ^{2,5,8} Prostate (advanced) 2014 ^{1,9}
STRONG EVIDENCE	Substantial effect on risk unlikely			Adult body fatness	Cervix (BMI ≥ 29 kg/m ²) 2017 ^{2,5}
					None identified

World Cancer Research Fund (WCRF) American Institute for Cancer Research (AICR) CUP Continuous Update Project

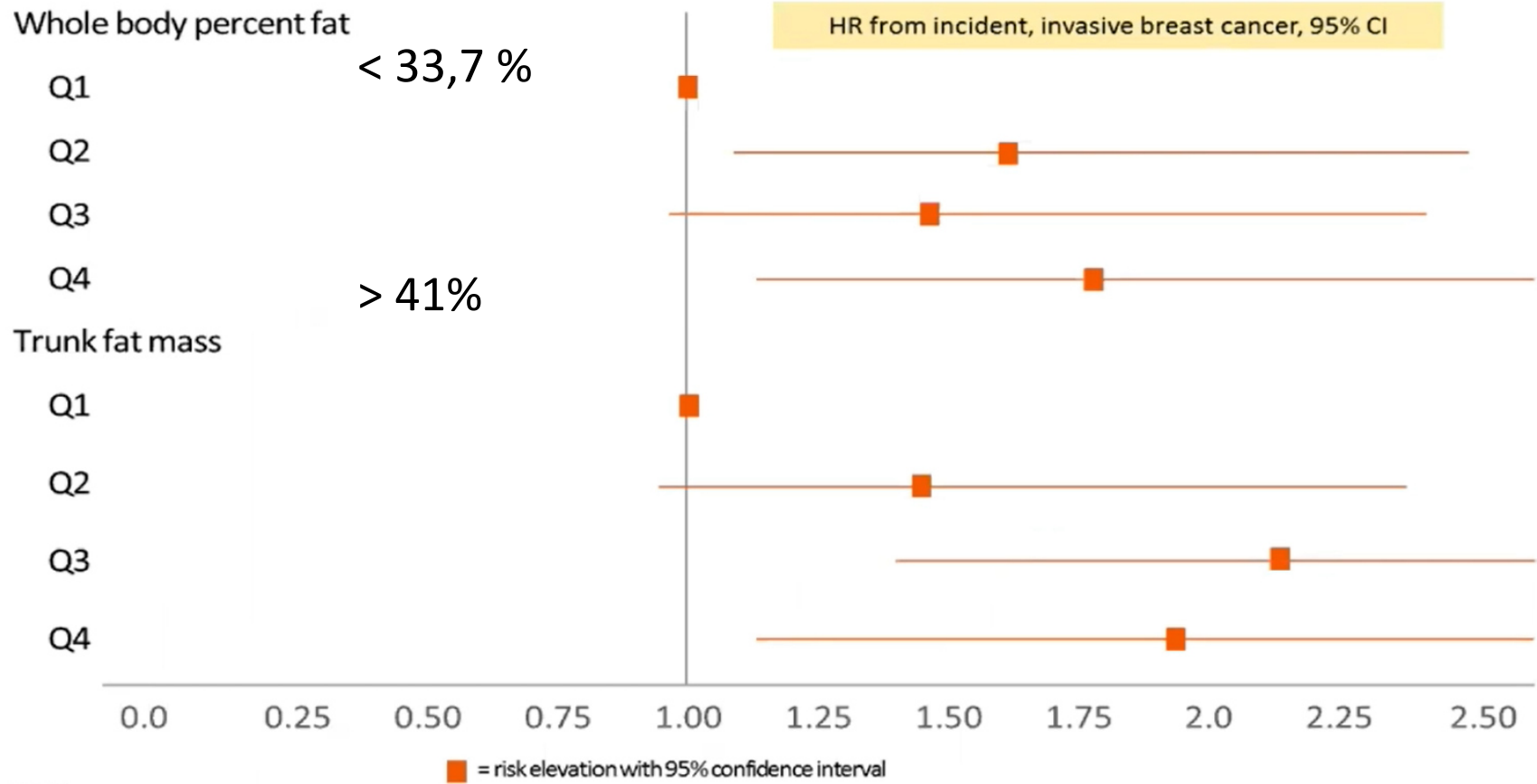
World Cancer Research Fund logo, American Institute for Cancer Research logo, CUP Continuous Update Project logo.

Table of contents > 🔍

Breast cancer

How diet, nutrition and physical activity affect breast cancer risk

Normal Weight Hyperadiposity and Postmenopausal Breast Cancer



The effect of physical exercise on anticancer immunity

[Carmen Fiuza-Luces](#) , [Pedro L. Valenzuela](#), [Beatriz G. Gálvez](#), [Manuel Ramírez](#), [Alejandro López-Soto](#) ,
[Richard J. Simpson](#) & [Alejandro Lucia](#) 

Conclusion

There is biological evidence for an immune-stimulating effect of regular physical activity or exercise, notably, by stimulating immune cell mobilization (and, at least potentially, homing into tumours) in the few hours after each acute bout of exercise. As opposed to immunotherapeutic approaches, the beneficial immune effects of exercise are not accompanied by detrimental side effects, and carefully adapting exercise programmes to the individual characteristics of each patient can have a positive impact on health status, even in those with advanced-stage cancer¹⁴². These observations support the recommendation of

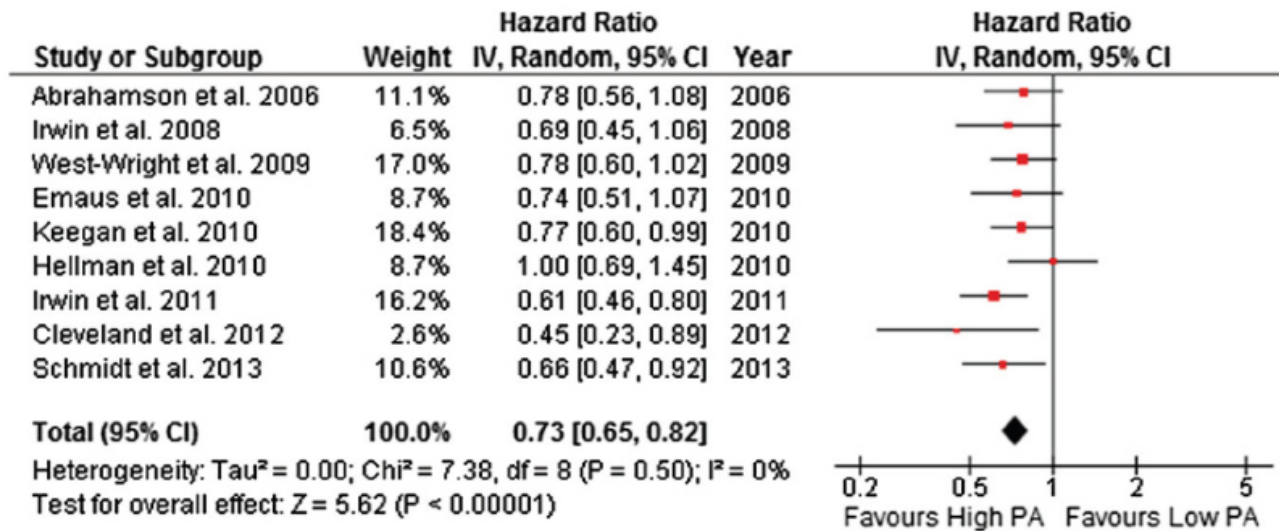
Physical activity and breast cancer

Acta Oncologica, 2015; 54: 635–654

informa
healthcare

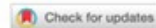
REVIEW




Physical activity, risk of death and recurrence in breast cancer survivors: A systematic review and meta-analysis of epidemiological studies



ASCO SPECIAL ARTICLES

Exercise, Diet, and Weight Management During Cancer Treatment: ASCO Guideline



Jennifer A. Ligibel , MD¹; Karl Bohlke , ScD²; Anne M. May , PhD³; Steven K. Clinton , MD, PhD⁴; Wendy Demark-Wahnefried , PhD, RD⁵; Susan C. Gilchrist, MD, MS⁶; ...

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*J.A.L. and C.M.A. were expert panel cochairs.

Abstract **Full Text** PDF Figures and Tables Supplements

ABSTRACT

Choose

RECOMMENDATIONS

Oncology providers should recommend regular aerobic and resistance exercise during active treatment with curative intent and may recommend preoperative exercise for patients undergoing surgery for lung cancer. Neutropenic diets are not recommended to prevent infection in patients with cancer during active

The evidence base consisted of 52 systematic reviews (42 for exercise, nine for diet, and one for weight management), and an additional 23 randomized controlled trials. The most commonly studied types of cancer were breast, prostate, lung, and colorectal. Exercise during cancer treatment led to improvements in cardiorespiratory fitness, strength, fatigue, and other patient-reported outcomes. Preoperative exercise in patients with lung cancer led to a reduction in postoperative length of hospital stay and complications. Neutropenic diets did not decrease risk of infection during cancer treatment.

RECOMMENDATIONS

Oncology providers should recommend regular aerobic and resistance exercise during active treatment with curative intent and may recommend preoperative exercise for patients undergoing surgery for lung cancer. Neutropenic diets are not recommended to prevent infection in patients with cancer during active

PHYSICAL ACTIVITY'S SCREENING IN NON METASTATIC BREAST CANCER PATIENTS UNDERGOING SURGERY AN OBSERVATIONAL STUDY



FROM FEBRUARY 2019 TO MARCH 2020

we performed a preoperative physical and nutritional screening in

504 CONSECUTIVE PATIENTS

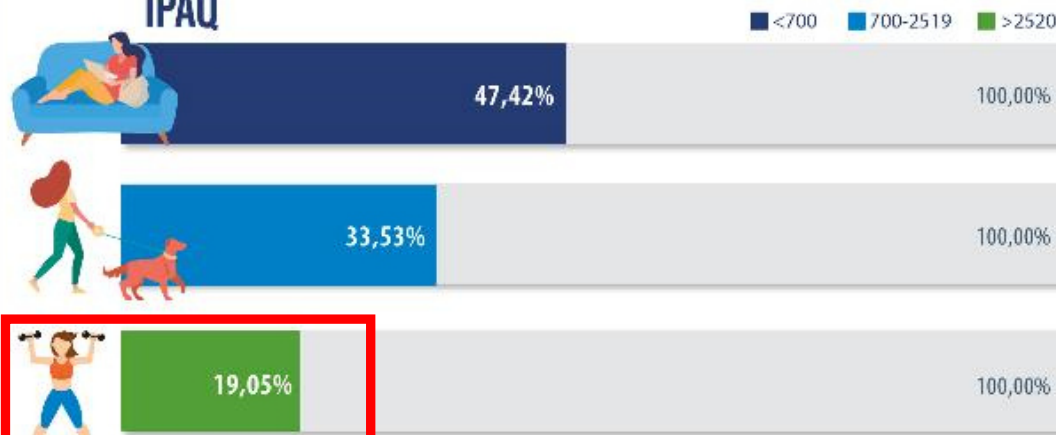
with histologically proven breast cancer waiting for surgery

INTERVENTIONS



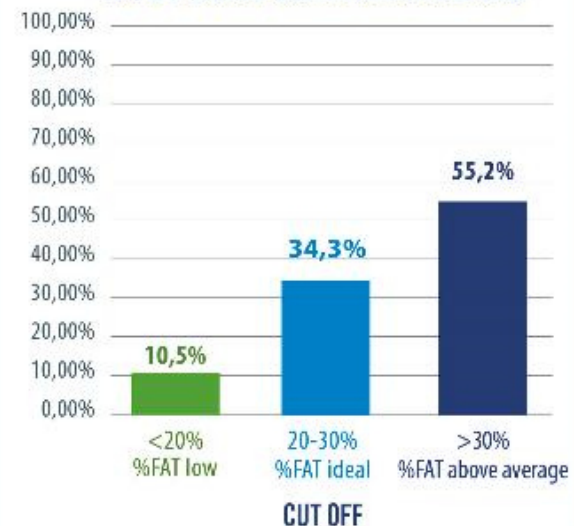
RESULTS

IPAQ

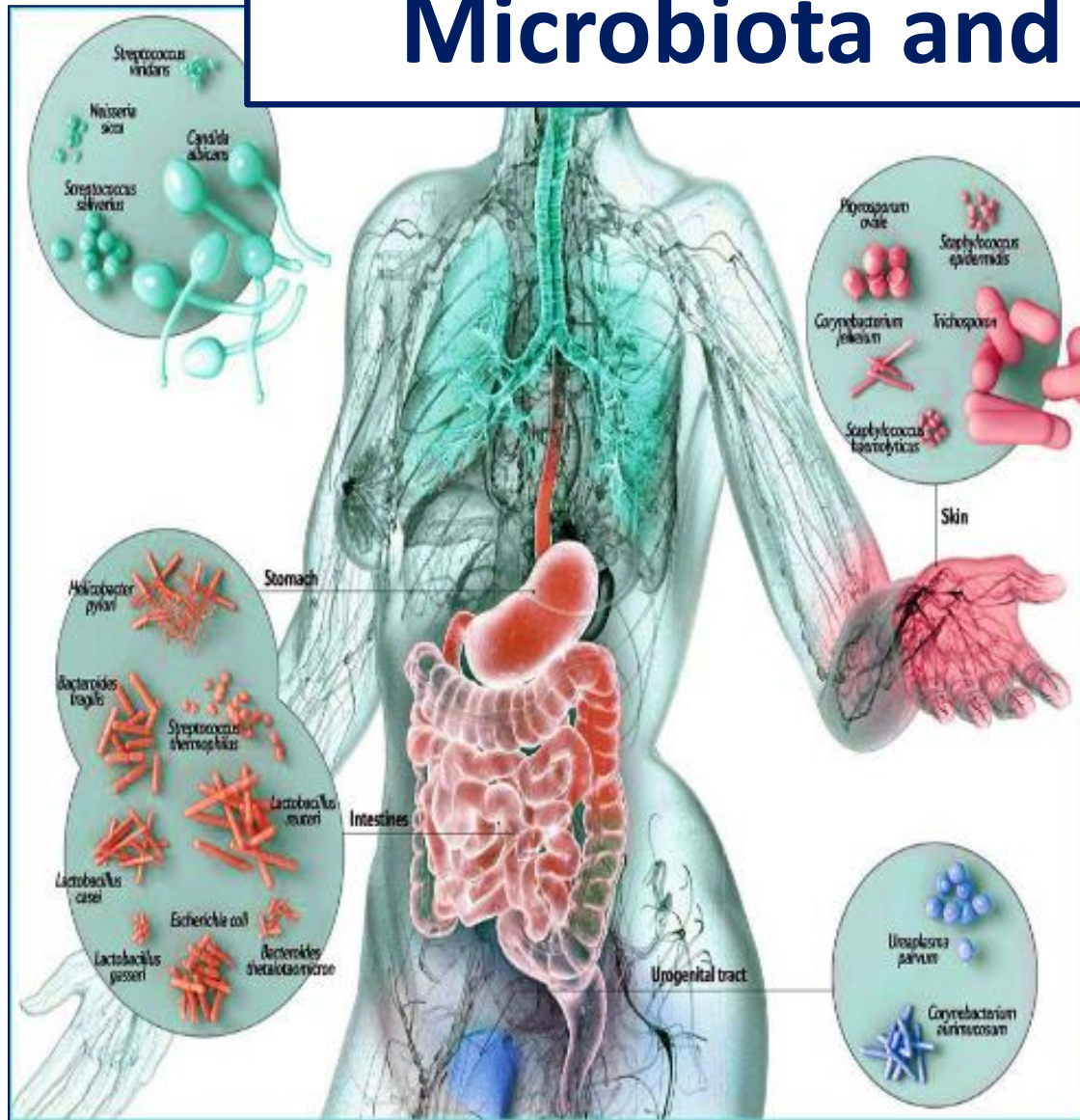


IPAQ: 47% of patients proved to be physically inactive (MET score <700), 34% moderately active (MET score 700-2520) and only 19% physically active (MET score > 2520).

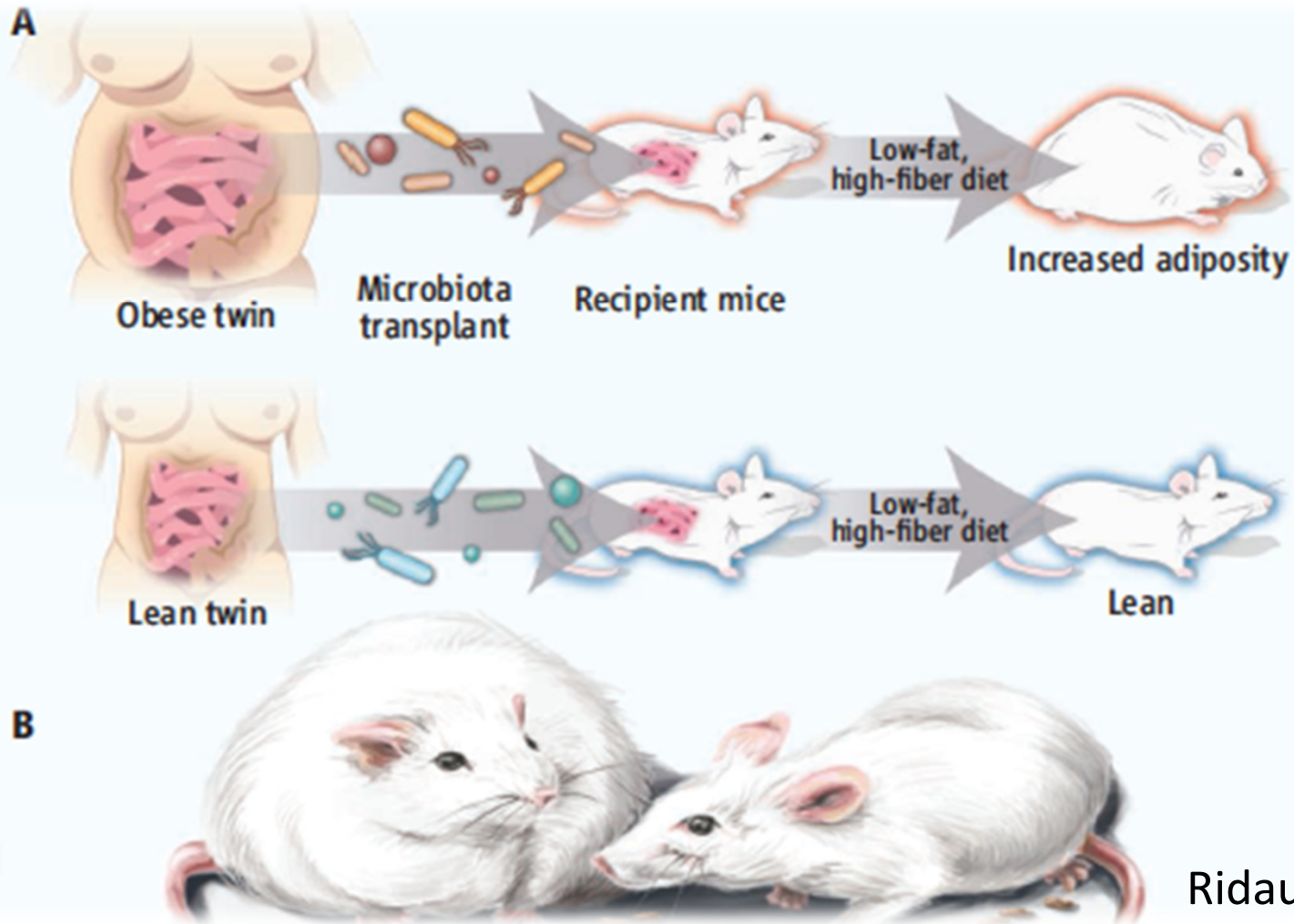
BODY COMPOSITION ANALYSIS



Microbiota and cancer

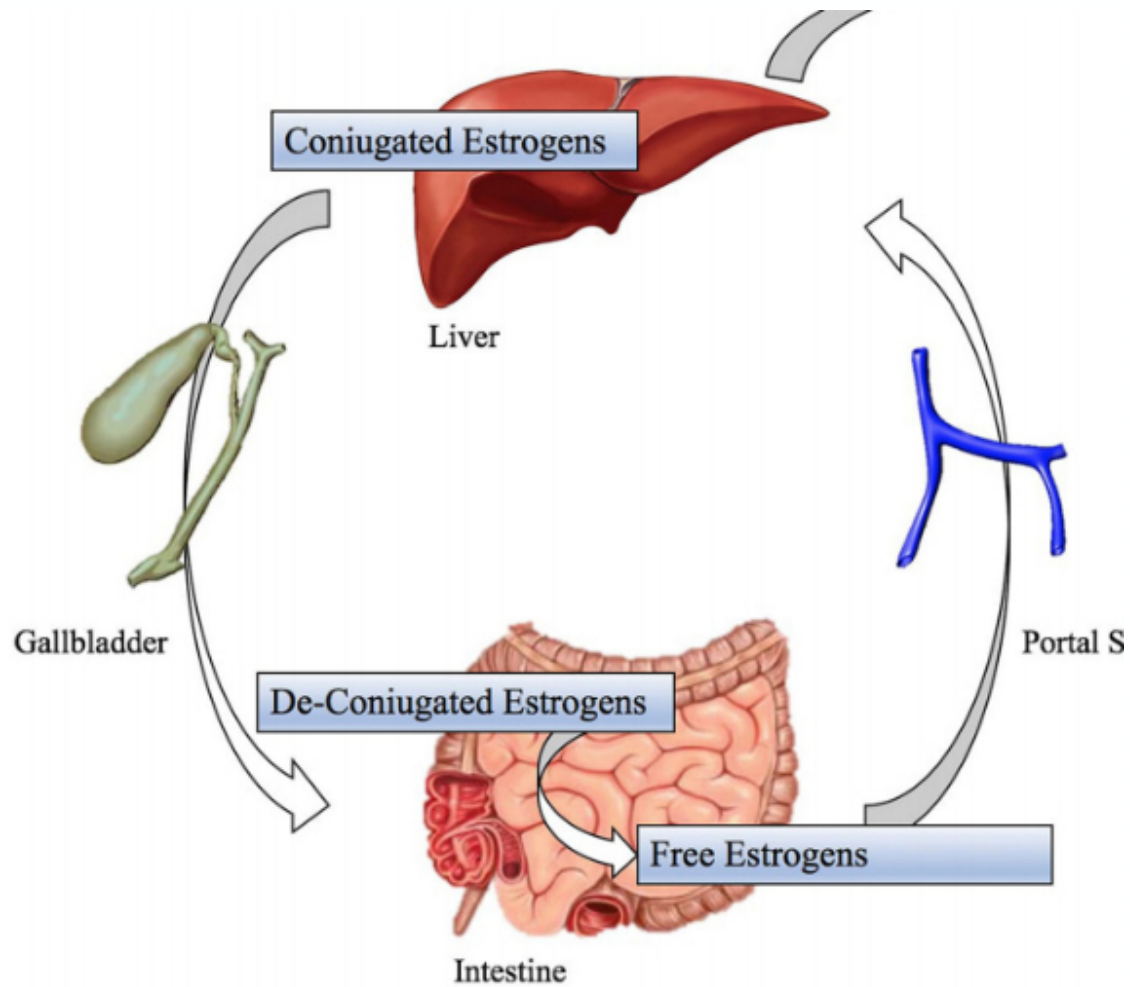


Microbiota and body weight

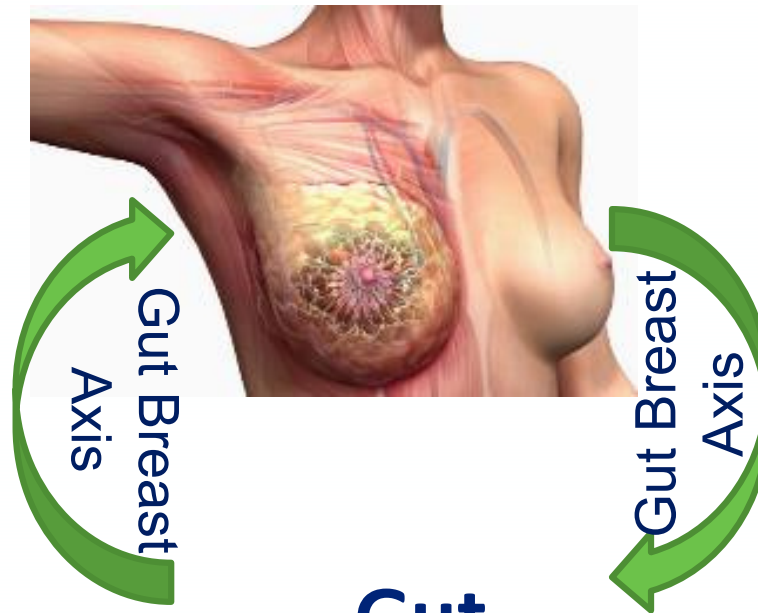


Ridaura VK et al. Science 2013

Microbiota and estrogens



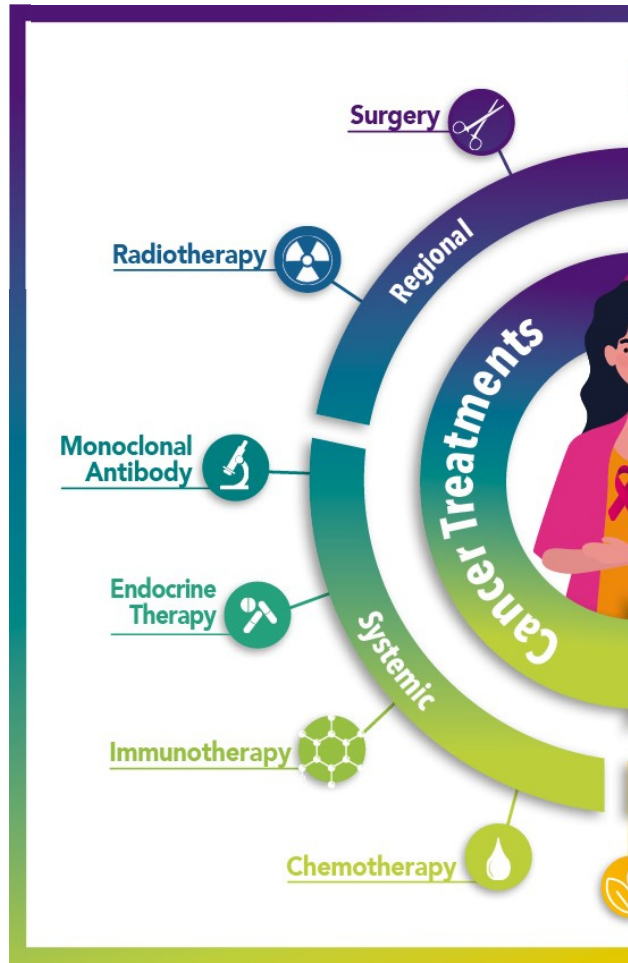
Microbiota and breast tissue



**Gut
Microbiota**



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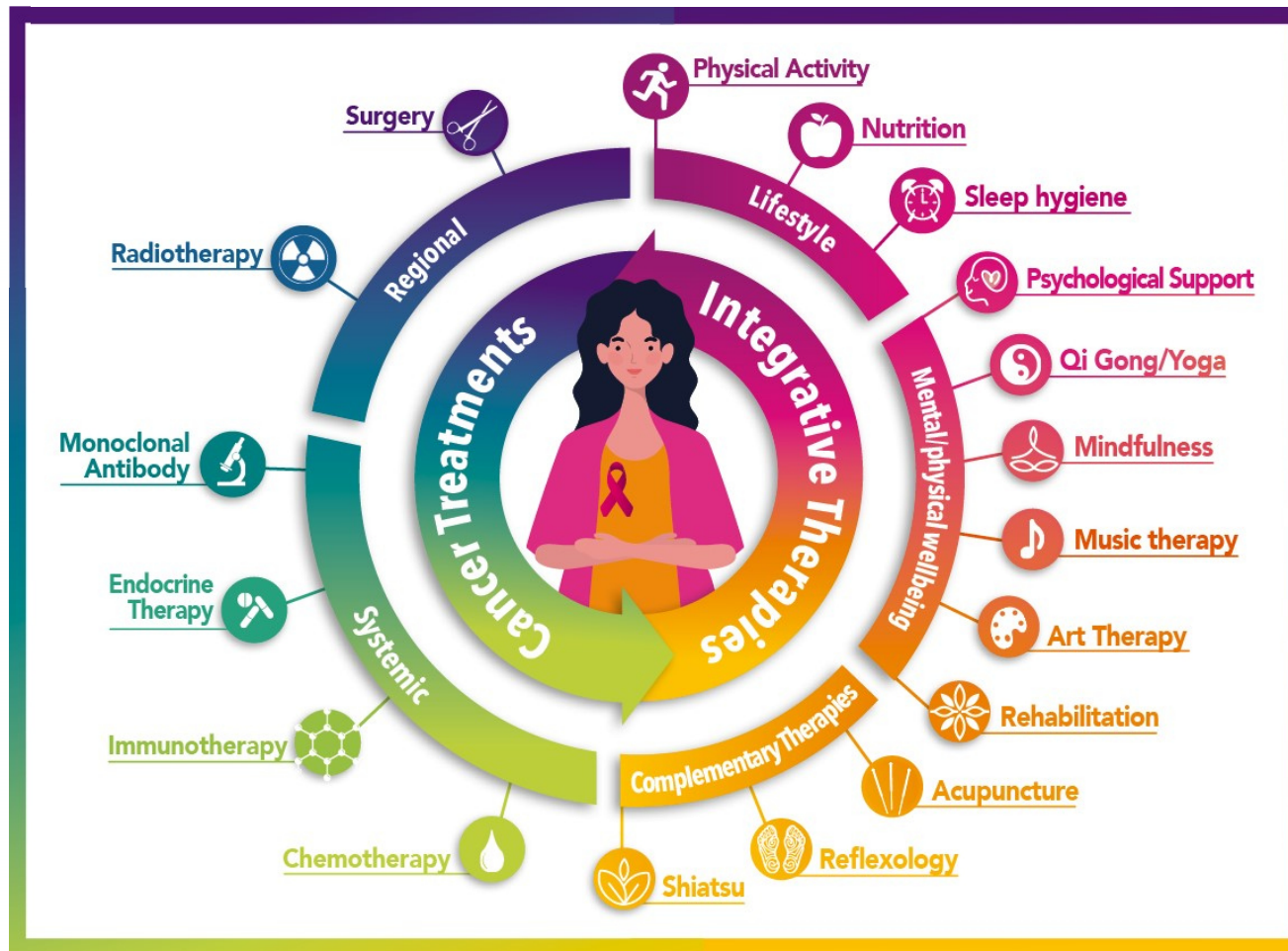


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JOURNAL OF CLINICAL ONCOLOGY

ASCO SPECIAL ARTICLE

Integrative Therapies During and After Breast Cancer Treatment: ASCO Endorsement of the SIO Clinical Practice Guideline

Gary H. Lyman, Heather Greenlee, Kari Bohlke, Ting Bao, Angela M. DeMichele, Gary E. Deng, Judith M. Fouladbakhsh, Brigitte Gil, Dawn L. Hershman, Sami Mansfield, Dawn M. Mussallem, Karen M. Mustian, Erin Price, Susan Rafte, and Lorenzo Cohen

Author affiliations and support information (if applicable) appear at the end of this article.

Published at jco.org on June 11, 2018.

G.H.L. and L.C. were Expert Panel co-chairs.

Clinical Practice Guideline Committee

ABSTRACT

Purpose

The Society for Integrative Oncology (SIO) produced an evidence-based guideline on use of integrative therapies during and after breast cancer treatment that was determined to be relevant to the American Society of Clinical Oncology (ASCO) membership. ASCO considered the guideline for endorsement.

20 years of integrative oncology at FPG



2008

Acupuncture
Reflexology
Manual therapy



2004
Psychoncology



2014

New Breast Unit



Integrative Therapies Service

Nutrition
Qigong
Herbal medicine
Mindfulness
Art therapy
Music therapy

2019

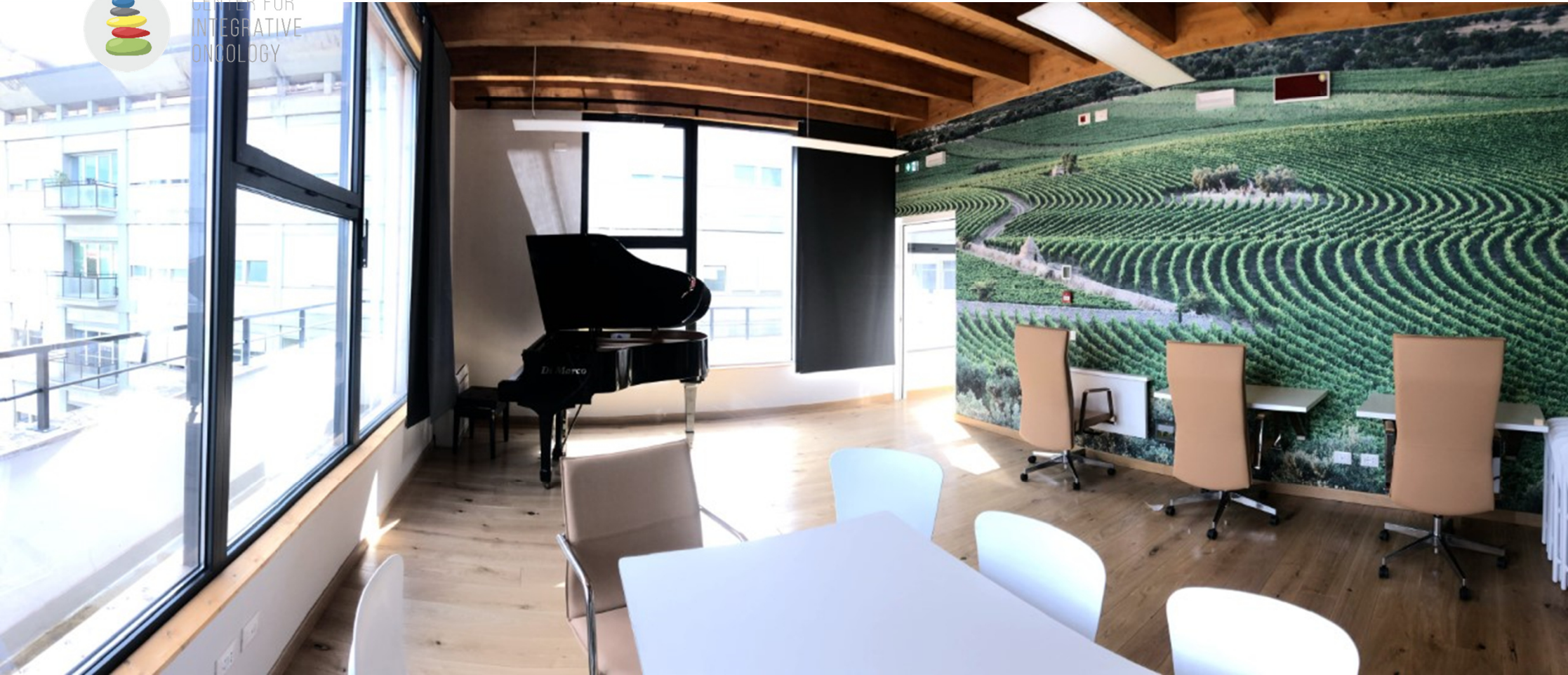


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INTEGRATIVE STEPS

PREHABILITATION



REHABILITATION



ADJUVANT THERAPIES



FOLLOW UP & ADVANCED DISEASE 

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INTEGRATIVE STEPS

PREHABILITATION



REHABILITATION



ADJUVANT THERAPIES



FOLLOW UP & ADVANCED DISEASE



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Psychoncological and lifestyle screening in BC patients awaiting for surgery

PRE-H

PSYCHO-ONCOLOGICAL TRIAGE (POT)



LIFESTYLE TRIAGE (SOS-PREHAB)

BMI <18,5 - >24,9



PRE-Hab

Priorità bassa - 0 interventi psicologico-clinico di follow-up differibili

Priorità intermedia - 1 approfondimento psicologico clinico

Priorità alta - 2 interventi immediati e/o valutazioni specialistiche

PRE-Hab

Rischio basso (4-5) Raccomandazioni alimentari WCRF

Rischio medio (6-8) Raccomandazioni alimentari WCRF e Consegna diario alimentare

Rischio alto (9) Invio a Nutrizione clinica o Patologie dell'obesità

INTEGRATIVE STEPS

PREHABILITATION



REHABILITATION



ADJUVANT THERAPIES



FOLLOW UP & ADVANCED DISEASE



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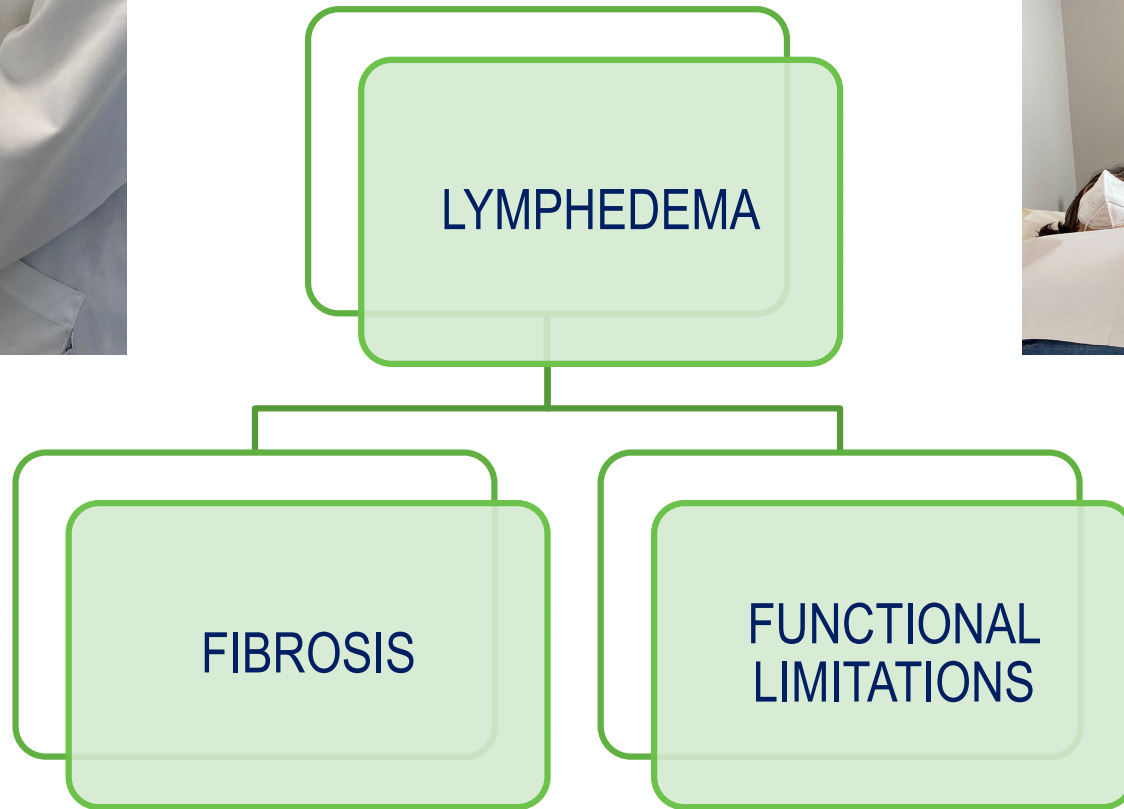




Manual



Mechanical



INTEGRATIVE STEPS

PREHABILITATION



REHABILITATION



ADJUVANT THERAPIES

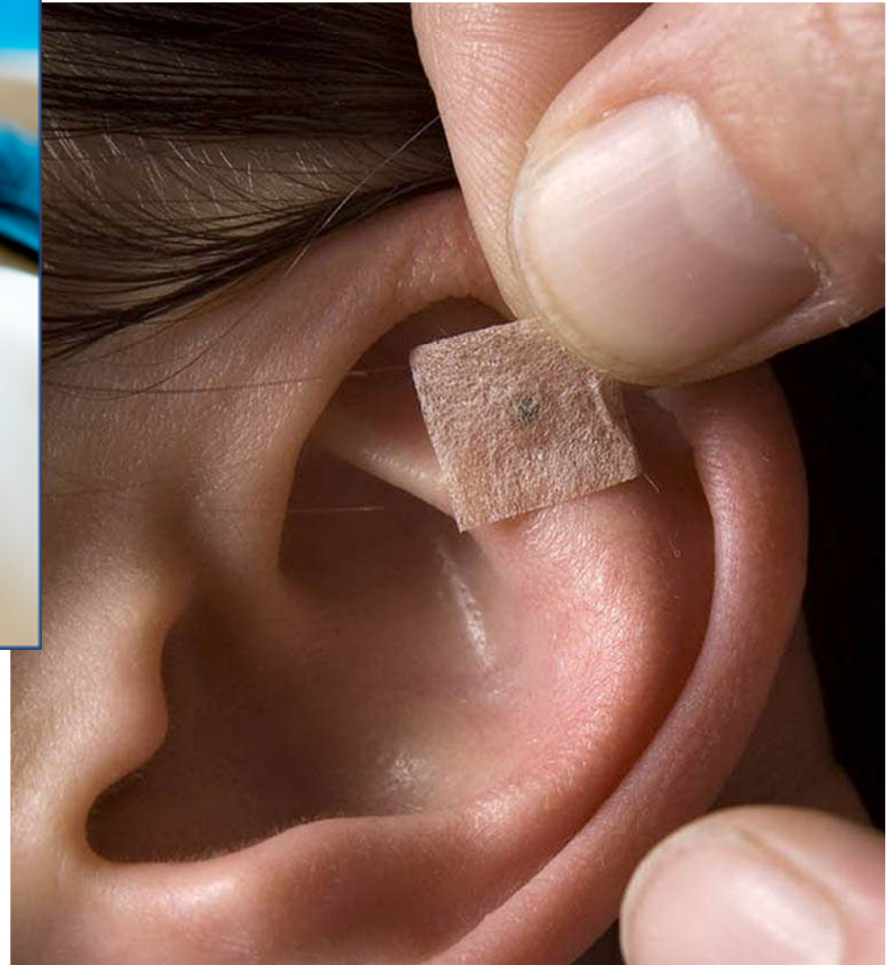


FOLLOW UP & ADVANCED DISEASE



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INTEGRATIVE STEPS

PREHABILITATION



REHABILITATION



ADJUVANT THERAPIES



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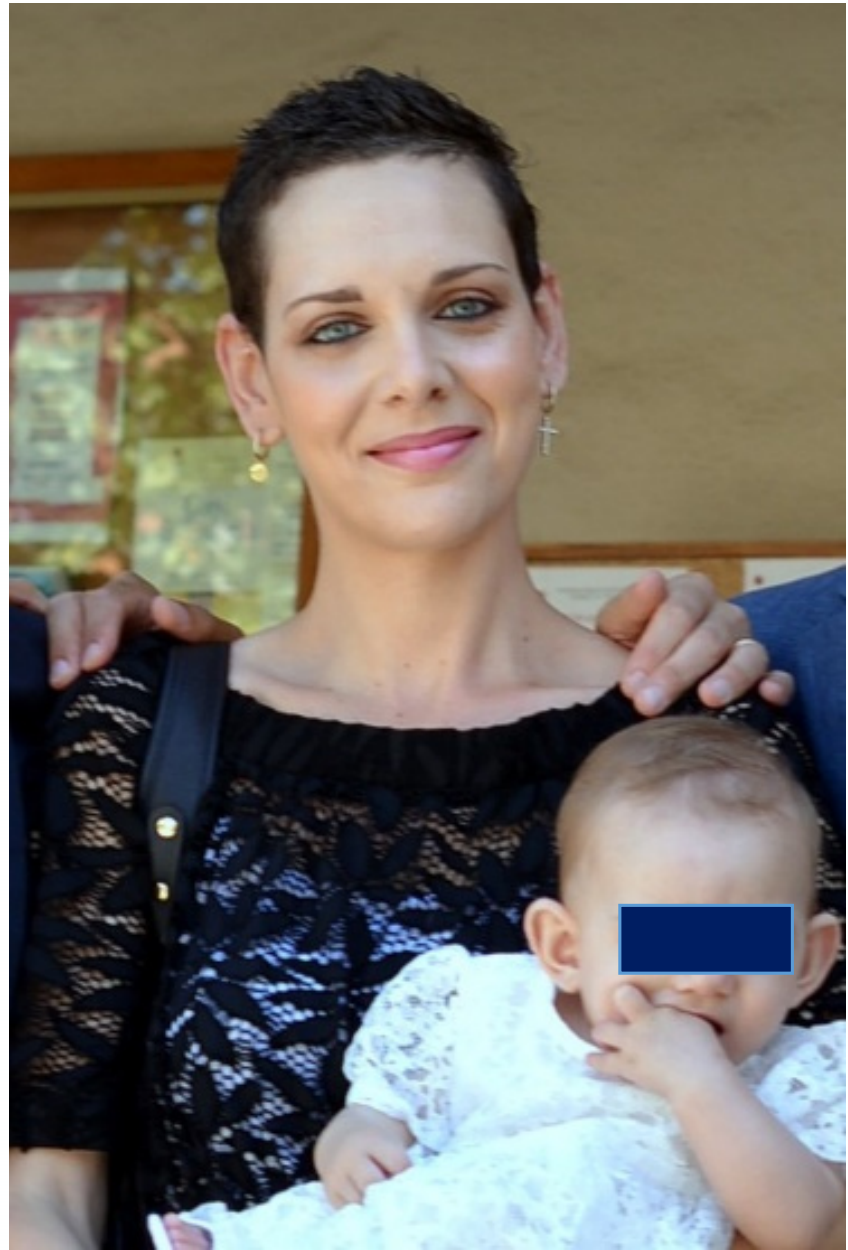






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