



JORNADAS DE MEDICINA IPO PORTO

Estilos de vida e prevenção do cancro e das suas sequelas

Ana Paula Santos, MD, PhD

Serviço de Endocrinologia, IPOFG- Porto / Porto Comprehensive Cancer Center

Grupo de Abordagem de Lesões Pre-cancerosas e Cancro Precoce,
RISE@CI-IPOP (Health Research Network)

**Desde os anos 50-60 do século XX
o estilo de vida nos países mais desenvolvidos mudou
(e mais recentemente, está a mudar nos países emergentes)**



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ID 42846576

1507kot | Dreamstime.com

<https://pt.dreamstime.com/ilustra%C3%A7%C3%A3o-stock-evolu%C3%A7%C3%A3o-da-obesidade-image42846576>

As Epidemias do Século XXI



Covid-19



Guerras



Doenças não Transmissíveis

Recomendações de Sociedades Científicas para prevenção da DCV e Doenças Endócrino-Metabólicas



American Heart Association, Healthy for Good® Life's Essential 8™

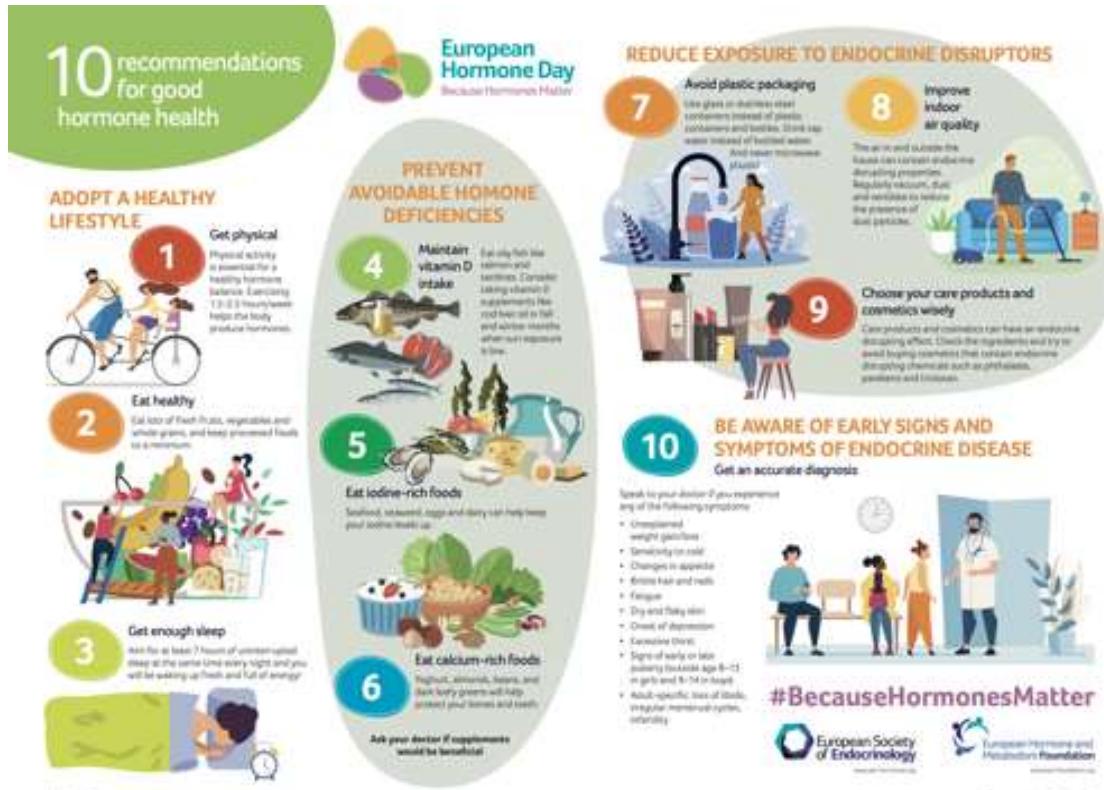
Improving and maintaining cardiovascular health, or CVH, can help you enjoy a longer, healthier life. Better CVH also has been associated with decreased risk for heart disease, stroke, cancer, dementia and other major health problems.

Life's Essential 8 outlines a few easy steps you can take to live a healthier lifestyle.

- EAT BETTER**
Aim for a balanced, healthy eating pattern that includes whole foods, lots of fruits and vegetables, lean protein, nuts, seeds and cooking in non-hospital oils such as olive and canola.
- MANAGE WEIGHT**
Activating and maintaining a healthy weight has many benefits. Body Mass Index (BMI), a numerical value of your weight in relation to your height, is a useful gauge. Defined BMI for most adults ranges from 18.5 to less than 25. You can calculate it online or consult a health care professional.
- BE MORE ACTIVE**
Adults should participate in 150 minutes of moderate-intensity aerobic physical activity weekly. Moderate intensity means a level of exertion that would have felt累 (moderate exertion). Including plug and screenless activities.
- CONTROL CHOLESTEROL**
High levels of non-HDL, or "bad," cholesterol increase your chance of heart disease. Non-HDL cholesterol is the preferred number to monitor, rather than total cholesterol, because it can be measured without testing beforehand and is relatively unaffected among all persons.
- QUIT TOBACCO**
Use of tobacco products or tobacco products, which includes traditional cigarettes, e-cigarettes and vaping, is the leading cause of preventable death and disease in the United States. About 1 in 5 deaths from heart disease and stroke in the U.S. children ages 3-19 are exposed to secondhand smoke or vaping.
- MANAGE BLOOD SUGAR**
Most of the food we eat is turned into glucose (or blood sugar) that our bodies use for energy. Over time, high levels of blood sugar can damage blood vessels and nerves. As part of testing, measure hemoglobin A1c, which reflects long-term control in people with diabetes or prediabetes.
- GET HEALTHY SLEEP**
Getting a good night's sleep is important for overall health. Adults should aim for an average of 7-8 hours, and babies and kids need more depending on their ages. Fewer than 6 hours of sleep is associated with heart disease.
- MANAGE BLOOD PRESSURE**
Getting your blood pressure under control is key to cardiovascular health. Adults should aim for a systolic blood pressure of less than 130 mm Hg and diastolic blood pressure of less than 80 mm Hg. Blood pressure increases with age.

Learn more at heart.org/lifes8

American Heart Association (AHA)



10 recommendations for good hormone health

European Hormone Day Because Hormones Matter

REDUCE EXPOSURE TO ENDOCRINE DISRUPTORS

- 7 Avoid plastic packaging**
Use glass or stainless steel containers for storing food. Choose reusable containers and bottles. Use water instead of bottled water. And reuse containers.
- 8 Improve indoor air quality**
This action and others like it can combat endocrine-disrupting substances that affect our health and well-being. Clean up moldy areas, dust, and remove or reduce the presence of dust particles.
- 9 Choose your care products and cosmetics wisely**
Care products and cosmetics can have an endocrine-disrupting effect. Check the ingredients and try to avoid buying cosmetics that contain endocrine-disrupting chemicals such as phthalates, parabens and bisphenols.

PROMOTE A HEALTHY LIFESTYLE

- 1 Get physical**
Physical activity is essential for a healthy hormone balance. Exercising 1.5-2.5 hours/week helps the body produce hormones.
- 2 Eat lots of fresh fruits, vegetables and whole grains, and limit processed foods to a minimum.**
- 3 Get enough sleep**
Adults should aim for at least 7 hours of uninterrupted sleep at the same time every night and you will be waking up fresh and full of energy!
- 4 Maintain vitamin D intake**
Eat oily fish like salmon and sardines. Consider taking vitamin D supplements like and vitamin D-rich foods such as mushrooms, when your exposure to sun is low.
- 5 Eat iodine-rich foods**
Seaweed, seaweed soup and dairy can help keep your iodine needs up.
- 6 Eat calcium-rich foods**
Yogurt, almonds, beans, and leafy greens will help protect your bones and teeth.
- 7 Ask your doctor if supplements would be beneficial**

PREVENT AVOIDABLE HORMONE DEFICIENCIES

10 BE AWARE OF EARLY SIGNS AND SYMPTOMS OF ENDOCRINE DISEASE
Get an accurate diagnosis

Talk to your doctor if you experience any of the following symptoms:

- Unexplained weight gain/weight loss
- Sensitivity to cold
- Changes in appetite
- Extreme hair and nail loss
- Fatigue
- Dry and itchy skin
- Onset of depression
- Excessive thirst
- Signs of early or late maturing (including age 8-12 in girls and 10-11 in boys)
- Adult-specific signs of libido, irregular menstrual cycles, infertility

#BecauseHormonesMatter

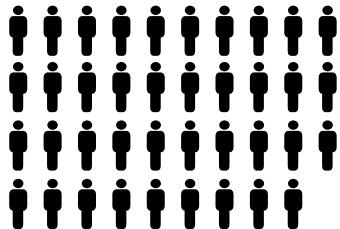
European Society of Endocrinology European Hormone and Metabolism Foundation

European Society of Endocrinology (ESE)

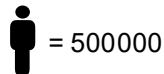
Aumento da Incidência e Mortalidade por Cancro – A catástrofe anunciada

Explore the future of cancer burden

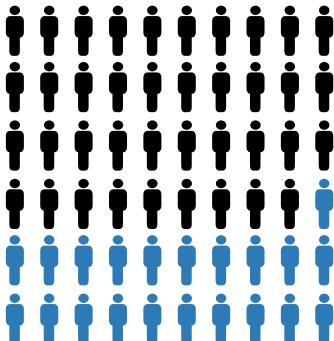
2020



19 300 000



2040



30 200 000



2020 → 2040

WORLDWIDE CANCER DEATHS
ARE PROJECTED TO INCREASE



FROM 9.96 MILLION TO 16.3 MILLION

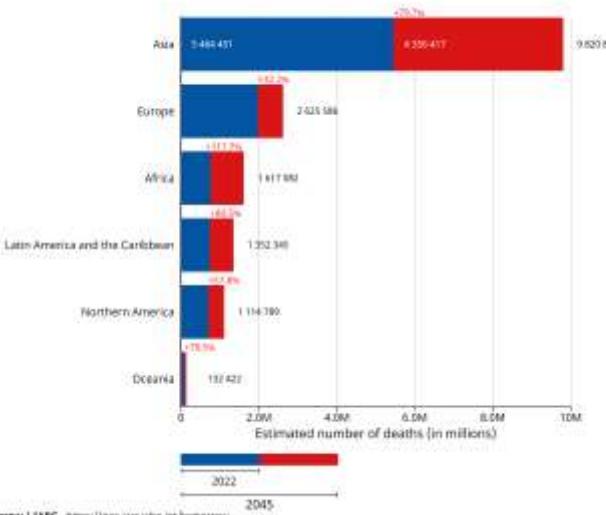
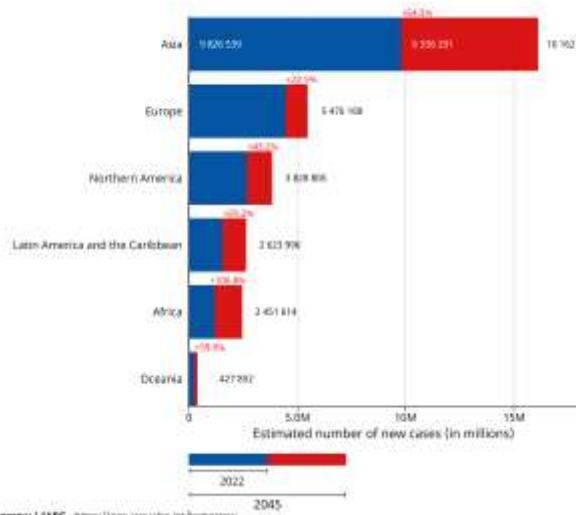
Source: Global Cancer Observatory, International Agency for Cancer Research, 2020

Previsões para 2045 (WHO)

Estimated number of new cases from 2022 to 2045, Both sexes, age [0-85+]
All cancers



Estimated number of deaths from 2022 to 2045, Both sexes, age [0-85+]
All cancers



Cancer Tomorrow | IARC - <https://gco.iarc.fr/tomorrow>
Data version : Globocan 2022 (version 1.1)
© All Rights Reserved 2024

International Agency
for Research on Cancer
IARC
World Health Organization
Cancer Tomorrow | IARC - <https://gco.iarc.fr/tomorrow>
Data version : Globocan 2022 (version 1.1)
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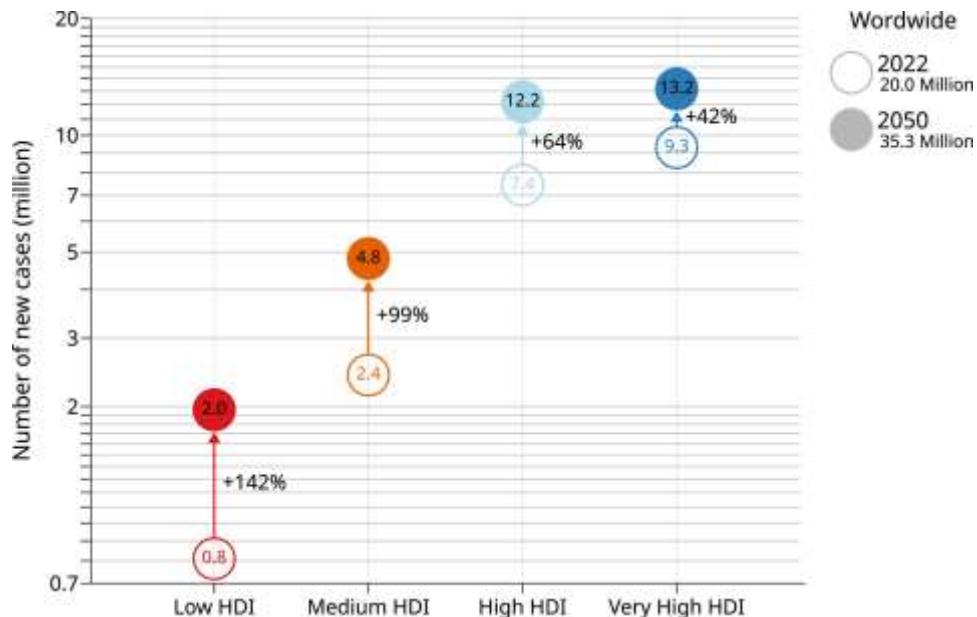
International Agency
for Research on Cancer
IARC
World Health Organization

Novos casos

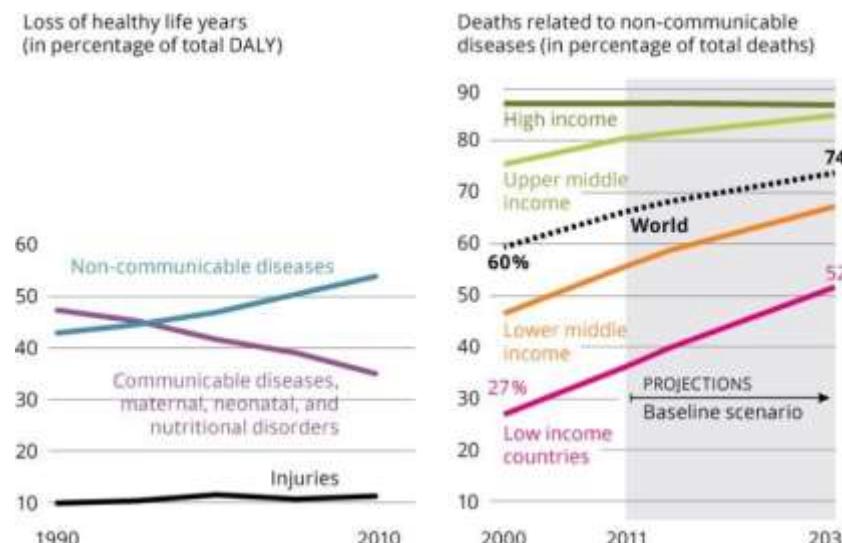
Mortes

Projected number of new cases for all cancers combined (both sexes combined) in 2050 according to the four-tier Human Development Index (HDI).

Source: GLOBOCAN 2022.



The shift in global disease burden, and share of non-communicable diseases by world regions (European Environment Agency)



Câncer precoce em crescimento

Geração X e millennials sob alerta máximo



- 4038 - PLATE 100

Siegel R CA Cancer J Clin. 2024;74:12–49

TABLE 3 Probability (%) of developing invasive cancer within selected age intervals by sex, United States, 2017–2019.

Cancer site	Sex	Probability, %				
		Birth to 49 years	50-64 years	65-84 years	85 years and older	Birth to death
All sites ^b	Male	3.5 (1 in 29)	11.8 (1 in 8)	31.9 (1 in 3)	19.1 (1 in 5)	41.6 (1 in 2)

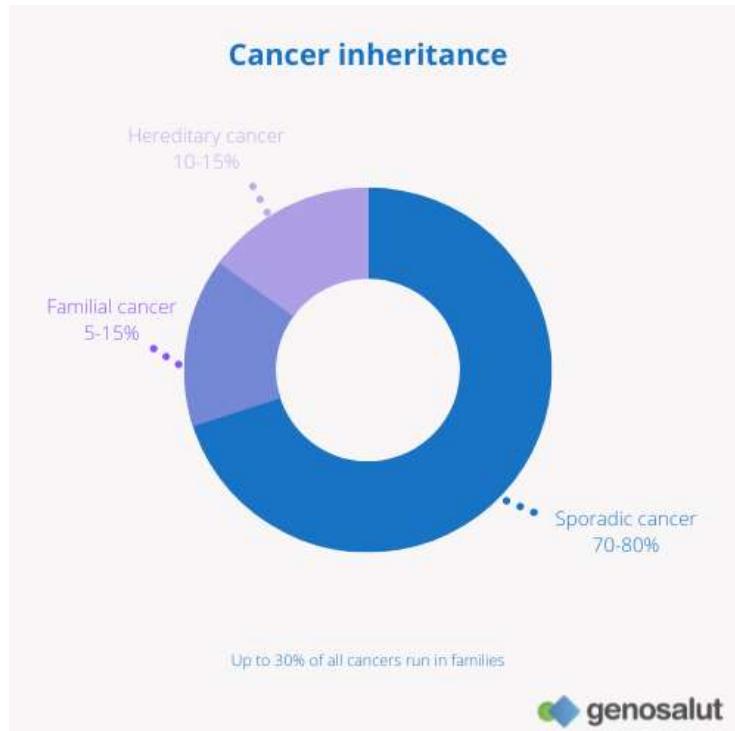
TABLE 3 Probability (%) of developing invasive cancer within selected age intervals by sex, United States, 2017–2019.^a

*For people free of cancer at the beginning of the age interval.

^bAll sites exclude basal cell and squamous cell skin cancers and in situ cancers except urinary bladder.

^aProbabilities for non-Hispanic White individuals.

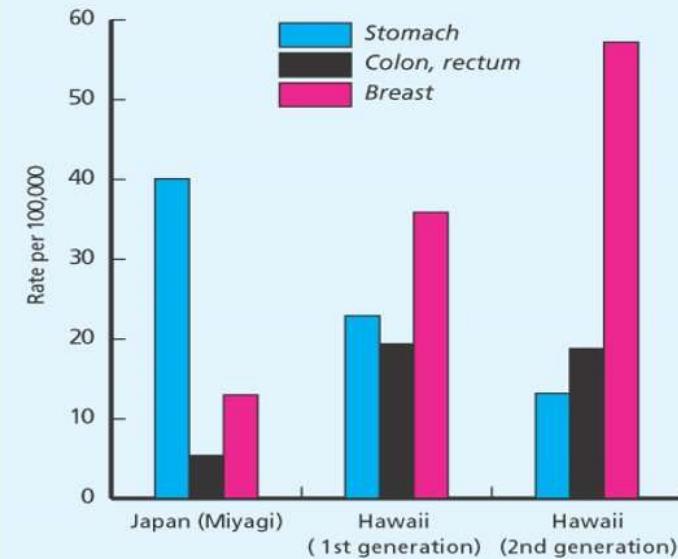
Cancro - Genética ou Ambiente?



[https://www.genosalut.com/en/
genetic-testing-and-counselling/cancer/](https://www.genosalut.com/en/genetic-testing-and-counselling/cancer/)

Dados Migratórios

Figure 1.2.20 Cancer incidence for selected cancers in Japanese women by generation in Hawaii and Japan, 1968–1977



Age-adjusted to the World Standard Population
(From Kolonel et al, 1980)

dietandcancereport.org

Evaluating intrinsic and non-intrinsic cancer risk factors

Song Wu, et. Al. Nature Communications, 2018

INTRINSIC RFs	NON INTRINSIC RFs	
Random errors in DNA replication (non modifiable)	Endogenous RFs (partially modifiable) Aging Genetic Susceptibility DNA repair machinery Hormones Growth Factors Inflammation...	Exogenous RFs (modifiable) Radiação Carcinogénicos Químicos Virus-associated neoplasia Smoking, sedentarism, nutrient imbalance....

- ✓ 50% das neoplasias seriam evitáveis se fossem reduzidos os FRs modificáveis para cancro
- ✓ 30% das neoplasias seriam evitáveis com adoção de um estilo de vida saudável

Fatores Modificáveis para Cancro e Diagnóstico Precoce



Tabaco e Cancro



Radiação e Cancro



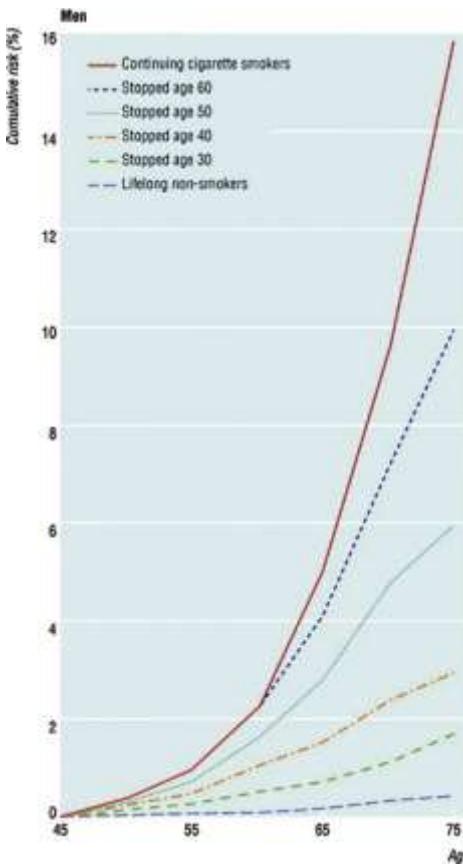
Exposição solar e Cancro



Agentes Infeciosos e Cancro



Ambiente e Cancro

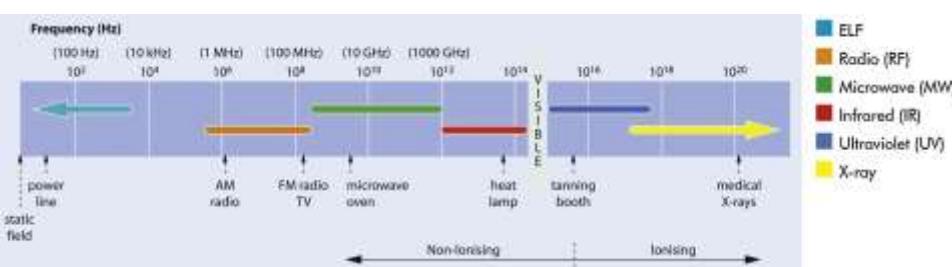


Tabaco e Cancro

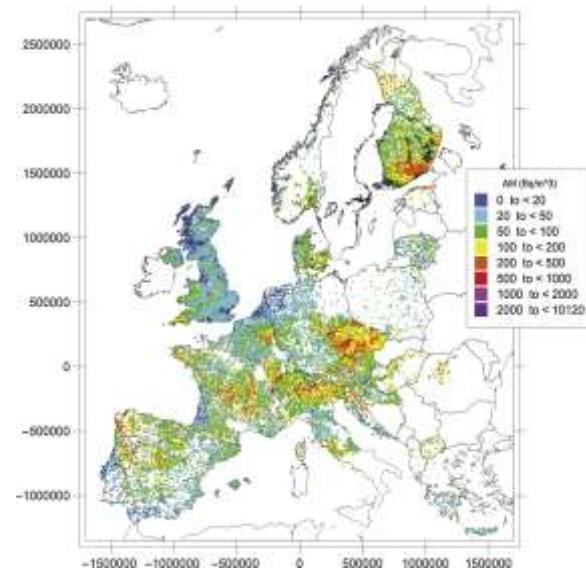
MAIOR RISCO DE CANCRO:

- ✓ Pulmão
- ✓ Cabeça e Pescoço
- ✓ Esófago
- ✓ Pâncreas
- ✓ ...

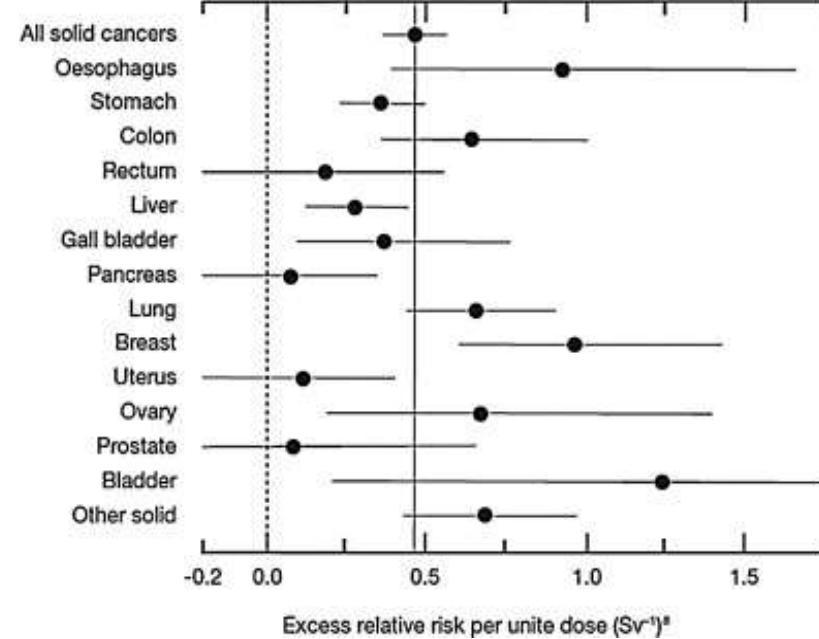
Cumulative risk of death from lung cancer in men in the United Kingdom for continuing smokers and for former smokers, according to the age when quitting (death rates in 1990 are shown). From Peto et al. BMJ 321 (2000) 323–329.



Map of radon in Europe (<=2014). Radiat. Prot. Dosimetry 2014;162: 129–34.



Radiação e Cancro



Estimates of solid cancer mortality risk for different organs from studies of the survivors of the atomic bombings in Japan. The figure shows the excess relative risk per unit dose (Sv^{-1}) of various cancer types from radiation exposure among the survivors of the atomic bombings in Japan. (ONU)



Radiação UV (UVA e UVB) e Cancro

	Phenotype	UV sensitivity		Skin cancer risk	
Type I		Very fair, pale white, light coloured or red hair, often freckled.	++++	Skin burns very easily, and never, or hardly ever, develops a tan	Greatest risk of skin cancer
Type II		Fair, white skin, light hair, and blue or brown eyes. Some may have dark hair	+++	Skin burns easily, and tans slowly	High risk of skin cancer
Type III		Light brown, light olive skin with dark hair and brown or green eyes	++	Skin does not burn easily, and develops a tan	High risk of skin cancer
Type IV		Moderate brown, brown eyes and dark hair	+	Skin hardly ever burns, and develops a tan easily (Mediterranean skin type)	At risk of skin cancer
Type V		Dark brown, brown eyes and dark hair	+/_	Skin never burns, naturally darker skin (Asian skin types)	Skin cancers are relatively rare, but those that occur are often detected at later, more dangerous stage.
Type VI		Deeply pigmented dark brown to black, dark brown eyes and black hair	-	Skin never burns, naturally dark-coloured skin (Negroid skin types)	Skin cancers are relatively rare, but those that occur are often detected at later, more dangerous stage.

Melanoma

Carcinoma Espinocelular

Carcinoma Basocelular

Mecanismos:

- ✓ Danos DNA
- ✓ Imunossupressão
- ✓ Melanogénesis
- ✓ Vit. D

Risco acrescido se exposição na infância

Solários - carcinogénicos

Infecção e Cancro

- ✓ Vírus Hepatite B (HBV)
- ✓ Vírus Hepatite C (HCV)
- ✓ Vírus Imunodeficiência Humana (HIV)
- ✓ Vírus Papiloma Humano (HPV)
- ✓ Helicobacter Pilori (HP)

Carcinoma Hepatocelular (HBV, HCV)

Sarcoma de Kaposi, LNH, Cancro Cabeça e Pescoço (HIV)

Cancro Genital e Cabeça e Pescoço (HPV)

Cancro Gástrico (HP)

The screenshot shows a section of the HPV website with the following content:

Quais as doenças causadas?

O HPV é um vírus que se pode transmitir facilmente, sendo que na maioria das vezes o organismo consegue eliminá-lo. No entanto, noutras pessoas, o HPV não desaparece e pode causar vários cancro e doenças genitais em homens e mulheres.

O HPV é hoje considerado a 2ª carcinogénesis mais importante, logo a seguir ao tabaco. Está associado a 11% dos cancro, no geral e a 10% dos cancro na mulher.

O Papilomavirus Humano (HPV) é responsável por:

Câncer	Percentagem	Detalhe
Câncer do útero	100%	Das condições ou vírus genitais
Câncer do ânus	84%	Das condições ou vírus genitais
Câncer de vulva	70%	Das condições ou vírus genitais
Câncer de pênis	47%	Das condições ou vírus genitais
Câncer de boca	40%	Das condições ou vírus genitais
Câncer de garganta	99%	Das condições ou vírus genitais

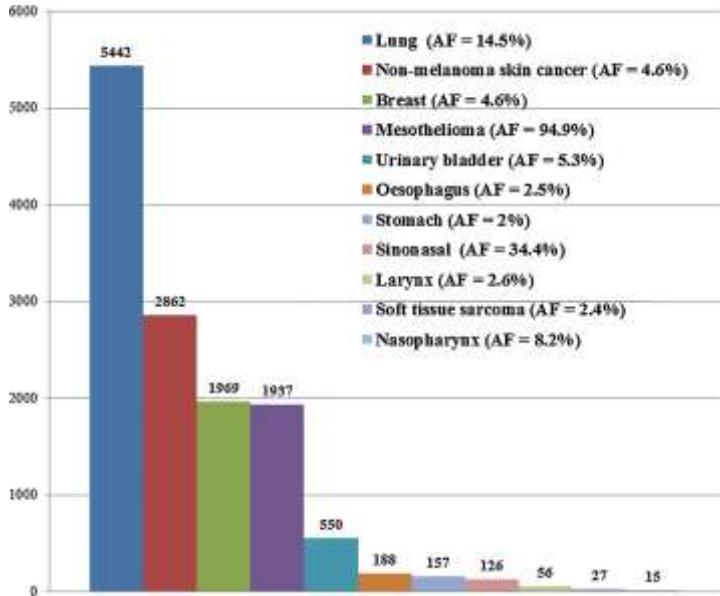
Sente que estou bem? [Saiba mais](#)

806 255 255

Tudo contra os vírus



Ambiente e Cancro



Estimated numbers (cases in men and women together) attributable to occupational exposures by cancer site (and attributable fraction (AF) for men and women together indicated in parenthesis).

Br. J. Cancer, 107 (Suppl 1) (2012 Jun), pp. S3-S7

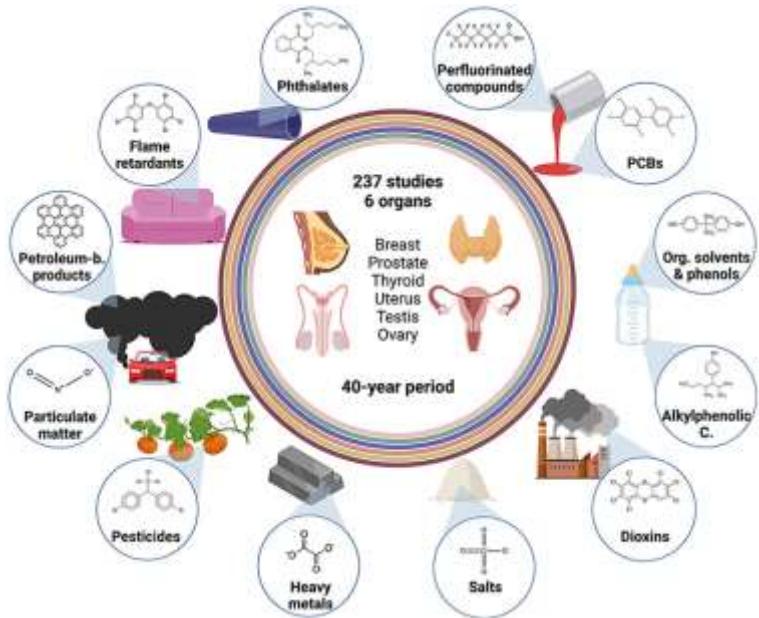


✓ POLUIÇÃO AMBIENTAL

✓ EXPOSIÇÃO OCUPACIONAL



Disruptores Endócrinos e Cancro



- ✓ Pesticides were the most studied EDCs. Phthalates, Heavy Metals, and Particulate Matter (silica dust) were the EDCs most frequently associated with neoplasia.
- ✓ EDCs were associated with increased neoplasia risk in 43-67% of the studies, with a lowest value for the ovary (43%) and a highest value for thyroid (67%).
- ✓ Thyroid was the endocrine organ with more studies showing a positive effect size for cancer risk.
- ✓ The additive effect of EDCs mixtures could exacerbate adverse effects on human health and should be addressed.

Fatores Modificáveis para Cancro e Diagnóstico Precoce



Álcool e Cancro



Alimentação e Cancro



Sedentarismo e Cancro



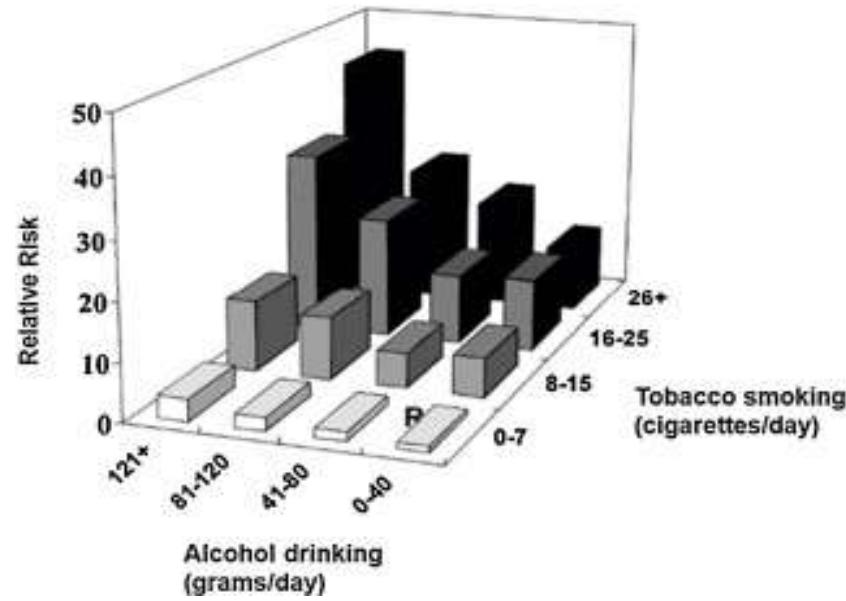
Obesidade e Cancro



Amamentação, Menopausa e Cancro



Álcool e Cancro



MAIOR RISCO DE CANCRO:

- ✓ Cancro da Cavidade Oral, Faringe, esófago
- ✓ Cancro Colo-retal
- ✓ Carcinoma Hepatocelular
- ✓ Carcinoma da Mama Feminina

Estimated relative risk (RR) for the interaction between tobacco smoking and alcohol drinking on cancers of the upper respiratory tract (reference category, risk = 1). Combined exposure to alcohol drinking and tobacco smoking increases the risk of upper digestive and respiratory tract neoplasms in a supra-multiplicative manner. From P. Boyle, Annals of Oncology 2003, 14: 973– 1005.

Alimentação e Cancro



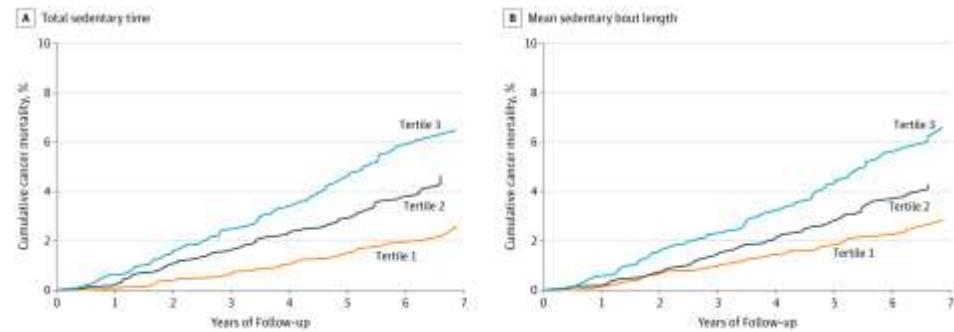
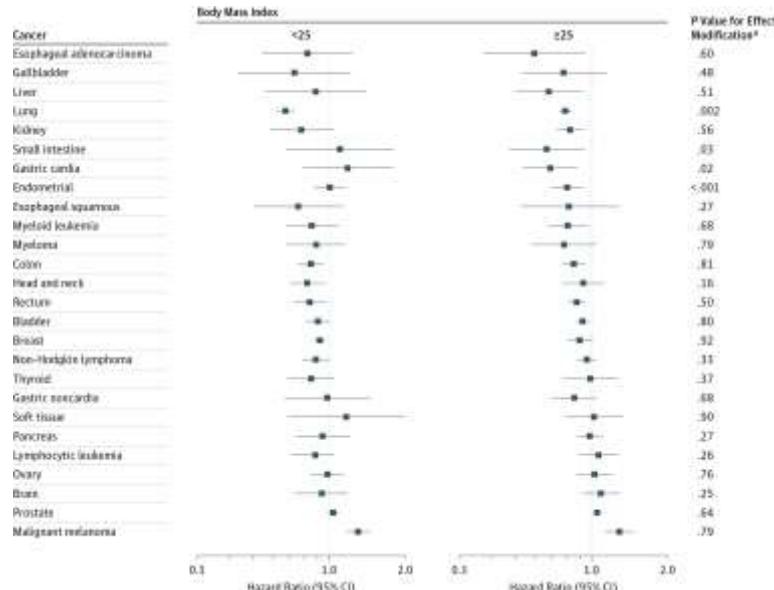
[https://www.americanoncology.com/blogs/
cancer-prevention-dietary-habits-cancer](https://www.americanoncology.com/blogs/cancer-prevention-dietary-habits-cancer)

- ✓ There is no good evidence that any one food prevents cancer.
- ✓ There aren't many foods that cause cancer, **but eating processed red meat can increase the risk of bowel cancer.**
- ✓ Foods such as burnt toast or crispy potatoes contain a chemical called acrylamide.
- ✓ Some tins and cans are lined with something called Bisphenol-A (BPA).

[https://www.cancerresearchuk.org/about-cancer/causes-of-cancer/diet
-and-cancer/food-controversies](https://www.cancerresearchuk.org/about-cancer/causes-of-cancer/diet-and-cancer/food-controversies)



Sedentarismo e Cancro



Sedentarismo associado a excesso de Mortalidade por Cancro.

Exercício Físico associado a menor incidência de cancro, sobretudo se Excesso de Peso /Obesidade

Moore S. JAMA Intern Med. 2016;176(6):816-825

Gilchrist S. JAMA Oncol. 2020;6(8):1210-1217



Obesidade e Cancro

Evidence level	Strength of Relative Risk Increase for Obesity and Cancer Risk		
	High (RR increase ≥ 3)	Modest (RR increase: 1.50-2.99)	Little (RR increase: $\geq 1.0 < 1.49$)
Convincing / Sufficient	Endometrial	Renal Adenocarcinoma	Colorectal Cancer
	Adenocarcinoma	Hepatocellular Cancer	Postmenopausal Breast Cancer
	Esophageal Adenocarcinoma	Pancreatic Adenocarcinoma	Gallbladder cancer
		Gastric Cardia Cancer	Ovarian cancer
		Multiple Myeloma	Thyroid cancer
		Meningioma	
		Advanced Prostate Cancer	
		Male Breast Cancer	
		Diffuse Large T-Lymphoma	

Adapted from Avgerinos, 2019

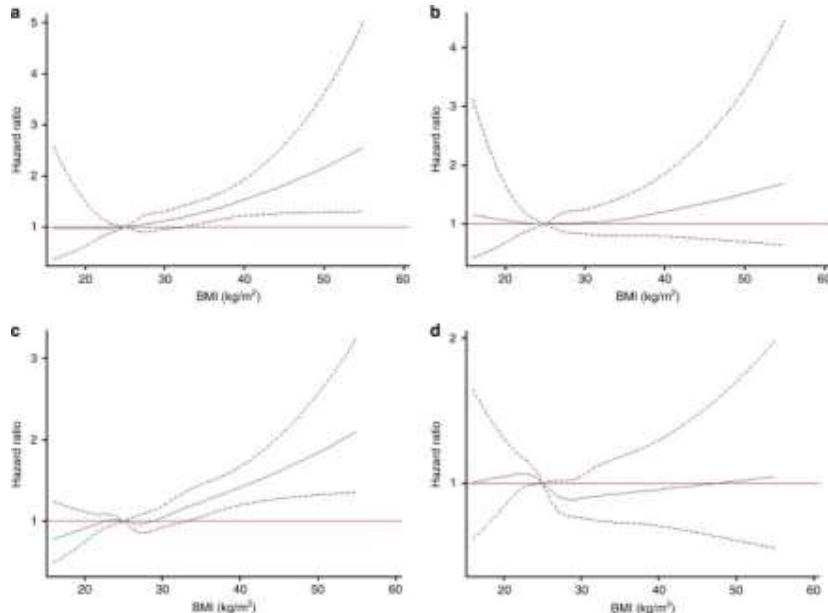
**Epidemiological Evidence Associating Overweight/Obesity and Cancer
by Level of Evidence and Strength of Relative Risk Increase for Overweight/Obesity
In Comparison to Normal-Range Body Mass Index Defined by WHO as Synopsized by the IARC Working Group In 2017**



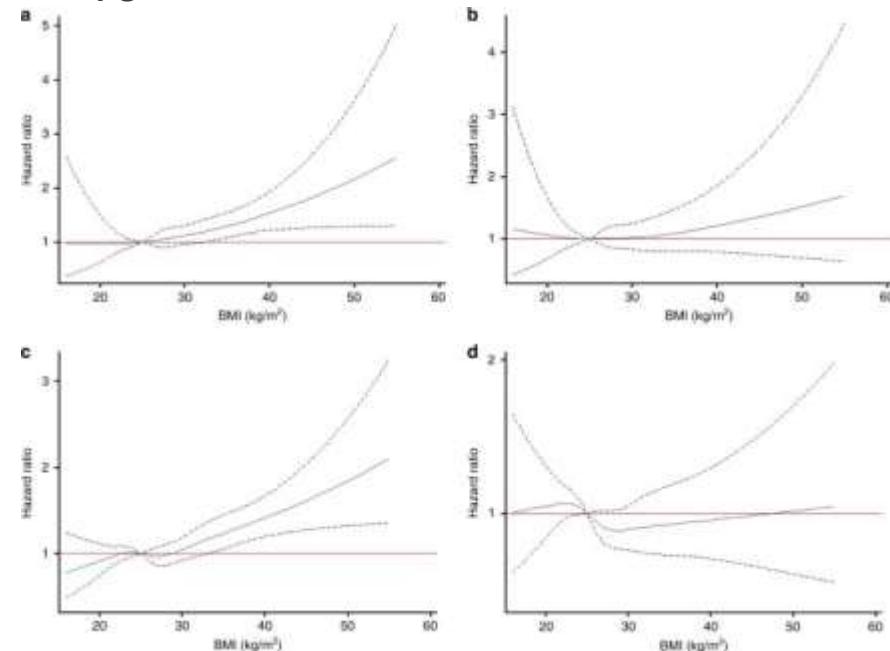
Central body fatness is a stronger predictor of cancer risk than overall body size

Amanda M. Barberio et. al., Nature Communications, 2019

IMC



PC



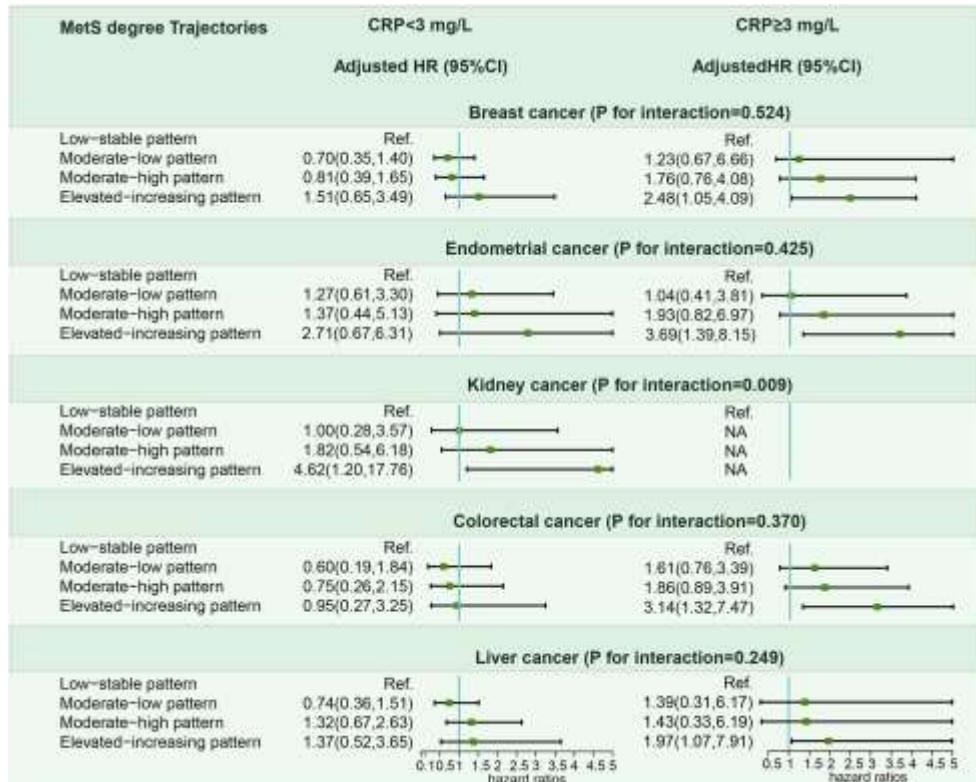
These findings suggest that central adiposity measured by waist circumference is a stronger than BMI risk factor for all cancers



Síndrome Metabólica e Cancro

Metabolic syndrome is defined as having at least three of five components:

- Elevated waist circumference (≥ 88 cm for women; ≥ 102 cm for men)
 - Elevated triglycerides (≥ 150 mg/dL) or drug treatment for elevated triglycerides
 - Low HDL cholesterol (< 40 mg/dL for men; < 50 mg/dL for women) or drug treatment for low HDL
 - Elevated blood pressure (systolic ≥ 130 mm Hg or diastolic ≥ 85 mm Hg) or hypertensive drug treatment
 - Elevated fasting glucose (≥ 100 mg/dL) or drug treatment for elevated glucose
- ✓ Metabolic dysfunction associations with breast and colorectal cancer risk have been observed independently of BMI,
- ✓ with increased risk in individuals with metabolically unhealthy normal weight or overweight/obese compared with metabolically healthy normal weight





Case-control study (43 controls vs 43 naive treatment breast cancer pts)

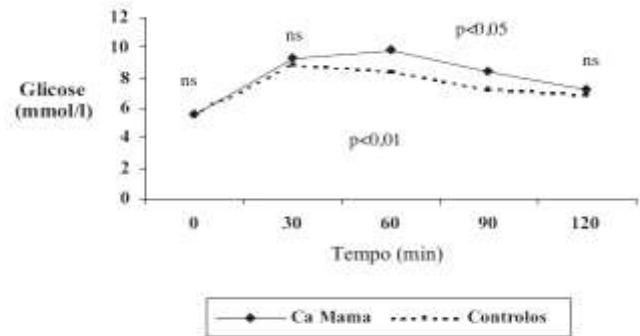


Fig. 8 – Curva de Glicemia (PTGO).

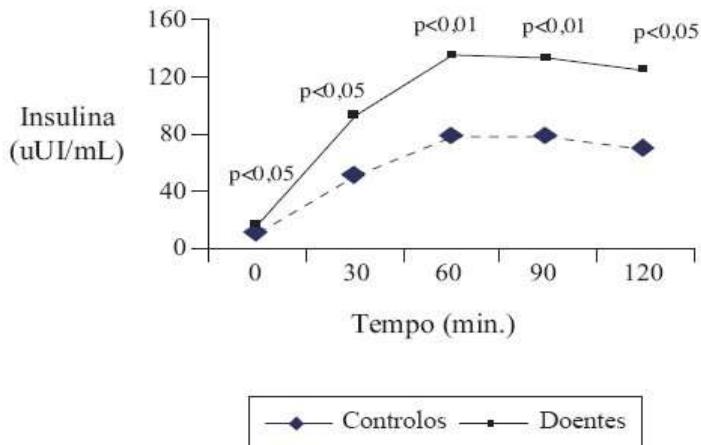


Fig. 9 – Curva de insulina (PTGO)

Breast Cancer associated with:

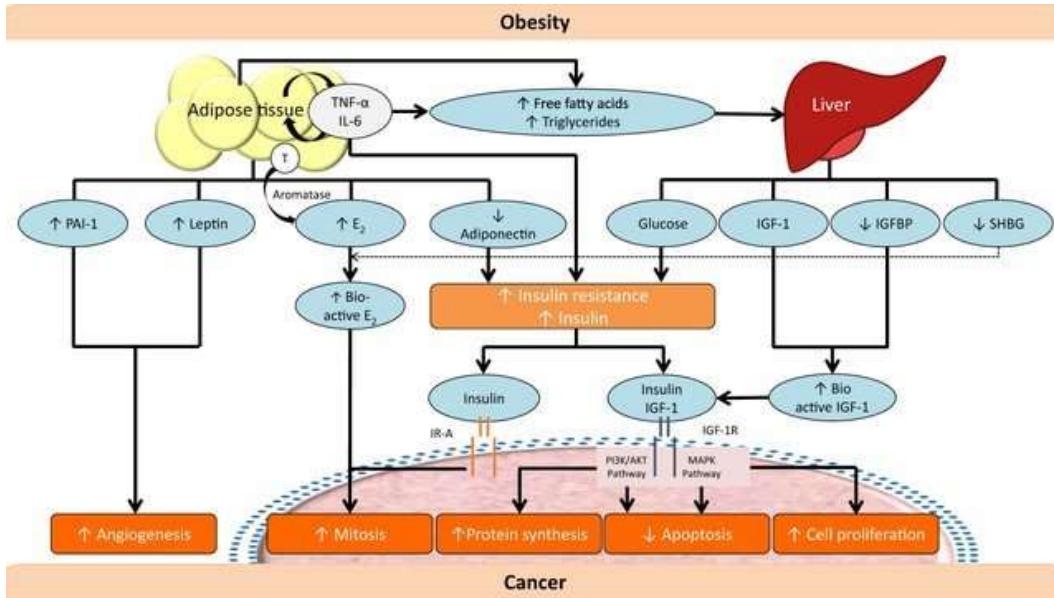
- Fetal Macrossomia
- High WC
- High Blood Pressure
- Metabolic Syndrome
- Insulin resistance ($HOMA-RI > 2.2$)

The risk was proportional to the number of MetS components

Ana Paula Santos. Falência dos Mecanismos de Regulação Endócrina na Obesidade e sua relação com a Carcinogénese Mamária. 2004.
<http://hdl.handle.net/10216/14341>.

RISCO DE CANCRO e RESISTÊNCIA À INSULINA

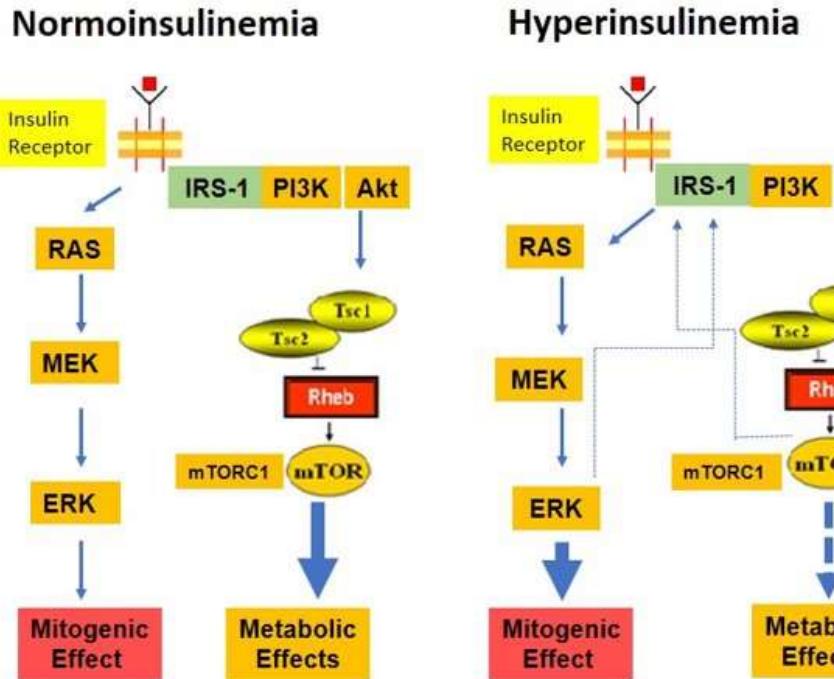
Um modelo multi-dimensional



- ✓ Efeito mitogénico da insulina
- ✓ F. Crescimento (Insulina, IgF1)
- ✓ Hormonas (Estrogénios, Androgénios, Leptina...)
- ✓ Citoquinas pro-inflamatórias
- ✓ PAI-1
- ✓ Microbiota

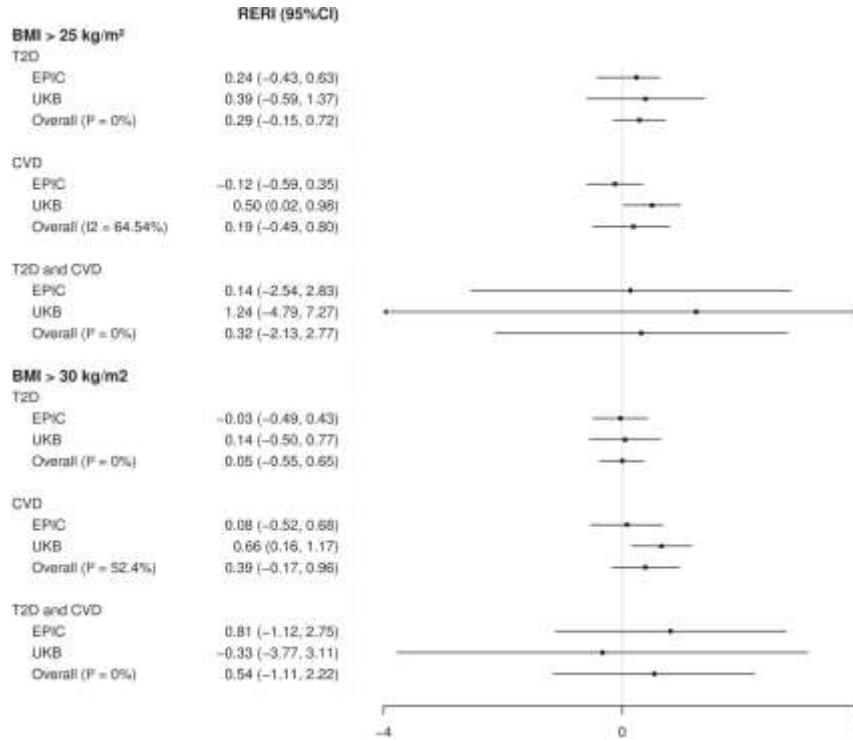
Adaptado de Jee et al. Yonsei Med J 2005; 46(4):449

**PI3K/Akt/mTOR pathway is a major key
in establishing the connection between metabolism
(Insulin Resistance and Hyperinsulinism) and Cancer**



(Adapted from "Diabetes and cancer. Paolo Vigneri, et. al. ERC, 2009)

Body mass index and cancer risk among adults with and without cardiometabolic diseases: evidence from the EPIC and UK Biobank prospective cohort studies. Emma Fontvieille, et. Al. *BMC Medicine* volume 21, 418 (2023)



- Irrespective of CMD status, **higher BMI increased the risk of obesity-related cancer among European adults.**
- The additive interaction between obesity and CVD suggests that **obesity prevention would translate into a greater cancer risk reduction among population groups with CVD than among the general population.**

Health & Medicine

Obesity could overtake smoking as biggest preventable cause of cancer in women



by [Cancer Research UK | News](#)

24 September 2018

 0 comments

 3 mins read



“Right now, obesity is projected to replace tobacco as the leading modifiable risk factor for many cancers,” said ASCO Immediate Past President Clifford A. Hudis, MD, FACP m(2014).

When addressing ASCO membership at the 2014 ASCO Annual Meeting, Dr. Hudis stressed that **obesity has the potential to reverse the gains oncologists have made in fighting cancer during the past 50 years.**

Factores Modificáveis para Cancro e Diagnóstico Precoce



Álcool e Cancro



Sedentarismo e Cancro



Alimentação e Cancro



Obesidade e Cancro



Amamentação, Menopausa e Cancro da Mama



Amamentação e Cancro da Mama

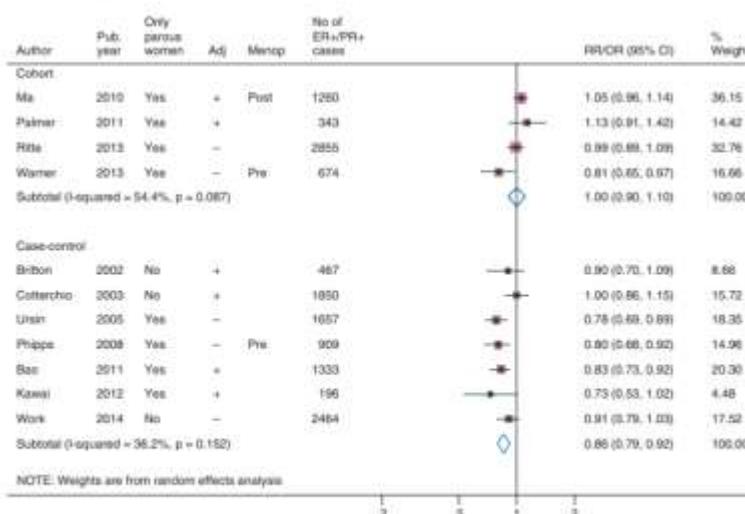


Figure 4. Association between ever breastfeeding and the breast cancers that were positive for both oestrogen and progesterone receptors. Adj., adjusted for at least age, body mass index, parity, and family history of breast cancer; Menop, menopausal status of study participants ('Pre' and 'Post' indicate that participants were premenopausal or postmenopausal women, respectively); Pub. year, publication year.

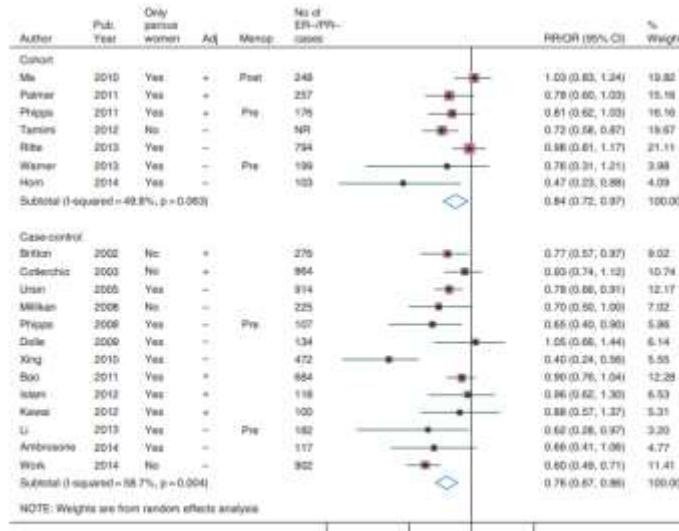
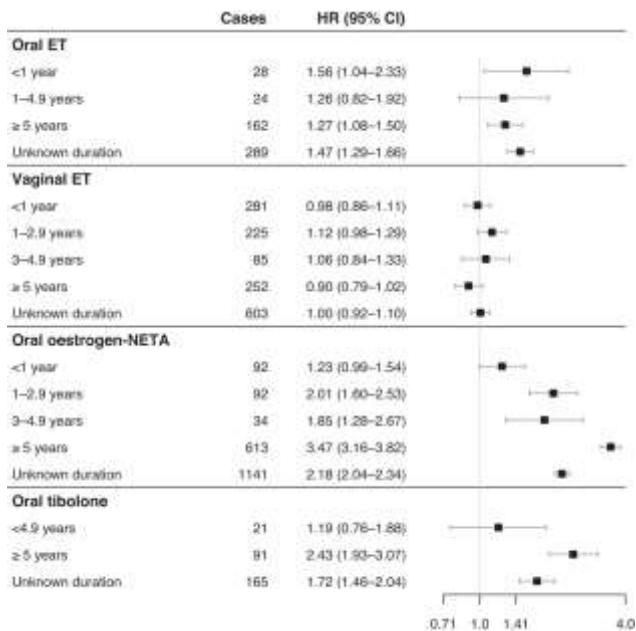


Figure 2. Association between ever breastfeeding and the breast cancers that are negative for both oestrogen and progesterone receptors. Adj., adjusted for at least age, body mass index, parity, and family history of breast cancer; Menop, menopausal status of study participants ('Pre' and 'Post' indicate that participants were premenopausal or postmenopausal women, respectively); No, not reported; Pub. year, publication year.

- ✓ The relative risk of breast cancer is decreased by 4.3% (CI 2.9–5.8) for every 12 months of breastfeeding, which was in addition to the 7.0% (CI 5.0–9.0) decrease in risk observed for each birth.
- ✓ In the context of a high-income country such as the UK, a woman who has two children and breastfed for 12 months with each child will have reduced her risk of breast cancer by 8.6%.
- ✓ No reduction in the risk for hormone-receptor positive (HR+) BC associated with breastfeeding but found a 20% reduction in the risk of triple-negative BC (TNBC). Association of Breastfeeding and HER+ and BC is controversial.



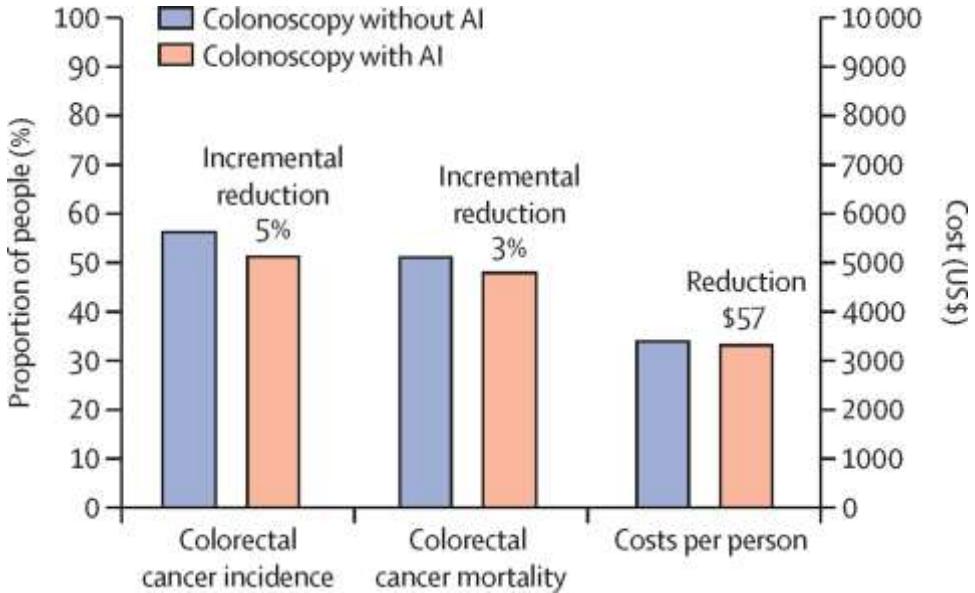
Terapêutica Hormonal Substituição (THS) na Menopausa e Cancro da Mama



- ✓ Combination therapy with E/P demonstrated a significantly increased risk, with a hazard ratio of 1.2.
- ✓ This risk remained elevated for several years after discontinuation HRT but then declined rapidly.
- ✓ After the results of the WHI study were made public, a decline in BC incidence was noted in the US.
- ✓ In the WHI study, postmenopausal women on combination E/P HRT had an average increase of 6% in mammographic density vs approx 1% decrease in placebo group over the same period.

The use of oral and transdermal HT was associated with an increased risk of BC. The associations varied according to HT type, individual drugs, molecular subtype, detection mode and BMI. British Journal of Cancer (2024) 131:126–137

Rastreio do Cancro – Diagnóstico Precoce (Prevenção Secundária)



Expected risk of colorectal cancer incidence and mortality of colonoscopy screening with and without AI compared with non-screening. Estimated costs per person are also presented. Lancet Digit Health 2022 Published Online April 13, 2022 [https://doi.org/10.1016/S2589-7500\(22\)00042-5](https://doi.org/10.1016/S2589-7500(22)00042-5)

- ✓ Colo Útero
- ✓ Cancro da Mama
- ✓ Cancro Colorectal

- ✓ Pele
- ✓ Cavidade Oral
- ✓ Estômago
- ✓ Ovário
- ✓ Pulmão.....

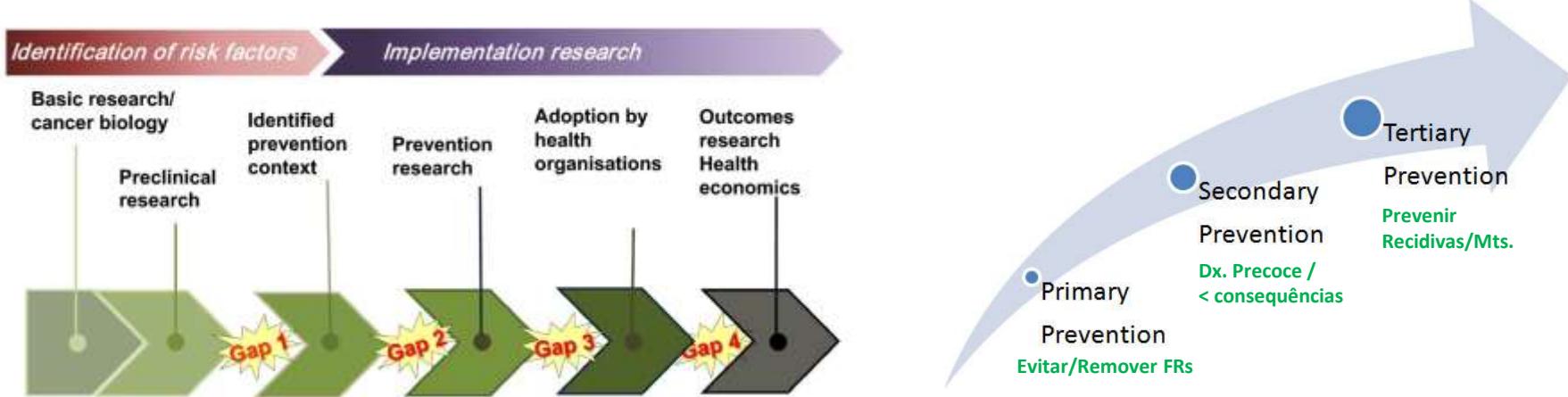
Estilo de Vida nos doentes com Cancro (Prevenção terciária)

Postdiagnosis body fatness, recreational physical activity, dietary factors and breast cancer prognosis: Global Cancer Update Programme (CUP Global) summary of evidence grading

- ✓ Após o Diagnóstico
- ✓ Evitar recidivas
- ✓ Reduzir Mortalidade
- ✓ Manter a QoL

Summary of evidence matrix	All-cause mortality	Breast cancer mortality	Breast cancer recurrence	Second primary Breast cancer	Nonbreast cancer mortality	CVD mortality
Diet						
Pre-defined healthy dietary and lifestyle patterns						
Dietary patterns conceived for interventional trials - Low fat dietary pattern						
Data-driven dietary patterns						
Fruit and vegetables						
Fruits						
Vegetables						
Cruciferous vegetables						
Wholegrains						
Meat (meat, red meat, processed meat, red and processed meat ¹ , poultry)						
Fish						
Dairy products (total, high fat, low fat)						
Soy foods (isoflavones and soy protein)						
Carbohydrates						
Protein (meat, animal, vegetable)						
Fat (total fat, SFA, MUFA, PUFA, marine fats, trans fatty acids)						
Dietary fibre						
Alcoholic drinks						
Dietary supplements						
Serum vitamin D (25(OH)D)						
Food containing vitamin D						
Vitamin D supplement						
Body fatness						
Body mass index						
Waist circumference						
Waist-to-hip-ratio						
Weight/BMI change						
Physical activity						
Recreational physical activity						
Increases risk						
Conclusions key						
■ Strong - Convincing	■ Strong - Probable	■ Limited - Suggestive	■ Limited - No conclusion	■ Limited - Suggestive	■ Strong - Probable	■ Strong - Convincing
Decreases risk						
Note: Empty cells included few or no studies and were not assigned an evidence grade.						

Em Resumo....



- ✓ The growing cancer problem can only be significantly modified by concerted action involving prevention to decrease incidence, early detection and treatment to increase the cure rate,
- ✓ and personalised/precision cancer medicine to adapt early detection and treatment to the biology of a tumour
- ✓ with the aim of increasing the cure rate, prolonging survival and improving health-related quality of life.

12 WAYS TO REDUCE YOUR CANCER RISK

MAKING THE EUROPEAN CODE AGAINST CANCER

Did you know that about half of all cancers could be avoided?

What can you do to reduce your risk of cancer?

- 1 BE PHYSICALLY ACTIVE IN EVERYDAY LIFE**
Last time I was physically active for at least 30 minutes of moderate physical activity a week.
 - 2 EAT FOOD, NOT TOO MUCH, MOSTLY PLANTS**
 - 3 HAVE A HEALTHY DIET**
Eat more vegetables, whole grains, fruit, beans, lentils, nuts, seeds, lean protein, low-fat, plant-based processed meat, and fish.
 - 4 ADVICE FOR WOMEN**
Women having a preventable breast cancer risk of 1 in 8 have a 1 in 8 risk of developing breast cancer. This is known as hereditary risk.
 - 5 DO NOT SMOKE**
How to Stop if you smoke is devoted to smoking. Call me now if you want to quit.
 - 6 AVOID ALCOHOL**
Drinking alcohol can cause at least seven types of cancer. It increases the risk of breast, liver, esophageal, oral, stomach, colon, rectal, and pancreatic cancer.
 - 7 AVOID SECOND-HAND SMOKE**
Keep your home and car smoke-free. Second-hand smoke increases the risk of lung cancer and heart disease in non-smokers.
 - 8 AVOID TOO MUCH SUN**
Sunburn is the most important risk factor for skin cancer. Increase your sun protection and avoid sunbeds.
 - 9 GET VACCINATIONS**
Routine vaccines are effective against hepatitis B and meningitis. If there is no vaccination programme for hepatitis B and meningitis, ask your doctor or pharmacist.
 - 10 GET SCREENED FOR CANCER**
Screening is of great benefit for early detection of certain cancers. Take part in organised screening programmes for breast cancer, bowel cancer, cervical cancer, and prostate cancer.
 - 11 BE A HEALTHY WEIGHT**
As the amount of fat in the body increases, so does the risk of developing cancer. Try to have a healthy weight, eat right by eating nutritious food, and getting a healthy diet.
 - 12 POLLUTANTS**
Protect yourself against workplace and pollution health and safety risks.
- Irish Cancer Society**
We won't give up until cancer does.

Find out more about the [European Code Against Cancer](#) and ways to reduce your cancer risk on www.cancer.ie/europeancode or call: 1800 200 700



'This Food Will Kill You,
That Food Will Save You'

(Freedhoff, Y. [Medscape Diabetes & Endocrinology](#), 2021)

12

WAYS TO REDUCE
YOUR CANCER RISK

Muito Obrigada!



JORNADAS DE MEDICINA IPO PORTO