# Cardio-Oncology in General Practice

Dr Theodore Murphy

Consultant Cardiologist

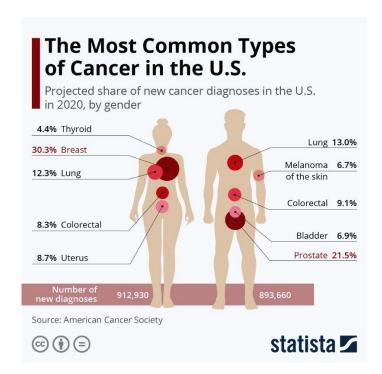
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<u>Theodore.Murphy@beaconhospital.ie</u>



#### Lifetime Risk of Cancer

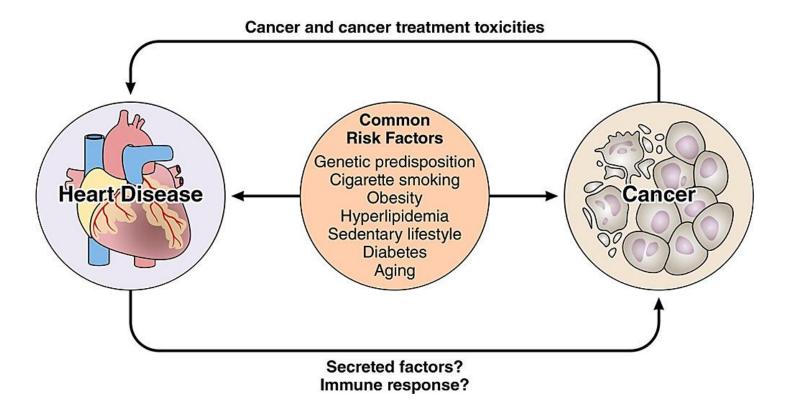
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SEER Cancer Statistics Review, 1975-2011. http://seer.cancer.gov/csr/1975\_2012/. Published 2013

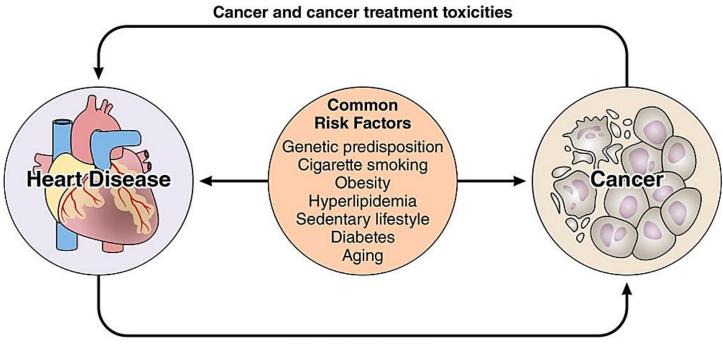


#### Cancer & Cardiovascular Disease





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Secreted factors? Immune response?

**PREDICT** 

**PROTECT** 

**PREVENT** 



## Learning Objectives

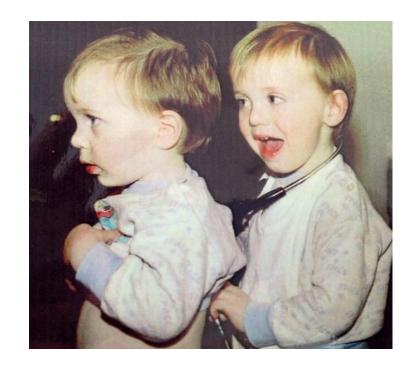
- Recognise the importance of Cardio-oncology
- Relevance of Cardio-oncology in General Practice
- The Role of GP in Cardio-oncology



#### Disclosures & Conflicts of Interest

- Son of a GP
  - Appreciation of what it is to be a GP

Married to a GP trainee





# What is Cardio-Oncology & What it is Not!

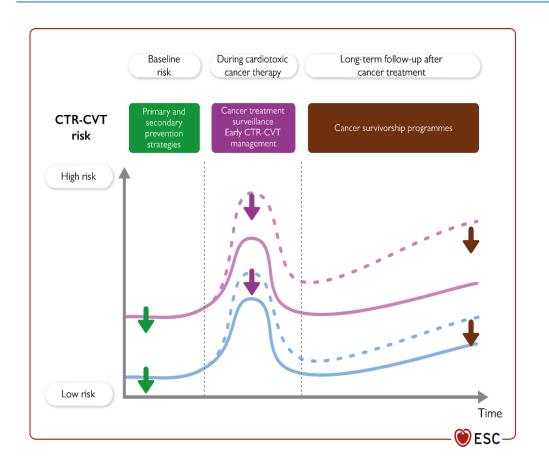
- Cardio-oncology:
  - The overarching goal of the cardio-oncology discipline is to allow patients with cancer to receive the best possible cancer treatments safely, minimizing CTR-CVT across the entire continuum of cancer care.

Cardio-oncology is not cancer of the heart!

Cancer of the heart is rare: Cardio-oncology is not!



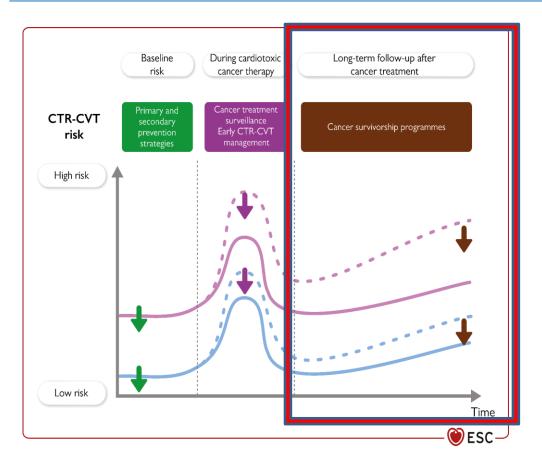
# Role of Cardio-Oncology Before, During & After Treatment



2022 ESC guidelines on Cardio-oncology (European Heart Journal;2022- doi 10.1093/eurheartj/ehac244)



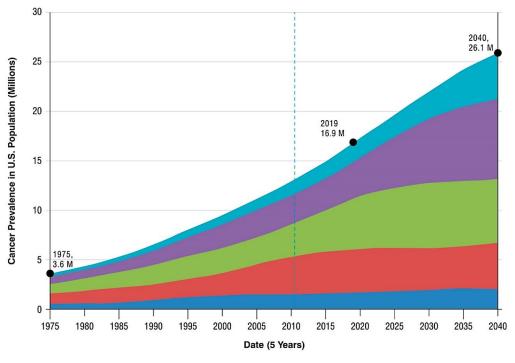
#### Role of Cardio-Oncology Before, During & After Treatment



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## Cancer Survivorship



KEY

Age

Signifies the year at which the first baby boomers (those born 1946–1964) turned 65 years old.

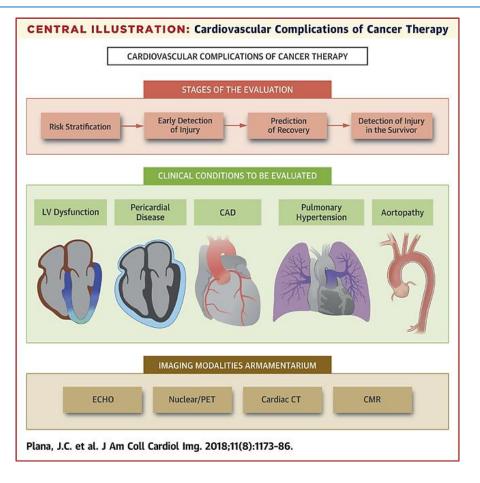
Age

50
50–64
65–74
75–84
85+

Shapiro CL. Cancer survivorship. N Engl J Med. 2018;379(25):2438-2450

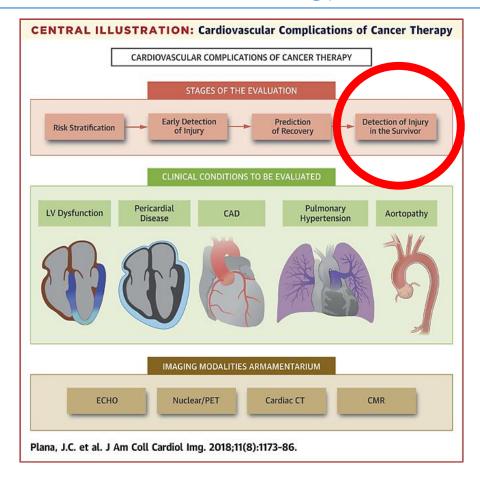


# Clinical Presentation of Cardio-Oncology



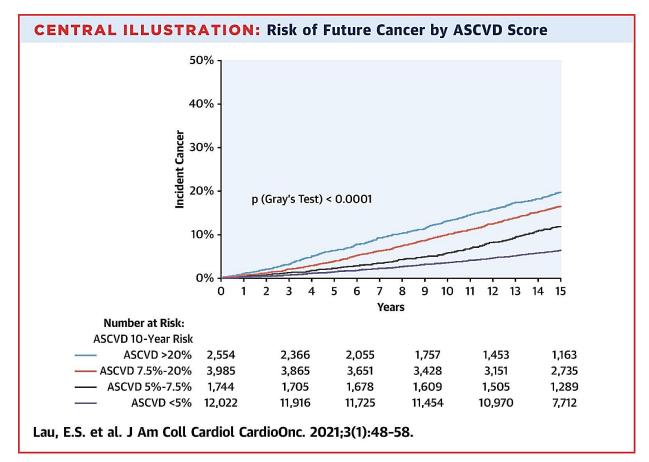


# Clinical Presentation of Cardio-Oncology





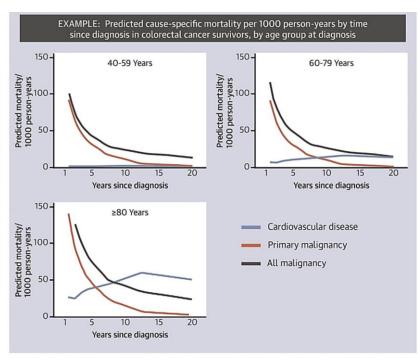
#### Increased CVD Risk = Increased Cancer Risk





# Cardiovascular Disease Overtaking Cancer in Survivors

Crossover point in years when cardiovascular disease mortality rate equals mortality rate from primary cancer, by age group at diagnosis				
T o			Age group at diagnosis	
7	Cancer site	40 to 59 yrs	60 to 79 yrs	≥80 yrs
	Prostate			8.9 (7.4-16.7)
	Leukemia			6.3 (2.9-13.1)
	Colorectal		8.6 (8.1-13.9)	5.4 (4.7-9.3)
	Lung		17.4 (12.9-26.6)	10.6 (7.4-22.4)
U	Melanoma		8.5 (6.8-14.6)	1.9 (1.5-4.5)
	Breast		12.7 (11.6-21.6)	7.1 (6.3-12.6)
	Bladder		4.8 (2.9-9.1)	2.6 (2.4-3.9)
19	Non-Hodgkin lymphoma		15.4 (10.8-24.8)	4.7 (3.1-9.9)
	Uterus	11.0 (8.2-20.8)	7.1 (6.6-13.0)	3.9 (3.5-8.8)



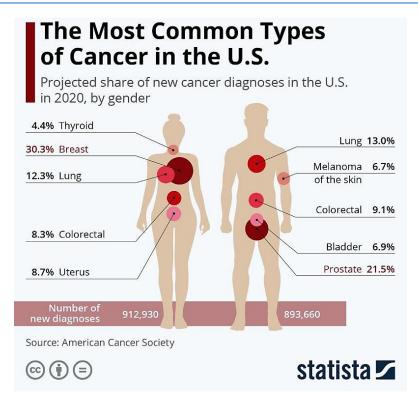


#### Identification of The Unmet Need

# LIFETIME CHANCE OF GETTING CANCER: (Howlader et. al 2013)





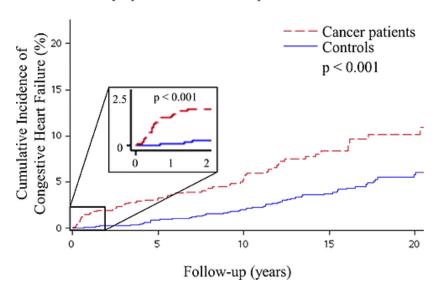


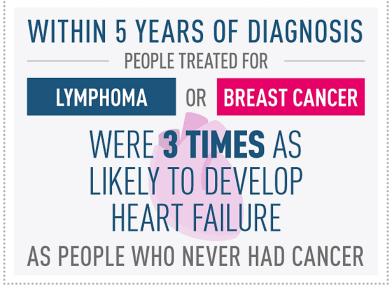
SEER Cancer Statistics Review, 1975-2011. http://seer.cancer.gov/csr/1975\_2012/. Published 2013



#### Breast Cancer & Cardiovascular Disease

Figure 1. Incidence of Congestive Heart Failure in Breast Cancer and Lymphoma Patients Compared With Matched Controls



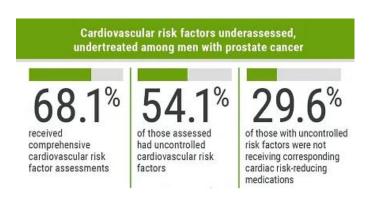


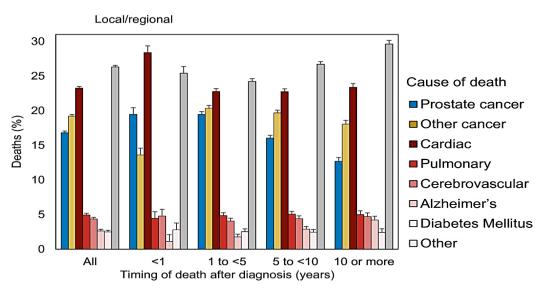
Source: Larsen CM, et al. 2018 ACC Annual Scientific Session. Session #1105-066

Cancer.gov



#### Prostate Cancer & Cardiovascular Disease





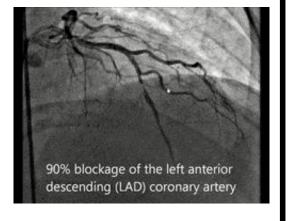
Sun, L. et al. (2021) "Assessment and management of cardiovascular risk factors among US veterans with prostate cancer," JAMA Network Open, 4(2). Available at: https://doi.org/10.1001/jamanetworkopen.2021.0070.

Weiner, A.B. et al. (2021) "Cause of death during prostate cancer survivorship: A contemporary, US population–based analysis," Cancer, 127(16), pp. 2895–2904. Available at: https://doi.org/10.1002/cncr.33584.

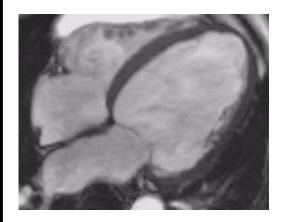


#### Three clinical Examples

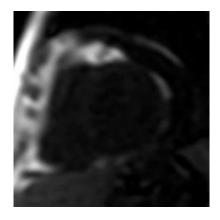
- Juan Carlos 40 y/o male Google
- Childhood malignancy
- Unclear of chemotherapy but recalls radiation
- C/O shortness of breath and some chest discomfort on exertion



- Mary 67 y/o female retired nurse
- Breast cancer in her 40s
- Bilateral mastectomy with anthracyclinebased Chemotherapy and Trastuzumab.
- C/O increased fatiguability, shortness of breath on exertion



- Patrick 82 y/o farmer
- "Non-attender" 5 year history of prostate cancer
- Poorly controlled diabetic
- BP 165/90, Cholesterol 8, LDL 5.
- Wife brings him in as he is just not feeling right "getting sweatier out in the fields"



# First Dedicated Cardio-Oncology Centre in Ireland



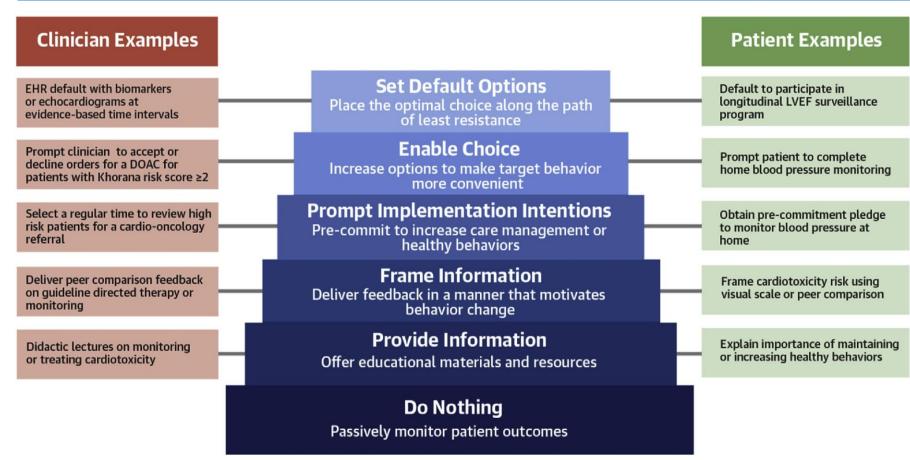


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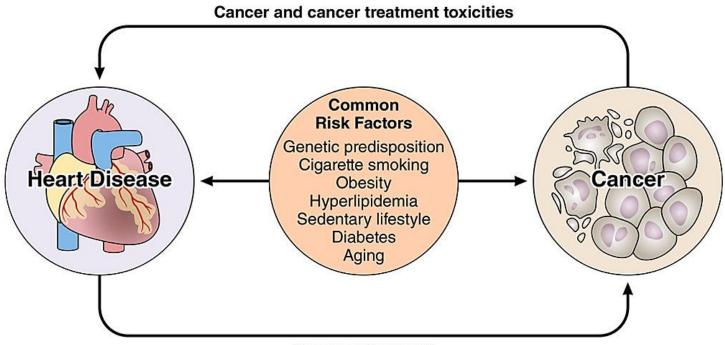




# A Nudge Ladder – Steps to Improve Quality of Care



#### Cancer & Cardiovascular Disease



Secreted factors? Immune response?

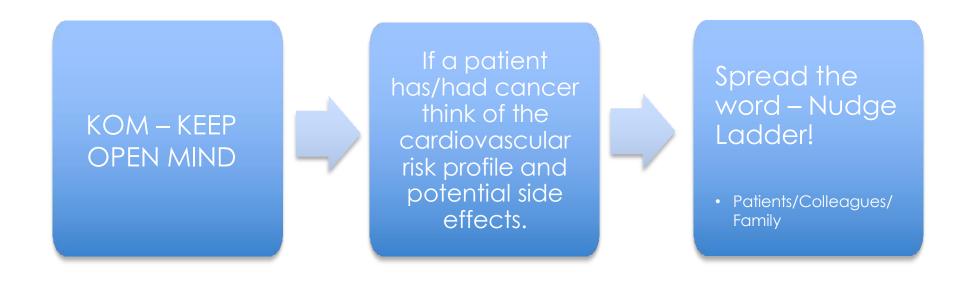
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#### Cardio-Oncology: Take Home Messages





# Thank you

Or Theodore Murphy
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