



Value of Money in Cancer - IMRT as a case study

Jean H.E. Yong, MASC

Pharmacoeconomics Research Unit, Cancer Care Ontario

Canadian Centre for Applied Research in Cancer Control

Applied Health Research Centre, St. Michael's Hospital



Key messages

- It is important to consider Value for Money when planning and coordinating cancer care
- Assessing value for money is not difficult, but needs to be relevant to the context
- Let's try to provide value for money every step along the cancer journey

Cancer care shows 'culture of excess'

CBC News Posted: Sep 26, 2011 4:54 PM ET | Last Updated: Sep 26, 2011 4:59 PM ET 46

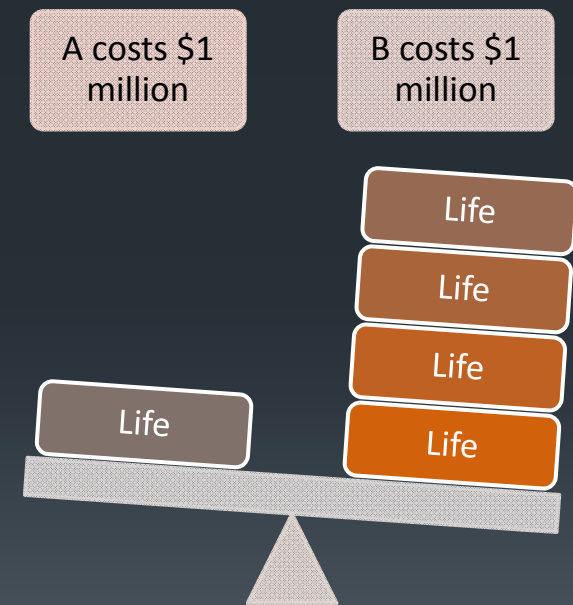
The cost of cancer care in wealthy countries is becoming unsustainable, according to a new report.

Monday's online issue of Lancet Oncology includes a report by 37 experts from developed countries on managing cancer costs in the U.S., UK and Australia.

"In developed countries, cancer treatment is becoming a culture of excess," the authors said. "We overdiagnose, overtreat, and overpromise." This extends from use of complex technology, surgery, and drugs to events related to the acceptance of treatment side-effects."

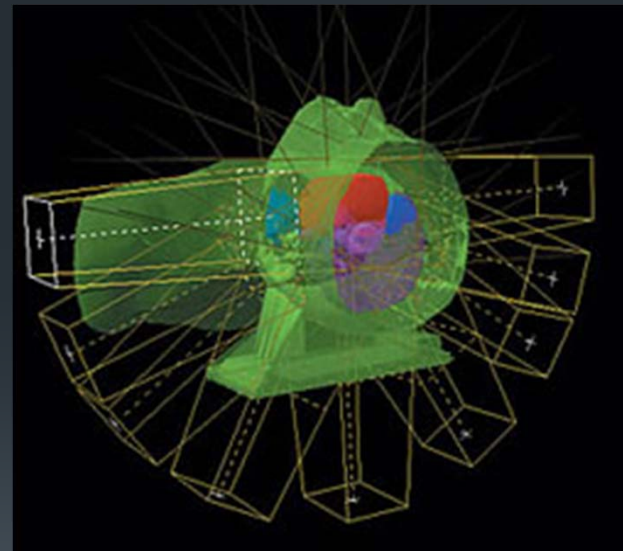
Value for money

- We want to buy as much health as possible
- But, we have limited resources
- Economics:
 - How much does something cost?
 - What do we get for what we pay?
 - Cost-effectiveness analysis



Intensity-Modulated Radiation Therapy (IMRT)

- Introducing IMRT across Ontario
- Which disease sites?
- Is IMRT good value for money?
- Can we afford it?



Picture: Radiation Medical Group

Toxicity – IMRT vs. conventional RT

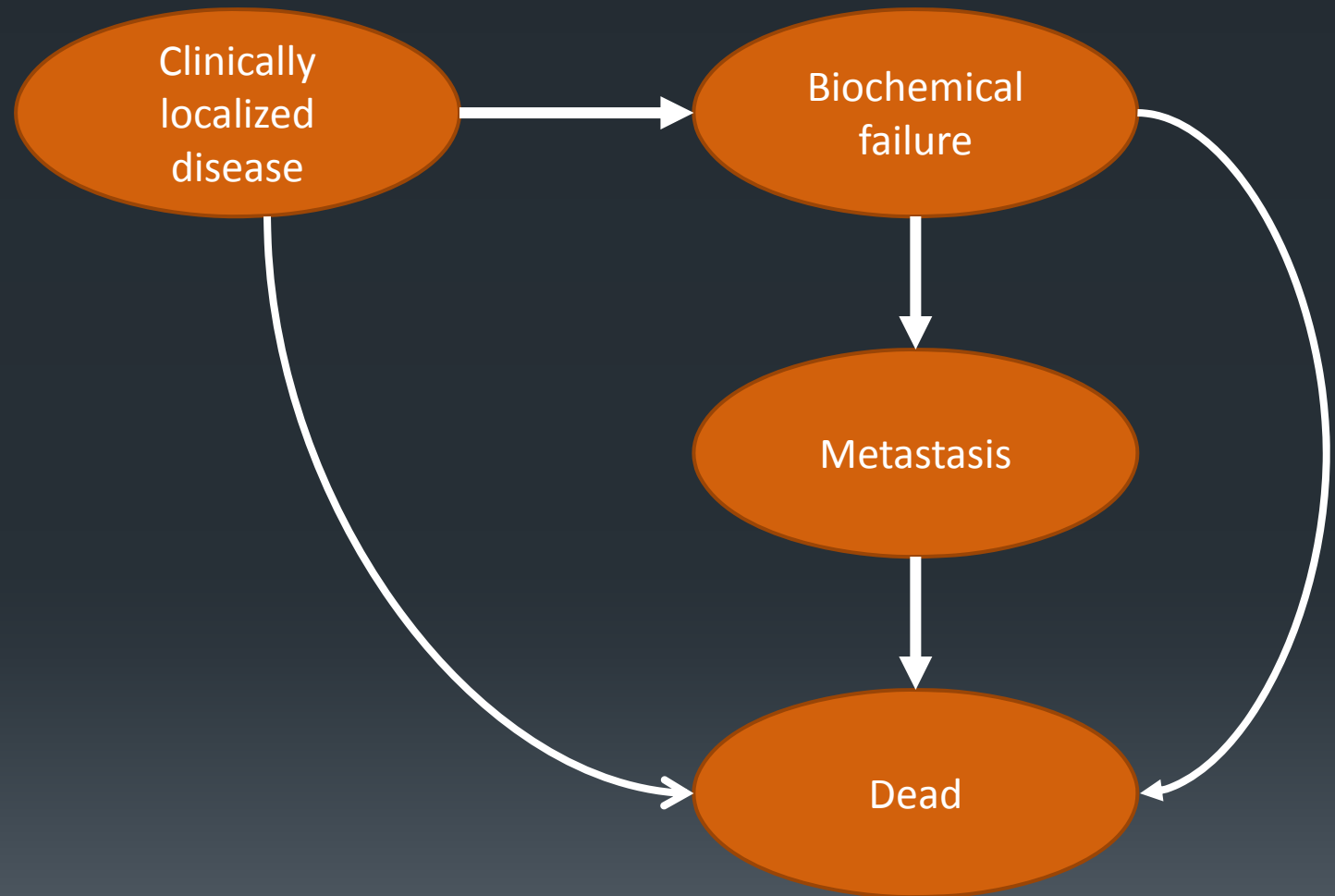
Localized prostate cancer

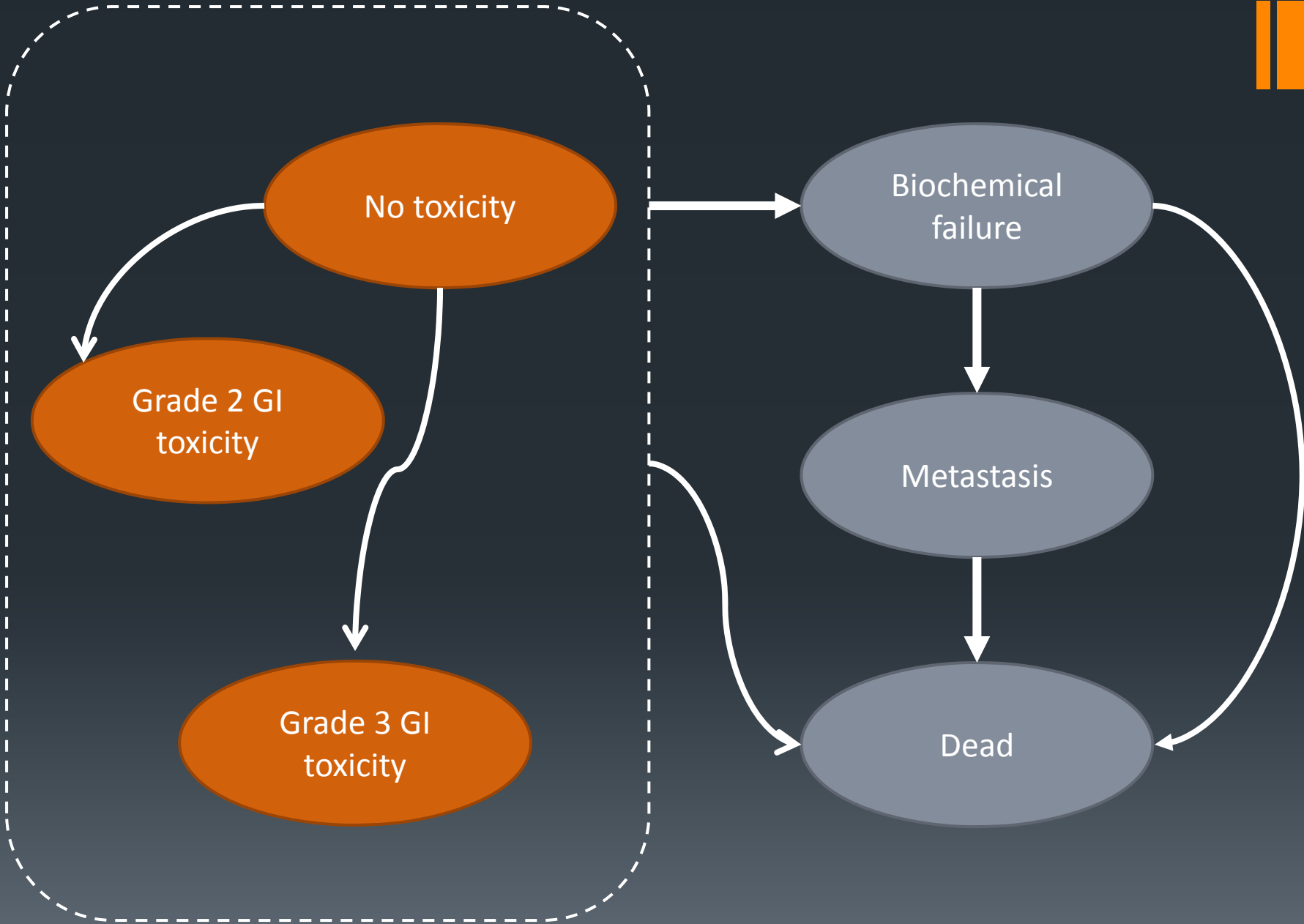
	Grade 2	Grade 3	Duration
Acute gastrointestinal	16% vs. 33%	0 vs. 13%	2 months
Late gastrointestinal	5% vs. 13%	0 vs. 0	36 months

Head and neck cancers

	Event rates
Grade ≥ 2 Xerostomia	12% vs. 67%

Localized prostate cancer





IMRT vs. 3D-CRT in prostate cancer

	IMRT	CRT	Incremental
Radiation treatment cost	\$14,520	\$13,501	\$1,019
Radiotherapy toxicity cost	\$106	\$508	\$(402)
Total cost (discounted at 5%)	\$60,138	\$59,518	\$621
Life-years gained (discounted at 5%)	8.257	8.257	0.000
QALYs gained (discounted at 5%)	6.085	6.062	0.023
Incremental cost per QALY gained			\$26,768



IMRT vs. 2D-RT in head and neck cancers

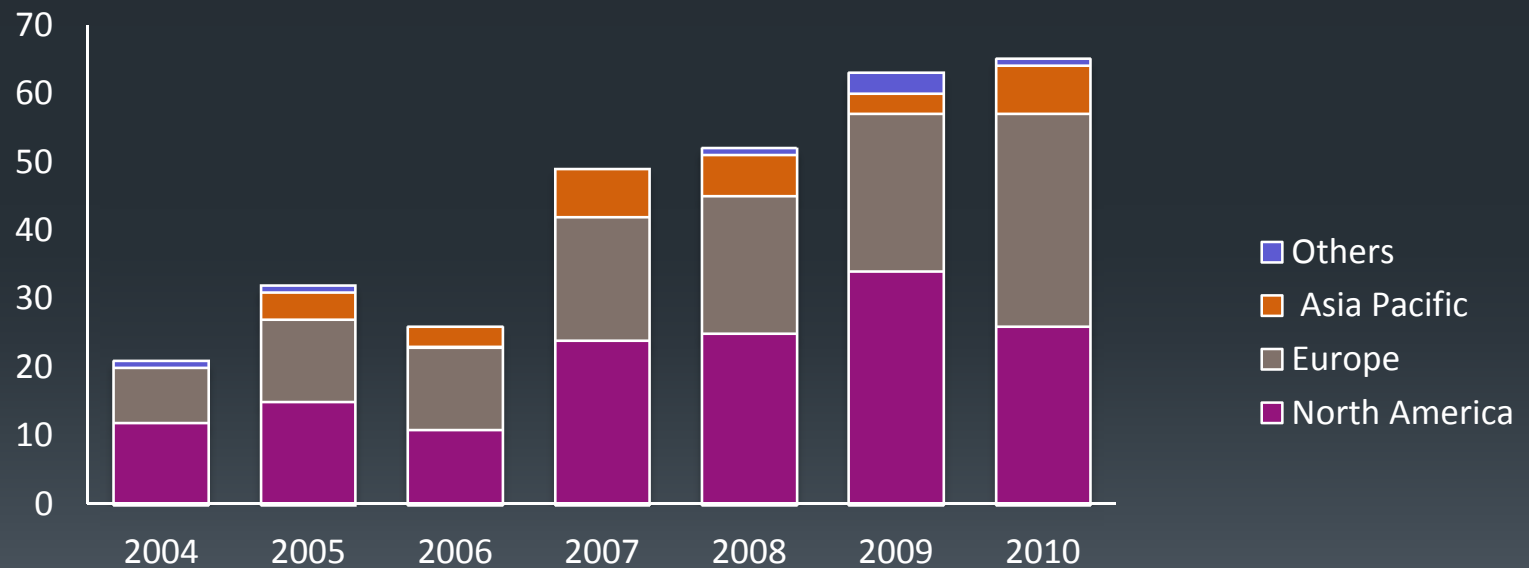
- Compared with 2D-RT, IMRT improves clinical outcome
 - Need to treat <2 patients to reduce one case of xerostomia
 - 0.5 QALY gain per patient
- IMRT is less expensive than CRT
 - saves \$1100 per patient
 - IMRT takes longer to plan but less time to deliver



Discussion

- Results are specific to the research questions
 - Not generalizable to other indications
 - Specific to the comparator
 - Radiotherapy costs vary across disease sites and countries

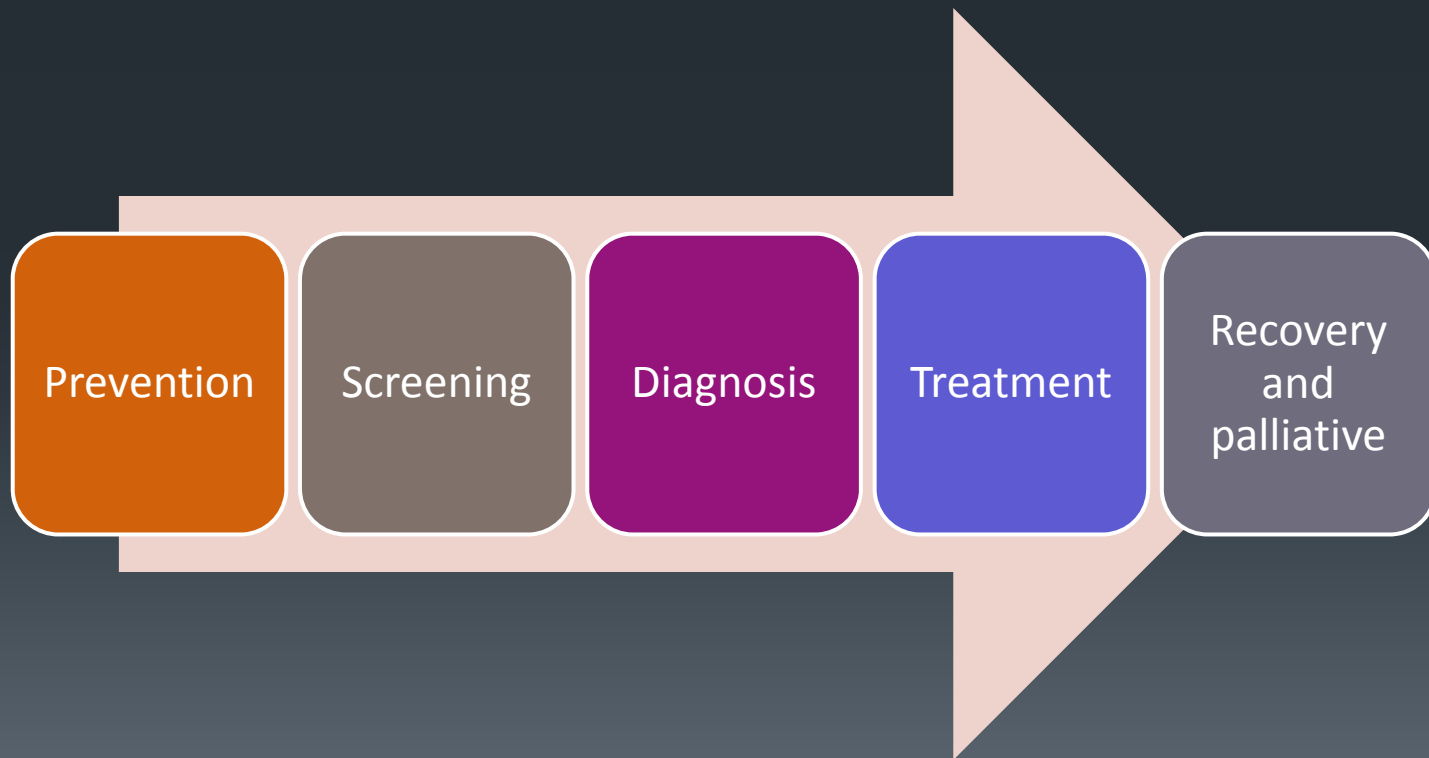
Value for money in Cancer

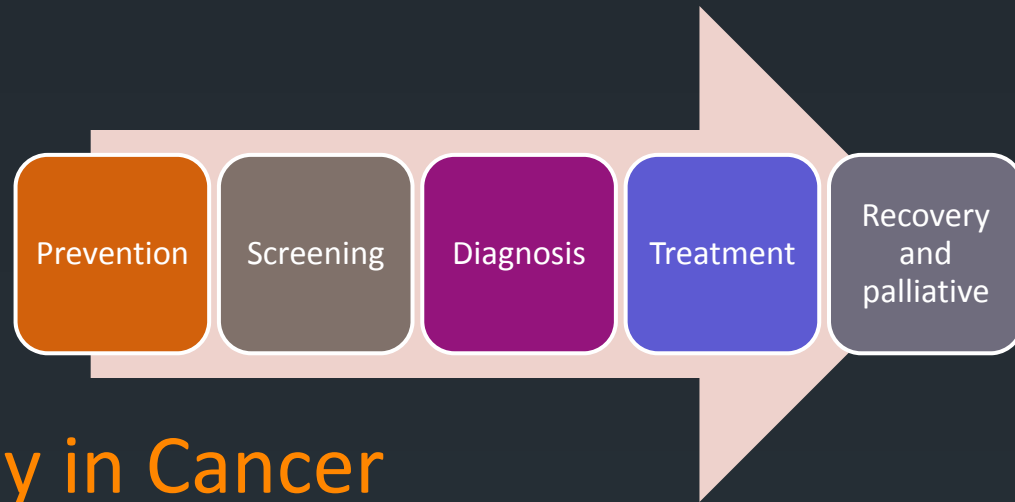


350 publications in all disease areas in 2010

Data: The Center for Evaluation of Value and Risk in Health, CEA Registry

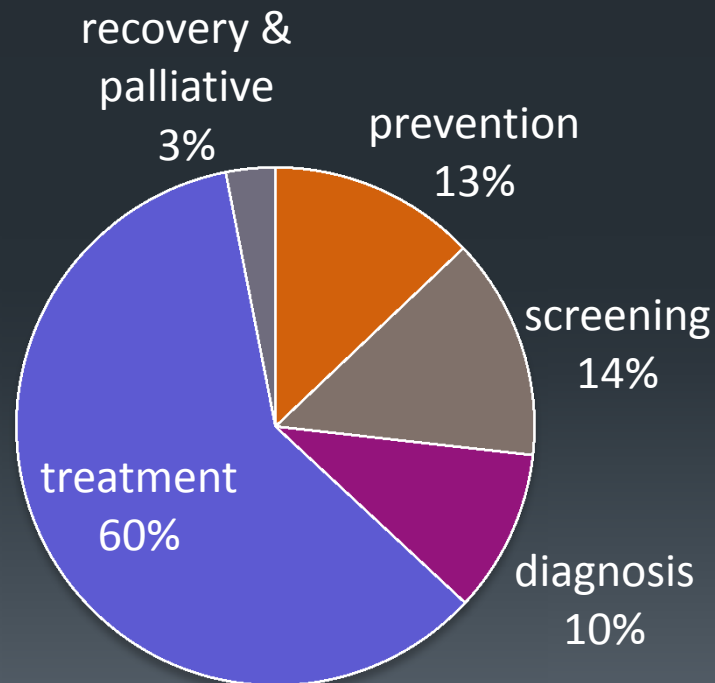
Cancer journey





Value for money in Cancer

313 studies (2004-2010)



Data: The Center for Evaluation of Value and Risk in Health, CEA Registry



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Jean.yong@cancercare.on.ca

Thank you.