



**Cancer Council Update
2008**

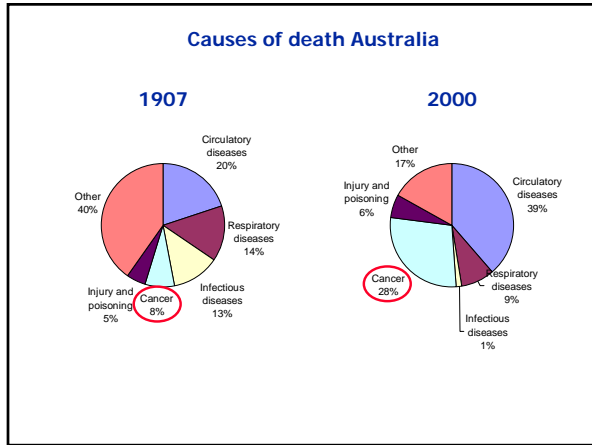
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Why blokes get cancer...
and how they can avoid it

David Whiteman
B Med Sc, MBBS (Hons), PhD, FAFPHM
NHMRC Senior Research Fellow



Queensland Institute of
Medical Research

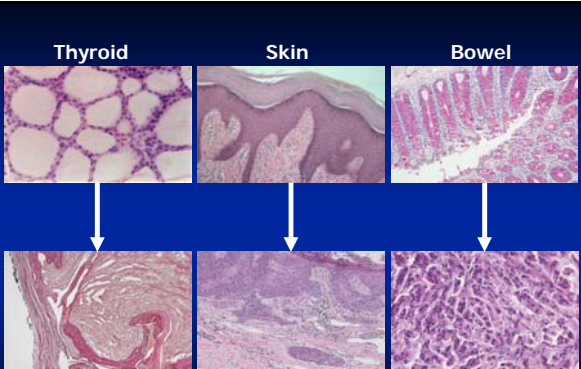


Focus of this talk

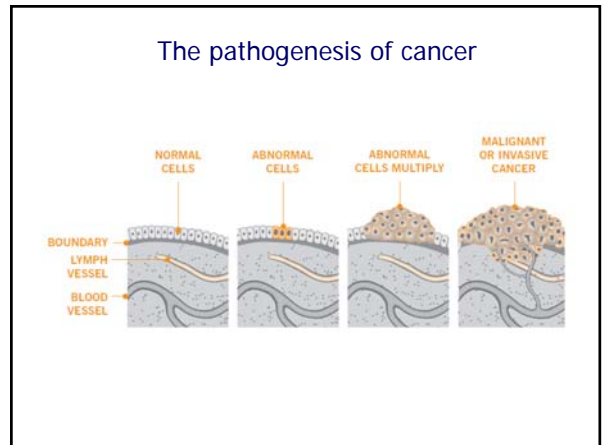
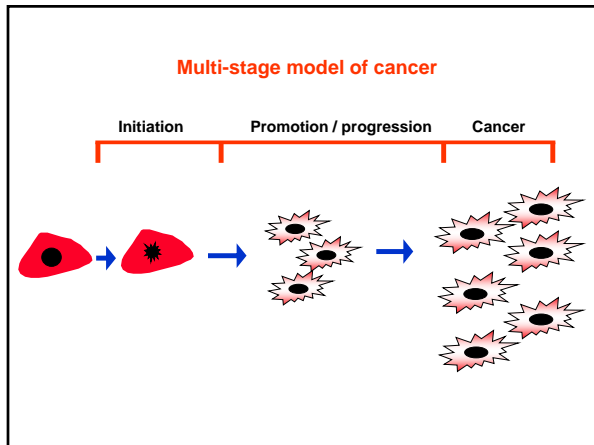
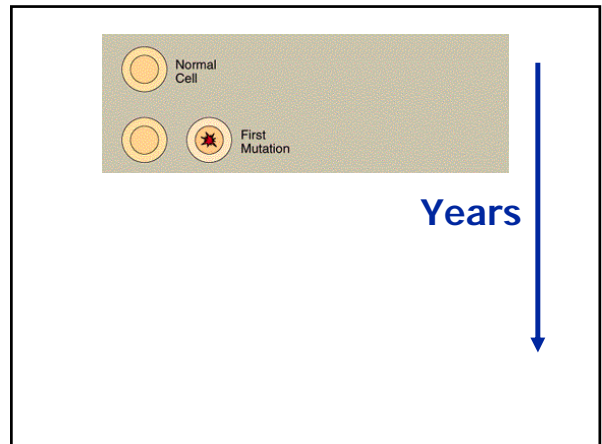
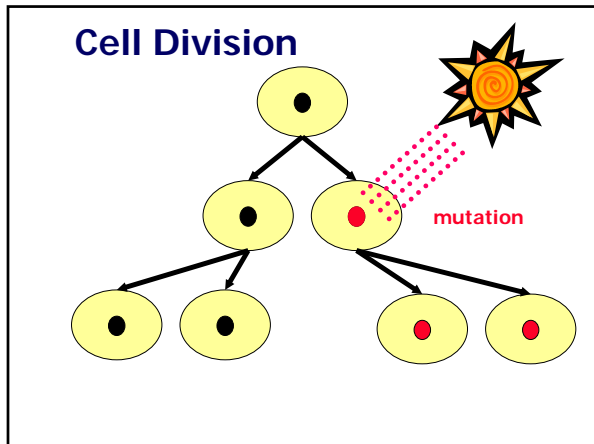
1. What is cancer?
2. Which cancers affect blokes?
3. How do we control these cancers?
4. What's new in the world of cancer prevention?

Focus of this talk

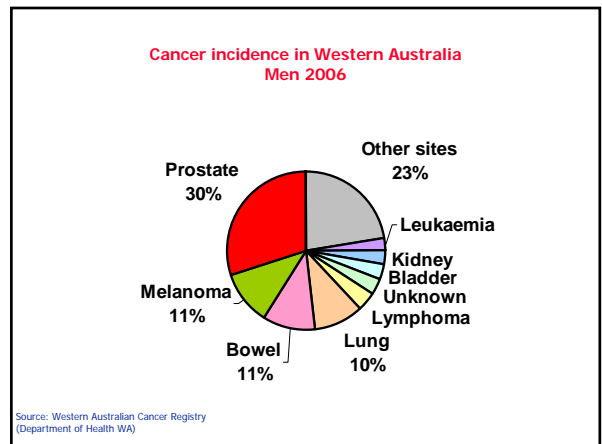
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Thyroid	Skin	Bowel
Thyroid cancer	Skin cancer	Bowel cancer



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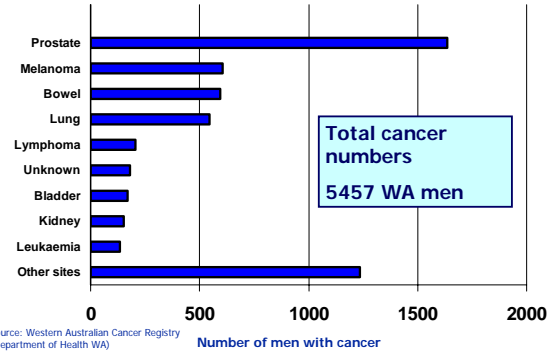


Cancers of the skin

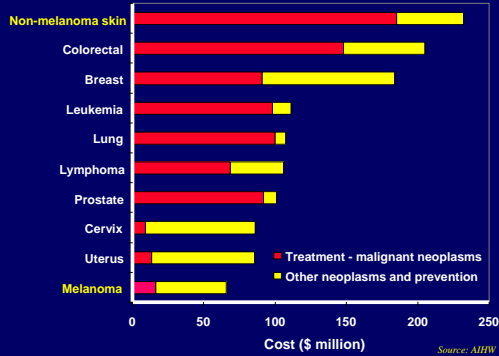
melanoma
squamous cell carcinoma
basal cell carcinoma



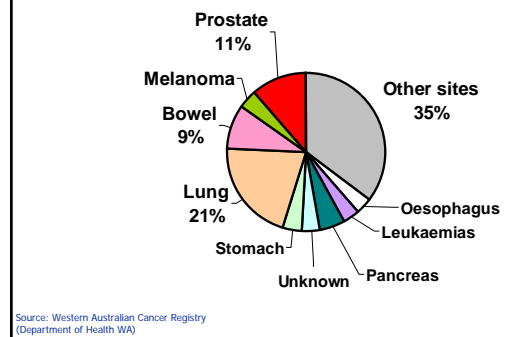
Cancer incidence in Western Australia Men 2006



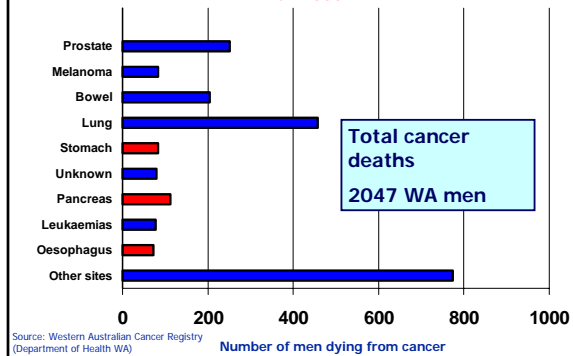
Health costs of cancer in Australia



Cancer deaths in Western Australia Men 2006



Cancer deaths in Western Australia Men 2006



The "Big Four"

1. Prostate
2. Bowel
3. Melanoma / skin
4. Lung

Prostate cancer statistics WA

Number of male cases	Number of male deaths	Lifetime risk
1635	252	1 in 8

Bowel cancer statistics WA

Number of male cases	Number of male deaths	Lifetime risk
594	204	1 in 21

Melanoma statistics WA

Number of male cases	Number of male deaths	Lifetime risk
605	83	1 in 22

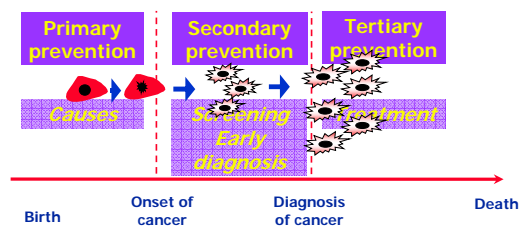
Lung cancer statistics WA

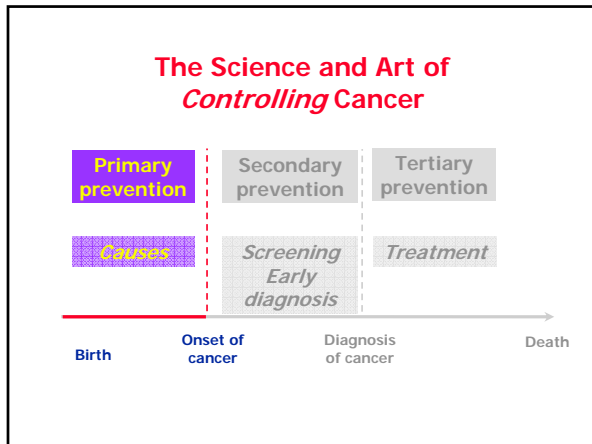

Number of male cases	Number of male deaths	Lifetime risk
546	458	1 in 24

Focus of this talk

1. What is cancer?
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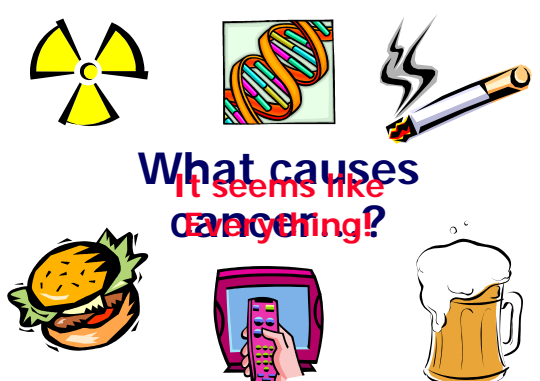
The Science and Art of Controlling Cancer



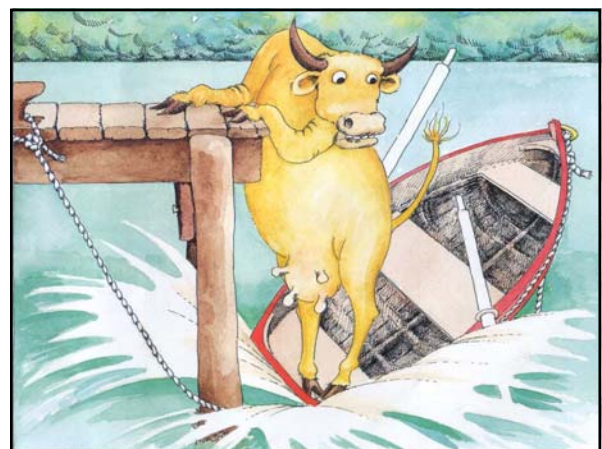



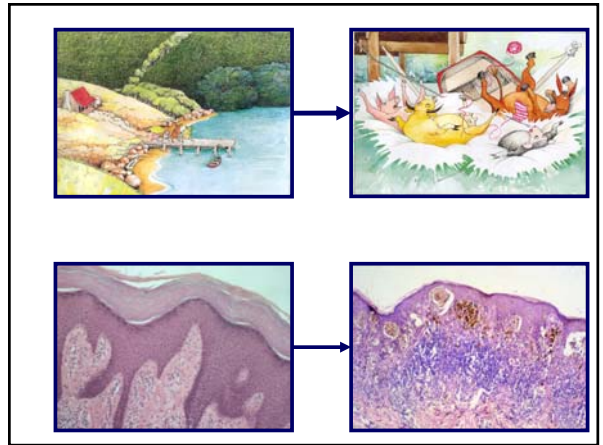
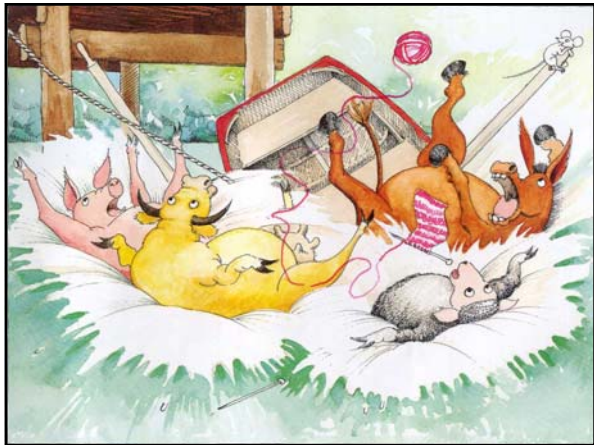

A brief interlude

Causal reasoning 101

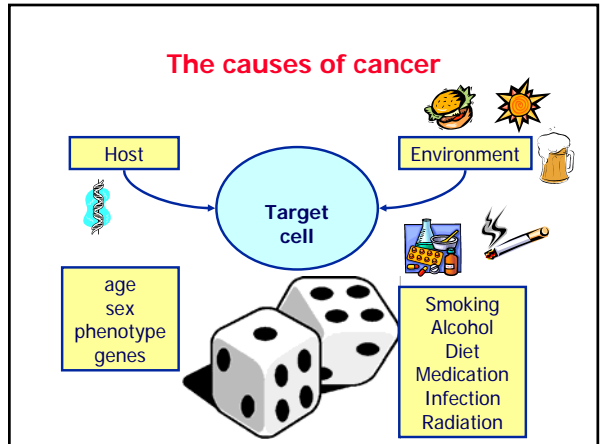


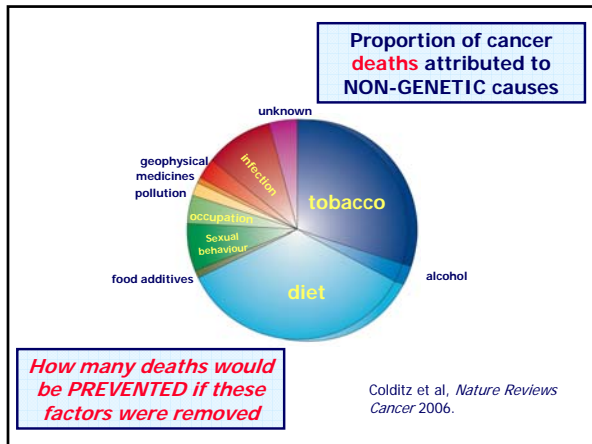
What causes cancer?
It seems like everything!



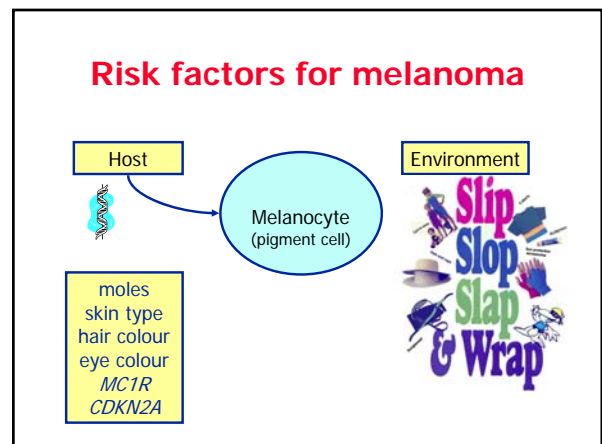
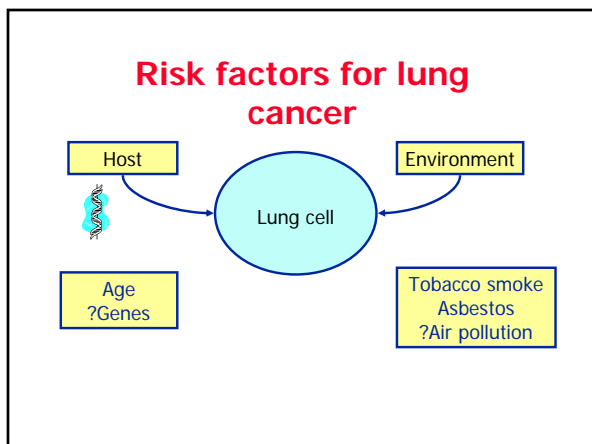
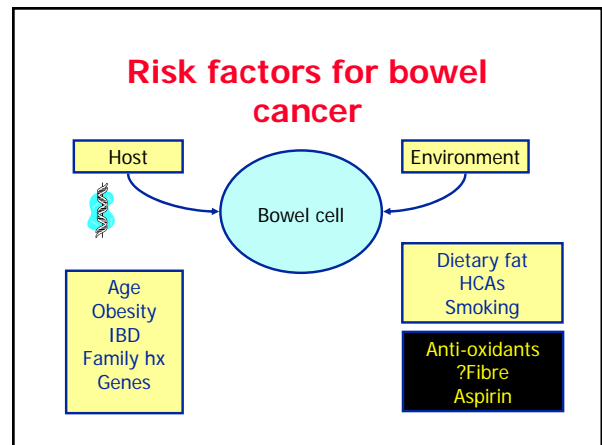
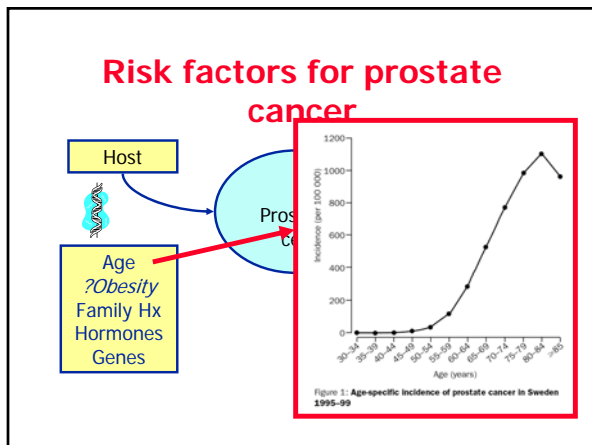



Back to the lecture...

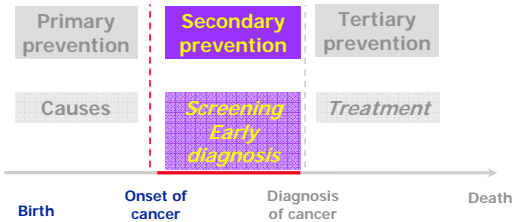




- ### Risk factors for the "Big Four"
1. Prostate
 2. Bowel
 3. Melanoma / skin
 4. Lung



The Science and Art of Controlling Cancer



How does screening work?

"A screening test is performed on an **asymptomatic** individual to determine that cancer might be present and that further evaluation, including a biopsy and staging, is necessary."

Brawley and Kramer, J Clin Oncol, 2005

1. Disease must be common
2. Disease must have a 'pre-clinical' stage
3. Effective treatment must be available
4. Benefits must outweigh harms

5. No such thing as a perfect screening test....

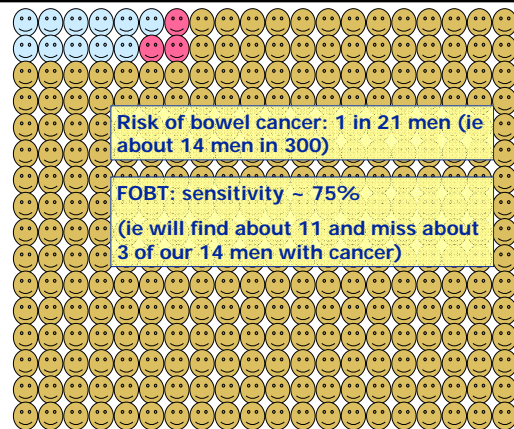
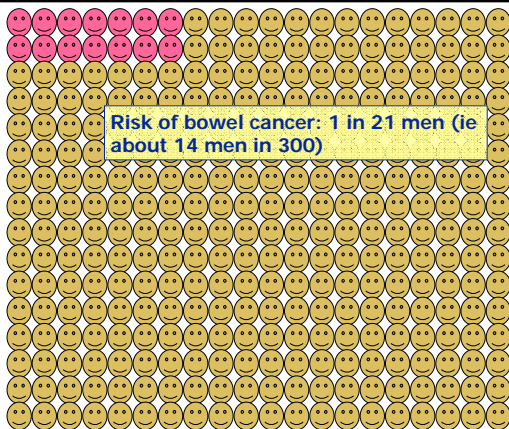
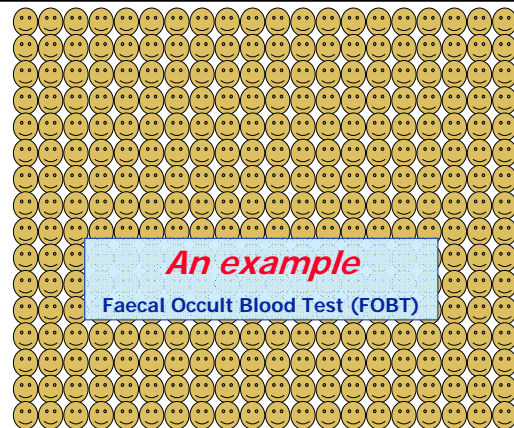
Some key concepts

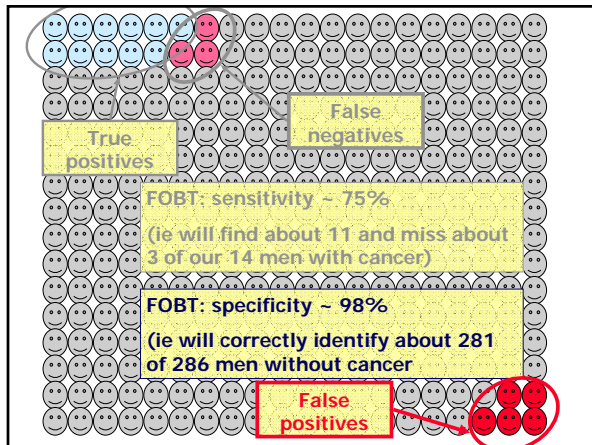
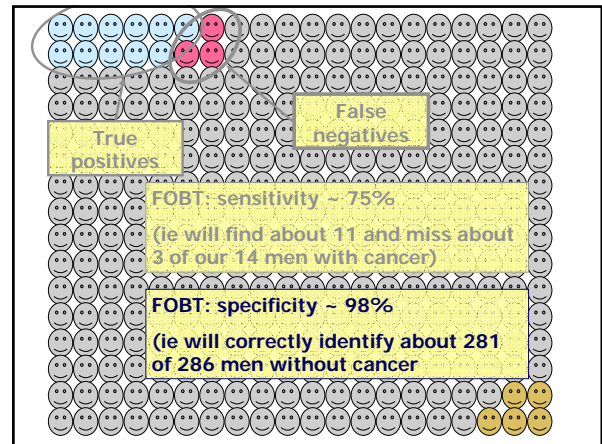
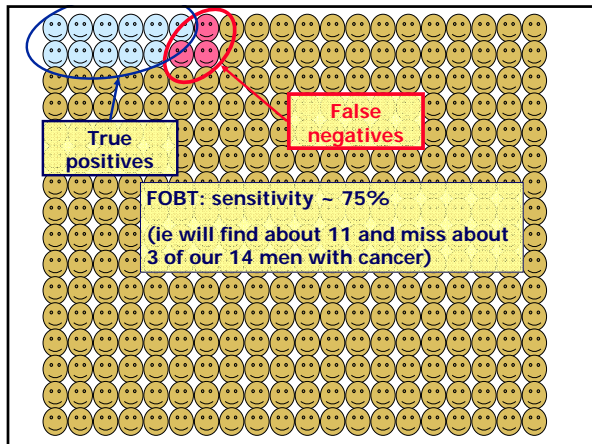
Sensitivity

- The % of people with cancer who return a ***positive*** screening test

Specificity

- The % of people without cancer who return a ***negative*** screening test





- ### Screening tests for the "Big Four"
1. Prostate
 2. Bowel
 3. Melanoma / skin
 4. Lung

- ### Prostate cancer screening
1. Digital Rectal Examination (DRE)
 2. Prostate Specific Antigen (PSA)

Prostate cancer screening

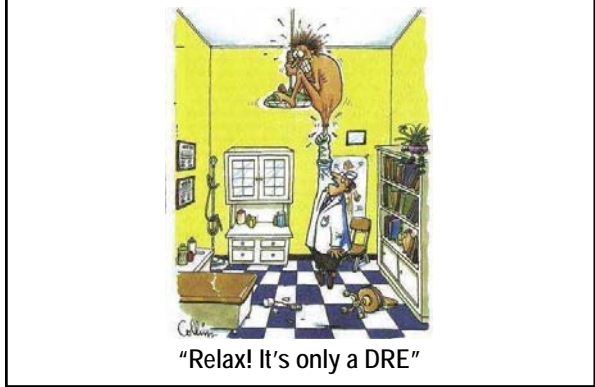
1. Digital Rectal Examination (DRE)
2. Prostate Specific Antigen (PSA)

Very low sensitivity
Only detects large, advanced tumours
Not useful as a screening tool (it's a diagnostic tool)

The DRE as an object of humour



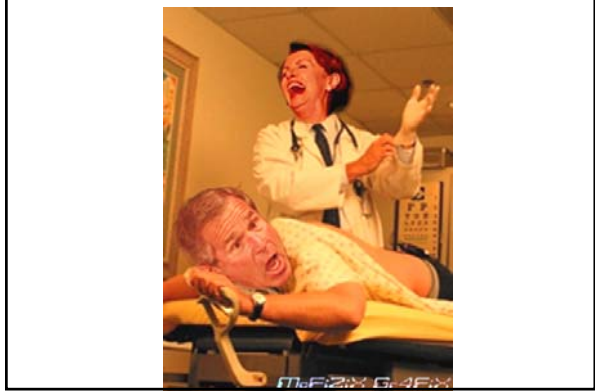
The DRE as an object of humour



The DRE as an object of humour



The DRE as an object of humour



Prostate cancer screening

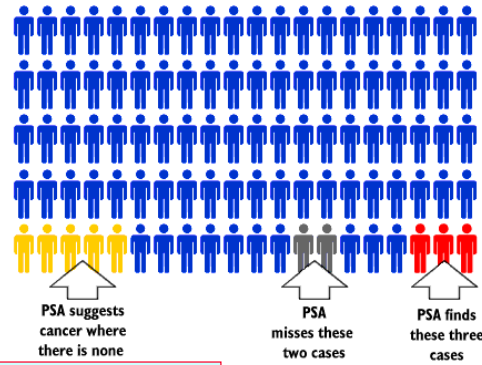
1. Digital Rectal Examination (DRE)
2. Prostate Specific Antigen (PSA)

Prostate-specific antigen (PSA) is a protein in prostatic cells. It can be detected in the blood of all adult men.

The PSA level is **increased** in men with prostate cancer but **can also be increased** in other disorders of the prostate



● Healthy man ● Man with prostate cancer ● Missed cases



Ontario Ministry of Health website

WA Cancer Council position

"The Cancer Council is a strong supporter of cancer screening and early detection of cancer if the benefits of screening outweigh any possible harms."

*"Unfortunately in the case of prostate cancer there is **no reliable medical proof that screening saves lives.**"*

WA Cancer Council position

"Individual men who decide to be tested should be able to do so on the basis of informed consent, having access to full information about the potential benefits and risks associated with testing."

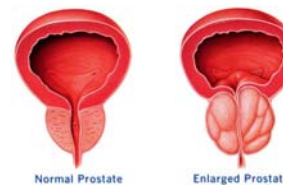
Talk to your GP



Prostate cancer early diagnosis

Symptoms

Frequent urination
Poor stream
Hesitancy



Talk to your GP

Bowel cancer screening

1. FOBT
2. Colonoscopy



National Bowel Screening Program

- Introduced 2006
- Strong evidence that screening for bowel cancer saves lives
- Screening every 2 years reduces the risk of dying from bowel cancer by **up to one-third**

National Bowel Screening Program

Who is eligible?

- People aged 50, 55 and 65 years who hold a Medicare card or DVA Gold Card

How does the program work?

- Invitation by mail
- Test in own home
- Specimen mailed to lab
- No cost to individual



What happens if I return a positive test?

- referred to GP and colonoscopy

National Bowel Screening Program

Results from the first year of the program

- 475,000 invitations sent to people aged 55 or 65 years

Response rates

- **Males:** 31%
- **Females:** 38%

Positive tests

- **Males:** 8.4%
- **Females:** 5.9%
- *Pre-cancerous polyps, adenomas or polyps were detected in 62.8% of all positive FOBT tests*

Talk to your GP

Australian Institute of Health and Welfare 2008. National Bowel Cancer Screening Program monitoring report 2007. Cancer series no. 40. Cat.no. CAN 35. Canberra: AIHW.

Bowel cancer early diagnosis

Symptoms

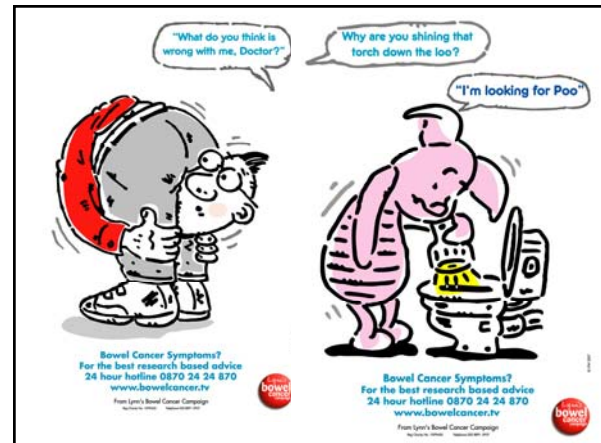
- Change in bowel habits
- Blood in stools
- Weight loss
- Fatigue



Talk to your GP

For the best research based advice
24 hour hotline 0870 24 24 870
www.bowelcancer.tv

From Lyn's Bowel Cancer Campaign
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Lung cancer screening


1. Nothing has been proven to save lives
2. *Experimental methods ???*


Melanoma screening


1. Nothing has been proven to save lives
2. *BUT early detection widely recommended*

Melanoma early detection

A = Asymmetry: 

B = Borders (irregular): 

C = Color (various): 

D = Diameter: 

The Cancer Council Australia and Australasian College of Dermatologists

- People are encouraged to check all areas of their skin, including skin not normally exposed to the sun.
- Look for changes in shape, colour or size of a pigmented lesion or a new lesion regularly (every three months).
- Individuals who are concerned about skin cancer should seek advice from a medical practitioner.
- Outdoor workers are encouraged to regularly check their skin for suspicious spots.


Talk to your GP

Focus of this talk

1. What is cancer?
2. Which cancers affect blokes?
3. How do we control these cancers?
4. What's new in the world of cancer prevention?


What's new in the world of cancer prevention?

exposure




→ Chemoprevention →

Skin cancer




"Old fashioned" primary prevention


exposure



→ SUN SCREEN →




Skin cancer




"New fashioned" prevention?

exposure




Initiation → Promotion → Progression



→ Chemoprevention →

Skin cancer




"New fashioned" prevention?

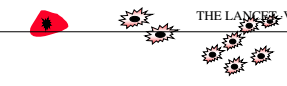
Early report

Effect of topically applied T4 endonuclease V in liposomes on skin cancer in xeroderma pigmentosum: a randomised study


exposure




Initiation → Promotion → Progression

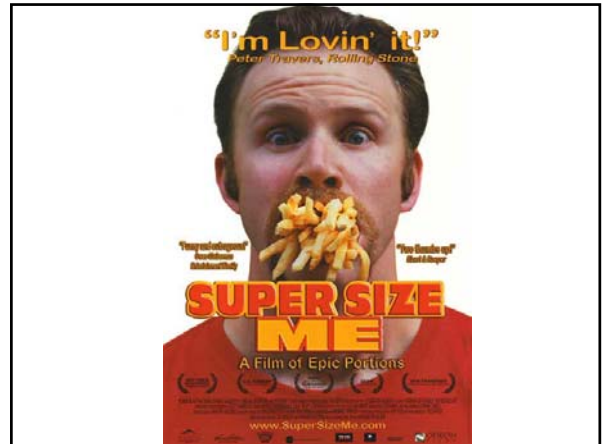
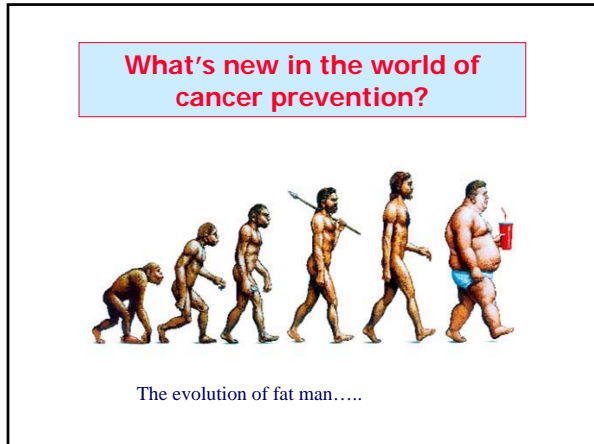


Skin cancer



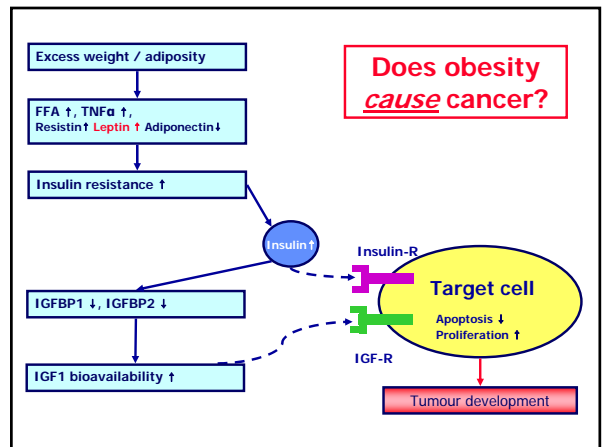
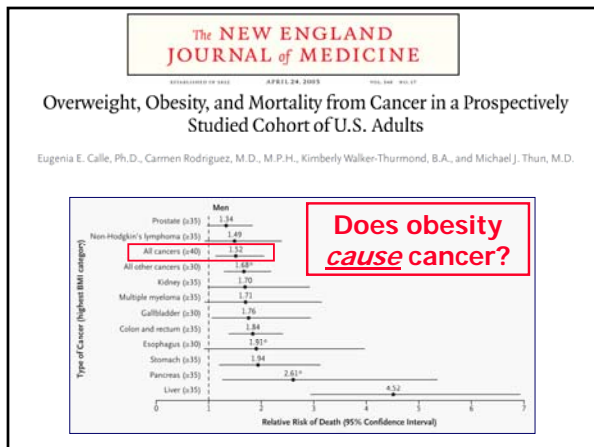

 therapy

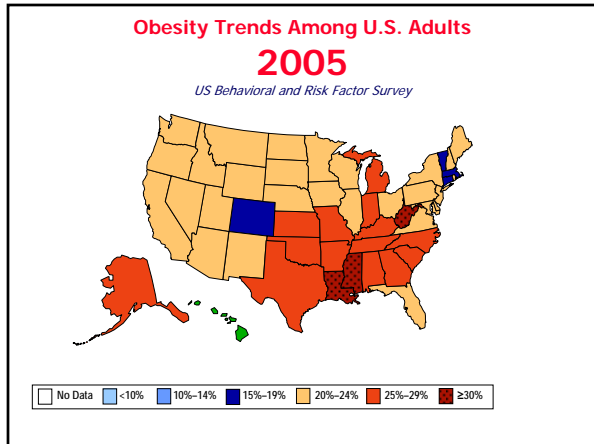
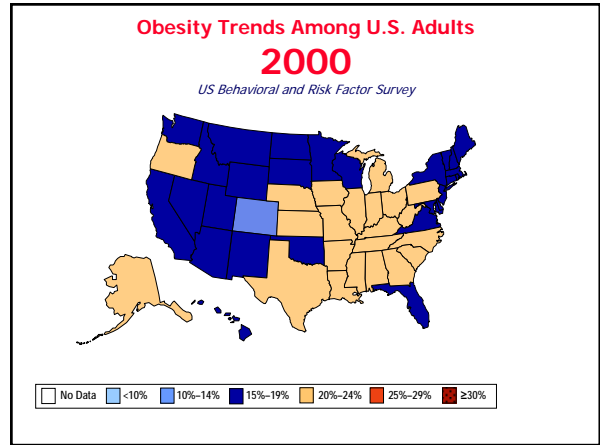
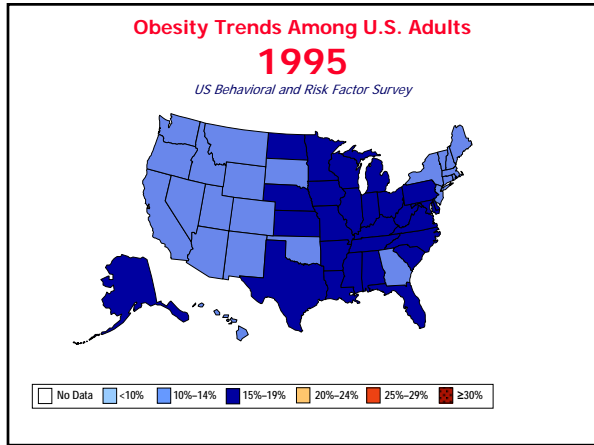
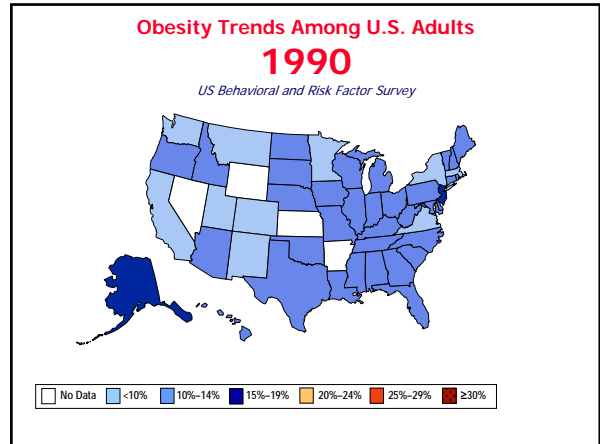
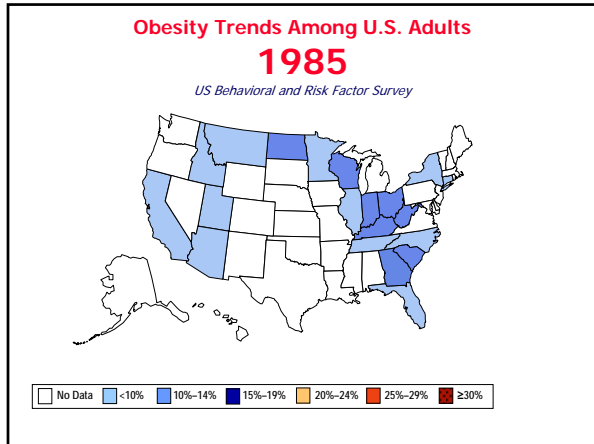
THE LANCET Vol 357 March 24, 2001



BMI = $\frac{\text{weight}}{(\text{height})^2}$

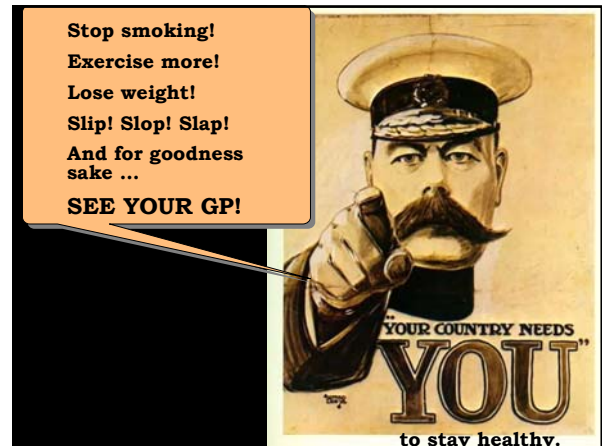
WHO categories		For a 1.80m bloke...	
<18.5 kg/m ²	= <i>underweight</i>	70kg	BMI = 22
18.5-24.9	= 'healthy'	75kg	BMI = 23
25-29.9	= <i>overweight</i>	80kg	BMI = 25
30 +	= <i>obese</i>	95kg	BMI = 29
		100kg	BMI = 31
		140kg	BMI = 43



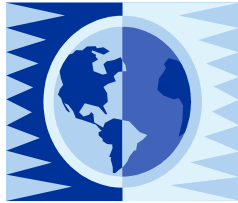


So why do blokes get cancer?

- many still smoke
- *Most* are overweight or obese
- many eat too much meat
- *Most* don't eat enough veg
- *Most* don't get enough exercise
- many get too much sunlight
- *Most* don't participate in screening
- *Most* don't go to the doctor



Prevention



A healthier world

Next week's lecture

Updates in the management of adult
brain cancer (glioma) patients

Dr Elizabeth Hovey,
Prince of Wales Hospital, NSW



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