

Alcohol & Cancer: from prevention to the patient

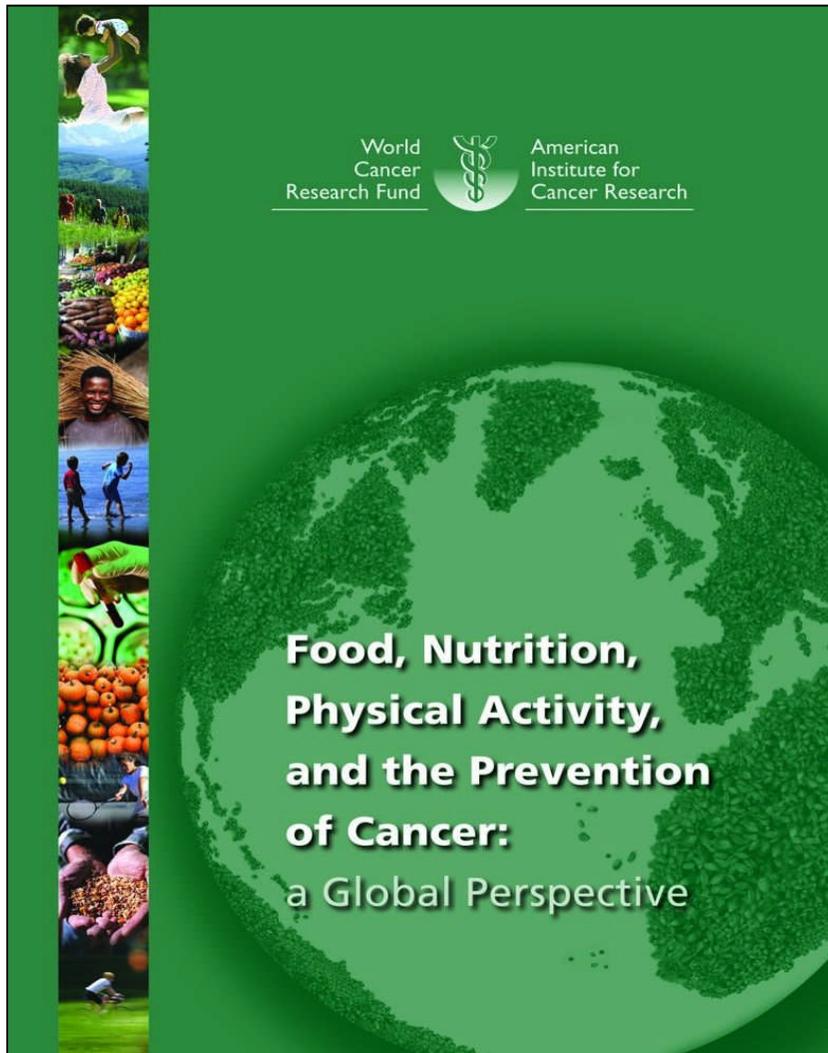
-from consistency to inconsistencies-

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Academic Medical Centre St Radboud Nijmegen



NEDERLANDS INSTITUUT VOOR ALCOHOLBELEID

Alcohol and the prevention of cancer



Alcohol increases the risk of tumors of the :

- mouth, larynx, pharynx
- oesophagus
- stomach
- colon, rectum
- breast
- liver

General recommendations of the 2007 WCRF/AICR Diet and Cancer Report

BODY FATNESS

Be as lean as possible within the normal range of body weight

PHYSICAL ACTIVITY

Be physically active as part of everyday life

FOODS AND DRINKS THAT PROMOTE WEIGHT GAIN

Limit consumption of energy-dense foods
Avoid sugary drinks

PLANT FOODS

Eat mostly foods of plant origin

ANIMAL FOODS

Limit intake of red meat and avoid processed meat

ALCOHOLIC DRINKS

Limit alcoholic drinks

PRESERVATION, PROCESSING, PREPARATION

Limit consumption of salt
Avoid mouldy cereals (grains) or pulses (legumes)

DIETARY SUPPLEMENTS

Aim to meet nutritional needs through diet alone

BREASTFEEDING

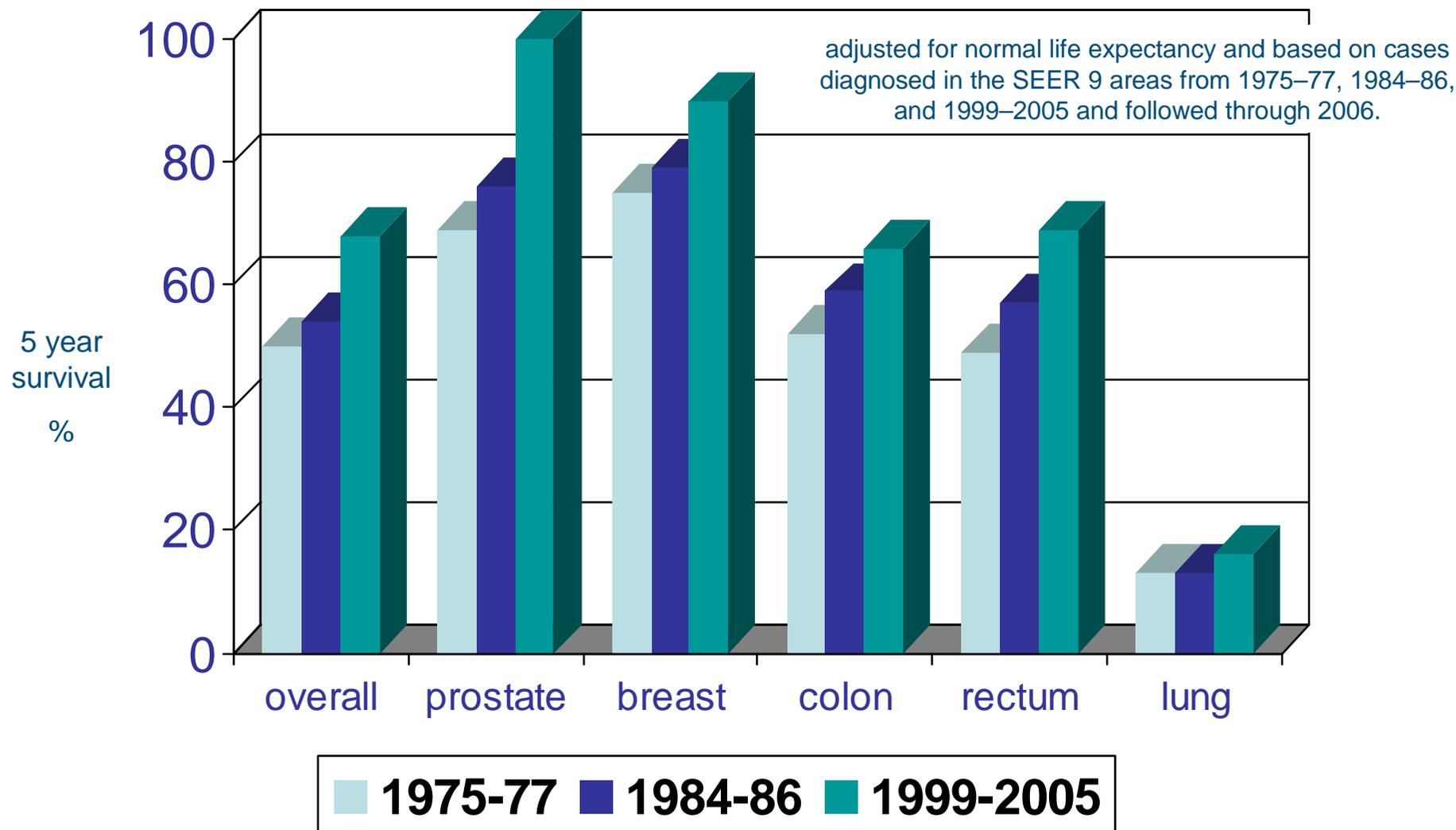
Mothers to breastfeed; children to be breastfed

CANCER SURVIVORS

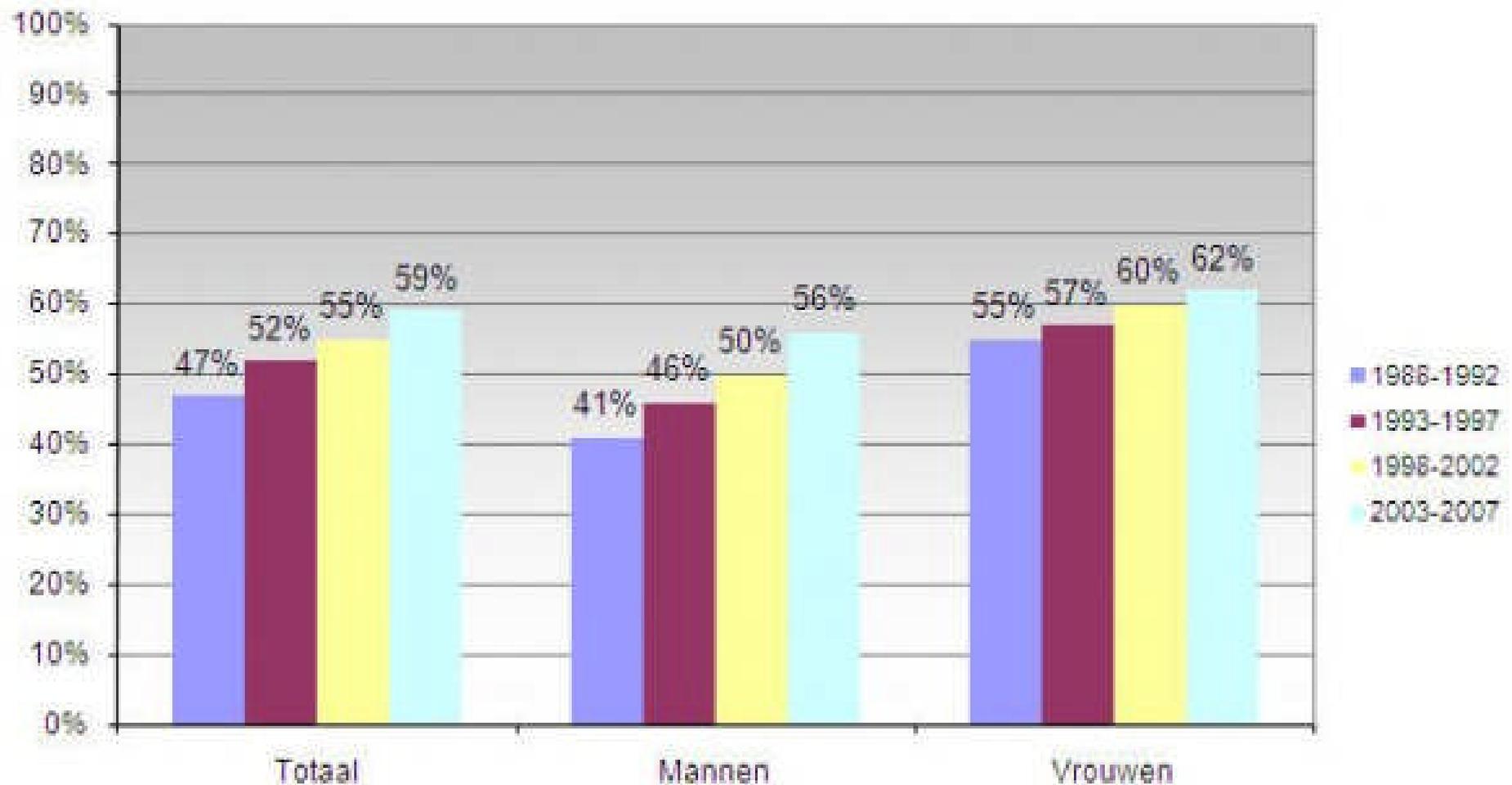
Follow the recommendations for cancer prevention

'If consumed at all,
you should limit
alcoholic drinks to
two for men and one
for women a day.'
Cancer survivors:
follow the
recommendations
for cancer
prevention.....' ?

5-year cancer survival rates in the US



Vijf-jaars relatieve overleving Alle vormen van kanker



Bron: Nederlandse Kankerregistratie, VIKC

Lifestyle research before and after cancer diagnosis

BEFORE DIAGNOSIS

Prevention

> 7000 studies

Substantial evidence

Cancer as endpoint

Not very commercial

AFTER DIAGNOSIS

During & after treatment

< 100 studies

Poor evidence

Cancer as start

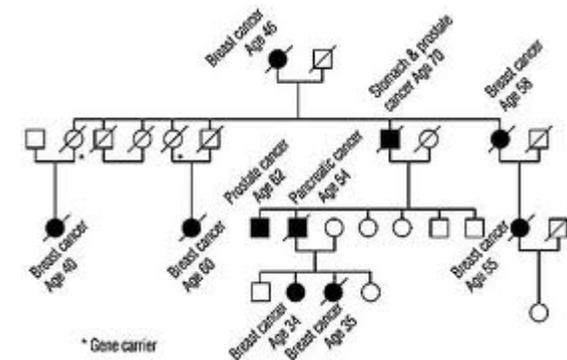
Commercial

What about those at high risk of cancer?

- Cancer survivors



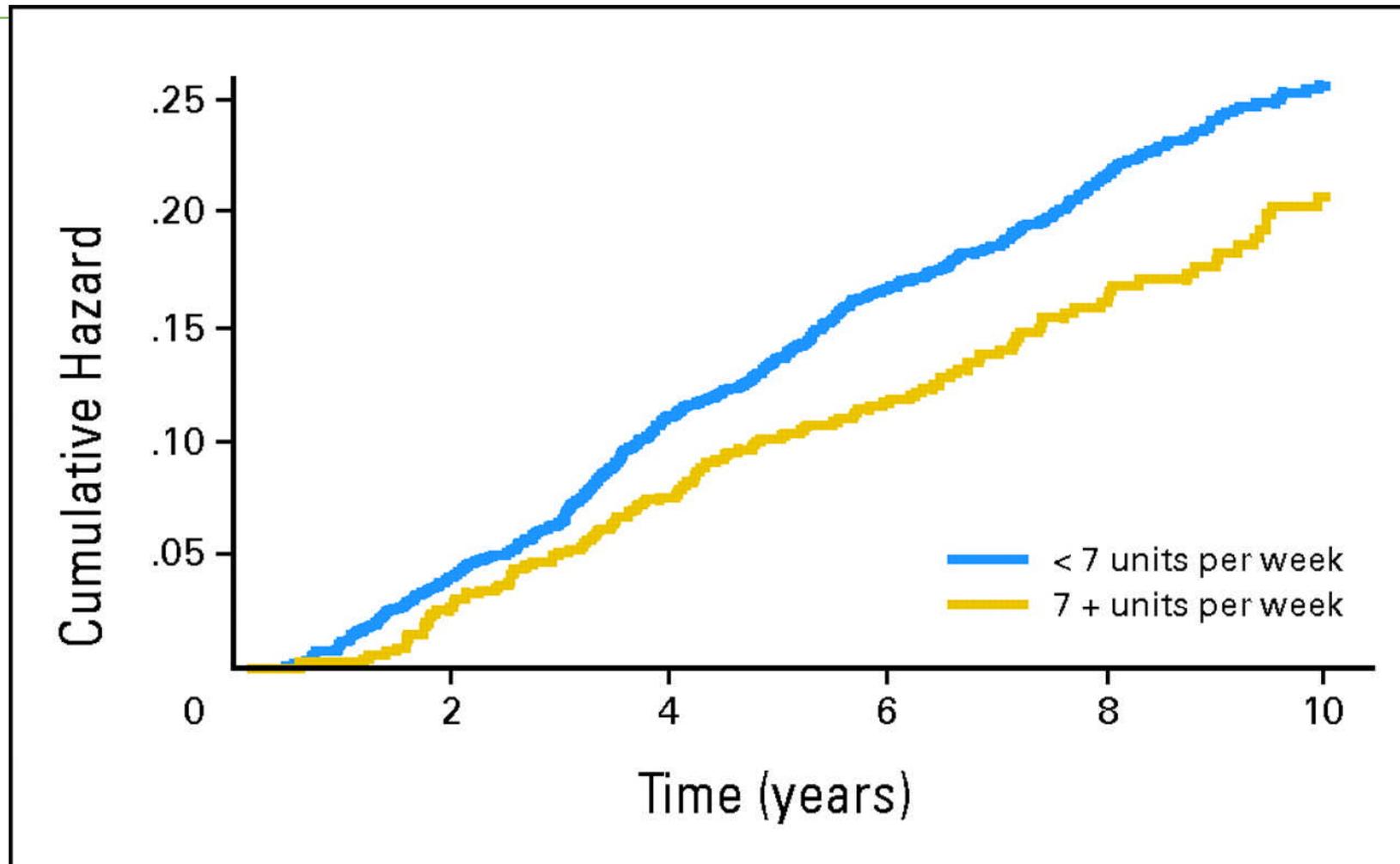
- Those with inherited cancer



Cancer survivors



Alcohol consumption and overall mortality among women with breast cancer



Barnett G C et al. JCO 2008;26:3310-3316

Alcohol and all cause mortality among breast cancer survivors – recent cohort studies

Study	No. of cases	Yrs of FU	Dose	RR (95% CI)
Barnett et al, 2008 UK	4,560	6.8	> 7 units per week versus less than 7	0.8 (0.6-0.95)
Reding et al, 2008, US, young women	1,286	9	> 7 drinks/week versus non-drinkers (before diagnosis)	0.7 (0.5-0.9) Wine: 0.7 (0.5-1.1)
Franceschi et al, 2009, Italy	1,453	12.6	> 21 drinks per week versus non-drinkers	1.2 (0.9-1.6) Wine: 1.1 (0.7-1.7)
Flatt et al, 2010 US	3,088	7.3	> 300 g/month versus < 10 g/month	0.7 (0.5-0.97)

To take into account.....

- When was alcohol ascertained: before, during or after treatment?
- Adjusted for age at diagnosis, stage of the disease, treatment, BMI, physical activity, education, income?
- What is the endpoint? Overall mortality or disease specific mortality or disease-free survival?

Alcohol & breast cancer recurrence

Life After Cancer Epidemiology study, 1,897 early breast cancer,
 ~ 2 years after diagnosis, follow-up ~ 7 years;
>5 g/day alcohol versus no drinking:

	Breast cancer recurrence		Death from breast cancer		Death from other causes	
	HR	95%CI	HR	95%CI		
all	1.4	1.0-1.8	1.5	1.0-2.3	0.8	0.5-1.3
Post-menopausal	1.5	1.1-2.2	1.7	1.1-2.8	-	-
Overweight/obese	1.6	1.1-2.4	1.6	0.9-2.8	-	-

Alcohol and breast cancer survival

Alcohol drinking may increase breast cancer recurrence and death from breast cancer, but may not influence or reduce mortality risk from other causes.

Alcohol & colorectal cancer progression?

- COLON-study: Prospective cohort study among CRC-survivors
 - Diet, lifestyle (incl. alcohol), supplements
 - Association with quality of life, recurrence and survival
- Observational, 5 yr follow-up
- 1,000 colorectal cancer patients
- Academic and regional hospitals



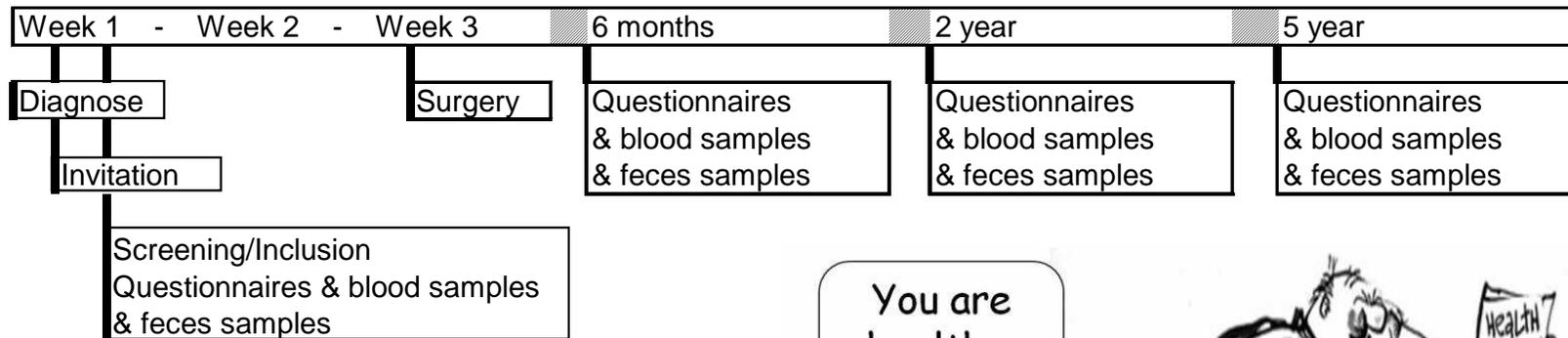
Renate Heine-Broring, MSc.



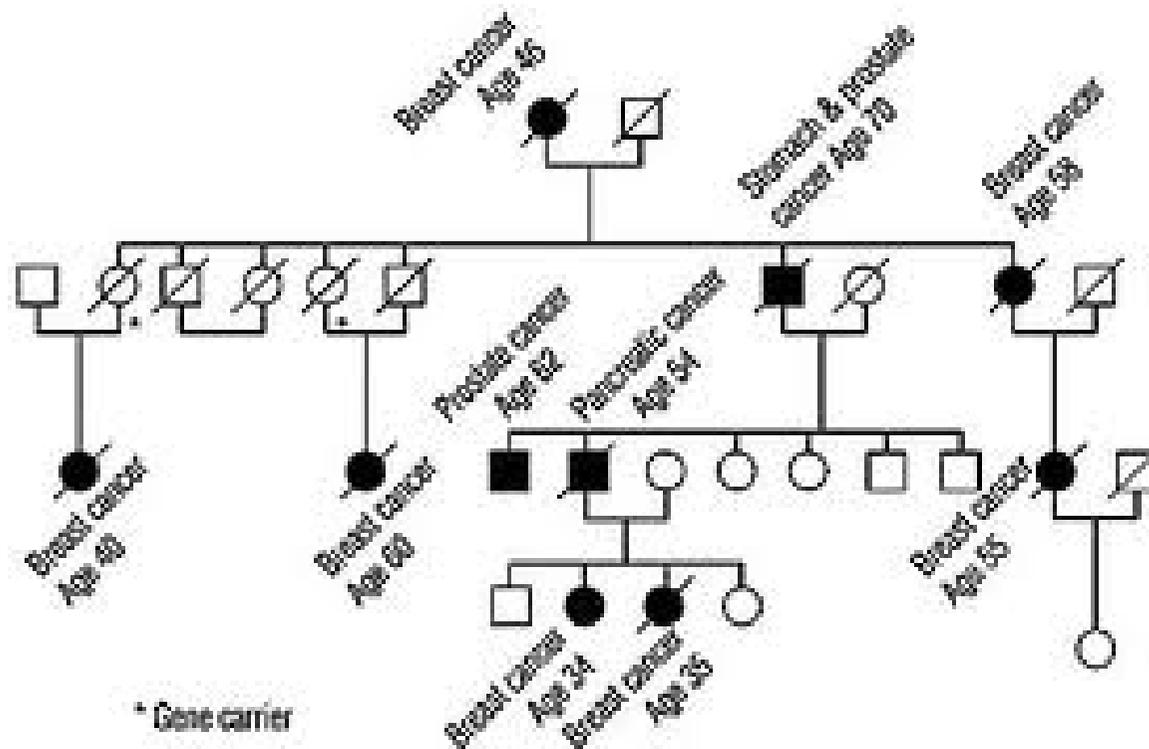
Renate Winkels, PhD.



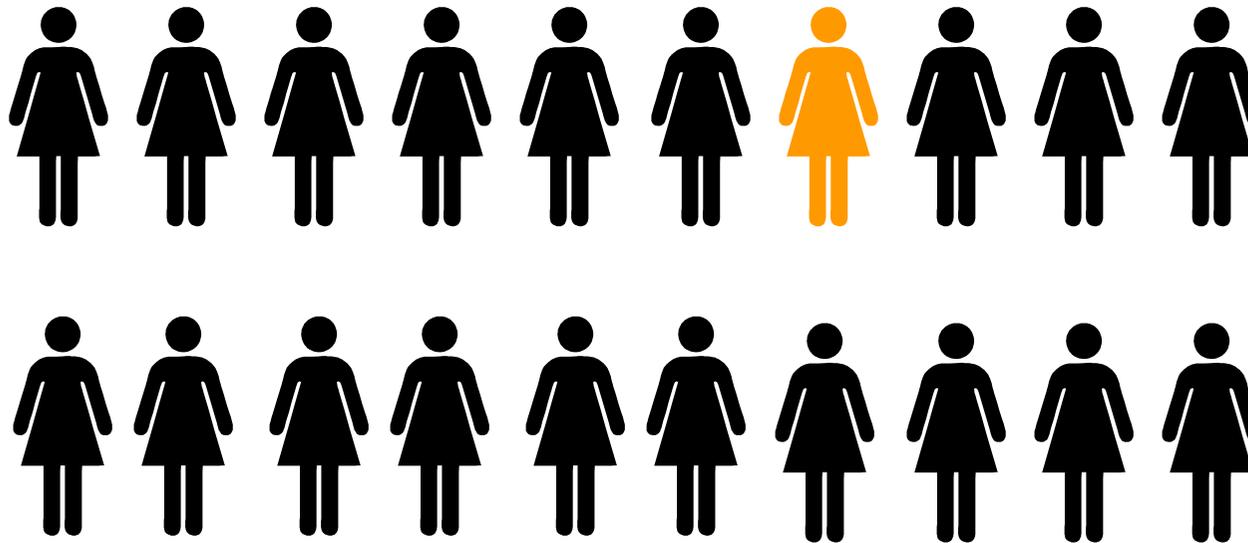
COLON-study- Design



Inherited cancer syndromes



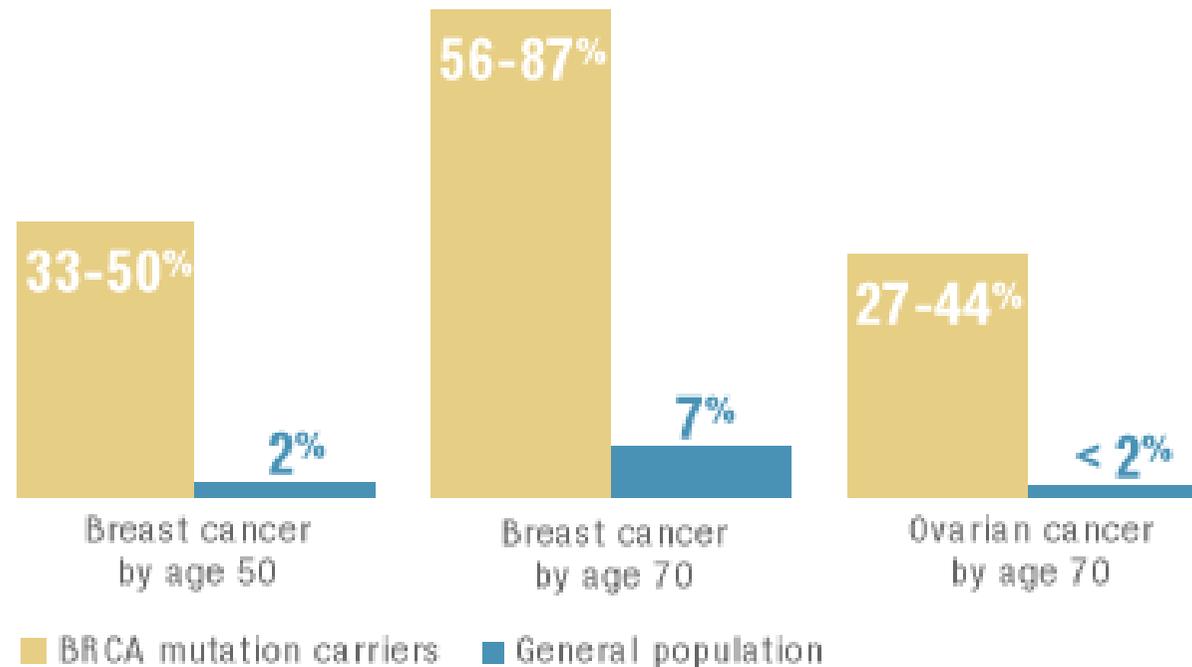
5 – 10% of cancer is inherited



....or explained by a mutation in one gene.....

Inherited breast cancer

BRCA Mutation Increases the Risk of Cancer

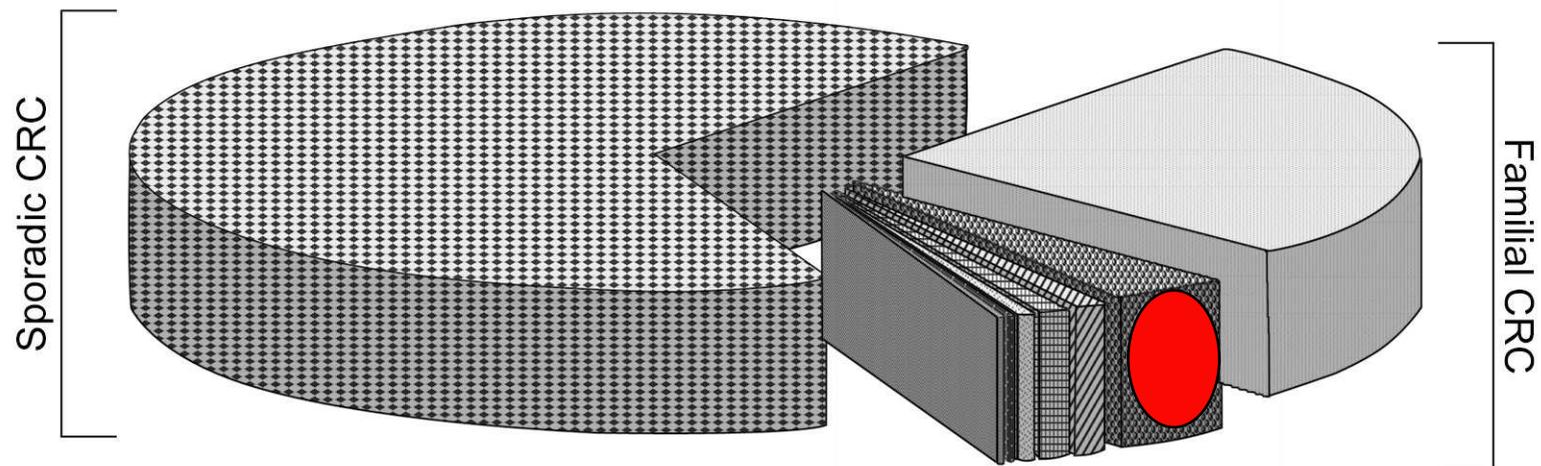


Alcohol and risk of breast cancer among BRCA1 and BRCA2 mutation carriers

	Number of alcohol drinks per week			
	None	0-3	4-9	> 9
BRCA1 1480 pairs	1.0	0.8 (0.7-0.9)	1.0 (0.7-1.3)	0.6 (0.3-0.9)
Wine	1.0	0.6 (0.5-0.9)	0.8 (0.4-1.7)	0.4 (0.1-1.5)
BRCA2 445 pairs	1.0	1.0 (0.7-1.4)	1.0 (0.7-1.6)	1.2 (0.6-2.5)

Adjusted for ethnicity, menopause, oral contraceptives, HRT, smoking, oophorectomy, BMI, parity

Familial colorectal cancer



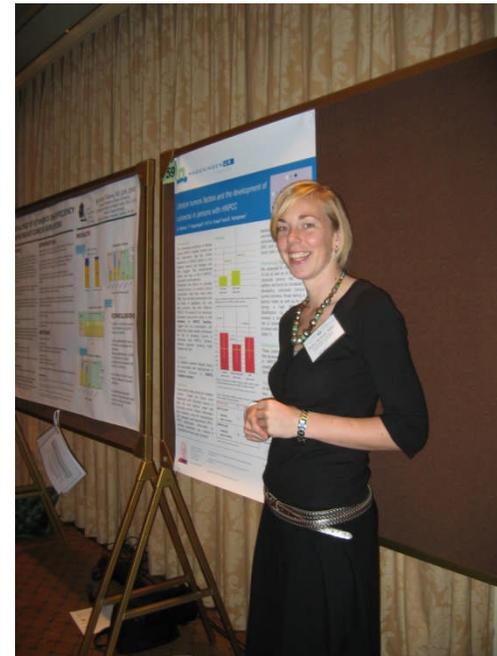
- Sporadic CRC
- Lynch Syndrome
- *MUTYH* associated polyposis (MAP)
- Juvenile polyposis syndrome (JPS)

- Unexplained familial CRC
- Familial adenomatous polyposis (FAP)
- Peutz-Jeghers syndrome (JPS)
- Cowden disease (CD)

GeoLynch-study

- Cohort of persons with Lynch syndrome
- Mutation in mismatch repair genes (MMR)
- 60-90% chance of CRC
- Recruitment 2006-2008
- n=713 invited
- n=486 responded

- PhD-project Akke Botma



GeoLynch progress

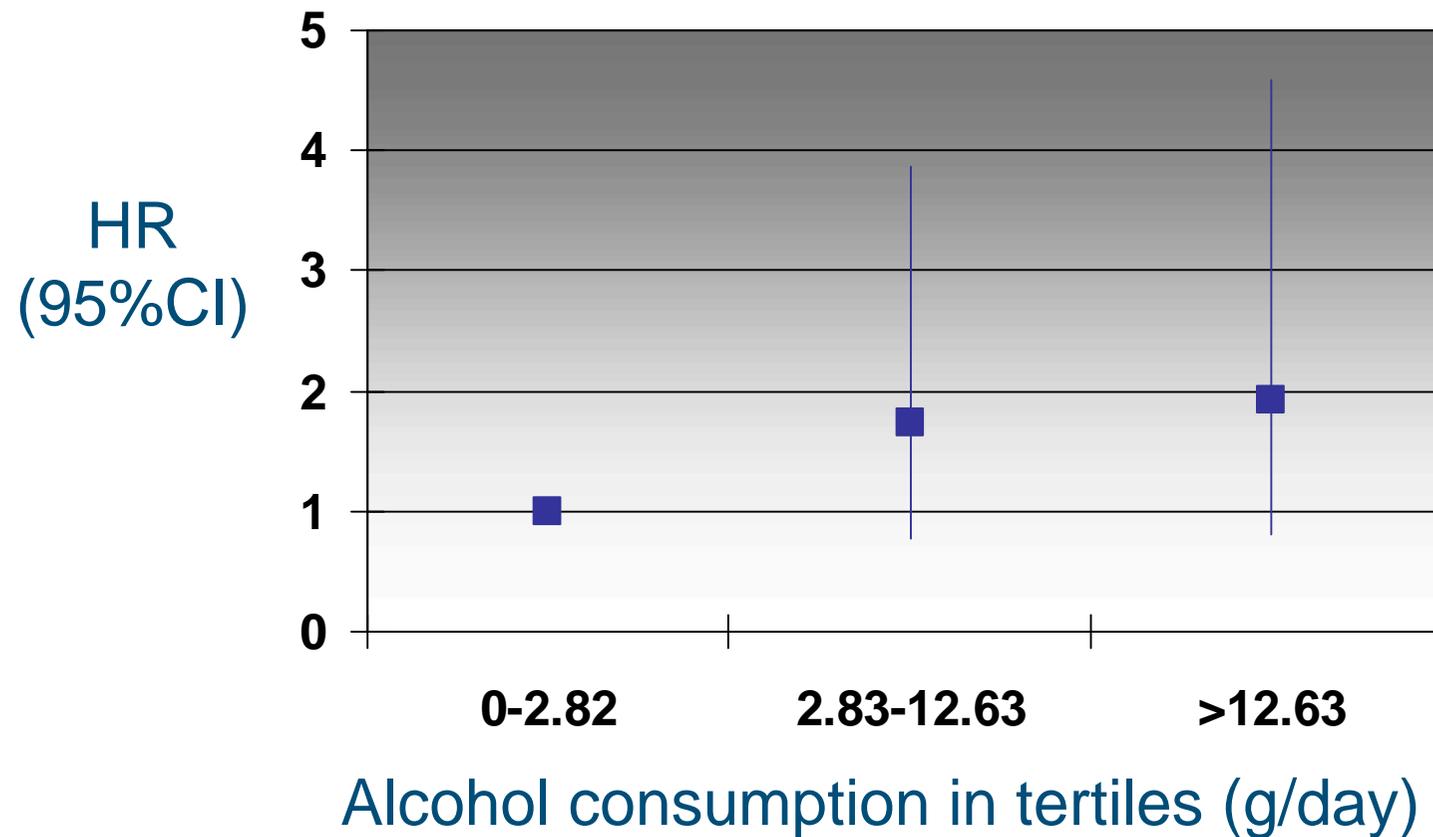
Median follow-up of 19 months

New follow-up in 2011-2012

First results Alcohol



GeoLynch: alcohol intake & risk of colorectal adenomas



Adjusted for age, sex, extent of colon resection, smoking, physical activity

Summarizing....

- Alcohol increases risk of breast cancer recurrence, but not of overall mortality in breast cancer patients
- More research needs to be conducted among cancer survivors as well as among those with an inherited cancer syndrome

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Thus.....

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An initiative to benefit
DUTCH
CANCER
SOCIETY

World Cancer
Research Fund