

# Costs of cancer and the need for cost-effectiveness assessments:

Discussant of posters 1415, 1417, 1418

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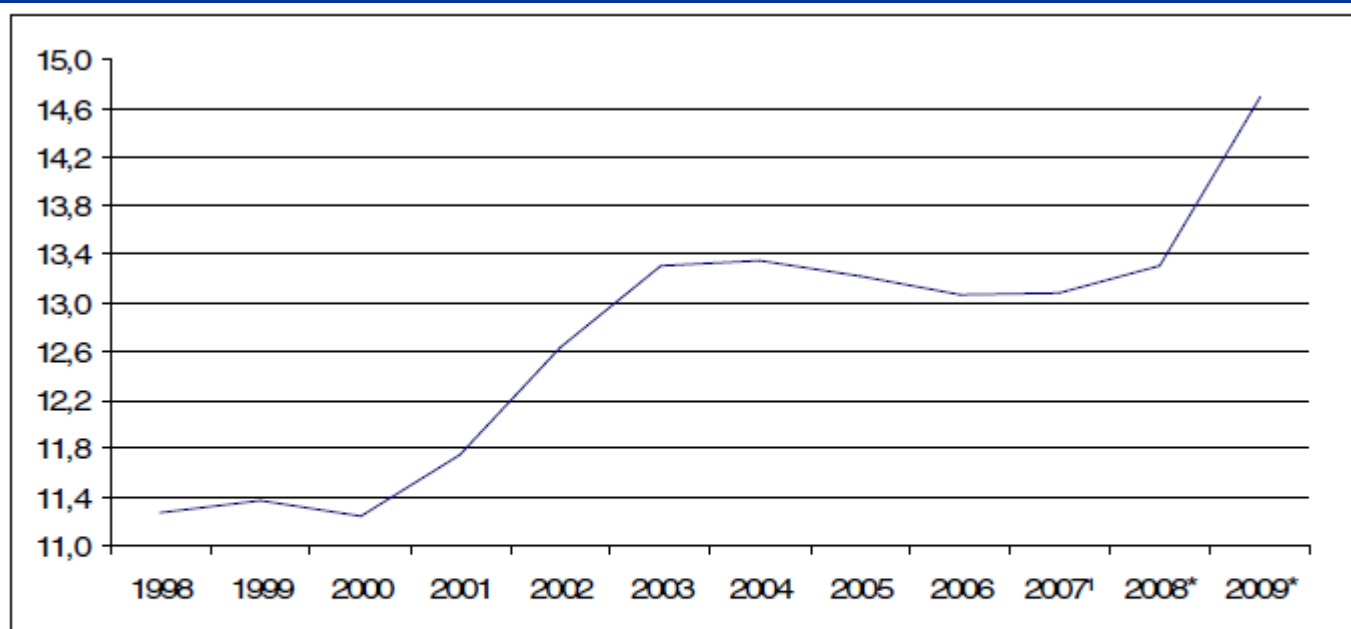
# Conflict of interest

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JB's employer received:

- Unrestricted research grants from GSK (2007-2010)
- Consultancy fees from Sanofi Pasteur, GSK and DDL
- Speakers' fee from Qiagen

# Health care costs



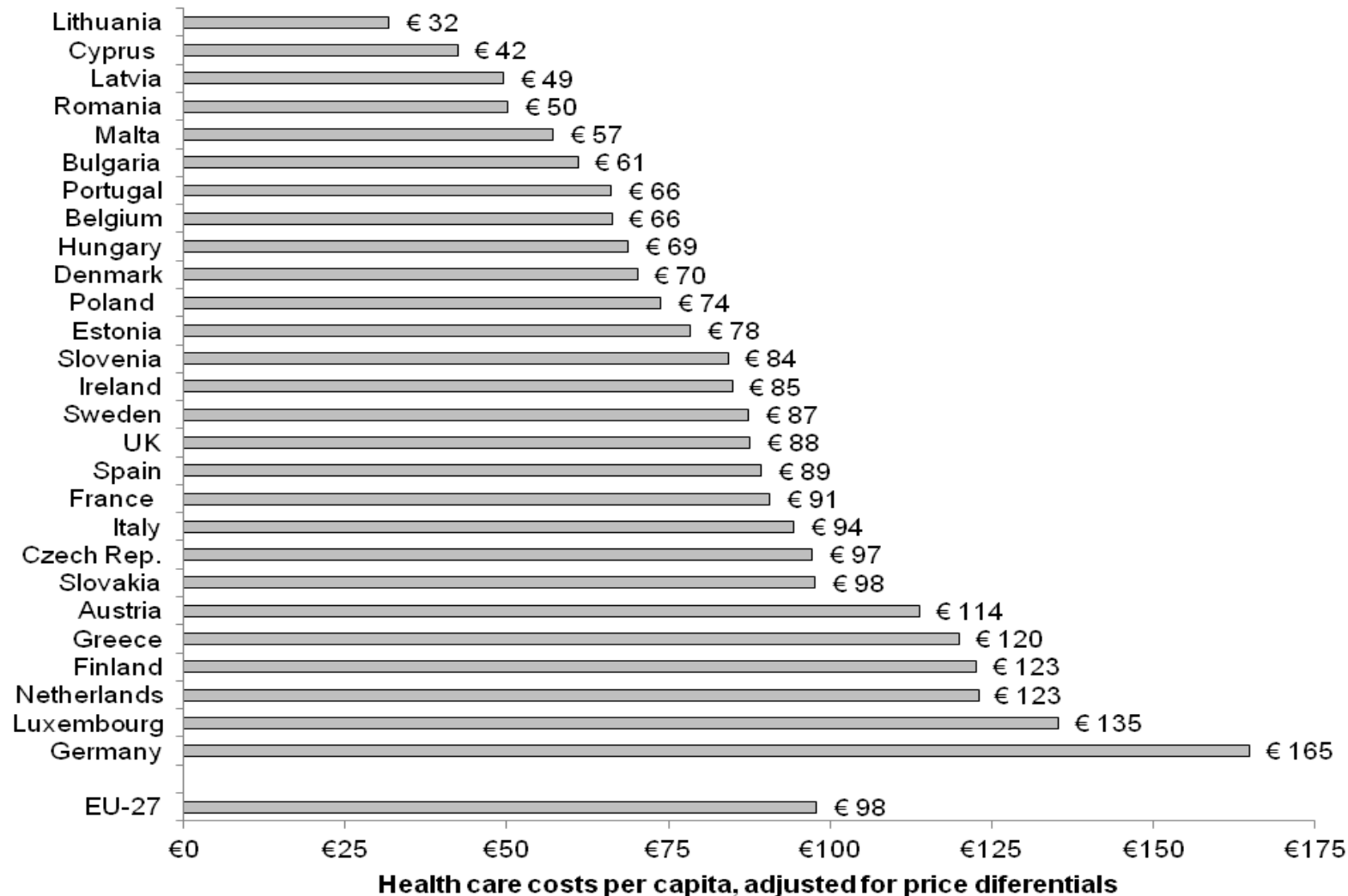
**Health care costs in the Netherlands as percentage of GDP per capita 1998-2009**

# Cancer costs as part of health care costs (Ann Oncol 2007)

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Austria	6.6%
France	5.3%
Germany	6.6%
France	6.6%
Netherlands	4.1%
Sweden	7.0%
UK	5.0%
Europe	6.4%

# Per capita cancer healthcare costs (Luengo-Fernandez et al. P1415)



# Cancer costs

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## Direct healthcare costs:

costs for prevention, treatment etc.

Costs for cancer drugs accounts for about 25% of cancer health care costs.

## Indirect costs:

costs of resources lost due to inability to work.

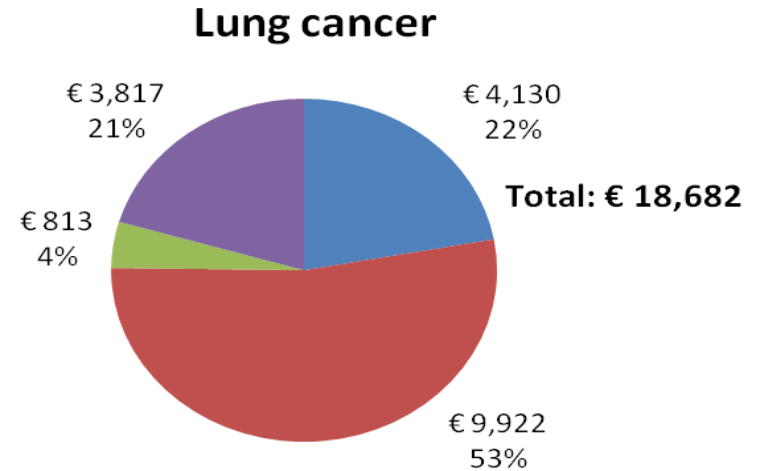
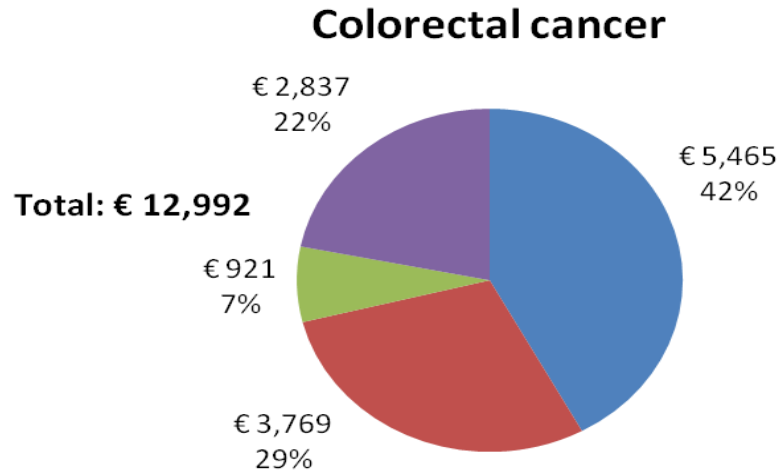
=> Friction method: employer's perspective.

Costs until patient is replaced.

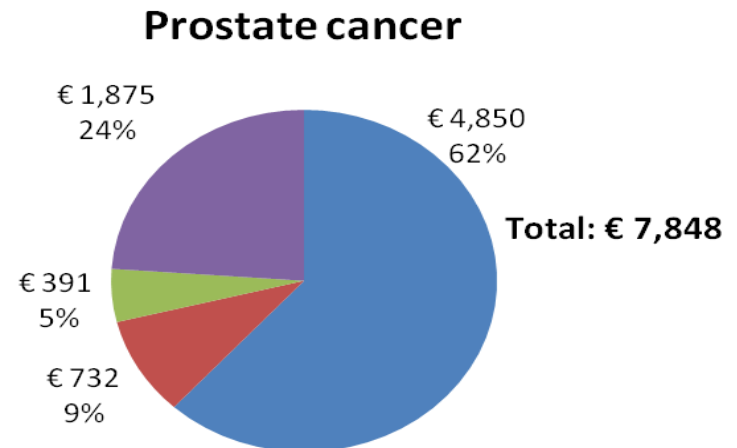
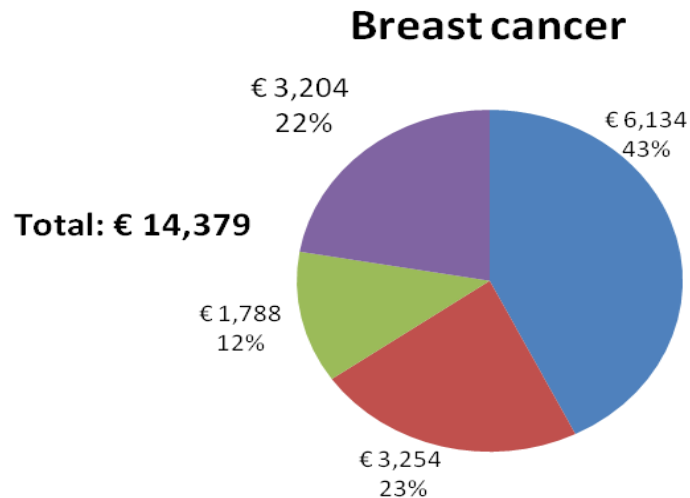
=> Human capital method: patient's perspective.

# Luengo-Fernandez et al. P1415

## Costs by cancer type, € millions, 2009



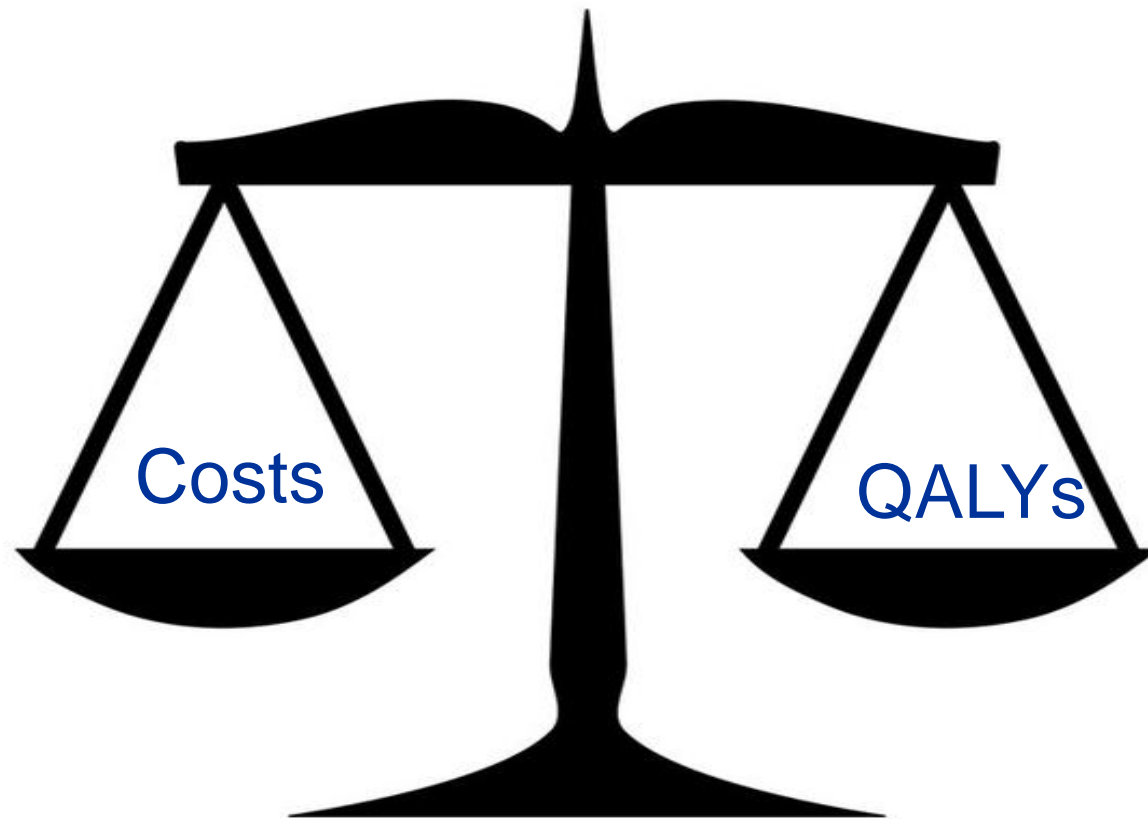
■ Direct health care costs  
■ Productivity loss due to mortality  
■ Productivity loss due to morbidity  
■ Informal care costs



# Health technology assessments

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Cost-effectiveness analysis (CEA): amount we are willing to pay to save one quality-adjusted lifeyear (QALY)





# Implementation of CEA

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## UK: NICE technology appraisals

- allocate NHS health care budget as good as possible.
- Only direct health care costs are eligible.

*Spending money on one thing means you have less to spend on another. Dixon, NHS*

## WHO: Choice model

- International comparisons
- Maximum willingness-to-pay 3 times gross domestic product (GDP) per capita.
- Societal perspective so that indirect costs are allowed.

# Health effects: direct and indirect

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## Indirect health benefit:

- Vaccination: If some are vaccinated, non-vaccinees also have a lower chance of becoming infected (herd immunity effect).

## Indirect health loss:

- Health loss of relatives of cancer patient  
*Mori et al poster 1418*

# **Mori et al. poster 1418:**

## **Quantifying the burden of caregiving for cancer patients in Europe**

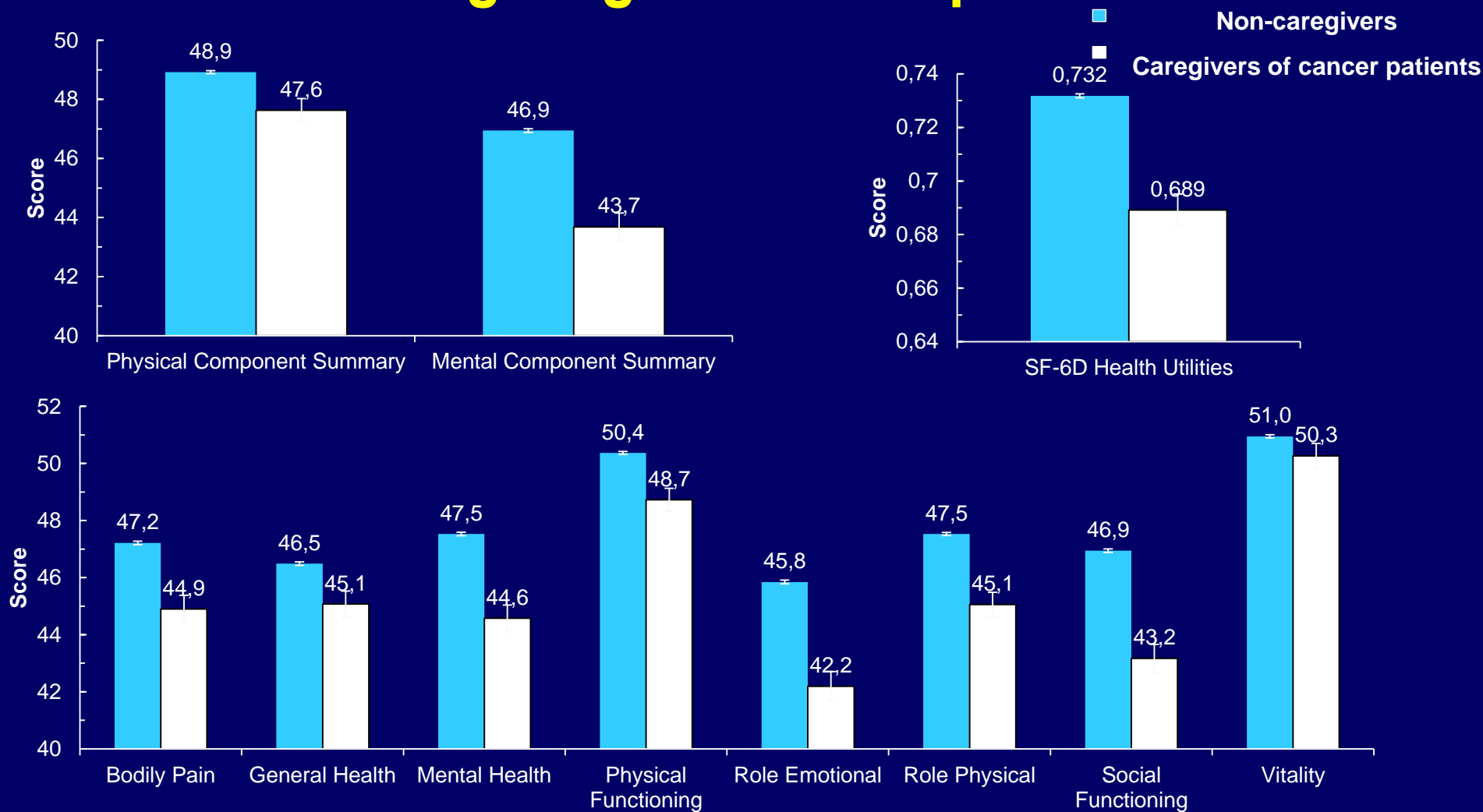
### **Aim**

- **To investigate the burden imposed by informal care for cancer patients in Europe, including its impact on comorbidities, healthcare resource utilization, health-related quality of life, and work productivity and activity impairment**

### **Methods**

- **Data were provided from 2010 and 2011 EU National Health and Wellness Survey (NHWS): an annual, cross-sectional, Internet-based survey of self-reported healthcare attitudes and behaviors**
- **A total of 1,713 caregivers of cancer patients and 103,868 non-caregivers (used as a control group) were identified via NHWS**

Figure 1. Quality of life and health state utilities associated with caregiving for cancer patients



Note. Presented are adjusted scores controlling for covariates, and their 95% confidence intervals. All pairs of means are significantly different, at  $p < .001$ , except for Vitality:  $p = .002$ .

# Bertwistle et al. poster 1417 The NICE technology appraisals analysed were mostly followed by the intended changes in UK drug uptake

## UK results summary

Appraisal	Drug	Uptake increased after positive recommendation?	Uptake decreased after negative recommendation?	How long until changes occur (quarters)?
TA107	Trastuzumab (Herceptin)	Yes	-	1
TA108	Paclitaxel	-	Yes	4
TA109	Docetaxel (Taxotere)	Yes	-	1
TA112	Aromatase inhibitors	Yes	-	1
TA116	Gemcitabine (Gemzar)	Yes	-	4
TA147	Bevacizumab (Avastin)	-	No (too early?)	?
<b>Overall</b>	-	<b>5/6</b>		<b>3/5 within 1Q</b>

# Final remarks

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- Given the tight budgets for health care, cost-effectiveness analyses seem a reasonable way to aid in allocation of the money.
- At least, better than arbitrary decisions on reimbursement.
- Cost-effectiveness analyses may also be used by the health administration when negotiating about the price.

# Final remarks

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## But

- Cost-effectiveness analyses might delay implementation of innovative, new drugs somewhat.
- For rare diseases, budget impact is low. A no-reimbursement decision then remains difficult to defend to public and media (reimbursement Pompe/Fabry medication in the Netherlands).
- Decision on investments in road safety, legionella inspections etc. are taken to warrant safety and are unlikely to be cost-effective at the willingness-to-pay threshold used in health care.