

The cost of cancer treatment

Lieven Annemans

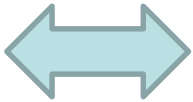
Ghent University

Lieven.annemans@ugent.be



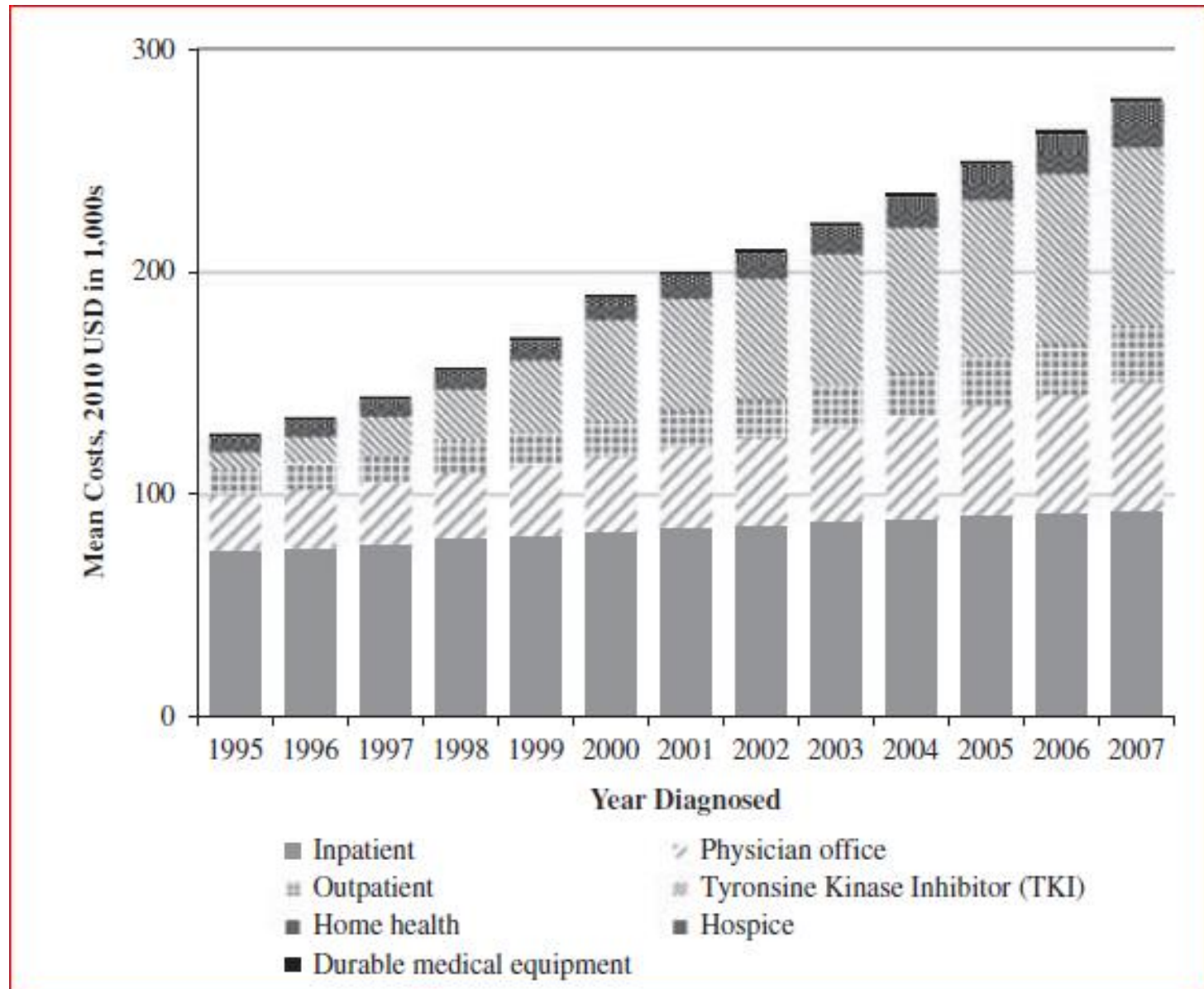
January 2016

What's the problem?

- “those prices are too high”
 - “the budgets will explode”
- 
- “these drugs offer survival benefit”
 - “the medical need is very high”

15 years cumulative cost after diagnosis of **CML** in the US

(Lin et al, Med Care 2016)



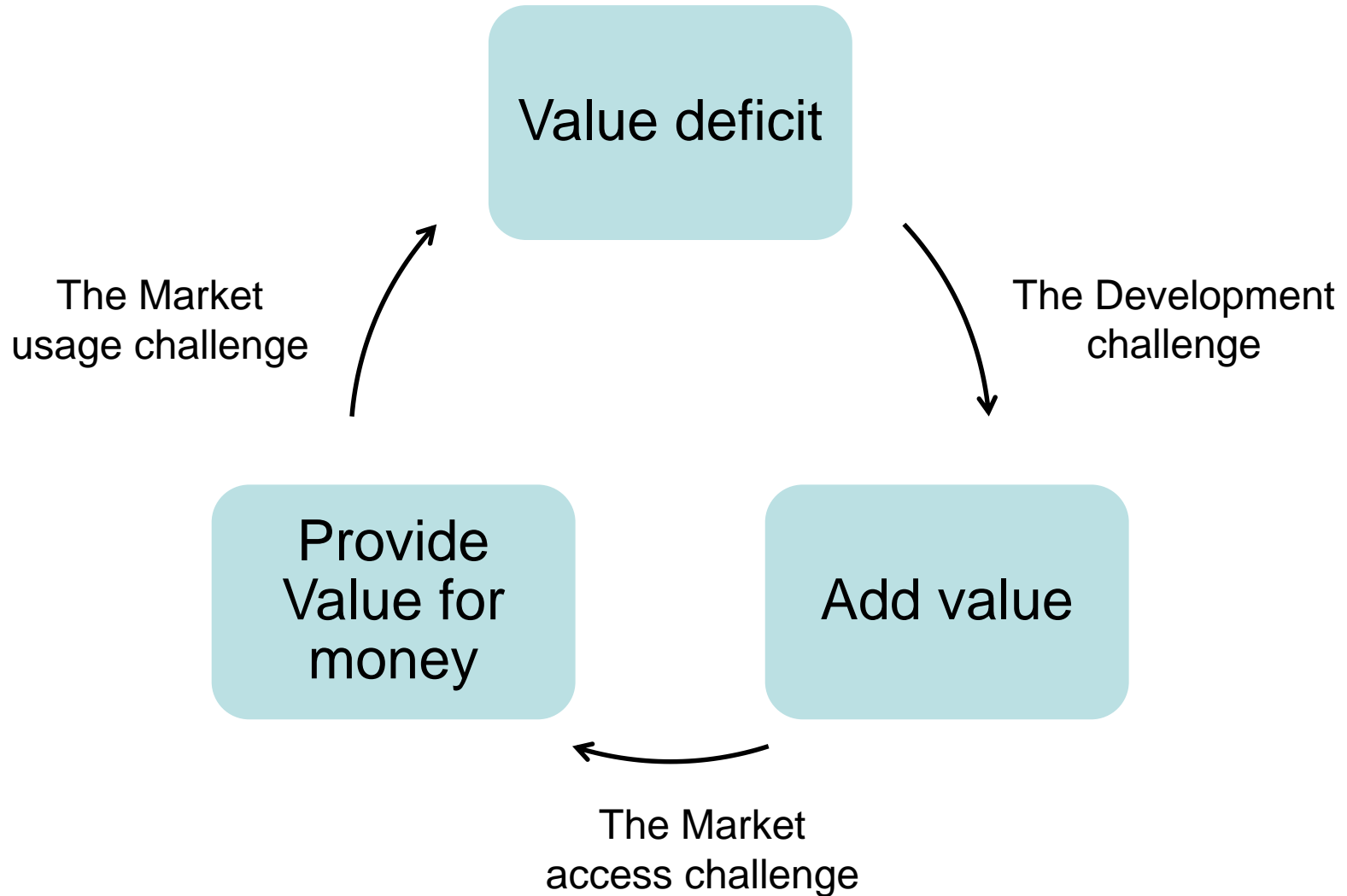
Mean life expectancy was
2.2 years in 1995
and increased to
4.2 years in 2007.

Lin et al, Med Care 2016

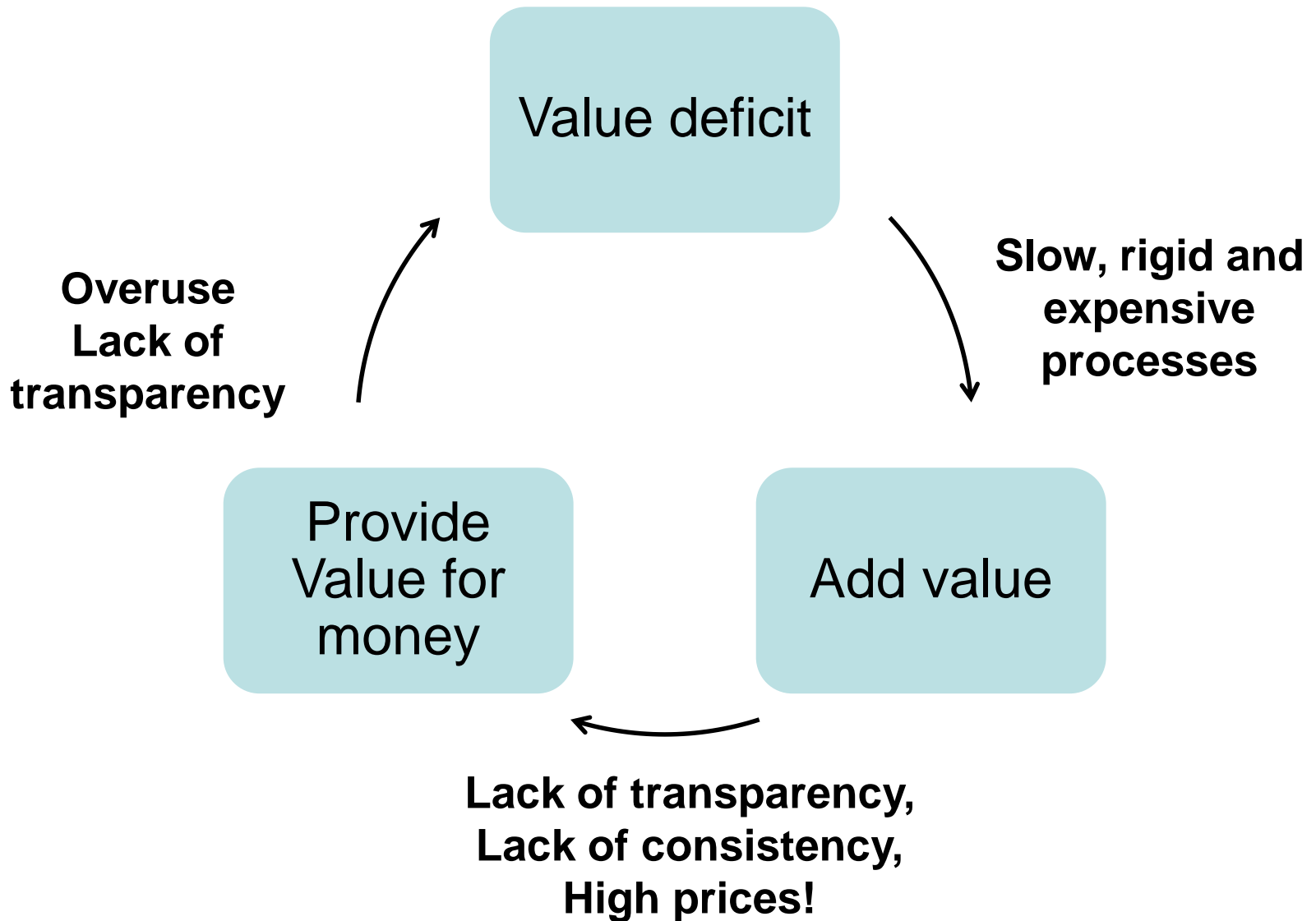
Principles of good healthcare



A framework for analysis: the innovation cycle



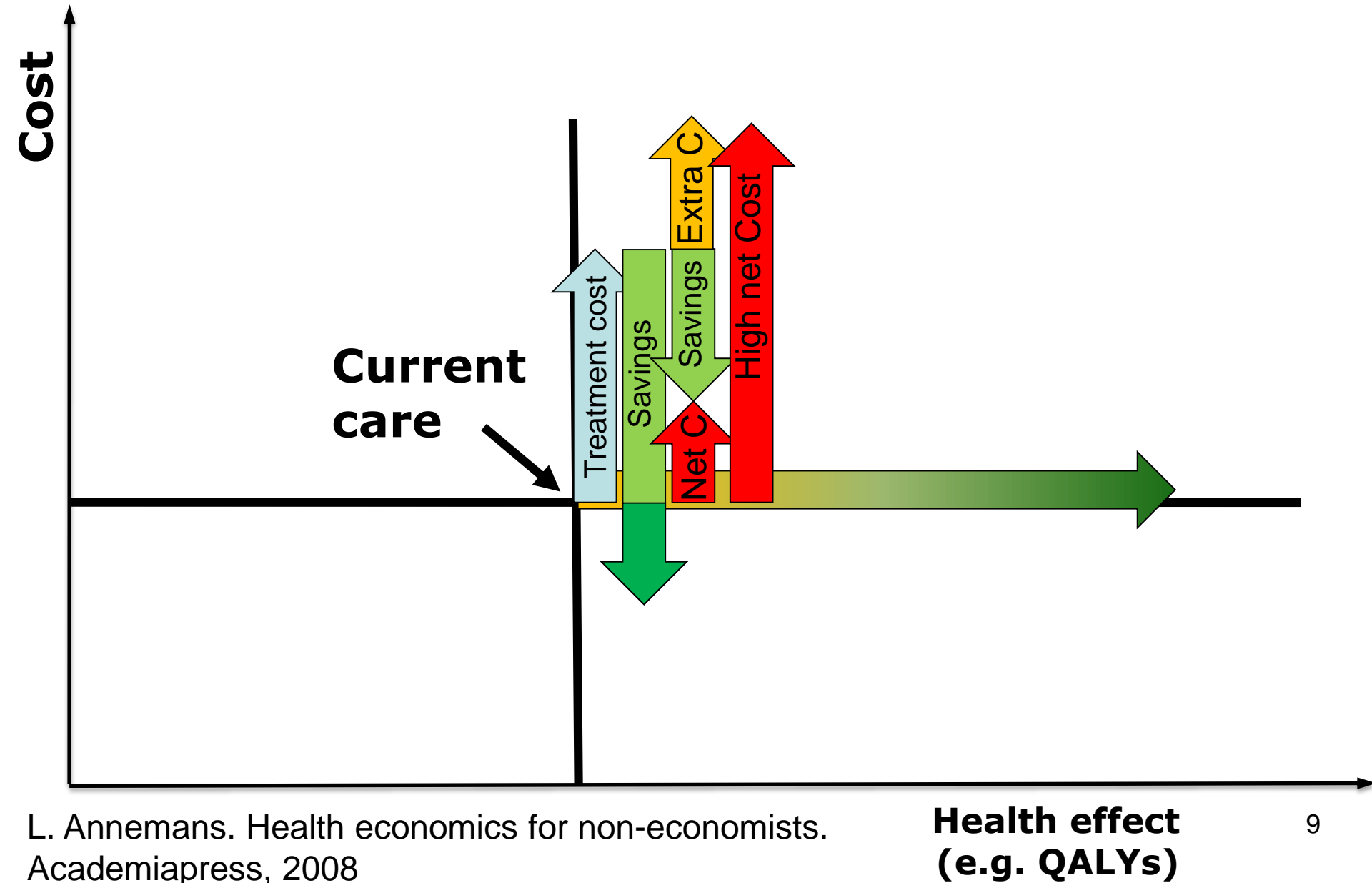
Key Problems



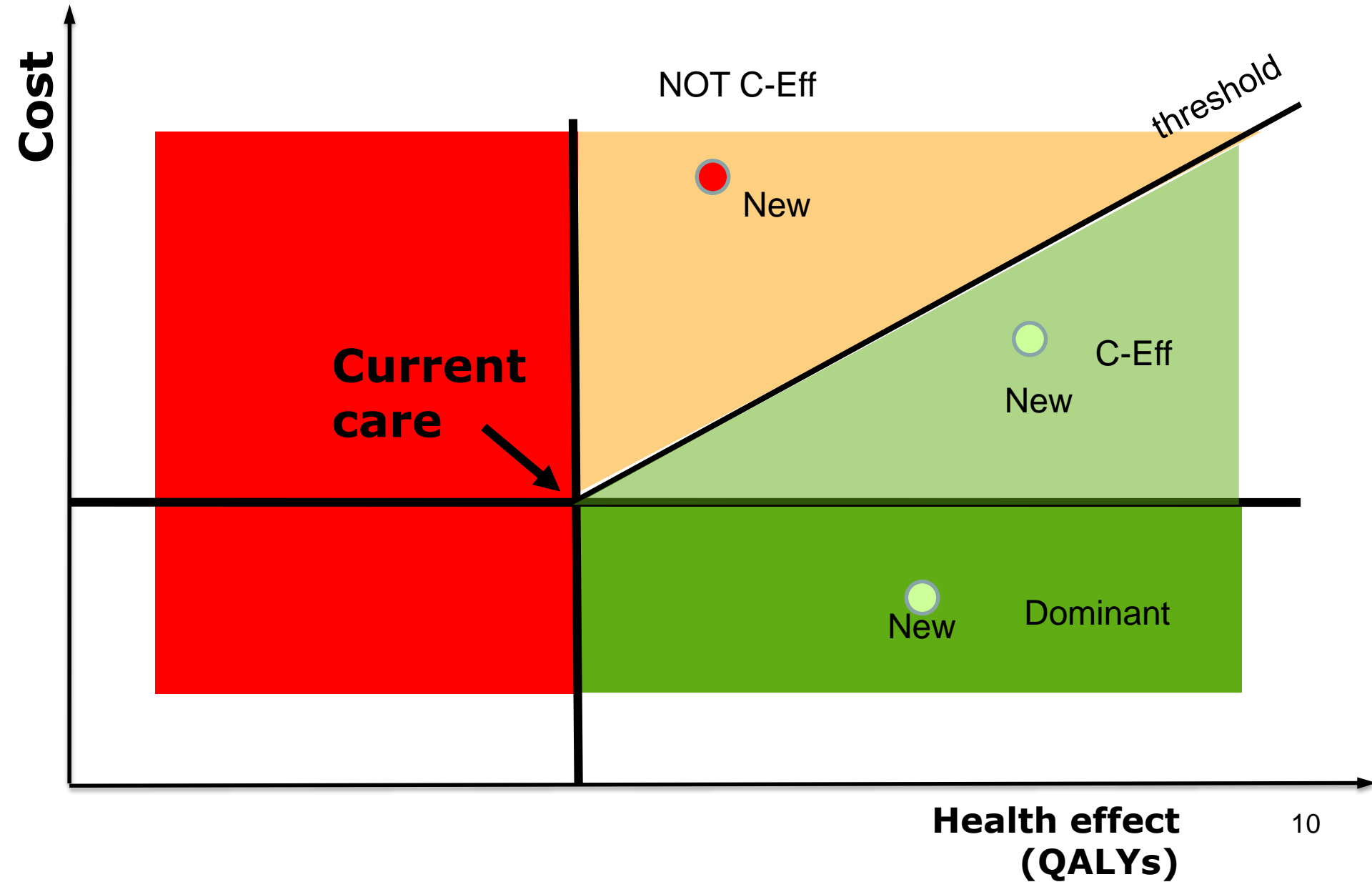
Pricing = basically two options

- **“cost+” price** → price justified by costing structure.
 - ☺ acceptable mark-up as compensation for the costs of capital investment in R&D
 - difficulty in assessing the true cost of R&D (cfr failures)
 - wrong incentives (‘spend a lot on R&D’)
 - Added value not sufficiently recognized
- **Value based pricing**
 - ☺ Better added value is recognized by better rewarding
 - profit margin may not be in reasonable proportion to the cost structure

Value for money?

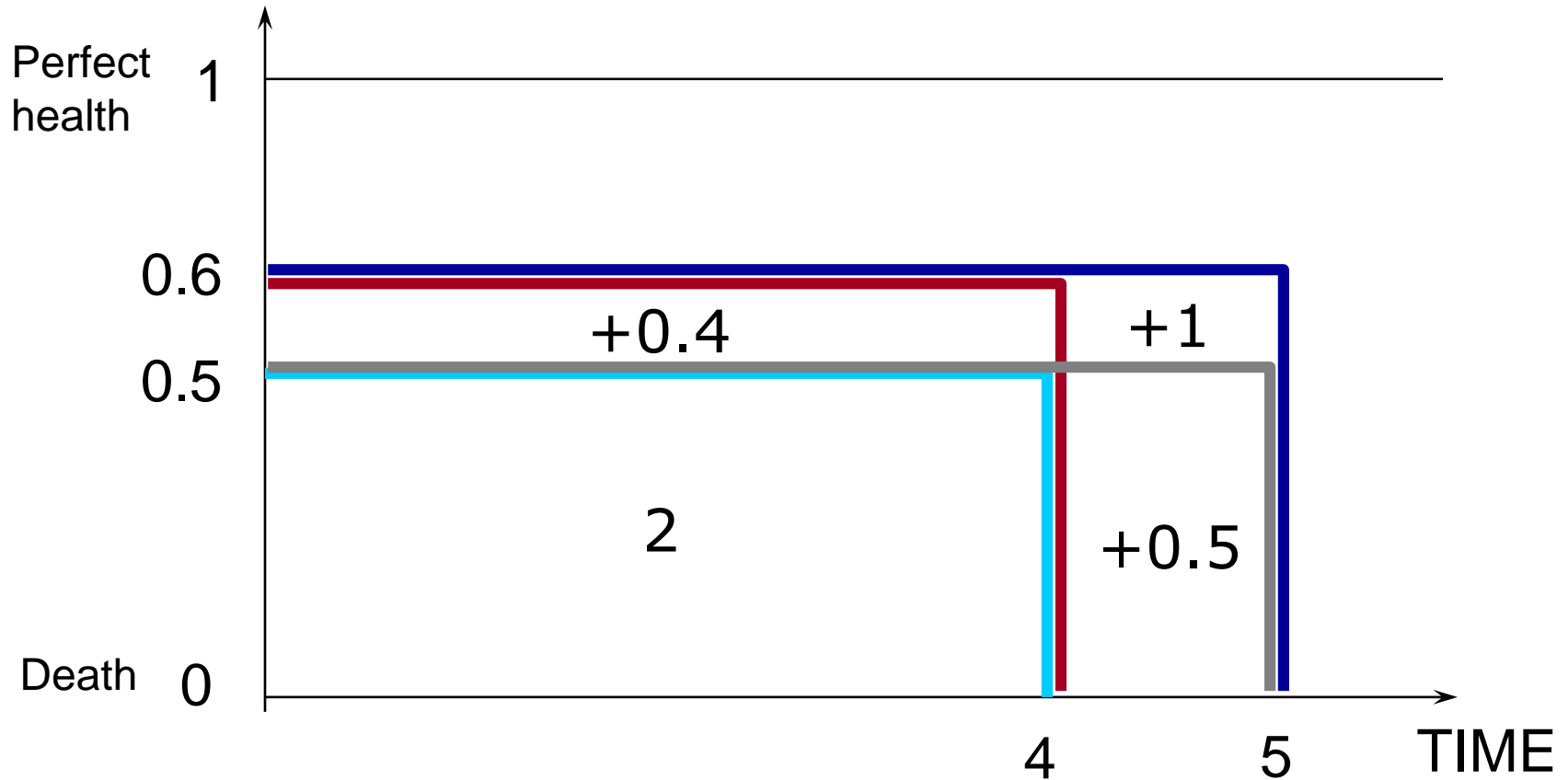


Cost-effectiveness



Quality Adjusted Life Years

INDEX (“utility value”) (via EQ5D)



Where is the threshold?

- Desaigues et al (2007): willingness to pay: €40,000 per Healthy Life Year (for EU25 countries)
- BENCHMARKING
 - e.g. cost-effectiveness of caring for a dialysis patient
 - historically **50,000 \$ per QALY**:*
- WHO: Highly cost-effective (< GDP per capita); Cost-effective (between one and three times GDP per capita); (e.g. Belgium = +/- €35000)
http://www.who.int/choice/costs/CER_thresholds/en/
- At the discretion of the decision maker (England: 20,000£ per QALY)

Examples of reimbursed medicines in Belgium

Treatment	Cost per QALY gained (€)
Champix Smoking cessation	dominant
Procoralan Chronic Heart Failure	6,000
Brillique Acute Coronary Syndrome	14,000
Prezista HIV	16,000
Sovaldi HCV	18,000
Velcade multiple myeloma	30,000
Alimta NSCLC	40,000
Tysabri MS	47,000

CTG/CRM (RIZIV) (at official prices)

Cost-effectiveness of TKIs in CML?

	Diagnosed in 1995	Diagnosed in 2007	Difference	ICER
Life Years	2.2	4.2	2.0	
Costs	\$127,438	\$278,236	\$150,798	\$74,144

Lin et al, Med Care 2016

Extra problems!

1. Uncertainty
2. Medical, therapeutical and societal need
3. Budget impact

PROBLEM 1: Uncertainty



Solution: *adaptive* pathways and performance based agreements

1. Coverage upon evidence development
 - *Temporary approval, then final*
2. Performance Linked Reimbursement (outcomes guarantee)
 - *No cure no pay (on individual level)*
 - *Not as good as promised (on population level) → pay less*

PROBLEM 2

Medical need (Scitovsky)

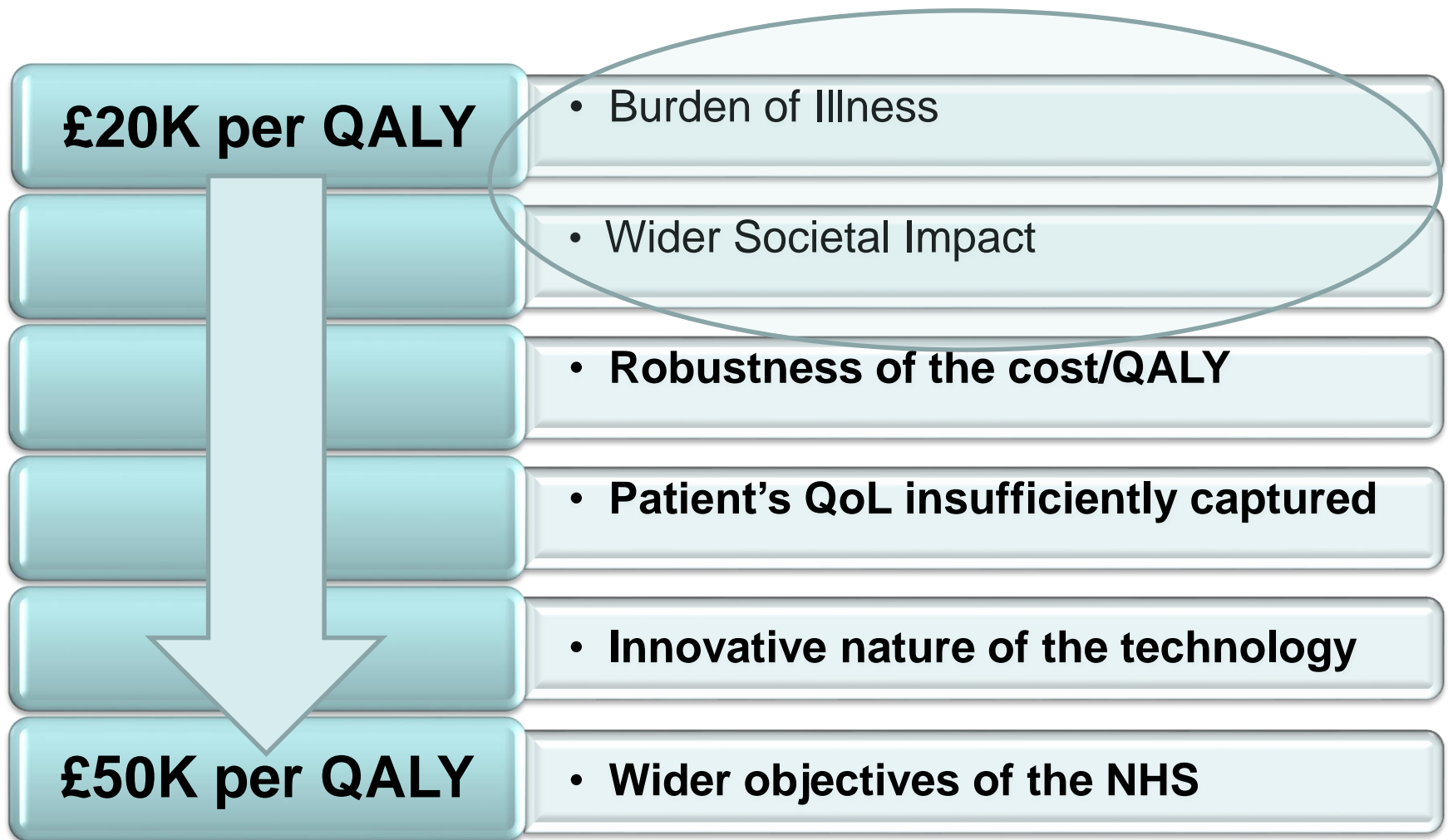
Low medical need
→ no funding



Acceptable
health

High medical need
→ more solidarity
→ invest more

England: proposed solution



currently unclear how each modifier will contribute to the weighting factor

PROBLEM 3: Budget impact

“The economic and equity rationale for carrying out budget impact analyses is opportunity cost = benefits forgone by using resources in one way rather than another” Cohen et al (2008)

- Need for well documented estimates at population level!
- Need for very clear description of the target population
- Need for a stratified approach (but still need to show value for money!)

in 2020 oncology PMx will represent 8.9 to 9.5% of the total pharmaceutical specialties budget.

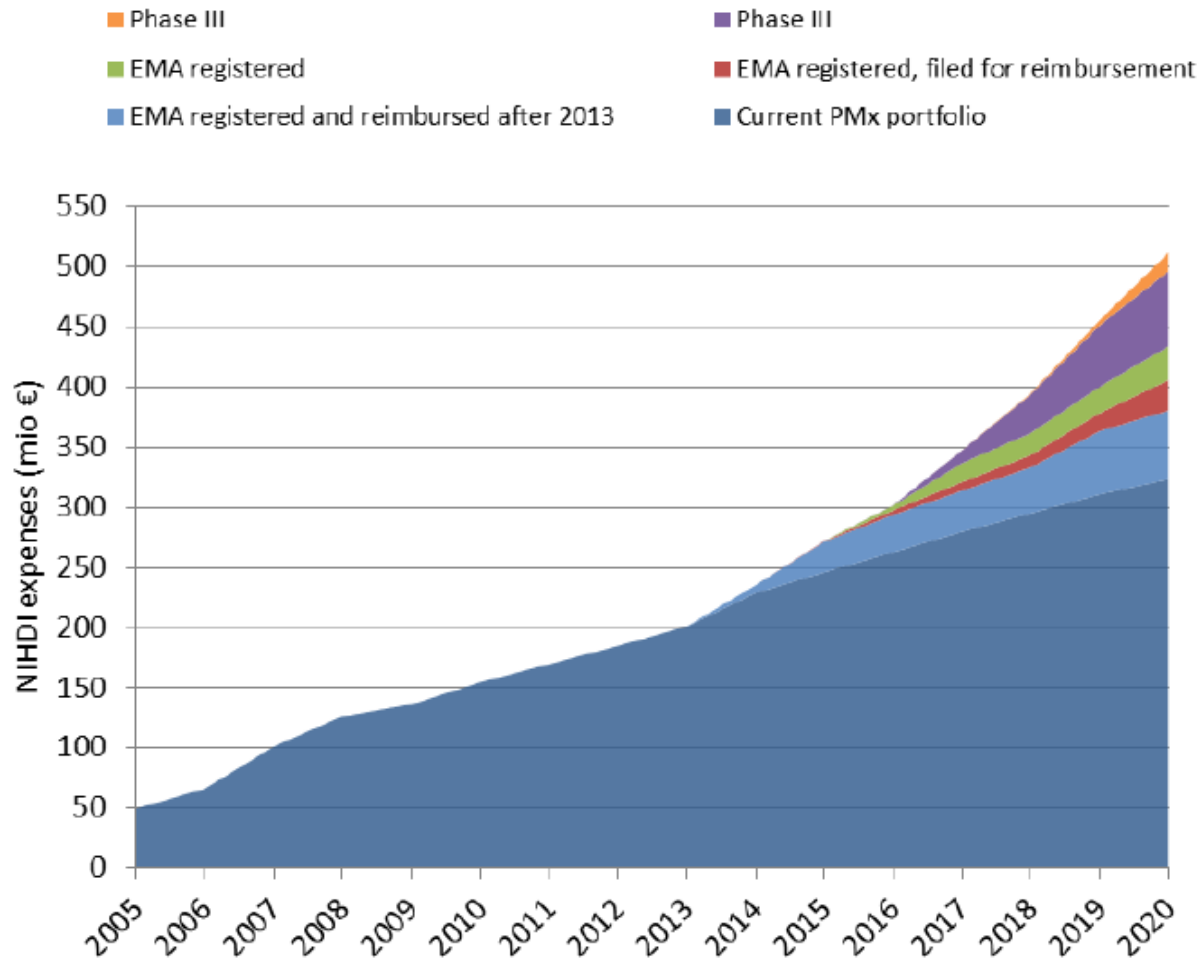
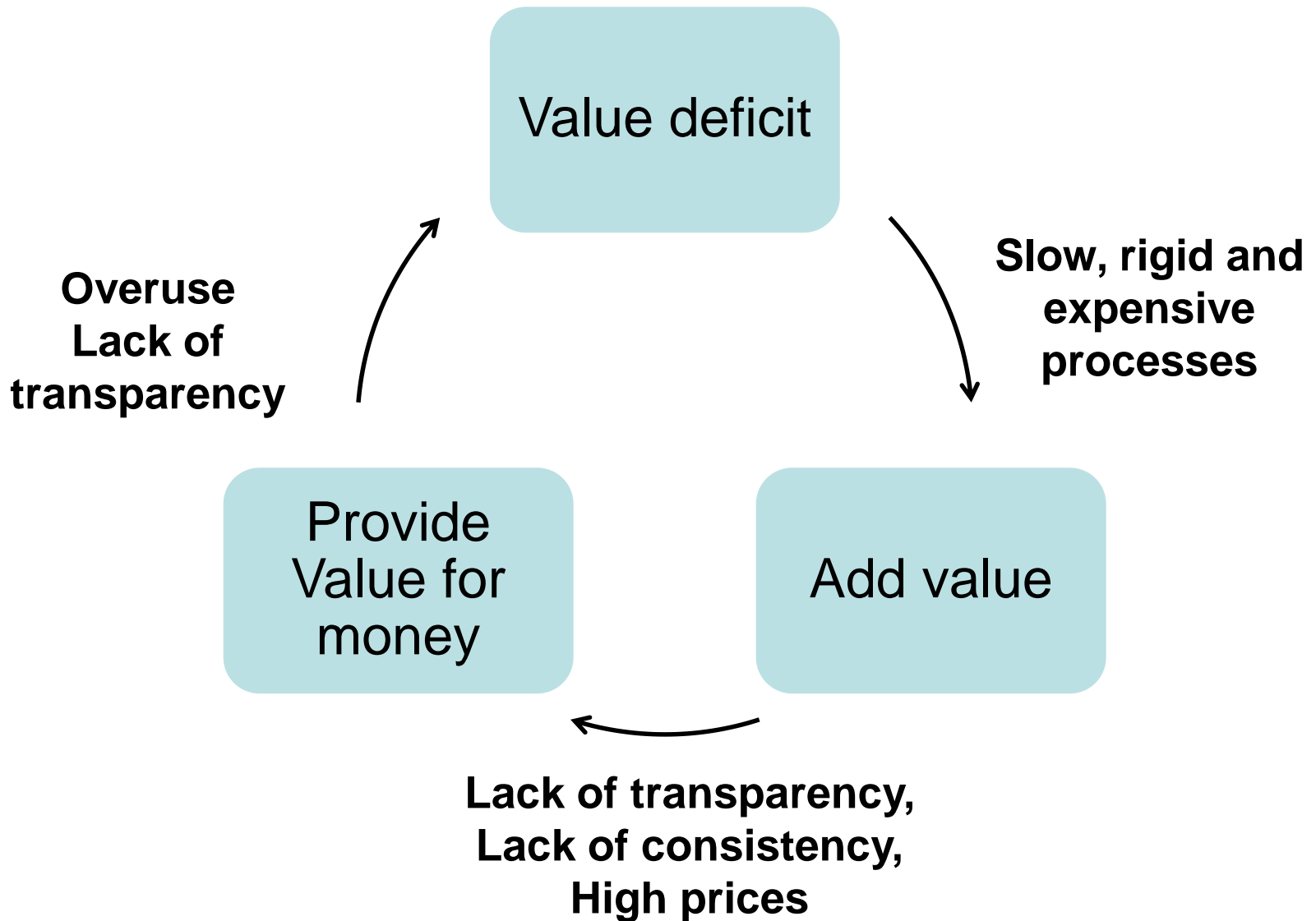


Figure 14: Projection of the budget impact before savings of reimbursed PMx in Belgium from 2005 to 2020.

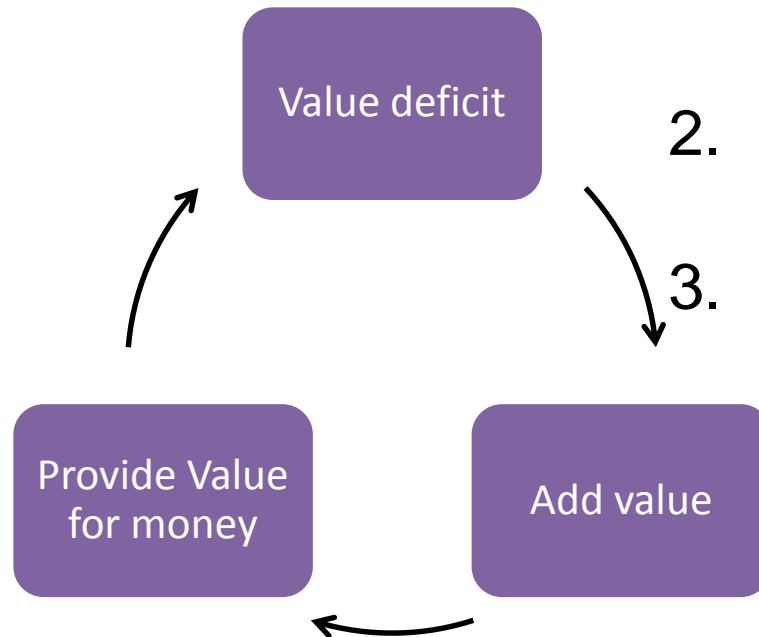
**B
U
D
G
E
T** **≠** **BRINGING
UNNECESSARY
DEATHS/DISABILITY by
GENERAL
EXCLUSION from
TREATMENT**

*Not recognizing the value goes against the objectives of health care policies;
If we only look at budget impact, then we better let patients die.*

Back to the key Problems



10 recommendations for a joint solution

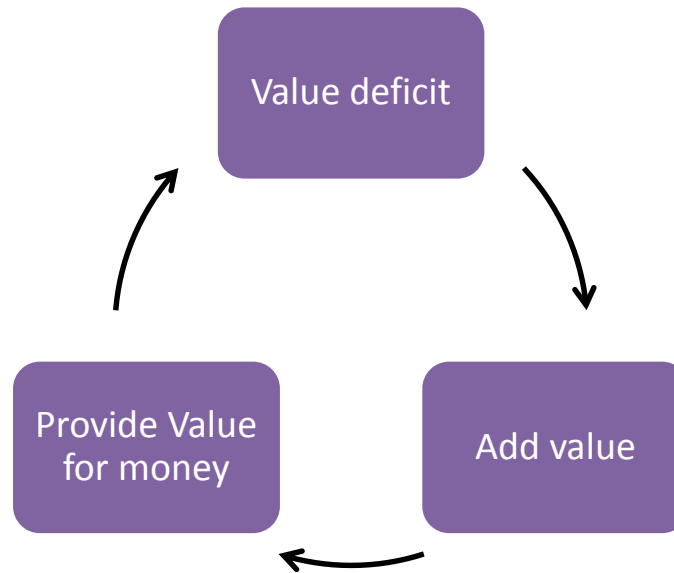


1. More Public Private Partnerships (IMI) to facilitate development
2. Adaptive trial designs and adaptive authorisation
3. Early advice & dialogues

- Faster and more efficient development
- Innovate the way we innovate

Work in Progress
Eur. Comm.

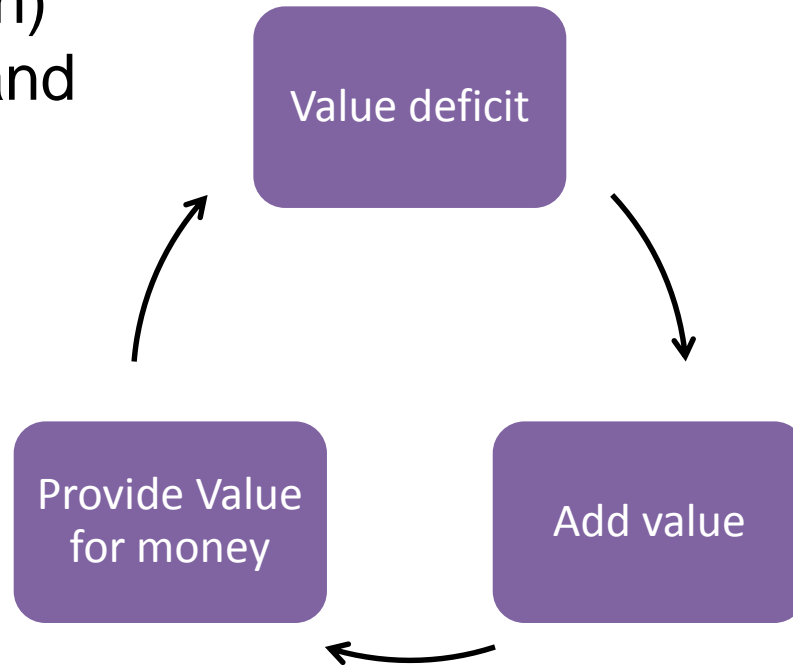
10 recommendations (cont'd)



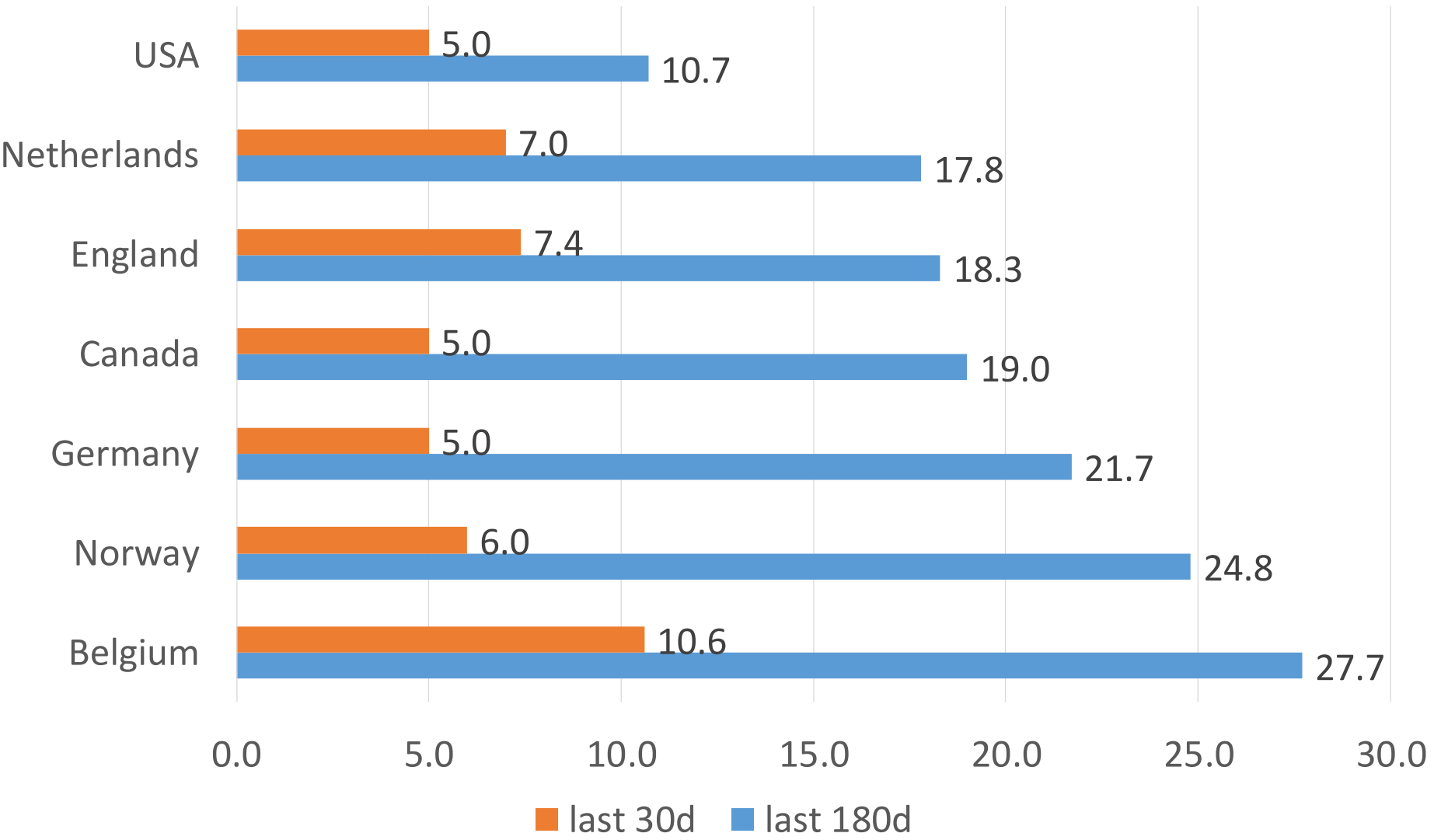
4. Value based pricing, accounting for savings elsewhere & QALY gains
5. Adaptive reimbursement processes & outcomes based agreements
6. Explicit societal limits & value for money benchmarks
7. Importance of medical need (involve citizens and patients!) and budget impact to review/modulate the cost/QALY thresholds
8. Industry to show the fairness of its prices

10 recommendations

9. Monitor the usage of the innovations (e-Health)
10. Stimulate right use and discourage misuse



Hospital days end of life



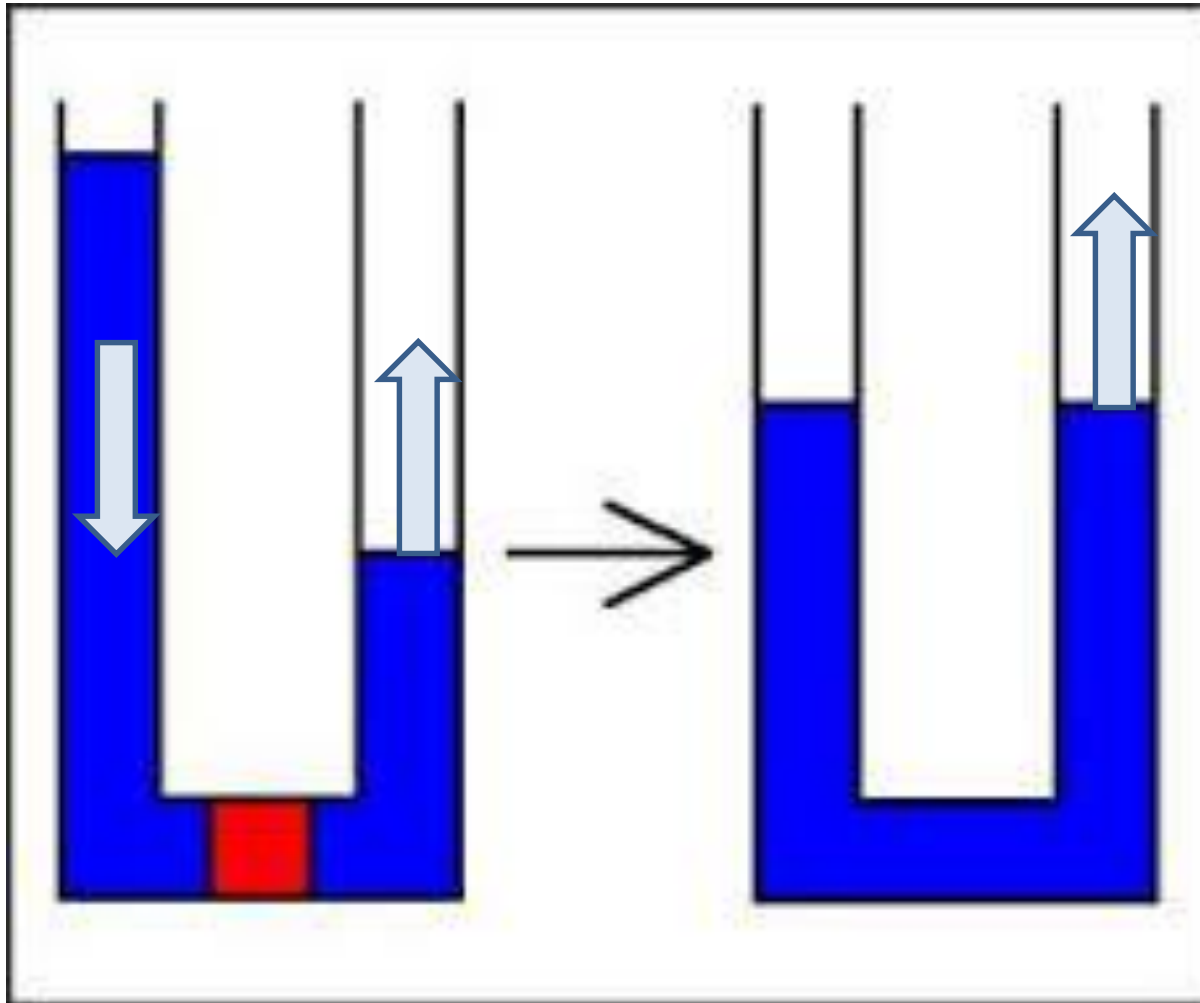
Bekelman et al, JAMA, January 2016

== **WASTED**
LIVES



Re-investing in health !

Over ~~use~~



More
Prevention
&
Innovation



The cost of cancer treatment

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Ghent University

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January 2016