

# Value & Valuation of Health Technologies The Swedish Experience

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Zurich, November, 2010.



# Outline

HTA

VBP

TLV

# Health Technology Assessment (HTA)

Historically HTA agencies have focused on producing high quality assessment reports to inform decision makers

Now such organizations are increasingly undertaking or commissioning HTAs, to inform a particular resource allocation decision, i.e. appraisals, such as:

- listing a drug on a national or local formulary,
- defining coverage and insurance plans,
- issuing mandatory guidance on the use of health care technologies

## Value Based Pricing (VBP) of pharmaceuticals

”Value Based Pricing or Value optimized pricing is a business strategy. It sets selling prices on the perceived value to the customer, rather than on the actual cost of the product, the market price, competitors prices, or the historical price.” (Ref. Wikipedia)

The goal of VBP is to align price with value delivered.

VBP is dependent upon an understanding of how customers measure value.

# Organizations undertaking or commissioning Health Technology Assessment (HTA) in Health Care in Sweden

- SBU (Swedish Council on Technology Assessment in Health Care)
- SoS (National Board of Health and Welfare)
- TLV (Dental & Pharmaceutical Benefits Agency)
- Regional P&T Committees & Regional Mini-HTA

Health care resources are limited and the government has decided that rationing will be based on three criteria:

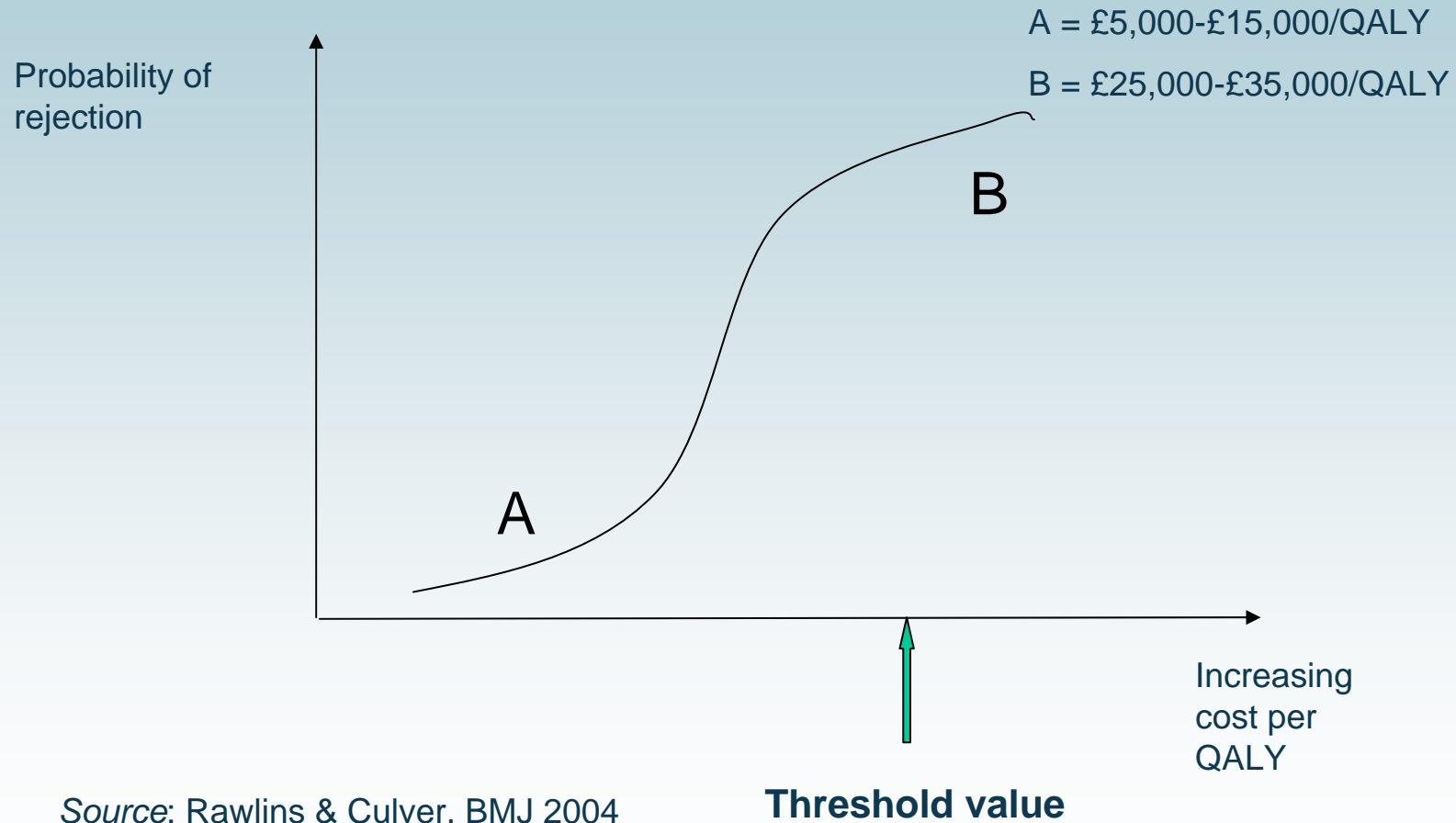
- The principle of equal human value
  - respect for the equal human value of all people
- The principle of need and solidarity
  - those in greatest need take precedence) and
- The cost-effectiveness principle where the cost of a drug will be decided through a "value-based pricing" system

## Key principles of Value Based Pricing of pharmaceuticals in Sweden

- 1. A *threshold value***, e.g. maximum willingness-to-pay for a QALY gained
- 2. *Marginal decreasing utility*** of treatment, e.g. the benefit varies by indication or by degree of severity
- 3. *Societal perspective*** in order to consider cost offset in other sectors/budgets than the health care

# 1. A threshold value

## National Institute for Clinical Excellence (NICE) and its value judgments



Source: Rawlins & Culyer, BMJ 2004

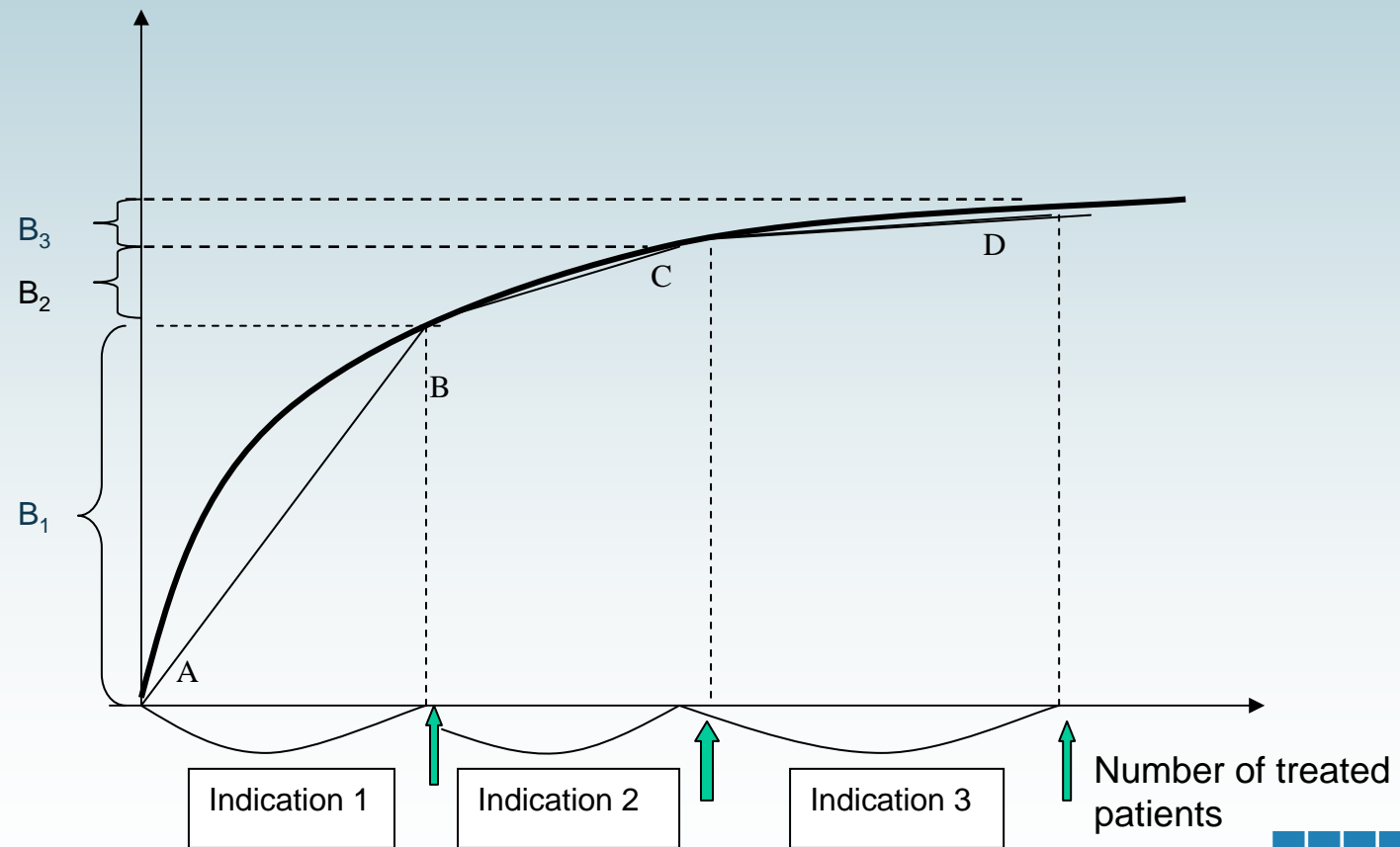
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## 2. Diminishing marginal utility of drug treatment

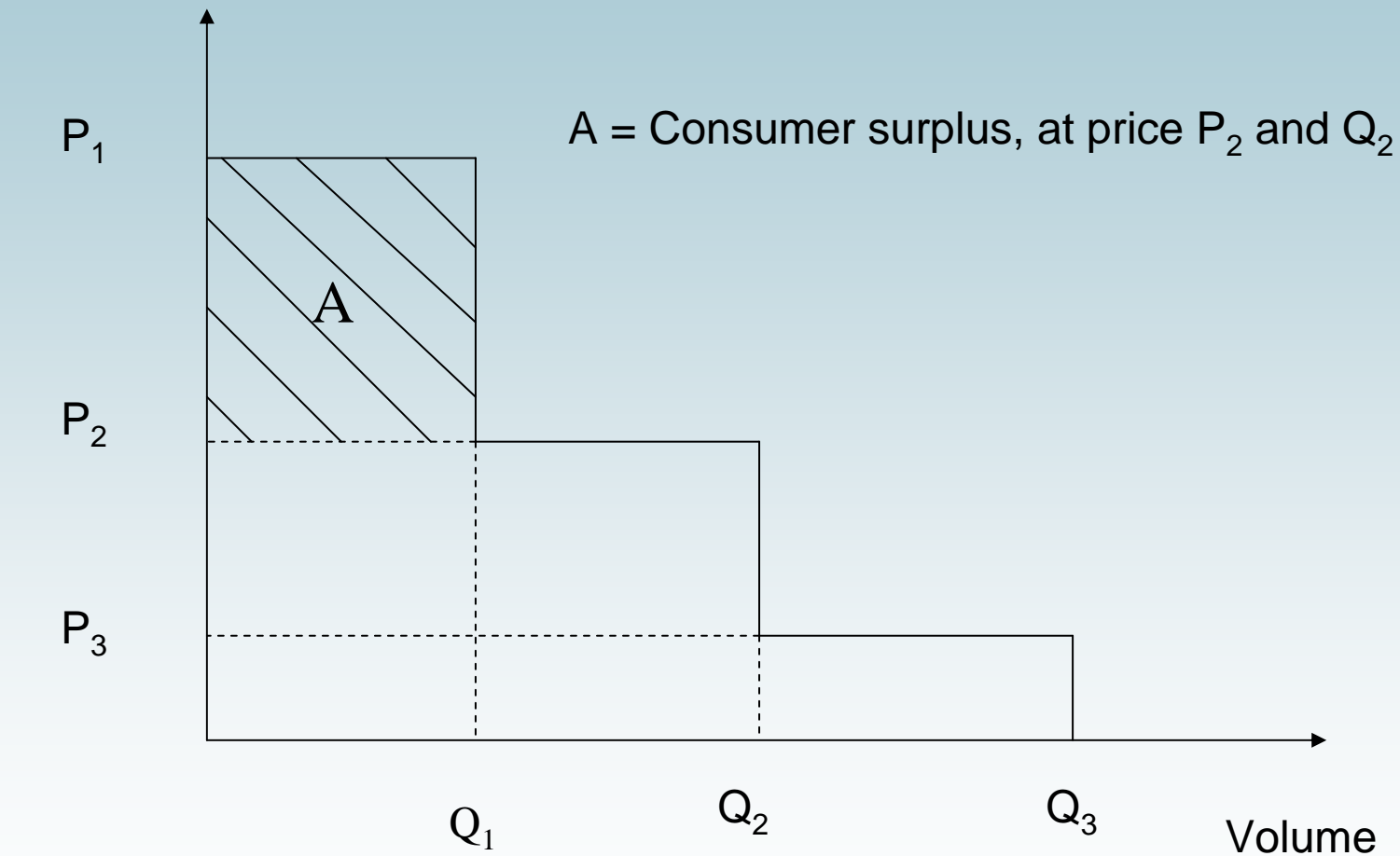
Benefit of health:



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# Corresponding Price, volume and consumer surplus in VBP



### *3. Consequences in a social economic perspective*

Other pharmaceuticals

Outpatient care

Inpatient care

Social services (home care, rehabilitation)

Value of lost production

Life expectancy

Quality of life

Relationship between costs and Quality Adjusted Life Years gained (QALYs)

# Value based pricing of pharmaceuticals

## Advantages expected

Cost-Effective use of health care resources

Cost containment instruments

A sustainable system – access to new treatments and encouraging the developments of new treatments

Cost-effectiveness analysis is not a sufficient and adequate basis for fair and reasonable decision making

Some argument against VBP :

**1. VBP drives costs upwards:**

Asymmetry of expenditures within different sectors in health system, e.g. between hospital budgets and treatment interventions, not covering pharmaceuticals are calculated and based on expected costs.

If we at the same time set the prices and reimbursements of pharmaceuticals based on the principles for VBP it will result in an increase in costs that widely extend the costs for the other health care resources.

*Source : Thomas Muller, G-BA, Joint Federal Committee, Germany, EMAUD, Newsletter #1, June 2010*

## Arguments against VBP (cont.)

### 2) **VBP results in "to high prices"**

If the threshold value, i.e. the societies maximum willingness-to pay is known prior to the price and reimbursement negotiation the health care (taxpayers) have to pay maximal price for each QALY

## Arguments against VBP (cont.):

### 3) Orphan drugs could be excluded from reimbursement.

If price & reimbursement decisions are based solely in the principles of VBP, budget aspects are not included in the decision-making process. The result is that orphan drugs will not be reimbursed.

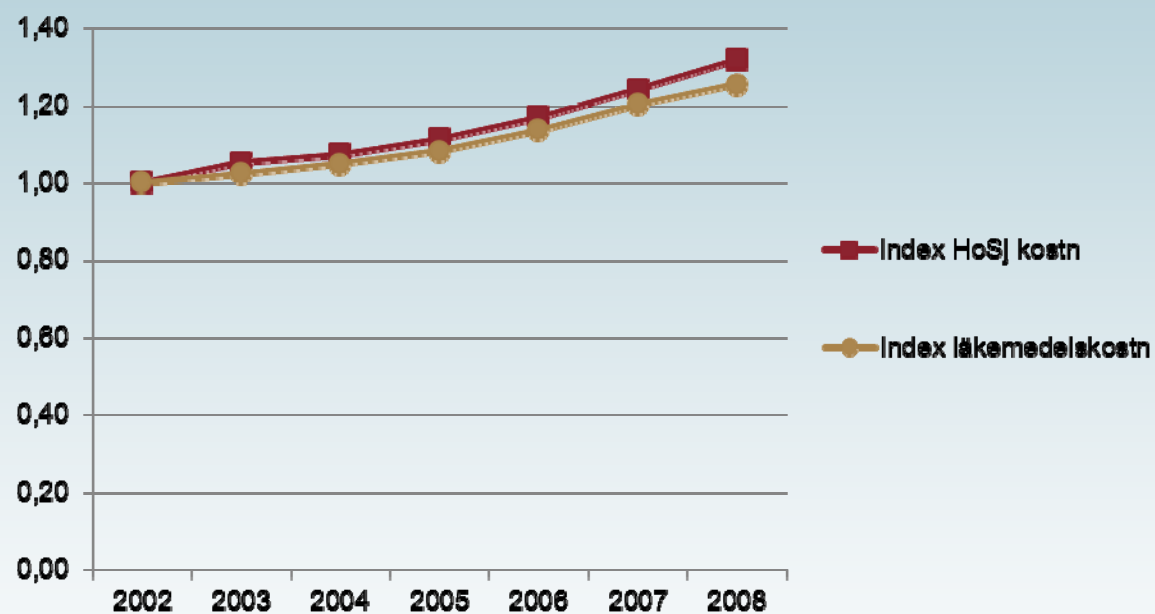
## How does VBP work in reality?

1. Cost increase rapidly?
2. “Too high” prices?
3. A sustainable system – access to new treatments and encouraging the development of innovations?



# The development of costs for health care and for pharmaceuticals in Sweden

Index, base year 2002



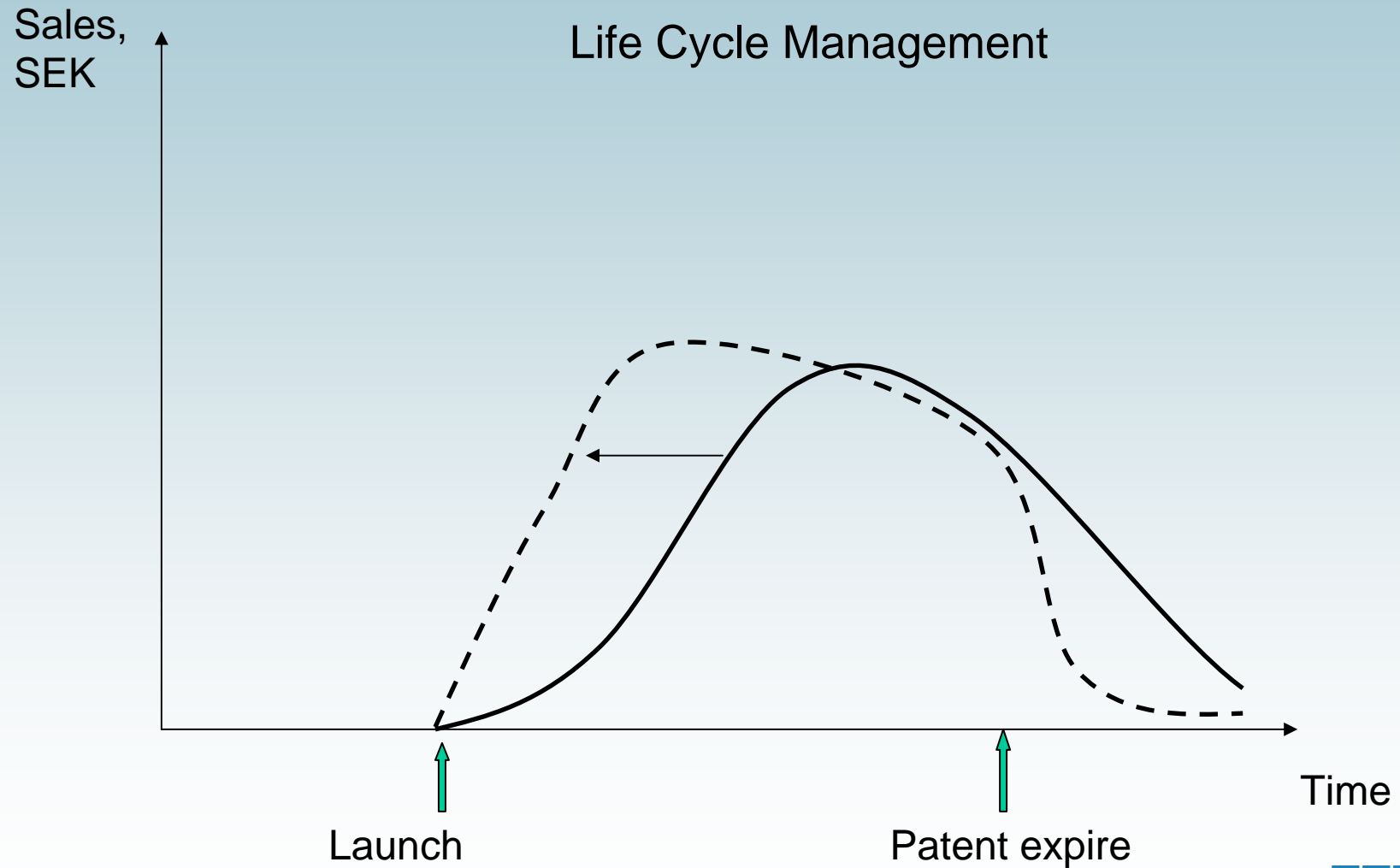
# 1. Cost containment?

Increased costs for pharmaceuticals (for humans) in Sweden,  
Total 2008, € 3,500 million

1990s	10 % annually	
2002	8.5 %	← TLV appraisals
2003	2.1 %	
2004	2.8 %	
2005	2.9 %	
2006	5.1 %	
2007	6.1 %	
2008	5.2%	
2009	2.6%	

## Cost containment (Cont.)

### Life Cycle Management



## 2. Increase in pharmaceutical prices?

All decisions from reimbursement for new products from October 2002 to October 2007, total 216 decisions

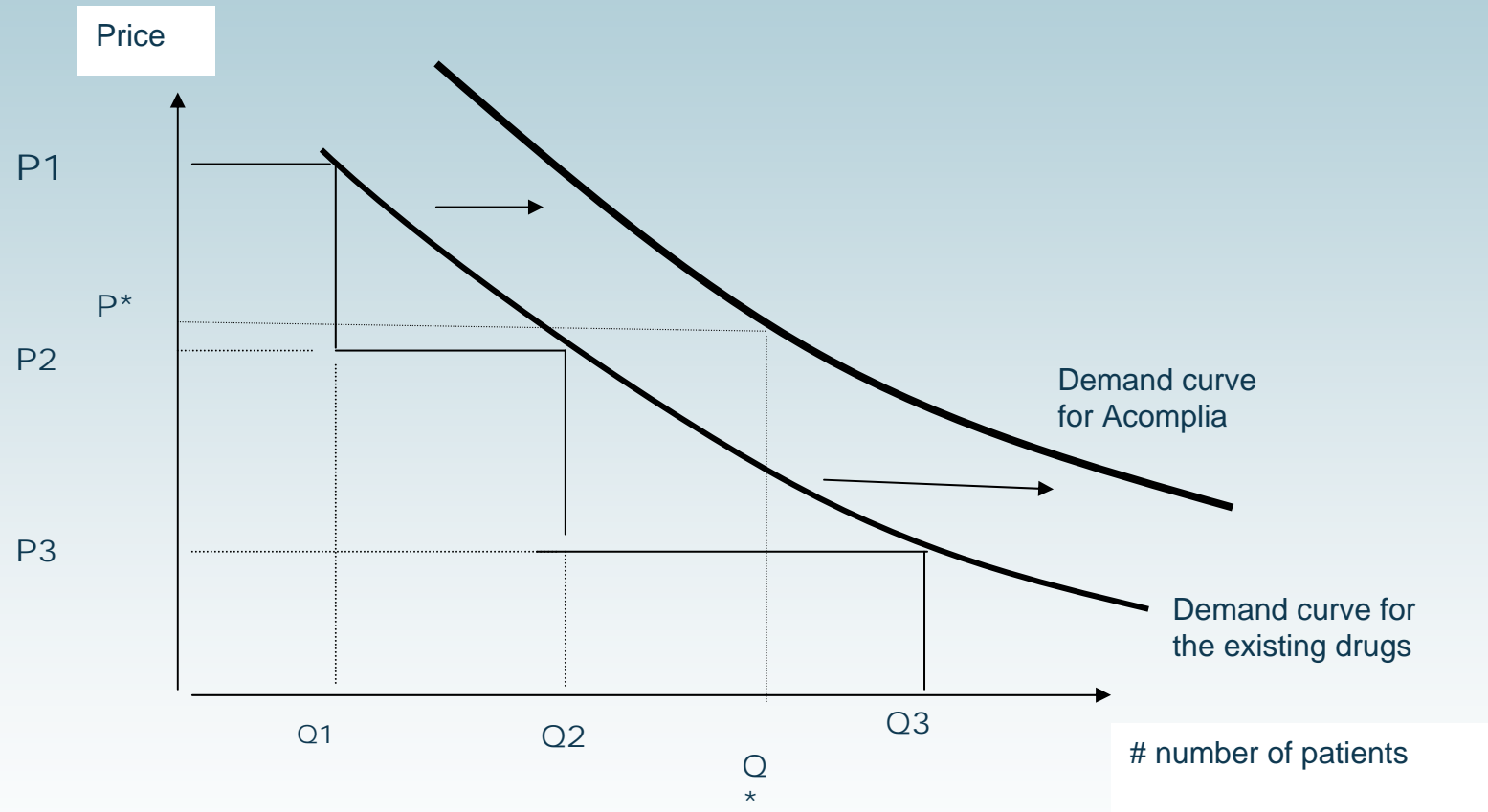
On average the cost/QALY is € 36 000.

For more severe conditions the TLV/LFN has accepted cost per QALY in the area of € 90 000

Note: In October 2008 TLV rejected the breast cancer treatment drug Tyverb because it was considered as too costly per QALY gained, € 120 000.

# Value, Based Pricing (VBP), cost-effectiveness and consumer surplus for marginal subgroup

## The example of Acomplia – a weight reducing drug



Source : Persson et al. A Case Study of Ex Ante, Value-Based Price and Reimbursement Decision-Making: TLV and Rimonabant in Sweden. The European Journal of Health Economics (2009)

### 3. Sustainability ?

Access to new treatments &  
uptake of new therapies

The uptake and use of the TNF-inhibitors for rheumatoid arthritis (RA) in Sweden is not very far away from that in the United States.

Patient registries were established early on in RA

Source: Jönsson B, Kobelt G, Smolen J. Eur J Health Econ (2008)

## Sustainable system? (cont.)

Orphan drugs have difficulties in receiving reimbursement because cost/QALY gained can exceed the accepted threshold value

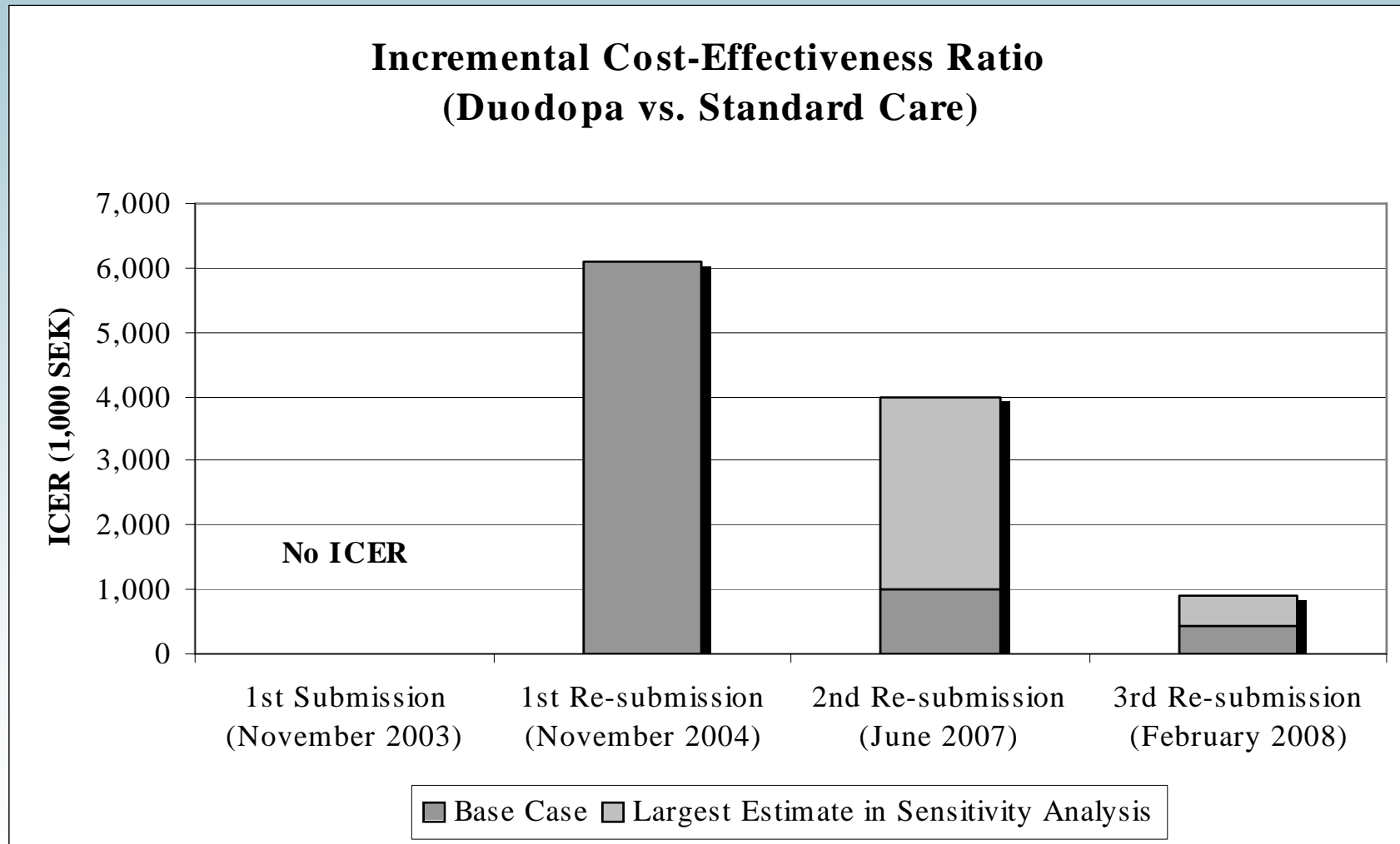
In a total of 30 orphan drugs 29 have received reimbursement by TLV (6 with limitations), Juni 2003 – April 2010\*.  
(Kuvan vid hyperfenylalaninemi vid fenylketonuri (PKU) were not granted reimbursement.

SMC in Skottland have evaluated 28 orphan drugs and "almost half of them" were denied reimbursement\*\*.

Source: \*TLVs homepage

\*\* Policies for Rare Diseases and Orphan Drugs, *KCE reports 112C*

Cost-effectiveness for Duodopa at each stage in the reimbursement approval process



Source: Willis et al. Reducing Uncertainty in Value-Based Pricing Using Evidence Development Agreements: The Case of Continues Intraduodenal infusion of Levodopa/Carbidopa (Duodopa®) in Sweden. Applied Health Economics and Health Policy (2009)



## VBP Discussion

The "Swedish" example for pharmaceuticals does not support the arguments that VBP should:

- Increase costs more rapidly for pharmaceuticals than for other health care costs
- Higher prices on pharmaceuticals when the society's willingness-to-pay is known

However, VBP may make it difficult to receive reimbursement for orphan drugs

## A balance between three goals

1. Cost-effectiveness
2. Cost containment
3. A sustainable system require instruments encouraging innovations