

Understanding QALYs: Do they need to be complicated?

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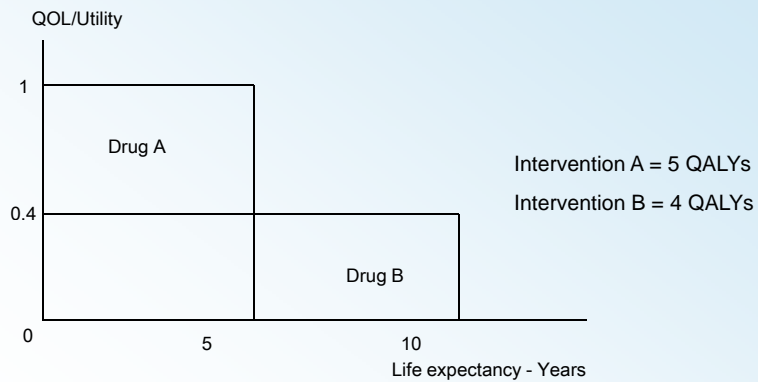
York Health Economics Consortium

Introduction to QALYs

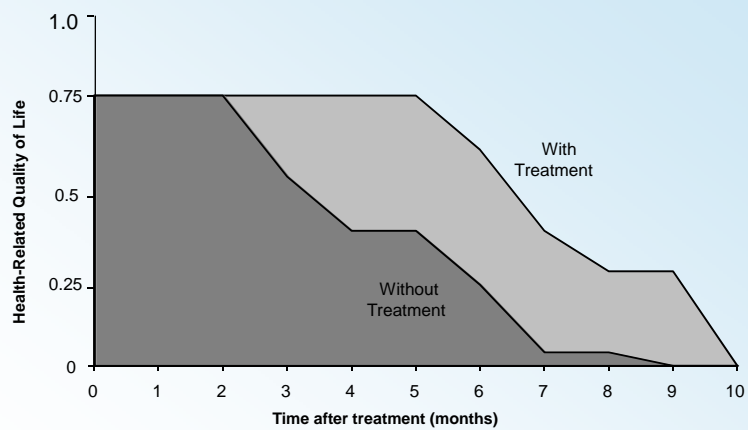
- QALY = Quality Adjusted Life Year
- “Adding life to my years as well as years to my life”
- Acknowledge that extension of life is not the ultimate objective of medicine
- Particularly applicable to cancer therapies

Deriving QALYs

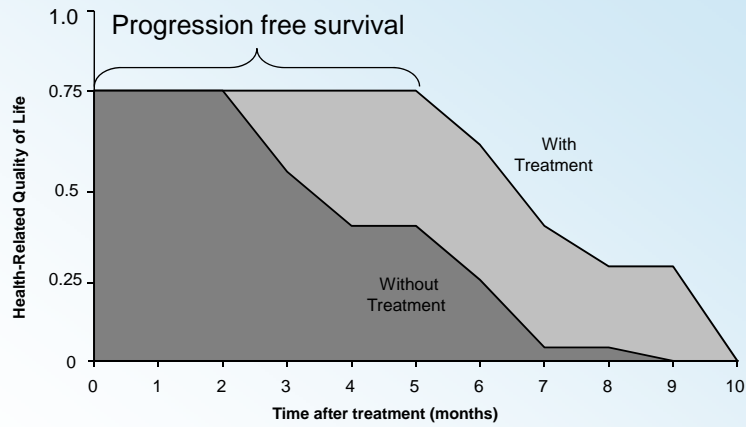
- Weight the life expectancy by the quality of life (or utility) during that time.



QALYs Over Time

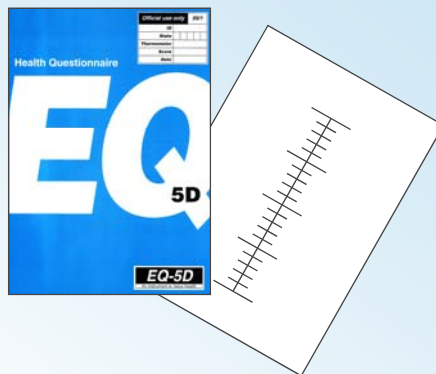


QALYs Over Time



Deriving Utilities/QOL

- Questionnaires
 - EuroQol EQ-5D
 - SF-36
- Visual analogue scales
 - Thermometers
- Direct valuation techniques



Why Bother?

- Scarce resources lead to difficult choices and opportunity cost
- QALY's provide us with a common currency

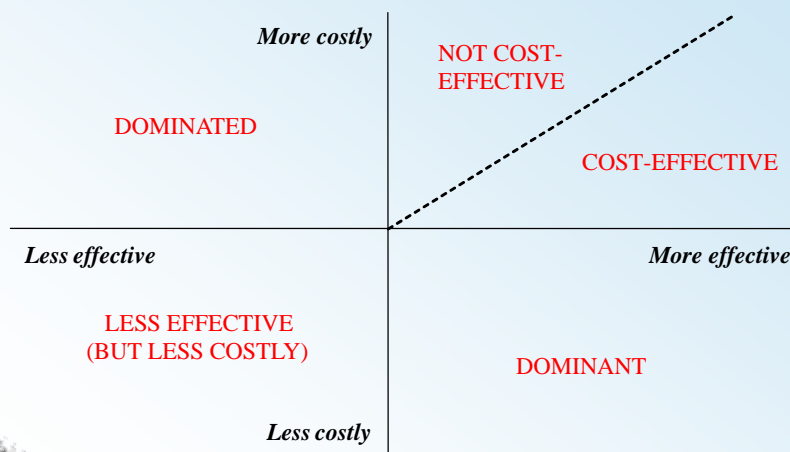
Health Outcomes - Examples

- "Lives saved"
- "Increased life years"
- "Relapses averted"
- "Pain-free days"
- "Cases cured"
- "Cases prevented"

Health Outcomes - Examples

- “Lives saved” = 2
- “Increased life years” = 9
- “Relapses averted” = 48
- “Pain-free days” = 5,360
- “Cases cured” = 35
- “Cases prevented” = 28
- Which of these is the best value for money?

QALYs & Cost Effectiveness



QALYs & Decision Making

- Concern about adopting an explicit threshold for value for money
 - Economics only one input to decision
 - Gaming
- NICE adopts a range of £20,000 - £30,000 per QALY gained
- Consideration given to 'end-of-life' criterion
 - Decisions to date suggest a higher threshold of £50,000 - £70,000 per QALY gained

Cost per QALY Calculations

- Most rigorous method is to collect data alongside trials
 - Resource use/cost data
 - Utilities/QoL data
 - Survival data

Cost per QALY Calculations

- However, simpler calculations may support rapid decision making
 - New treatment costs £15,000 more per patient year than existing treatment
 - For this to be cost effective (<£30,000 per QALY) it needs to provide an additional 0.5 QALYs

Cost Per QALY Calculations

- Overall survival improved by 6 months
- Progression free survival improved by 1 month
- Impact of adverse events?
- Treatment provides 6 months of benefit but in a state less than full health
 - i.e. QALY gain is less than 0.5
- Unlikely to be cost effective at a £30,000 per QALY threshold.

Interpreting QALYs: Caution

- Comparator
- Validity of trial data to practice
- Costs
 - What's included/excluded? E.g. Non-treatment costs
- QoL
 - What's included/excluded? E.g. Adverse events

Key messages

- QALYs a useful tool to support difficult resource allocation decisions
 - Provide a common currency and a framework for evaluating value for money
- However, QALYs are only one input to the decision making process and need to be considered in context