Assessment and Appraisal of Cancer Medicines: Do They Deserve a Special Treatment?

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ISPOR - 14th Annual International Meeting, Orlando, 2009
Outline

• Achieving efficiency in budget constrained health systems
• Implications for benefit measurement
• How does cancer fit in?
• Addressing the limitations of the QALY
Cost-effectiveness in budget constrained systems

Price = P*

Cost-effectiveness Threshold £20,000 per QALY

Price > P* £60,000

Price = P* £40,000

Price < P* £20,000

Implications

- Decisions are taken across diseases and clinical areas
- Health needs to be measured consistently (gains and losses)
  - Combines change in length and quality of life
  - QALYs most widely used and understood
- Cancer patients can be the gainers and the losers
What does this mean for cancer?

| Diagnostic (e.g. MRI to stage cancer) |
| Chronic disease (e.g. testicular)    |
| Screening (e.g. cervical)            |
| Primary prevention (e.g. prophylactic mastectomy) |
| Secondary prevention (e.g. early breast cancer) |
| Life extending (e.g. multiple myeloma) |
| Palliative (e.g. dysphagia in oesophageal) |
| Care (e.g. late stage lung cancer)    |

Δ Life expectancy
Δ Health-related quality of life
Δ Life expectancy and HRQoL
Challenges to using the QALY

Individual health

Strong assumptions
- Constant proportional trade-off
- Additive independence
- Risk neutrality

Whose preferences?

Analytical solutions
Alternative measures (e.g. HYE$es$) $\times$
Sensitivity analysis $\checkmark$
Patient preferences $?$
**Challenges to using the QALY**

Interpersonal comparison of health gain

“A QALY is a QALY is a QALY”

- Severity of baseline prognosis
- Lifetime health experience
- Non health-related disadvantage
- End of life
- Degree of ‘blame’

Those that **gain** health
- Generally known

Those that **lose** health
- Generally unknown
Analytical versus deliberative approaches

**Analytical?**
- Equity-weighted QALYs
- Other methods
- Which characteristics?
- Whose preferences?
- Ready for prime time?

**Deliberative?**
- Other factors taken into account
- More nuanced
- Lacking transparency

**Deliberation informed by analysis?**
- Threshold analysis
- Which utilities?
- Which QALY weights?
- What opportunity cost?
- When do QALY limitations matter
Conclusions?

• Focus has to be health improvement not disease
• QALYs are a tool rather than a rule
• Limitations of QALYs are not unique to cancer
• Issues do not apply to all evaluations in cancer