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Making decisions at NICE: how economic assessment informs guidance

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Role of NICE

- Promote effective and cost effective means of preventing ill health and treating illnesses
- Help the NHS and the wider public health community improve quality and reduce variation in care
- Give people who use the NHS information about what they can expect from it

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The need for economic assessment

- Recognises the reality of fixed NHS resources – and brings this to the attention of the public
- Exposes the opportunity cost of new interventions
- Enables consistency in investment – and disinvestment – decisions
- Helps to direct innovation into those areas regarded as priorities by the health system

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Economic assessment is used in most NICE programmes ….

- Technology appraisals
  - use well-integrated into the decision process
- Clinical guidelines
  - application is increasing but the context is challenging
- Public health
  - an evolving approach with a broader economic perspective
- Patient safety
  - entirely novel (for NICE) with real potential for controversy

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Assessing cost effectiveness

- Below a most plausible ICER of £20,000/QALY, judgements about the acceptability of a technology as an effective use of NHS resources are based primarily on considerations on the cost effectiveness estimate.
- Above a most plausible ICER of £20,000/QALY, judgments about the acceptability of the technology as an effective use of NHS resources are more likely to make more explicit reference to factors including:
  - the degree of uncertainty of the ICER
  - the innovative nature of the technology
  - the particular features of the condition and population receiving the technology
  - (where appropriate) the wider societal costs and benefits.
- Above an ICER of £30,000/QALY the case for supporting the technology on these factors has to be increasingly strong.

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Our methods guide…….

- Describes the general methodological concepts underlying appraisal process
- Describes the requirements for those submitting evidence to NICE
- Uses a ‘reference case’ for cost-effectiveness analysis
  - need for consistency in approach for decision-making
  - defines the methods which should be used in our preferred approach
- Is kept under review – the latest update is out for consultation

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Elements of the Reference Case

Element of health technology assessment	*Reference Case*
Defining the decision problem	The scope developed by NICE in consultation with stakeholders
Comparator	Alternative therapies routinely used in the NHS
Perspective on costs	NHS and PSS
Perspective on outcomes	All health effects on individuals
Type of economic evaluation	Cost-effectiveness analysis
Measure of health benefits	Quality-adjusted life years (QALYs)
Representation of uncertainty	Probabilistic sensitivity analysis

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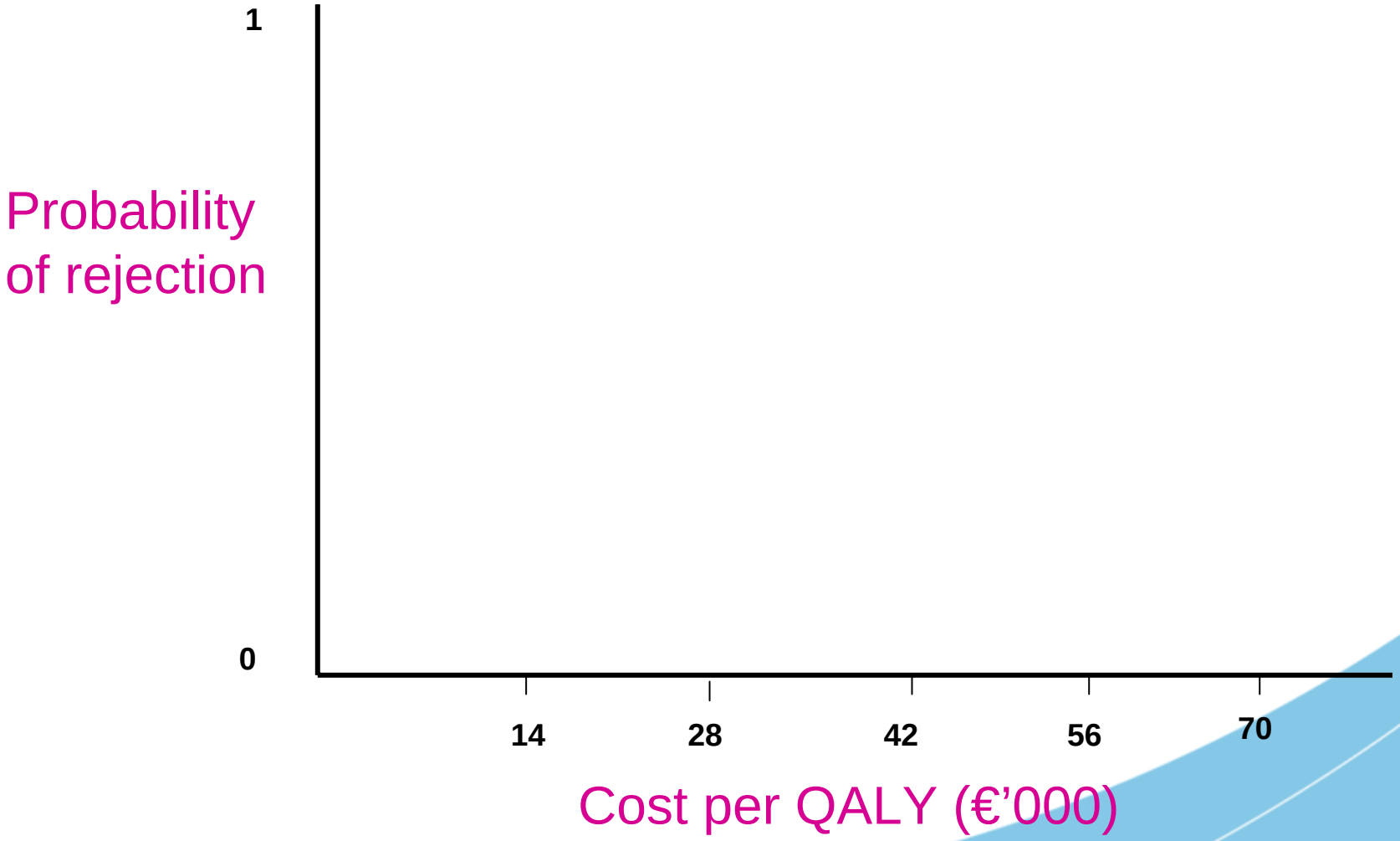
Assessing Cost Effectiveness



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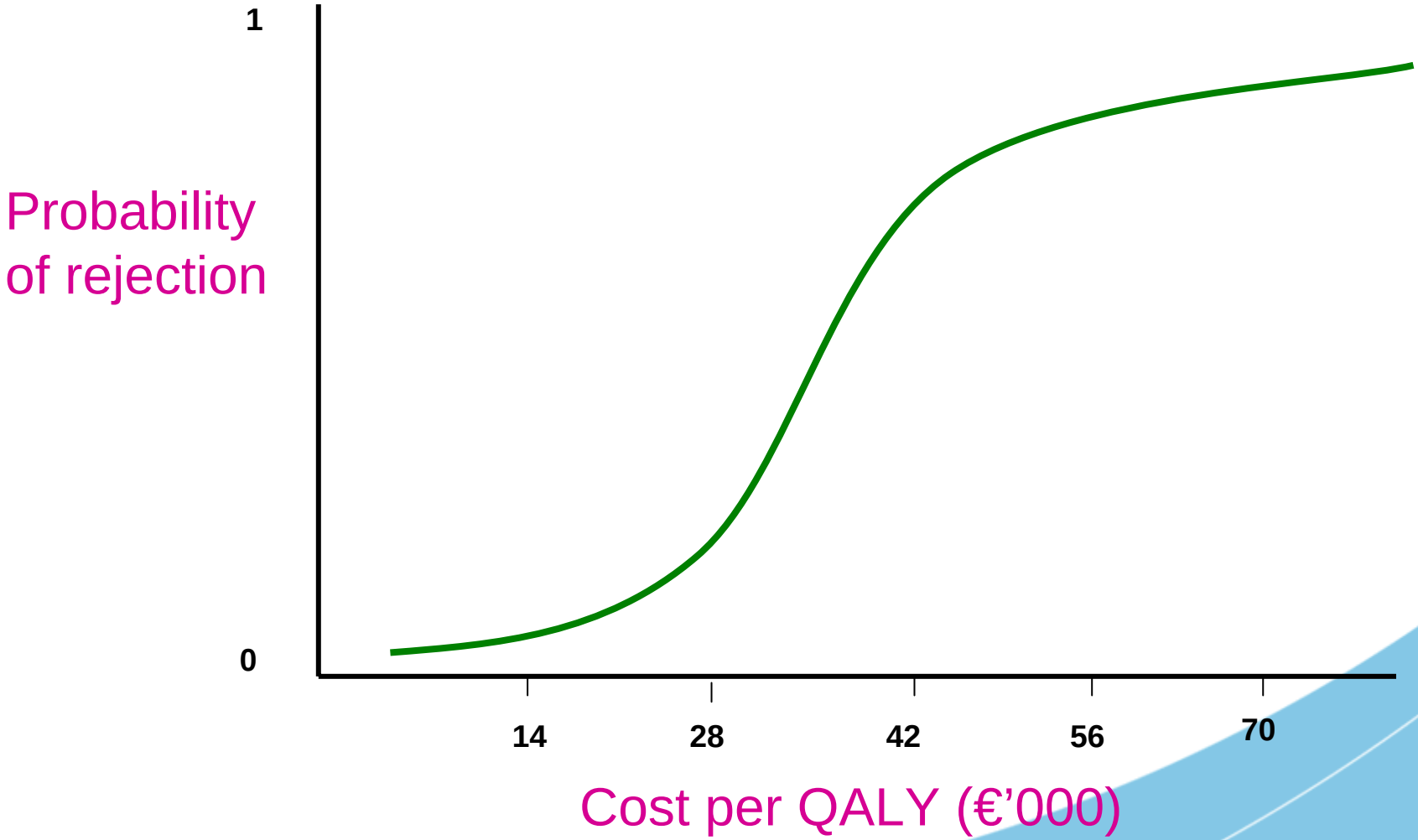
Assessing Cost Effectiveness



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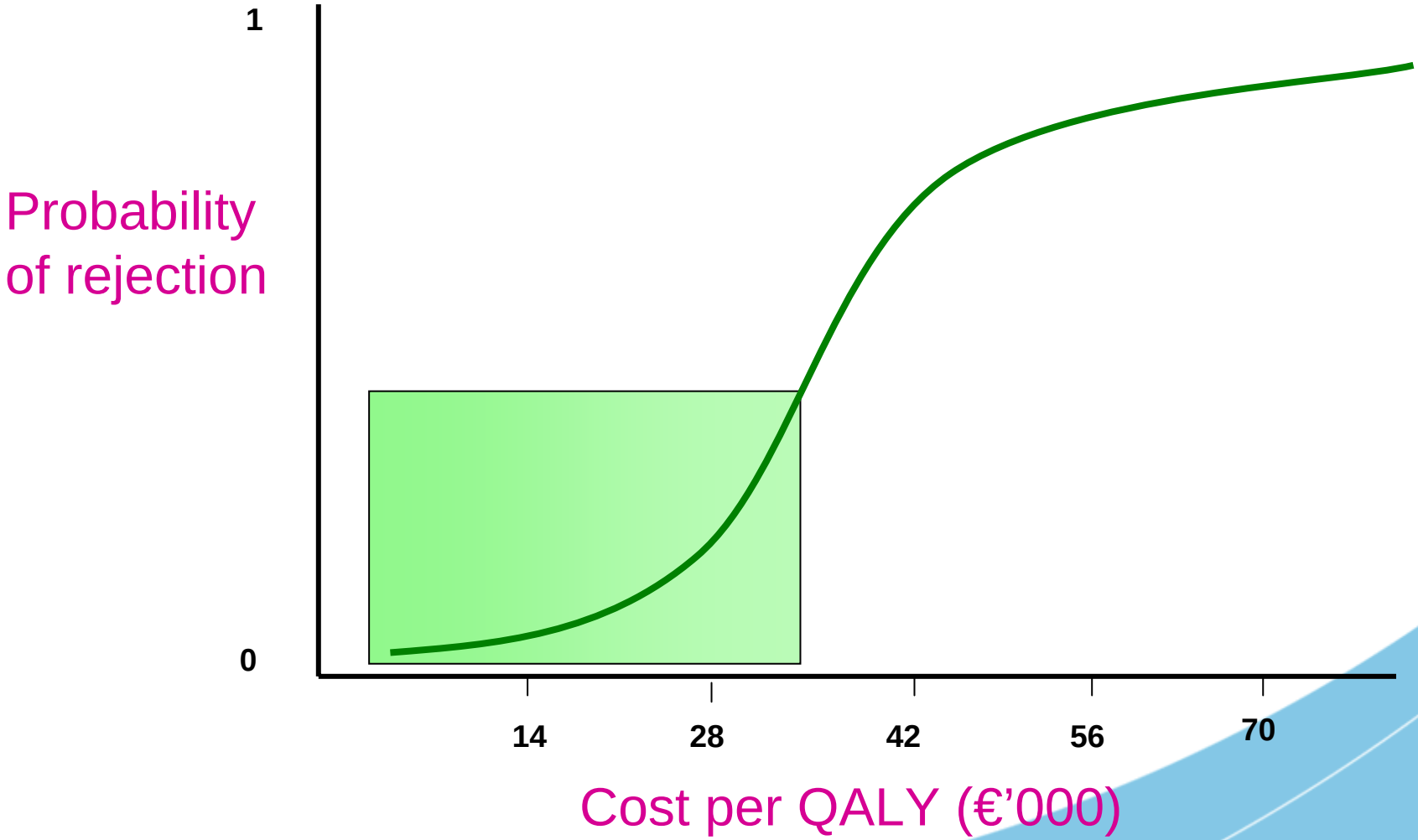
Assessing Cost Effectiveness



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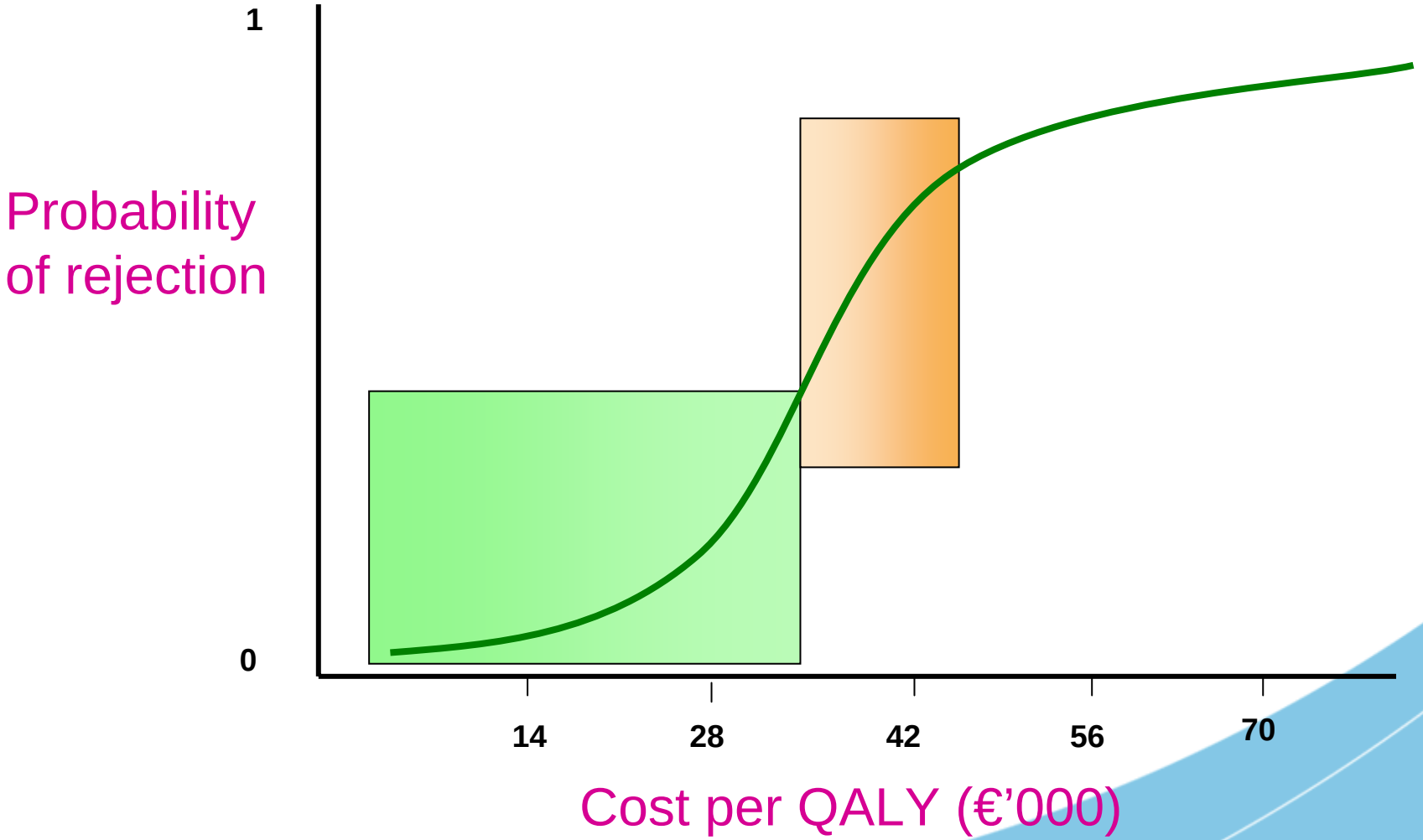

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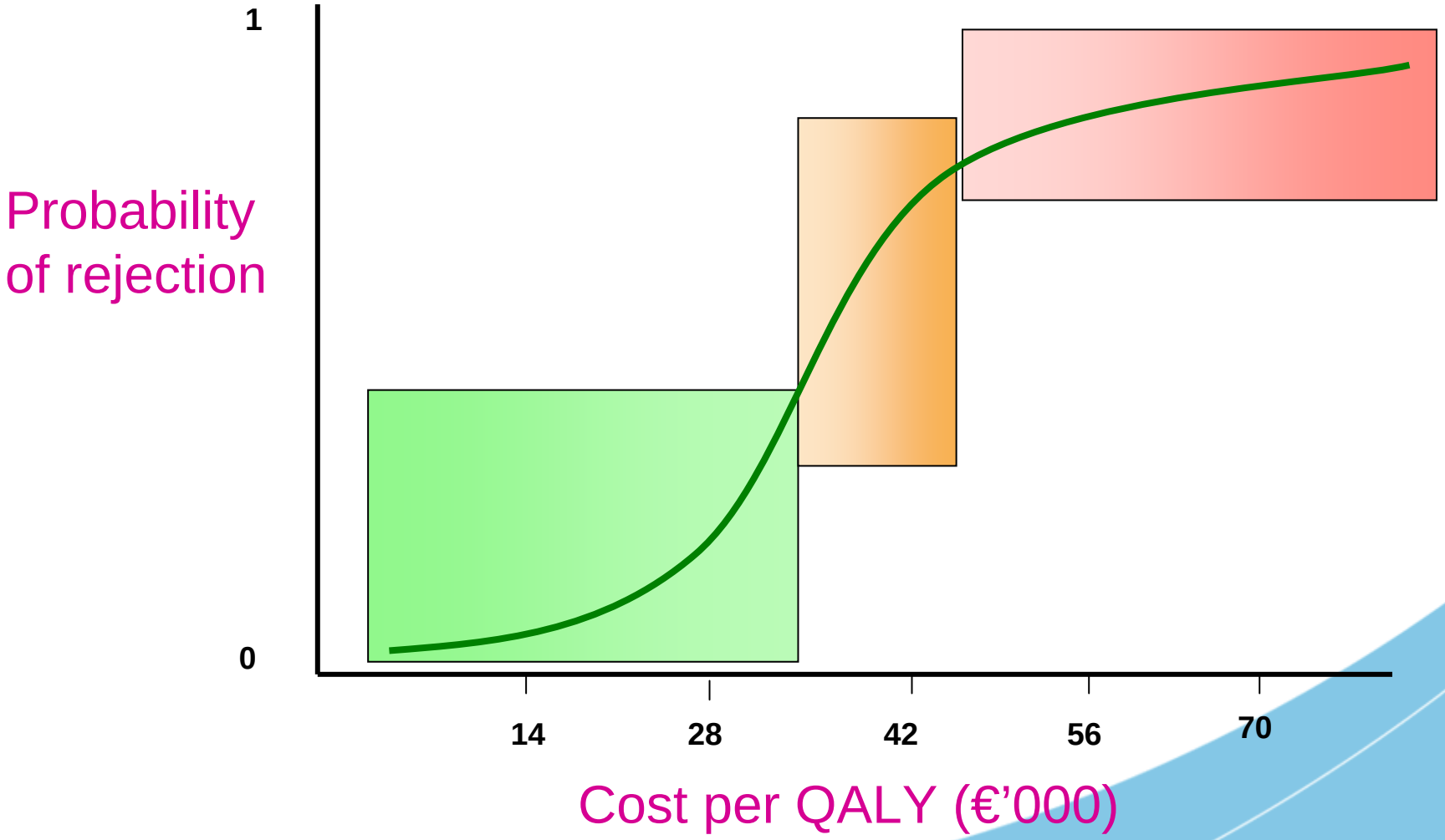

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Breakdown by decision

Decision	n	%
Recommended	283	81
Not recommended	38	11
Only in research/with data collection	28	8
TOTAL	**349**	**100**

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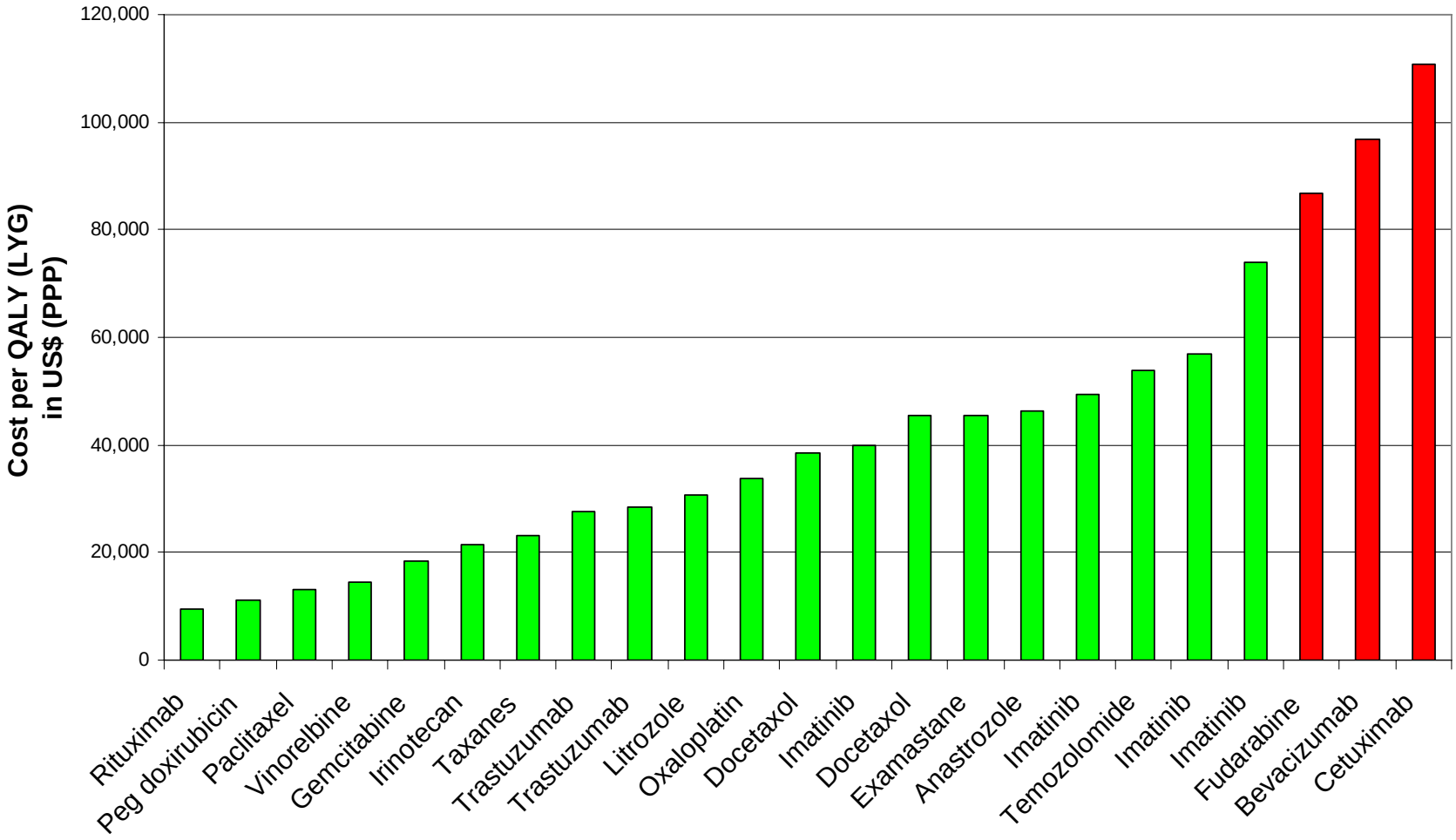
Cost effectiveness analysis: outcomes

Anti-cancer drug appraisals (2000 to 2007)



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Approaches to managing uncertainty

- Only in research
  - Laparascopic surgery for colorectal cancer
- Coverage with evidence development
  - Beta interferons for multiple sclerosis
- Cost sharing
  - Bortezomib (Velcade®) for refractory multiple myeloma

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Some issues and challenges

- Appraisal of technologies closer to point of launch
  - Data on resource impact in the health system may be lacking
- Availability of data relevant to the decision problem
  - trials may have not compared intervention to comparator of interest
- Increasing complexity of models
  - balancing accuracy and transparency
- Wider understanding and acceptance of economic assessment and the use of modelling
  - we need to raise awareness and educate health professionals and the public

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Industry and agency collaboration

- An adversarial relationship is sub-optimal
- Carefully managed space for engagement is essential
- Limitations of engagement need to be clearly stated
- Both the benefits and the risks of collaboration – for both health systems and manufacturers – need to be recognised and managed
- Optimal use and managed introduction of effective new technologies should be a joint aim