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Faria, Rita orcid.org/0000-0003-3410-1435, McKenna, Claire orcid.org/0000-0002-7759-4084 and Palmer, Stephen John orcid.org/0000-0002-7268-2560 (2013) Targeting subgroups to realise value : the cost-effectiveness of omalizumab in severe allergic asthma. In: UNSPECIFIED. (Unpublished)

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Targeting subgroups to realise value: The cost-effectiveness of omalizumab in severe allergic asthma

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Background

- Patients with uncontrolled severe persistent allergic asthma balance asthma control with adverse effects from treatment.
- Omalizumab offers an effective alternative to stepping up treatment but at a substantial cost.
- Although omalizumab is unlikely to be cost-effective for the overall patient population, it may be good value for money for severe subgroups.

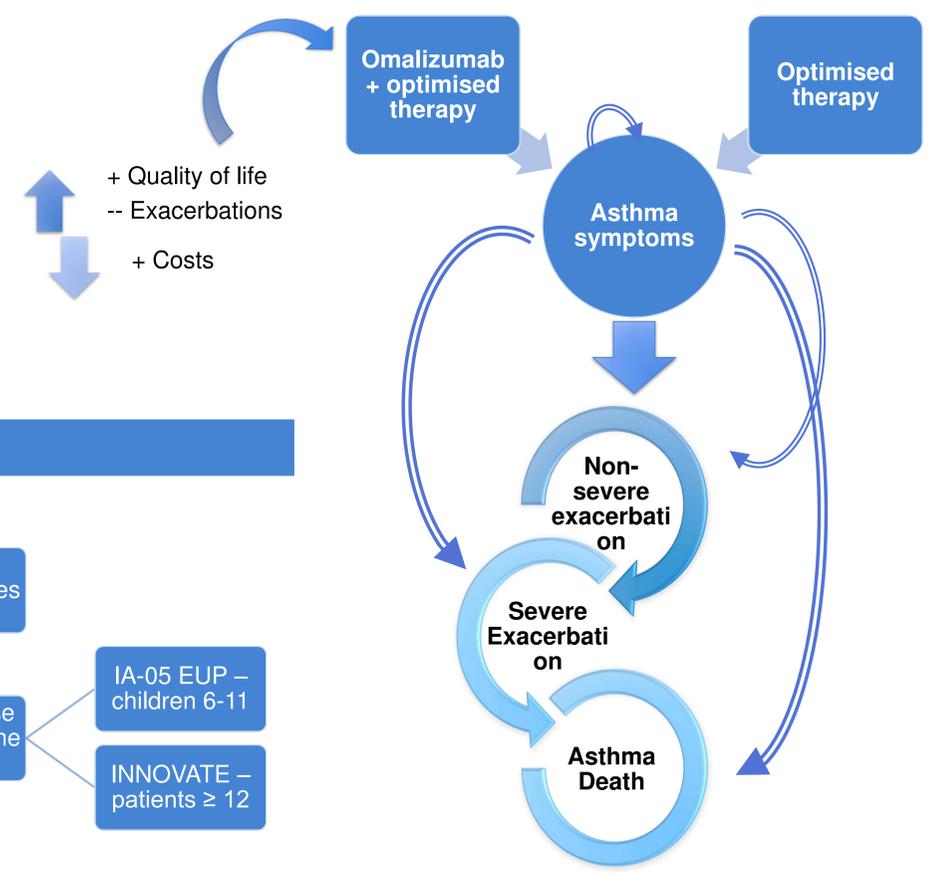
Population and subgroups

- Population reflects marketing authorisation
 - Patients uncontrolled at step 4
 - Patients controlled at step 5
 - Two age groups: 6-11 and ≥ 12
- Population subgroups defined by indicators of severity:
 - Hospitalisation for asthma in past year
 - Maintenance OCS use (step 5)
 - ≥ 3 exacerbations in the past year

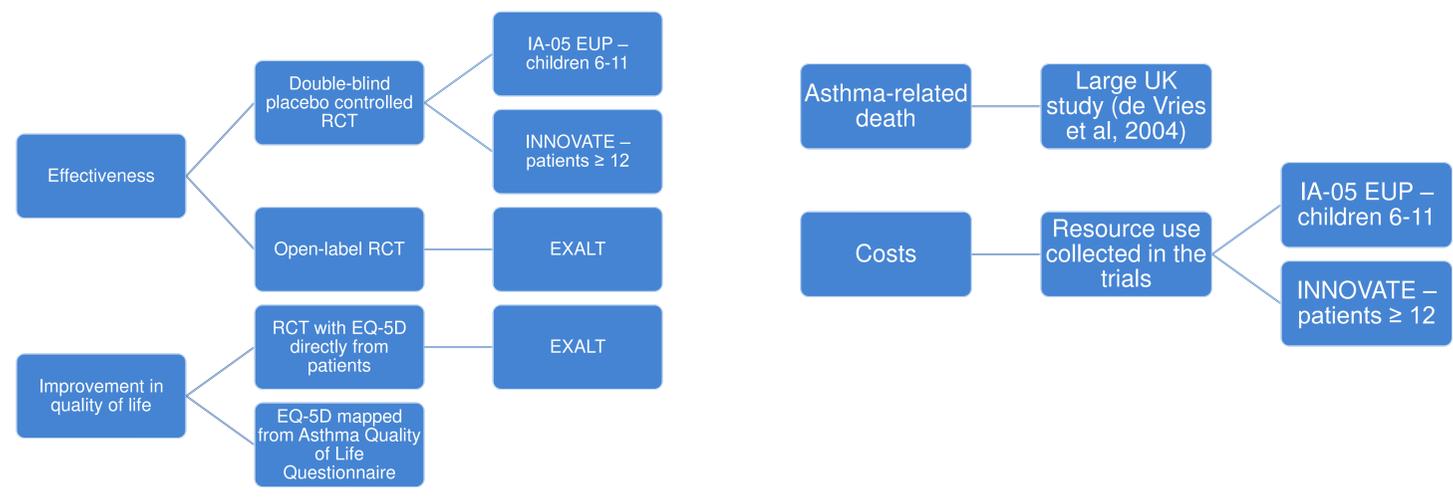
Objectives

- Evaluate cost-effectiveness of omalizumab for severe persistent asthma for the overall patient population covered by the marketing authorisation and relevant subgroups under the UK NHS perspective.
- Omalizumab 75mg or 150mg solution for injection + optimised therapy vs optimised therapy alone (step 4 or step 5)
- Assessment for response to treatment at 16 weeks:
 - Non-responders should discontinue omalizumab

The model



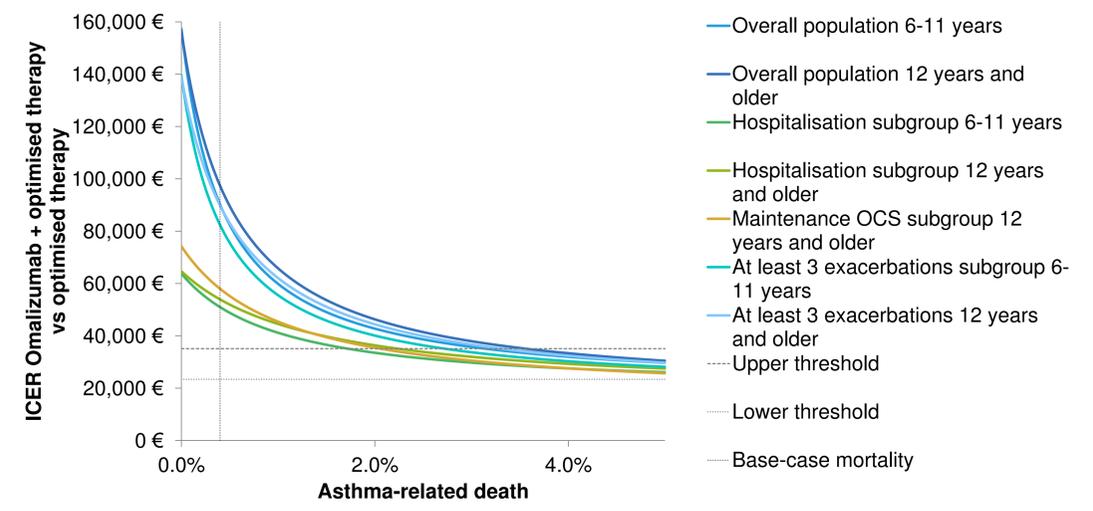
The inputs



Results

Population	Age	ICER, /QALY
Overall	6-11 years	98,072€
	≥ 12 years	91,276€
Hospitalisation	6-11 years	54,324€
	≥ 12 years	51,646€
Maintenance OCS	≥ 12 years	58,712€
≥ 3 Exacerbations	6-11 years	91,106€
	≥ 12 years	89,094€

ICERs > conventional thresholds of cost-effectiveness used in the UK NHS of 23,400€ (£20,000) and 35,100€ (£30,000)/QALY



Conclusions

- Omalizumab improves the health outcomes of patients but at a high cost to the UK NHS.
- ICERs were lower in more severe subgroup but still above conventional cost-effectiveness thresholds.
- Asthma-related mortality is one of the key cost-effectiveness drivers:
 - ↑ asthma-related mortality → ↓ ICER

References and Acknowledgements

This project was funded by the National Institute for Health Research Health Technology Assessment (NIHR HTA) Programme on behalf of the National Institute for Health and Clinical Excellence. The views expressed are those of the authors and not necessarily those of the NIHR HTA Programme. Any errors are the responsibility of the authors.

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