Narrative Review of Total Quality-Adjusted Life Year (QALY) Gains from Oncology Medicines Reimbursed 2020 to 2025 in Ireland

HPR144

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Introduction

- In Ireland survival rates from invasive cancers have significantly improved in recent years. As reported from the National Cancer Registry of Ireland, the 5-year survival has increased from 43.0% in 1994-1998 to 65.3% in 2019-2022.[1]
- Despite the improvements in cancer survival rates, cancer remains the most common cause of death in both younger (under 55 years) and older (over 55 years) adults.[2]
- There has been a significant number of new cancer medicines available to Irish patients over the last number of years. A data gap remains in terms of survival implications from these new cancer medicines.
- Immature OS data is challenging in health economics, consequently an alternative measure can be considered to capture the lifetime patient benefit from a medicine.[3] The predicted *incremental quality-adjusted life year (QALY)* provides an estimate of patient benefit through increases in length of life and quality of life over that patients lifetime by extrapolating the immature data from the respective clinical trials.[3,4]
- The cumulative number of Irish patients predicted to benefit from new cancer medicines has not been reported nor the extent of this benefit in terms of QALYs.

Objective

- The aim of this study is to estimate the total population QALY gains attributable to reimbursed oncology medicines in Ireland between 2020-2025.

Methods

Determine the reimbursed oncology medicines as outlined by the National Cancer Control Programme between 2020- 2025[6]

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Search the NCPE database for each medicine and indication to determine whether a full HTA was required for reimbursement[7]

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Extract the incremental QALY and estimated treated population over the 5-year time horizon

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Where the incremental QALY gain is not available from NCPE HTA reports the SMC in Scotland and NICE in England HTA reports will be searched

Assumptions

- Oncology medicines reimbursed without a full HTA appraisal are assumed to have no incremental QALY gain versus the standard of care in this analysis. This potentially underestimates total QALYs gained as medicines without a HTA could have a QALY benefit, thus is a limitation of the analysis.
- Only the incremental QALY from NCPE adjusted base case was used.
- Where there were multiple ICER results due to multiple comparators, an average of the incremental QALY gain versus each comparator was used.

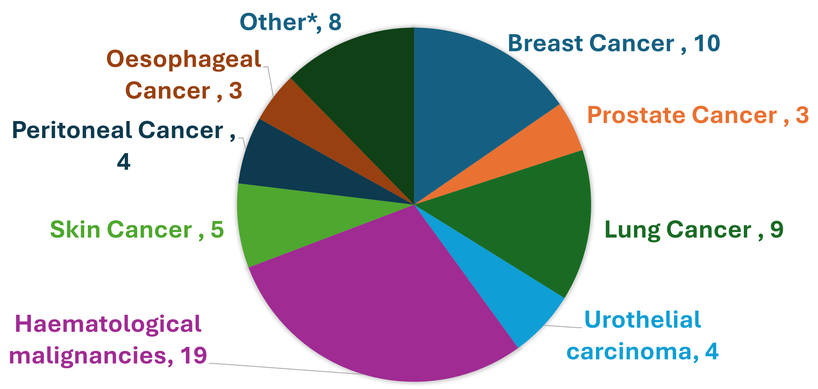
Analysis

- Descriptive statistics including the estimated number of patients treated with new medicines, total population QALY gain, median QALY from the reimbursed medicines, and the weighted average mean QALY gain from the reimbursed medicines. Stratified by cancer type.

Results

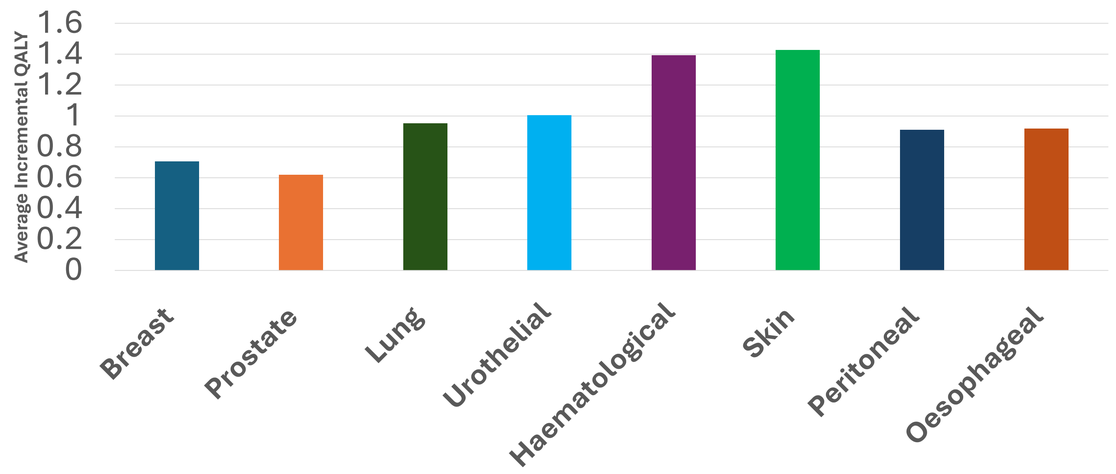
- 65 new oncology indications were reimbursed by the HSE between 2020 and 2025 across 14 cancer types.
- New indications for haematology malignancies, breast cancer and lung cancer accounted for the highest number of approvals.
- It is projected that **22,762 patients will be treated** by the reimbursed indications within 5 years after their approval.
- It is estimated that these reimbursed indications would generate **20,721* additional QALYs** versus the previous standard of care for Irish patients.
- The median (IQR) incremental QALY from the treatments assessed in the included HTA reports was 0.99* (0.59, 1.41).
- The weighted average QALY (to account for the size of the treated population), of the treatments assessed in these HTAs is 0.91.

Reimbursed indications by Cancer Type



* other precision oncology solid tumours, head and neck, neuroendocrine tumours, colorectal, renal

Average Incremental QALY by cancer type



Only including indications in cancer types with 3 or more reimbursements

Descriptive Statistic	Results
Number of indications reimbursed	65
Total estimated population to be treated	22,762
Total estimated additional population QALYs	20,721*
Weighted Average Mean (Total estimated QALYs / Total estimated treated population)	0.91
Median QALY (IQR Lower, IQR Upper)	0.99* (0.59, 1.41)
QALY Min, Max	0.21, 5.91

Conclusion

- This analysis summaries the incremental QALY from new cancer medicines reimbursed in Ireland between 2020-2025. These medicines are predicted to generated 20,721 additional QALYs for Irish cancer patients.
- The median incremental QALY from the HTA's was approximately 1 year per HTA. This study provides a different perspective to patient and overall population value of new oncology medicines compared to standard methods such as overall survival.
- An analysis of average QALY gains from HTA outcomes for oncology medicines with published HTA's between 2017-2022 from the NCPE reported similar average incremental QALY results.[8]

Disclosures

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