parameters that can be combined to produce suitable measures of cost (\(\text{c}1\)) and clinical benefit (\(\text{c}2\)) associated with an intervention. Within the Bayesian framework (which is the natural environment for BCEA), this amounts to estimating a posterior distribution for the pair \((\text{c}_1,\text{c}_2)\). Health economic evaluations then proceed by computing some relevant summaries of the resulting decision process: is the innovative intervention \(\text{I}_1\) more "cost-effective" than the standard intervention \(\text{I}_2\)? METHODS: BCEA provides a set of functions that can be used to produce a standardised analysis, by synthesising the decision process given the current evidence and uncertainty, as well as producing a Cost-Effectiveness Acceptability Curve that can be used to perform Probabilistic Sensitivity Analysis (PSA) to parameter and model structure uncertainty. These include the Cost-Effectiveness Acceptability Curve and the analysis of the Expected Value of Information, which can be used to prioritize research. RESULTS: BCEA uses as inputs vectors of simulations from some of the most common models for the cost and outcome. This naturally fits the Bayesian framework, but a frequentist analysis can also be carried out by using tools such as the bootstrap. There is scope for linking R and programs such as Excel to facilitate a comprehensive approach, including sensitivity PSA. CONCLUSIONS: In this talk, I will present the main feature of BCEA and its applicability to the wider context of health economic evaluation and cost-effectiveness analysis.

PM4A

A METHODOLOGY FOR ESTIMATING THE POPULATION OF ADVANCED OR METASTATIC EGF M+ NON-SMALL CELL LUNG CANCER PATIENTS IN THE UK AND IRELAND

Mildred M. Rochirringer Ingelheim Ltd, Bracknell, UK

OBJECTIVES: Impact budget models (IBMs) which demonstrate the economic impact of introducing or increasing the use of specific treatments are routinely used to assist the NHS with financial planning. A core component of any IBM is the estimation of the eligible patient population. The objective of this study was to identify an approach to estimating the size of the potential population of advanced or metastatic non-small cell lung cancer (NSCLC) patient population eligible for first-line treatment with a tyrosine kinase inhibitor such as afatinib (GIOTRIF®). METHODS: A review of the existing statistical modeling approaches utilized for patients with advanced (stage IIIb/IV) or metastatic (stage IV) EGF M+ NSCLC was conducted. The costing statements of tyrosine kinase inhibitors afatinib, cetuximab and gefitinib were reviewed, as was the costing statement for the chemotherapy agent pemetrexed. RESULTS: Based on the reviewed approaches, the calculation can be broken down into six discrete steps from the estimation of the general population to the target population: (1) Incidence of lung cancer; (2) Proportion of NSCLC; (3) Proportion with stage IIIb/IV NSCLC; (4) Proportion who receive first-line chemotherapy; (5) Proportion with EGF mutation status; and (6) Proportion who are EGF M+. A detailed breakdown of the methods used to calculate the patient population eligible for treatment with afatinib was not available in the respective NICE costing statements, nor in the published estimates obtained by NICE, which states that this approach is reasonable. CONCLUSIONS: The methodology employed by NICE to estimate the proportion of stage IIIb/IV EGF M+ NSCLC patients was widely consistent across all costing statements considered. It is reasonable to assume that this approach, used to estimate the population of stage IIIb/IV EGF M+ NSCLC patients in England and Wales is also applicable in Scotland and Ireland.

PM43

ARE CARE-SEEKERS GOOD CANDIDATES FOR SUBGROUPS COST-EFFECTIVENESS ANALYSES?

Rayner S1,2, Kennedy-Martin T.2

1University of Paris Descartes, Paris, France, 2Université Paris Descartes, Paris, France

OBJECTIVES: There is a growing need for early evaluation of innovative technologies to prevent ineffective and expensive technologies to be widely diffused in health care. The headroom method was introduced for early determination of the potential value of new technologies. In this study we explore the feasibility and usefulness of the headroom method in the early assessment of diagnostic technologies with no immediate treatment implications. METHODS: We applied the headroom method to the implementation of whole exome sequencing (WES) into the current diagnostic trajectory of complex pediatric neurology. We determined the room for improvement regarding health-related quality of life (HRQoL), diagnostic yield and the duration of the current diagnostic trajectory. RESULTS: The headroom in a certain diagnostic trajectory can be calculated by the so-called effectiveness gap is established and monetised. The preferred measure for the effectiveness gap is HRQoL expressed in quality-adjusted life years (QALY). Since the direct product of diagnostics is information, and not improved health, no impact on HRQoL is expected. Other measures, such as diagnostic yield, can also be used to calculate the effectiveness gap. Unlike QALYs, these appeared difficult to monetise, however. Despite this difficulty, effectiveness gap calculation using these effect measures is very informative on the room for improvement of current practice. In combination with QALYs, the effectiveness gap seems relevant. Our analyses can be easily implemented by adding three questions in the clinical protocol.

PM44

A REVIEW OF THE UTILITY VALUES USED IN PUBLISHED COST-EFFECTIVENESS ANALYSES OF ANGIOTENSIN-CONVERTING ENZYME INHIBITOR OR ANGIOTENSIN RECEPTOR BLOCKER THERAPY IN PATIENTS WITH DIABETIC NEPHROPATHY

Paczkowski L1, Kennedy-Martin T.2, Rayner S2

1Eliza J. Landy & Company, Inc., Indianapolis, IN, USA, 2Kennedy Martin Health Outcomes, East Sussex, UK

OBJECTIVES: BCA is a library specifically designed to post-process the result of a health economic model. Typically, this consists in the estimation of a set of relevant

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