dominance is a key to answer, we aimed to formulate an analytical criterion which judges the extended dominance of a new technology in comparison with the SOC and placebo. METHODS: Assume the ICER of a new technology is evaluated with expected effectiveness Ex and cost Cx, compared to placebo or the SOC, respectively, with a pair of effectiveness and cost: (Ep, Cp) and (Es, Cs), where Ep < Es < Ex and regarding an ICER as the slope between two points on the cost-effectiveness plane, the concept of extended dominance was materialized through a geometric approach so that the slope of the line connecting between a new technology and the SOC should be shallower than that between the SOC to placebo. RESULTS: The analytical development resulted in the following criterion: if the expected cost Cx is smaller than the value of aEx + b, where a = (Cp - Cx) / (Ex - Ep) and b = (Cp - Cx)/ (Es - Ep), then the new technology can be judged as being extended dominant to the SOC. It implies the ICER of the new technology compared to the SOC must be smaller than that compared to placebo. If Cx is greater than aEx + b, the extended dominance disappears with the ICER to the SOC greater than that to placebo. CONCLUSIONS: The criterion is well defined for application in the study to judge the extended dominance and further to know the magnitude relationship between two ICERs of a new technology compared to the SOC or placebo.

PRIM142 THE EXPANDED NUMBER NEEDED TO TREAT: APPLYING THE CONCEPT OF NNT TO CONTINUOUS HEALTH ECONOMIC OUTCOMES

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OBJECTIVE: To present the concept of the expanded number needed to treat (NNT) as a potential decision aid for continuous outcome measures, to show how the expanded NNT can be derived from results of health economic analyses, to review several examples, and to discuss potential benefits and limitations. METHOD: The NNT, calculated as the inverse of the absolute risk reduction, provides clinicians and patients with a relative risk reduction. Measures of absolute change in economic outcomes as opposed to reporting statistics in terms of probabilities, such as relative and absolute risks. However, one significant limitation of the NNT is that it only applies to binary outcomes. A new expanded NNT was developed for continuous outcomes measures, for example by dichotomizing outcomes according to whether a minimal clinically important difference is achieved. These methods may be appropriate for clinical decision making but may not be necessary for continuous outcomes, such as LVVs and QALYs, where these are considered from the perspective of a health policy decision maker at the societal level. Accordingly, we propose the concept of the expanded NNT, calculated as the inverse of the difference in outcomes or, alternatively, as the incremental cost-effectiveness ratio divided by the incremental costs. The expanded NNT is a measure of clinical benefit, informing decision makers of how many people would need to be treated with one intervention versus another to achieve one additional unit of outcome (eg, LVs or QALYs). We review some differences between the NNT and expanded NNT and provide some useful insights on potential benefits and limitations of the expanded NNT. CONCLUSION: The expanded NNT may provide policy makers with a more intuitive metric to compare the clinical benefit of population level interventions involving LVs and QALYs and is consistent with standard methods of health economic decision making.

PRIM143 IMPORTANT STATISTICAL CONSIDERATIONS FOR DEVELOPING EQUATIONS FOR DISEASE SIMULATORS

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Defining and in trial protocols for drugs in development. The COLA approach helps sponsors to select the most appropriate COA for studies in a specific population and disease area. We believe this framework allows for more confidence, transparency and credibility in the decision-making process and as such COLA is a systematic approach to support an optimal COA strategy.

PRIM146 ADVANCING METHODS OF HTA: OPTIMISING MONITORING TESTS TO MEET VALUE TARGETS

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Optimising the value of monitoring tests is currently under-researched. Conventionally, tests are repeated at fixed intervals using a fixed test cut-point value. Theory however suggests that diagnostic test performance changes with repeated use in any given population. We hypothesize that conventional practice may be sub-optimal. A simulation model is built to determine the test cut-point and retest interval which maximize population health. A simulated experiment is carried out on a hypothetical population of 10,000 patients who are being monitored for disease progression or remission of some chronic disease for a period of 60 months. A dichotomous test is applied on the population each month for the entire monitoring period. The patients are repeatedly stratified into diagnostic sub-populations (positive or negative) after each test, using a cut-point value between 0 and 1. The test performance and optimal cut-point in each sub-population is measured after each repetition. Patients are then allowed only two tests within the monitoring period. Due to the nature of the simulation suggests that patients should be initially diagnosed using a cut-point of 0.25. Patients with a positive diagnosis should be re-tested after 4 months using a cut-point of 0.55, while those with a negative diagnosis should be re-tested after 2 months using a cut-point of 0.45. This optimal strategy is associated with an expected health loss of 50 QALYs across the population compared to the optimal strategy. Maximising the value of a monitoring test requires a dynamic test cut-off with respect to population characteristics based on previous test results, and the re-test interval.

Cancer policymakers, researchers, and advocates have different priorities for cancer treatment research and the many methods that contribute to this ‘value’ of new treatments. Harmonising the priorities and values of diverse stakeholders may be neither possible nor desirable. In November 2012, as part of its Patient Access to Cancer care Excellence (PACE) initiative, Lilly Oncology convened a Global Council of opinion leaders with expertise in policy to identify and prioritize on oncology research and develop strategies to improve cancer care. Participants concluded that the policy field lacked tools to visualize these differences and to translate research ‘value’ into clinical and regulatory decisions. Responding to this need, PACE developed the Continuous Innovation Indicators: novel, scientifically rigorous progress trackers designed to increase understanding of continuous innovation in cancer treatments among different stakeholders. The CIIs report progress in cancer treatments 1) by determining the strength of the evidence supporting each treatment; 2) weighting the analysis according to the audience’s priorities and values; and 3) calculating the evidence scores (Es) that can be compared across different cancers and the strength of the evidence weighted by the assigned value. We introduce a flexible model to illustrate differing values, show how the values from the model can be used to weight the evidence from the scientific literature to obtain E-Scores, and compare how the values of different values in one E-Score. Differentiated analyses based on values provided by various stakeholders will help the cancer policy field to obtain accurate representations of the complex, stepwise progress against different cancers over time. We envision partnerships and collaborations to support educational efforts, identification and illustration of policy goals, and work in the field of health technology assessments. We will not make this tool available to individuals or organizations for the purpose of deriving treatment recommendations.

PRIM147 REVIEWING CLINICAL OUTCOME ASSESSMENT USAGE IN CLINICAL TRIALS: INTRODUCING THE COLA METHODOLOGY

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To present the concept of the expanded number needed to treat (NNT) as a potential decision aid for continuous outcome measures, to show how the expanded NNT can be derived from results of health economic analyses, to review several examples, and to discuss potential benefits and limitations. METHOD: The NNT, calculated as the inverse of the absolute risk reduction, provides clinicians and patients with a relative risk reduction. Measures of absolute change in economic outcomes as opposed to reporting statistics in terms of probabilities, such as relative and absolute risks. However, one significant limitation of the NNT is that it only applies to binary outcomes. A new expanded NNT was developed for continuous outcomes measures, for example by dichotomizing outcomes according to whether a minimal clinically important difference is achieved. These methods may be appropriate for clinical decision making but may not be necessary for continuous outcomes, such as LVVs and QALYs, where these are considered from the perspective of a health policy decision maker at the societal level. Accordingly, we propose the concept of the expanded NNT, calculated as the inverse of the difference in outcomes or, alternatively, as the incremental cost-effectiveness ratio divided by the incremental costs. The expanded NNT is a measure of clinical benefit, informing decision makers of how many people would need to be treated with one intervention versus another to achieve one additional unit of outcome (eg, LVs or QALYs). We review some differences between the NNT and expanded NNT and provide some useful insights on potential benefits and limitations of the expanded NNT. CONCLUSION: The expanded NNT may provide policy makers with a more intuitive metric to compare the clinical benefit of population level interventions involving LVs and QALYs and is consistent with standard methods of health economic decision making.

PRIM148 PACE CONTINUOUS INNOVATION INDICATORS: "A NOVEL TOOL TO MEASURE PROGRESS IN CANCER TREATMENTS

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