compare guideline-adherent and routine clinical practice. Value of information analysis will be employed to identify areas for future research. We are applying this translational approach to various current and different examples of PM in cancer: 1) trastuzumab for human-epidermal growth factor receptor-2 positive BC; 2) gene-expression profiling to identify patients who will benefit most from adjuvant treatment in BC; 3) cytotoxic PS4026D testing to select patients for adjuvant tamoxifen therapy in BC; and 4) testing for Lynch Syndrome in CRC patients and their family members to inform treatment and preventative interventions. This research will develop evidence-based information for patients, providers, industry, researchers and policymakers to objectively assess how PM can be beneficial and efficient in improving cancer outcomes.

PODIUM SESSION III: RESEARCH ON THE USE OF UTILITY MEASUREMENT

ASSOCIATION BETWEEN UTILITY AND TREATMENT AMONG PROSTATE CANCER PATIENTS

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OBJECTIVES: To analyze the association between utility, treatment and generic and prostate-specific health-related quality of life (HRQoL) among prostate cancer patients. METHODS: In this longitudinal cohort study we recruited 201 (c45 yrs) newly diagnosed prostate cancer patients from urology clinics of an urban academic hospital. Participants completed Quality of Wellbeing (QWB-SA), generic (SF-36) and prostate-specific (UCLA-PCA) HRQoL surveys prior to treatment and up to 24 months post-treatment. Sociodemographic and medical data were obtained via medical chart review and utility scores were computed using QWB-SA. To analyze the relationship between treatment and utility we used linear mixed effects models, after adjusting for covariates. Similar models were used to examine association between generic and prostate-specific HRQoL and utility. RESULTS: Mean baseline utility was comparable between radical prostatectomy (RP) and external beam radiation therapy (EBRT) groups (0.73 vs. 0.69, \( p = 0.1750 \)). Mixed effects models indicated that RP was associated with higher utility at 24 month (OR = 1.12, \( p = 0.027 \)), after controlling for covariates. RP was associated with improved functioning for role physical, role emotional, vitality, mental health and bodily pain and impaired urinary function. Higher scores on generic health subscales were indicative of higher utility. Also, for prostate-specific HRQoL, higher scores on bowl function, sexual function, urinary bother and bowel bother were associated higher utility. CONCLUSIONS: Treatment appears to have significant association with post-treatment utility. Thus, utility assessment provides an important quantitative tool to support patient and physician clinical treatment decision making process of prostate cancer care.

COMPARISON OF HEALTH STATE UTILITY ESTIMATES IN COST-EFFECTIVENESS ANALYSIS

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OBJECTIVES: This study examined the effect of different utility instruments and tariff choices on condition utility scores and incremental cost-effectiveness ratios (ICERs). METHODS: Postoperation of diabetes was modeled in a high-risk population receiving a hypothetical intervention, as compared to a similar control group. Utility estimates for the general population, diabetes, hypertension, stroke, myocardial infarction and congestive heart failure (CHF) were retrieved from the literature. These were used to calculate incremental cost-effectiveness ratios (ICERS), which are the discounted cost of the intervention divided by the gain in QALYs over a specified time horizon. CONCLUSIONS: The initial health state utility was lowest using the SF-6D(0.79), and highest using EQ-5D/S(0.81). The lowest estimates for diabetes(0.708), hypertension(0.761) and CHF(0.575) were found using EQ-5D/S, but the highest stroke(0.534) and CHF(0.503) estimates were found with SF-6D. The lowest estimates for stroke(0.819), MI(0.516), and CHF(0.189) were from the EQ-5D/S, but the lowest estimates for hypertension(0.383) and diabetes(0.618) were from the SF-6D. The EQ-5D/S resulted in the largest marginal utility decrement for all conditions. The smallest decrement for hypertension(−0.032) and diabetes(−0.022) resulted from the SF-6D, but from the EQ-5D/S for stroke(−0.069) and CHF(−0.053). When these estimates were applied to the model, the resulting QALYs gained from the intervention were greatest from the EQ-5D/S(11.32) and least from the EQ-5D/9.77. Incremental QALYs gained were greatest for EQ-5D/S(3.278) and least for the SF-6D(2.880). The ICER varied from $46,000 to $52,000 depending on the instrument.tariff. CONCLUSIONS: Different utility instruments/tariffs resulted in unsystematic differences in chronic condition utilities, but the marginal decrement in each of these conditions was systematically lower for the EQ-5D/S and may be a trend across all conditions. Incremental QALYs gained differed by instrument/tariff and the ICER varied from $46,000 to $52,000.

RELIABILITY OF HEALTH UTILITIES INDEX (HUI) SCORES: PATIENT AND PARENT INTER-RATER AGREEMENT ACROSS TWO CLINICAL TRIALS OF TREATMENT FOR ACUTE LYMPHOBlastic LEUKEMI(A ALL) IN CHILDHOOD

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OBJECTIVES: To assess differences in the reliability of HUI Mark 3 (HUI3) health-related quality of life (HRQoL) utility scores for patients between self and parent assessments across two Dana-Farber Cancer Institute (DFCI) clinical trials for treatment of ALL during childhood. METHODS: Patients were enrolled in either the DFCI 95-001 or 98-001 trials, and were ≥12 years of age at the time of HUI survey. Parents, and parents, blind to each other, completed HUI questionnaires at each of 5 trial phases: induction; CNS prophylaxis; intensification; continuation; and post-treatment. Reliability was assessed in terms of inter-rater agreement of individual scores and summary scores in mean scores. Agreement was quantified using the single-way mixed model intra-class correlation coefficient (ICCs). An ICC of 0.41–0.60 represents moderate reliability, 0.61–0.80 good reliability, and 0.81–1.00 very good reliability. Mean differences of ≥0.03 are clinically important. Statistical significance was set at \( p < 0.05 \). RESULTS: The number of patient and parent paired assessments varied by assessment phase for both the 95-001 (minimum = 9, maximum = 30) and the 99-001 (minimum = 28, maximum = 54) trials. ICCs in the two trials ranged from 0.49 (\( p = 0.05 \)) to 0.88 (\( p < 0.05 \)). There was substantial overlap of ICC 95% confidence bounds across the two trials at each of the five assessment phases. There was no significant difference (\( p > 0.06 \)) between parent-parent pairs of scores at any assessment phase in either trial. The difference between trials in mean patient-parent scores was 0.503 and insignificant (\( p > 0.05 \)) for each of the 5 assessment phases. CONCLUSIONS: Agreement between parent and parent scores was moderate or better for all assessment phases in both trials. There were no important differences in mean patient and parent scores for any of the assessment phases of the two trials. Inter-rater reliability of scores was similar across the two trials. Parental assessments provide acceptable and consistent estimates of HRQoL for children.

EVALUATING WILLINGNESS TO PAY THRESHOLDS FOR A DEMENTIA CAREGIVING INTERVENTION

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OBJECTIVES—Assess the methodological challenges of evaluating appropriate willingness to pay thresholds (WTP) in cost-effectiveness studies which do not use a societal perspective or a QALY outcome measure. METHODS—Tailored Activity Program (TAP), an intervention designed to reduce caregiver burden for dementia patients, served as a case study. Caregiver interventions such as TAP employ an individual perspective and non-QALY outcome measures such that standard societal WTP thresholds are not applicable. Two outcome measures related to caregiver burden were used: 1) reduction in hours “on duty,” and 2) reduction in hours “doing things.” To estimate appropriate WTP values for each TAP outcome measure, we identified three studies which met these inclusion criteria: 1) published studies in the past 5 years using contingent valuation methodology to identify WTP; 2) available studies of a dementia-related intervention that required an out-of-pocket expenditure; and 3) studies on caregivers who would be willing to pay for an outcome of reducing caregiver burden. We also assessed WTP based on the potential financial savings caregivers could achieve from purchasing TAP. To assess proportion of time TAP was cost-effective, we built a Monte Carlo simulation to test the four WTP values identified. RESULTS—For the outcome measure “on duty” WTP varied between $1.06/hr–$4.58/hr. WTP for the outcome measure “doing things” varied between $2.21/hr–$9.57/hr. Applying WTP values to TAP indicates TAP cost-effectiveness varies between 50%–80% for both outcome measures. CONCLUSIONS—If WTP data cannot be collected prospectively or societal values cannot be applied, evaluating WTP using comparable studies appears to be an acceptable method for informing decisions makers of potential cost-effectiveness. Application of WTP to TAP shows potential cost-effectiveness that can be expected under different WTP scenarios.

EVALUATING CLINICIAN REPORTED OUTCOME (CRO) ENDPOINTS FOR FDA REGULATORY APPROVALS

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OBJECTIVES: Clinician reported outcomes (CROs) are the most commonly observed endpoints in FDA approved product labels (Wilke et al, 2004) but few have been adequately scrutinized in terms of their suitability as endpoints. This study evaluates four widely used CROs in order to assess their suitability as endpoints for regulatory approvals. METHODS: Published evidence on the Karnofsky Performance Status