European countries (France, Germany, Italy, UK). Additionally, it was tested which influence a generic product would have on the relative importance of product attributes. RESULTS: The conjoint analyses resulted in the fact that there were major differences between relatives of importance of attributes between physicians in Europe and the US. In the US, the EF was the most preferable attribute. Even when a generic drug would enter the marketplace, it would still be the most important attribute—on a lower level than the “branded” product market but still the most important. In Europe, the most important attribute was the cost. Even when a generic product would enter the market, the costs would be the most important factor. CONCLUSIONS: Discussions about the increasing health care costs across Europe could have a major impact on the potential prescribing behavior of physicians. Even in the breast cancer market, which is highly under public view the pressure on health care budget is changing the relative importance of products. In the US where these discussions are not as intensive as in Europe this conclusion cannot be found.

**PCN33**

**MAPPING FACT-P AND EORTC QLQ-C30 TO THE EQ-SD**

**HEALTH UTILITY IN METASTATIC HORMONE-REFRACTORY PROSTATE CANCER PATIENTS**

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OBJECTIVES: To construct and validate a prediction model of health utility (EQ-SD) for metastatic hormone-refractory prostate cancer (HRPCA) patients using cancer-specific health-related quality of life (HRQL) measures. METHODS: Data were obtained from a multicenter, multinational observational study of metastatic HRPCA patients conducted during 2002–2004. In addition to clinical and resource utilization, health utility (EQ-SD) and HRQL (Functional Assessment of Cancer Therapy—Prostate [FACT-P] and European Organization for Research and Treatment of Cancer Quality of Life Questionnaire [EORTC QLQ-C30]) data were collected. Predictive validity of ordinary least square (OLS), Tobit, and median regressions of various model specifications were tested using cross-validation samples. The selected specification was then further refined and tested for alternative model specifications and restrictions. RESULTS: OLS regression with both HRQL measures as individual components and patient demographics was the best performing model. It explained 88.2% of the observed EQ-SD variation in the validation sample. A model including only the prostate cancer-specific HRQL measure, FACT-P, explained 53.5% of the observed EQ-SD variation. Both models have good ability to distinguish patients with high health utility from those with low utility for cutoff points between the 20th and 80th percentiles of observed EQ-SD values. CONCLUSIONS: The prediction models developed have good predictive validity. These algorithms enable researchers to translate cancer-specific HRQL measures to health utility in metastatic HRPCA patients. The findings will help perform utility adjustments in cost-effectiveness analyses.

**PCN34**

**VALIDATION OF AN INTERNET-BASED PATIENT HEALTH-RELATED QUALITY OF LIFE QUESTIONNAIRE:**

**DATA FROM CAPSURE**

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OBJECTIVES: The purpose of this validation study was to test the accuracy and acceptability of an Internet-based questionnaire (Qx) assessing health-related quality of life (HRQoL) among subjects in CaPSURE, a longitudinal study of health outcomes among men with prostate cancer. METHODS: Active participants were sent a flyer with their usual bi-annual Qx offering the opportunity to test the new Internet version and were paid $25 for their participation. Volunteers were randomized to one of two Qx administration groups (paper-then-Internet or Internet-then-paper). The SF-36 and the UCLA Prostate Cancer Index (PCI) comprised the HRQoL Qx. A 10-item survey designed to measure patient preference of administration was administered after completion of both modalities. Descriptive statistics, Pearson correlation coefficients, and percent agreement were used to assess comparability between these two methods of administration. RESULTS: A convenience sample of 245 subjects volunteered to participate; 209 (85%) completed both paper and online Qx. Subject median age was 63 years-old (range 46–83). The majority of respondents were white (97%), college educated (66%) and had an income of >$75,000/year (46%). With few exceptions, correlation coefficients for the HRQoL multi-item levels were high (0.66–0.97) and the percent agreement for yes/no items was also very high (≥0.89). Subjects rated both methods of administration favorably, although the Internet was rated as somewhat more convenient and faster to complete. There were no differences between the two versions on respondent ratings for ease of reading, ease of answer completion, confusion or stress. 70% preferred the Internet mode; 21% had no preference and 9% preferred paper. CONCLUSIONS: Administration of the HRQoL Qx, including SF-36 and PCI domains, demonstrated a high correlation between the Internet and the paper-and-pencil methods. The Internet was a well-accepted mode among this select group of older men with prostate cancer.

**PCN35**

**DEVELOPMENT AND VALIDATION OF A DISEASE-SPECIFIC, NEUROENDOCRINE TUMOR QUESTIONNAIRE (QOL-NET), TO MEASURE PATIENTS’ PERCEPTION OF THE EFFECTS OF DISEASE ON THEIR QUALITY OF LIFE (QOL)**

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OBJECTIVE: Develop/validate a quality of life questionnaire for capturing the unique spectrum of symptoms and impact on physical/psychological functioning related to neuroendocrine tumors and eliciting patients’ own perceptions of their illness, providing a guide to therapeutic options. METHODS: A total of 103 subjects from a Philadelphia Neuroendocrine Tumor (NET) Conference completed the QOL-NET. Seventy-two subjects were females (mean age 56.29 ± 1.03 years); and 27 were males (mean age 54.89 ± 0.93 years). The population was predominately Caucasian (92.2%). On the data, we performed an exploratory factor analysis using a forced 7-factor varimax rotation. A descriptive statistical analysis was completed on the total QOL score and seven factors. Internal consistency was estimated using Cronbach’s alpha coefficient. Test-retest reliability over a 4–6 week period was assessed by a pairwise t-test on data from a subset of 20 subjects. RESULTS: All 72 questions loaded into the 7 domains, which we called: Factor 1 = Depression; Factor 2 = Flushing; Factor 3 = Respiratory; Factor 4 = Gastrointestinal; Factor 5 = Cardiovascular; Factor 6 = Physical Functioning; Factor 7 = Positive Attitude. Seventy-two items on the forced seven factor solution accounted for 71.74% of the variance. If items loaded with a score ≥20.35 on more than one factor, the highest loading was used. The summary statistics for the Total QOL and each domain: Total QOL, 76.80 ± 4.80; Factor 1,
14.96 ± 0.95; Factor 2, 6.10 ± 0.71; Factor 3, 6.24 ± 0.77; Factor 4, 10.58 ± 0.73; Factor 5, 2.61 ± 0.41; Factor 6, 33.96 ± 2.33; and Factor 7, 2.35 ± 0.30. Physical functioning proved the largest and most influential factor in measuring QOL. Cronbach’s alpha was 0.9765, indicating correct allocation of individual items to a particular factor. The tool’s robustness was shown by the test-retest scores, which lacked significant differences between two completions of the questionnaire. CONCLUSIONS: QOL-NET should be invaluable for clinical trials.

DEVELOPING HEALTH STATE DESCRIPTIONS FOR METASTATIC COLORECTAL CANCER: QUALITATIVE STUDY

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OBJECTIVES: The aim of this study was to develop health state descriptions for patients with metastatic colorectal cancer (mCRC)—either stable on treatment, disease progression or “end of life”. Health states also contrasted intravenous and oral therapy. These health states can be used subsequently to derive utility values for use in cost utility analyses. METHODS: An interview discussion guide was produced based on literature review and clinical input. This focused on the symptoms of mCRC, the impact on different areas of functioning (physical, social, emotional, sexual, and cognitive), and health related quality of life. Draft health states were developed based on analyses of in-depth exploratory interviews with oncologists (n = 1) and specialist oncology nurses (n = 3). These health states were then edited and improved through two further rounds of interviews (nurses n = 5; oncologists n = 7; psychometricians n = 2). The final health states were piloted with five members of the general public for ease of comprehension and obvious errors of interpretation. This piloting involved taking the participant through the full standard gamble interview and then undertaking a full cognitive debrief interview exploring participants’ interpretation of the health states. RESULTS: The analysis of the literature suggested seven main areas to focus on which included physical, social, sexual, and cognitive functioning, emotional wellbeing, side effects and symptoms. The third round of interviews with clinical staff indicated that the health states were a fair reflection of the disease. The piloting work also indicated that members of the general public were able to easily understand the concepts in the health states. No major changes were required following the pilot work. CONCLUSIONS: Health states describing the impact of stages of mCRC have been developed. These health states are designed to be used in societal or patient based valuation studies. An example final health state will be presented.

ESTIMATION OF A SET OF PATIENT-BASED UTILITY WEIGHTS FOR THE FACT-G

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OBJECTIVES: The goal of this study was to estimate an algorithm to convert responses to the Functional Assessment of Cancer Therapy—General (FACT-G) to current health time trade-off (TTO) utilities. METHODS: Data for 1433 cancer patients were randomly separated in to construction and validation samples. FACT-G questions were selected for inclusion based upon correlation with ECOG-PS scores and TTO utilities, and mean scores, and item response theory was used to collapse response categories. Ordinary least squares regression with the constant constrained to one was used to estimate the algorithm. RESULTS: Four FACT-G questions: lack of energy, feel sick, able to work, and able to enjoy life were selected for the algorithm, using between two and four response categories each. The algorithm estimated mean utility for the full validation sample within three points of observed mean utility (0.805 versus 0.832, p < 0.01). Mean utilities are well predicted (difference less than three percentage points, and not statistically significant) for most subgroups defined by ECOG-PS and SF-36 physical functioning scores, and responses to the FACT-G overall quality of life item. However, the algorithm systematically over-predicted utility for poor health by each measure. CONCLUSIONS: This algorithm estimates mean cancer patient preferences for FACT-G based health states with group level accuracy comparable to other preference-based measures, and may be applied to both retrospectively and prospectively collected clinical trials data. This patient-based preference algorithm expands the tools available for use in cost-utility analyses and treatment comparisons and is useful in multiple situations, including when the patient is the primary payer of care, and when understanding how patients view treatment is desired.

PROPRENSITY SCORE MATCHING WITH LIMITED OVERLAP

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OBJECTIVES: Propensity score matching fails especially when there is lack of overlap in the covariate distributions. In this paper, we analyzed three different methods to adjust propensity score matching under lack of overlap. METHODS: Most commonly used method is to drop all control units with an estimated propensity score lower than the smallest value, or larger than the largest value, for the estimated propensity score among the treated units. The second method is discarding units with covariate values at which the estimated density is below some threshold and newly proposed third method is to estimate average treatment effect on the optimal subpopulation. RESULTS: The Market Scan private insurance data base was used in this study which based upon prostate cancer patients. There was significance lack of overlap in data set. Pre-match data set contains 8576 prostate cancer patients and 30,550 control patients. If one-to-one matching is applied, only 581 patients would match. Most commonly method described in the methodology section dropped 1137 patients from control sample.Kernel technique matched 1250 treatment patients with 2126 control patients. By using optimal subpopulation, optimal cut-off point is calculated as 0.02 and it matched 1752 patients from treatment group with 2912 patients in control group. Health care expenditures for prostate patients using three different methods were significantly different from the ones calculated using one-to-one matching technique. CONCLUSION: Lack of overlap is the significant drawback of propensity score matching. We can improve propensity score matching estimands by adjusting overlap differences. Optimal subpopulation technique seems better since it does not rely on arbitrary choices regarding thresholds for discarding observations.