which temozolomide, nimustine, doxorubicin, and teniposide were most common. 53% of these patients received subsequent chemotherapy regimens. Forty-four percent (16/36) underwent surgery initially for their recurrence, with 81% (13/16) of these patients receiving subsequent chemotherapy. Other drugs used in treatment of recurrent disease included doxorubicin and lomustine. CONCLUSION: Consistent with published guidelines, GBM patients in Germany with better functional status undergo active therapy. Patients initially undergo surgery, followed by radiotherapy. Chemotherapy is often used with or immediately following radiotherapy or at disease recurrence.

IMPLEMENTATION AND EVALUATION OF CLINICAL PATHWAYS IN AN ONCOLOGY ELECTRONIC MEDICAL RECORD

Conner TM1, Beveridge R2, Lokay K3, Young D3, Johnston A3

1Outcomes Research Consulting, Austin, TX, USA, 2US Oncology, Fairfax, VA, USA, 3US Oncology, Houston, TX, USA

OBJECTIVES: This oncology-specific organization integrated into its electronic medical record (EMR) system a series of clinical pathways (CPs) based on national guidelines. The objective was to evaluate adherence to pathways and develop a process for communication to practices regarding performance. METHODS: The CPs are based on clinical and economic literature and are physician-led. Adherence is measured using a combination of patient disease, stage of disease, and line of therapy. A combination of methods has been used in the reporting process, including web-based reports; involvement of staff pharmacists to promote and monitor clinical pathway adherence at the local level; multiple teleconferences among pharmacists and physicians to discuss cases, share successes, failures, and ideas; and inclusion of network pathway reports for all attendees at the organization’s biannual national P&T meetings. RESULTS: Eighteen practices have EMR pathway reporting capabilities, with new practices being added every month. Currently clinical pathways for 7 cancer types have been implemented into the EMR system. Pharmacists have increased their role in promoting clinical pathway adherence. One of the greater challenges has not been to ensure they are current and are based on both clinical and economic evidence.

CANCER—Methods and Concepts

MULTI-STATE SURVIVAL ANALYSIS IN COST-EFFECTIVENESS STUDIES: THE CASE OF CAPECITABINE VERSUS DOXETAXEL IN METASTATIC BREAST CANCER (MBC) FOR A PRIVATE PAYER IN BRAZIL

Santos EA1, Marques RM2

1Roche Brazil, Sao Paulo, SP, Brazil, 2Hospital Sirio Libanês, São Paulo, São Paulo, Brazil

OBJECTIVES: Conventional cost-effectiveness analysis are usually supported by clinical data collected in phase III RCTs (Drummond, 2005) and it is typically based on time-to-event data. However, ignoring mean quality-adjusted survival for multiple transitions may introduce some estimates bias. Multi-state models appeared to eliminate some limitations of Q-TWiST models such as the necessity for progressive states (Billingham, 1999), but the applicability of these models in health economics is still unclear. The aim of this analysis is to compare the results of two modeling alternatives: conventional cost-effectiveness analysis and multi-state cost-effectiveness analysis taking capectabine versus doctaxel in mBC in Brazil as a study case. METHODS: Conventional and multi-state survival analysis techniques were applied on O’Shaugnessy (2001) data to perform both cost-effectiveness analysis. For the conventional survival analysis, a Cox and parametric approach were used, and the best fit was chosen analyzing Cox-Snell and deviance residuals, as well as AIC and BIC criteria. For multi-state survival analysis, the model estimation was based on Gardner (2006), and assumed as a three-stage non-homogeneous Markov process. For costs, the resource use was obtained from O’Shaugnessy trial and unit costs were derived from published lists such as CBHBM 2004, Simpro magazine and PROAHSRA report. RESULTS: In conventional analysis the incremental cost-effectiveness ratio (ICER) was R$26,208 per QALY assuming log-logistic distributions which was the best fitted one, meanwhile in multi-state analysis, the incremental cost-effectiveness ratio was R$19,320 per QALY using weibull distributions (Klein, 1994). PSA was performed using Monte-Carlo simulations that supported the robustness of the findings. CONCLUSION: Despite multi-state analysis demands more sophisticated statistical background, there is an evident superiority in multi-state estimates precision and accuracy when performing cost-effectiveness analysis. Regarding to capectabine, it was observed that in both models its addition in this setting could be considered as a cost-effective alternative under the private payer perspective in Brazil.
Patients received a 5-level instrument for HRQL of CLL patients in remission. The data suggests a slight improvement between baseline (0.73 and 0.90 respectively) and 12 weeks (0.77 and 0.93 respectively).

The EQ-5D index and VAS also reported a trend for improved QoL. Patients with a greater percentage of answers, which may be a function of the design of the questionnaire.

**CONCLUSION:** Results obtained thus far suggest that the HRQL of CLL patients in remission is high. Patients utilize the additional categories provided with a 5-level instrument. However, in this case the labelled levels still attracted the greatest percentage of answers, which may be a function of the design of the questionnaire.

**PCN63**

**META-ANALYTIC, TRIAL-LEVEL APPROACH TO VALIDATION OF PROGRESSION-FREE SURVIVAL AS A SURROGATE ENDPOINT IN ADVANCED BREAST CANCER**

Miksad R1, Zietemann V2, Matteucci Gothe R3, Schwarzer R3.

1Beth Israel Deaconess Medical Center/Institute for Technology Assessment/Harvard University, Boston, MA, USA, 2UMIT—University for Health Sciences, Medical Informatics and Technology, Hall, Tirol, Austria

**OBJECTIVES:** Progression-free survival (PFS) has not been validated as a surrogate endpoint for overall survival (OS) for anthracycline-based (A) or taxane-based (T) chemotherapy in metastatic breast cancer (MBC). Using a meta-analytic trial-level approach, we evaluated the relationship between PFS and OS.

**METHODS:** A literature review identified all randomized, controlled A and T trials for MBC. Progression-based endpoints were classified by prespecified definitions. Treatment effects were derived as hazard ratios (HR) for PFS (HRPFS) and OS (HROS) from trial data (constant rate assumption). The kappa statistic assessed overall agreement. HROS was predicted from trial HRPFS using fixed effects models that were internally validated. Sensitivity and subgroup analyses were performed for the constant rate assumption, PFS definition, year of last patient recruitment, and type of treatment. **RESULTS:** Inclusion criteria were met by 15 A and 16 T trials, allowing 17 A (n = 4155) and 17 T (n = 5509) comparisons. The direction of HROS and HRPFS agreed in 25% (A) to 50% (T) (negative) and in 62.5% (A) to 50% (T) (positive) (kappa = 0.71, p = 0.0029 (A); kappa = 0.75, p = 0.0028 (T)). HRPFS was a significant predictor of HROS for A (p = 0.0019) and T (p = 0.012) in the fixed effects models, with explained variance (R²) of 0.35 (T) and 0.49 (A). Cross validation showed that 97% of the 95% prediction intervals crossed the equivalence line. The direction of predicted HROS agreed with observed HROS in 82% (A) and 76% (T). Results were robust in sensitivity and subgroup analyses. **CONCLUSION:** This analysis suggests the treatment effect on PFS is significantly associated with the treatment effect on OS. However, prediction of OS based on PFS is surrounded with uncertainty: Half (A) to one third (T) of the OS treatment effect variance is explained by the PFS treatment effect variance. Using limited data, sensitivity and subgroup analysis did not explain result heterogeneity.

**PCN65**

**RESULTS FROM MABEL: QUALITY OF LIFE OF PATIENTS WITH METASTATIC COLORECTAL CARCINOMA (mCRC)**

Glynne-Jones R1, Esser R2, Ralston SJ1

1Mount Vernon Hospital, Northwood, Middlesex, UK, 2Merck KGaA, Darmstadt, Germany, 3Merck Serono, Feltham, Middlesex, UK

**OBJECTIVES:** The MABEL study is an open label, uncontrolled, multi-centre, study of cetuximab in combination with irinotecan in patients with EGFR expressing mCRC and having progressed on a recent irinotecan-based treatment regimen. A study objective was to assess quality of life (QoL). This abstract will report on findings on 126 patients from 28 UK sites.

**METHODS:** QoL was assessed using the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30) and the EQ-5D. The EQ-5D questionnaire comprises 30 items, organised into global health status, functionality, symptomatology and single items. The EQ-5D questionnaire consists of the EQ-5D descriptive system and the Visual Analogue Scale (VAS). QoL changes were assessed on patients with a baseline and at least one post-baseline assessment. **RESULTS:** At the 6 week assessment, 88 [69.8%] patients completed at least one QoL item, with 71 [56.3%] patients at 12 weeks, and 41 [32.5%] patients at the end of the study visit. Given the loss of two thirds of data by the end of study, the following results will assess data over a 12 week period. Between baseline and 12 weeks the EORTC QLQ-C30 global health score increased slightly from 65.3–68.9. Symptomatic scales reported a similar trend with the exception of diarrhoea and financial difficulties single items. The EQ-5D index and VAS also reported a trend for a slight improvement between baseline (0.73 and 0.90 respectively) and 12 weeks (0.77 and 0.93 respectively.) **CONCLUSION:** It is important to consider these results in context of patient prognosis and treatment administered. The data suggests