transformation to accelerated phase or blast crisis and death. A 5-year time horizon was considered. Each 3-month period, the patients were monitored by the study team. The results were analyzed to understand the effectiveness of different treatment regimens. A model was constructed to predict the transition probabilities between different health states. The model was validated using data from clinical trials.

CONCLUSIONS: The results of this study can help guide treatment decisions for patients with metastatic colorectal cancer. The model can be used to evaluate the impact of different treatment regimens on patient outcomes. Further research is needed to validate the model and improve its accuracy.

PCN16

DEBATE BURDEN AND TREATMENT OUTCOMES IN SECOND-LINE THERAPY OF PATIENTS WITH ESTROGEN-RECEPTOR POSITIVE (ER+) ADVANCED BREAST CANCER: A REVIEW OF THE LITERATURE

Roswell KA, Wang X, Shah MV, Aspo M

OBJECTIVES: To determine the variable burden of disease of patients with advanced ER+ breast cancer and assess the current treatment landscape after failure of first-line therapy.

METHODS: A comprehensive literature review was performed (2000–2011) by searching Medline via PubMed and Embase and Cochrane databases to assess disease burden (ie, societal, humanistic and/or economic burden) and treatment landscape for second-line therapy of ER+ advanced breast cancer. Inclusion criteria were:1) randomized controlled trials,2) follow-up to progression or death,3) HR+ or ER+ breast cancer recurrences.

RESULTS: On total, 11 studies were identified that evaluated burden of disease based on ER status (ER+, ER-, ER-unknown), which was a subgroup analysis assessing the impact of recurrence over 10 years. The investigators reported that only minor differences in survival and medical costs were noted according to ER status. Regardless of ER status, patients with breast cancer recurrence consumed more health care resources and were associated with more costly care than those without recurrence. A total of 7 studies were identified related to treatment outcomes of ER+ second-line therapy. A combined international population totaling >3,800 patients who had progressed on prior hormonal therapy, including tamoxifen and aromatase inhibitors. Three trials performed a comparative efficacy/safety assessment of ER antagonist vs aromatase inhibitor and 1 trial each for aromatase inhibitor versus megestrol acetate and aromatase inhibitor versus aromatase inhibitor. Among each of the studies evaluated, no significant differences were observed in the primary efficacy endpoint, and the safety profiles were similar. Two additional studies, both dosing evaluations, demonstrated that lower doses had a similar or better efficacy and safety profile.

CONCLUSIONS: Currently, there is insufficient evidence on the economic and humanistic burden associated with ER status, and this gap warrants further research. With increasing drug resistance and greater economic burden associated with breast cancer recurrence, there is an unmet medical need for improved treatment in this patient population.

PCN17

CORRELATIONS BETWEEN SURROGATE END POINTS AND OVERALL SURVIVAL IN ADVANCED OR METASTATIC BREAST CANCER

Abdel kader L1, Castillo MA2, Lacalle J2, Fleseriu S3

1Andalusian Agency for Health and Technology Assessment, Seville, Andalucia, Spain, 2Seville University, Seville, Andalucia, Spain

OBJECTIVE: To determine whether surrogate end points [progression free survival (PFS), time to progression (TTP) and response rate (RR)] are correlated with overall survival (OS) in the first-line treatment of advanced or metastatic breast cancer (BC).

METHODS: A systematic review of the literature was conducted to identify randomized clinical trials (RCTs) that evaluate the efficacy of chemotherapy in first-line treatment of advanced or metastatic BC. Searches were realized in MEDLINE and EMBASE databases from 1995 to April 2010. The nonparametric Spearman rank correlation coefficient (rs) was used as a measure of correlation between the difference (Δ) in surrogate outcomes (ΔPFS, ΔTTP and ΔRR) and the difference in OS (ΔOS). Correlation coefficients were compared using the normal approximation to the z-transformation of rs and its standard deviation. Linear regression analysis, through the origin of the plot, evaluating ΔOS as a function of differences in each surrogate outcomes was used to determine the proportion of variability explained (R²). When analyses were stratified using STEPP.

RESULTS: Thirty-four RCTs were included in the analysis, with a total of 11,398 patients evaluated. In the first-line therapy of advanced or metastatic BC, there was a weak significant association between ΔPFS and ΔOS [rs = 0.43 (Confidence Interval (CI) 95%: 0.04-0.71)]. When the analysis was performed including only RCTs in the metastatic stage, the rs data between ΔPFS and ΔOS increased statistically significant to 0.59 (CI95%: 0.17 to 0.83). The surrogate outcomes that correlated better with the ΔOS were ΔTTP [rs: 0.79 (CI95%: 0.43-0.94), R²=62%], and ΔRR [rs: 0.73 (CI95%: 0.55-0.85), R²:53%]. CONCLUSIONS: In the first-line treatment of advanced or metastatic BC, TTP and RR may be appropriate surrogate end points for OS, although it is important to consider the magnitude of their variations.