2140 POSTER

A comparison of lapatinib plus capecitabine versus capecitabine for quality-adjusted survival in metastatic breast cancer (MBC): A QTWiST analysis

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Background: A Phase III randomized study compared lapatinib plus capecitabine (L+C) versus capecitabine (C) alone for disease progression among women with ErbB2+ (HER2+) MBC who had received prior therapy including an anthracycline, a taxane and trastuzumab. Q-TWiST (Quality-Adjusted Time Without Symptoms or Toxicity) analysis, a method to evaluate treatment toxicity and time-dependent clinical outcomes, was used to examine overall survival experience using patient-reported utility scores. This trial-based analysis does not take into account benefits accrued beyond the trial.
Methods: Survival curves for each treatment arm were partitioned into 3 health states: TOX (toxicity) – time with grade 3/4 adverse events (AEs) during progression-free survival time; TWiST (time without toxicity or disease progression) – remaining time prior to progression in which no serious AEs were experienced; REL (relapse) – time until death or end of follow-up following disease progression. The utility-weighted sum of the mean health state durations was derived and treatment comparisons of Q-TWiST made at varying utility weight combinations, using trial-based EQ-5D scores.
Results: Overall median survival for the ITT population of 399 subjects [L+C 198; C 201] was 67 weeks (at latest data cut-off). No significant difference was observed between arms in mean duration of serious AEs prior to progression (L+C 1.7 weeks, C 1.5 weeks). Overall average utility value observed during TOX state was 0.59, and was similar between arms. Patient-reported utility weights for TWiST state were
Conclusions: Using patient-reported utility values, L+C was shown to provide more quality-adjusted survival than C alone i.e., the longer time to disease progression with L+C was achieved without increased time with serious AEs in this late-stage breast cancer population, For MBC, a condition with a short term prognosis, quality-adjusted survival >5% of the 67 week time horizon can be considered as clinically significant.

Central Nervous System

Oral presentations (Tue, 25 Sep, 09.00−10.30)
Central Nervous System

2500 ORAL

A score predicting overall survival in patients with metastatic spinal cord compression

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Background: This study was performed to create a scoring system to estimate the survival of patients with metastatic spinal cord compression (MSCC) and to determine who would benefit from short-course radiotherapy (1x8 Gy or 5x4 Gy, given in $\leqslant$1 week) or from long-course radiotherapy (10x3 Gy, 15x2.5 Gy, or 20x2 Gy, given in 2−4 weeks).
Materials and Methods: Based on a multivariate analysis for survial of 1,852 patients irradiated for MSCC, a scoring system was developed. This system included the six prognostic factors found to be significant in that multivariate analysis: tumor type, interval from tumor diagnosis to MSCC, presence of other bone or of visceral metastases, ambulatory status, and duration of motor deficits before radiotherapy. The score for each of the six prognostic factors was determined by dividing the 6-month survival rate (in %) by 10. The total score represented the sum of the scores for each prognostic factor. For example: A breast cancer patient (8 points) with absence of visceral metastases (8 points) and other bone metastases (7 points) developed motor deficits within 5 days (3 points) and was not ambulatory before radiotherapy (3 points). The interval from first diagnosis of breast cancer to MSCC was 24 months (7 points). The total score is 36 points, which is associated with a 6-month survival probability of 78%. Total scores ranged between 20 and 45 points. The patients were divided into 5 groups according to the total score. For each group, survival was compared for short-course versus long-course radiotherapy.
Results: The 6-month survival rates were 4% for patients with a score of 20−25 points, 11% for those with a score of 26−30 points, 48% for those with a score of 31−35 points, 87% for those with a score of 36−40 points, and 99% for those with a score of 41−45 points ($p < 0.001$). 1-year survival rates were 0%, 6%, 23%, 70%, and 89%, respectively. Patients with scores $\geqslant$36 had significantly longer survival with long-course than with short-course radiotherapy ($p = 0.011$ and $p = 0.002$, respectively), and those with scores <36 had similar survival with short-course and long-course radiotherapy ($p = 0.90$, $p = 0.47$, and $p = 0.73$, respectively).
Conclusions: Patients with MSCC can be grouped with this scoring system to estimate survival. Patients with scores of $\geqslant$36 survived significantly longer when given long-course radiotherapy, whereas, patients with scores <36 appear to fare similarly from short-course and long-course radiotherapy.

2501 ORAL

Atypical and malignant meningioma: outcome and prognostic factors in 119 irradiated patients. A multicentre, retrospective study of the rare cancer network

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Purpose/Objective(s): To analyze a large number of patients to assess the outcome and prognostic factors in patients with atypical and malignant meningiomas.
Materials and Methods: Eligibility criteria were: histologically proven atypical or anaplastic (malignant) meningioma (WHO grade II and III) and age >18 years; a previous benign histology was admitted but a first or second course of radiotherapy must have been realized after the diagnosis of atypical or malignant meningioma. Ten academic medical centres participating in the Rare Cancer Network contributed 119 cases of patients with atypical or malignant meningiomas treated with fractionated external beam radiotherapy after initial resection or for recurrence. All patient data were collected through retrospective chart review from 1971 to 2005. Sex ratio (M/F) was 1.3 and mean age was 57.6 years ($\pm$12). Sixteen patients (13.4%) presented first with benign meningioma; the median interval between benign and atypical or malignant histology was 2.8 years ($\pm$5). Surgery was macroscopically complete (Simpson grades 1−3) in 71% of the patients; histology was atypical and malignant in 69% and 31% respectively. High mitotic rate, necrosis and brain invasion were present in 49%, 47% and 19% of the patients respectively. Radiotherapy was realized after initial resection in 94 patients, and for recurrence with or without resection in 25 patients; 5 patients received a second course of radiotherapy. Mean dose of radiotherapy (RT) was 54.6 Gy ($\pm$5.1, range 40−66). Median follow-up was 4.1 years.
Results: The actuarial overall survival was 65% and 51% at 5 and 10 years respectively, and was significantly influenced by age >60 years ($p = 0.005$), Karnofsky Performance Status ($p = 0.01$), and high mitotic rate ($p = 0.047$) on univariate analysis. On multivariate analysis age >60 years ($p = 0.001$) and high mitotic rate ($p = 0.02$) remained significant adverse prognostic factors. The 5 and 10-year disease free survival was 58% and 48% respectively and was significantly influenced by KPS ($p = 0.04$), high mitotic rate ($p = 0.003$) and adjuvant RT after initial resection ($p < 10^{-5}$) on univariate analysis. On multivariate analysis high mitotic rate ($p = 0.003$) remained significant prognostic factor.
Conclusions: In this multicentre retrospective study, age, KPS, and mitotic rate influenced the outcome. Multicentric prospective studies are necessary to clarify management and prognostic factors of such a rare disease.