of patients with advanced breast cancer patients after failure to anthracyclines and taxanes with at least two years follow-up treated at three tertiary public hospitals in Mexico: Hospital de Oncología del Centro Médico Siglo XXI del Instituto Mexicano del Seguro Social (SigloXXI) (47%), Instituto Nacional de Cancerología (INCan) (42%) and Centro Universitario de Cancer (CUC) (11%). The diagnosis and treatment procedures (and services) were obtained from institutional sources and expressed in 2009 US$. RESULTS: The mean unitary cost of surgery at the SigloXXI (n = 26) is US$2777.31 ($1658.31-$2869.36), at the CUC (n = 16) US$306.14 ($2248.68-$3570), and at the INCan (n = 106) US$288.36 ($150-$5280). Radiotherapy (at least 5 sessions) at the SigloXXI (n = 133) is US$755.90 ($696.59-$815.20), CUC (n = 31) US$910.28 ($728.20-$1092.36), INCan (n = 136) US$1126.13 ($1004.87-$1251.40). The morphometric cost (at least 3 months) is equally bolstered $154.73-$3214.62 at the SigloXXI (n = 30) US$933.61 ($282.49-$3136.31), INCan (n = 102) US$1878.09 ($1386.56-$2377.62). The mean chemotherapy cost (all regimens included for at least 3 cycles) at the SigloXXI (n = 213) US$2972.85 ($8097.55-$10,460.42), CUC (n = 43) US$1674.23 ($3192.73-$4285.71), INCan (n = 209) US$212.42 ($6876.75-$9548.34). CONCLUSIONS: The treatment costs vary widely within every center, as result of the clinical practice variability, but seem consistent between centers included in this analysis with no significant statistical differences.

**Podium Session II: Health Care Management Studies**

**CN1**

**Modeling the Impact of Technology Diffusion in Breast Cancer Treatment on the Cost-effectiveness of Mammography Screening**

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OBJECTIVES: The association between treatment advances and dissemination and the cost-effectiveness of cancer screening is largely unknown. This study addressed the above association among breast cancer patients. METHODS: Using a Bayesian microsimulation framework, we followed a hypothetical cohort of 1 million women born in 1960 throughout their lifetimes. We compared no screening strategy to eight mammography screening strategies that consisted of a combination of different initiation age (40 vs. 50), cessation age (74 vs. 79), and frequency (annual vs. biennial) of screening. Upon identifying the most cost-effective strategy, we then applied probabilistic sensitivity analyses (PSA) to explore the impact of different patterns of treatment dissemination on the cost-effectiveness of screening. RESULTS: At the societal willingness-to-pay (WTP) of $50,000 per life year (LY) gained and with the dissemination pattern prior to the availability of trastuzumab, the most cost-effective screening strategy was biennial screening for women aged 50–74. The probability that this strategy was more cost-effective than the no screening strategy was 0.43, followed by biennial screening 50–79 (prob = 0.41), biennial screening 40–79 (prob = 0.08), and biennial screening 40–74 (prob = 0.04). At a WTP of $100,000/LY, the probabilities increased to 0.89, 0.87, and 0.62, respectively. Results from the PSA indicated that when adding trastuzumab to the base case dissemination pattern, the probability that the biennial screening 50–74 strategy was more cost-effective than the no screening strategy at a WTP of $100,000/LY decreased from 0.89 to 0.83, and the probability that the biennial screening 40–74 strategy was more cost-effective than the no screening strategy at a WTP of $100,000/LY decreased from 0.87 to 0.62. CONCLUSIONS: Joint modeling with PFS accounted for changes in PRO scores over time as determined by the slope coefficient of the LGCMs. No growth factors were associated with fatigue or treatment. The joint growth factors of each LCSS item.

**CN2**

**USE OF LATENT VARIABLE AND SURVIVAL MODELING TO ESTIMATE THE ASSOCIATION OF PATIENT-REPORTED OUTCOMES AND PROGRESSION-FREE SURVIVAL IN MALIGNANT PLEURAL MESOTHELIOMA**

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OBJECTIVES: The purpose of this study was to conduct joint modeling of latent growth curve models (LGCMs) for patient-reported outcomes (PROs) and survival models for progression-free survival (PFS) to estimate their association in previously-treated patients with advanced malignant pleural mesothelioma (MPM). METHODS: Post-hoc analyses were conducted on PRO and PFS data collected from 243 patients in a phase III randomized controlled trial of best supportive care (BSC) versus pemetrexed plus-BSC. PFS was a secondary end point in the original study; PRO data were collected using the Lung Cancer Symptom Scale (LCSS). LGCMs were constructed for the nine LCSS items including a treatment covariate; PFS was then regressed onto the LGCMs; no growth factors were associated with fatigue or treatment. The joint hemothysis model did not converge therefore the association between PROs and hemothysis could not be assessed. CONCLUSIONS: Joint modeling with PROs accounted for censoring of LGCM observations and increased our ability to estimate latent growth factors of each LCSS item. The prediction of PFS was significantly associated with the EQ-5D and SF-12 physical component and HAQ-DI scores, but did not have improved SF-12 mental component scores.

**CN3**

**DIRECT MEDICAL COSTS OF TREATMENT OF METASTATIC BREAST CANCER AFTER ANTHRACYCLINES AND TAXANES FAILURE FROM THE MEXICAN PUBLIC HEALTH SYSTEM PERSPECTIVE**

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OBJECTIVES: To define resources and procedures to set the direct medical costs of treatment of metastatic breast cancer (MBC) after anthracyclines and taxanes failure from the Mexican public health system perspective. METHODS: The unitary costs of chemotherapy, surgery, radiotherapy and hormonal therapy were obtained through quantification the consumption of health care resource reported in 873 clinical files

**Podium Session II: Cancer Outcomes Research Studies**

**CN4**

**USING QALYS IN CANCER: WHAT ARE THE METHODOLOGICAL LIMITATIONS?**

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OBJECTIVES: This presentation will examine how well the quality-adjusted life year (QALY) captures the health gains generated by cancer treatments, with particular focus on the methods for constructing QALYs preferred by the National Institute for Health and Clinical Excellence (NICE), the organisation responsible for providing advice on the cost-effective use of health care resources in England and Wales. METHODS: Comprehensive literature review; The published literature relating to QALYs and cancer will be reviewed, with data obtained using a keyword search of the MEDLINE database and a hand search of articles written by leading researchers in the subject area. RESULTS: Three key issues are identified and will be discussed. First, the EQ-5D, a widely used measure of health-related quality of life in adults, has been found to be relatively insensitive to changes in health status of cancer patients. Second, the time trade-off, a widely used technique for the estimation of the value of health, involves making assumptions that are likely to be violated in end-of-life scenarios. Third, the practice of using valuations of members of the general population, as recommended both by NICE and the US Public Health Service Panel, is problematic because such individuals typically display a misunderstanding of what it is really like for patients to live with cancer. Thus, it is clear that because of the way in which it is constructed, the QALY shows important limitations in terms of its ability to accurately capture the value of the health gains deemed important by cancer patients. CONCLUSIONS: The presentation will conclude by proposing a research agenda for addressing these limitations.