to determine what tasks were conducted by pharmacy staff and how much time was spent in the preparation of the top fifteen chemotherapy drugs and regimens used across the four sites. Pharmacy staff was observed to spend the majority of their day (90% or higher) on tasks directly related to the preparation of these agents. **CONCLUSIONS:** Preparation costs for chemotherapy are significant and need to be considered in determining reimbursement rates for administration.

**PCN29**

**PER-PATIENT COST OF HOSPITAL CARE FOR ADVANCED BREAST CANCER IN THE UK BASED ON A PATIENT-LEVEL RESOURCE UTILISATION DATASET**

Wolzacz S1, Roskell N1, Christie A2, Kerr G1, Cameron D1

1RTI Health Solutions, Manchester, UK; 2Sanofi-Aventis, Guildford, Surrey, UK; 3Western General Hospital, Edinburgh, Scotland, UK

**OBJECTIVES:** To estimate the per-patient cost of hospital care associated with the treatment of breast cancer recurrence in the UK. **METHODS:** Patient-level resource utilisation data for 571 node-positive early breast cancer patients treated at the Western general Hospital, Edinburgh between 1991 and 2004, of whom 180 experienced disease recurrence, wereanalysed in order to provide estimates of the cost of hospital care post-relapse. Unit costs from national sources were applied to patient-level resource use data for hospital care collected over a period of five years post-relapse. The total cost was estimated by bootstrapping (1000 simulations; with replacement). **RESULTS:** Of the 180 patients who experienced a relapse, 145 (81%) died within follow-up, 143 of these due to breast cancer. The first relapse was distant in 145 patients and locoregional in 35 (25 of which experienced a subsequent distant disease and 3 experienced further locoregional recurrence within follow-up). The bootstrap mean cost post-relapse (and 95% confidence intervals) was £14,085 (£12,370–£15,877) for patients whose first relapse was distant and £14,575 (£11,411–£17,872) for patients whose first relapse was locoregional. Comparison with previous published estimates suggests that the cost of chemotherapy treatments has increased substantially in recent years. **CONCLUSIONS:** Hospital costs for patients with relapsed breast cancer may be higher than previously estimated, perhaps due to recent increases in the costs of chemotherapy agents. Costs for patients whose first relapse is locoregional are similar on average to that for patients whose first relapse is distant, as many have subsequent locoregional or distant relapses.

**PCN30**

**COMPARATIVE ANALYSIS OF DRUG COST OF BREAST, CERVICAL AND COLORECTAL CANCER IN HUNGARY**

Boncz I1, Sebestyen A2, David T1

1National Health Insurance Fund Administration (OEP), Budapest, Hungary; 2National Health Insurance Fund Administration (OEP), Pécs, Hungary

**OBJECTIVES:** The aim of this study is to calculate the market share of drug cost from the total health insurance cost of treatment of breast, cervical and colorectal cancer. **DATA AND METHODS:** Data derives from the central, nationwide database of the Hungarian National Health Insurance Fund Administration (OEP) covering the year 2001. The cost of treatment includes the cost of outpatient care, the acute and chronic inpatient care, the (subsidies) of medicines’ prices (reimbursement) and the expenditure on disability to work. The subsidies of drugs include the following ATC codes: “L” (Antineoplastic and immunomodulating agents), “N02” (Analgesics) and “A04” (Antimetics and antineuseants). The diseases were identified with the following ICD (International Classification of diseases): breast (C50, D05, D24), cervix (C53, D06, D26.0) colorectal (C18, C19, C20, C21, D01.0, D01.1, D01.2, D01.3, D01.4, D12). **RESULTS:** The total health insurance cost of treatment of breast cancer was around 33.4 million € (8.6 billion Hungarian forint) in 2001. The total health insurance cost of treatment of cervical cancer was around 4.1 million € (1 billion Hungarian forint) in 2001. The total health insurance cost of treatment of colorectal cancer was around 38.871.666 (9.98 billion Hungarian forints) in 2001. The drug cost of breast cancer was €9.45 million, cervical cancer €6.62 million and colorectal cancer was €4.86 million. The market share of drug reimbursement from the total health insurance cost was the following: breast cancer (28.3%), cervical cancer (15.4%), colorectal cancer (12.5%). **CONCLUSIONS:** The health insurance reimbursement of drugs varies in different types of cancer. The drug costs represent the highest cost element in breast cancer compared to cervical and colorectal cancer.

**PCN31**

**COST EFFECTIVENESS MODEL OF IV BISPHOSPHONATES IN THE PREVENTION OF BONE COMPLICATIONS IN BREAST CANCER PATIENTS WITH BONE METASTASES: A GERMAN INPATIENT PERSPECTIVE**

Botteman M1, Gay J2, Stephens JM1, Barghouth V1, Quednau K1

1Pharmerit North America LLC, Bethesda, MD, USA; 2University of Southern California, Los Angeles, CA, USA; 3Novartis Pharmaceuticals Corporation, Florham Park, NJ, USA; 4Novartis Pharma GmbH, Nuernberg, Germany

**OBJECTIVES:** Intravenous (IV) bisphosphonates reduce skeletal related events (SREs) and alleviate bone pain in patients with breast cancer and bone metastases (BCBM). However, these agents differ in terms of efficacy, administration time and costs. We compared the cost-effectiveness of IV bisphosphonates from a German inpatient perspective. **METHODS:** A 7-year literature-based model was designed to simulate the natural history, costs and quality-adjusted life expectancy (QALE) of 4 hypothetical cohorts of BCBM patients receiving no treatment (NT) or monthly IV ibandronate (IB), pamidronate (PA) or zoledronic acid (ZA). The model included probabilities of death and disease progression and the risk of SREs. The risk reduction in SREs with each bisphosphonate was estimated using the Andersen Gill hazard ratio v. NT (0.71 for IB, 0.70 for PA, and 0.56 for ZA). The model included direct medical costs for drugs, IV administration and SREs. Survival was adjusted for the time spent with and without SREs and on and off therapy to capture the bisphosphonates' impact on QALE. All outcomes were discounted 5% per annum. **RESULTS:** The cumulative number of SREs over the 7-year simulation was lowest for ZA (3.53 per patient), followed by PA (4.17), IB (4.21) and NT (5.80). Average QALE was highest with ZA (1.10), followed by PA (1.09), IB (1.09) and NT (0.92). Total per-patient costs were lowest for ZA (€15,520), followed by PA (€16,968), NT (€17,317) and IBN (€17,881). In probabilistic sensitivity analyses, the 95th percentile value for the cost per QALY saved was €15,600 (ZA), €84,000 (IB), and €87,500 (PA). ZA, PA and IB were cost savings
We previously reported the treatment costs for gastric cancer in Japan, and suggested that TS-1 is cost saving compared to conventional intravenous chemotherapy. The aim of this study is to examine health utilities in gastric cancer patients and to assess the cost-utility of TS-1.

**METHODS:** Patients with advanced or recurrent gastric cancer who were able to ingest meals were identified retrospectively from the ordering system database of Showa University Hospital between January 1998 and July 2001. The utilities of the patients during chemotherapy were assessed by oncology pharmacists on the basis of medical records (including information on mobility, meal ingestion, pain, and other symptoms), using the rating scale method, time trade-off method, standard gamble method and EQ-5D mapping procedure. The costs of the patients were calculated on the basis of hospital billing data. Cost-utility analysis was conducted from a societal perspective.

**RESULTS:** Of the 23 patients who met the inclusion criteria, 13 received TS-1 and 10 received conventional intravenous chemotherapy. Mean (SD) utilities as measured by the rating scale method, time trade-off method, standard gamble method and EQ-5D mapping procedure were 0.89 (0.12), 0.90 (0.11), 0.94 (0.07), and 0.84 (0.18), respectively, in the TS-1 group. The corresponding utilities in the conventional intravenous chemotherapy group were 0.65 (0.18), 0.66 (0.18), 0.81 (0.12), and 0.52 (0.23), respectively. The utilities of the TS-1 were significantly (P < 0.05) higher than those of conventional intravenous chemotherapy by every technique. The mean monthly cost during chemotherapy was significantly lower in the TS-1 group than in the conventional intravenous chemotherapy group ($2481 vs. $6458, P < 0.05). CONCLUSION: TS-1, an oral anticancer agent, is a dominant strategy with a lower cost and a greater health outcome than conventional intravenous chemotherapy in patients with advanced or recurrent gastric cancer.