AN ECONOMICALLY RANOMIZED, MULTICENTER PHASE III TRIAL OF SECOND LINE TREATMENT FOR NON SMALL CELL LUNG CANCER (NSCLC) COMPARED DOCEXTAL VERSUS Pemetrexed: GPFC (GROUPE FRANÇAIS DE PNEUMO-CANCÉROLOGIE) 05–06 STUDY

**OBJECTIVES:** Costs of second line treatment for non small cell lung cancer (NSCLC) has dramatically increased during the last decade. The objective of this phase III, randomized, multicenter study was to compare from the payer's perspective the economical impact of two widely used treatments: pemetrexed versus docetaxel. **METHODS:** This study included progressive NSCLC; docetaxel 75 mg/m² (arm A) versus pemetrexed 500 mg/m² (arm B) every three weeks. The number of subjects was determined based on the second line direct cost difference of 10% between the two arms (n = 0.05, β = 0.20). The analysis recorded: transportation, drug, administration (outpatient or inpatient) and adverse events costs. Average and 95% confidence intervals, cost-differences were calculated by nonparametric methods (bootstrap, SAS software). **RESULTS:** 150 patients were enrolled between February 2006 and June 2008. There were no differences between the two arms in terms of sex, age, performance status, weight loss, body surface, history. TTP was 2.8 [2.26, 4.41] for arm A, 2.53 [2.16, 4.00] for arm B (p = 0.85). The mean number of cycles was 3.7 (±1.9) for arm A and 3.6 (±1.75) for arm B. There were no differences for overall toxicities (p = 0.233), grade 3 or 4 toxicities (p = 0.15), grade ≥2 toxicities. In the opposite, there was a significant dif- ference in term of overall grade 3-4 toxicities: 39/55 for arm A (52%) versus 25/55 (45%) for arm B (p = 0.02). In terms of chemotherapy costs, arm A was more costly: €777,682,76 versus €513,700,42 (€151). In terms of global costs, the difference was declared but not the difference of the costs of the two regimens. **CONCLUSIONS:** Chemotherapy with pemetrexed reduced the direct cost of 2nd line NSCLC treatment. The difference decreased according to adverse events and administration costs. Cost-effectiveness and sensitivity analyses will be presented at the meeting.

LOSS OF WORK ACTIVITY AND PRODUCTIVITY IN CAREGIVERS ATTENDING TO PATIENTS WITH ADVANCED RECURRENT CARCINOMA TREATED WITH TEMSIROLimus OR INTERFERON-ALFA: EVALUATIONS FROM A PHASE 3 RANDOMIZED TRAIL

**OBJECTIVES:** We analyzed the impact of informal caregiving on caregiver's workplace productivity. Workplace productivity of caregivers attending to patients (pts) with advanced renal cell cancer (ad-RCC) treated with temsirolimus (TEMSR) was compared with that of caregivers attending to pts treated with interferon-alfa (INFα). In addition, we evaluated the reaction of informal caregiving in both treatment groups. **METHODS:** Data were analyzed from phase 3 trial of pts with untreated, poor-prognosis ad-RCC. Pts were randomly assigned to 25 mg TEMSR weekly, or INFα (intratd to 18 μl) 3 times weekly. Caregiver work productivity and activity impair-ment questionnaire (WPAI-GC), as well as a caregiver reaction assessment instrument (RAI), was administered at baseline and at 4-week intervals until wk-32. Participation for caregiver study was on a voluntary basis. For the current analysis, we evaluated the WPAI and RAI at pts’ last visits. ANCOVA model was used with baseline WPAI-GC, RAI score and mean disease severity as covariates. **RESULTS:** 416 pts entered in the TEMSR (n = 209) and INFα (n = 207) arms, data were available for 174 caregivers. About 50% of participating caregivers were employed (55% in TEMSR arm & 45% in INFα arm [p = 0.1724]). Caring for ad-RCC pts was associated with substantial carer burden; on average, caregivers reported absenteeism of 11 hrs/wk and a 27% reduction in productivity at work. Caregivers caring for TEMSR pts reported signifi- cantly lower absenteeism (22% vs. 40%, p = 0.0319), lower overall work productivity loss (34% vs. 49%, p = 0.0178) and lower overall impairment in regular activity (29% vs. 38%, p = 0.0305) than caregivers caring for INFα pts. Based on RAI ques-tionnaire, caregivers of TEMSR pts reported significantly 17% better health. On this study schedule compared with caregivers of INFα pts (14.0 vs. 15.9, p = 0.0043). **CONCLU-SIONS:** Although the study had 42% (174/416) caregiver participation rate, TEMSR therapy in ad-RCC is associated with reductions in caregiver burden.

DYNAMIC CONTRAST-ENHANCED ULTRASOUND WITH QUANTIFICATION TO ASSESS TARGETED TREATMENT EFFICACY: RESULTS OF A MULTI-CENTER PROSPECTIVE COST-OUT-COME STUDY

**OBJECTIVES:** The aim was to assess the cost of dynamic contrast-enhanced ultrasound (DCE-US) with quantification of tumor perfusion parameters from raw linear data on a large sample of patients and tumors. **METHODS:** Eighteen French hospitals participated in the study. All consecutive exams performed to assess targeted treatment efficacy were registered. The cost of each DCE-US was computed based on resource use data collected during the study: the duration of each exam, the type of staff and equipment and the amount of US contrast agent. To value resources we used unit costs at the Gustave-Roussy Institute. A sensitivity analysis was conducted. **RESULTS:** A total of 1452 DCE-US were recorded in 367 patients with mainly hepatocellular carcinoma (22%), or metastasis from kidney cancer (33%), colon cancer (12%) or melanoma (10%). Sorafenib, sunitinib and bevacizumab were the three most frequent treatments. The median number of DCE-US per patient was 5. Quantification of perfusion parameters was possible in 881 DCE-US (62%). The mean duration of a DCE-US was 28 minutes. The radiologist’s intervention lasted 24 minutes on average. Quantification of the tumor perfusion could be performed in 81% of the cases. The cost of DCE-US was estimated at €173. In the sensitivity analysis, the cost ranged from €152 to €197. The cost of the baseline DCE-US was 10% higher than subsequent exams. A second bolus injection was required in 15 baseline exams to choose a relevant target treatment initiation. **CONCLUSIONS:** The cost of DCE-US is lower than conventional US mostly because of contrast agent use which accounts for half the cost of the procedure. Despite a 20% rate of re-injections and longer exams at baseline, the cost variability of DCE-US is rather low. This new technique strongly challenges CT perfusion in the monitoring of targeted treatments: it is cheaper and reduces the risk of radiation-related cancers.