

therapy. **METHODS:** Medical records of 220 patients with metastatic SCCHN who received  $\geq 3$  lines of systemic therapy were abstracted. Clinical and demographic information at metastatic diagnosis as well as treatment and supportive care data were collected for patients  $\geq 18$  years initiating third-line systemic therapy between 1 January 2011 and 30 August 2014. Performance status (PS) was recorded prior to each line of therapy. SCCHN-related HCRU was captured until death or last medical record. All analyses were descriptive. **RESULTS:** Most patients were Caucasian (90%), male (74%), current or former smokers (85%), with an initial SCCHN diagnosis of stage IVC (52%). Median age at metastatic diagnosis was 60 years and most patients had an Eastern Cooperative Oncology Group (ECOG) PS of 0 or 1 (208/217=96%). For patients with PS=0/1, the most common first-line treatment was cisplatin+5-FU (98/208=47%); docetaxel was the most common second-line (85/177=48%) and third-line treatment (30/117=26%). For patients with PS $\geq 2$ , the most common first-, second-, and third-line treatments were carboplatin+5FU (5/9=56%), cetuximab (12/38=32%), and methotrexate (21/95=22%), respectively. Four patients (2%) received 4 therapy lines while no patient received  $\geq 5$  lines. Seven patients (3%) received radiation and/or surgery for metastatic disease. Most patients received supportive care during therapy (85%) and after its discontinuation (89%). SCCHN-related hospitalizations and emergency department visits were reported for 27% and 20% of patients during therapy, respectively (vs. 10% and 16% after therapy discontinuation). Median survival after metastatic diagnosis was 25.6 months. **CONCLUSIONS:** Patterns of care and HCRU varied among patients with repeatedly treated metastatic SCCHN; specific systemic therapies varied by PS. Factors associated with HCRU will be examined in future multivariate analyses.

#### PCN121

##### CLINICAL, MEDICATION AND ECONOMICAL OUTCOME RESEARCH OF ADVANCED COLORECTAL CANCER RELAPSE USING REIMBURSEMENT AND CANCER REGISTRY DATABASES

Chang CJ<sup>1</sup>, Chou T<sup>1</sup>, Fann CS<sup>2</sup>

<sup>1</sup>Chang Gung University, Kwei Shan, Tao Yuan, Taiwan, <sup>2</sup>Academia Sinica, Taipei, Taiwan

**OBJECTIVES:** This study aims to evaluate the clinical, medication and economic outcome among advanced CRC patients who were relapsed to metastasis in Taiwan using reimbursement and cancer registry databases. **METHODS:** The outcome data was form 2 million sampling reimbursement data base of Taiwan's National Health Insurance Research Database (NHIRD) and diseased stage was derived from the Taiwan Cancer Registry (TCR) between 2007 and 2011. Diseased stage diagnosed for the first time ever of CRC patients was recorded in TCR. Merged database was provided by Health and Welfare Statistics Application Center (HWSAC), Ministry of Health and Welfare, Taiwan. Metastasis relapse of the advanced CRC patients was identified if the patients were prescribed the approved target therapies, i.e. Avastin or Erbitux. Descriptive statistics were derived and summarized; Cox regression was used to estimate the difference of the relapse proportion and mortality. **RESULTS:** After eliminating the other previous cancer coded in the database, and non-reported diseased stages in the merged database, 2,477 patients were derived and enrolled into the analysis. Relapse rates were 5.8% and 19.2% among stage III and IV CRC patients with median relapse days of 590 and 437. Mortality rates were 21.9% and 64.6% with median survival days of 765 and 652. Comparison of the relapse rates among different stages was statistical significant with  $p < 0.0001$ . Overall costs were estimated as an average of 103,616 and 162,714 USD per person during the first year since diagnose. **CONCLUSIONS:** Relapse to metastasis stage and mortality rate in advanced CRC are still high and estimated medical expenditure increased 57% between stage 3 and stage 4 and is possibly due to the high metastasis relapse rate.

#### PCN122

##### THE MANAGEMENT AND COSTS OF LOCALLY ADVANCED OR METASTATIC ALK-POSITIVE NON-SMALL CELL LUNG CANCER IN GREECE

Kousoulakou H<sup>1</sup>, Boukovinas I<sup>2</sup>, Georgoulas V<sup>3</sup>, Kosmidis P<sup>4</sup>, Koumakis G<sup>5</sup>, Makrantonakis P<sup>6</sup>, Samantas E<sup>7</sup>, Syrigos K<sup>8</sup>, Krikelis D<sup>9</sup>, Markouri A<sup>9</sup>, Geitona M<sup>1</sup>

<sup>1</sup>University of Peloponnese, Corinth, Greece, <sup>2</sup>Bioclinic, Thessaloniki, Greece, <sup>3</sup>Medical School, University of Crete, Iraklion, Crete, Greece, <sup>4</sup>Hygeia Hospital, Marousi, Greece, <sup>5</sup>Agios Savvas Anticancer-Oncology Hospital of Athens, Athens, Greece, <sup>6</sup>Theageneio Anticancer Hospital, Thessaloniki, Greece, <sup>7</sup>Agioi Anargyroi Anticancer Hospital of Athens, Athens, Greece, <sup>8</sup>Medical School, University of Athens, Athens, Greece, <sup>9</sup>Novartis (Hellas) S.A.C.I., Metamorphosis, Greece

**OBJECTIVES:** To map the current treatment pathway and resource use in advanced/metastatic ALK+ non-small cell lung cancer (NSCLC) in Greece, and estimate the impact of adding ceritinib in the future treatment pathway. **METHODS:** An expert panel of 7 leading oncologists was convened in order to map the local treatment pathway and resource use for ALK+ NSCLC. Published sources provided unit costs from the perspective of the Social Insurance Fund (SIF). Direct medical costs were included in the analysis: pharmaceutical, medical and hospital care, lab and imaging tests, accompanying treatment, and management of AEs and brain metastases for all four lines of treatment. Cost base year was 2014. The analysis estimated treatment duration based on progression free survival (PFS) from published literature and controlled for estimated brain metastasis frequency by treatment. **RESULTS:** The current treatment pathway in Greece for the management of ALK+ NSCLC utilizes 1st line chemotherapy followed by crizotinib, chemotherapy, and palliative care in 2nd, 3rd and 4th lines of treatment, respectively. The most widely used 1st line chemotherapeutic regimen is carboplatin or cisplatin plus pemetrexed (73% of patients); the most commonly used 3rd line chemotherapeutic agent is docetaxel (83% of patients). The average per patient cost in the current treatment pathway was estimated at €67,672, based on a 20-month treatment duration adjusted for median PFS. The costs associated with future scenario 1 (crizotinib, ceritinib, chemotherapy, palliative care -treatment duration adjusted to 26 months) and future scenario 2 (chemotherapy, ceritinib, chemotherapy, palliative care -treatment duration adjusted to 29.3 months) were €93,113 and €105,609, respectively. All cost estimates assumed completion of all four lines of treatment and all treatment cycles in each line. **CONCLUSIONS:** Ceritinib in the 2nd line treatment of ALK+ NSCLC leads to an increase in total health care costs due to improved survival which produces longer treatment duration.

#### PCN123

##### ESTIMATION OF DIRECT MEDICAL COSTS ASSOCIATED WITH TREATMENT OF METASTATIC MELANOMA IN SWITZERLAND

Christoffersen P<sup>1</sup>, Khan N<sup>1</sup>, Lucas J<sup>1</sup>, Christodouloupolou A<sup>2</sup>, Del Ponte A<sup>2</sup>, Gutzwiller F<sup>2</sup>

<sup>1</sup>IMS Health, Basel, Switzerland, <sup>2</sup>Amgen Switzerland AG, Zug, Switzerland

**OBJECTIVES:** Metastatic melanoma is a rare, but aggressive disease that accounts for 90% of deaths related to skin cancer. The objective of this project was to estimate average direct medical costs associated with treatment of metastatic melanoma in a population of Swiss, adult patients from a third-party payer perspective. **METHODS:** Direct medical costs of drugs and services were estimated for the following components: Pharmacotherapy; physician visits; inpatient stays; outpatient visits; laboratory tests; imaging and other procedures. Unit costs were based on 2015 list prices in Swiss Francs (CHF) and derived from the Swiss official tariff schedule (TARMED) for outpatient-related costs, Swiss diagnosis-related group (DRG) tariffs for inpatient-related costs, the Swiss Federal Office of Public Health for laboratory tests and the Swiss drug Compendium for prescription drugs. Estimated average cost per patient was population-weighted and reported for three mutually-exclusive designed health states: Pre-progression, progression and post-progression. Estimates of the utilization of services and the units of service received were based on published literature and a survey of Swiss physicians treating melanoma. **RESULTS:** For pharmacotherapy, the estimated cost for a full treatment course was 79'986.09 CHF for ipilimumab, 104'311.59 CHF for vemurafenib, and 1'329.89 CHF for dacarbazine. For parenteral drugs the cost of administration for a full treatment course was 1'408.73 CHF for ipilimumab and 2'077.22 CHF for dacarbazine. Average monthly cost for neurosurgery was 1'101.03 CHF during progression. Outpatient visits accumulated an average per month of 27.40 CHF during pre-progression, 92.40 CHF during progression and 170.23 CHF during post-progression. Other melanoma-related costs (laboratory tests and scans) comprised on average 140.70 CHF per month during pre-progression and 1'182.37 CHF per month during progression. **CONCLUSIONS:** Based on list prices, direct medical costs associated with metastatic melanoma treatment were estimated and reported for patients in an adult, Swiss population.

#### PCN124

##### ADDITIONAL COST OF VTE IN PATIENTS WITH CANCER: AN APPROACH BASED DATABASES

Bourguignon S<sup>1</sup>, Mayeur D<sup>2</sup>, Mahe I<sup>3</sup>, Krakowski I<sup>4</sup>

<sup>1</sup>Stratégique Santé, Evry, France, <sup>2</sup>Ch Versailles, Le Chesnay, France, <sup>3</sup>Louis Mourier Hospital, Colombes, France, <sup>4</sup>Bergonié Institut, Bordeaux, France

**OBJECTIVES:** VTE (venous thromboembolism) are among the frequently associated with malignant disease events which requires hospitalization and could generate extra costs for the health insurance. There is no French studies analyzing the additional costs induced by VTE and cancer. The objective of this study is to provide an estimation of the additional cost induced by VTE + cancer from the analysis of hospital stays extracted from PMSI 2013 (French Hospital Database) for 4 types of cancer (breast, lung, hepatocellular carcinoma and colon). **METHODS:** A crossed approach of Principal Diagnosis (DP) and Comorbidities (DAS) was performed to identify all stays combining VTE and cancer. The analysis is divided into 3 parts: a descriptive approach of hospital stays for VTE + cancer, an analysis by severity level of DRG and an economic valorization based on the National Cost Scale. It was not achieved PMSI extraction to create a comparison population for each type of cancer because the creation of such a population could be a mood point, in particular because of other comorbidities may also generated additional costs (eg infection). Public ATIH database was used. The essential approach of this study is based on analysis of the distribution of stays according to levels of severity DRG. **RESULTS:** 14,251 stays were analyzed combining VTE and cancer. Stays for VTE + cancer represented 81.7% in the severity levels 3 and 4. For example, the average cost of lung cancer in cancer patients + VTE (PMSI extraction) is € 7,296 against € 4,647 for this cancer in ATIH database. A multiplying factor is estimated: 1.57 in lung cancer, 1.5 for breast cancer, 1.34 in colon cancer and 2.01 for hepatocellular carcinoma. **CONCLUSIONS:** The economic justification for the use of preventive treatment of VTE is here in line with clinical guidelines.

#### PCN125

##### INTERMEDIATE AND ADVANCED HEPATOCELLULAR CARCINOMA MANAGEMENT IN FOUR ITALIAN CENTERS: PATTERNS OF TREATMENT AND COSTS

Colombo GL<sup>1</sup>, Cammà C<sup>2</sup>, Attili AF<sup>3</sup>, Ganga R<sup>4</sup>, Gaeta GB<sup>5</sup>, Brancaccio G<sup>5</sup>, Franzini JM<sup>6</sup>, Volpe M<sup>6</sup>, Cortesi E<sup>7</sup>, Turchetti G<sup>8</sup>

<sup>1</sup>University of Pavia, Milan, Italy, <sup>2</sup>Di.Bi.M.I.S University of Palermo, Palermo, Italy, <sup>3</sup>Università La Sapienza, Roma, Italy, <sup>4</sup>Ospedale Brotzu, Cagliari, Italy, <sup>5</sup>Seconda Università di Napoli policlinico, Napoli, Italy, <sup>6</sup>Business Integration Partners, Milano, Italy, <sup>7</sup>Università la Sapienza, Roma, Italy, <sup>8</sup>Scuola Superiore Sant'Anna, Pisa, Italy

**OBJECTIVES:** Hepatocellular carcinoma (HCC) is the fifth most common malignancy worldwide imposing high hospitalizations and mortality rates and a relevant economic burden. Objective of the present analysis is to investigate treatment pathways and healthcare costs for intermediate and advanced HCC patients (Barcelona Clinic Liver Cancer Classification (BCLC) stage B and C). **METHODS:** Structured interviews with gastroenterologists and interventional radiologists were performed in four Italian centres experienced in HCC management. Information on disease stage, diagnostic procedures, treatments and healthcare resource consumption related to HCC were recorded. Direct healthcare costs associated with relevant treatments (sorafenib, Transarterial chemoembolization (TACE), transarterial radioembolization (TARE) systemic treatment) were evaluated. **RESULTS:** Between 2013 and 2014, 285 patients with HCC (mean age 66 years, 74% males) were treated in the 4 participating centres; of them, 80 were classified in the intermediate stage and 57 in the advanced stage. TACE was the most frequent first-line treatment in intermediate stage HCC (63%), followed by sorafenib (15%), radiofrequency ablation (14%) and TARE (1.3%). In the advanced stage of HCC the most frequently used first-line therapy was sorafenib (56%), followed by best