HNSCC or within 6 months after platinum chemotherapy as part of a multimodality therapy with curative intent. Disease characteristics, treatment patterns, and HCU (including drug administration encounters) were described. **RESULTS:** Data for 197 patients (median age 59.6 years) were extracted by 47 physicians. At least 1 additional (second-line) systemic therapy was received by 144 (73.1%) patients, of whom 19 (13.2%) also had third line therapy; the other 53 (26.9%) received best supportive care only. The most common second-line treatments were docetaxel alone (n=72, 50.0%), cisplatin+5-fluorouracil (n=13, 9.0%), and single-agent cetuximab (n=11, 7.6%). During second-line treatment, 79 (54.9%) patients had ≥1 hospital outpatient encounter (median 0.8 visits per month), and community health and emergency department visits were reported for 8 (5.6%) and 13 (9.0%) patients, respectively; 17 (11.8%) patients had ≥1 hospitalisation (median length of stay 4 days), and the most common reasons for hospitalisation were palliative care (n=6, 35.3%), treatment- or procedure-related complications (n=5, 29.4%), and disease progression (n=4, 23.5%). **CONCLUSIONS:** In this study in the UK, 26.9% of patients received best supportive care only for R/M HNSSC. Of the 144 (73.1%) patients receiving second-line therapy, only 19 (13.2%) had third-line treatment for R/M HNSCC. Hospital-based outpatient services were used more frequently than community health, and 11.8% of patients required inpatient hospitalisation. These findings emphasise the need for new treatments for R/M HNSCC after initial platinum therapy that are effective and have improved safety.

PCN269

HEALTHCARE RESOURCE USE (HRU) ASSOCIATED WITH TREATMENT IN ADULTS WITH PHILADELPHIA CHROMOSOME-POSITIVE (PH+) RELAPSED OR REFRACTORY (R/R) B-CELL PRECURSOR (BCP) ACUTE LYMPHOBLASTIC LEUKEMIA (ALL) IN EU-4 COUNTRIES

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OBJECTIVES: To estimate HRU associated with treatment in adults with Ph+ R/R BCP ALL in France, Italy, Spain, and UK. **METHODS:** A Delphi-based methodology was employed to generate estimates of HRU of common treatments for Ph+ R/R BCP ALL patients relapsed/refractory to at least one second-generation tyrosine kinase inhibitor (TKI). The study had two phases: a questionnaire administered to physicians with ≥5-years' R/R ALL experience; and a country-specific panel to discuss these results. The duration of treatment and inpatient length-of-stay (LOS) for the most widely-used treatment regimen was presented. **RESULTS:** In France, 67% of patients with Ph+ R/R BCP ALL were treated with a TKI+chemotherapy (e.g. vincristine+steroids) for induction and consolidation of 6/8 cycles followed by TKI monotherapy maintenance for 18 months. Mean LOS was the same for one cycle of induction and consolidation (21 days). In Italy, 86% patients were treated with TKI monotherapy for either 3 months (followed by hematopoietic stem-cell-transplant [HSCT] [33%]) or 7 months (no HSCT [67%]). Inpatient stays only occurred during the first month (9.8 days). In Spain, the most commonly used regimens were TKI monotherapy (90% received ponatinib for 7 months; 10% received dasatinib for 4 months) and TKI+chemotherapy (1 cycle each of induction and consolidation). The mean LOS/month was 8 days for both TKI monotherapies. For TKI+chemotherapy, more inpatient stays were needed for one cycle of induction (17 days) than consolidation (11 days). In the UK, 50% patients were treated with FLAG-IDA-based chemotherapy (1 cycle each of induction and consolidation) followed by ponatinib for a mean of 7.9 months. Mean inpatient stays for one cycle of induction and consolidation were 31 days and 23 days, respectively. **CONCLUSIONS:** In EU-4 countries, adult Ph+ R/R BCP ALL patients experience substantial inpatient stays during treatment with conventional therapies, causing substantial economic burden. Novel therapies that reduce HRU are needed.

PCN270

HOSPITAL RESOURCES USE AND COSTS ASSOCIATED WITH 6 PREVALENT CANCER IN SPAIN, A REALWORLD DATA STUDY

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OBJECTIVES: To use a healthcare claim database to identify patients with cancer who visited hospital during 2016 and to describe hospital resources used and costs associated. **METHODS:** Retrospective information from the Ambulatory and Patientś Hospitalization database 2016 (with a population of reference about 6.5 million inhabitants) of the Spanish Minimum Basic Data Set (MBDS) were used. Every single hospital contact of all patients who had at least one diagnosis for breast, lung, prostate, bladder, melanoma or colorectal cancer (ICD-10 codes: C50, C33-C34, C61, C67+D09.0+D41.4, C43 and C18-C21) were collected. Socio-demographic information (age, sex), number of hospital contacts (hospitalization and outpatient care), length of stay (days), main diagnoses and procedures performed during hospitalization and outpatient care, and costs were extracted and compared by cancer type. **RESULTS:** Main results for breast, lung, prostate, bladder, melanoma or colorectal cancer are presented for each variable: Number of patients: colorectal 4,520; breast 4,468; lung 3,336; bladder 2,263; prostate 2,243; melanoma 842 Hospitalization episodes: lung 1,913; colorectal 1,910; bladder 1,830; breast 1,268; prostate 1,180; melanoma 134 Hospitalization days: colorectal 21,867; lung 17,606; bladder 12,285; prostate 9,482; breast 7,236; melanoma 1,183 Outpatient visits: breast 34,307; colorectal 28,625; lung 22,273; bladder 12,277; prostate 5,898; melanoma 2,590 Inhospital deaths: lung 284; colorectal 180; prostate 90; bladder 88; breast 69; melanoma 11 Hospital costs (millions of euros): colorectal 33.6; breast 27.8; lung 26.3; bladder 16.4; prostate 10.0; melanoma 2.5 **CONCLUSIONS:** Real word data is a useful source of information to assess resources use and costs associated with diseases. Colorectal cancer ranked 1st for patient attending hospital, number of hospitalization days and for total costs, lung cancer for hospitalization episodes and deaths, and breast cancer for outpatient visits.

PCN271

A REAL-WORLD DATA STUDY REGARDING HOSPITAL RESOURCES USE AND COSTS ASSOCIATED WITH BREAST CANCER IN SPAIN

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OBJECTIVES: To identify patients with breast cancer who visited hospital during 2016 and to describe hospital resources used and costs associated through a healthcare claim database. **METHODS:** Retrospective information from the Ambulatory and Patientś Hospitalization database 2016 (6.5 million inhabitants as reference population) of the Spanish Minimum Basic Data Set (MBDS) were used. All hospital contacts of patients who had at least one diagnosis for breast cancer (coded C50 using ICD-10) were collected. Socio-demographic information (age, sex), number of hospital contacts (hospitalization and outpatient care), length of stay (days), main diagnoses and procedures performed during hospitalization and outpatient care, and costs were extracted. **RESULTS:** A total of 4,468 patients with breast cancer were identified: 99.4% women, mean age (standard deviation (SD)) 59.1 (13.5). A total of 1,268 hospitalization episodes (5 most frequent main diagnoses: 8.6% C50.912, 8.1% C50.911, 5.8% C50.412, 4.9% C50.812 and 4.0% C50.411) and 34,307 outpatient episodes were observed (5 most frequent main diagnoses: 42.0% Z51.11, 30.6% C50.919, 9.9% Z51.12, 1.9% C50.911 and 1.5% C50.912). A total of 69 (1.5%) patients died during a hospital episode. Length of hospitalization for the overall sample was estimated in 7,236 days and the total hospital healthcare costs were € 27.8 million. A patient has a mean of 0.28 hospitalization episodes, 1.6 hospitalization days, and 7.7 outpatient visits, with a total cost of €6,218 that includes €1,347 and €4,871 for inpatient and outpatient care, respectively. **CONCLUSIONS:** Real-world data studies provide useful information regarding hospital resource use for a range of diseases where patients have a regular contact with hospital. Breast cancer patients visit a hospital approximately 8 times per year causing associated costs for hospitals in Spain.

PCN272

ANALYSIS OF PHARMACY CLAIMS FOR HIGH COST DRUGS: LENALIDOMIDE UTILISATION AND EXPENDITURE IN IRELAND

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OBJECTIVES: In Ireland, the National Centre for Pharmacoeconomics (NCPE) considers the cost effectiveness of drugs for which reimbursement by the health payer (Health Service Executive (HSE)) is sought. Lenalidomide (Revlimid®; Celgene Ltd) is reimbursed in the community setting under the High-Tech Drugs Scheme (HTDS). The HTDS database contains much information including drug utilisation and cost, but not indication for which the drug is prescribed. The license of lenalidomide was extended to allow treatment of previously untreated multiple myeloma in patients ineligible for transplant. In 2015, the NCPE determined the drug not to be cost effective for this indication secondary to non-submission of a HTA by the applicant. The objective was to analyse the HTDS database to determine national utilisation and expenditure (January 2010 to December 2016). Also to ascertain if trends changed beyond the time of license extension. **METHODS:** A retrospective analysis of the anonymised HTDS database of dispensed lenalidomide identified the study population. The annual and total number of individuals who had received at least one prescription was determined. Trends in the cost of drug acquisition were examined. **RESULTS:** From January 2010 to December 2016 inclusive, 4,021 individuals (60% male; mean age = 70.4 (±11.42) years) received at least one dose of lenalidomide. The number of patients increased annually from 1,861 (2010) to 4,032 (2016). Acquisition cost increased annually from €13.5 million (2010) to €25.3 million (2016); cumulative cost was €124 million. The largest increase in year-on-year acquisition cost occurred in 2016 (+ €5.5 million); the mean increase in the previous years was €1.3 million. **CONCLUSIONS:** The largest increase in year-on-year acquisition cost occurred beyond the time of license extension. Results from our study highlight the benefit that real world information offers in relation to monitoring utilisation and affordability.

PCN274

TIME TO PRICE CHANGE FOLLOWING HTA DECISIONS

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OBJECTIVES: to analyze how health technology assessment (HTA) reviews impact the prices of pharmaceutical products and how long it takes for changes in price to occur. **METHODS:** We analyzed the pricing and HTA decision histories of nivolumab and pembrolizumab from February 2013 – April 2018. HTA and pricing data were obtained for Germany, France, the U.K., and Australia. 121 HTA decisions were considered. We recorded the price of the drug at the time of the HTA decision, the next price change, and the time until the price change. One HTA review could apply to multiple formulations of a drug, and therefore multiple prices. Overall, 432 combinations of HTA decisions and formulations were analyzed. **RESULTS:** The average time to a price change following a reimbursement decision for pembrolizumab was 8.2 months, compared to 4.6 months for nivolumab. The price changes for pembrolizumab were also larger, with an average 15% decrease compared to a 10% decrease. There were differences in time to price change by geography, ranging from 3.8 months on average in France to 11.2 months in the U.K. Price changes ranged from an average 14% decrease in France to an average 14% increase in the U.K. The patterns of time differences and price changes were largely consistent across geographies, except in France, where the price for pembrolizumab changed sooner, on average, than the price for nivolumab following an HTA decision. **CONCLUSIONS:** Little past research has examined the relationship between HTA decisions and price changes, mostly due to limitations in

accessibility of data. This research has shown that, for the pair of drugs considered, large differences in both the time until a price change and the magnitude of price changes exist between countries and between drugs. In the future, we will repeat this analysis using a larger sample of different drugs.

PCN275

HOW DO HTA DECISIONS FOR NEW DISEASE CONDITIONS IMPACT TIME TO PRICE CHANGES?

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OBJECTIVES: to analyze how health technology assessment (HTA) decisions for new disease conditions impact the prices of drugs already on the market. **METHODS:** Pricing and HTA decision data for nivolumab and pembrolizumab from February 2013 – April 2018 were collected for Germany, France, the U.K., and Australia. 121 HTA decisions were analyzed. The price of the drug at the time of decision, the next price change, and the time until the next price change were recorded for each HTA decision. HTA reviews often apply to more than one formulation of a drug, though different formulations are often assigned different prices. Overall, 432 HTA decision/formulation combinations were analyzed. **RESULTS:** When HTA agencies reviewed nivolumab for a first disease condition, the drug's price changed, on average, 5.3 months after the review, compared to an average of 8.8 months for pembrolizumab. This pattern remains when only positive decisions are considered: nivolumab's price changed, on average, 8.8 months after the first positive decision, compared to 11.1 months for pembrolizumab. The inverse was seen for negative decisions: nivolumab's price changed, on average, 10.0 months after a negative decision, compared to 8.0 months for pembrolizumab. Similar patterns were observed when the drugs were reviewed for new disease conditions subsequent to their initial disease conditions. The price for nivolumab changed, on average, 3.2 months following a first positive decision for a new disease condition, compared to 4.3 months for pembrolizumab. The magnitude of the price changes for new disease conditions also differed, with an average 11% price decrease for nivolumab compared to a 21% price decrease for pembrolizumab. **CONCLUSIONS:** HTA decisions for existing drugs for new disease conditions can have a substantial impact on the prices of those drugs. Understanding the relationship between price and HTA decisions can have important implications for policymakers and industry stakeholders.

PCN276

MANAGED ACCESS AGREEMENTS UNDER THE CANCER DRUGS FUND (CDF): KEY METRICS AND DRIVERS

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OBJECTIVES: Since July 2016, the U.K.'s Cancer Drugs Fund (CDF) has been an avenue for the provisional reimbursement of drugs which do not demonstrate sufficiently robust evidence for a routine NICE guidance recommendation. 16% of current and prior CDF drugs have entered into a Managed Access Agreement (MAA), providing the metrics and drivers that will outline evidence collection, and potentially lead to baseline NHS commissioning for these therapies. Our research examined how the MAAs are structured, the key uncertainties which compel their use and what metrics drive the data collection. **METHODS:** Sixteen MAAs across 10 indications, published between October 2016 and June 2018, were identified in the Context Matters data model. Estimated time for data collection; primary and secondary sources of data requested; Systematic Anti-Cancer Therapy Dataset (SACT) and Blueteq utilization rates; and the uncertainty drivers were analyzed. **RESULTS:** The average timeframe allotted for data collection was 25 months (median=24 months). All MAAs included patient eligibility requirements which were more stringent than the EMA label. The main uncertainty category was clinical efficacy (88%); followed by concerns over the applicability of trial results to the U.K. population (50%); concerns over clinical trial design (38%); and requiring subgroup analyses (19%). 63% of drugs with MAAs had more than one category of uncertainty driving the MAA. The majority of MAAs were awaiting ongoing phase III clinical trial results (69%). All MAAs specified the use of SACT data, and the majority indicated the use of Blueteq (75%). Only two MAAs outlined the anticipated use of Real World Evidence (RWE). **CONCLUSIONS:** MAAs allow therapies to access the CDF, which in turn, offers patients access to life-saving drugs. Pharmaceutical companies may rely on the commonalities among the drivers and metrics of these agreements to inform strategy in the future submission of oncology drugs.

PCN277

PREDICTORS OF HOSPITALIZATIONS AND EMERGENCY DEPARTMENT (ED) VISITS IN SECOND-LINE (2L) ADVANCED NON-SMALL CELL LUNG CANCER (ANSCLC)

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OBJECTIVES: This US study evaluated predictors of hospitalizations and ED visits in patients with aNSCLC receiving 2L therapy following first-line (1L) chemotherapy in the immuno-oncology (IO) era. **METHODS:** This retrospective cohort study of Inovalon's MORE2 Registry® claims identified adult patients with aNSCLC initiating 1L systemic therapy within 6 months of diagnosis in March 2015 – December 2016. Patients with SCLC, other malignancies, <1 month follow-up, on 1L targeted therapy, and on clinical trials were excluded. The impact of key demographic and clinical characteristics on the risk of 2L hospitalizations and ED visits was evaluated by binary multiple logistic regression. Results for significant variables were reported as odds ratios (OR), where an OR >1 indicated greater risk. **RESULTS:** Of 2,700 patients initiating 1L chemotherapy, 829 (31%) received 2L therapy: 539 (65%) chemotherapy, 262 (32%) IO, 28 (3%) targeted therapy. Mean age at 2L start was 65.4 years; Charlson comorbidity index score: 2.5; lines of therapy per patient: 2.4; comorbidities: 1.4; follow-up time from 1L start: 11.2 months; 48% were female; 21% insured by commercial payer; 69% had evidence of smoking cessation/counselling; 34% were hospitalized, and 50% had ED visits in 2L. Significant predictor of 2L hospitalization was 1L hospitalization (OR=1.56, p=0.028); while longer time to 1L treatment discontinuation lowered hospitalization risk (OR=0.92, p=0.036). Predictors of increased risk of 2L ED visits included: radiation therapy (OR=1.57, p=0.004), prior additional malignancy (OR=1.75, p=0.019), and 1L ED visits (OR=1.45, p=0.042); decreased risk of ED visits: commercial insurance (OR=0.58, p=0.012) and longer time to 1L discontinuation (OR=0.91, p=0.012). **CONCLUSIONS:** This real-world study demonstrated that the risk of 2L hospitalizations and ED visits was heavily influenced by the patients' 1L journey. An improved 1L experience may benefit patients in their overall care and reduce costs to the US healthcare system.

PCN278

DIVERSITY OF PATIENTS PATHWAYS WITH LUNG CANCER BETWEEN 4 FRENCH REGIONS: DEFINITION OF DISSIMILARITY MEASURES

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OBJECTIVES: Inequalities in access to care for cancer patients have been identified in many countries and constitute barriers to effective care. In France, a better understanding of such inequalities in lung cancer is important because of its high incidence, of its often late diagnosis and of recently available therapeutic innovations. The aim of the study was to measure the dissimilarity of patient pathways between 4 French regions. **METHODS:** Based on hospital stay data from patients in the PMSI, a national cohort of incident patients (diagnosed in 2011) with lung cancer was followed for 2 years (2011-2013). 4 sub-cohorts were created to study regional disparities (Auvergne, Brittany, Nord-Pas-de-Calais, Rhône-Alpes). The identification of the different treatment types (chemotherapy, radiotherapy, surgery, etc.) enabled to describe the entire patients' care sequences. Disparities in care pathways between cohorts were studied thanks to the definition of 3 criteria: sequences' entropy, odds ratio on headcounts and inter-treatment delays. These criteria allow the inclusion of all the sequences and their complexity in the comparison. **RESULTS:** At the national level, 41,715 incident patients were identified, 9,327 of whom were in the 4 regions. Care pathways are very differentiated between regions. The treatment in Auvergne is very close to the national model on the 3 criteria, contrary to Rhône-Alpes (highest inter-treatment delays, lowest odds ratio). The entropy of the sequences remains high and little varies between regions. **CONCLUSIONS:** The care pathways in lung cancer in France are different among regions. In addition to monitoring indicators for access to care, we have co-constructed methodologies for analyzing and comparing patient care sequences within the territory.

PCN279

A REVIEW OF RECOMMENDATIONS FOR INCLUSION AND DATA COLLECTION WITHIN THE CDF FRAMEWORK

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OBJECTIVES: To explore the process and criteria used for consideration of treatments under the Cancer Drugs Fund (CDF) framework, and to describe the extent of evidence collection while in the Fund. **METHODS:** A review of the NICE technology appraisals of all drugs included in the CDF (10.05.2018) was conducted. To compare with decisions in Scotland, the Scottish Medicines Consortium (SMC) determinations were also reviewed. **RESULTS:** Details were available on 17 indications for 12 drugs. Where reported, inclusion in the CDF was proposed in company submissions (n=10) or by the Committee (n=3). Drugs were indicated for adults with nine different types of cancer. Ten indications were for advanced disease and 13 for second or further-line therapy. Twelve cases met the end-of-life criteria. The major sources of uncertainty resulting in inclusion in the CDF related to: overall survival (n=11), information on comparator (n=7) and treatment duration (n=5). The planned data collection ranged from five to 42 months (median 21 months). All cases collected data through NHS systems and 15 through ongoing studies. Sufficient data on ICERs were available for 14 cases. The median ICER in the company's base case analyses was £43,227 and the Committee's preferred ICER was higher by a median of £11,602. All available ERG ICERs were higher than the company's. The SMC accepted 13 indications, rejected one and no decision was available for three cases. **CONCLUSIONS:** The included cases were mostly in difficult to treat patients: second-line, advanced cancer, meeting end-of-life criteria. The most common source of uncertainty was insufficient overall survival information. Data collection was often planned for a period beyond the assumed usual two years and in most cases it involved continuation of ongoing studies. The SMC rejected only one of these indications despite potential gaps in evidence, resulting in similar treatment availability.

PCN280

IMPACT OF SUBOPTIMAL CLINICAL EVIDENCE ON HEALTH TECHNOLOGY ASSESSMENT RECOMMENDATIONS

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OBJECTIVES: To assess the impact of suboptimal clinical evidence on funding recommendations. **METHODS:** Using published pan-Canadian Oncology Drug Review (pCODR) reports, 111 unique decisions spanning July 2011 to April 2018 were identified. Thirty-nine independent variables were consistently reported covering clinical, economic, and patient inputs. Quality of trials providing clinical