(60% vs. 53%). 55% of the patients who received a first metastatic ATT subsequently received a second ATT. The remainder (45%) received SCo .Patients receiving SCo after 1st mBC ATT were on average older than those receiving a 2nd ATT (70 y.o. vs. 58) and had a degraded PS (89% with PS 2+ vs. 15%). More of the patients receiving SCo had cerebral metastases: 35% vs. 17%. The factors influencing initiation of SCo after conclusion of the 2ndATT were similar to those described earlier: age, PS and metastatic burden. **CONCLUSIONS:** While the majority of HER2+ mBC patients received a 1st line ATT, half did not receive a 2nd line of ATT, indicating that there is an need for a novel method of anti-tumor management for patients currently ineligible to receive standard anti-tumor treatment due to their age, performance status, metastases or other factors.

PCN310

TREATMENT PATTERNS OF ALK+ NON-SMALL CELL LUNG CANCER IN WESTERN EUROPE

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OBJECTIVES: Non-small cell lung cancer (NSCLC), which accounts for over 80% of all lung cancer cases, is associated with a particularly poor prognosis among those with metastatic disease. Approximately 2-7% of patients with NSCLC have an anaplastic lymphoma kinase (ALK) gene alteration, which suggests the potential for a favorable response to an ALK inhibitor. The objective of this study was to document the current treatment patterns for ALK+ patients in Western Europe given the recently available and upcoming ALK inhibitor therapies. **METHODS:** A multi-country retrospective medical chart-review of NSCLC patients was conducted by cancer-treating physicians in 5EU (France, Germany, Italy, Spain, UK) between Q2 2015 and Q1 2016 (N=16,549). Physicians randomly selected patient charts currently on an anti-cancer regimen and abstracted data on patient demographics, disease status, treatment patterns, and biomarker status. Only patients who were ALK+ were included in the analyses. **RESULTS:** A total of 1,092 patients were ALK+; 58.2% were male and the mean age was 60.7 years (SD=10.8). A total of 91.8% were diagnosed in stage IIIb/IV. Approximately two-thirds of patients had an ECOG score of 0 or 1 (65.3%). Crizotinib (26.3%) and cisplatin/pemetrexed (15.7%) were the most common first-line (1L) treatments. Crizotinib (41.1%) was the most common second-line (2L) treatment, among those who had a 2L therapy (N=815). Among those with a third-line (3L) treatment (N=341), erlotinib (26.4%), crizotinib (22.3%), and docetaxel (12.0%) were the most common treatments. **CONCLUSIONS:** There has been a quick adoption of the ALK inhibitor crizotinib in the 5EU. Over 20% of patients in each treatment line received crizotinib, with treatments such as docetaxel, cisplatin/pemetrexed, and erlotinib being used less frequently. Given the upcoming availability of additional ALK inhibitor treatments, this study provides an important baseline assessment of current treatment patterns in Western Europe.

PCN311

TREATMENT PATTERNS OF ALK+ NON-SMALL CELL LUNG CANCER IN JAPAN

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OBJECTIVES: Between 2-7% of patients with non-small cell lung cancer (NSCLC) have an anaplastic lymphoma kinase (ALK) gene alteration, which suggest the potential for a favorable response to an ALK inhibitor treatment. The objective of this study was to document the current treatment patterns for ALK+ patients in Japan given the recently available and upcoming ALK inhibitor therapies. **METHODS:** A multi-country retrospective medical chart-review of NSCLC patients was conducted by cancer-treating physicians in Japan between Q2 2015 and Q1 2016 (N=3,492). Physicians randomly selected patient charts currently on an anti-cancer regimen and abstracted data on patient demographics, disease status, treatment patterns and biomarker status. Only patients who were ALK+ were included in the analyses. **RESULTS:** A total of 169 patients were ALK+ and were included; 40.8% were male and the mean age was 63.3 years (SD=13.0). A total of 59.2% were diagnosed in stage IIIb/IV. Slightly more than half of patients had an ECOG score of 0 (56.2%). The most common first-line treatments were crizotinib (26.0%), alectinib (21.3%), and pemetrexed (19.5%). Of the patients who had a second-line treatment (N=96), nearly 90% used an ALK inhibitor either alone (crizotinib = 47.9%; alectinib = 37.5%) or in combination (alectinib+bevacizumab = 4.2%). Among patients who had a third-line treatment (N=32), alectinib (71.9%) and docetaxel (28.1%) were the only treatments used. The four patients who had a fourth-line treatment all used alectinib (100.0%). **CONCLUSIONS:** ALK inhibitor treatments have been incorporated quickly into clinical practice in Japan, particularly in second lines and later. Nearly half of ALK+ patients received an ALK inhibitor in first line and over 70% of ALK+ patients received an ALK inhibitor in second, third, and fourth lines. Given the upcoming availability of additional ALK inhibitor treatments, this study provides an important baseline assessment of current treatment patterns.

PCN312

A SYSTEMATIC REVIEW OF TREATMENT PATTERNS IN PATIENTS WITH RECURRENT GLIOBLASTOMA IN THE REAL WORLD

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OBJECTIVES: Despite aggressive front-line treatment, most patients with glioblastoma multiforme (GBM) develop recurrent disease 5–8 months after diagnosis. Systemic treatment at recurrence can provide clinically meaningful benefits for patients. A systematic literature review was carried out to describe the treatment patterns of patients with recurrent GBM (rGBM) in routine clinical practice. **METHODS:** This systematic review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. A tiered search string that included a combination of keywords and medical subject headings (MeSH) was used to search for English language studies in the following databases: BIOSIS Previews, Current Contents Connect®, Embase®, Gale Group PROMT®, International Pharmaceutical Abstracts, Medline, and SciSearch (January 1 2005–December 31 2015). **RESULTS:** The search yielded 350 citations with two additional citations identified through examination of reference lists of the included publications. After applying the selection criteria, six articles that described eight different study cohorts were included in the qualitative data synthesis. Seven study cohorts were retrospective analyses and one was a physician panel survey. Six study cohorts included patients from Europe, and two included patients from the USA. Among studies that followed patients from primary GBM diagnosis, 41–64% received systemic treatment at recurrence. Treatment regimens varied by year of diagnosis and country. Bevacizumab-containing regimens were the most common in USA-based cohorts (representing 80–86% of treatment received). Bevacizumab-containing therapy, nitrosourea-containing therapy, and temozolomide were the most common treatment regimens in Spain, Italy, and France, respectively. **CONCLUSIONS:** The studies in this qualitative systematic review demonstrate that few treatment options are available for rGBM patients. In Europe, where bevacizumab is not approved for rGBM, the treatment paradigm varies between countries and several options are used (including regimens without bevacizumab). In the USA, where bevacizumab is indicated for rGBM, bevacizumab-containing regimens have become the standard of care.

PCN313

REAL WORLD ANAPLASTIC LYMPHOMA KINASE (ALK) REARRANGEMENT TESTING PATTERNS, TREATMENT SEQUENCES AND SURVIVAL OF ALK-INHIBITOR TREATED PATIENTS

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OBJECTIVES: Patients with ALK rearrangement (ALK+) account for 4-7% of advanced non-small cell lung cancer (aNSCLC) patients. For this group, limited information is currently available on different lines of therapy and associated survival outcomes in routine clinical practice. The goal of this analysis is to determine the prevalence of ALK testing, treatment sequences and associated survival outcomes in ALK+ patients in cancer care providers across the US. This study will also provide comparative evidence for currently used ALK-inhibitors in clinical practice. **METHODS:** A retrospective analysis of treated ALK+ aNSCLC patients was conducted using a US electronic health record (EHR) database. Information on ALK testing patterns, treatment sequences, and overall survival (OS) was extracted from a combination of structured and unstructured EHR data elements. ALK testing and treatment rates were analyzed descriptively. OS will be analyzed using Kaplan Meier and Cox proportional hazard models. **RESULTS:** Of the aNSCLC patients diagnosed between January 1, 2011 and December 31, 2014, 342 were ALK+ with follow-up data through death or end of the study period (February 29, 2016). The mean age across the cohort was 60 years and 55% of patients were women. 91% of patients received first line (FL) treatment with 95% of the treated patients receiving ALK test results before or during FL treatment. Among the 312 treated patients 62% received FL crizotinib-based treatment (n=193). 58% of the 312 patients went on to receive second line (SL) treatment and 49% of the SL treated patients received third line treatment. **CONCLUSIONS:** Results from this real world study described the use of biomarker-driven therapy and associated outcomes in ALK+ patients in clinical practice. In the US the majority of treated ALK+ patients received ALK test before or during FL treatment and received treatment with ≥1 ALK-inhibitor therapy.

PCN314

CURRENT STATUS OF ENDOSCOPIC SUBMUCOSAL DISSECTION FOR GASTRIC CANCER WITHIN ABSOLUTE INDICATION IN KOREA: BASED ON NATIONAL CLAIMS DATABASE

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OBJECTIVES: This study aimed to investigate the recent ESD status of gastric cancer (GC) within absolute indications between 2011 and 2014 based on national claims database. **METHODS:** We used Health Insurance Review and Assessment Service data. Patients with GC who underwent ESD between November 1, 2011 and December 31, 2014 were identified with ICD-10 and a procedural code. We analysed treatment patterns, en-bloc and treatment after ESD by hospital type. ESD-related length of stay and total medical costs were also analysed. **RESULTS:** A total of 23,828 cases were identified during the study period, of which 17,675 were males (74.2%), and the median age was 64.9±9.9 (mean±SD). 16,052 procedures were performed in tertiary hospitals (67.4%), and 7,578 in general hospitals (31.8%). The rate of tertiary hospitals who performed under ESD procedures decreased from 40.0% in 2012 to 31.3% in 2014. On the other hand, the rate of tertiary hospitals with between 201-300 cases increased from 0.0% in 2012 to 4.4% in 2014. The median length of stay (in days) per patient was 5.0, and the total median medical cost per patient was 1,505,000 (Korean WON) in 2014. The en-bloc resection rate was above 97.3% regardless of the year or hospital type. For the study period, 8.5% were treated within 90 days after ESD, 1.9% with endoscopic treatment, and 6.6% with operational treatment. 5.5% were treated within 91~365 days after ESD, 4.4% with endoscopic treatment, and 1.0% with operational treatment. **CONCLUSIONS:** The ESD of GC has increased over time, and the proportion of elderly cases has increased since it started being reimbursed for in 2011. ESD procedures have been spreading from tertiary hospitals to general hospitals. We suggest that monitoring strategies of clinical outcomes for gastric ESD should be established in Korea. *This work was supported by a grant from the National Evidence-based Healthcare Collaborating Agency.

PCN315

PHYSICIANS' BEHAVIOR INFLUENCES THE HEALTH AND ECONOMIC IMPACT OF APPLYING CIRCULATING TUMOR CELLS AS RESPONSE MARKER IN METASTATIC CASTRATION-RESISTANT PROSTATE CANCER

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OBJECTIVES: Treatment decisions in metastatic castration-resistant prostate cancer (mCRPC) vary between physicians, even though expert opinion guidelines exist to guide the interpretation of information from multiple time-dependent imaging modalities and markers. We aimed to investigate whether physicians' behavior, regarding the use and interpretation of imaging modalities and markers, influences the health and economic impact of novel biomarkers, such as circulating tumor cells (CTC). **METHODS:** A previous developed model on the use of response markers for informing treatment switches from ineffective docetaxel treatment to cabazitaxel treatment in mCRPC was used. This model compares two strategies for monitoring patients' response to treatment: the use of PSA and bone scans (control strategy) and the use of CTC (experimental strategy). The likelihood that a physician would follow guideline-suggested treatment switches was varied (60%-100%) to assess its impact on several outcome measures, including the amount of overtreatment and the incremental cost-utility ratio. **RESULTS:** The results show that the physicians' behavior influences both the health and economic impact of applying CTC as response marker in mCRPC treatment. Average docetaxel overtreatment varied between 19.7 and 21.5 weeks and between 10.3 and 12.5 weeks for the control and experimental strategy, respectively. Average cabazitaxel overtreatment varied between 10.6 and 11.2 weeks and between 6.5 and 7.6 weeks for the control and experimental strategy, respectively. The cost-utility of CTC as response marker varied between €-14,421.- and €56,753.- per QALY gained. **CONCLUSIONS:** Physicians' behavior is expected to have a large impact on the performance of CTC as response markers in mCRPC treatment with regard to both health and economic outcomes. This indicates that also the extent to which patients benefit from health care innovations depends on physicians' preferences regarding the use of those interventions. Therefore, physicians and modelers should be aware of the impact that physicians' behavior might have in practice.

PCN316

REVIEW OF CLINICAL PRACTICE GUIDELINES AND TREATMENT PATTERNS IN METASTATIC PANCREATIC CANCER IN EU-5 COUNTRIES

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OBJECTIVES: According to a recent epidemiological study, pancreatic cancer is fourth most fatal cancer in men and women across Europe. A 19% increase in deaths associated with pancreatic cancer was observed from 2009 to 2014 in Europe. This review was aimed to assess the clinical practice guidelines and treatment patterns in metastatic pancreatic cancer in EU-5 countries i.e. the UK, Germany, Spain. France, and Italy. **METHODS:** Embase® and MEDLINE® were searched for relevant studies providing clinical guidelines and real-world patterns for treatment of patients with pancreatic cancer, published post 2006. **RESULTS:** Of the 271 citations identified (treatment guidelines: 66 and treatment patterns: 205), 10 studies met the inclusion criteria (treatment guidelines: 7 studies and treatment pattern: 3 studies) Two guidelines were identified for the UK, while one each clinical guideline was identified for Spain, Germany, Italy, and France and one guideline was identified for Europe. Gemcitabine is considered as the standard of care for the treatment of patients with metastatic pancreatic cancer across EU-5 countries. Similar treatment recommendations were observed across the guidelines; recommended first-line treatment options include FOLFIRINOX, gemcitabine plus nab-paclitaxel, gemcitabine plus erlotinib, gemcitabine-capecitabine or gemcitabine monotherapy. However, best supportive care is recommended for the patients with PS of 3 or 4, even chemotherapy is not recommended for these patients. Real-world treatment pattern also showed that gemcitabine alone was most commonly administered for treating metastatic pancreatic cancer (UK: 46%; France: 46.5%; Germany: 41.5%) followed by FOLFIRINOX (UK: 20.1%; France: 28.3%). **CONCLUSIONS:** Gemcitabine based therapies are recommended treatment options for metastatic pancreatic cancer. Treatment pattern were similar across EU-5 countries and aligned with clinical practice guidelines. Further research need to be conducted to comprehensively characterize pancreatic treatment patterns in the EU-5

PCN317

DESCRIPTIVE ANALYSIS OF THE RESECTED PANCREATIC CANCER PATIENT JOURNEY: FINDINGS FROM A U.S. REAL-WORLD CLAIMS-BASED ANALYSIS

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OBJECTIVES: Recent RCT suggest resected pancreatic cancer (RPC) patients receiving adjuvant chemo have significantly improved overall survival (OS). Milestones along the journey of pancreatic cancer patients including the timing of surgery, chemotherapy and radiation and the proportion of the population in each of these settings has not been evaluated. **METHODS:** Individuals with pancreatic cancer (ICD-9=157.x, excluding 157.4) diagnosed between 03/2012-06/2015 were selected from the Inovalon More2 claims database. Resected patients were identified by the CPT codes (48140, 48146, 48150, 48152-5). Neoadjuvant = chemo/chemoradiation prior to resection; adjuvant = chemo/chemoradiation $\leq$ 90 days post-resection; metastatic = initiation of chemotherapy after progression (ICD-9:196.0-196.3, 196.5-196.6, 197.0-197.8, 198.0-198.8) or >180 post-resection. Mean time from diagnosis are shown. **RESULTS:** There were 1014 RPC identified in the database. Mean age at diagnosis was 62.7 yrs (SD = 13.0) and 39.7% had commercial insurance, 40.9% Medicare and 18.5% Medicaid. 37.4% were diagnosed with metastatic disease at or following resection. Four patient journeys were identified: 1. 9.7% of patients initiated neoadjuvant chemotherapy (48.5%) or chemoradiation (51.5%) at 1.1 mo and were resected at 5.8 mo. 21 patients went on to receive adjuvant systemic therapy. 2. 32.5% had a resection at 0.9 mo and initiated adjuvant chemotherapy (65.2%) or chemoradiation (34.8%) at 2.1 mo. 3. 15.9% of patients had surgery at 1.0 mo, were diagnosed with metastatic disease at 1.7 mo, and initiated first-line chemotherapy at 3.3 mo. 4. 45.6% of patients were resected at 1.4 mo, were diagnosed with metastatic disease at 1.8 mo and did not receive any chemotherapy. **CONCLUSIONS:** In a real-world analysis of RPC patients diagnosed in the last 3 years four treatment journey cohorts were identified corresponding to the receipt of neoadjuvant, adjuvant, metastatic and untreated patients. The majority of patients (45.6%) did not receive systemic therapy and were diagnosed with metastatic disease shortly following surgery.