cant difference in inpatient costs (p<0.01) between the 2 groups. **CONCLUSIONS:** The economic burden of patients using new bio-surgical hemostatic materials was considerable. While a number of factors affected inpatient costs, patients using ORC were associated with lower total inpatient expenditure.

**PCN48**

**SYSTEMATIC REVIEW OF ECONOMIC EVALUATIONS IN ALLOGENIC HEMATOPOIETIC STEM CELL TRANSPLANTATION**

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**OBJECTIVES:** The objective of this systematic review was to determine the economic analyses regarding cost-effectiveness of allogeneic hematopoietic stem cell transplantation (HSCT) in hematologic cancers (HCs). METHODS: A systematic literature review was performed using the PICO method. Population consisted of patients suffering from HCs. Intervention and Comparators were HSCT compared to different types of HSCT or standard therapies and Outcomes were incremental cost–utility ratios (ICURs) and/or incremental cost–effectiveness ratios (ICERs). The search was performed with the NHS EED filters using electronic databases from 1966 to 2018. RESULTS: The systematic search yielded 13 publications of which 13 fulfilled the eligibility criteria. Three studies included economic analyses on acute myeloid leukemia (AML), two on acute lymphoid leukemia (ALL), five on chronic myeloid leukemia (CML), and one on myelodysplastic syndromes. Nine were cost-effectiveness analyses and four were cost-utility analyses. Five studies used a Markov model. The largest proportion of the studies compared HSCT to standard chemotherapy (SC) (n=5), followed by imatinib (n=3) and various other agents (n=6). The time horizon varied from 1 year to lifetime. All studies used a health care system perspective. In AML and ALL, ICURs ranged from dominant to (2014US)$154,597/LYG compared to SC. In Philadelphia-positive (Ph+) CML, HSCT ranged from total healthcare costs (HHCs) of (2014US)$127,013/QLY to (2014US)$217,013/QLY compared to AHSCT. CONCLUSIONS: Most of analyzed studies suggest that HSCT is cost-effective in AML and ALL compared to SC, but not in Ph+ CML when compared to imatinib. While HSCT represents a wide cost range, this is consistent with current clinical practice in Ph+ CML, where tyrosine kinase inhibitors, like imatinib, have replaced HSCT for first-line therapy. Despite the high level of heterogeneity among selected studies, this review provides a comprehensive overview of the cost-effectiveness of HSCT in HCs and could serve in the realization of future economic evaluations.

**PCN49**

**ESTIMATION OF DIRECT HEALTHCARE COSTS OF GYNECOLOGIC CANCER IN THE U.S.: AN ANALYSIS OF 2007-2011 MEDICAL EXPENDITURE PANEL SURVEY (MEPS) DATA**

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**OBJECTIVES:** A literature search revealed no prior study on the direct medical costs of gynecologic cancers including uterine, cervical, ovarian and other gynecologic cancers. The study objective was to estimate the direct healthcare costs of gynecologic cancers among community-dwelling U.S. residents from an all-payer perspective. METHODS: A retrospective cross-sectional analysis was conducted using a 2007-2011 MEPS data. Sample selection was restricted to MEPS participants with gynecologic cancers. Direct healthcare costs in the U.S. were estimated using logic cancers. The study objective was to estimate the direct healthcare costs of gynecologic cancers, including uterine, cervical, ovarian and other gynecologic cancers. Direct healthcare costs in the U.S. were estimated using the University of Texas at Austin, Austin, TX, USA, 4IMS Health, San Francisco, CA, USA, 5Bayer HealthCare Pharmaceuticals, Whippany, NJ, USA

**OBJECTIVES:** The University of Texas at Austin, Austin, TX, USA, 4IMS Health, San Francisco, CA, USA, 5Bayer HealthCare Pharmaceuticals, Whippany, NJ, USA

**OBJECTIVES:** Thyroid cancer (TC) constitutes ~1% of all diagnosed cancers. DTC is the most common type of TC, accounting for about 95% of all cases. Patients with DTC respond well to surgery and/or radioactive therapy (I-131). However, ~5% of patients become refractory to I-131. Disease burden and healthcare costs associated with this orphan disease have not been well described. METHODS: This retrospective cohort analysis combined data from the Humana and OptumInsight Claims databases from Apr 2005-Jun 2014. Patients aged ~18 years were defined as having RAI-R DTC if they received a tyrosine-kinas inhibitor (TKI) and had ~2 diagnoses of thyroid cancer (ICD-9 code 193.xx) on or prior to the index date (first TKI use). Patients were excluded if no continuous medical/ pharmacy coverage in the 6-months pre and post-index. Descriptive results included mean all-cause and thyroid-related care cost & utilization (inpatient, outpatient and pharmacy), and were assessed 6 months post-index then converted to annual estimates. Results were reported for both the individual and combined datasets. RESULTS: A total of 924 patients were included representing a wide cost range. The mean age at diagnosis was 60 years and 45.5% were female. The average time from diagnosis to TKI use was 754 days. The most common TKIs were sorafenib (41.4%), sunitinib (26.7%), and vandetanib (14.7%), and 31.9% of patients used ~2 TKIs. The average number of outpatient and ER visits was 4.4 and 1.2 for all-cause and 1.3 for thyroid-related, respectively. Rates of hospitalization were 25.0% and 11.2% for all- and thyroid-related causes, with a mean stay of 7.8 and 5.1 days, respectively. The average number of all-cause and thyroid-related prescriptions were 60.9 and 15.7, respectively. Total all- and thyroid-related annual healthcare costs were $217,935 and $97,344, respectively. CONCLUSIONS: RAI-R DTC is a rare disease, with high disease burden as shown through high rates of healthcare utilization and annual cost.

**PCN52**

**COSTS OF TREATING SKELETAL-RELATED EVENTS AMONG PROSTATE CANCER PATIENTS WITH BONE METASTASES IN A COMMERCIAL INSURED POPULATION IN THE US**

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**OBJECTIVES:** We evaluated the economic burden of treating skeletal-related events (SREs), including pathologic fractures (PF), spinal cord compression (SCC), radiation to bone (RB) and bone surgery (BS), in prostate cancer (PC) patients with bone metastases (BM). METHODS: This retrospective cohort analysis included patients with DTC respond well to surgery and/or radioactive therapy (I-131). However, ~5% of patients become refractory to I-131. Disease burden and healthcare costs associated with this orphan disease have not been well described. METHODS: This retrospective cohort analysis combined data from the Humana and OptumInsight Claims databases from Apr 2005-Jun 2014. Patients aged ~18 years were defined as having RAI-R DTC if they received a tyrosine-kinas inhibitor (TKI) and had ~2 diagnoses of thyroid cancer (ICD-9 code 193.xx) on or prior to the index date (first TKI use). Patients were excluded if no continuous medical/ pharmacy coverage in the 6-months pre and post-index. Descriptive results included mean all-cause and thyroid-related care cost & utilization (inpatient, outpatient and pharmacy), and were assessed 6 months post-index then converted to annual estimates. Results were reported for both the individual and combined datasets. RESULTS: A total of 924 patients were included representing a wide cost range. The mean age at diagnosis was 60 years and 45.5% were female. The average time from diagnosis to TKI use was 754 days. The most common TKIs were sorafenib (41.4%), sunitinib (26.7%), and vandetanib (14.7%), and 31.9% of patients used ~2 TKIs. The average number of outpatient and ER visits was 4.4 and 1.2 for all-cause and 1.3 for thyroid-related, respectively. Rates of hospitalization were 25.0% and 11.2% for all- and thyroid-related causes, with a mean stay of 7.8 and 5.1 days, respectively. The average number of all-cause and thyroid-related prescriptions were 60.9 and 15.7, respectively. Total all- and thyroid-related annual healthcare costs were $217,935 and $97,344, respectively. CONCLUSIONS: RAI-R DTC is a rare disease, with high disease burden as shown through high rates of healthcare utilization and annual cost.

**PCN53**

**SYSTEMATIC REVIEW OF EPIDEMIOLOGY AND BURDEN OF PREDICTIVE CANCER**

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**OBJECTIVES:** Pancreatic cancer is considered one of the toughest cancers to treat, with extremely poor prognosis. The objective of this research was to conduct a systematic literature review of epidemiologic characteristics and measures of utilization including length of stay (LOS) and readmissions were described. Multivariable regression was used to identify significant drivers of hospital-based utilization. RESULTS: Hospital utilization occurred primarily in the OP setting (81.0%) in teaching facilities (88.3%) with 300 or more beds (78.1%). More than half of the population was female (56.0%) with a mean Charlson comorbidity score of 0.43. Mean age at diagnosis was 63.9 years for the age of 18. The most common OP procedures were diagnostic (10.3%) while valve and septa operations (15.6%) and heart catheterization (11.9%) were the most frequent IP procedures. Mean LOS was 10.4 days. Congestive heart failure (CHF) (RR 1.31, 95% CI 1.12, 1.51) fluid electrolyte disorders (RR 1.68 CI 1.42, 1.97), atrial fibrillation (RR 1.19, 95% CI 1.09, 1.29) and chronic obstructive pulmonary disease (COPD) (RR 1.19, 95% CI 1.10, 1.29) diagnoses were associated with longer IP stays. 5.0% of patients admitted expired in the hospital and 8.5% were readmitted within 30 days. CHF (OR 2.89 CI 1.80, 4.19), AF (OR 2.51 CI 1.64, 3.79), and cardiac dysrhythmias (OR 2.63 CI 1.21, 5.82) were associated with increased mortality. Only CHF (OR 2.64 CI 1.46, 4.68) was associated with increased readmissions. CONCLUSIONS: While EA patients are typically treated in the OP setting hospital utilization is high when IP services are required.