METHODS: Using Surveillance, Epidemiology, and End Results (SEER) cancer registry data linked to Medicare claims, we identified 1,117 FL patients diagnosed between 01/99 and 12/05. Patients were included if chemotherapy began within 90 days of cancer diagnosis and consisted of CHOP (cyclophosphamide [C], doxorubicin, vincristine [V], and prednisone [P]) or CVP ± rituximab. Monthly Medicare paid amounts were calculated for each of 48 monthly partitions following chemotherapy initiation. To account for censoring we conducted 48 inverse probability-weighted (IPW) least-squares regression analyses to examine patient factors associated with cumulative costs after each partition. Total costs were divided into chemotherapy and non-chemotherapy. Overall survival was estimated using Kaplan-Meier analysis. **RESULTS:** The median age was 73 years, 56% were diagnosed with stage III-IV disease, 67% received rituximab, and, among these, the average cost of rituximab was $17,958 during the first 12 months of frontline therapy. In IPW regression, the incremental cumulative total cost associated with rituximab was $20,622 (95% Confidence Interval [CI] $16,999-$24,092) at month 6, $19,606 (95% CI $14,996-$23,914) at month 12, and $18,122 (95% CI $8,110-$27,533) at month 48. Other factors associated with higher costs were later cancer stage and higher comorbidity index. The cumulative chemotherapy cost associated with rituximab was $18,109 (95% CI $16,081-$20,365) at month 6, $16,249 (95% CI $13,820-$19,023) at month 12, and $16,130 (95% CI $11,320-$21,015) at month 48. There were no differences in cumulative non-chemotherapy costs associated with rituximab at any time. Kaplan-Meier 48-month survival was 74.4% for rituximab and 62.6% for non-rituximab patients. **CONCLUSIONS:** The net cost of rituximab is consistent with the cost of rituximab treatment, suggesting that over 48 months additional costs from improved survival were balanced by the reduced need for medical services.

PCN35

DOSING PATTERN AND COST COMPARISON OF EPOETIN ALFA AND DARBEPOETIN ALFA IN CHRONIC KIDNEY DISEASE AND CHEMOTHERAPY-INDUCED ANEMIA INPATIENTS

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OBJECTIVES: To compare erythropoiesis-stimulating agent (ESA) dosing patterns and costs in inpatients with chronic kidney disease (CKD) not on dialysis or with chemotherapy-induced anemia (CIA). **METHODS:** Electronic records from the Premier Perspective Comparative Hospital Database (2006Q1-2009Q4) were analyzed to identify inpatients ≥18 years old treated with epoetin alfa (EPO) or darbepoetin alfa (DARB). Patients receiving renal dialysis or treated with both ESAs were excluded. CKD patients had ≥1 claim for CKD, no claim for cancer, and did not receive chemotherapy. CIA patients had ≥1 claim for cancer, received chemotherapy, and had no claim for CKD. The mean cumulative ESA dose was used to calculate costs, based on April 2010 wholesale acquisition costs (EPO: $15.15/1,000 Units, DARB: $4.96/mcg). **RESULTS:** A total of 148,746 CKD (EPO: 116,017; DARB: 32,729) and 13,832 CIA (EPO: 10,454; DARB: 3,378) patients were identified. EPO patients were slightly younger than DARB patients in the CKD group (years: 71.0 vs. 71.2; P=.0199) and slightly older in the CIA group (years: 60.7 vs. 59.2; P<.0001). The proportion of females was higher in CKD (EPO 52.3% vs. DARB 51.3%; P=.0018) and similar in CIA (EPO 52.9% vs. DARB 53.8%; P= .3722). The mean length of stay (LOS) was slightly longer for EPO patients (days: CKD: 9.9 vs. 9.7, P=.0006; CIA: 13.4 vs. 12.6; P=.0028). The mean cumulative dose was EPO 37,333 Units and DARB 149 mcg for CKD patients, and EPO 62,605 Units and DARB 272 mcg for CIA patients, yielding dose ratios of 251:1 and 230:1 (Units EPO:mcg DARB), respectively. Corresponding ESA costs were higher for DARB than for EPO in both populations (CKD: $739 vs. $566; CIA: $1,349 vs. $948). **CONCLUSIONS:** This analysis reported dose ratios of 251:1 and 230:1 and a cost premium associated with DARB of 31% and 42% for CKD and CIA inpatients, respectively, despite longer LOS for EPO patients.

PCN36

COST ANALYSIS, SAFETY, AND EFFICACY OF PEMETREXED/CISPLATIN COMPARED WITH BEVACIZUMAB/GEMCITABINE/CISPLATIN IN PATIENTS WITH PREVIOUSLY UNTREATED ADVANCED NON-SQUAMOUS NSCLC IN RUSSIA

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OBJECTIVES: The novel chemotherapy agent pemetrexed combined with cisplatin and the vascular endothelial growth factor (VEGF)-targeted agent bevacizumab combined with cisplatin and gemcitabine are approved as first-line treatments for patients with non-squamous non-small cell lung cancer (NSCLC). Recent studies have claimed that bevacizumab has equivalent safety and is cost-saving when compared with pemetrexed in this population. This study analyzed the health care costs in Russia based on the indirect analysis and local treatment practice. Safety and efficacy were also compared. **METHODS:** As no direct head-to-head trials have been undertaken comparing the two regimens, an indirect treatment comparison approach was used. Data from 2 separate studies, that had a common comparator (cisplatin/gemcitabine), were analyzed. Only the 7.5 mg bevacizumab arm was included. The cost analysis comprised chemotherapy and adverse event treatment costs. Chemotherapy costs were based on the average number of cycles in the trials. Safety and efficacy endpoints were matched from the available data. Previous studies had assumed equivalent safety and used median number of cycles for the calculation of drug costs when the cycles of bevacizumab are not normally distributed. **RESULTS:** The overall proportion of patients suffering a severe adverse event was significantly lower with pemetrexed (−10.50; 95%CI −18.4, −2.71). No significant differences were found in overall survival (HR 0.90; 95%CI 0.72, 1.13), although in the individual trials only pemetrexed demonstrated significant survival advantage (HR 0.84; 95%CI 0.74, 0.96) while 7.5 mg bevacizumab showed no survival advantage (HR 0.93; 95%CI 0.78, 1.11). When costs were based on the average number of cycles used on a per-patient basis (4.3 vs. 7.2), pemetrexed was cost-saving (saving R337,600 or $US11,100) with most savings from chemotherapy costs to pharmacy (R334,100 or $US10,900). **CONCLUSIONS:** Pemetrexed is cost-saving and less toxic compared to bevacizumab in this patient population, and produces at least equal survival outcomes.

PCN37

ESTIMATING COST OF TREATMENT IN ELDERLY PATIENTS WITH COLORECTAL CANCER USING MEDICARE DATA

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OBJECTIVES: Coloretal cancer (CRC) is one of the most common and costly cancer in the United States. 70% of the patients are diagnosed post 65 years old. This study used a large cohort of patients from 2005-2008 100% Medicare Institutional Inpatient and Outpatient data to estimate the cost of different treatments and understand the chemotherapy use for CRC patients. **METHODS:** 203,532 (50.8% Female) CRC patients that were age 65 or older with a mean Charlson Comorbidity Index (CCI) of 2.30 (± 3.26) were identified by ICD-9 code 153.x and/or 154.x. The overall cost for patient groups with different characteristics was compared by using standard t-test, Wilcoxon test or ANOVA. The cost was further modeled in a generalized linear model (GLM) with a log-link and gamma distributed variance functions. **RESULTS:** 38% of CRC patients had surgery, 6.0% conducted radiotherapy and 5.7% received chemotherapy. Patients on chemotherapy were incurred with the highest cost ($41,867), followed by radiotherapy ($13,812) and surgery ($4,964). Patients on 5-FU, Leucovorin, Oxaliplatin and Bevacizumab (5-L-O-B) had the highest estimated cost ($52,158), as its patient population was the most severe (Mean CCI=7.6), followed by 5-FU, Leucovorin and Oxaliplatin (5-L-O) ($39,435, Mean CCI=4.6). The average cost for other chemotherapies was $30,838. Most colon cancer patients (2,761 patients) used the drug combination of 5-L-O and 5-L-O-B (1,450 patients). Oxaliplatin and Bevacizumab were administered at a lower dose when used in combination with other drugs than used alone. About 60% of the patients received these combinations as adjuvant therapy after surgery. **CONCLUSIONS:** This study provided information on the average annual cost of elderly CRC patients by treatment type and disease comobidity. The analysis illustrated the utilization of chemotherapy in CRC treatment: the common drug combinations and its costs, dosing and administration information as well as chemotherapy use after surgery.

PCN38

FIRST-YEAR COSTS FOR THE 19 MOST COMMON CANCER DIAGNOSES IN ONTARIO

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OBJECTIVES: The first year after cancer diagnosis is a period of intensive treatment and high cost. Our objective is to estimate the first year costs for patients initially diagnosed with one of the 19 most common cancers in Ontario between 1997 and 2007. **METHODS:** We selected patients who were diagnosed at 19 years of age or older, with valid ICD-O and histology codes, who survived more than 30 days after diagnosis, and had no second cancer within 90 days of the initial cancer from the Ontario Cancer Registry (N= 412,787). We linked these patients to health care administrative databases, and radiation therapy data from Cancer Care Ontario. We defined the health care resources to be costed and developed suitable costing methodologies. We examined health care resource use and calculated mean costs for each type of cancer in the first year after diagnosis. **RESULTS:** Patients with myeloma and brain cancer incurred the highest mean first-year costs ($71,892 and $65,629, respectively); patients with melanoma, uterine and prostate cancers had the lowest mean costs ($21,050, $29,115 and $29,309 respectively). The most costly resources for all cancer types were hospitalizations (38% of total costs) and physician services (28% of total costs). Surprisingly, chemotherapy and radiation therapy contributed very little to the total (4% and 1%, respectively). Previous research on first-year costs for patients aged 65+ in the US also found that brain and other nervous system cancers had the highest cost of care while melanoma of the skin had the lowest cost; hospitalization was also the costliest resource. **CONCLUSIONS:** The first-year costs of cancer care in Ontario are substantial and vary by tumour site. Hospitalizations and physician services comprise a large portion of the costs for all cancer types. These estimates will improve the quality of future cancer-related economic evaluations and are of value to researchers and policy makers.

PCN39

COSTS AT THE END OF LIFE FOR PATIENTS WITH CASTRATION-RESISTANT PROSTATE CANCER (CRPC)

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OBJECTIVES: Recent research describes decreasing quality of life for patients with CRPC at the end of life, but less is known about accompanying changes in health care costs. This study aimed to examine costs at the end of life for patients with CRPC who died compared to patients alive at the end of the study period. **METHODS:** A retrospective study design used medical and pharmacy claims and lab results (2001-2007) to identify patients with CRPC from a large U.S. managed