

by dermatologists were more likely to receive surgery subsequently ($p = 0.002$). Older age and female gender were associated with a lower likelihood to receive surgery, systemic, or radiation therapy. **CONCLUSIONS:** Sites of metastases and treating physician specialty might influence treatments for patients with metastatic melanoma.

PCN138

GEOGRAPHIC VARIATION AND SOCIO-DEMOGRAPHIC DISPARITY IN THE UTILIZATION OF OXALIPLATIN-CONTAINING CHEMOTHERAPY IN PATIENTS WITH STAGE-III COLON CANCER

Panchal J, Lairson D, Chan W, Du XL

University of Texas Health Science Center Houston, School of Public Health, Houston, TX, USA

OBJECTIVES: To examine geographic variation and socio-demographic disparity in the utilization of chemotherapy in patients with stage-III colon cancer, focusing specifically on Oxaliplatin. **METHODS:** A retrospective cohort of 7654 Medicare patients was identified from the Surveillance, Epidemiology and End Results – Medicare linked database. Descriptive statistics show how Oxaliplatin containing chemotherapy was utilized in various geographical regions, among different age and racial groups. Multiple logistic regression was performed to examine the relationship between receipt of Oxaliplatin-containing chemotherapy and geographic region while adjusting for other socio-demographic and tumor characteristics. The primary outcome of this study was the receipt of Oxaliplatin chemotherapy within three to six months of colon-cancer specific surgery. **RESULTS:** Overall, only 51% of the stage-III patients received adjuvant chemotherapy within 3 to 6 months of colon-cancer specific surgery and it was evident that more patients in big metro and metro regions used chemotherapy than patients in less-urban and rural regions. Younger patients aged 66-70 years were more likely to receive chemotherapy than those of age 80 years and above; similarly, white patients were more likely to receive chemotherapy compared to African-American population. The association between the receipt of Oxaliplatin-containing chemotherapy and geographic regions was not significant in univariate analysis; however, after controlling for the confounding variables, it became statistically significant. Patients in the rural regions were approximately 30% less likely to receive Oxaliplatin chemotherapy than those residing in big metro region ($OR = 0.69, p = 0.033$). **CONCLUSIONS:** Chemotherapy use varies across geographic regions, especially for new chemotherapy drugs like Oxaliplatin which in combination with 5-FU/LV is considered as standard adjuvant chemotherapy for use in patients with resected stage-III patients. Further research is required to examine thoroughly the potential reasons behind this geographic disparity and find the ways to eliminate it in order to provide high-quality cancer care to all patients.

PCN139

BLOOD TRANSFUSION UTILIZATION IN CHEMOTHERAPY-INDUCED ANEMIA—AN ANALYSIS OF HOSPITAL INPATIENT AND OUTPATIENT RECORDS IN THE UNITED STATES

Forslen JB¹, Herrera A¹, Scaife J², Pritti K², Foster T², Boswell E²

Janssen Scientific Affairs, LLC, Horsham, PA, USA, ²Trinity Partners, LLC, Waltham, MA, USA

OBJECTIVES: This retrospective analysis of US hospital inpatient and outpatient electronic records aimed to describe current blood transfusion utilization in a population with chemotherapy-induced anemia (CIA). **METHODS:** The Premier Hospital Database (2006-2010) was used to identify records for cancer patients aged 18 years or older who had received chemotherapy and a diagnosis of anemia (ICD9 codes: 284.x, 285.3, and 285.9). Excluded were those who received renal dialysis or had a diagnosis of chronic kidney disease, myeloid cancer, myelodysplastic syndrome, or anemia due to chronic illnesses. The study population was then categorized into three subgroups based on ICD-9 procedure codes, CPT codes, and billing code descriptions in the database within the same month as or two months after the anemia diagnosis: 1) The Blood Transfusion group had either ICD-9 codes, CPT codes, or a select subset of billing code descriptions specific to blood transfusion; 2) The Other/unknown Transfusion group had only billing code descriptions that appeared to be transfusion-related but were non-specific; and 3) The No Transfusion group had no transfusion-related ICD-9 codes, CPT codes, or billing code descriptions. **RESULTS:** During the 5 years of data, there were 2980-7094 CIA occurrences in a given year. Average age for the CIA population ranged from 60-62 years and 52%-55% were female. During the years observed, the Blood Transfusion group comprised 44-51% of the total CIA study population. When other transfusion codes were considered (Blood Transfusion population plus Other/unknown Transfusion population), this number increased to 56-61% of the total CIA study population. **CONCLUSIONS:** These results from five years of hospital inpatient and outpatient records suggest that there is a large portion of CIA patients that may be receiving blood transfusions. Further research to better understand the characteristics of CIA patients receiving blood transfusions and blood utilization in this population is warranted.

PCN140

MANAGING THE RISK OF EXPOSURE TO LOW-IONIZING RADIATION IN CANADA: A POPULATION MODEL

Zowall H¹, Brewer C², Deutsch A¹

¹McGill University, Montreal, QC, Canada, ²Zowall Consulting, Westmount, QC, Canada

OBJECTIVES: Rapidly increasing use of imaging procedures in Canada and the United States has raised concerns about exposure to low-dose ionizing radiation in the general population. We assessed radiation exposure from medical and non-medical uses. **METHODS:** Recent evidence-based studies linked exposure to low-dose, ionizing radiation with the development of cancer/leukemia. Individuals at risk for repeated radiation exposure (in health care/nuclear industry) are typically monitored and restricted to effective doses of 20-50 mSv per year. In contrast,

radiation exposure in the general population is not monitored. Using the epidemiological databases from Canada and the United States, we are developing an age/sex stratified population model to assess radiation exposure from medical and non-medical uses. We identify the potentially most exposed subpopulations, for which the long-term risks are most relevant. **RESULTS:** We compiled the list of effective doses (mSv) from radiation exposure for common medical and non-medical uses, using National Council on Radiation Protection and Measurement (NCRP) data and other published sources. Excluding naturally occurring radiation, most of radiation comes from medical use as opposed to non-medical use. In medical use, the bulk of exposure is related to CT and nuclear imaging, especially cardiac. Exposure to nuclear medicine examinations among 65+ individuals is 3 times higher than among 30-44 group, fast growing over time, with higher exposure among females than males. Concern is emerging about rapidly increasing doses among pediatric populations. In non-medical use exposure is minor, coming mainly from cigarette smoking, building materials, and commercial air travel. Results are presented by age and sex, and sensitivity analyses on selected variables are reported. **CONCLUSIONS:** Given the rapidly growing radiation exposure, our findings might have important implications for the health of the general population. Strategies to monitor and to manage cumulative exposure, especially in medical use in the general population should be developed.

PCN141

PROJECTING THE POTENTIAL PUBLIC HEALTH IMPACT OF A 9-VALENT HPV VACCINE IN THE UNITED STATES

Pillsbury M¹, Kawai K², Nwankwo C³, Weiss T⁴, Dasbach E⁴, Elbasha EH⁴

¹Atlas Data Systems, Woodbridge, NJ, USA, ²Temple University, Philadelphia, PA, USA,

³University of Medicine & Dentistry of New Jersey, Piscataway, NJ, USA, ⁴Merck & Co, Inc., North Wales, PA, USA

OBJECTIVES: To project the potential public health impact of a 9-valent HPV vaccine in the United States. **METHODS:** A previously published non-linear, deterministic compartmental model of HPV (6, 11, 16, and 18) transmission was extended to include HPV 31, 33, 45, 52, and 58. We calibrated the model to US epidemiological data on cervical cancer, attributing 70% of cervical cancer to HPV 16 and 18, and 20% to HPV 31, 33, 45, 52, and 58. Other inputs were from public data sources and published literature. Because it is currently unavailable, vaccine efficacy against 5 additional HPV types was assumed to be similar to that of the quadrivalent vaccine (HPV4) against HPV 16. We assessed the impact of 9-valent HPV vaccination (HPV9) relative to current US HPV4 recommendations, with routine vaccination for 11-12 year olds and a permanent catch-up program for 13–26 year old females and 13–18 year old males, and coverage of 80% for females and 48% for males, with 50% of vaccinees receiving all doses of the vaccine. **RESULTS:** We project that HPV9 vaccination of males and females will reduce the incidence of cervical cancer by 63% over 100 years, relative to 52% for HPV4. HPV9 vaccination relative to HPV 4 vaccination prevents an additional 872,000 cases of CIN1 (Cervical Intraepithelial Neoplasia), 1,881,000 cases of CIN2/3, and 80,000 cases of cervical cancer in the US population, cumulative over 100 years. **CONCLUSIONS:** Protecting the population against HPV infection with an HPV9 vaccination program relative to an HPV4 vaccination program can have significant public health benefits.

PCN142

ASSOCIATION OF HEALTH-RELATED QUALITY OF LIFE AMONG PATIENTS WITH MULTIPLE MYELOMA WITH INSURANCE COVERAGE

Pashos CL¹, Durie BG², Rifkin RM³, Abonour R⁴, Fonseca R⁵, Gasparetto C⁶, Mehta J⁷, Narang M⁸, Shah JJ⁹, Terebelo HR¹⁰, Thomas S¹¹, Toomey K¹², Swern AS¹³, Harding G¹⁴, Yu R¹⁴, Sullivan KA¹³, Street TK¹³, Khan ZM¹³

¹United BioSource Corporation, Lexington, MA, USA, ²International Myeloma Foundation (IMF)

and Cedars-Sinai Comprehensive Cancer Center, Los Angeles, CA, USA, ³US Oncology, Denver, CO, USA, ⁴Indiana University Simon Cancer Center, Indianapolis, IN, USA, ⁵Mayo Clinic Arizona, Scottsdale, AZ, USA, ⁶Duke University Medical Center, Durham, NC, USA, ⁷Northwestern University, Chicago, IL, USA, ⁸Maryland Hematology Oncology, Westminster, MD, USA, ⁹MD Anderson Cancer Center, Houston, TX, USA, ¹⁰Newland Medical Associates, Novi, MI, USA, ¹¹Illinois Cancer Care, Peoria, IL, USA, ¹²Steeplechase Cancer Center, Somerville, NJ, USA, ¹³Celgene Corporation, Summit, NJ, USA, ¹⁴United BioSource Corporation, Bethesda, MD, USA

OBJECTIVES: This analysis evaluated whether health-related quality of life (HRQOL) of patients newly diagnosed with active, symptomatic multiple myeloma (MM) in the United States varies by their insurance coverage as they initiate treatment. **METHODS:** Baseline data were collected in Connect[®] MM, a prospective observational registry initiated in 2009. Clinicians provided data on patient demographics and clinical characteristics. Patients reported HRQOL in the clinic at enrollment within two months of diagnosis, by completing the Brief Pain Inventory (BPI), EQ-5D, and Functional Assessment of Cancer Therapy-Multiple Myeloma (FACT-MM). Patients were characterized by source of coverage: Medicare, Medicaid, Commercial-HMO/PPO, Other Commercial. The Medicare cohort included those with supplemental coverage; the Medicaid cohort included dual Medicare-Medicaid beneficiaries. Mean BPI, EQ-5D and FACT-MM scores were analyzed by insurance coverage. Statistical significance was ascertained by ANOVA (SAS 9.1). **RESULTS:** HRQOL data were reported by 1074 patients from 228 centers. Patients were predominantly male (57%) and white (83%) with mean age 67 (standard deviation 11) years. BPI data (on a scale of 0 [no pain] to 10 [worst pain]) indicate that average pain was less among HMO/PPO patients and worst among Medicaid patients ($p = 0.0119$). HMO/PPO patients fared better in the EQ-5D domain of mobility than other cohorts ($p = 0.0085$), but no other statistically significant differences were observed on EQ-5D scores (on a scale of 1 [no problem] to 2 [some problems]) to 3 [incapacity]. FACT-G results indicate that Medicaid insurance is associated with worse baseline HRQOL compared to other groups ($p = 0.0229$). **CONCLUSIONS:** Results from the Connect[®] MM Registry suggest that certain HRQOL domains at treatment initiation may be worse among Medicaid patients and better among HMO/