the DDD results indicated small declines in medication adherence for cancer survivors relative to beneficiaries without a cancer diagnosis in all three drug classes (3 to 5 percentage points), whereas longer term cancer survivors had much better adherence to all three drug classes (10 to 12 percentage points higher) relative to beneficiaries with cancer who had a poor prognosis. **CONCLUSIONS:** A diagnosis of cancer among Medicare beneficiaries with diabetes significantly reduces adherence with evidence-based medications recommended in diabetes treatment guidelines.

PCN166

REGIONAL VARIATIONS IN HEALTH CARE EXPENDITURES AMONG MEDICARE BENEFICIARIES WITH COLORECTAL CANCER

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OBJECTIVES: To examine total health care-expenditures in the initial phase-of-care among Medicare beneficiaries with colorectal cancer (CRC) from a rural setting, and compare them with "national" estimates. **METHODS:** A population-based retrospective cohort-study was conducted on fee-for-service Medicare beneficiaries aged ≥66 years diagnosed with CRC between 2003-2006 identified from the West Virginia Cancer Registry (WVCR)-Medicare linked database (n=2,114). Similarly, a comparative cohort was identified from Surveillance, Epidemiology, and End Results (SEER)-Medicare (n=38,172). Medicare claim payment-amounts were used to calculate total average health care, inpatient, outpatient, physician-visits, and other health care-utilization expenditures. To control for geographic variation in cost-of-living across the different counties, health care-expenditures were expressed using county-specific cost-of-living indices (COLI). **RESULTS:** After COLI-adjustment, the average total health care expenditures in the initial phase-of-CRC care for those from the WVCR-Medicare linked-database were estimated at $46,644. The average total health care and inpatient expenditures in initial phase-of-care were found to be lower (5% and 4%, respectively) for those from WVCR-Medicare as compared to those from SEER-Medicare. However, they had a higher co-morbidity burden, and significantly higher (45%) outpatient expenditures as compared to their "national" counterparts. The outpatient expenditures were higher specifically for beneficiaries with chronic-conditions, which have a higher prevalence in the WVCR-Medicare group as compared to those from SEER-Medicare. Further, the differences in total health care-expenditures between beneficiaries from WVCR-Medicare and SEER-Medicare reduced from $2,282 to $898, and remained no longer significant in a multivariable setting after controlling for receipt of minimally-appropriate CRC treatment (MACT) and presence of chronic-conditions. **CONCLUSIONS:** This study highlights the importance of providing preventive health care services and better co-management of CRC and chronic-conditions, to control the higher outpatient expenditures among beneficiaries with CRC from a rural population. This study also showed that the differences in total health care-expenditures between rural and "national" population are likely to be partially explained by the receipt of MACT and comorbidity-burden.

PCN167

TREATMENT AND SURVIVAL PATTERNS AMONG ELDERLY MEDICARE BENEFICIARIES WITH COLORECTAL CANCER: A COMPARATIVE ANALYSIS BETWEEN A RURAL STATE CANCER REGISTRY AND NATIONAL DATA

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OBJECTIVES: To examine colorectal cancer (CRC) treatment patterns in the initial phase-of-care, the extent of receipt of minimally-appropriate CRC-treatment (MACT), the associated survival in a three-year period following a CRC-diagnosis in Medicare beneficiaries diagnosed with CRC from a rural setting, and to compare these findings with "national" estimates. **METHODS:** A population-based retrospective cohort-study was conducted with data from fee-for-service Medicare beneficiaries aged ≥66 years diagnosed with CRC between 2003-2006 identified from the West Virginia Cancer Registry (WVCR)-Medicare linked database (n=2,119). A comparative "national" cohort was identified from Surveillance, Epidemiology, and End Results (SEER)-Medicare (n=38,168). CRC-treatment received was ascertained from beneficiaries' Medicare claims by following them for 12-months from their CRC-diagnosis date or until death. Receipt of MACT was defined based on National Cancer Institute CRC-treatment guidelines. All-cause and CRC-specific mortality in the 36-month period following CRC-diagnosis were examined after accounting for selection bias using inverse probability treatment weights. **RESULTS:** Although a higher proportion of beneficiaries from WVCR-Medicare were diagnosed in the earlier stages of CRC (when it can still be treated effectively) as compared to their SEER-Medicare counterparts, they had poorer CRC-survivorship with adjusted hazards ratio (AHR)=1.26;95%CI=[1.20,1.32]. This poorer survivorship may be due to a lower-likelihood (adjusted odds ratios (AOR)=0.85;95%CI=[0.76,0.96]) of beneficiaries from WVCR-Medicare of receiving MACT as compared to their "national" counterparts. Differences in usage of CRC-surgery, chemotherapy and radiation were also observed in the two populations. Those from WVCR-Medicare were less likely to receive any type of CRC-surgery with AOR=0.82;95%CI=[0.73,0.93]. **CONC LUSIONS:** This study highlights the need for an increased emphasis on adoption and adherence to accepted surgical and adjuvant CRC-treatment guidelines, and improving access to CRC-care for those from rural-settings. Further research needs to be conducted to determine if similar rural-urban differences in receipt of MACT exist in the elderly in other rural-areas of the nation.

PCN168

FIRST TWO YEARS OF HEALTH SYSTEM RESOURCES AND COSTS FOLLOWING A STAGE DEFINED BREAST CANCER DIAGNOSIS: A POPULATION BASED APPROACH

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OBJECTIVES: To determine the publicly funded health care costs associated with breast cancer (BC) by stage of disease in the first two years following diagnosis. **METHODS:** Incident cases of female invasive BC (ICD-9 174.x) diagnosed between 2005 and 2009 were extracted from the provincial cancer registry and linked by their encrypted health card number to administrative datasets. The type and usage of publicly funded health care services used were stratified by disease stage over the first two years following diagnosis. BC cases were matched to controls (women without cancer). Overall average costs (2008$CAN) and costs per resource per BC case were compared to a control group. The attributable cost for the two-year time horizon was determined. **RESULTS:** There were 39,655 BC cases and 190,520 controls in our cohort study. The average age was 61.1 years old and 60.9 years old, respectively. Of the BC cases with staging information, the majority of cases were Stage I (34.4%) and Stage II (31.8%). Eight percent of the entire cohort died within the first two years of diagnosis. The overall mean cost per BC case from a public payer perspective in the first two years following diagnosis was $41,686 based on the study cohort of 39,655 BC cases. The mean cost increased by stage: Stage I ($29,938), Stage II ($46,893), Stage III ($65,369) and IV ($66,627). When compared to controls, the net cost for BC cases was $31,732. Cost drivers for the entire cohort were cancer clinic visits, physician billing and inpatient hospitalizations. **CONCLUSIONS:** Costs increased by stage of disease. Cost drivers were identified and a net cost was calculcated. This data will allow for planning and decision making around limited health care resources.

PCN169

TREATMENT PATTERNS AMONG PATIENTS WITH BREAST CANCER: DOES INSURANCE STATUS MATTER?

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OBJECTIVES: Mixed results have been reported on the associations between insurance coverage and cancer treatment, probably due to different population involved. This study was conducted to investigate treatment patterns by insurance status in patients with breast cancer using a large national database. **METHODS:** The National Cancer Database (NCDB) was used to examine the initial treatment after diagnosis. Patients were classified into the early stage group (stage 0-2) and the advanced stage group (stage 3-4). Logistic regressions were used to estimate the Odds ratios (ORs, with confidence intervals [95% CIs]) of receiving surgery, hormone therapy, and chemotherapy by insurance status. **RESULTS:** A total of 2,317,286 patients with breast cancer were retrieved from the database during the study period (2000-2011). Patients with private insurance, Medicare, Medicaid or no insurance accounted for 53.8%, 35.5%, 4.8%, and 2.2% respectively. Compared with the uninsured, patients with private insurance, Medicare, or Medicaid were more likely to receive surgery in both early stage group (OR 2.97, [2.83-3.11], OR 2.00, [1.90-2.09], OR 1.58, [1.49-1.67] respectively) and advanced stage group (OR 2.89, [2.78-3.01], OR 1.45, [1.39-1.51], OR 1.60, [1.53-1.68] respectively). In the early stage group, patients with private insurance and Medicare were more likely to undergo partial mastectomy than the uninsured (OR 1.40, [1.37-1.43], OR 1.36, [1.33-1.39]), while patients with Medicaid had similar utilization of partial mastectomy as the uninsured (OR 1.02, [1.0-1.05]). In the advanced stage group, patients with private insurance, Medicare, or Medicaid were more likely to receive hormone therapy (OR 1.54, [1.48-1.60], OR 1.68, [1.61-1.74], OR 1.20, [1.15-1.26]) than the uninsured. Patients with private insurance and Medicaid were also more likely to receive chemotherapy (OR 1.67, [1.60-1.74], OR 1.39, [1.32-1.46]), while patients with Medicare were less likely to receive chemotherapy (OR 0.36, [0.34- 0.37]) than the uninsured. **CONCLUSIONS:** Insurance status is associated with different treatment patterns. It may have an impact on clinical management of patients with breast cancer.

PCN171

EFFICACY, SAFETY AND COST-EFFECTIVENESS OF TRASTUZUMAB IN METASTATIC GASTRIC CANCER TREATMENT IN CHINA

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OBJECTIVES: The study aims to systematically review the efficacy, safety and cost-effectiveness of trastuzumab in metastatic gastric cancer treatment in China. **METHODS:** A systematic review method was performed. We collected both national and international clinical, cost-effectiveness and disease burden studies mainly from database of Pubmed, MEDLINE, CNKI, etc. And health insurance status of trastuzumab in China was also collected. **RESULTS:** With inclusion and exclusion criteria, there were 8 clinical studies, 2 cost-effectiveness study and 19 disease burden studies finally recruited for the analysis. Clinical results showed that trastuzumab in combination with chemotherapy were effective and well tolerated in target population. In ToGA, the only phase III randomized controlled trial, compared with chemotherapy alone, trastuzumab plus chemotherapy substantially improved overall survival (13.8 vs. 11.1 months) and progression-free survival (6.7 vs. 5.5 months). One cost effectiveness study revealed that from the perspective of UK NHS, ICER of trastuzumab plus chemotherapy among IHC3+ or IHC2+/FISH+ patients was 66,982-71,637 pounds per QALY, compared with chemotherapy alone. Gastric cancer had brought a heavy disease burden to China. The DALY lost from gastric cancer was 1.48-5.03 per thousand patients and average hospitalization expenditure per patient was rising. By the first half year of 2013, there were more than 6 provinces and cities in China providing public reimbursement for trastuzumab, but only 2 for gastric cancer indication. **CONCLUSIONS:** Trastuzumab with chemotherapy can be considered as a new standard option for HER2-positive metastatic gastric cancer patients. However, more evidences on efficacy, safety and cost effectiveness of trastuzumab are still needed to support local public decision making on health insurance benefits update in China.