medical record abstraction. For this analysis, we included 2384 women with an incident diagnosis of stage 1-3 breast cancer with no history of chest radiation. We excluded cases of inflammatory or multifocal breast cancer. **Results:** We found rates of TM as the initial surgical procedure varied by study site ($p<0.0001$), age at diagnosis ($p=0.0005$), and by use of preoperative MRI ($p<0.0001$). TM frequency ranged from 10.4% - 21.0% across the four institutions. Increased TM use was associated with increasing pre-operatively estimated tumor size ($p<0.0001$), ER/PR negative status ($p=0.0007$), high grade ($p<0.0001$) and lobular (vs. ductal) carcinoma ($p=0.001$). We did not find TM increasing over time. When we limited our analysis to the 1712 cases with tumor size <20 mm, we continued to observe variability in initial TM frequency across institutions from 5.2% to 14.2% ($p<0.0001$). **Discussion:** Our TM rates were low compared to those reported in previous studies. Variation in TM rates was associated with several patient, tumor, and facility characteristics and may reflect differences in the patient population presenting with breast cancer, or in patients' treatment preferences. This variation persisted even when limited to women with small tumors. While TM rates were relatively low, the two-fold variation by study site suggests inconsistent surgical practices across facilities despite several studies showing BCT and mastectomy provide equal survival benefit.

Keywords: Breast Cancer; Mastectomy; Cancer

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CA2-05:

Continuous Monitoring and Timely Intervention are Needed to Improve Adherence to Adjuvant Hormonal Therapy Among Breast Cancer Patients

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Background/Aims: There are approximately 150,000 new hormone-sensitive breast cancer cases in the U.S. each year. Numerous studies have shown that adjuvant hormonal therapy (AHT) dramatically reduces breast cancer recurrence and mortality. Daily treatment for 5 years is the recommended therapy among ER+ women. Yet, reports of under-utilization are alarming, ranging from 30% to more than 50%. **Methods:** We examined under-utilization of AHT among members of Kaiser Permanente Southern California (KPSC), a nonprofit prepaid managed care organization dedicated to providing evidence-based medicine. KPSC serves 3.3 million socioeconomically diverse members broadly representative of the racial/ethnic groups living in southern California. Subjects were members of the health plan for one or more years and had comprehensive medical and pharmacy benefits. We identified 10,827 women diagnosed with breast cancer between 2000 and 2007 from the health plan's SEER-affiliated cancer registry who were eligible for AHT. We used automated pharmacy prescription records to describe uptake and utilization of AHT (primarily tamoxifen (Tam) and aromatase inhibitors (AI)) over the 5 years of recommended therapy. **Results:** In this insured population, we found 14% of eligible breast cancer survivors did not begin AHT (1516/10,827). Of those who started AHT, over 30% had sub-optimal adherence defined as a medication possession ratio $<80\%$. Discontinuation of AHT, defined as greater than 90 days without medication, began in year 1 (7%) and reached 22% and 25% by the end of years 4 and 5, respectively. **Discussion:** Monitoring and intervention for improving adherence to AHT needs to begin by one year after breast cancer diagnosis and continue across the 5 years of recommended therapy in order to ensure women receive optimal benefit from this life-saving treatment.

Keywords: Adjuvant Hormonal Therapy; Breast Cancer; Cancer

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CB2-04:

Use of the Oncology Beacon Module and VDW Data to Identify Variations in Treatment for Advanced Colorectal Cancer

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Background/Aims: Variation in utilization and costs of chemotherapy agents for colorectal cancer (CRC) patients not captured by SEER-Medicare or clinical trials has not been well studied. Little is known about how chemotherapy is administered to patients with advanced disease who are treated in community practices, including such key factors as treatment intent (curative vs. palliative), dosing, treatment modifications, and discontinuations, and whether patients receive new lines of chemotherapy after failing to respond to prior regimens. **Aims:** Using the wealth of cancer treatment data newly available as a result of recent VDW infrastructure development efforts associated with infusion and chemotherapy utilization, we characterize the number of unique chemotherapy protocols and regimens administered to patients with advanced CRC. **Methods:** Patients aged >21 years with stage III or IV CRC, diagnosed between 2007-2010 at three CRN sites were included in the analysis. Using VDW files including tumor registries and data files derived from Kaiser Permanente's HealthConnect Oncology Beacon® module, patients were followed from diagnosis date through 2010 (or death or disenrollment). We identified and tabulated treatment information including treatment intent, treatment protocols, oral and infused treatment regimens, early cessation and/or dose modification of therapy due to toxicities, and patient characteristics. We also estimate the variation in costs associated with the treatment regimens identified. **Results:** Preliminary findings suggest that more than 40% of advanced CRC patients receiving chemotherapy were less than 65 years old. For the majority of cases, treatment intent was noted as adjuvant or neo-adjuvant. Chemotherapy treatments were distributed across 14 standard adult oncology protocols. The most common first line treatment was Oxaliplatin + Fluorouracil + Leucovorin. However, a large number of regimens included the monoclonal antibody, bevacizumab. A number of cases were noted to have treatment plan changes and modifications. Treatment costs were positively correlated to the use of regimens that included bevacizumab. **Discussion:** Newly available VDW chemotherapy infusion data derived from the EpicCare and Kaiser Permanente's HealthConnect Oncology Beacon® files (along with other infusion data sources) is a rich cancer treatment data source that researchers can use to conduct clinical- and policy-relevant comparative effectiveness research studies in patients with advanced colorectal cancer.

Keywords: Chemotherapy; Colorectal Cancer; Cancer

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CB2-05:

Chemotherapy Treatment Patterns Among Advanced Colon Cancer Patients

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Background/Aims: Chemotherapy for advanced (stage III/IV) colon cancer has changed with new drugs and combination regimens. Treatment guidelines for advanced disease are broad thus allowing for treatment variation. We evaluated cases enrolled at 7 HMO Research Network sites through the Comparative Effectiveness in Genomic and Personalized Medicine for Colon Cancer (CERGEN) study to describe characteristics and patterns of chemotherapy treatment by geographic site and patient characteristics. **Methods:** Metastatic colon cancer cases diagnosed between 1/1/04 and 12/31/09 were identified. Information on relevant patient characteristics including comorbidities, treatment, KRAS test status, and utilization of acute and palliative care was collected electronically. Chart review was conducted to supplement and/or verify the electronic data. Tumor specimens were obtained for KRAS testing on cases not tested as part of standard care. Analysis included descriptive statistics, incidence rates, and Cox proportional