

parametric and non-parametric statistics. **Results:** Preliminary finding suggest, that while slightly more than half of our study population received chemotherapy, the proportions varied by stage and age, with younger patients (<65) and those diagnosed at a lower stage (IIIb) were significantly more likely to receive treatment. The most common first line treatment was Carboplatin and paclitaxel. However, with the introduction of taxenes, monoclonal antibodies, antimetabolites, and targeted agents in the later years of the study period, the distribution of first line therapy changed significantly overtime. **Conclusions:** The findings from this analysis could have significant clinical and policy relevance given that NSCLC is the number one cause of cancer death. Future analyses will compare the variation in treatment patterns overtime for CRN enrollees as compared to SEER-Medicare, NCCN data and ASCO guidelines.

**Keywords:** Lung cancer, Chemotherapy, Patterns of care  
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C-B2-02:

### **Epidemiology of Tamoxifen and Thromboembolism**

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**Background/Aims:** Tamoxifen is a widely prescribed endocrine therapy for prevention and treatment of breast cancer in pre- and post-menopausal women and is commonly recommended for five years duration. While most people tolerate tamoxifen reasonably well, thromboembolic events such as deep vein thrombosis, pulmonary embolism, myocardial infarction or cerebrovascular accident can be serious complications. Study aims include evaluation of epidemiology of tamoxifen-related thromboembolic event in a large community setting, determination of rate and temporal distribution of thromboembolic events, description of patient clinical characteristics, analysis of time from tamoxifen initiation to first thromboembolic event, description of incidence of events among subgroups of patients related to antiplatelet, anticoagulant and statin medication use. **Methods:** Retrospective electronic extraction of tamoxifen-use patient data from Marshfield Clinic/ St. Joseph's Cancer Registry and the Marshfield Clinic Electronic Medical Record (EMR) from 1/1/1992 - 6/31/2009, with manual data validation. Medication use was identified by MedsManager and by Freepharm<sup>TM</sup>. Thromboembolic events and comorbidity diagnoses were identified by ICD9 codes, and cancer diagnosis by ICD9 code or inclusion in the Registry. Analysis included descriptive statistics, Kaplan-Meier estimates of event-free survival over time and estimates of event rates and hazard ratios. Risk factors were assessed in univariate and multivariate analyses. **Results:** Primary analysis was limited to 3283 women with breast cancer. Mean age at first tamoxifen use was 62.1 years (range 22 - 97). Tamoxifen adherence rates (censored for death or 18 months after last visit) showed 88.6% of women on tamoxifen at year one, 78.1% at year 2, 67.4% at year 3 and 56.9% at year 4. Thromboembolic events (venous and arterial) occurred in 5% of women under age 45, 7% of women age 45-54, 14% in women age 55-64, 19% in women age 65-74 and 27% in women older than 75 years. Thromboembolism continued to occur over time, unlike other studies that reported clustering of thromboembolism in the first year. **Conclusions:** Tamoxifen use should be recommended with caution, and patients monitored closely over the entire period of tamoxifen use for development or prevention of thromboembolic events. Further investigation into tamoxifen discontinuation rates is warranted.

**Keywords:** Tamoxifen, Thromboembolism, Breast cancer  
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PS2-29:

### **KRAS Testing in Metastatic Colorectal Cancer: The CERGEN-C Comparative Effectiveness Study**

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Genetic testing to inform health professionals and patients of disease risk, diagnostic, prognostic, or treatment information such as KRAS mutation testing to determine colorectal cancer (CRC) treatment is an evolving health care approach. KRAS, a pharmacogenomic marker normally expressed in wild type form, confers a lack of response to epidermal growth factor receptor (EGFR) inhibitor treatment in metastatic CRC when mutated. Mutations occur in 30-50% of CRC cases and a gap in knowledge exists regarding the impact of KRAS testing on treatment outcomes in metastatic CRC. The CERGEN-C (Comparative Effectiveness Research in Genomics & Personalized Medicine for Colorectal Cancer) study is a collaboration of eight Cancer Research Network members and four academic partners evaluating connections between evidence synthesis and evidence generation in cancer-related genomics and personalized medicine. We are conducting a comparative effectiveness study to evaluate overall survival in patients who received KRAS testing during routine medical care compared to those who did not before and after recommendations for KRAS testing were published in mid-2008. We identified 800 members from seven integrated health care organizations diagnosed with stage III (n=200) or IV (n=600) colorectal cancer from 1/1/05-7/31/2010. To date, 293 charts have been reviewed, 224 (76%) from pre-KRAS testing recommendations (pre-) and 69 (24%) from post-KRAS testing (post-) recommendations. All cases were Stage IV and the majority of cases were Caucasian, 133 (61%) pre and 51 (76%) post. A family history of any cancer was identified in 97 (43%) pre- and 29 (42%) post- cases and KRAS testing was performed in 60/293 (20%) of cases reviewed to date, 41 (18%) pre- and 19(26%) post-, respectively. Wild type KRAS was found in 28 tested cases, 21 pre- and 7 post- cases. Of the identified wild type cases, 17 pre- and 6 post- were treated with EGFR inhibitors. Overall, EGFR inhibitors were administered in 48 cases, 42 (18%) pre- and 6 (19%) post-. EGFR inhibitor treatment began with 3rd line therapy in those tested for KRAS compared to first line in those not tested. The most common chemotherapy regimen including an EGFR inhibitor was irinotecan and cetuximab, n=25 (52%).

**Keywords:** KRAS, Metastatic colorectal cancer, CERGEN  
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### **Cardiovascular Disease**

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#### **Primary Non-Adherence to Statin Therapy in an Integrated Delivery System: Patients' Perceptions**

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**Background/Aims:** Statin medications are commonly prescribed to lower cholesterol and the risk for cardiovascular events. Few published studies have, however, explored factors that may contribute to primary non-adherence with statins. We aimed to determine patients' reasons for non-adherence with newly prescribed statin medication. **Methods:** We identified Kaiser Permanente (KP) Southern California members aged ≥24 years with a new order for a statin prescription between May 10 and June 5, 2010 not redeemed within five weeks of the order date and with 12 months of continuous membership prior to the statin order. New orders were defined as the patient having no statin prescriptions in the previous 12 months. Among 1,157 eligible patients indicating English as their preferred language, we randomly selected patients and conducted 98 semi-structured telephone interviews about factors and perceptions that contribute to non-adherence. **Results:** At six weeks post-index prescription date, 73% of respondents (74/98) reported not filling their new statin prescription while 23% (21/98) picked it up from a non-KP pharmacy. The three most commonly cited reasons for primary non-adherence were general concerns about taking the medication (63%; 46/73), a decision to try lifestyle modifications instead of taking the medication (63%; 46/73), and fear of side effects (53%; 39/73). One-third of respondents (33%; 24/72) reported taking over-the-counter products to lower their cholesterol. The majority of respondents agreed with the importance of the medication (63%; 45/73) but worried that the prescription would cause more harm than good (62%; 46/73). Fewer respondents (22%; 16/74) were burdened by the out-of-pocket expenses for the medication. **Conclusions:** Although most respondents were convinced of the importance of their newly prescribed statin medication, they expressed