PS2-29:

Factors Influencing Response to a 2012 FIT Kit Outreach Effort in Kaiser Permanente Northern California

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Background/Aims: To learn about factors that influence decision to take up FIT. **Methods:** Self-administered survey of 3 groups of White, Black, and Latino KPNC members aged 52-75 who were mailed FIT kits in 2010, 2011, and 2012: “Compliers” (CMs) – did FIT all 3 years; “Converts” (CVs) - did FIT in 2012 but not 2010-2011; “Non-Compliers” (NCs) - no FITs 2010-12. **Results:** Preliminary based on 896 respondents (596 CMs, 300 CVs, and 114 NCs). All comparisons reported are statistically significant. 89% CMs, 80% CVs, and 58% NCs: think it's very important to their KP medical team that they get CRC screening and 91% CMs, 75% CVs, and 51% NCs themselves think it's very important. This was despite perceived risk of polyps (64%) or CRC (71%) being low. Most frequently indicated reasons for completing FIT (CM+CV) were wanting to make sure I am OK, FIT will help me protect my health, my doctor really wanted me to, FIT more convenient than other CRC screening methods, and spouse/partner wanted me to. Guilt about being sent so many kits was a factor for 43% of CVs. Blacks and Latinos were more likely than Whites to cite pressure from their kids. Almost no one indicated urging from a minister or employer. Many (32% CMs, 50% CVs) used own glove to get their sample. Among NCs, reasons for not doing the FIT were feeling uncomfortable/disgust about the test (e.g., reaching into toilet, handling stool, messiness), concern about mailing the sample, and low CRC risk. CRC “fatalism” was much lower down in the list, with no significant difference by race. 21% of NCs said nothing would make them do the FIT and 17% had no interest in CRC screening. Of those open to CRC screening, 25% want their PCP to tell them why they need it. **Conclusions:** To improve participation in FIT and CRC screening, it may be helpful to involve churches; send multiple kits; have more PCP-patient discussion about CRC screening; and modify FIT kits (e.g., add gloves) to reduce anxiety about exposure to germs and mess.

Keywords: Colorectal cancer screening; Race-ethnic differences

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PS2-32:

Disparities in Oral Capecitabine Use: A Chart Review of Older Patients Treated in the Community

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Background/Aims: Convenient for its oral route of administration, capecitabine is increasingly used in the older population with colorectal and other solid tumors. Since renal impairment increases with age, we designed a pilot study to assess adherence to standard dose reductions for renal insufficiency and dosing recommendations for older patients. We sought to describe patterns of capecitabine use in older patients and factors that influence dosing; specifically age and renal insufficiency. **Methods:** Tumor registries of 8 community-based outpatient cancer clinics were reviewed to identify patients age 65 and older treated for breast, colon, esophageal, pancreas or stomach cancers from 01/01/2001-12/31/2012. Of the 1403 patients identified, 53 received capecitabine. A retrospective electronic medical record review was conducted to collect capecitabine dose and demographic variables, vital signs, adverse events, hospitalizations, and clinical and laboratory data. **Results:** Of the 53 patients who received capecitabine, 21% received a dose appropriate for documented age and renal function. Most patients received doses lower than recommended and, on average, were under-dosed by 25%. Univariate analysis showed women were under-dosed more frequently than men, 85% vs. 55%. Multivariate analysis showed lower than recommended capecitabine dosing for patients with a diagnosis other than colorectal cancer -481 (95%CI -807,-154; $P = 0.01$) and Stage II and III disease -331 (95%CI -646,-16; $P = 0.05$). **Conclusions:** This pilot study suggests that a disparity exists in the dosing of capecitabine in older patients and both men and women received empiric doses of capecitabine below those recommended for renal insufficiency or age. This

may be of particular importance in the adjuvant setting, where under-dosing may compromise outcome. Our findings highlight the need for a more thorough understanding of how chemotherapeutic agents are prescribed for older patients with cancer.

Keywords: Chemotherapy; Dosing

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PS2-33:

Incidence and Treatment of Ductal Carcinoma in Situ in Kaiser Permanente, 2000-2010

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Background/Aims: Ductal carcinoma in situ (DCIS) makes up approximately 25% of all breast cancer diagnoses and is considered to be a precursor to invasive cancer. Most DCIS diagnoses will not progress to invasive cancer, but reliable prognostic and predictive markers to guide treatment have not been established. Considerable debate exists about how to best treat DCIS, and many have expressed concern that DCIS is over-diagnosed and over-treated. This study examined patterns of DCIS incidence and treatment across six regions of Kaiser Permanente (KP). **Methods:** Women aged ≥ 18 years of age diagnosed with DCIS between 2000 and 2010 were identified from tumor registries at each region using distributed code. Annual age-adjusted incidence rates of DCIS were estimated overall and by region and were standardized to the 2000 US population. The annual incidence of DCIS was also estimated for women aged ≥ 45 years and stratified on hormone replacement therapy status at DCIS diagnosis. Demographic characteristics and variation in first course of therapy were compared. **Results:** Across six KP regions, overall age-adjusted incidence was 35.2/100,000 in 2000, increased to a high of 47.2/100,000 in 2007, and then decreased to 42.6/100,000 in 2010. Age-adjusted incidence rates for women on estrogen plus progestin hormone therapy prior to diagnosis were higher than for women on estrogen only or no hormone therapy. The most common first course therapy was breast conserving surgery plus radiation (38%); however, we observed different treatment patterns across regions. These patterns will be explored further in additional analyses that will include examining variation in treatment patterns by age, year of diagnosis, and histopathologic characteristics such as hormone receptor status and tumor grade. **Conclusions:** Although age-adjusted incidence rates from six KP regions were consistent over time, we observed differences in treatment patterns. Differences in patient mix, tumor characteristics, patient, or physician preferences may have contributed to the variation in treatment patterns. These results may be of clinical use in determining factors associated with DCIS diagnosis and in understanding and evaluating regional treatment differences.

Keywords: Ductal carcinoma in situ; Breast cancer treatment

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PS2-34:

Disparities in Head and Neck Cancer Patient Survival Relative to Race and Gender

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Background/Aims: Head and neck cancers account for approximately 3% of all cancers in the United States. The majority of these cancer types are squamous cell carcinoma (SCC), but also include salivary malignancies and others. These cancers are nearly twice as common among men as they are among women. Head and neck cancers are also diagnosed more often among people over age 50 years. Over-all disease specific survival rates are around 50%. There have been previous studies that demonstrate racial and gender

disparities in the patterns of treatment and survival, but these studies are performed in academic tertiary centers with populations comprised mainly of referral patients with limited follow up. No studies have been performed within vertically integrated health systems. **Methods:** The Henry Ford Health System's Virtual Data Warehouse was queried to obtain data on head and neck cancer patients diagnosed between 1990 and 2013. Search criteria included all tumors of the upper aerodigestive tract including SCC, salivary gland malignancies and also endocrine tumors. Mortality data was obtained from SEER and Michigan State mortality data. Follow up was 20 years. Both HMO and non-HMO patients were included within the study. Statistical analysis was performed using chi-squared test. **Results:** 1364 thyroid cancers, 225 salivary gland cancers and 1376 aerodigestive SCCs were found. Statistically significant survival differences were found with regard to race and gender in several tumor types. For thyroid malignancies, females and Non-African Americans had a statistically significant improved survival ($P = 0.0073$ and $P < .0001$). For salivary gland malignancies, females and African Americans had a statistically significant improved survival ($P = 0.0384$ and $P = 0.0013$). For aerodigestive SCCs African Americans had a worse survival but there were no statistical differences by gender ($P < .0001$ and $P = 0.6984$). **Conclusions:** Disparities in head and neck cancer outcomes exist relative to race and gender within an integrated health system. It is unclear why African Americans with salivary malignancies have a survival advantage but worse survival in other tumor types. Further study and analysis is required to control for other factors such as socioeconomic status, education, smoking/alcohol use, comorbidities and treatment modality to answer these questions.

Keywords: Head and neck cancer; Squamous cell cancer

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PS2-35:

Strategies Used by Rectal Cancer Survivors to Improve Bowel Function Other than Diet, Exercise, or Dietary Supplements

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Background/Aims: Rectal cancer (RC) surgery includes a colostomy (or ileostomy) or, more frequently, anastomosis of the rectum. Both surgery types may create long-term after-effects. We examined differences reported between survivors with ostomies (O) versus anastomoses (A) regarding bowel function and self-care. This analysis highlights patient-reported changes in daily routines that helped their bowel function, as revealed by responses to a question about post-surgical changes other than diet, exercise, or use of supplements "(such as timing of eating, number of meals, or other changes to your daily routines) that have helped with your bowel function?"

Methods: In 2010-2011, we mailed questionnaires to 1,063 long-term rectal cancer survivors (= 5 year's post-diagnosis) from two Kaiser Permanente (KP) Regions, Northern California (KPNC) and Northwest (KPNW), who had undergone a major intra-abdominal operation as part of their cancer treatment. Potential participants (KP members age 18 years or older with tissue-verified RC diagnoses) were identified through an electronic search of each site's computerized tumor registry. The overall response rate was 60.5% (577 respondents/953 eligible patients). **Results:** Survivorship ranged from 5 to 25 years. Mean age at time of survey was 72 years for anastomoses and 74 years for ostomies ($P < .03$). About 56% of patients with anastomoses were male compared to 66% of ostomates ($P < .03$). The most frequently mentioned strategies to help bowel function for both surgery types were: smaller meals (O = 26%, A = 33%; $n = 13/30$), regular time of meals (O = 26%, A = 9%; $n = 13/8$), and not eating dinner too late (O = 8%, A = 9%; $n = 4/8$). Patients with anastomoses mentioned the following additional strategies: grazing or multiple small meals/snacks (10%, $n = 9$), and not eating before activity (4%, $n = 4$). The most frequent bowel symptoms helped by these strategies were: predictability (52%, $n = 73$), gas (34%, $n = 48$), constipation (31%, $n = 43$), diarrhea (26%, $n = 37$), and bloating (23%, $n = 32$). **Conclusions:** Minimal differences were observed between ostomy/anastomosis survivors in bowel self-care strategies beyond diet, exercise, or use of supplements. Clinicians caring for RC survivors should be aware of these bowel self-management strategies both to offer as potential self-care practices and to understand whether these activities pose any risks to specific

patients, given their comorbidity burdens and other health practices.

Keywords: Rectal cancer; Bowel function

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PS2-36:

Incremental Medical Care Costs of Prostate Cancer for Medicare Beneficiaries

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Background/Aims: We estimated incremental monthly medical costs of prostate cancer (PC)—differences in monthly standardized costs between PC cases age = 65 and age-gender-health plan matched cancer-free controls—for SEER-Medicare and HMO Medicare beneficiaries across four 12-month phases of care—Pre-diagnosis, Treatment, Survivorship, End-of-Life—to understand whether type of health care arrangement—FFS indemnity vs. HMO capitation—was associated with differences in PC costs. **Methods:** Cases were SEER-Medicare and HMO patients aged = 65 years with PC (per tumor registry). Cancer-free controls were aged male Medicare indemnity beneficiaries and aged male HMO members who had no tumor registry evidence of any cancer prior to 2009. SEER-Medicare controls were a 5% random sample of aged Medicare beneficiaries. HMO controls were frequency matched to cancer cases on a 5:1 ratio by age group, gender, and having health plan eligibility during the year of the diagnosis from the matched prostate cancer case. We used a longitudinal case-control design to estimate incremental medical costs for PC cases starting 12 months prior to diagnosis. We extracted data for 2000-2008 from HMO standardized data warehouses and SEER-Medicare files. We applied Standardized Medicare reimbursement rates to utilization vectors and summed to total monthly medical expenses per patient in 2008 dollars. We analyzed monthly cost trajectories by phase of care and SEER-Medicare vs. HMO for Stages I-III vs. Stage IV vs. unknown Stage cases. **Results:** Monthly incremental PC costs in the pre-diagnosis phase were negative in the first 3 quarters and then rose rapidly in the quarter prior to diagnosis, with advanced-stage cases showing the steepest. FFS advanced-stage cases had the highest peak costs in the month of diagnosis, followed by HMO advanced stage cases. By the 12th month of the Treatment phase, monthly costs for all study groups converged at about \$500 per month. In the first survivorship year, FFA and HMO advanced-stage cases had higher incremental costs than the other study groups. In the last year of life, advanced-stage cases had higher incremental costs than all other groups. **Conclusions:** Stage-IV Medicare FFS PC cases received the most costly treatments of all study groups. FFS incremental costs were mostly higher than HMO costs.

Keywords: Prostate cancer; Cost

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PS2-38:

Cancer Research Network: Cancer Incidence, Prevalence, and Health Plan Enrollment

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Background/Aims: Nested within the HMO Research Network (HMORN), the Cancer Research Network (CRN) is a collaboration among the National Cancer Institute, 9 funded HMORN sites, 6 affiliate sites, and scientific collaborators from multiple institutions. Now in its fourth cycle, the CRN has been funded continuously since 1999. CRN's goals are to build data infrastructure, expertise, and collaborations to promote successful cancer research involving integrated healthcare delivery systems. Understanding