OBJECTIVES: To compare Computed Tomographic (CT) utilization and potentially related cancer risks in the United States and in Canada. METHODS: While CT scans can provide great medical benefits, there is growing concern about potential cancer risks because they deliver higher radiation doses than conventional diagnostic x-rays. Using epidemiological databases, we developed a risk projection model to assess radiation exposure from CT use, to estimate the number of cancer deaths from CT use and compare to age, gender, and race-specific cancer mortality rates in the United States and in Canada. RESULTS: Exposures for CT use are highest for ages 0–4 years and 20–64 years. Cancer risks were highest for ages 0–4 years and 20–64 years, with a peak of 0.013 per million per CT use for ages 20–29 years. Cancer risks were highest for CT use in the United States and in Canada. CONCLUSIONS: The risk of cancer deaths from CT use is significant and should be considered in policy discussions about CT use.

USE OF SMOKING CESSATION AGENTS IN PATIENTS WITH LUNG CANCER: AN EXPLORATORY STUDY

OBJECTIVES: Lung cancer is the most frequent cause of cancer death with cigarette smoking being the number one risk factor. Nearly 90% of lung cancer deaths are attributable to smoking. Smoking in patients diagnosed with lung cancer decreases the rate of survival, quality of life, and the effectiveness of medical treatment in these patients. One of the ways to stop smoking is through the use of smoking cessation agents. The purpose of this study is to explore the prevalence of smoking among lung cancer patients and report the use of smoking cessation agents using a national dataset.

METHODS: A retrospective study was done to identify lung cancer patients (ICD-9 = 162) who smoke and those who use smoking cessation agents from 2006-2010 using Medical Expenditure Panel Survey (MEPS) data. Number of patients who smoke and those who use smoking cessation agents were described. RESULTS: Data from five identified nearly 260 lung cancer patients. Out of these, 48 patients, accounting for 18.4% prevalence, reported smoking even after diagnosed with lung cancer. Percentage of female smokers was 58.33% while that of males was 41.66%. Medications history for these patients revealed a very low proportion, i.e. 6/48 (12.5%) reported using any form of smoking cessation agents. CONCLUSIONS: It is evident from the results that significant numbers of patients continue smoking even after diagnosis. This is an underestimated number as this was patient reported information. There may be more patients that have not reported smoking because of social norms. This shows that the non-medical efforts to quit smoking might have been unsuccessful. Also, the use of smoking cessation agents among these patients is extremely low. This is an alarming matter and future research should focus on the barriers to use of smoking cessation agents and approaches to address these barriers.

UTILIZATION OF BEVACIZUMAB AMONG MEDICARE PATIENTS WITH COLORECTAL CANCER RECEIVING CHEMOTHERAPY

OBJECTIVES: Bevacizumab (Bev, Avastin®), the first FDA-approved anti-angiogenesis agent, has been used as an adjuvant therapy for the treatment of metastatic colorectal cancer (mCRC) since 2004. This study aimed to evaluate the utilization of Bev among elderly mCRC patients aged 65 and older within the US. METHODS: This retrospective cohort study used the SEER-Medicare data. Our cohort included individuals aged 65 years or older who were incident CRC patients diagnosed in 2005-2007 and received chemotherapy at any time through December 2009 (date of first chemotherapy = index date). This included patients with stage I to III mCRC, diagnosed between January 2000 and December 2007, who progressed from initially diagnosed localized/regional disease (recurrence). We ascertained comorbid conditions using ICD-9 codes from inpatient, outpatient, and prescription claims up to the index date. Logistic regression was adjusted for patient characteristics to conduct the likelihood of Bev use. RESULTS: A total of 6,804 patients were identified. The mean age at index date was 73 years (median = 73). There were 7,278 (108%) patients received Bev, among which the average number of Bev cycles was 11.9 (median = 9). Bev was used in 64% of patients with metastatic CRC and 26% of patient with recurrent disease. After adjustment for all other variables, we found that patients were less likely to receive Bev if they were with age 60–69 compared with those aged 65–69 (adjusted odds ratio [OR] = 0.92 [95% CI 0.86-0.98]; p<0.01), or had evidence of arterial thromboembolism (OR = 0.70 [0.54-0.90]; p<0.001) prior to chemo initiation. We also observed a trend of increasing Bev use over calendar time as well as substantial geographic variation in its use. CONCLUSIONS: Less than half of Bev-indicated patients received Bev in US Medicare population. Patients’ age and history of arterial thromboembolism significantly contribute to the low utilization of Bev.

FACTORS ASSOCIATE WITH UTILIZATION OF TRADITIONAL CHINESE HERBAL MEDICINE: EVIDENCE FROM 5 YEARS INPATIENT RECORDS IN TCM HOSPITALS IN CHINA

OBJECTIVES: To analyzed the pattern and factors associate with the utilization of TCM in China. METHODS: We examined 87,248 inpatient records in 100 TCM hospitals from 2003 to 2007. Use of TCM are analysed by a logit model. Major factors associate with the utilization includes patients’ and hospitals’ characteristics. RESULTS: The utilization of TCM in China was 19.6% (95% CI 19.4-19.8). For female, ethnic group, health insurance status, and disease type also associate with TCM utilization. Patients in critical conditions (OR=1.27, P<0.01) are more likely to use TCM than those in stable conditions. However, patients admitted from emergency department are less likely to use TCM (OR=0.75, P<0.01).