Chemotherapy-associated peripheral neuropathy (CAPN) is a painful side-effect of chemotherapy. Comprehensive measures of health outcomes, medical costs, and work loss burden of CAPN in patients with breast, ovarian, head, neck, or non-small cell lung cancer (NSCLC) have not been quantified. This study assesses the outcomes and direct and indirect cost burden of CAPN in these four tumor types from a third-party payer perspective. METHODS: Data were from an administrative claims database of privately insured companies covering 1999–2006. Patients with qualifying tumors, and claims for chemotherapy and services indicative of peripheral neuropathy (PN) within 9-months of chemotherapy were selected. Cases were matched 1:1 to controls with no PN-related claims based on cancer type, diabetes history, demographic, and propensity for reporting PN claims during the study period (estimated on baseline resource use and comorbidities). Direct costs and resource use were calculated for a 12-month study period using diagnosis and procedure codes, pharmacy claims, and specialty Visit codes. Indirect costs were obtained for a subset of patients that had disability and medically related absenteeism data. Comparisons of cost and resource use between cases and controls used paired t-tests. RESULTS: Among patients treated for breast, ovarian, head/neck, and NSCLC, 454 were identified who met inclusion criteria and had evidence of CAPN. Average direct costs were $17,344 higher for CAPN cases than non-CAPN controls ($ > 0.0001). Outpatient costs were the highest component for both cases and controls with cases having excess outpatient costs of $8092 ($ > 0.001). On average, each CAPN case had 12 more outpatient visits than controls (51.3 vs. 39.8 visits; $ < 0.0001), and spent more days in the hospital (5.6 vs. 3.2 days; $ < 0.001). Indirect resource use and costs were higher for cases but not statistically different from controls. CONCLUSIONS: CAPN is associated with increased direct medical cost and resource use of patients with breast, ovarian, head/neck, or NSCLC.

PND3

PRESCRIBING PATTERNS AMONG DEMENTIA PATIENTS AT THE VETERANS AFFAIRS MARYLAND HEALTH CARE SYSTEM (VAMHCS)

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OBJECTIVES: Dementia patients often receive cholinesterase inhibitors and/or memantine (CIM) for cognitive symptoms, and antidepressants (AD) for behavioral symptoms. Ideally, patient demographics or clinic locations have no effect on care received. We explored whether patient demographics and/or outpatient referrals to specialists, dementia, or mental health clinics increased the likelihood of receiving CIM/AD medications. METHODS: Veterans' Affairs Maryland Health Care System (VAMHCS) electronic medical records were used to select a cohort, based on diagnosis codes or medications indicating Alzheimer's or related dementia. Patients aged 60 and above, and referable to CIM/AD medications during the period from 1999 to 2006 were included. Additional criteria included a minimum of one year follow up or death within a year of index date. The outcome (referent) was categorized as receipt of CIM, receipt of AD, receipt of both CIM/AD (receipt of neither medication type). Multivariable non-linear logistic models (MLM) explored predictives of CIM and AD utilization categories, including age, gender, in cohort, race, marital status, and referrals to dementia or mental health clinics. RESULTS: A cohort of 1359 patients, average age of 78.1 (SD 6.0) years and 22% African-Americans, was followed up for an average of 3.1 (SD 1.9) years. Thirty-five percent had mental health or dementia clinic visits while 18% visited both clinics. Significant associations were found for receiving both CIM and AD medications versus receiving no medication for years in cohort (OR = 1.237, $ < 0.0001), African-American race (OR = 0.437, $ < 0.0001), age (OR = 0.569, $ = 0.0288), marital status (OR = 1.492, $ = 0.0339) and mental health clinic visit (OR = 3.386, $ < 0.0001). Dementia clinic visit was associated with CIM only but not receipt of both medications (OR = 1.405, $ = 0.0996). CONCLUSIONS: In veterans with possible dementia, demographic factors and care at dementia/mental health clinics impact the likelihood of receiving CIM/AD medications. These found associations need to be further investigated for their potential impact on patient outcome.

PND4

CO-UTILITY OF INTERFERON-BETA-1B IN THE TREATMENT OF PATIENTS WITH A CLINICALLY ISOLATED SYNDROME SUGGESTIVE OF MULTIPLE SCLEROSIS: MODEL UTILIZING FIVE YEAR BENEFIT DATA


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OBJECTIVES: To estimate the cost-utility of interferon-beta-1b (IFNB-1b) for the treatment of patients with a clinically isolated syndrome (CIS) suggestive of multiple sclerosis (MS) using five year BENEFIT clinical trial data. METHODS: We developed a Markov model of the epidemiology and treatment of CIS and MS. A hypothetical cohort of 1000 patients with incident CIS, with initial health states defined by Kurtzke’s Expanded Disability Severity Scale (EDSS), was specified. The cohort was assumed to be treated with IFNB-1b for 2 (310 mg) monthly infusions, lasting event suggestive of MS or not treated until confirmation of Posner-defined MS. Data from BENEFIT were used to model EDSS transitions and transition from CIS to MS. Relapses were estimated from BENEFIT and published natural history data. Follow-up transition to MS, all other transitions, and re-treatment with IFNB-1b until reaching EDSS 6.5. Direct and indirect medical costs of MS treatment and IFNB-1b were estimated using published literature and pricing schedules. Patient utilities were derived from EQ-5D data from BENEFIT, supplemented by published data derived by EDSS score and relapse occurrence. Mortality was estimated using life tables and EDSS data. Costs (2007 AUD) and outcomes were discounted at 5% per annum. Sensitivity analyses were performed on all key parameter models. RESULTS: Use of IFNB-1b was associated with fewer EDSS transitions, longer time to CDMS diagnosis, and a reduced relapse burden. In the base case (Australian perspective, 25-year time horizon), the incremental cost utility of IFNB-1b versus no treatment was AUD 20,000 (USD 14,000) per quality-adjusted life year (QALY) gained. Findings were sensitive to time horizon, IFNB-1b cost and treatment effect, and underlying rate of disease progression. CONCLUSIONS: This model shows that IFNB-1b treatment of patients with CIS is cost-effective with a cost per QALY gained within the range of many well accepted health care interventions.