each LOT are limited, although this data may be important to inform health coverage and resource allocation decisions. This study aimed to assess the number of US patients with aALL treated in 2020. Methods: We developed a five-compartment model: LOT1–LOT5+. Patients in LOT1–LOT4 could die or transition to the next LOT. Patients in LOT5+ could remain in that compartment or die. Each LOT was sub-divided based on stem-cell transplant (SCT) eligibility and treatments type (anti-CD38 therapy or ‘other’), patients’ risk of progression, and patient’s switching treatment with LOT progression. Patient numbers were stratified by age (<65 and ≥65 years) and cytogenetic risk. Results were aggregated to provide patient numbers by LOT. For ‘other’ treatments, mortality and time to next treatment (TTNT) depended on LOT, SCT, and cytogenetic risk and were informed by published epidemiological data. Results: For 2020, estimated incidence of 128,326 US patients, with 106,176 actively receiving treatment (LOT1: 53.9%; LOT2: 25.8%; LOT3: 10.7%; LOT4: 4.9%; LOT5+: 4.7%). An estimated 69.7% (351/5034) in LOT5+ (standard deviation=861) had prior exposure to proteasome inhibitors, immunomodulatory agents and/or anti-CD38 antibodies. LOT5+ model results were most sensitive to mortality, TTNT and anti-CD38 use. Conclusions: This novel model predicted the number of patients with MM by LOT with an overall prevalence within a 10% deviation of SEER estimates (140,779 US patients); and provides a framework that can be adapted to other countries and healthcare systems.

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PCN183 GLOBAL INCIDENCE, PREVALENCE, AND SURVIVAL IN RELAPSED/REFRACTORY (R/R) ADULT ACUTE LYMPHOBLASTIC LEUKEMIA (AALL): A SYSTEMATIC LITERATURE REVIEW (SLR)

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Objectives: This research aims to review and summarize the most recent data on the epidemiology of patients with B-cell/R/R AALL, with particular focus on the US, Canada and EU5. Methods: In April 2020, we conducted a SLR to identify the incidence, prevalence, and mortality of R/R AALL in Medline and EMBASE (2015-2020) combined with desk research (no time limit) of publicly available databases, appraisals and registries. Results: In total, 16 journal articles and 16 other sources were identified. Data for R/R AALL were mostly identified regardless of treatment line, B-cell disease and age subgroups. Incidence rate per 100,000 was 0.25 (117-46M) for B-cell/R/R AALL in the UK (n=1). For countries without published incidence, the rate per 100,000 was calculated assuming 48% of ALL patients were relapsed or refractory (based on published trial results included in a UK appraisal): 0.26-0.82 in the US (n=2), 0.22-0.67 in Canada (n=2), 0.26 in Germany (n=1), 0.23 in France (n=1), 0.35 in Italy (n=1), 0.26 in Spain (n=1), and 0.22-0.24 in Netherlands (n=2). The calculated prevalence ranged from 3.00 (US) to 11.21 (Italy). Country-specific survival in patients with R/R AALL was reported for the UK (n=2): 5-yrs survival <10%; Germany (n=1): 3-yrs survival 24%; and the US (n=1): 1-yr survival 13-19%. Conclusions: Although limited data were found, incidence for R/R AALL appears comparable across countries. Survival of R/R AALL varies substantially between countries. Current treatments are associated with poor survival and better treatment options are needed to improve outcomes.

PCN184 USEFULNESS OF ADMINISTRATIVE DATABASES FOR THE EPIDEMIOLOGICAL EVALUATION OF ESOPHAGEAL CANCER DIAGNOSIS IN AN ITALIAN REAL-WORLD SETTING

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Objectives: The study aims to evaluate prevalence and incidence of patients diagnosed with lung cancer in Italian real-world settings of clinical practice by using administrative data. Methods: This observational retrospective study was performed using administrative databases of a Northern Italian Region. All adult patients were included between January 2010 and December 2018 (study period) if they presented at least a hospitalization discharge diagnosis for lung cancer, identified by ICD-9-CM code 162.0. The incidence or prevalence was calculated for each year of study period and stratified by gender. Results: From data available since starting from 2010, the incidence rate was reported starting from year 2011. Results: Incidence rate appeared constant during study period, ranging from 31.0/100,000 in 2015 to 69.9/100,000 in 2018. Incidence rate was higher in men than women. Incidence rate was higher in males than females, with prevalence ranging from 60.4/100,000 and 22.6/100,000 in 2010 to 149.6/100,000 and 90.6/100,000 in 2018, respectively. Both incidence and prevalence rates were higher in males than in females in all years analysed. Conclusions: The study gave insight into the prevalence and incidence of lung cancer diagnosis, showing how administrative databases can be reliable sources for conducting epidemiologic studies. Our findings could be consistent with expected epidemiology (incidence of lung cancer 70/100,000 health-assisted individuals reported by AIRTUM); moreover, our data integrated with pathological anatomy database could allow to quantify patients with lung cancer eligible to targeted therapies.

PCN185 TREATMENT PATTERNS IN ADVANCED ESOPHAGEAL SQUAMOUS CELL CARCINOMA (SCC) PATIENTS IN SPAIN

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Objectives: Esophageal cancer is the 7th most common cancer in Spain, with an incidence of 2,383 cases per year. Patient with EC has significant unmet medical need, poor quality of life and low survival rates. Methods: A retrospective, non-comparative, real-world survey of 52 Spanish physicians was conducted between August-November 2018. Clinical data were collected from medical charts for patients aged ≥20 years who had initiated through completion or stopping 1/2 line treatment for EC and for esophageal adenocarcinoma or ESCC at either line of therapy. Excluded were patients with adenocarcinoma, or oesophageal type I gastro-esophageal junction cancer. Results: The 52 physicians surveyed were aged 46.5±11.4y, 71.2% male, 14.9±5.9y in practice, 93.4% hospital-based, and treated a median of 50 EC patients in the past 2 years. 149 patients were included, with mean age at 11 of 62.8±15.2y and 83.5% male. At diagnosis patients presented the following comorbidities: 28.8% hypertension, 27.5% hyperlipidemia, 23.5% diabetes, 14.8% dysphagia, and 14.1% chronic obstructive pulmonary disease. At 1L, 91.1% of EC patients received active systemic therapy (Cisplatin+5-FU+10.0%) and 8.1% received BSC (ESCC=5.3%, ESCC=4.5%). In 2L (n=44), 81.8% (n=36) of EC patients received systemic treatment (docetaxel n=9; 25.0%) and 18.2% (n=8) received BSC (20.5% in EAC vs 16.7% in ESCC). Physician-reported treatment decisions based primarily on personal experience (85%) and side effects (85%). The main 2L treatment goals were extent patients’ life (41.7%) and relieve symptoms (29.2%). For 2L ESCC patients, the most common grade 3 or 4 adverse events were fatigue (70%), neutropenia (55%) and anemia (50%). Conclusions: In this real-world survey of Spanish physicians, approximately 120 ESCC patients received BSC at 1L, whereas approximately 1/6 ESCC patients received BSC at 2L. Data indicated that physician treatment decision-making, treatment goals, and adverse events show a great unmet need for a more efficacious or a safer/better tolerated 2L ESCC treatment.

PCN186 A COMPARISON OF BREAST CANCER BURDEN IN 120 COUNTRIES (2008-2017)

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Objectives: Breast cancer is the cancer with the highest incidence in women in many countries. The purpose of this study is to explore the influencing factors of various national levels that affect the burden of breast cancer disease in countries around the world. We also generate strategic policy recommendations based on the research results to reduce the burden of breast cancer disease in the country. Methods: This study used the incidence and mortality of breast cancer in women as a measure of disease burden. The data comes from the statistical data of the World Health Organization’s Global Disease Burden system from 2008 to 2017. We used the generalized linear mixed model statistical method to analyze the four types of country-level factors that affect women’s breast cancer incidence and mortality. Results: The study found that, after adjusting for other factors, the country’s mean of total cholesterol, average body mass index, average annual alcohol consumption, smoking percentage, average life expectancy, years of education, GDP per capita, and total female population and the annual average temperature were significantly positively correlated with the incidence of breast cancer in women. The country’s mean of total cholesterol, average body mass index, average annual alcohol consumption, smoking percentage, average remaining life, years of education, and average annual temperature are significantly positively correlated with the incidence of breast cancer in women. In terms of mortality, the country’s average systolic blood pressure, average total cholesterol, average annual alcohol consumption, smoking percentage, average remaining life, years of education, and average annual temperature were significantly positively correlated with the incidence of breast cancer in women. Conclusions: This study found that the higher the average total cholesterol, the higher the average annual alcohol consumption, the higher the smoking rate, and the higher the average temperature, the higher the incidence and mortality of breast cancer among women.