relapse (1st month after relapse) 20,877€, pre SCT (1st month before the operation) 37,400€, post SCT (2 years after the operation) 57,044€ and one month before death 10,200€. The cost distribution of first year treatment was 102,272€. The cost distribution was for the treatment duration for which the costs are reported varies between the different disease stages.

**PCN156**

**ESTIMATING THE ECONOMIC AND HEALTH IMPACT OF THE PD-1/PD-L1 INHIBITOR CLASS IN BULGARIA**

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**Objectives:** Immunotherapy treatments have transformed cancer care, offering improved outcomes in a range of indications, greater quality of life, survival benefits and regimen tolerability, and have markedly improved treatment efficacy. The rapid expansion of immuno-oncology (IO) treatment options and their use may potentially put healthcare budgets under strain. The objective of this study is to describe an approach developed to inform decision makers and payers of the potential health outcomes and economic impact of PD-1/PD-L1 inhibitors in Bulgaria. **Methods:** Budget impact analyses and partitioned survival modelling were used to estimate key clinical and economic outcomes in a world with and without PD-1/PD-L1 inhibitors in 11 oncology indications: adjuvant and metastatic melanoma, first- and second-line non-small cell lung cancer, metastatic renal cell cancer, metastatic triple-negative breast cancer, urothelial carcinoma, renal cell carcinoma, first- and second-line and neck squamous cell carcinoma, small cell lung cancer and gastric cancer. Outcome were estimated over a five-year time horizon (2019-2023). Drug acquisition costs and market share assumptions were based on publicly available information, while efficacy and adverse events data were taken from the clinical trials. Indirect costs were also included in the model. **Results:** In 2019, it was estimated that 22.2% (BCN 88 million) of Bulgarian expenditure on cancer medicines was attributable to PD-1/PD-L1 inhibitors. The average annual economic impact of PD-1/PD-L1 inhibitors is estimated to be BCN 179 million over five years. For this investment, 1,711 additional life years, 1,546 progression-free life years and 1,429 quality-adjusted life years are expected to be gained over five years by using PD-1/PD-L1 inhibitors in Bulgaria. A reduction of 626 high-grade adverse events is also expected. **Conclusions:** PD-1/PD-L1 inhibitors can deliver significant survival benefits in cancer patients, with less severe side effects. The budgetary effects for Bulgaria are manageable but increasing usage of PD-1/PD-L1 inhibitors will require additional budget planning.

**PCN158**

**CONSIDERATIONS AND CHALLENGES FOR ECONOMIC MODELING IN NON-METASTATIC NON- SMALL CELL LUNG CANCER (NMNSCLC)**

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**Objectives:** Recent regulatory approvals in neoadjuvant non-metastatic cancer treatment have been contingent on early endpoints (e.g., event-free survival [EFS] or pathological complete response [pCR]), but an estimate of overall survival (OS) benefit is required for a health technology assessment model. The objective of this study was to understand challenges in estimating the cost-effectiveness of therapies in non-metastatic cancer using partitioned survival analysis (partSA) and Markov approaches. **Methods:** Neoadjuvant treatment of nmNSCLC was selected as the case study. A targeted literature review revealed no prior cost-effectiveness analyses in this indication. Thus, we developed a de novo model that could estimate the long-term survival outcomes of patients with nmNSCLC using two approaches: three-state partSA and Markov state-transition (health states: EFS, locoregional recurrence [LR], post-recurrence remission, distant metastasis [DM], and death). In both approaches, EFS was stratified by pCR, and inputs were informed by published data evaluating neoadjuvant platinum-doublet chemotherapy. Mortality rates are lower in non-metastatic vs. metastatic cancer; multiple prognostic factors and subsequent treatments should be considered. **Results:** Both approaches produced similar undiscounted QALY estimates (148 years) but different OS benefits (Milev: 2.02 life years [LY]; partSA: 3.42 LYs) over a lifetime time horizon. Predicted 5-year OS was similar in both models (Markov: 17%; partSA: 19%). Data required to inform the Markov post-progression phase are sparse and from heterogeneous populations. PartSA approach produces greater uncertainty due to structural inability to explicitly model the post-progression pathway. Model results are sensitive to selected parameter distribution to extrapolate EFS, the appropriateness of the literature informing the model, and the impact of the extent of progression (e.g., LR vs. DM).

**Conclusions:** Both modeling approaches face challenges. The Markov approach better articulates the post-progression setting but suffers from a lack of complete data; conversely, the PartSA approach is less data-driven, but the results are subject to uncertainty.

**PCN159**

**THE ECONOMIC ANALYSIS OF SOCIAL SECURITY COSTS CANCER-RELATED IN ITALY**

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**Objectives:** In Italy, more than 21,000 workers lost their ability to work because of cancer. The aim of this study is to estimate the cancer economic impact on the Social Security System in Italy, during the last years. **Methods:** The economic analysis is focused on two types of social security benefits: Disability Benefit (DB), for workers with reduced workability, and Incapacity Pension (IP) for workers without workability. Data are derived from the database of disability insurance awards of the Italian National Institute of Social Security (INPS). Considering the period between 2011 and 2019, it was possible to estimate the increased cases and related amount of costs due to cancer. Probabilistic Sensitivity Analysis and Deterministic Sensitivity analysis were performed in order to test the robustness of the estimation. **Results:** Estimates are ongoing, but preliminary results show a significative economic burden on the social security system due to cancer: about € 2 billion every year. Moreover, there is an upward trend in Disability Benefit beneficiaries (+ 21% in 2019, compared to 2014) and, at the same time, a decline in Incapacity Pension beneficiaries (-20%). **Conclusions:** This study is the first attempt to estimate the overall social costs induced by cancer in Italy. The disability insurance costs caused by cancers have a significative and constantly increasing impact on the Italian Social Security System. Exploring what is hidden in these dynamics and ensuring a more rapid access to innovative treatments could reduce these costs (accompanied by increase in QoL), through the reduction of people requesting a Social Security benefit to INPS.

**PCN161**

**DISEASE BURDEN OF MULTIPLE MYELOMA (MM) IN FRANCE: A DESCRIPTIVE STUDY BASED ON A FRENCH MEDICO-ADMINISTRATIVE DATABASE**

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**Objectives:** Multiple Myeloma (MM) is a malignant hemopoesis. The disease is identified by a severe proliferation of plasma cell in bone marrow for which there is still a lack of economic evidence. The objective of this study is to estimate the MM burden disease in the French setting, **Methods:** The EGB (Echantillon Généraliste de Bénéficiaires) database, a 1/979th random sample of the French healthcare insurance database linked with the hospital discharge database (PMSI) was used for this study. Retrospective data between 2014 and 2017 were considered to identify incident cases of MM. The index admission was the first admission with principal diagnosis (ICD-10: C90) and patients had to be clear of MM admission in the 5 previous years. Healthcare costs were analyzed from the national health insurance perspective. The study period included the first-year period following the initial diagnosis, and the second-year period following the initial diagnosis. Additional costs attributable to the disease were estimated by comparing the incident CL cohort to a matched cohort, on age and gender, with a 1:5 ratio. **Results:** The study identified 150 incident cases with a mean age of 73 years (SD: 11); 47% were women, 16% had severe comorbidities (Charlson index ≥3) and 33 deaths (22%) were observed during the study period. Monthly additional cost during the first-year period was estimated at €5,259. Main drivers of costs were admissions (€2,478) and pharmaceuticals (€2,366) and 28 patients (19%) had transplantation (autograft or allograft); Monthly additional cost for the second year of follow-up was estimated at €1,407. **Conclusions:** This study confirms the significant economic burden of CL disease in France and provide up-to-date economic data that could support decision-making.

**PCN162**

**DISEASE BURDEN OF CASTRATION-RESISTANT PROSTATE CANCER (CRPC) IN CHINA**

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**Objectives:** In China and even in the Asia Pacific region, study quantified the disease burden of MM-CRPC is lacking. This study aims to evaluate the disease burden (including epidemiology, survival, direct and indirect cost) of CRPC patients (including NN-CRPC and mCRPC) from the society perspective. **Methods:** First of all, to design the questionnaire, a systematic literature review on the CRPC's