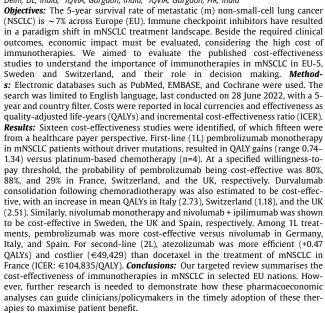unbalanced covariates in the propensity score model were included for covariates in the ECM. Outcomes for the ECM were total medical cost, insurance benefit cost, and out-of-pocket expenses for three years. **Results:** After propensity score matching and the ECM, total medical cost, insurance benefit cost, and out-of-pocket expenses for three years were significantly higher than the control group (p<0.01). The incremental total medical cost was estimated at 1,706$ before and 2,959$ after reimbursement. It was 34.21% more than the control group after reimbursement (p=0.080). The insurance benefit cost was increased by 41.31% for the DME group after reimbursement (p=0.178). For out-of-pocket expenses, incremental cost was 30.73% compared control group after reimbursement (p=0.053). **Conclusions:** Despite the reimbursement of expensive drugs in DME, the economic impact on payers was not significantly increased. The patient's disease burden is also increased through active and various treatments due to reimbursement. However, to evaluate the precise effect of reimbursement policy, we need to consider the economic impact on various aspects, including clinical effectiveness after reimbursement.

EE643
A TARGETED REVIEW OF COST-EFFECTIVENESS OF IMMUNOTHERAPIES USED IN TREATMENT OF METASTATIC NON-SMALL-CELL LUNG CANCER PATIENTS IN EU-5, SWEDEN, AND SWITZERLAND
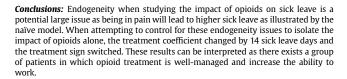
Trikha S,[1] Mehta M,[2] Ghosh S,[3] Chatterjee M,[4] Mahajan K,[4] Aggarwal A[5]
[1]IQVIA, BANGALORE, KA, India, [2]IQVIA, BENGALURU, KA, India, [3]IQVIA, New Delhi, DL, India, [4]IQVIA, Gurgaon, India, [5]IQVIA, Gurgaon, HR, India

Objectives: The 5-year survival rate of metastatic (m) non-small-cell lung cancer (NSCLC) is ~7% across Europe (EU). Immune checkpoint inhibitors have resulted in a paradigm shift in mNSCLC treatment landscape. Beside the required clinical outcomes, economic impact must be evaluated, considering the high cost of immunotherapies. We aimed to evaluate the published cost-effectiveness studies to understand the importance of immunotherapies in mNSCLC in EU-5, Sweden and Switzerland, and their role in decision making. **Methods:** Electronic databases such as PubMed, EMBASE, and Cochrane were used. The search was limited to English language, last conducted on 28 June 2022, with a 5-year and country filter. Costs were reported in local currencies and effectiveness as quality-adjusted life-years (QALYs) and incremental cost-effectiveness ratio (ICER). **Results:** Sixteen cost-effectiveness studies were identified, of which fifteen were from a healthcare payer perspective. First-line (1L) pembrolizumab monotherapy in mNSCLC patients without driver mutations, resulted in QALY gains (range 0.74–1.34) versus platinum-based chemotherapy (n=4). At a specified willingness-to-pay threshold, the probability of pembrolizumab being cost-effective was 80%, 88%, and 29% in France, Switzerland, and the UK, respectively. Durvalumab consolidation following chemoradiotherapy was also estimated to be cost-effective, with an increase in mean QALYs in Italy (2.73), Switzerland (1.18), and the UK (2.51). Similarly, nivolumab monotherapy and nivolumab + ipilimumab was shown to be cost-effective in Sweden, the UK and Spain, respectively. Among 1L treatments, pembrolizumab was more cost-effective versus nivolumab in Germany, Italy, and Spain. For second-line (2L), atezolizumab was more efficient (+0.47 QALYs) and costlier (€49,429) than docetaxel in the treatment of mNSCLC in France (ICER: €104,835/QALY). **Conclusions:** Our targeted review summarises the cost-effectiveness of immunotherapies in mNSCLC in selected EU nations. However, further research is needed to demonstrate how these pharmacoeconomic analyses can guide clinicians/policymakers in the timely adoption of these therapies to maximise patient benefit.

EE645
THE EFFECT OF OPIOID USE ON SICK LEAVE AMONG PATIENTS WITH OSTEOARTHRITIS UNDERGOING JOINT REPLACEMENT: A PROPENSITY SCORE ADJUSTMENT APPROACH

Liseth Hansen J,[1] Fast T,[2] Wangen KR[1]
[1]University of Oslo, Oslo, Norway, [2]Quantify Research, Stockholm, Sweden

Objectives: Estimate the impact of high-dose opioid use on sick leave among patients with osteoarthritis (OA) undergoing joint replacement, adjusting for endogeneity through propensity scores (PS). **Methods:** This was a non-interventional observational study using the Swedish Patient, Prescription Drug and sick leave registers in patients with hip/knee OA and a hip/knee joint replacement between 2011 and 2014. High-dose opioid use was defined as being dispensed ≥4500 oral morphine equivalents (OMEQ) (binary variable) during the exposure period from one month to one year after surgery. The outcome variable was the number of sick leave days in the year following the end of the exposure period. A PS model was estimated including age and sex at surgery, comorbidities (Elixhauser index and chronic pain related), NSAID and opioid use measured during three-year pre-surgery. Two OLS regression models were estimated, one naïve model regressing sick leave on opioid use, and one model also including the PS. **Results:** In total 19,901 patients were identified. The mean age at surgery was 53.6, 47% were male and 10% were dispensed ≥4500 OMEQs during exposure. In the naïve model, opioid use was associated with 7.3 more sick leave days (95% CI: 5.2-9.4). When adding the PS, use of opioids was associated with 6.9 fewer days on sick leave (95% CI: -10 - -3.7).
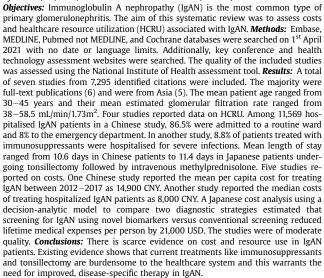
Conclusions: Endogeneity when studying the impact of opioids on sick leave is a potential large issue as being in pain will lead to higher sick leave as illustrated by the naïve model. When attempting to control for these endogeneity issues to isolate the impact of opioids alone, the treatment coefficient changed by 14 sick leave days and the treatment sign switched. These results can be interpreted as there exists a group of patients in which opioid treatment is well-managed and increase the ability to work.

EE646
SYSTEMATIC REVIEW ON COST AND HEALTHCARE RESOURCE UTILIZATION IN IMMUNOGLOBULIN A NEPHROPATHY (IGAN)

Doherty J,[1] George A,[2] Akkapantula S,[2] Kolli NR,[2] **Pannagl K[3]**
[1]Novartis Pharma AG, Basel, BS, Switzerland, [2]Novartis Healthcare Pvt. Ltd., Hyderabad, AP, India, [3]Novartis Pharmaceuticals UK Ltd, London, UK

Objectives: Immunoglobulin A nephropathy (IgAN) is the most common type of primary glomerulonephritis. The aim of this systematic review was to assess costs and healthcare resource utilization (HCRU) associated with IgAN. **Methods:** Embase, MEDLINE, Pubmed not MEDLINE, and Cochrane databases were searched on 1st April 2021 with no date or language limits. Additionally, key conference and health technology assessment websites were searched. The quality of the included studies was assessed using the National Institute of Health assessment tool. **Results:** A total of seven studies from 7,295 identified citations were included. The majority were full-text publications (6) and were from Asia (5). The mean patient age ranged from 30−45 years and their mean estimated glomerular filtration rate ranged from 38−58.5 mL/min/1.73m^2. Four studies reported data on HCRU. Among 11,569 hospitalised IgAN patients in a Chinese study, 86.5% were admitted to a routine ward and 8% to the emergency department. In another study, 8.8% of patients treated with immunosuppressants were hospitalised for severe infections. Mean length of stay ranged from 10.6 days in Chinese patients to 11.4 days in Japanese patients undergoing tonsillectomy followed by intravenous methylprednisolone. Five studies reported on costs. One Chinese study reported the mean per capita cost for treating IgAN between 2012−2017 as 14,900 CNY. Another study reported the median costs of treating hospitalized IgAN patients as 8,000 CNY. A Japanese cost analysis using a decision-analytic model to compare two diagnostic strategies estimated that screening for IgAN using novel biomarkers versus conventional screening reduced lifetime medical expenses per person by 21,000 USD. The studies were of moderate quality. **Conclusions:** There is scarce evidence on cost and resource use in IgAN patients. Existing evidence shows that current treatments like immunosuppressants and tonsillectomy are burdensome to the healthcare system and this warrants the need for improved, disease-specific therapy in IgAN.

EE647
REAL-WORD EFFECTIVENESS AND COST CONSEQUENCE OF ANTIPSYCHOTIC TREATMENT CHOICES IN THE TREATMENT OF SCHIZOPHRENIA IN ITALY: A BAYESIAN HIERARCHICAL INFERENCE MODEL

Pradelli L,[1] Zaniolo O,[2] Povero M,[3] Franchi A,[4] Sansone C,[4] Maffezzoli S[4]
[1]AdRes HEOR, Torino, TO, Italy, [2]AdRes HEOR, Turin, TO, Italy, [3]AdRes HEOR, Turin, Italy, [4]Janssen-Cilag SpA, Cologno Monzese, Italy

Objectives: The use of long-acting injectable antipsychotics (LAIs) is considered an important option in the management of schizophrenia, as their pharmacokinetics offer considerable advantages in terms of compliance and drug plasma level compared with oral antipsychotics (OAPs). **Aim:** To investigate factors affecting the efficacy of antipsychotics in terms of relapse prevention in the real-world and to estimate their real-life impact in terms of overall disease management cost. **Methods:** We conducted a literature search using MEDLINE/PubMed with the aim of extracting efficacy and effectiveness data of LAIs and OAPs. The primary outcome was relapse rate (RR). RRs reported from RCTs and low risk of bias observational studies were pooled and analyzed in a Bayesian hierarchical model in order to estimate the real-world effectiveness of relapse prevention as function of antipsychotic generation (second- vs. first-generation, SGA vs. FGA), administration route (parenteral vs. oral) and frequency. Resulting estimates were used as inputs for an economic evaluation of the management costs of schizophrenia from the Italian NHS perspective. **Results:** 50 studies reporting on 71 direct comparisons met inclusion criteria. The model estimates indicate increasing effectiveness with LAIs vs. OAPs, SGAs vs. FGAs, and lower administration frequency. The lowest RR is predicted for SGA LAIs administered once every 3 or 6 months, with relative reductions of 77% and 83% compared to FGA OAPs. Economic evaluation results show that the least expected cumulative cost is associated to SGAs administered every 180 days, with an overall cost reduction of more than € 2,000 per patient at 1 year, if compared to FGA OAPs. **Conclusions:** In the Italian setting, SGA LAIs administered every 180 days are expected to be the a high value option for the treatment of patients with schizophrenia from both the clinical and economic perspectives.

EE648
ECONOMIC ANALYSIS OF NEW SINGLE-INHALER TRIPLE THERAPIES IN PATIENTS WITH COPD IN THE UK

Cai R,[1] Martin A,[2] Ge Y,[3] Risebrough N,[3] Sharma R,[2] Haeussler K,[4] Compton C,[2] Halpin D,[5] Ismaila AS[6]