QT prolonging drugs, bradycardia, no recent ECG, recent prolonged QT interval. Three types of acceptance were evaluated: CDS alert acceptance, telephone acceptance (ie, oral confirmation by physician) and intervention acceptance. Chi-square tests were used to compare frequencies.

**Results** In total, the CDS triggered 11 084 QT-DDIs, of which 2679 (24.2%) alerts were accepted. Pharmacists intervened for 192 QT-DDIs (1.7% of all QT-DDIs) with a telephone acceptance of 177 (92.2%). When verified in the patient records, the true intervention acceptance was significantly lower (145, 75.5%; p=0.037). Of 192 interventions, monitoring was advised for 85 (44.3%), therapy change for 51 (26.6%), and re(initiation) for 31 (16.1%). There was no significant difference in intervention acceptance between the intervention types (p=0.087). On average, patients with a QT intervention had five risk factors. The most prevalent risk factors were age >65 years (121, 63.0%), structural heart disease (120, 62.5%), female sex (88, 45.8%) and prolonged QT interval (88, 45.8%).

**Conclusion and relevance** Telephone acceptance was very high, which can be interpreted as the pharmacist interventions being highly appropriate and complementary to CDS alerts. However, reasons for the difference between telephone acceptance and intervention acceptance need to be explored.

**REFERENCES AND/OR ACKNOWLEDGEMENTS**

K Muylle and S Wuyts contributed equally.

Conflict of interest No conflict of interest

**4CPS-139**

**THERAPEUTIC DRUG MONITORING OF INTRAVENOUS BUSULFAN IN PAEDIATRIC PATIENTS**

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10.1136/ejhpharm-2022-eahp.157

**Background and importance** Busulfan is a chemotherapeutic drug used in preparative regimens for hematopoietic stem cell transplantation in adults and children for different diseases. Its efficacy and safety could be affected by its narrow therapeutic range and its pharmacokinetic variability, making therapeutic drug monitoring essential to optimise treatments.

**Aim and objectives** To analyse the impact of therapeutic drug monitoring on busulfan treatments in our centre during the last 10 years.

**Material and methods** We conducted a retrospective observational study in paediatric patients treated with intravenous busulfan between 2010 and 2020 in a bone marrow transplantation unit.

We recorded demographics (age, sex, weight, baseline disease), treatment (type of conditioning protocol, dose by weight), drug monitoring (need for dose modification, number of necessary adjustments, percentage of variation between received dose and theoretical dose), efficacy (incidence of implant failure) and safety variables (incidence of sinusoidal obstruction syndrome).

For pharmacokinetic studies we applied a nonlinear regression method and used ID3 software. Area under the curve target was 55 000–95 000 ng/mL×hour, depending on the conditioning protocol (reduced intensity or myeloablative).

**Results** We included 45 patients with ages between 4 months and 16 years. They received 43 allogeneic and two autologous transplantations. Baseline diseases in the allogeneic group were 23 malignant and 20 non-malignant haematological diseases while in the autologous group there were two neuroblastomas. Regarding the conditioning regimen, 38/45 were myeloablative and 7/45 non-myeloablative.

Busulfan initial doses ranged from 3.2 and 5.1 mg/kg/day (related to adjusted body weight), according to the protocol and the weight band. All patients received seizures prophylaxis.

Eight patients presented implant failure (five received myeloablative conditioning). Four patients presented sinusoidal obstruction syndrome (all received myeloablative conditioning).

**Conclusion and relevance** These data show high variability in the direction and magnitude of adjustments made to assure a busulfan exposure within the desired range. Busulfan monitoring is an essential tool to optimise treatments and to improve its efficacy and safety.

**REFERENCES AND/OR ACKNOWLEDGEMENTS**

Conflict of interest No conflict of interest

**4CPS-139**

**ADEQUACY ANALYSIS OF PROPHYLACTIC TREATMENT OF EPISODIC AND CHRONIC MIGRAINE IN PATIENTS WHO START ANTIMIGRAINE BIOLOGICALS**

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10.1136/ejhpharm-2022-eahp.158

**Background and importance** After the appearance of migraine biological drugs, some criteria have been established for their rational use and efficiency. There are many drugs for migraine prophylaxis but there are very few for which clear evidence has been presented, so we will try to provide data in this regard.

**Aim and objectives** To determine the adequacy of prophylactic treatment and compliance with the financing conditions for antimigraine monoclonal antibodies in our hospital.

**Material and methods** Retrospective observational study involving all the patients that had started treatment in our hospital with any of the monoclonal antibodies: erenumab, fremanezumab and galcanezumab. The duration and tolerance of all migraine prophylaxis treatments were recorded. Prophylactic treatments were considered adequate according to whether or not they had a therapeutic indication in the technical sheet in
Spain. Being consider as low evidence drugs the rest of them. Finally, compliance with the funding criteria set by the Health Ministry to start monoclonal antibody treatment was determined: having 8 or more days of migraine/month and having failed at least three prophylactic treatments for at least 3 months, one of them being botulinum toxin in the case of chronic migraine.

Results A total of 38 patients (79% women) started treatment with antimigraine biologics. The average number of prophylactic treatments was 3.9 and only one patient did not receive the minus 3. 10.5% reported some type of intolerance with any of the treatments. The duration of treatment reached at least 3 months in 78% of the patients and exceeded 6 months in 48%. 43% of the drugs used in prophylaxis had an indication. In the 57% of patients that received drugs without indication, the following were used: pregabaline (5), valproic acid (4), diazepam (2), candesartan (1), levetirazetam (1), citalopram (1), zonisamide (1), tizanidine (1) and Lisonopril (1). 14 patients (37%) did not meet the funding criteria: 8 for not having reached 3 months of treatment, 3 for presenting less than 8 MMD and 2 for presenting chronic migraine and not having received botulinum toxin A.

Conclusion and relevance More than half of the patients (57%) received drugs without indication for migraine prophylaxis and more than a third (37%) did not meet the funding criteria for these biological drugs. The work of the hospital pharmacist could improve the adequacy of treatment.

REFERENCES AND/OR ACKNOWLEDGEMENTS
Conflict of interest No conflict of interest

4CPS-142 EFFECTIVENESS AND SAFETY OF ATEZOLIZUMAB IN METASTATIC UROTHELIAL CARCINOMA
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10.1136/ejhpharm-2022-eahp.159

Background and importance Few options exist for patients with metastatic urothelial carcinoma (MUC). Atezolizumab, an anti-PD-L1 immune checkpoint inhibitor, has been shown to reduce tumour size in patients who have been treated with platinum chemotherapy or who are not eligible for such treatment in MUC.

Aim and objectives To evaluate the effectiveness and safety of atezolizumab in MUC in real clinical practice, comparing the results with the pivotal clinical trial IMvigor211.

Material and methods This was a retrospective observational study including all patients with MUC treated with atezolizumab, between January 2018 and October 2021. Variables included were age, sex, smoking status, Eastern Cooperative Oncology Group (ECOG), line of treatment, cycles received, duration and causes of treatment discontinuation (progression, toxicity, death). Effectiveness was assessed by the Kaplan–Meier method (SPSS v25.0) in terms of progression-free survival (PFS) and overall survival (OS). Adverse effects (AE) were collected and classified according to the Common Terminology Criteria for Adverse Events (CTCAE) scale v5.0.

Results 33 patients (87.9% men) were included. Median age was 67 (53–85) years. 24.2% were smokers and 66.7% former smokers. All patients had ECOG ≤1 at the beginning of treatment. Treatment line of atezolizumab: 12.1% firstline, 72.7% secondline, 12.1% thirdline and 3% fourthline. 87.9% received at least one previous platinum-based line. Median of cycles received and duration of treatment were 5 (1–21) and 4 months, respectively. 81.8% of the patients discontinued therapy: 21.2% due to death and 60.6% due to progression. Median PFS and OS were 5 months (95% CI 3.9 to 6.1) and 15 months (95% CI 1.7 to 28.3), respectively. In IMvigor211, median PFS and OS were 2.1 and 8.6 months, respectively. 39.4% of patients had AE only grade 1–2. The most common AE were fatigue, pruritus and asthenia.

Conclusion and relevance The effectiveness results observed in real clinical practice appear to be superior to those obtained in the pivotal study, although our sample size and design are limited. The safety profile appears to be better than IMvigor211 with a similar toxicity profile.

REFERENCES AND/OR ACKNOWLEDGEMENTS
Conflict of interest No conflict of interest

4CPS-145 EFFECTIVENESS AND SAFETY OF BARICITINIB AND TOFACITINIB IN RHEUMATOID ARTHRITIS IN CLINICAL PRACTICE
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10.1136/ejhpharm-2022-eahp.160

Background and importance Baricitinib and tofacitinib are Janus kinase inhibitors indicated in rheumatoid arthritis (RA) with a demonstrated effectiveness and safety in various clinical trials.

Aim and objectives To evaluate the effectiveness and safety of baricitinib and tofacitinib in patients diagnosed with RA in clinical practice.

Material and methods Retrospective descriptive study that included patients with RA treated with baricitinib or tofacitinib between September 2018 and September 2021. The data were obtained from the review of clinical and analytical histories in Diraya. The variables collected were: age, sex, previous treatment, C-reactive protein (CRP), erythrocyte sedimentation rate (ESR) and follow-up time. To evaluate the effectiveness, the decrease in the value of the inflammatory parameters (ESR and CRP), the reduction in the number of painful joints, the remission of the disease, the dose reduction and the treatment changes were taken into account. Safety was determined based on the adverse reactions (ARs) described.

Results 32 patients with a median age of 55 years were evaluated. 21 received treatment with baricitinib (15 women) and 11 with tofacitinib (10 women). The median treatment time was 18 months. The median of previous treatments in patients with baricitinib was 2 biologics and for patients with tofacitinib of 1 biological. In 13 patients with baricitinib and in 4 with tofacitinib there was a reduction in inflammatory parameters. Baricitinib decreased the number of painful joints in 15 patients and tofacitinib in 11. There was remission in 15 patients treated with baricitinib (of which 5 reduced doses) and in 10 with tofacitinib. 6 ARs related to the use of baricitinib (2 weight gains, 1 neutropenia, 1 herpes zoster, 1