before obtaining the full text for all potentially eligible trials and assessed the included trials for risk of bias. A random-effects meta-analysis was applied to pool event rates with 95% confidence intervals (CIs). We made appropriate clinical treatment recommendations by GRADE Evidence to Decision (EtD) frameworks.
Results A total of 33 RCTs were included with 14 studies in the non-surgical group and all patients with BPH. There was high quality evidence to suggest that the rate of successful trial without catheter (TWOC) favoured alpha-blockers over placebo (odds ratio [OR], 2.2; 95% CI:1.6–3.0). There was moderate quality evidence to reduce the risk of requiring re-catheterisation (OR: 0.5; 95% CI: 0.3–0.7). There was low quality evidence to reduce the incidence of recurrent urinary retention (OR: 0.2; 95% CI: 0.1–0.7). In 19 studies with BPH and non-BPH patients undergoing surgery, there was moderate quality evidence to reduce the risk of postoperative urinary retention (POUR) regardless of gynaecological surgery.
Conclusion and Relevance We strongly recommend patients with a history of BPH or suspected with BPH to accept prophylactic alpha-blockers before catheter removal. Surgical patients are moderately recommended using alpha-blockers to prevent POUR. As for other patients, we must evaluate many factors such as age, gender, medical history, risk of adverse effects, previous urinary catheter experience and indications of indwelling urinary catheters before alpha-blockers application.

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

6ER-019 TREATMENT BEYOND PROGRESSION WITH PEMBROLIZUMAB IN ADVANCED NON-SMALL-CELL LUNG CANCER

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Background and Importance While pembrolizumab became a new standard of care in advanced non-small-cell lung cancer (aNSCLC), limited studies proved the effectiveness of continuing use of pembrolizumab after disease progression.
Aim and Objectives We aimed to evaluate the effectiveness of treatment beyond progression (TBP) of pembrolizumab in aNSCLC patients.
Material and Methods This multicentre study retrospectively analysed electronic medical records from databases of two medical centres and two local hospitals. Patients confirmed aNSCLC who received pembrolizumab (monotherapy or combination therapy) and experienced progression disease between 2016 and December 2021 were enrolled. The first date of disease progression after pembrolizumab used was defined as the index date. We defined patients with at least one pembrolizumab within 60 days as TBP group, other patients were defined as switched group. We followed each patient until death, loss of follow-up and end of June 2023. The primary outcome was overall survival (OS), and the baseline characteristic would be adjusted by inverse probability treatment weighting method. We also evaluated prognostic factors, including progression pattern, metastatic sites and baseline characteristics by using a Cox regression model.
Results A total of 307 aNSCLC were included. Among all, 141 (45.9%) continued receiving pembrolizumab beyond progression, while 166 patients (54.1%) switched to other treatments. Overall, median age was 63.3 y/o, 73.3% were male, 90.6% were with ECOG performance 0–1 and 61.3% had high programmed death ligand-1(PD-L1) expression (≥50%). With median 6.2 (2.0–13.1) months follow-up time, the TBP group had a longer OS than the switched group (median OS: 11.1 vs. 4.5 months, $P < 0.01$).
Conclusion and Relevance While the TBP group was associated with better OS, additional studies are needed to further validate our findings.

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

6ER-020 WOULD CHATGPT PASS THE RESIDENT INTERNAL PHARMACIST EXAM?

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Background and Importance Assessing ChatGPT's performance in the Health Training exam for Pharmacy specialisation (FIR) holds significance in gauging AI's role in healthcare education.
Aim and Objectives To assess ChatGPT's ability to respond to and potentially pass the Health Training exam for Pharmacy specialisation (FIR).
Material and Methods A multidisciplinary team consisting of hospital pharmacists, physicians and biomedical engineers selected an exam version for the 2022 session. One question was excluded due to the presence of an image. A brief introduction, providing context about the FIR exam and its contents, was added at the beginning of the conversation.

ChatGPT's performance, defined as the percentage of correct answers, was evaluated through three different approaches:

1. Two sets of 50 randomly selected questions were manually input into the OpenAI web interface during the same conversation.
2. A total of 209 questions, including both questions and their four possible answers were solved by the Application Programming Interface (API) for Python from a spreadsheet.
3. Open-ended questions lacking predefined possible answers were extracted by API for Python, followed by the application of Natural Language Processing (NLP). NLP assessed the similarity between API-generated responses and actual responses, providing a more accurate evaluation of ChatGPT's human-like performance in a multiple-choice exam. The similarity metric compared feature vectors of sentences and generated a value representing the degree of similarity, with a maximum value of 1 signifying a perfect match and thus a correct answer.

Correct answers received a value of 3 points, while incorrect ones subtract incurred a deduction of 1 point. In the 2022 call, a minimum score of 97 points was necessary to be eligible for allocation of FIR positions.
Results Using the manual inclusion method, we achieved 60% and 66% accuracy in 50 randomly selected questions (score equivalent to 280 and 328 points, respectively). The second method yielded a success a success rate of 45.5 to 49.0%,

equating to 164–192 points. In the third method, values of 50.2–52.6% (200–220 points) were obtained.

Conclusion and Relevance The findings demonstrate ChatGPT's variable ability to provide correct responses to FIR questions depending on the methodology employed. Regardless of the approach, ChatGPT consistently achieved the minimum score required for participation in the allocation of FIR positions.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest.

6ER-021 OPIOID-SPARING STRATEGIES FOR DISCHARGE ANALGESIA PRESCRIBING IN NON-COMPLEX SURGERIES – A MISSED OPPORTUNITY

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Background and Importance Opioids are an integral element of post-operative management for moderate to strong pain. Despite their effectiveness they are associated with a range of adverse effects and excessive opioid prescribing has contributed to a widespread international crisis of addiction and overdose, including across Europe and in Australia. Even minor surgeries can serve as an initial event for opioid-naive patients to become persistent opioid users. In Australia, opioid-related harm and associated deaths have risen along with opioid prescribing.

Guidelines recommend paracetamol and nonsteroidal anti-inflammatory drugs (NSAIDs) to reduce the opioid analgesics use. NSAIDs in particular work synergistically with opioids, providing opioid-sparing effects. Usage in the final 24 hours of hospital admission guides decision-making around prescribing of discharge analgesia.

Aim and Objectives We retrospectively assessed analgesia use patterns in opioid-naive patients undergoing non-complex surgery (length-of-stay 1–4 days post-operatively). We had a particular focus on intermediary analgesia use (NSAIDs and tramadol) and possible NSAIDs contra-indications to short-term use.

Material and Methods Patients undergoing surgery under general surgical teams with a post-operative length-of-stay of 1–4 days were retrospectively identified using case mix codes. Use of opiods, non-steroidal anti-inflammatories, tramadol and paracetamol in the final 24 hours of admission were quantified along with possible contra-indications for use and discharge prescribing.

Results Of 1015 patients assessed there were 555 (55.7%) who were eligible for NSAIDs and/or tramadol and not prescribed this as an inpatient option, although 310 (55.9%) of these patients still received opioids.

In the final 24h of admission 759 patients with no contra-indication to NSAIDs or tramadol did not receive these medications but 314 (41.4%) still received discharge opioids.

79 (7.8%) patients required no opioid analgesia in the final 24 hours but were still prescribed opioid at discharge.

A further 122 (12.0%) were not prescribed inpatient paracetamol 31 (25%) but received discharge opioids.

Conclusion and Relevance There is an abundance of missed opportunity for opioid-sparing strategies to be employed in this cohort. These poor prescribing patterns were largely driven by engrained culture and/or junior prescriber unawareness of options. Further work is underway to define post-discharge analgesia use patterns in order to inform development of clinical decision support to address this issue.

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Conflict of Interest No conflict of interest.

6ER-022 KNOWLEDGE, ATTITUDE AND PRACTICE ABOUT PHARMACEUTICALS IN THE ENVIRONMENT AMONG HOSPITAL PHARMACISTS IN SPAIN

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Background and Importance Healthcare professionals need to be more aware of the negative environmental impact of pharmaceuticals. Hospital pharmacists, in particular, play an essential role in the life cycle of drugs. Their contribution to tackle the problem is going to be pivotal. So far, scant information is available about the level of knowledge, attitude and practice about the issue among hospital pharmacists.

Aim and Objectives To evaluate the knowledge, attitude and practice about the issue of pharmaceuticals in the environment (PiE) among hospital pharmacists in Spain.

Material and Methods A self-administered on-line questionnaire (Microsoft Forms) consisting of 18 questions about knowledge, 10 about attitude, 2 about practice and 3 others was sent via e-mail to all members of the Spanish Society of Hospital Pharmacists (n=4451). The scale used for knowledge questions was variable. The attitude scale, previously validated, is an agreement scale (being 0 'totally disagree' and 10 'totally agree'). Descriptive statistics were performed.

Results 149 hospital pharmacists (3.4%) answered the survey. (75.2% women, mean age 43.7 years). 92 professionals (61.7%) did not know the concept 'emerging pollutants', and 85 participants (57.0%), had not heard of 'One Health'. Only 19 (12.7%) knew about the Environmental Risk Assessment reports of the European Medicines Agency, and the majority (n = 98; 66.2%) responded 'do not to know/no answer' to the question about the most famous ecotoxicological disaster in Asian vultures caused by veterinary diclofenac. 111 (74.5%) knew nothing about the destiny of their hospital wastewaters and 58 (38.9%) admitted to having doubts about pharmaceutical waste management in their setting. On the contrary, 130 (87.2%) correctly identified metered dose inhalers (MDIs) having a higher carbon footprint. Acquiring knowledge about drug pollution was considered very positive (mean score 8.61). Only 17 responders (11.4%) admitted to considering environmental aspects to develop hospital formularies.

Conclusion and Relevance This study shows that there is room for improvement in the knowledge about PiE among hospital