various methodologies, further studies are necessary to compare them in the same conditions. Because each solution has been tested with different contaminants, new studies are required to confirm their ability to decontaminate other conventional anti-neoplastic drugs.

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No conflict of interest.

3PC-027 PRODUCTIVITY ANALYSIS OF AN AUTOMATED COMPOUNDING SYSTEM FOR INTRAVENOUS CHEMOTHERAPY

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Background The automated preparation of anti-neoplastic drugs presents unquestionable advantages in terms of precision, asepsis, traceability and decreased occupational exposure to hazardous drugs, increasing the safety of patients and manipulators.

However, productivity remains one of the great unknowns of this emerging technology.

Purpose The objective of this work is to analyse the productivity of an automated anti-neoplastic preparation system since its implementation in the hospital.

Material and methods In this descriptive study, we retrospectively evaluated the collected data from 4 April 2016 to 16 August 2018. Analysing the following variables: number of working days, number of preparations, preparations per hour, number of preparations per drug, dose accuracy, percentage of cancellations and their causes, time per cycle, percentage of automatic work time, number of cycles and average time per preparation according to user, number of final preparations and average of vials per preparation.

Results The number of mixtures prepared was 1095, 2901 and 2901 in 2016, 2017 and 2018, which represents an interannual increase of 265% and 160% respectively. The number of active ingredients prepared with the robotic system was 10 in 2016, 15 in 2017 and 18 in 2018, with Paclitaxel the most frequently prepared drug. The percentage of preparations with deviations from the theoretical dose greater than 10% was 1.9% in 2016, 1.2% in 2017 and 1.3% in 2018.

No differences were observed in the average time per preparation between the different users. The shortest average time per preparation was obtained in cycles of eight final preparations (6.8 min) and with one vial or less per mixture (6.2 min). The average duration per cycle was 43.2 min, with 54% of automatic work.

The main cancellation causes were: vials and syringes recognition errors, weighing errors, adapter recognition failures and computer problems.

Conclusion An increase in productivity has been achieved since 2016: we obtained the greatest productivity in cycles with eight final preparations and one vial or less per preparation. The cycle cancellations are the main limitations for the increase of productivity. The automatic preparation time represents an opportunity to improve productivity in the robotic anti-neoplastic preparation.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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3PC-028 DOSE-BANDING GEMCITABINE AND STANDARDISATION OF CHEMOTHERAPY PROTOCOLS PRODUCTION

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Background Prescription and production of chemotherapies are generally based on body surface area, as recommended by the literature. However, standardisation of doses of chemotherapy (dose-banding/DB) has shown benefits for patients and better cost management Advantages of DB of chemotherapy are: reduction in variation of doses, medicine waste, patient waiting time and medication errors; increased pharmacy capacity for chemotherapy, manufacturing of complex compounds and participation in clinical trials; and uniform requirements in presentation and doses.

Purpose Determine which of the drugs compounded in our centralised chemotherapy production unit were potential candidates for DB for adults, while guaranteeing patient safety and meeting the needs of physicians, pharmacists and nurses.

Material and methods We extrapolated from our IT system all the adults' chemotherapy protocols containing gemcitabine active substances, in order to analyse the doses most commonly used.

Dose-banding is based on the latest version of the NHS National Dose-banding Table (2016).[1] Sometimes the same protocols are used for different indications and with different doses, therefore we considered them separately. We subdivided the schemes for department, pathology and banded dose.

Results Our centralised chemotherapy production recently started using DB gemcitabine in 19 protocols. The gynaecology department uses 63% of the schemes, for the following indications: ovarian, cervical and endometrial cancer. They foresee the administration of 1000 mg of DB gemcitabine, and uterine leiomyosarcoma (900 mg DB gemcitabine). The medical oncology department uses 37% of the schemes, for indications such as: biliopancreatic cancer (1000 mg DB gemcitabine), metastatic breast cancer (800 mg DB gemcitabine), mesothelioma and non-small-cell lung carcinoma (1250 mg DB gemcitabine). In most of the cases, gemcitabine is administered on the first and eighth day of a 21 day chemotherapeutic cycle and associated with other active substances: bevacizumab, carboplatinum, cisplatinum, dacarbazine, docetaxel and oxaliplatinum.

Conclusion The standardisation of chemotherapeutic doses promotes the rationalisation of pharmacy activity and allows the preparation of batches and acceleration of preparation processes. Efficiency and automation also ensure safety and quality control on chemotherapeutic products. Further studies are needed to investigate product stability and develop an alternative way of planning chemotherapy production.

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No conflict of interest.