combined direct and indirect evidence to estimate pooled hazard ratios (HR) by Bayesian methods. Fixed and random effects were considered. Deviance information criteria (DIC) statistics were evaluated to compare models. I<sup>2</sup> determined the proportion of variability in outcomes due to heterogeneity.

Results Three RCTs were selected. The RCTs assessed the following regimens: Cam+CT, nivolumab plus ipilimumab (N+I), nivolumab plus chemotherapy (N+CT), pembrolizumab plus chemotherapy (Pem+CT) and CT. The common comparator was CT. Two RCTs included patients with 0-1 performance status (ECOG). Cam+CT study evaluated patients with a life expectancy of at least 12 weeks. Results of N+I and N+CT were obtained from a congress abstract. Similar values of DIC (difference <5, no minimun relevance) were estimated for fixed- and random-effects models. Fixed-effects model was selected due to the higher precision of data. I<sup>2</sup> was 25%. Regarding Cam+CT (therapy with the greatest magnitude of effect), HR for OS were: 1.0 (95% CI 0.76 to 1.4) vs Pem +CT, 1.1 (95% CI 0.78 to 1.4) vs N+CT, 1.1 (95% CI 0.81 to 1.5) vs N+I and 1.4 (95% CI 1.1 to 1.8) vs CT. No statistically significant differences were found among Cam+CT. Pem+CT, N+CT and N+I. All schemes with immune checkpoint inhibitor drugs were superior to CT.

Conclusion and relevance This updated NMA showed a greater efficacy benefit of combinations with immunotherapeutic agents over CT in untreated patients with mESCC. Standard first-line therapy could be modified. Safety and efficiency criteria should also be considered in the therapeutic positioning of drugs in this clinical context.

## REFERENCES AND/OR ACKNOWLEDGEMENTS

None

Conflict of interest No conflict of interest

2SPD-013

## INCREASE IN HEALTHCARE COSTS WITH FIDAXOMICIN VERSUS VANCOMYCIN FOR CLOSTRIDIUM DIFFICILE TREATMENT

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Background and importance Clostridium difficile (CD) colonises the human intestinal tract after the normal flora has been disrupted (in association with antibiotic therapy). Clinical guidelines use fidaxomicin as first-line treatment in patients at greater risk for recurrence (age >65 years, compromised immunity, severe CD infection) in accordance with 2021 Infectious Diseases Society of America (IDSA).

Aim and objectives Evaluation of the cost increase in the treatment of *CD* if patients are treated with fidaxomicin instead of vancomycin after the failure of first-line treatment or as first-line treatment according to the age recommendations of the IDSA.

Material and methods Retrospective observational study that included patients diagnosed with pseudomembranous colitis and treated with oral vancomycin for *CD* from 1 October 2020 to 30 September 2021. Clinical sources used were from FarmaTools and the Electronic Medical Record Selene.

Results 97 patients were analysed; 48.45% men, median age 72 (SD 16) years. 9 were empirically treated. 88 pacients were positive for CD. 5 patients died from another pathology

during treatment (3 during the first-line and 2 during the second-line treatment).

73 patients (75.26%) (43.84% men) only needed one line of treatment with vancomycin to achieve a cure. The cost of vancomycin treatment for these patients was  $\leq$  3216.

19 patients (19.59%) (63.16% men) required a second (15 patients) or third line (4 patients) of treatment after the failure of the previous lines. The cost of vancomycin treatment for these patients was  $\leqslant$  2266. These patients could have been treated with fidaxomicin. The total cost would have been increased to  $\leqslant$  30 300.

71 patients (73%) at the time of diagnosis were older than 65 years; 83% first line, 9.86% second line and 7.14% third line. The cost of vancomycin treatment for these patients was € 5461. Following the IDSA criteria, these patients could have been treated from the beginning with fidaxomicin. The total cost would have been increased to € 102 453.

Conclusion and relevance The use of fidaxomicin represents a very high increase in healthcare costs compared to vancomycin. In our study all the patients were cured with the use of vancomycin. It should also be noted that in clinical trials and meta-analyses, fidaxomicin achieves a modest superior efficacy compared to vancomycin.

## REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

2SPD-014

# APPROPRIATENESS OF USTEKINUMAB THERAPY PRESCRIPTION AND REAL-LIFE CONDITION USE IN CROHN'S DISEASE

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Background and importance For the patient with moderate to severe Crohn's disease, first-line options for induction therapy include a biologic agent. Tumour necrosis factor alpha antagonists (anti-TNF $\alpha$ ) are recognised as the primary therapeutic option. Ustekinumab is an anti-IL 12/23 antibody that has been approved for use in patients who have had an inadequate response, show loss of response or are intolerant to conventional treatment or anti-TNF $\alpha$  or have contraindications.

Aim and objectives To describe the prescription of ustekinumab in real-life conditions in our hospital and to assess the appropriateness of ustekinumab prescription.

Material and methods All patients treated with ustekinumab were included during the period 2017–2021. Demographic variables: previous anti-TNF $\alpha$  agents used, dose or interval intensification, drug trough antidrug antibodies measurements, primary or secondary failure, concomitant medication, ustekinumab dose, and reason for switching (biomarkers, symptoms, mucosal inflammation) were collected. Data were obtained from the electronic medical record and prescription application. Appropriateness of prescription: therapeutic drug monitoring, intensification before switching, and contraindications to use of anti-TNF $\alpha$ .

Results The results are shown in Table 1.

Conclusion and relevance Given the high number of patients without therapeutic drug monitoring or with dose or interval intensification, it was decided to create an interdisciplinary commission made up of digestive and pharmaceutical experts in order to optimise drug prescribing in Crohn's disease.

### Abstract 2SPD-014 Table 1 Parameter Result Average age (years) Crohn's disease diagnosis 100% Previous adalimumab and infliximab 19.5% Previous adalimumah 50.1% Previous infliximab 19 5% Previous vedolizumah 43% Previous anti-TNF $\alpha$ and vedolizumab 6.6% Median dose ustekinumah 38.8 mg Combination therapy azathioprine 27.1% Combination therapy budesonide 18.6% Combination therapy methotrexate 22% Combination therapy budesonide + thiopurine 6.6% No combination therapy 45.5% Dose intensification 8.8% Interval intensification 30.1% Dose and interval intensification 6.6% No intensification 54 4% Drug trough concentrations/antidrug antibodies measurement (% 35.2% patients) Monitoring not applicable 19.11% Adalimumab < 7.5 6.6% Adalimumab < 7.5 with positive antibodies 2 2% Infliximah <5 6.6% Infliximah <5 with positive antibodies 2.2% Undetectable concentration 4 4% Undetectable concentration with positive antibodies 2.2% Primary failure 13.23% Secondary failure 56.6% Adverse reactions 13.23% Refused treatment 6.6% Unknown reason 10.34% Symptoms reason + mucosal inflammation reason + biomarkers reason 10% Symptoms reason 58% Symptoms reason + mucosal inflammation reason 32% Inappropiate prescription 56.1%

## REFERENCES AND/OR ACKNOWLEDGEMENTS

Overview of medical management of high-risk adult patients with moderate to severe Crohn's disease up to date. https://www.uptodate.com/contents/overview-of-medical-management-of-high-risk-adult-patients-with-moderate-to-severe-crohn-

Conflict of interest No conflict of interest

## 2SPD-015 | LOGISTICS AUTOMATION AND PROCESS RE-ENGINEERING: IMPACT ON INTER-HOSPITAL LOAN MANAGEMENT

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Background and importance Inter-hospital loans are part of the usual practice in the hospital Pharmacy Department.

Optimisation of this process is key to improved utilisation of resources and time by the hospital pharmacist.

Aim and objectives To evaluate the impact on pharmacist time and economic savings after the automation of the drug storage system in the Pharmacy Department and after the redesign of the inter-hospital loan requesting process (HLRP).

Material and methods Retrospective observational study in which we analysed the loan registry of a Pharmacy Service in 2016 (pre-intervention period) and 2019 (post-intervention period). Regarding the redesign of the process, in 2019 all the stages involved were defined, as well as the professional profile involved in each of them, in this case administrative assistants, pharmacy technicians and pharmacists. The cost in personnel time was estimated based on the average salary of each professional profile. For the pre-intervention period, a multidisciplinary group defined by consensus the time invested by each role involved in HLRP. For the post-intervention period, the times were measured by direct observation. A transport service cost of € 34 per loan was given by the company contracted for this purpose.

Results The number of loan requests was 83 in 2016 vs 61 in 2019, a reduction of 24.20%. There was a reduction of 13 min in the total time spent on HLRP (50 min in 2016 compared to 37 min in 2019). The cost derived from the request of each loan was € 55 in 2016 vs € 40.60 in 2019, resulting in an annual saving of € 2086.98 (45.73%). Overall expenditure was € 4563.57 in 2016 vs € 2476.59 in 2019. Finally, the time spent by the pharmacist decreased from 50 min in 2016 (100% of the activities and time spent) to 2 min in 2019 (5.4% of the time), used only in the assessment of the number of pharmaceutical units requested in the loan. In the post-intervention year this resulted in savings of up to 35.58 hours of pharmacist time spent.

Conclusion and relevance The automation of medication storage systems, together with process re-engineering, improves the efficiency of medication loan management, freeing up pharmacist time to perform more value-added tasks.

## REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

## 2SPD-016

## APPLICATION OF FAILURE MODE AND EFFECT ANALYSIS TO IMPROVE CYTOSTATIC DRUG STOCK MANAGEMENT

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Background and importance Drug stock management is a complex process because space, budget and other external factors such as delivery delays or demand variability must be taken into account. To manage a drug stock properly is a pharmacist's responsibility.

Aim and objectives To carry out a failure mode and effect modal analysis (FMEA) in the cytostatic drug store to improve the stock management process.

Material and methods A multidisciplinary team was assembled to perform the detection of failure modes and their causes through FMEA methodology. Then, risk priority index (RPI) was calculated: frequency (F) × severity (G) × detectability