95% CI. Monotherapy Pb reserves platinum doublet for later use, and additional data for OS in the pemetrexed subgroup is needed for addressing the benefit of the combination. Taking into account the toxicity of adding chemotherapy, the combined regimen should be considered cautiously.

REFERENCES AND/OR ACKNOWLEDGEMENTS

None.

No conflict of interest.

2SPD-011 NETWORK META-ANALYSIS OF FIRST-LINE ANTIANGIOGENIC DRUGS IN ADVANCED RENAL CELL CARCINOMA

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Background Advanced renal cell carcinoma (RCC) presents multiple therapeutic alternatives. Recently, tivozanib has been authorised in this indication.

Purpose To perform a network meta-analysis (NMA) to provide a comprehensive treatment comparison of the efficacy of first-line antiangiogenic treatment in RCC.

Material and methods A review in the Pubmed database and the European Medicines Agency was done. Inclusion criteria: pivotal randomised clinical trials (CT), including antiangiogenic drugs (sunitinib, pazopanib, sorafenib, tivozanib, interferon and bevacizumab) in treatment-naive patients with RCC, with the most mature data of progression-free survival (PFS). Subgroups of CT with pre-treated and treatment-naive patients were assessed. Exclusion criteria: pivotal CT without a comparator common to the alternatives evaluated. The evaluated outcome was PFS. NMA combined direct and indirect evidence to calculate pooled hazard ratios (HR) by Bayesian methods. Fixed and random effects were evaluated. Models were compared using deviance information criteria (DIC) statistics. The consistency of NMA was assessed by node-splitting models to assess agreement of direct and indirect estimations.

Results Seven eligible CT were selected. Three CT included pre-treated patients and treatment-naive patients. No statistical interaction was found between pretreated and treatment-naive patients, so global results were used for the analysis. Inclusion criteria involved 0–1 (ECOG) performance status in all CT. Sorafenib studies included patients with life expectancy $\geq$3 months. The value of DIC was found more favourable for the fixed-effects model. NMA was consistent because node-splitting models detect no statistical differences between direct and indirect evidence. Regarding sunitinib (treatment with the greatest magnitude of effect), HR for PFS were: 0.39 (CI 95% 0.30 to 0.51) vs. placebo, 0.56 (0.47 to 0.66) vs. interferon, 0.74 (0.56 to 0.97) vs. sorafenib, 0.89 (0.70 to 1.1) vs. bevacizumab plus interferon, 0.92 (0.65 to 1.30) vs. tivozanib, and 0.93 (0.80 to 1.10) vs. pazopanib. CI 95% for HRs among bevacizumab plus interferon, pazopanib, sunitinib and tivozanib included a neutral value. Tivozanib (HR 0.74; 0.56 to 0.97) and sunitinib (0.80; 0.64 to 0.99) – but no other antiagiogenics – showed benefit over sorafenib. Statistically significant benefit was found between all drugs over interferon and placebo.

Conclusion The NMA provided a review of the relative efficacy of current antiangiogenic alternatives for RCC in terms of PFS. Bevacizumab plus interferon, pazopanib, sunitinib and tivozanib showed no differences. Sorafenib was inferior to sunitinib and tivozanib.

REFERENCES AND/OR ACKNOWLEDGEMENTS

None.

No conflict of interest.

2SPD-012 RELATIVE VALUE UNITS AS A PRODUCTIVITY SCORE OF MANAGEMENT OF ONCOLOGY MEDICATION IN SPECIAL SITUATIONS

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Background Relative value units (RVU) as a clinical management tool prove to be useful in measuring different pharmaceutical activities. However, little is known about RVU for the management of medication in special situations.

Purpose To measure productivity in the management, dispensation, elaboration and pharmaceutical care activity of oncology medication in special situations: expanded or early access (EA) and 'off-label' use in a pharmaceutical department by estimating RVU.

Material and methods Retrospective and observational study performed in a tertiary hospital. Data from all EA and off-label use oncology drugs requests were collected from January 2015 to February 2018 (38 months).

Variables collected active drug, kind of drug in special condition (EA/'off-label') and length of treatment. Pharmaceutical processes included: management, dispensation, elaboration and pharmaceutical care.

RVU assigned to each activity have been obtained from a standardised document drawn up by the Spanish Society of Hospital Pharmacists.[1]

Results Seventy-five oncology drug requests were analysed, of which 58 (77.3%) were EA. Nivolumab nine (13%), pertuzumab/cabonzatinib seven (10%), bevazicumab/liposomal irinotecan six (9%) and trametinib/durvalumab five (7%) were the most requested. The average length of treatment was 5.9 months.

Abstract 2SPD-012 Table 1

Activity area	RVU value	Total produced RVUs
1. Management area	19.82	4677.52*
1.1. Processing of drugs (initial and consecutive application)		
2. Dispensation area		
2.1. Successive dispensations in outpatient	5.08	960.12
3. Elaboration area	16.02	128.16
3.1. GMP of new cytotoxic preparation	79.15	23190.95
3.2. Elaboration of cytotoxic drug		
4. Pharmaceutical care area	39.58	1385.3
4.1. To inpatient about specific drug therapy	13.19	3403.02
4.1.1. Initial	21.11	675.52
4.1.2. Successive		
4.2. To outpatient.		
4.2.1. Initial		

*In total, 4,320.76 (92.4%) were processing of EA drugs.

Conclusion The pharmaceutical process with the highest productivity was elaboration of cytotoxic drugs. The processing of EA vs 'off-label' in oncology means 92.4% of total management activity.

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No conflict of interest.

2SPD-013 ECONOMIC IMPACT OF THE USE OF FLAT DOSE VS PERSONALISED DOSE OF PEMBROLIZUMAB

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Background Pembrolizumab is a highly selective anti-PD-1, approved for the treatment of metastatic melanoma, lung cancer and other advanced malignancies. The dosage was changed from a personalised dose to a flat dose. We suspected that using a newly approved dose of 200 mg for all patients may be an unnecessarily high dose, given the average weight of our patients, 70 kg.

Purpose The objective of this study is to demonstrate the economic impact of the use of a flat dose (200 mg) vs personalised dosing (2 mg/kg) vs dose banding.

Material and methods We collected data from all pembrolizumab's prescriptions, between March and August 2018, from our software.

The data were processed: by date, weight, diagnosis and number of therapies prepared. Then we calculated the actual number of milligrams used and the related economic impact value of the 3 strategy.

Results From March to August 2018, 81 patients were treated, 56 men and 25 women. The most frequent diagnosis was melanoma (43) and lung cancer (38). The mean weight of the patients was 71.8 kg. In this 6 months' period we prepared a total of 372 preparations in a personalised dose (2 mg/kg), 53424 mg were prescribed, for a value of € 1.118.9218,24. Simulating the same preparation with a flat dose, would have prescribed 74400 mg, with a value of € 1,656,144.00, an increase of 39% (€ 466,925.76). Simulating the same situation with dose banding (we use NHS table banding as an example), 51 775 mg would be prescribed, with a value of € 1,152,511.00, a small decrease of 3%.

Conclusion Our analysis shows how the introduction of the flat dose can undermine the sustainability of these high-cost therapies. The Food and Drug Administration determined, on the basis of pharmacokinetic models, that the 200 mg dose is comparable to that of 3 mg; but the same studies show that there are no clinically significant effects on safety and efficacy between the two doses. From our perspective it is important to consider strategies to minimise wastage without compromising the efficacy, such as dose banding, or organisation of the Pembrolizumab's Day, which could help to alleviate pressure on drug budgets.

REFERENCE AND/OR ACKNOWLEDGEMENTS

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No conflict of interest.

2SPD-014 MULTIDISCIPLINARY STOCK MANAGEMENT AND REDUCED DISTRIBUTION OF MEDICINE UP TO A DRUG PATENT EXPIRY REDUCED EXPENSES WITHOUT COMPROMISING MEDICINE SUPPLY IN A HOSPITAL SETTING

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Background When a drug patent expires, prices usually fall dramatically with the entrance of generic competitors. While the economic benefit from this price reduction is obvious, the benefit is often dampened by two conditions: when the hospital shortly before the patent expiry hands out medicine to patients that covers several months' home treatment, patients use the expensive original product at home after the availability of cheaper generic products; and the patent expiry is followed by a transition period where the hospital uses the original product despite the availability of cheaper generic products because there is a stock of original product.

Purpose The aim of this project was to increase the economic benefit of a drug patent expiry by reducing the unnecessary use of the original product after the entrance of generic competitors without putting supply at risk.

Material and methods The handing out of medicine to patients was fitted to the tender period end date instead of consistently handing out medicine for 6 months' treatment. Moreover, the stock of the original product was depleted before the beginning of the new tender period. The tender organisation interviewed presumed generic suppliers in advance of the tendering process to guarantee low prices and supply reliability. The effects on the economy and supply reliability were evaluated.

Results The controlled reduction of stock and medicine handouts to patients of the original product led to a reduction in medicine expenses of approx. € 1.4 million (corresponding to a 54% reduction) in the past five months before patent expiry. The supply of the generic product was sufficient in the whole country. Close collaboration between the hospital pharmacy, the tender organisation and the clinic appeared crucial to the success of the new method without putting the medicine supply to patients at risk.

Conclusion Collaboration between the hospital pharmacy, the tender organisation and the clinic prevented unnecessary use of the original product after patent expiry and a fast transition to the generic product, which reduced medicine expenses without compromising the medicine supply.

REFERENCES AND/OR ACKNOWLEDGEMENTS

None.

No conflict of interest.

2SPD-015 RISK-ADAPTED MANAGEMENT OF DRUG SHORTAGES TO ENSURE PROPER CARE FOR PATIENTS IN MEDICAL NEED

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Background The experienced increase of drug shortages (DS) in recent years has obliged pharmacists to monitor the actual