Conclusion and Relevance Based on our findings, TT and ICI therapies are comparable to pivotal studies in terms of duration, safety, and reasons for treatment discontinuation. In patient mut-BRAF, TT seems to show a better RFS when compared to ICI. However this could be due to the different stages of disease; stage IV (visceral involvement) is eligible only for ICI therapy and this can lead to a worse prognosis.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest

4CPS-143 CORE BINDING FACTOR ACUTE MYELOID LEUKAEMIA FOLLOWING IMMUNE CHECKPOINT INHIBITION FOR SOLID TUMOURS: TWO CASE REPORTS AND LITERATURE STATE OF THE ART

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Background and Importance Immune checkpoint inhibition (ICI) can induce responses in patients with advanced malignancies. Although a well-established downside of ICI is its diverse spectrum of immune-related adverse events, the incidence of second primary malignancies associated with ICI is still a matter of debate.

Aim and Objectives We present two consecutive patients treated in our Hospital in 2022 who developed clinically acute myeloid leukaemia (AML) during or after ICI treatment for solid tumours.

Patient 1 is a man with a previous history of metastatic lung adenocarcinoma treated with pembrolizumab, which was stopped due to complete response (CR) 5 months before diagnosis of AML in April 2022. Patient 2 is a woman, with a previous history of ductal breast cancer treated with adjuvant chemoradiotherapy; she also developed a metastatic V600E BRAF-mutated melanoma, treated with BRAF/MEK inhibitors. Finally after two months of pembrolizumab, she developed AML in April 2022.

Material and Methods In both Patients 1 and 2, peripheral blood (PB) and bone marrow blood testing confirmed Core Binding Factor (CBF) AML, according to the presence of (inv16) (p13;q22) in 80% and 70% of blasts in the PB, respectively.

According to ESMO AML Guidelines, therapy with gemtuzumab ozogamycin associated standard chemotherapy was recommended for both patients.

Results Patient 1 achieved a CR after induction and consolidation therapy; patient 2 performed cytarabine-based consolidation therapy due to leukaemia-aberrant immunophenotype. Both patients are alive at current follow-up (4 months after diagnosis).

Conclusion and Relevance A case of AML after 3 cycles of pembrolizumab for the treatment of non-small-cell lung cancer and 5 cases of myeloid neoplasia after treatment with ICIs were recently reported.

Hyperprogression of subclinical myeloid malignancies could be a potential explanation since a myeloid clone with acquired driver mutation(s) could obtain an extra proliferation advantage from functional myeloid PD-1 knockout after ICI. Abberant PD-1 expression was observed in 8–26% of CD34+ blasts in myelodysplastic syndromes, chronic myelomonocytic leukaemia, and AML. Moreover chemotherapy and BRAF inhibitor exposure, together with short exposure to pembrolizumab in Patient 2, suggest a major role of previous therapies in the development of AML.

The correlation between ICI and myeloid neoplasias is still uncertain.

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Conflict of Interest No conflict of interest

4CPS-152 PERSISTENT CYTOPENIA AFTER CAR-T CELLS: TREATMENT WITH ELTROMBOPAG: A CASE REPORT

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Background and Importance Impaired haematopoietic recovery is observed in about 30–50% of patients treated with anti-CD19 CAR-T cells, with prolonged cytopenia appearing as an unmet need for optimal treatment. Generally, treatment consists in the use of erythropoietin and G-CSF (Granulocyte Colony Stimulating Factor). Thrompopoietyn receptor agonists (TPOa) can be on option too, on the basis of their consolidated use in refractory poor graft function, following allogeneic stem cell transplantation and aplastic anaemia.

Aim and Objectives We present a 72 year old patient who received commercial tisagenlecleucel treatment for a diffuse large B-cell lymphoma (DLBCL) in July 2021. Complete molecular response at one month from infusion was obtained but persistent cytopenia was developed, requiring transfusional support.

Material and Methods At 28 days from CAR-T infusion, the patient showed pancytopenia, which persisted in the following months and required transfusions of both platelets and erythrocytes. No clinical response to erythropoietin nor G-CSF was obtained. In March 2022, bone marrow examination allowed to exclude the myelodysplastic syndrome diagnosis and showed relative myeloid hyperplasia and altered distribution of megakaryocytes. In June 2022, the patient was receiving monthly transfusion of erythrocytes and fortnightly transfusion of platelet, despite supportive care. Complete molecular response of lymphoma was confirmed. Treatment with eltrombopag was started at 50 mg/day.

Results Haematologic recovery was progressively obtained, achieving independence from transfusion as 40 days since starting the eltrombopag therapy; treatment with erythropoietin was stopped at 60 days and the G-CSF administration frequency was progressively reduced to 1 G-CSF dose per week. Eltrombopag dose was maintained at 50 mg/day, with no side effects.

Conclusion and Relevance The mechanism for late-onset cytopenia following CAR-T cells is still not clear, but it could be related to the sustained role of cytokines secreted by CAR-T cells during their expansion phase and during the following persistence phase. A series of 6 patients treated with eltrombopag and one patient treated with romiplostim are reported, with positive results in terms of haematological recovery. Although, further data on the role of TPOa in post-CAR-T

bone marrow toxicity are needed as a few reports are available.

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Conflict of Interest No conflict of interest

4CPS-156 ANALYSIS OF EFECTIVENESS AND COSTS OF DRUG THERAPY PRESCRIBED IN SPECIAL SITUATIONS IN OUR HOSPITAL

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Background and Importance A marketing authorisation is a general rule in the legal framework of medicines. However, EU legislation does not regulate how drugs are ultimately used in medical practice.

The Royal Decree 86/2015 regulates the Pharmacy and Therapeutics Committee of the Balearic Islands. This P&T-Committee is an advisory panel of experts, composed by pharmacysts and physicians, which elaborate technical reports to allow or deny drugs prescribed in special situations: off-label drugs(OLDs), compassionate drugs(CDs) and drugs not included in the hospital's pharmacotherapeutic guide(HPG).

Aim and Objectives To analyse the clinical response achieved by the treatments approved by P&T-Committee and their associated costs.

Material and Methods Prospective study of the drugs requested to the P&T-Committee between January/20-December/21.

A Microsoft-Access® database was created for collecting the variables: type of treatment (OLD,CD or not included in the HPG), level of evidence, clinical response, adverse effects and costs. Clinical response was defined as success or failure based on the therapeutic objective established by the physician at the time of the request. The cost was calculated based on the duration of the treatment until the objective was achieved or until treatment was discontinued.

The data were obtained from patients' electronic medical records(HP-HCIS®).

Results In total, 182 requests were approved: 30.8% successes, 29.7% failures, 6.6% interrupted because of adverse effects, 8.7% not initiated and in 24.2% insufficient time had passed for them to make a valid assessment of the real effectiveness.

Almost half of the treatments(44,5%) were considered to have a high level of evidence. In reference to the type of treatment: 57.5% were OLDs, 35.5% were drugs not included in the HPG and 7% were CDs. Oncology and Haematology submitted more than 50% of the requests.

The overall estimated cost of the 182 authorised treatments was 3.672.751,93€ . The average cost per request was 20.179,93€ . The medical services that have a greatest impact on the cost were Oncology(35.307,22€ /treatment) and Haematology(20.686,16€ /treatment).

Conclusion and Relevance The percentage of treatments analysed that achieved their therapeutic goal was very similar to those that didn't, probably because of the high level of heterogeneity of the treatments analysed. However, we can't ignore the high economic impact of these drugs and we need to define therapy follow-up plans.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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4CPS-159 ESTIMATING RENAL FUNCTION FOR DRUG DOSING: CORRELATION BETWEEN CKD-EPI AND COCKCROFT-GAULT IN AN ELDERLY POPULATION

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Background and Importance Estimates of glomerular filtration rate (eGFR) should provide accurate measure of an individual's kidney function. This is even more important in old people since there is age-related physiological change in the kidney, which could lead to reduced GFR. The overestimation of GFR may lead to drug toxicity and the underestimation may lead to sub-therapeutic drug levels.

Use of multiple equations to evaluate renal function can lead to differences and corresponding drug dosing regimens. The Cockcroft-Gault (CG) equation, despite inaccurate in the elderly, remains the most widely used equation for determining the creatinine clearance (CrCl). On the other hand, estimation of GFR using the CKD-EPI has gained increasing acceptance. This formula is used to classify chronic kidney disease.

Aim and Objectives To determine the correlation between estimated CrCl by CG with eGFR by CKD-EPI. Additionally, we have compared the differences among dose adjustments recommendations and evaluated the patient's profile in the most discrepant results.

Material and Methods The study included hospitalised patients in the Medicine ward aged 70 and above with prescriptions of enoxaparin, meropenem, amoxicillin + clavulanate and piperacilin + tazobactam. Demographic data and serum creatinine (SrCr) were collected. CrCl was calculated using CG equation and eGFR by CKD-EPI 2021 equation.

Results

Population characteristics	
Number of patients	32
Men	12
Women	20
Mean age (years)	85,6
Mean serum creatinine (mg/dL)	1,71
Number of enoxaparin prescriptions	26
Number of meropenem prescriptions	8
Number of amoxicillin + clavulanate prescriptions	3
Number of piperacillin and tazobactam prescriptions	2

Characteristics of patients with different drug dose recommendation						
Age	SrCr (mg/dL)	Weight (kg)	Height (cm)	CrCl CG (mL/min)	GFR CKD (ml/min/1.73m2)	Prescription
92	1,24	50	155	22,85	40,83	Enoxaparin +Meropenem
94	1,33	53	150	21,64	37,07	Amoxicillin + clavulanate
81	1,6	65	160	28,3	32,2	Enoxaparin
91	2,24	80	170	24,31	27	Meropenem

Abstract 4CPS-159 Figure 1

Conclusion and Relevance In only four patients did difference in the estimation of renal function using the two equations, leading to different drug dosing recommendation. One patient had both enoxaparin and meropenem prescribed, all others only one drug. It seems that it is safe to use the CKD-EPI equation to drug dosing, with caution in patients with extreme weight and age characteristics. Future studies should