

**Purpose** To assess the budget impact of introducing FCM in the current practise for treating postoperative anaemia in orthopaedic surgery.

**Materials and Methods** A budget impact model (BIM) was built from a hospital perspective. Study population consisted of patients who underwent total hip or knee replacement in 2011. Costs are estimated by micro-costing for treatment costs and questionnaire for nursing costs. A reference case is based on the present patient case-mix. Simulations consider different substitutions: simulation A 100% ISC for FCM, simulation B 100% ISC and 50% oral iron for FCM and simulation C 100% ISC and 100% oral iron for FCM. One-way sensitivity analysis is applied to simulations.

**Results** Population: 314 patients (210 women) underwent 327 operations (205 total hip replacements), mean age was 71.6 years. Costs per treatment: oral iron €0.57, ISC €60.48, FCM €82.46 and transfusion €431.13 (no patient received erythropoietin treatment during hospitalisation). Average costs per patient: reference case €161.63, simulation A €169.83, simulation B €195.93 and simulation C €219.85. Total costs per year: reference case €44 124.20, simulation A €46 364.85 (+5%), simulation B €53 488.94 (+21%) and simulation C €60 018.12 (+31%). Discussion: BIM is very sensitive to variations in transfusion rate, moderately sensitive to variations in treatment costs and insensitive to variations in nursing costs. Economically, simulation A is feasible for many patients, simulation B is feasible, but simulation C is not.

**Conclusions** FCM will be added to the hospital formulary. A further study is needed to define substitution modalities in the real-life situation. BIM has contributed to this decision-making process.

No conflict of interest.

#### **OHP-079 TUMOR NECROSIS FACTOR BLOCKERS IN RHEUMATOLOGY; CONVENTIONAL VERSUS OFF-LABEL DRUG DOSAGE**

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**Background** Drug dosage modifications are a common clinical practise regarding Tumor Necrosis Factor (TNF) blockers, using posologies not specified on the authorised product information summary. This practise has a significant financial impact on the healthcare system.

**Purpose** To revise and investigate actual drug dosages in our Hospital's rheumatology service for conventional TNF blockers.

**Materials and Methods** The Pharmacy Service analysed the internal data record for rheumatology patients treated during April 2012 and for at least one year with infliximab (IFX), etanercept (ETN) or adalimumab (ADA). Off-label indications were excluded. Therapeutic indication, initial and current posology were recorded.

**Results** Number of patients by drug;

IFX	ETN	ADA
128	152	121

Number of patients by indication:

RA	AS	PA	JIA
208	109	79	5

RA: Rheumatoid arthritis, AS Ankylosing spondylitis, PA psoriatic arthritis, JIA: Juvenile idiopathic arthritis

Regarding posology, 261 patients (65%) were on a conventional dose (CD), 93 (23%) on a reduced dose (DR) and 47 (12%) on an increased dose (DI)

Percentage of patients by drug on CD, DR or DI was;

Treatment/posology	CD	DR	DI
IFX	33%	35%	32%
ETN	79%	21%	–
ADA	82%	14%	4%

Percentage of patients by indication was;

Indication/posology	CD	DR	DI
RA	65%	19%	16%
AS	59%	32%	9%
PA	72%	24%	4%
JIA	80%	20%	–

**Conclusions** Only 65% of patients using TNF blockers on rheumatology use a CD while a quarter of them have a reduced posology.

Infliximab is the drug that requires more dosage modifications, on almost 2/3 of patients.

AS and PA are the indications that allow more DR.

Drug dosage revisions at the end of the first year of treatment allow an important number of patients to reduce their dose while controlling their disease and it is a relevant efficacy instrument.

No conflict of interest.

#### **OHP-080 USE OF CHEMOTHERAPY NEAR THE END OF LIFE**

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**Background** Appropriately timed cessation of chemotherapy is integral to the patient's quality of life.

**Purpose** To describe and evaluate the use of chemotherapy in cancer patients in their last days of life.

**Materials and Methods** Retrospective observational study that included all cancer patients who died in our hospital in 2011. Information sources used were: a) Mambrino for the age, date of death of the patient and clinical charts; b) Oncofar to record the type of cancer, the last cycle of intravenous (IV) chemotherapy received, the historic administration, lines of treatment and the percentage of the last dose received; c) APD-Athos to review data from the patient's hospital stay and outpatient oral cytostatics dispensing. We collected for each patient their demographics, pharmacotherapy, the temporal interval between the last chemotherapy administration and death of the patient and the number of days in hospital one month before death.

**Results** A total of 94 patients (30% female) died in 2011 in our hospital. Of these, 10 patients didn't receive chemotherapy, 10 received IV chemotherapy combined with oral, 4 received oral chemotherapy alone and 70 IV chemotherapy alone. Tumours with the highest number of deaths were non-small cell lung cancer (21), head and neck cancer (11) and colorectal cancer (10). The most common last chemotherapy regimens were combinations of carboplatin (16) (especially with pemetrexed and paclitaxel), gemcitabine (11) (mostly alone), combinations of cisplatin (9), paclitaxel (9) (alone or combined with carboplatin) and monoclonal antibodies (9) (in 67% combined with bevacizumab); the most frequent oral chemotherapy drugs were erlotinib (4) and temozolomide (3). Of the 80 patients who received IV chemotherapy, 27.5% (22) received chemotherapy in the last 14 days of life, another 27.5% (22) received chemotherapy between 15 and 30 days before death, 21.25% (17) between 31 and 60 days, 13.75% (11) between 61 and 90 days and 10% (8) more than 90 days before death. In addition, 14% (12)

started a new IV chemotherapy regimen a month before death. About lines of treatment, 45.25% (38) of the patients received first-line chemotherapy, 20.25% (17) in second line, 21.4% (18) in third line and 13.1% (11) received more than 3 lines of chemotherapy. In 48.75% (39), the percentage of the last dose of IV chemotherapy administered was  $\leq$  80%. All patients were admitted to the Oncology floor at some point in the last 30 days of life, with an average stay of 9.73 days.

**Conclusions** The percentage of patients receiving IV chemotherapy in the last 14 days of life and that of those who started with a new regimen a month before death are much higher in our hospital than in similar studies. In view of the results obtained, more than half of these patients received IV chemotherapy in the last month of life. This makes us ask ourselves what factors contributed to this decision to treat, were the benefit and toxicity correctly assessed and was it really necessary to have active cancer treatment in the last days of life?

No conflict of interest.

#### **OHP-081 USE OF LOW THERAPEUTIC UTILITY DRUGS IN AN INSTITUTION BEFORE THEIR USE WAS RESTRICTED IN THE SPANISH HEALTH SYSTEM**

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**Background** Low therapeutic utility drugs (LTUDs) are those with controversial efficacy that provide little improvement for the disease or the symptoms.

These drugs have recently been removed from the system financing Spanish healthcare, with the aim of controlling healthcare expenditure.

**Purpose** To assess the use of these drugs in institutionalised older people and find out how the new law may be affecting it.

**Materials and Methods** This was a retrospective transversal study. We choose one day at random and checked all treatments prescribed that day.

The following data were collected: drugs, sex, age and LTUDs.

The data were obtained from the SAVAC programme and processed in Excel.

**Results** A total of 175 residents were included, mean age 89 years old.

LTUDs were administered to 65 people (37%).

There were 1812 different drugs, of which 88 (4.9%) were LTUDs, measured as number of dosage units.

Drug consumption in primary care (PC) is measured by number of packs, not as number of dosage units. During the study, PC consumption of LTUD accounted for 6.86% of the total.

The LTUDs prescribed were: 26 items (30.3%) acetylcysteine, 18 (21.5%) topical diclofenac, 12(14.4%) citicoline, 10 (12.0%) trimetazidine, 9 (10.8%) pentoxifylline, 4 (4.9%) piracetam, 2 (2.5%) ambroxol, 1 (1.2%) acetaminophen plus codeine, 1(1.2%) escine and 1(1.2%) inhaled mesna.

**Conclusions** Institutionalized older people use fewer LTUDs than patients from PC.

Mucolytic agents and topical NSAIDs are on top of the list, accounting for 50% of the LTUDs used.

Nearly 40% of institutionalised people will have to pay for these 5% of their drugs, or these medicines will have to be removed from their treatments.

Better designed studies should be done to clarify the real efficacy and efficiency of this large group of drugs.

No conflict of interest.

#### **OHP-082 USE OF STANDARD PROTOCOLS FOR TOTAL PARENTERAL NUTRITION IN A TERTIARY UNIVERSITY HOSPITAL**

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**Background** One of the clinical pharmacist's main functions in parenteral nutrition is to ensure the quality and safety of the solutions prepared. It is too laborious to do this with each preparation. So in our hospital it was decided to design 21 standard Total Parenteral Nutrition (TPN) protocols.

**Purpose** To analyse the prescriptions for TPN and their compliance with the standard protocols available.

**Materials and Methods** A retrospective study was conducted over a period of one year (October 2011–October 2012). The composition of all TPN administered to adults was recorded, as well as the addition of various drugs such as insulin or somatostatin. Data were obtained from the pharmacy service's nutritional database.

**Results** 629 adult patients were treated with TPN and received 8342 bags of TPN; 3129 (37.5%) fitted the standard protocols. The changes in the composition of TPN in non-standard TPN bags were: glucose added to 117 (2.3%) bags, lipids in quality 2276 (44.4%) and in quantity 374 (7.5%), nitrogen to 223 (4.3%); electrolytes: sodium to 238 (4.6%), calcium to 7 (0.1%), magnesium to 181 (3.5%), potassium to 3054 (59.6%) and phosphorus to 245 (4.8%); volume to 117 (2.3%), somatostatin to 545 (10.6%) and insulin to 862 (16.8%).

Composition of protocols ranged from: nitrogen: 6 to 20 g, increasing the amount of nitrogen from 2 by 2 g, glucose: 150–200–250–300 g, lipids 0–50–75–100 g, kcal non-protein/g nitrogen from 87.5 to 187.5 and volume 1350–2000–3000 mL. All protocols contained the same amount of electrolytes (sodium: 75 mEq, potassium: 60 mEq, calcium: 15 mEq, magnesium: 15 mEq, chloride: 90 mEq, acetate: 75 mEq and phosphorus: 10–20 mMol), vitamins and trace elements.

**Conclusions** 61% of administered TPN needed to be modified with respect to standard protocols in order to meet the nutritional requirements of individual patients. So we are considering revising the protocols regarding the quality of lipids and amount of potassium.

No conflict of interest.

#### **OHP-083 USTEKINUMAB FOR THE TREATMENT OF PSORIASIS IN A TERTIARY HOSPITAL**

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**Background** Ustekinumab is a fully human IgG1 $\kappa$  monoclonal antibody against interleukin 12 and 23 indicated for the treatment of moderate to severe plaque psoriasis in adults who have failed to respond to previous treatment. The recommended posology is an initial dose of 45 mg (90 mg with a body weight > 100 Kg) subcutaneously, followed by the same dose 4 weeks later, and then every 12 weeks thereafter.

**Purpose** To analyse the use of ustekinumab in our hospital since its launch.

**Materials and Methods** Retrospective longitudinal study of all the patients with psoriasis treated with ustekinumab since its launch in January 2009 in a tertiary hospital. Data was obtained from the records of outpatients who get their medicines from the hospital pharmacy, and before February 2010, we used records of