**Materials and Methods** This descriptive observational study was carried out in a General Hospital, over a period of 24 months between January 2010 and December 2011. All patients diagnosed with AMD who received at least one dose of intravitreal ranibizumab were included.
**Results** 77 patients were included in the study, with a total of 82 eyes treated. This involved the administration of 259 injections of intravitreal ranibizumab. Each dose cost €549.75. In total, the consumption of intravitreal ranibizumab to treat the AMD during the period of study carried an expense of €142,385.25.

Considering that the unit cost of intravitreal bevacizumab is €4.08, the administration of this drug instead of ranibizumab would have cost €1,056.72.
**Conclusions** Ranibizumab is 135 times more expensive than bevacizumab.

In this group of patients, the use of bevacizumab would have reduced costs by approximately €141,000.

No conflict of interest.

## OHP-018 COST-MINIMIZATION STUDY ASSOCIATED WITH TWO STRATEGIES OF INTRAVENOUS CHEMOTHERAPY: PERIPHERALLY INSERTED CENTRAL CATHETERS VERSUS SUBCUTANEOUS CENTRAL VENOUS ACCESS PORTS

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**Background** Subcutaneous central venous access ports (CVPs) and peripherally inserted central catheters (PICCs) are two widely used devices for the administration of chemotherapy. Many studies focus on their complications but no cost study could be found in the literature.
**Purpose** To determine which technique allows cost minimization in the administration of chemotherapy.
**Materials and Methods** We constructed a Markov chain (TreeAge Software) from literature data in which probabilities were adjusted to the duration of one cycle (21 days).

Time horizon was 5 cycles. Population was oncohaematology.

Four states were identified for patients: absence of complications; mechanical complications, infectious complications and obstructive thrombotic complications.

Three consequences were isolated: the maintenance, removal or reinstallation of the catheter.

Costs were estimated from care protocols of a French University Hospital, from treatment recommendations and the French 'Common Classification of Medical Acts'.
**Results** Adjusted complication rate (%): (Table)

Cost of these strategies:

PICC (with fixture) = €542
PICC (without fixture) = €486
CVP = €550

The financial gain on the purchase of PICCs doesn't recoup the costs associated with maintenance and management of their complications.

Limits: the study is based on a literature review with a low number of subjects (PICCs) and foreign data (CVPs).The foreign data cannot necessarily be applied to French practise (PICC thrombosis rate in France < international rate).

Moreover unlike the CVP group, the majority of PICC complications are mechanical and therefore depend on the hospital maintenance practises.
**Conclusions** Costs incurred by the two strategies are equivalent; however we economise on PICCs when the care protocol doesn't change the fixture every time.

Abstract OHP-018 Table 1 Adjusted complication rate (%)

| Complications | Infectious | Mechanical | Obstructive/ thrombosis | Absence of complications |
|---|---|---|---|---|
| CVP | 0.41 | 0.16 | 0.31 | 99.1 |
| PICC | 0.76 | 9.28 | 0.76 | 82.3 |

No conflict of interest.

## OHP-019 DAY-1 CALL IN AN ONCOLOGY DAY UNIT: WHAT IMPROVEMENTS?

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**Background** The preparation in advance of anticancer drugs can decrease the waiting time of patients in oncology day units.
**Purpose** To establish a system of phoning patients before their session (D-1 call) to cheque their availability. A year after its deployment, we evaluated the impact of this plan.
**Materials and Methods** The oncologist and a nurse call patients one day before their appointment. The prescriptions are validated when the patient's condition permits it in the light of the patient's biological assessment, done in an outside medical analysis laboratory, and an interview using a standardised questionnaire. After pharmaceutical validation, anticancer drugs are prepared in the afternoon for the next day. Indicators of routine monitoring were defined.
**Results** A median of 13 patients with 23 planned day-hospital appointments were called the day before their appointment. An oncologist validated the treatment of 45% of the patients on D-1 and 95% of the cancer treatments were delivered on D1 before 9:00 am. The total time the patients spent in the unit was reduced from 273 minutes to 242 minutes after our plan was adopted. The average time between the end of the medical consultation and the start of the treatment went down from 79 minutes before the D-1 call to 52 minutes. In addition, 2/3 of patients received the treatment only 30 minutes after seeing their doctor. Finally, fewer than 2% of anticipated preparations were not administered.
**Conclusions** The D-1 call requires significant effort, but it enables us to improve the organisation of care in the oncology day unit and the preparation of the anticancer drugs by the pharmacy's production unit. The workload is more even throughout the day and is not stressful for the staff. All of this contributes to making the system safer. We are hoping to extend the D-1 call to the oncology week unit and evaluate patient satisfaction.

No conflict of interest.

## OHP-020 DE-ESCALATION STRATEGY OF EMPIRICAL ANTIBIOTIC TREATMENT WITH CARBAPENEMS

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**Background** Therapeutic de-escalation enables us to improve the effectiveness of empirical antimicrobial therapy and avoids the development of resistance.
**Purpose** To analyse the preliminary results of a pilot project of pharmacy interventions to achieve de-escalation of treatment with carbapenems, within a programme of optimisation of antibiotics use.
**Materials and Methods** Prospective study of pharmacy interventions aimed at de-escalation in patients starting treatment with carbapenems, over three months (from March to June 2012) in a

tertiary hospital, based on available microbiology results. The de-escalation suggestion was made through the electronic prescribing software. The variables analysed were: number of patients prescribed carbapenems, prescribing speciality, request for cultures, micro-organisms isolated and interventions performed. De-escalations carried out without pharmacy intervention were also assessed.

**Results** Total number of prescriptions was 433. The most prescribed carbapenem was ertapenem (37.6%) followed by meropenem (36%). The carbapenem most used in Internal Medicine was meropenem (58.2%) and in Urology, imipenem (75%). Ertapenem was used more frequently in General Surgery (53.7%) and Vascular Surgery (86.0%). Out of a total of 316 requested tests, 172 (54.4%) were positive. The most common pathogen isolated was Escherichia Coli (24.7%) 20.8% of which were Extended-Spectrum Beta-Lactamase (ESBL)-producing, 60% of which were sensitive to piperacillin-tazobactam or fosfomycin. Klebsiella spp. were isolated in 3.6%, of which 33.3% were ESBL-producing and 50% were sensitive to piperacillin-tazobactam. Total treatments subject to de-escalation were 96 (55.8%), out of 172 showing this possibility, where 74 (77.1%) were carried out by initiatives of medical teams and 22 (22.9%) after pharmacy interventions. The Services with a higher degree of acceptance of pharmacy interventions were Internal Medicine (36.4%) and General Surgery (27.3%).

**Conclusions** Although the therapeutic de-escalation of empirical treatments with carbapenems was a low percentage, nevertheless pharmacy interventions achieved an increase of this practise, with the more receptive specialties being Internal Medicine and General Surgery.

No conflict of interest.

## OHP-021 DEVELOPMENT AND IMPLEMENTATION OF A PERIPHERAL STANDARD PARENTERAL NUTRITION FOR A NEONATOLOGY DEPARTMENT

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**Background** Parenteral nutrition (PN) for neonates has to be infused by a central line, due to the high osmolarity resulting from the recommended requirements. The central catheter frequently needs to be removed, and therefore PN may have to be administered by a peripheral line. This problem has been resolved by infusion of enriched glucose solutions, minus the protein input, which is very important in order to avoid catabolism.

**Purpose** To develop a standard PN with glucose, electrolytes and amino acids, suitable for peripheral infusion and available for the Neonatology department at any time.

The aim is to infuse 100 mL/Kg.

**Materials and Methods** We performed a literature search about standard PN and we made microbiological and biochemical cheques to ensure the stability and integrity of the solution, after keeping it refrigerated for seven days.

**Results** We developed a standard PN solution with the following composition per 100 mL:

Amino acids: 2 g
Glucose: 9.5 g
Sodium: 4 mEq
Potassium: 2 mEq
Magnesium: 0.2 mEq
Calcium: 1.5 mEq
Phosphate: 0.8 mmol
Osmolarity: 792 mOsm/L
Total calories: 46 Kcal

Weekly, we prepare four 500 ml bags from a stock solution. We give the neonatology department two so they can hold a small stock and we keep the other two in order to cheque when we need to make another batch.

From implementation, in February 2012, the microbiological controls have always been negative and the biochemical controls have demonstrated that degradation does not occur after refrigeration for seven days.

**Conclusions** This formulation makes it possible for the physicians to continue with the nutritional support, by peripheral infusion, at any time.

However this type of nutritional solutions is only suitable for meeting the nutritional requirements for short periods, until a new central catheter is placed or the neonate is able to have complete enteral feeding.

No conflict of interest.

## OHP-022 DEVELOPMENT OF AN AUTOMATIC METHOD FOR THE COMPARISON OF MASKS USED IN 81MKR/99MTC DUAL ISOTOPE PLANAR VENTILATION/PERFUSION SCINTIGRAPHY

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**Background** Various pulmonary diseases can be evaluated by ventilation and perfusion scintigraphy with a continuous inhalation of 81mKrypton. Leak of radionuclide during inhalation is a major issue for image quality and requires the intervention of a technician, exposing him-her to gamma radiation from the patient.

**Purpose** To compare two masks: the DAR breathing system (Covidien) and the Performa Trak VNI (Philips Respironics) including a harness for ventilation scintigraphy and to develop an automatic method for evaluating the quality of 81 mkr inhalation.

**Materials and Methods** We enrolled and randomised 48 patients to breathe through two types of masks: DAR (n = 25) or VNI (n = 23). After intravenous injection of 99mTc-labelled macroaggregated human albumin (LyoMAA, Covidien) and during continuous inhalation of 81mKr extracted from a 81Rb-81mKr generator (Kryptoscan, Covidien), eight incidences were acquired on a dual-head gamma camera. Three parameters were automatically computed by an automatic segmentation method: the mean ventilation counts (mcounts), an index of constancy of the inhalation rates (Cvent/perf) reflecting variations of the ventilation counts [(maximum-minimum)/median] between incidences compared to perfusion and an index of inhalation leak (mBN, the maximum background noise mean on the profiles incidences). Non-parametric tests of comparison of variance and proportion were used (Mood test and Fisher exact Test).

**Results** Variance of Cvent/perf and mBN were significantly higher (P = 0.03) in the DAR group. In this group 6/25 (24%) patients had parameters out of the distribution of the VNI group and 11/25 (44%) needed the help of a technician to hold their mask. No difference in the mcounts rate was observed.

**Conclusions** Index of variability of the ventilation rate as well as background noise were significantly higher in the DAR group and involved about 24% of the patients. Support with VNI masks improved the image quality, decreased exposure to radiation and guaranteed constancy in care compared to DAR. Nevertheless high costs restrict their use.

No conflict of interest.