OBJECTIVES: There are limited studies compare the outcomes and costs of robotic, laparoscopic, and open surgeries in a nationally representative population. Of note, the evidence of economic impact is limited and also limited to colorectal cancer patients undergoing these three types of surgeries. METHODS: A retrospective analysis of the National Inpatient Sample database from 2008 to 2012 was performed to compare outcomes and costs of the different surgical techniques. The outcomes and costs of the different surgical techniques were adjusted using propensity score. RESULTS: Of the 499,724 weighted number of colorectal surgeries performed during the study period, 371,463 (74.3%) were performed laparoscopically, 120,615 (24.5%) were laparoscopic robotic surgeries and 14,696 (1.53%) were robotic surgeries. In comparison with laparoscopic surgeries after propensity score adjustment, open surgeries was associated with 2.6 fold increase in risk of in-hospital mortality, 17% increase in risk of wound complications, 63% increase in general medical complications, 58% increase in risk of general surgical complications, 2.5 fold increase in risk in longer hospital stay, and higher cost ($13,134 vs $19,187) than robotic surgery. The outcomes of laparoscopic and robotic surgery are generally similar and the economic impact is limited. CONCLUSIONS: Malignantly invasive robotic and laparoscopic colorectal cancer surgeries have fewer complications, lower in-patient mortality, and shorter hospital stays. Their use in colorectal cancer surgery should increase with efforts to improve the outcomes. Additional work is needed to better determine the cost-effectiveness and cost-effectiveness of robotic surgery relative to laparoscopic surgery.

PCN82 COSTS EVOLUTION OF CANCER THERAPIES IN EUROPE FROM 2004 TO 2014

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OBJECTIVES: Analysis of the economic costs of therapies in France, Germany, Italy and UK. METHODS: Drugs included within the analysis were selected using two criteria: their rate of use in shortlisted indications (breast, colorectal, non-small cell lung cancer, lymphoma and leukaemia) and their significant turns in France, Germany, Italy, and UK. IMS-MIDASTM, a multicountry database, was used to extract drug manufacturer prices and sales. Sales figures were split by indications using IMS- Oncology Analysis™, a retrospective, longitudinal cancer drug expenditure database and then, average costs of drugs per indication have been built for each country. These baskets of drugs were compared between countries to illustrate the evolution and differences of cancer costs in each indication, considering both price and prescribing behavior changes. RESULTS: Differences in composition of baskets for a same indication highlighted heterogeneous prescribing behaviors between countries. Additionally, various prices per product from one country to another led to differences of cancer management costs. Last, a macroeconomic analysis noted pricing policies generated savings of 10% in France, 6% in Germany, 1% in the UK over the studied period. Despite price reduction being the highest in France, this analysis also showed that application of Italian or British prices to the basket of drugs would lead to a significant reduction of 15%. CONCLUSIONS: Despite old drugs prices reductions, the cancer management costs were constantly increasing in the last decade, due to therapeutic innovations. Indeed, the drug industry activity investing the stronger price reductions (90%) but also the one with the earliest use of therapeutic innovations, generating the growth of cancer management cost. Also, the application of Italian or British prices to the French average baskets of drugs could have led to potential savings, this being explained by high launch prices in France.

PCN83 VIRTUAL PLANNING AND PATIENT-SPECIFIC IMPLANTS IN MANDIBULAR RECONSTRUCTIONSURGERY: A MICRO-COSTING ANALYSIS

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OBJECTIVES: Mandibular reconstruction surgery is a routine procedure managed with bone containing free flaps, being fibula and iliac crest the most used worldwide. Despite the advancement in surgical techniques are well established and strenghtened the adoption of a 3D virtual planning and customized implants, including pre-operative planning, surgical hardware and patient-customized implants, guarantees optimal functional and cosmetic outcomes compared with traditional technique. The objective of this study is to determine and compare the resource consumption associated with 3D virtual planning and customized implants compared to traditional technique in patients undergoing mandibular reconstruction surgery. METHODS: The economic study was performed by collecting costs from hospital perspective in an experienced Italian Hospital, where data on 34 cases of mandibular reconstruction surgery (13 performed by 3D virtual surgical planning and 21 performed by traditional planning) were collected retrospectively. The aim of the study was to evaluate the cost-effectiveness of 3D virtual planning and customized implants compared to traditional technique. The consumption of resources was extracted for each patient according to phases of the hospital procedure including hospital and intensive care unit length of stay, diagnostic tests, staff time, operating theatre occupation time and medical technology equipment utilization. Unit costs were provided by the Administrations and Management Control Offices and statistical analysis was carried out using appropriate techniques. RESULTS: Results confirmed that 3D virtual planning and customized implants led to reduce operating theatre time (9.3 hours versus 10.9 hours; p<0.05) and e hospital length of stay (11.23 days versus 24.00 days; p<0.0001). As consequence, the average hospitalization cost per patient associated with 3D virtual surgical planning was lower than a traditional technique ($ 29,342.27 versus $ 26,163.02; p<0.01) showing an average cost savings of € 5,820.76 for patient. CONCLUSIONS: The analysis showed that the 3D virtual planning and customized implants, including pre-operative planning, surgical hardware and patient-customized implants, has the potential to conditionally improve clinical outcomes and constituting the best option in mandibular reconstruction.

PCN84 BEVACIZUMAB IN THE TREATMENT OF KRAS WILD TYPE METASTATIC COLORECTAL CANCER: AN ECONOMIC ANALYSIS BASED ON THE CALGB 80405 TRIAL

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OBJECTIVES: The objective of this economic analysis comparing bevacizumab versus cetuximab (mCRC) in combination with FOLFOX (oxaliplatin, leucovorin, fluorouracil bolus and fluorouracil IV) or FOLFIRI (irinotecan, leucovorin, fluorouracil bolus and fluorouracil IV) or FOLFOX/FOLFIRI in patients with KRAS wild type metastatic colorectal cancer. METHODS: Costs were obtained using Portuguese official sources. Only medical costs were included (related with drug acquisition and administration, health state, adverse events and AEs gation treatment the latter only applicable in cetuximab arm and considering the perspective of the Portuguese NHS. A 5% yearly discount rate was applied in costs and health consequences. Costs were expressed in 2016 euros. RESULTS: Consequences were similar between the two interventions (QALYs and overall survival). Over a 12-year period, the model predicted a cost of €84,268 for treating one patient with bevacizumab + FOLFOX/FOLFIRI versus €103,305 with cetuximab + FOLFIRI, resulting in a cost-saving of €19,037 per patient per year in the NHS. CONCLUSIONS: Bevacizumab in treating KRAS wild type results mCRC resulted in substantial cost-savings to the Portuguese NHS, representing a cut of 39% on the expenses of the biologic drug over a 12-year horizon.

PCN85 COST-MINIMIZATION ANALYSIS OF LIPEFGILGRISTIM IN PROPHYLAXIS OF FEBRILE NEUTROPENIA IN CANCER PATIENTS

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OBJECTIVES: To conduct cost-minimization analysis of lipefigilgrastim compared with pegfilgrastim, filgrastim, lenogirstim in prophylaxis of febrile neutropenia (FN) in cancer patients in Russia for 1-year period. METHODS: A cost-minimization analysis was developed for the study. The total number of patients with FN in Russia according to the statistics equals 110,556. The following costs were taken into account: costs for the study drugs were used as the source of data on prices for G-CSFs. The number of FN events with pegfilgrastim (211,484 rubles/3200 $) by the end of the 1st year per patient.

CONCLUSIONS: Acquisition cost of bevacizumab lower than cetuximab (<15,494 $/patient) as well as adverse event costs (+22), KRAS test cost (+192) and supportive care while on progressive disease (+4,548). Components with high cost in bevacizumab arm (FOLFOX/FOLFIRI acquisition (+1076), drug administration (+477) and supportive care while on SLP (+953). CONCLUSIONS: The use of bevacizumab in treating KRAS wild type results mCRC resulted in substantial cost-savings to the Portuguese NHS, representing a cut of 39% on the expenses of the biologic drug over a 12-year horizon.

PCN86 ANALYSIS OF THE COSTS ASSOCIATED WITH THE MANAGEMENT OF ADVERSE EVENTS COMPARED THROUGH TKIS IN THE TREATMENT OF PATIENTS WITH NON-SMALL-CELL LUNG CANCER EGFR MUTATED

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OBJECTIVES: To evaluate the compeative costs of TKIs associated with the treatment of non-small cell lung cancer (NSCLC) EGFR mutated patients: afatinib, erlotinib and gefitinib. METHODS: Focusing on direct medical costs only (drugs, visits and test), a cost-minimization analysis (CMA) was performed from the Italian National Health Service (NHS) perspective1. The incidence of AEs (grades ≥2 or >3) was quantified on the basis of a recent literature review that considered the three TKIs. The average consumption of healthcare resources for managing the AEs was estimated on the basis of the expert panel technique. The