multiple centres in UK, Italy, The Netherlands and Poland. For each country, published local costs have been applied to the resource use. Results have been stratified by glomerular filtration rate (GFR) at one-year post-transplant. **RESULTS:** Across these countries, the total three-year cost of post-transplant care varies depending on local treatment practices, from a minimum of €36,000 per patient in Poland to a maximum of €77,000 in the The Netherlands. Consistently across all countries, the average three-year costs decrease as a result of improved graft functioning status (increased GFR) at one year. The average three-year costs for a patient with a GFR≥45 at one year are 29% lower than those with <30GFR in the The Netherlands, 40% lower in Italy, 43% lower in Belgium, 50% lower in the UK, and 51% lower in Poland. **CONCLUSIONS:** This study demonstrates that in five European countries, worsening post-transplant renal function contributes to substantive increases in resource use, with some variation across regions. Therefore management strategies that promote renal function after transplantation are likely to provide important resource savings. Additional analyses are ongoing in Spain, Czech Republic, Hungary, Germany and Sweden to further confirm these observations.

PSU16

MINIMALLY INVASIVE SURGERY IN TOTAL HIP ARTHROPLASTY: A COST-EFFECTIVENESS ANALYSIS

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OBJECTIVES: The main objective of this study is to evaluate the cost-effectiveness of total hip arthroplasty through anterolateral minimally invasive surgery (MIS) and compare it with the traditional approach. **METHODS:** A study was conducted to compare traditional and minimally invasive surgical techniques for total hip arthroplasty in a population of 340 patients at two Spanish hospitals (the Virgen de las Nieves University Hospital of Granada and the Serranía de Ronda Hospital) during the year 2007. The design of the study was a prospective stochastic cost-effectiveness analysis, where effectiveness data were collected over a one-year period at individual patient levels and costs were gathered from the analytical accounting system of Virgen de las Nieves University Hospital. Effectiveness was measured in functional terms (clinical) and self-perceived quality of life (SF-12 survey) during the first 6 postoperative weeks. **RESULTS:** After 6 postoperative weeks, in comparison with the conventional technique, a pattern in improvements for MIS was observed for length of hospital stay (hospitalization time was 4.97 days shorter); for operative time (an average of 83.3 minutes for MIS patients and 97.8 minutes for the control group); and for average length of skin incision (9.83 cm. for the MIS group and 16.2 cm. for the control group). The total cost of THA with MIS was lower (4519.19 €) than the cost of traditional hip replacement (6722.46 €). Incremental effectiveness value in terms of quality of life was 0.11 points in the SF-12 survey for MIS. The cost-effectiveness analysis reveals a strong dominance of MIS versus traditional THA. **CONCLUSIONS:** The study showed that the minimally invasive technique reduces inpatient resource utilization and improves self perceived quality of life of patients compared with the traditional approach. The more beneficial incremental effectiveness ratio of MIS versus traditional THA supports the recommendation for expanded use of minimally invasive surgery.

PSU17

COST-EFFECTIVENESS OF DSAEK VERSUS PK FOR CORNEAL ENDOTHELIALDISEASE

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OBJECTIVES: To perform a comparative cost-effectiveness analysis of Descemet's stripping automated endothelial keratoplasty (DSAEK) and penetrating keratoplasty (PK) for corneal endothelial disease. **METHODS:** Systematic review of the peer-reviewed English literature through a search of PubMed to populate a 5 year model of a) quality adjusted life years (QALYs) associated with clinical outcomes of the relatively new DSAEK procedure and the long-established PK procedure, and b) third party payer (US Medicare 2010) costs associated with associated medical, surgical and pharmaceutical services. **RESULTS:** Five year follow-up focusing on standard therapy and complications yeilds 2.99 QALYs associated with DSEAK and 1.94 QALYs with PK, a difference of 1.05. Following slightly higher sugical costs of $US7925 for DSEAK and $US7544 for PK, total five year costs are $US10,104 associated with DSEAK and $US9840 with PK, a difference of $US264. The ICUR is $US251. Sensitivity analyses of differeing disc dislocation rates, astigmtism complication rates and cost parameters yield ICURs in the range of $US0 to $US500. **CONCLUSIONS:** Using the literature on outcomes and costs for treatments of corneal endothelial disease, a five year model yields robust results siggesting that DSEAK is slightly more expensive procedure than PK to third party payers, but with favorable quality adjusted life year resulting making DSEAK a cost-effective option under all scenarios considered.

PSU18

COST-UTILITY ANALYSIS OF LAPAROSCOPIC VERSUS OPEN SURGERY FOR COLORECTAL CANCER

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OBJECTIVES: To assess the comparative efficiency of laparoscopic versus open surgery in colorectal cancer patients. **METHODS:** To establish relative efficacy of laparoscopic versus open surgery in all measures that could have clinical or economic relevance. Using previous systematic reviews and updating their contents with the new information published after. Meta-analysis technique is used to summarize the information. A Markov model is developed to estimate progress in time of health and resource use obtained with these two alternatives. Measures of health outcomes used in the model were life years and quality adjusted life years. Probabilistic sensitivity analysis was performed to assess uncertainty in the parameters included in the Markov model. **RESULTS:** Preliminary results show that cost of laparoscopic-assisted surgery is higher than open surgery in close to 750 €. This difference decreased slightly in the immediate postoperative period due to the lower readmission rate. The difference in costs, coupled with the equivalence in long-term results obtained by the two techniques makes that any of them can be considered efficient for our health system. Since considering a willingness to pay between 20,000 and 30,000 € per quality-adjusted life year gained, none of the alternatives have above 60% chance to be the best option. **CONCLUSIONS:** The laparoscopic-assisted resection has shown results in terms of overall survival and recurrence similar to those achieved by open surgery in colorectal surgery patients. The estimated cost for laparoscopic intervention is slightly higher than open surgery, but seems to accelerate the postoperative recovery time. This implies that none of the two alternatives is clearly superior to the other in terms of efficiency. Therefore, each decision maker at hospital level will assess available human and material resources, and its cost structure to use resources more efficiently.

PSU19

THE DOORS-STUDY OF ON-PUMP VERSUS OFF-PUMP CORONARY ARTERY BYPASS GRAFTING: A POST HOC ANALYSIS OF METHODS FOR MULTIPLE IMPUTATION OF MISSING DATA IN ECONOMIC EVALUATION

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OBJECTIVES: A cost-utility analysis was conducted alongside the Danish On-pump Off-pump Randomization Study (DOORS) based on the intention to treat principle. **METHODS:** A post hoc analysis of the problem of missing data was addressed by multiple imputation using the conditional Gaussian as well as the chained equation approach. Both methods where applied using two different models (representing a data-driven respectively a clinical reasoning selection strategy). **RESULTS:** The cost-effectiveness acceptability curve for the complete case analysis (n=779) showed 88 % probability of OPCAB being cost-effective at a threshold value of £30.000 per QALY. In analyses based on the conditional Gaussians approach and the chained equations approach to multiple imputation the results was 73-75 %. **CONCLUSIONS:** The result of the previously published complete-case analysis of the cost-effectiveness of OPCAB versus CCABG was reinforced by this post hoc analysis of the uncertainty due to missing data. The analysis showed that the conditional Gaussian approach and the chained equations approach produced similar results Evidence about the long term cost-effectiveness of OPCAB versus CCABG is warranted.

Surgery – Patient-Reported Outcomes & Preference-Based Studies

PSU20

ESTIMATING PREFERENCES FOR ECONOMIC EVALUATION IN PATIENTS WITH LOCALIZED PROSTATE CANCER

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OBJECTIVES: The high variability on preferences estimates for prostate cancer could be explained by differences in methods, techniques and obtaining populations. Our aim was to estimate the preferences and willingness to pay of patients in the "Spanish Multicenter Study of Localized Prostate Cancer" at 5 years of follow-up, according to the treatment received (radical prostatectomy, external radiotherapy and brachytherapy). **METHODS:** Data analyzed were from the 5-year follow-up evaluation of the "Spanish Multicenter Study of Localized Prostate Cancer", in which patients completed the preference questionnaire. The estimation of preferences was conducted using the indirect method (from the SF-6D index), and the direct method using the Standard Gamble (SG) and Time Trade-Off (TTO) techniques. We also assessed the patients' Willingness-to Pay (WTP). The three treatment groups were compared using the Kruskall Wallis test. **RESULTS:** Of the 441 patients enrolled, 105 were treated with radical prostatectomy, 137 with external radiotherapy and 199 with prostate brachytherapy. Most patients were married or living with a partner (89.6%), were retired (76%) and had completed primary or secondary studies (53.5%). Utilities measured with the SF-6D showed no statistically significant differences by treatment group ($p = 0.356$). The utilities measured by TTO presented the greatest differences according to treatment: mean of 0.94 in the radical prostatectomy group, 0.99 in external radiotherapy and 0.98 in brachytherapy ($p < 0.001$). The willingness to pay also showed significant differences: mean of 58.4 € in the radical prostatectomy group, 32.04 € in external radiotherapy and 28.8 € in brachytherapy ($p < 0.01$). **CONCLUSIONS:** The estimates of preferences vary according to the method and the technique used to obtain them. Both the utilities obtained by the direct method and the ones through willingness to pay indicate that radical prostatectomy is the worst valued treatment, prostate brachytherapy being the most valued by patients with localized prostate cancer.

PSU21

SPEECH PROBLEM AND HEALTH-RELATED QUALITY OF LIFE IN HEAD AND NECK CANCER SURVIVORS AFTER FIVE YEARS OF TREATMENTS

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