



## O-215 - ROBOTIC ASSISTED PANCREATIC ENUCLEATION. CLINICAL OUTCOMES AND COST EFFECTIVENESS ANALYSIS

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### Resumen

**Introduction and objectives:** We performed a prospective comparative study of robotic enucleation (RE) and open enucleation (OE) at our centre with the aim of evaluating clinical and cost-effective outcomes.

**Methods:** This is a comparative prospective non-randomized study which includes patients that underwent RE and OE reaching a minimum of 15 months of follow up from February 2015 to March 2021, at the Sanchinarro University Hospital, Madrid. Demographics, pathological characteristics, perioperative outcome, and medium term follow-up were collected. Surgical and post-operative costs, quality adjusted life years (QALY), and incremental cost per QALY gained, or the incremental cost effectiveness ratio (ICER) were calculated and compared in RE and OE groups. A willingness-to-pay of 20,000 € and 30,000 € per QALY was used as a threshold to recognize which treatment was most cost-effective.

**Results:** A total of 30 RE and 30 OE have been included. The overall rate of pancreatic leak was 27.7% in the RE group and 29.4% in the OE group ( $p \geq 0.5$ ). The mean number of hospital stay days was significantly higher in the OE (8.9 days vs. 10.9 days,  $p = 0.03$ ). The mean operative time was higher in the RE group. The overall mean total cost was similar in both groups (RE: 5,432.15 €; versus OE: 4,562.68 €;  $p \geq 0.5$ ). Mean QALYs at 1 year for RE (0.652) was higher than that associated with OE (0.59) ( $p \geq 0.5$ ). At a willingness-to-pay threshold of 20,000 € and 30,000 €, there was a 88.5% to 90.1% probability that RE was cost-effective relative to OE.

**Conclusions:** Cost-effectiveness analysis is paramount whenever a new technology is introduced. For the first time in literature we assess the cost effectiveness of robot versus laparoscopy pancreatic enucleation and this study might stimulate further larger, randomized studies. RE offers better postoperative outcomes with respect to the open resection and this study provides data of cost-effectiveness between the RE and OE approaches showing a benefit for RE.