

VOLUME OUTCOMES IN ADRENAL SURGERY: RESULTS FROM THE UKRETS DATABASE

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Abstract body (should contain maximum 300 words)

Introduction Recent UK guidelines have suggested that adrenal surgery should be performed by surgeons undertaking at least 6 adrenalectomies per annum. This is based on recent reports from both the UK and the US. This study examines the validity of this recommendation when applied to UKRETS contributors and to assess for volume outcomes. **Methods** The UKRETS database was interrogated for analysis. Outcomes between high volume surgeons (HSV; ≥ 6 adrenalectomies/annum) and low volume surgeons (LVS; < 6 / annum) were compared. Multi-logistic regression, with random effects by surgeon, was used to compare outcomes with annual volume. **Results** From Jan 2005-May 2017, 3084 procedures were performed by 36 'high volume' surgeons, and 343 by 33 'low-volume surgeons'. Adrenalectomies performed by HVS were more likely to be attempted (80.7% vs. 74.3%; $p=0.009$) and completed (75.8% vs. 68.8%; $p=0.008$) laparoscopically, than by LVS. The proportion of malignant tumours removed was greater in the low volume surgeon group (25% ($n=71$) vs. 18.3% ($n=596$); $p=0.007$). Conversion was more likely with LVS (OR 1.65 [95% CI 1.07-2.54]; $p=0.020$), largely due to conversion of malignant cases (OR 1.86 [95%CI 1.05-3.31]; $p=0.030$). Risk of re-operation (OR 0.59 [0.08-4.62]; $p=0.620$) and readmission (OR 1.01 [0.44-2.35]; $p=0.980$) were similar between groups. **Conclusion** Surgeons performing ≥ 6 adrenalectomies per annum have higher rates of laparoscopic surgery and lower conversion rates. Higher rates of malignancy, and subsequent conversion, in the low volume surgeon group are concerning, but did not appear to adversely affect re-operation rates, readmissions, length of stay or in-hospital mortality.