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**Are Elderly Patients at Increased Perioperative Morbidity and Mortality from Oesophagectomy for Oesophageal Cancer? A Systematic Mapping Review and Meta-Analysis**

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**Introduction:** Oesophagectomy is being increasingly performed in an ageing population that is observing a concomitant growth in the life expectancy. However, the risks are poorly quantified, and this study aims to review current evidence to further quantify the postoperative of oesophagectomy in the elderly population compared to younger patients.

**Methods:** A systematic electronic search was conducted for studies reporting oesophagectomy in the elderly population. Meta-analysis was performed using random-effects modelling to compute odds ratios (OR) and 95% confidence intervals (CI). Primary outcome was overall complications and secondary outcomes included anastomotic leaks, cardiac complications, pulmonary complications, overall and disease-free survival. Meta-regression was performed to identify study-, hospital- and patient-level factors confounding study findings.

**Results:** This review included 37 eligible studies involving 61,723 patients. Increasing age was significantly associated with increased rates of overall complications (OR: 1.67, CI 95%: 1.42 – 1.97), cardiac complications (OR: 1.62, CI 95%: 1.10 – 2.40), pulmonary complications (OR: 1.44, CI 95%: 1.11 – 1.87) and decreased 5-year overall survival (OR: 1.36, CI 95%: 1.11 – 1.66) and 5-year disease-free survival (OR: 1.66, CI 95%: 1.40 – 1.97). Rates of anastomotic leaks showed no difference between elderly and younger patients (OR: 1.06, CI 95%: 0.71 – 1.59).

**Conclusion:** Postoperative outcomes such as overall complications, 5-year overall survival and disease-free survival appear to significantly worse in all age cut-offs in this meta-analysis. Sarcopenia and frailty act as better predictors of postoperative outcomes than chronological age. This study confirms the preconceived suspicions of increased risks in elderly patients following oesophagectomy and will aid future pre-operative counselling and informed consent.