

## AB074. SOH21AS020. Safety, efficacy and cost-effectiveness of minimally invasive oesophagectomies vs. open oesophagectomies: an umbrella review

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**Background:** Traditionally, oesophageal oncological resections have been performed via open approaches with well-documented levels of morbidity and mortality complicating the post-operative course. Recently, minimally invasive approaches have garnered sustained support in all areas of surgery, and there has been an exponential adaptation of this technology in upper GI surgery with the advent of laparoscopic techniques and, the more recently, robotic surgery. The current literature while growing, is inconsistent in reporting on the benefits of minimally invasive oesophagectomies (MIE) and this makes it difficult to decide on appropriate healthcare provision to maintain best practice.

**Methods:** A systematic review (SR) of the literature was performed by searching 9 electronic databases to identify any SRs published on this topic. The recommended Joanna Briggs Institution (JBI) approach to critical appraisal, study selection, data extraction and data synthesis for umbrella reviews (URs) was used and the findings reported according to these guidelines.

**Results:** A total of 13 SRs encompassing 143 primary trials of differing study designs and 36,763 patients were included in the final synthesis. All SRs were critically appraised and found to be of moderate to good quality. Eleven reviews

examined safety parameters and found a generalized benefit or at least an equivalency of MIE in this regard. Efficacy was evaluated by 8 SRs and found both methods to be equivalent. There was limited data to judiciously appraise cost-effectiveness as this was only evaluated in one review involving a single trial.

**Conclusions:** Safety and efficacy of MIE is equivalent when compared to open oesophagectomies (OE) with a possible improvement in safety. Cost-effectiveness of MIE cannot be sufficiently supported at this point in time. Early experiences are promising but further studies are warranted to better identify the comparative utility of MIE in oesophageal resection.

**Keywords:** Cost-effectiveness; efficacy; laparoscopic; minimally invasive; oesophagectomy; robotic; safety

### Acknowledgments

*Funding:* None.

### Footnote

*Conflicts of Interest:* The authors have no conflicts of interest to declare.

*Ethical Statement:* The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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doi: 10.21037/map-21-ab074

**Cite this abstract as:** Ramjit SE, Ashley E, Donlon NE, Doyle F, Heskin L. Safety, efficacy and cost-effectiveness of minimally invasive oesophagectomies vs. open oesophagectomies: an umbrella review. *Mesentery Peritoneum* 2021;5:AB074.