**Supplementary table 2 Detailed search strategy terms for PubMed, Cochrane Library, EMBASE and Web of Science databases**

| Search strategy terms for PubMed, Cochrane Library, EMBASE and Web of Science databases. |
|---|
| **The PubMed search terms were as follows: for 92 studies** |
| #1 ((("Dexmedetomidine"[Mesh]) OR (MPV-1440[Title/Abstract])) OR (MPV1440[Title/Abstract]) OR (MPV1440[Title/Abstract]) OR (Precedex[Title/Abstract])) OR (Dexmedetomidine Hydrochloride[Title/Abstract]) OR (Hydrochloride, Dexmedetomidine[Title/Abstract]) |
| #2 (((((Esophageal Neoplasms[Mesh]) OR (Stomach Neoplasms[Title/Abstract])) OR (Gastrointestinal Neoplasms[Title/Abstract])) OR (Colonic Neoplasms[Title/Abstract])) OR (Rectal Neoplasms[Title/Abstract])) OR (Intestinal Neoplasms[Title/Abstract])) |
| #3 (((((Esophageal Neoplasms[Mesh]) OR (Gastrointestinal Neoplasms[Title/Abstract])) OR (Colonic Neoplasms[Title/Abstract])) OR (Rectal Neoplasms[Title/Abstract])) OR (Intestinal Neoplasms[Title/Abstract])) OR (Colorectal Cancer[Title/Abstract]) OR (Rectal Cancer[Title/Abstract]) OR (Gastrointestinal Cancer[Title/Abstract]) OR (Digestive Tract Cancer[Title/Abstract]) |
| #4 #2 OR #3 |
| #5 #1 AND #4 |
| **The Cochrane search terms were as follows: for 137 studies** |
| #1 MeSH descriptor: [Dexmedetomidine] explode all trees |
| #2 MeSH descriptor: [MPV-1440] explode all trees |
| #3 MeSH descriptor: [Precedex] explode all trees |
| #4 MeSH descriptor: [Dexmedetomidine Hydrochloride] explode all trees |
| #5 #1 OR #2 OR #3 OR #4 |
| #6 MeSH descriptor: [Esophageal Neoplasms] explode all trees |
| #7 MeSH descriptor: [Stomach Neoplasms] explode all trees |
| #8 MeSH descriptor: [Gastrointestinal Neoplasms] explode all trees |
| #9 MeSH descriptor: [Colorectal Neoplasms] explode all trees |
| #10 MeSH descriptor: [Colonic Neoplasms] explode all trees |
| #11 MeSH descriptor: [Rectal Neoplasms] explode all trees |
| #12 MeSH descriptor: [Intestinal Neoplasms] explode all trees |
| #13 MeSH descriptor: [Esophageal Cancer] explode all trees |
| #14 MeSH descriptor: [Gastric Cancer] explode all trees |
| #15 MeSH descriptor: [Intestinal Cancer] explode all trees |
| #16 MeSH descriptor: [Colorectal Cancer] explode all trees |
| #17 MeSH descriptor: [Colon Cancer] explode all trees |
| #18 MeSH descriptor: [Rectal Cancer] explode all trees |
| #19 MeSH descriptor: [Gastrointestinal Cancer] explode all trees |
| #20 MeSH descriptor: [Digestive Tract Cancer] explode all trees |
| #21 MeSH descriptor: #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 |
| #22 #5 AND #21 |
| **The EMBASE search terms were as follows: for 126 studies** |
| #1 Dexmedetomidine:ab,ti |
| #2 'Esophageal Neoplasms':ab,ti OR 'Stomach Neoplasms':ab,ti OR 'Gastrointestinal Neoplasms':ab,ti OR 'Colorectal Neoplasms':ab,ti OR 'Colonic Neoplasms':ab,ti OR 'Rectal Neoplasms':ab,ti OR 'Intestinal Neoplasms':ab,ti OR 'Esophageal Cancer':ab,ti OR 'Gastric Cancer':ab,ti OR 'Intestinal Cancer':ab,ti OR 'Colorectal Cancer':ab,ti OR 'Colon Cancer':ab,ti OR 'Rectal Cancer':ab,ti OR 'Gastrointestinal Cancer':ab,ti OR 'Digestive Cancer':ab,ti
The Web of Science search terms were as follows: for 97 studies

#1 TS=(Dexmedetomidine OR MPV-1440 OR MPV 1440 OR MPV1440 OR Precedex OR Dexmedetomidine Hydrochloride OR Hydrochloride, Dexmedetomidine)

#2 TS=(Esophageal Neoplasms OR Stomach Neoplasms OR Gastrointestinal Neoplasms OR Colorectal Neoplasms OR Colonic Neoplasms OR Rectal Neoplasms OR Intestinal Neoplasms)

#3 TS=(Esophageal Cancer OR Gastric Cancer OR Intestinal Neoplasms OR Colorectal Cancer OR Colon Cancer OR Rectal Cancer OR Gastrointestinal Cancer OR Digestive Tract Cancer)

#4 #2 OR #3

#5 #1 AND #4