**Table 1.** Systematic reviews characteristics and population description

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Author, (year)** | **Last date assessed** | **Included databases** | **Population**  | **Number of subjects** | **Number of Included studies** **[Pooled patient sample size (smallest - largest)]** | **~~Pooled patient sample size (smallest - largest)~~** | **Quality assessment tool** |
| **RCT** | **Non-RCT** |
| Huang et al (2017)15 | December 2015 | EMBASE, MEDLING, PubMed, Cochrane Central Register of Controlled Clinical Trials | Men with laparoscopic or robotic radical prostatectomy | LRP: 4114RARP: 5064 | 2 [248 (120-128) | 22 [8930 (80, 2386)] |  | Only ROB for RCT |
| ~~Du and Long et al. (2017)~~  | ~~April 2017~~ | ~~Cochrane library, MEDLINE Ovid, EMBASE Ovid, Conference Proceedings, CNK, Elsevier, PubMed~~ | ~~Men with prostate cancer, not previously treated~~ | ~~RARP: 2559~~~~LRAP: 3196~~~~ORP: 7659~~ | ~~1 [163]~~ | ~~32 [16,667 (20 - 11,816)]~~ | ~~16,830 (20 - 11,816)~~ | ~~N/A~~ |
| Ilic et al. (2018)11  | June 2017 | Cochrane library, MEDLINE Ovid, EMBASE Ovid, Conference Proceedings | Men ≥ 18 years, localized prostate cancer, not previously treated | RARP: 163LRP: 60ORP: 163+60\* | 2 [446 (120 - 326)] | 0 | ~~446 (120 - 326)~~ | ROB |
| Cacciamani et al (2018)18 | June 20~~0~~17 | PubMed, Scopus, Web of Science | Partial nephrectomy | RPN: 7,982OPN: 3,613LPN:4,352 | 0 | 98 [20,282 (20 – 1,831)] | ~~20,282 (20 – 1,831)~~ | NOS |
| Prete et al (2018)24 | August 2016 | Cochrane Central Register of Controlled Trials, MEDLINE, EMBASE, clinicaltrials.gov, Current controlled trials, WHO clinical Trials search portal, ISRCT registry, UMIN clinical trial registry, EU clinical Trial Register, CRSA, Grey literature report, Open grey, Publication, sciencedaily.com, google scholar, Conference proceedings citation index, thesis dissertations.  | Patients with rectal cancer that underwent robotic or laparoscopic rectal resection | RRS: 345LRS: 336 | 5[681 (12 - 471)] | 0 | ~~681 (12 - 471)~~ | ROB |
| Liang et al (2017)25 | November 2016 | PubMed, Web of Science, Medline, Cochrane | Robotic lobectomy/segmentectomy and Video-assisted lobectomy/segmentectomy | RATS: 3239VATS: 4199 | 0 | 14 [7438 (51 – 3876)] | ~~7438 (51 – 3876)~~ | NOS |
| Buentzel et al (2017)26 | October 2016 | PubMed, Cochrane library, Biomed central and Science direct, MEDLINE | Open thymectomy or robotic thymectomy | RT: 215OT: 274 | 0 | 7 [489 (21 – 200)] | ~~489 (21 – 200)~~ | N/A |
| Buentzel et al (2017)27 | August 2016 | PubMed, Cochrane library, Biomed central and Science direct, MEDLINE | Thoracoscopic thymectomy or robotic thymectomy | TT: 281RT: 169 | 0 | 5 [450 (46 – 153)] | ~~450 (46 – 153)~~ | N/A |
| Park et al (2017)28 | N/A | MEDLINE, EMBASE, CENTRAL, Domestic DBs | Cervical cancer treated with Robotic and Open or laparoscopic hysterectomy | RH: 623LH: 425OH: 588 | 0 | 22 [1062 (7- 175)] | ~~1062 (7- 175)~~ | RoBANS |
| Ind et al (2017)31 | Oct 2016 | MEDLINE, EMBASE, Cochrane | Robotic or laparoscopic hysterectomy for endometrial cancer | RH: 3830LH: 4245 | 1 [99] | 35 [7976 (7-745)] | ~~8075 (7-745)~~ | N/A |
| Wang et al (2018)34 | April 2017 | Cochrane library, MEDLINE, web of Science, EMBASE  | Robotic or laparoscopic or open myomectomy of Uterine fibroids | RM: 1129AM: 1852LM: 490 | - | 20 [2454 (15-393)] | ~~2454 (15-393)~~  | NOS |
| Albright et al (2016)33 | October 2014 | MEDLINE, EMBASE, Cochrane library, Clinicaltrials.gove, controlled-trials.com | Robotic or laparoscopic hysterectomy for benign uterine conditions | RH: 111LH: 110 | 3 [221 (52 – 95)] | 0 |  | ROB |
| Guan et al (2018)35 | June 2017 | Cochrane library, Embase, Web of Science | Robotic or laparoscopic liver resection for any focal liver lesion | RLR: 435LLR: 503 | 0 | 13 [938 (30 - 171)] | ~~938 (30 - 171)~~ | NOS |
| Niu et al (2019)36 | -- | PubMed, EMBASE, Cochrane library, Web of Science, China Biology Medicine disc | Robotic compared to laparoscopic or open distal pancreatectomy  | RDP: 409LDP: 970ODP: 754 | 0 | 17 [2133 (22 – 805)] | ~~2133 (22 – 805)~~ | NOS |
| Han et al (2018)37 | December 2017 | PubMed, EMBASE, Cochrane library | Robotic compared to laparoscopic cholecystectomy | RC~~AQ~~: 1833LC: 2171 | 5 [434 (40 – 136)] | 21 [3570 (20-445)] | ~~4004 (20 – 445)~~ | ROB and NOS |
| Chen et al (2017)38 | May 2017 | Web of science, Cochrane Library, Embase, PubMed | Robotic or laparoscopic gastrectomy for gastric cancer | LG: 4123RG: 1830 | 0 | 19 [5953 (27 – 1297)] | ~~5953 (27 – 1297)~~ | NOS |
| Wang et al (2018)39 | November 2017 | PubMed, EMBASE, Cochrane Library | Robotic or laparoscopic Roux-en-Y gastric bypass | LRYGB: 172,234RRYGB: 5532  | 1 [50] | 18 [177,750 (20 – 137,455)] | ~~177,766 (255 – 64,134)~~ | NOS |

RARP: robotic assisted radical prostatectomy, LARP: laparoscopic assisted Radical prostatectomy, ORP: open radical prostatectomy, OPN: open partial nephrectomy, LRP: laparoscopic partial nephrectomy, RPN: robotic partial nephrectomy, RRS: robotic rectal surgery, LRS: laparoscopic rectal surgery, RATS: robotic assisted thoracoscopic surgery, VATS: video assisted thoracoscopic surgery, RT: robotic thymectomy, OT: open thymectomy, TT: thoracoscopic thymectomy, RH: robotic hysterectomy, LH: laparoscopic hysterectomy, OH: open hysterectomy, RM: robotic myomectomy, LM: laparoscopic myomectomy, AM: abdominal myomectomy, RLR: robotic liver resection, LLR: laparoscopic liver resection, RDP: robotic distal pancreatectomy, LDP: laparoscopic distal pancreatectomy, ODP: open distal pancreatectomy, RC: robotic cholecystectomy, LC: laparoscopic cholecystectomy, LG: laparoscopic gastrectomy, RG: robotic gastrectomy, LRYGB: laparoscopic roux-en-y gastric bypass, RRYBG: robotic roux-en-y gastric bypass, NOS: Newcastle-Ottawa scale, ROB: risk of bias, ROBANS: Risk of Bias Assessment tool for Non-randomized Studies, N/A: not available.