Table S1, SDC. Country of origin of 190 included studies, percentages between brackets.	
Country	**Number of articles included**
Argentina	1 (0.5)
Australia	6 (3.2)
Belgium	1 (0.5)
Brazil	4 (2.1)
Canada	5 (2.6)
Chile	1 (0.5)
China	2 (1.1)
Czech Republic	1 (0.5)
France	2 (1.1)
Germany	8 (4.2)
Greece	1 (0.5)
India	10 (5.3)
Iran	1 (0.5)
Italy	5 (2.6)
Japan	7 (3.7)
Korea	11 (5.8)
Kuwait	1 (0.5)
Lebanon	1 (0.5)
Mexico	1 (0.5)
Netherlands	13 (6.8)
Norway	2 (1.1)
New Zealand	1 (0.5)
Pakistan	1 (0.5)
South Africa	1 (0.5)
Spain	3 (1.6)
Sweden	2 (1.4)
Switzerland	3 (1.6)
Taiwan	2 (1.1)
Thailand	1 (0.5)
Turkey	3 (1.6)
United Kingdom	12 (6.3)
USA	76 (40)
Vietnam	1 (0.5)

Figure S1 – GRADE table of quality of evidence for studies included in meta-analysis

Figure S2 - Forest plot analysis for postoperative ileus after laparoscopic donor nephrectomy with or without hand-assistance.

1. Hand-Assisted versus Pure Laparoscopic Live Donor Nephrectomy

Quality assessment							Quality
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	
19	3 RCTs 5 Pros cohorts 11 Retro cohorts	not serious	not serious	serious [1]	not serious	none	⊕◯◯◯ VERY LOW [1]

2. Retroperitoneoscopic versus Laparoscopic Live Donor Nephrectomy

Quality assessment							Quality
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	
7	2 RCTs 2 Pros cohorts 2 Retro cohorts	not serious	not serious	serious [2]	not serious	none	⊕◯◯◯ VERY LOW [2]

3. Single-Port (LESS) versus Multiport Laparoscopic Live Donor Nephrectomy

Quality assessment							Quality
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	
10	3 RCTs 1 Pros cohort 6 Retro cohorts	not serious	not serious	serious [3]	not serious	none	⊕◯◯◯ VERY LOW [3]

4. Mini-open versus Laparoscopic Live Donor Nephrectomy

Quality assessment							Quality
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	
8	3 RCTs 5 Pros cohorts	not serious	not serious	Serious [4]	not serious	none	⊕◯◯◯ VERY LOW [4]

RCT – Randomized Controlled Trial, Pros – Prospective, Retro – Retrospective

1. Hand-assisted techniques are compared to pure techniques in all articles, however in some the pure technique is done laparoscopically while in other the pure technique is the retroperitoneoscopic procedure.
2. Retroperitoneoscopic procedures are compared to laparoscopic procedures. In some articles this regards the pure technique, while in others hand-assisted procedures are performed.
3. In one study hand-assisted laparoscopic donor nephrectomy was compared to LESS donor nephrectomy, in one study the defined technique for multiport procedure was not specified. The other seven studies compared pure laparoscopic donor nephrectomy to LESS donor nephrectomy.
4. One study compared hand-assisted laparoscopic donor nephrectomy to mini-open donor nephrectomy, where the others compared pure laparoscopic donor nephrectomy to mini-open donor nephrectomy. One additional study compared the retroperitoneoscopic approach to mini-open procedures.

Study or Subgroup	Scopic Events	Scopic Total	Miniopen Events	Miniopen Total	Weight	Risk Ratio M-H, Fixed, 95% CI	Year
Kroencke 2015	0	45	0	38		Not estimable	2015
Hofker 2012	2	25	0	25	34.1%	5.00 [0.25, 99.16]	2012
Nicholson 2010	0	56	0	28		Not estimable	2010
Kok 2006	3	50	0	50	34.1%	7.00 [0.37, 132.10]	2006
Lewis 2004	0	22	0	29		Not estimable	2004
Castillon 2000	1	13	0	15	31.8%	3.43 [0.15, 77.58]	2000
Total (95% CI)		**211**		**185**	**100.0%**	**5.18 [0.91, 29.35]**	
Total events	6		0				

Heterogeneity: $Chi^2 = 0.11$, $df = 2$ ($P = 0.95$); $I^2 = 0\%$

Test for overall effect: $Z = 1.86$ ($P = 0.06$)