Appendices

Appendix A. Search Strategies 3
Appendix B. Unextracted and Excluded Studies 7
Peri/Post Nephrectomy Outcomes: Eligible Studies-Not extracted 7
Longterm Outcomes: Eligible Studies-Not extracted 15
Excluded Studies 18
Appendix C. Peri/Post-Surgical Outcomes: Supporting Tables 37
Table C1. Peri/Post-Surgical Outcomes: Characteristics of Included Systematic Reviews 37
Table C2. Peri/Post-Surgical Outcomes: AMSTAR Assessments of Included Systematic Reviews 40
Table C3. Peri/Post-Surgical Outcomes: Open versus Laparoscopic Nephrectomy 43
Table C4. Peri/Post-Surgical Outcomes: Standard Laparoscopic versus Hand-Assisted Laparoscopic Nephrectomy 45
Table C5. Peri/Post-Surgical Outcomes: Left versus Right Laparoscopic Nephrectomy 45
Table C6. Peri/Post-Surgical Outcomes: Older versus Younger Donors 46
Table C7. Peri/Post-Surgical Outcomes: Obese versus Overweight and Normal Weight 47
Appendix D. Long-Term Outcomes: Supporting Tables 49
Table D1. Long-Term Outcomes: Characteristics of Included Systematic Reviews 49
Table D2. Long-Term Outcomes: AMSTAR Assessments of Included Systematic Reviews 51
Table D3. Long-Term Outcomes: Study Characteristics of Included Studies 53
Table D4. Long-Term Outcomes: Risk of Bias Assessments of Included Studies 61
Table D5. Long-term Outcomes: Living Kidney Donors compared to healthy non-donors 798
Table D6. Long-Term Outcomes: Older donors versus Older Healthy Non-donor Controls 83
Table D7. Long-Term Outcomes: Older versus Younger Donors 87
Table D8. Long-Term Outcomes: Male versus Female Comparisons in Donors versus Healthy Non-Donors 92
Table D9. Long-Term Outcomes: Male versus Female Donors 96
Table D10. Long-Term Outcomes: African American and Hispanic Donors versus Healthy African American and Hispanic Non-Donors 100
Table D11. Long-Term Outcomes: Comparison between Donor Racial Subgroups 102
Table D12. Long-Term Outcomes: Obese Donors versus non-obese donors 107
Table D13. Long-Term Outcomes: Donors with lower renal function versus donors with normal renal function 109

Table D14. Long-Term Outcomes: Donors with impaired glucose tolerance versus donors with normal glucose tolerance 110

Table D15. Long-Term Outcomes: Donors with metabolic syndrome versus donors without metabolic syndrome 112

Table D16. Long-Term Outcomes: Hypertensive donors versus normotensive donors..... 113

Table D17. Long-Term Outcomes: Donors Related to Recipients versus Not-Related 115

Table D18. Long-Term Outcomes: Post Donation Pregnancy-related Outcomes..... 118

Appendix A. Search Strategy

Database: Embase <1974 to 2013 October 03> Search Strategy:
---
1 retracted article/ (6992)
2 (random$ or placebo$ or single blind$ or double blind$ or triple blind$).ti,ab. (964464)
3 (animal$ not human$).sh,hw. (3892889)
4 (book or conference paper or editorial or letter or review).pt. not exp randomized controlled trial/ (4026686)
5 1 or 2 (971306)
6 5 not (3 or 4) (788381)
7 exp cohort analysis/ (159852)
8 exp longitudinal study/ (65122)
9 exp prospective study/ (251233)
10 exp follow up/ (749090)
11 cohort$.tw. (363883)
12 7 or 8 or 9 or 10 or 11 (1281760)
13 exp case-control study/ (90165)
14 (case$ and control$).tw. (421076)
15 13 or 14 (455349)
16 (case$ and series).tw. (156704)
17 exp review/ (2051725)
18 (literature adj3 review$).ti,ab. (210224)
19 exp meta analysis/ (76123)
20 exp "Systematic Review"/ (64783)
21 17 or 18 or 19 or 20 (2235229)
22 (medline or embase or pubmed or cinahl or amed or psychlit or psychinfo or scisearch or cochrane).ti,ab. (99517)
23 retracted article/ (6992)
24 22 or 23 (106462)
25 21 and 24 (78850)
26 (systematic$ adj2 (review$ or overview)).ti,ab. (66304)
27 (meta?anal$ or meta anal$ or metaanal$ or metanal$).ti,ab. (75185)
28 25 or 26 or 27 (159362)
29 (ae or si or to or co).fs. (3025512)
30 (safe or safety).ti,ab. (597602)
31 side effect$.ti,ab. (238444)
32 ((adverse or undesireable or harm$ or serious or toxic) adj3 (effect$ or reaction$ or event$ or outcome$)).ti,ab.
(406794)
33 exp adverse drug reaction/ (358463)
34 exp drug toxicity/ (77722)
35 exp intoxication/ (328776)
36 exp drug safety/ (221042)
37 exp drug monitoring/ (40454)
38 exp drug hypersensitivity/ (49258)
39 exp postmarketing surveillance/ (22410)
40 exp phase iv clinical trial/ (1496)

41 (toxicity or complication$ or noxious or tolerability).ti,ab. (1146485)
42 exp postoperative complication/ (478856)
43 exp peroperative complication/ (19583)
44 or/29-43 (4747913)
45 retracted article/ (6992)
46 (random$ or placebo$ or single blind$ or double blind$ or triple blind$).ti,ab. (964464)
47 (animal$ not human$).sh,hw. (3892889)
48 (book or conference paper or editorial or letter or review).pt. not exp randomized controlled trial/ (4026686)
49 45 or 46 (971306)
50 49 not (47 or 48) (788381)
51 exp cohort analysis/ (159852)
52 exp longitudinal study/ (65122)
53 exp prospective study/ (251233)
54 exp follow up/ (749090)
55 cohort$.tw. (363883)
56 (51 or 52 or 53 or 54 or 55) not (47 or 48) (1147686)
57 exp case-control study/ (90165)
58 (case$ and control$).tw. (421076)
59 (57 or 58) not (47 or 48) (387052)
60 (case$ and series).tw. (156704)
61 60 not (47 or 48) (136432)
62 exp review/ (2051725)
63 (literature adj3 review$).ti,ab. (210224)
64 exp meta analysis/ (76123)
65 exp "Systematic Review"/ (64783)
66 62 or 63 or 64 or 65 (2235229)
67 (medline or embase or pubmed or cinahl or amed or psychlit or psychinfo or scisearch or cochrane).ti,ab. (99517)
68 retracted article/ (6992)
69 67 or 68 (106462)
70 66 and 69 (78850)
71 (systematic$ adj2 (review$ or overview)).ti,ab. (66304)
72 (meta?anal$ or meta anal$ or metaanal$ or metanal$).ti,ab. (75185)
73 (70 or 71 or 72) not (47 or 48) (79223)
74 kidney donor/ (6363)
75 living donor/ (16693)
76 kidney/ (259788)
77 (74 or 76) and 75 (3011)
78 (liv$ and kidney and don$).ti. (2260)
79 77 or 78 (4371)
80 73 and 79 (14)
81 50 and 79 (139)
82 56 and 79 (853)
83 59 and 79 (83)
84 61 and 79 (46)
85 80 or 81 or 82 or 83 or 84 (1032)
86 44 and 79 (2185)
87 86 not (3 or 4) (1680)
88 87 not 85 (1027)

Database: Ovid MEDLINE(R) <1946 to October Week 1 2013> Search Strategy:

---

1 meta analysis as topic/ (14064)
2 meta-analy$.tw. (57155)
3 metaanaly$.tw. (1274)
4 meta-analysis/ (51068)
5 (systematic adj (review$1 or overview$1)).tw. (46408)
6 exp Review Literature as Topic/ (7621)
7 or/1-6 (114404)
8 cochrane.ab. (33039)
9 embase.ab. (29462)
10 (psychlit or psyclit).ab. (1189)
11 (psychinfor or psycinfo).ab. (8174)
12 or/8-11 (47806)
13 reference list$.ab. (11604)
14 bibliograph$.ab. (11732)
15 hand search.ab. (865)
16 relevant journals.ab. (895)
17 manual search$.ab. (2220)
18 or/13-17 (25483)
19 selection criteria.ab. (26028)
20 data extraction.ab. (10019)
21 19 or 20 (33588)
22 review/ (1912544)
23 21 and 22 (25897)
24 comment/ (533153)
25 letter/ (803396)
26 editorial/ (334975)
27 animal/ (5486090)
28 human/ (13631608)
29 27 not (28 and 27) (3957888)
30 7 or 12 or 18 or 23 (143113)
31 randomized controlled trials as topic/ (102017)
32 randomized controlled trial/ (387734)
33 random allocation/ (81475)
34 double blind method/ (131321)
35 single blind method/ (19455)
36 clinical trial/ (503981)
37 clinical trial, phase i.pt. (16097)
38 clinical trial, phase ii.pt. (26744)
39 clinical trial, phase iii.pt. (10077)
40 clinical trial, phase iv.pt. (985)
41 controlled clinical trial.pt. (89736)
42 randomized controlled trial.pt. (387734)
43 multicenter study.pt. (181196)
44 clinical trial.pt. (503981)
45 exp Clinical trials as topic/ (295298)
46 or/31-44 (954164)
47 (clinical adj trial$).tw. (210053)
48 ((singl$ or doubl$ or treb$ or tripl$) adj (blind$3 or mask$3)).tw. (129006)
49 placebos/ (33702)

50 placebo$.tw. (161007)
51 randomly allocated.tw. (15955)
52 (allocated adj2 random$).tw. (18445)
53 47 or 48 or 49 or 50 or 51 or 52 (415598)
54 46 or 53 (1119857)
55 case report.tw. (183596)
56 case report.tw. (183596)
57 letter/ (803396)
58 historical article/ (299710)
59 55 or 56 or 57 or 58 (1275472)
60 54 not 59 (1096065)
61 exp cohort studies/ (1361688)
62 cohort$.tw. (260919)
63 controlled clinical trial.pt. (89736)
64 epidemiologic methods/ (30937)
65 limit 64 to yr=1971-1983 (5365)
66 61 or 62 or 63 or 65 (1535709)
67 exp case-control study/ (660962)
68 (case$ and control$).tw. (312502)
69 67 or 68 (885537)
70 epidemiologic studies/ (6242)
71 (follow up adj stud$).tw. (36469)
72 longitudinal.tw. (132878)
73 (observational adj stud$).tw. (40485)
74 retrospective.tw. (251881)
75 cross sectional.tw. (156469)
76 cross-sectional studies/ (179104)
77 or/70-76 (663510)
78 exp Living Donors/ (10898)
79 exp Kidney/ (301075)
80 Kidney Transplantation/ (80731)
81 kidney.ti. (105471)
82 79 or 80 or 81 (403205)
83 78 and 82 (4883)
84 (liv$ and kidney and don$).ti. (1566)
85 83 or 84 (5223)
86 30 and 85 (52)
87 85 and 60 (418)
88 66 and 85 (1899)
89 85 and (69 or 77) (1415)

Appendix B. Unextracted and Excluded Studies

Peri/Post Nephrectomy Outcomes: Eligible Studies-Not extracted

1. Aboutaleb E, Herbert P, Crane J, et al. Mini-incision donor nephrectomy techniques: a systematic review. Experimental & Clinical Transplantation: Official Journal of the Middle East Society for Organ Transplantation. 2010 Sep;8(3):189-95. PMID 20716035. *PP-OR-NO Extract*
2. Adiyat KT, Tharun BK, Shetty A, et al. Comparison of three different techniques of extraction in laparoscopic donor nephrectomy. Indian Journal of Urology. 2013 Jul;29(3):184-7. PMID 24082437. *PP-OR-NO Extract*
3. Aguiar WF, Passerotti CC, Claro JF, et al. Mini-incisions by lombotomy or subcostal access in living kidney donors: a randomized trial comparing pain, safety, and quality of life. Clinical Transplantation. 2007 Mar-Apr;21(2):269-76. PMID 17425757. *PP-OR-NO Extract*
4. Ahmadi AR, Lafranca JA, Claessens LA, et al. Shifting paradigms in eligibility criteria for live kidney donation: a systematic review. Kidney international. 2014. *LT-SR-Extract*
5. Amirzargar MA, Babolhavaeji H, Hosseini SA, et al. The new technique of using the epigastric arteries in renal transplantation with multiple renal arteries. Saudi Journal of Kidney Diseases & Transplantation. 2013 Mar;24(2):247-53. PMID 23538346. *PP-OR-NO Extract*
6. Anderson KM, Lindler TU, Lamberton GR, et al. Laparoscopic donor nephrectomy: effect of perirenal fat upon donor operative time. Journal of Endourology. 2008 Oct;22(10):2269-74. PMID 18831674. *PP-OR-NO Extract*
7. Arai K, Nishiyama T, Hara N, et al. Retroperitoneoscopic donor nephrectomy with a gel-sealed hand-assist access device. BMC Urology. 2013;13:7. PMID 23374442. *PP-OR-NO Extract*
8. Ashraf HS, Hussain I, Siddiqui AA, et al. The outcome of living related kidney transplantation with multiple renal arteries. Saudi Journal of Kidney Diseases & Transplantation. 2013 May;24(3):615-9. PMID 23640649. *PP-OR-NO Extract*
9. Aull MJ, Afaneh C, Charlton M, et al. A randomized, prospective, parallel group study of laparoscopic versus laparoendoscopic single site donor nephrectomy for kidney donation. American Journal of Transplantation. 2014 Jul;14(7):1630-7. PMID 24934732. *PP-OR-NO Extract*
10. Bachmann A, Wolff T, Ruszat R, et al. Retroperitoneoscopic donor nephrectomy: a retrospective, non-randomized comparison of early complications, donor and recipient outcome with the standard open approach. European Urology. 2005 Jul;48(1):90-6; discussion 6. PMID 15967257. *PP-OR-NO Extract*
11. Bachmann A, Wyler S, Wolff T, et al. Complications of retroperitoneoscopic living donor nephrectomy: single center experience after 164 cases. World Journal of Urology. 2008 Dec;26(6):549-54. PMID WOS:000260856600005. *PP-OR-NO Extract*
12. Bargman V, Sundaram CP, Bernie J, et al. Randomized trial of laparoscopic donor nephrectomy with and without hand assistance. Journal of Endourology. 2006 Oct;20(10):717-22. PMID 17094745. *PP-OR-NO Extract*

13. Becker BN, Becker YT. Rehospitalization after living kidney donation. Clinical Journal of The American Society of Nephrology: CJASN. 2014 Feb;9(2):227-8. PMID 24458083. *PP-OR-NO Extract*
14. Bergman S, Feldman LS, Anidjar M, et al. "First, do no harm": monitoring outcomes during the transition from open to laparoscopic live donor nephrectomy in a Canadian centre. Canadian Journal of Surgery. 2008 Apr;51(2):103-10. PMID 18377750. *PP-OR-NO Extract*
15. Biglarnia A, Bergqvist D, Johansson M, et al. Venous thromboembolism in live kidney donors--a prospective study. Transplantation. 2008 Sep 15;86(5):659-61. PMID 18791446. *PP-OR-NO Extract*
16. Brockmann JG, Senninger N, Wolters HH. Living donor of the kidney-open-video. Langenbecks Archives of Surgery. 2007 May;392(3):219-25. PMID 17375320. *PP-OR-NO Extract*
17. Buresley S, Samhan M, Al-Mousawi M. Kuwait experience in laparoscopic donor nephrectomy: first 80 cases. Transplantation Proceedings. 2007 May;39(4):813-5. PMID 17524819. *PP-OR-NO Extract*
18. Cannon RM, Eng M, Marvin MR, et al. Laparoscopic living kidney donation at a single center: an examination of donor outcomes with increasing experience. American Surgeon. 2011 Jul;77(7):911-5. PMID 21944358. *PP-OR-NO Extract*
19. Chandak P, Kessaris N, Challacombe B, et al. How safe is hand-assisted laparoscopic donor nephrectomy?--results of 200 live donor nephrectomies by two different techniques. Nephrology Dialysis Transplantation. 2009 Jan;24(1):293-7. PMID 18711221. *PP-OR-NO Extract*
20. Cherif M, Ounissi M, Karoui C, et al. Short- and Long-Term Outcomes of Living Donors in Tunisia: A Retrospective Study. Transplantation Proceedings. 2010 Dec;42(10):4311-3. PMID WOS:000285732200105. *PP-OR-NO Extract*
21. Chin EH, Hazzan D, Herron DM, et al. Laparoscopic donor nephrectomy: intraoperative safety, immediate morbidity, and delayed complications with 500 cases. Surgical Endoscopy. 2007 Apr;21(4):521-6. PMID 17180288. *PP-OR-NO Extract*
22. Cho HJ, Choi YS, Bae WJ, et al. Another option for laparoscopic living donor nephrectomy: a single center experience comparing two-port versus hand-assisted technique. Journal of Endourology. 2013 May;27(5):587-91. PMID 23228097. *PP-OR-NO Extract*
23. Chow GK, Prieto M, Bohorquez HE, et al. Hand-assisted laparoscopic donor nephrectomy for morbidly obese patients. Transplantation Proceedings. 2002;34(2):728. PMID 2002171828. *PP-OR-NO Extract*
24. Crane C, Lam VW, Alsakran A, et al. Are there anatomical barriers to laparoscopic donor nephrectomy? ANZ Journal of Surgery. 2010 Nov;80(11):781-5. PMID 20969683. *PP-OR-NO Extract*
25. Crotty C, Tabbakh Y, Hosgood SA, et al. Systemic heparinisation in laparoscopic live donor nephrectomy. Journal of transplantation. 2013;2013:138926. PMID 24455192. *PP-OR-NO Extract*
26. Dahm F, Weber M, Muller B, et al. Open and laparoscopic living donor nephrectomy in Switzerland: a retrospective assessment of clinical outcomes and the motivation to donate. Nephrology Dialysis Transplantation. 2006 Sep;21(9):2563-8. PMID 16702206. *PP-OR-NO Extract*
27. Dinckan A, Dinc B, Turkyilmaz S, et al. Comparison of open and retroperitonoscopic donor nephrectomy in terms of lipid and protein peroxidation responses. Transplantation Proceedings. 2013 Nov;45(9):3214-9. PMID 24182787. *PP-OR-NO Extract*
28. Diner EK, Radolinski B, Murdock JD, et al. Right laparoscopic donor nephrectomy: the Washington Hospital Center experience. Urology. 2006 Dec;68(6):1175-7. PMID 17169641. *PP-OR-NO Extract*

29. Dolce CJ, Keller JE, Walters KC, et al. Laparoscopic versus open live donor nephrectomy: outcomes analysis of 266 consecutive patients. Surgical Endoscopy. 2009 Jul;23(7):1564-8. PMID 19263157. *PP-OR-NO Extract*
30. Dols LF, Kok NF, d'Ancona FC, et al. Randomized controlled trial comparing hand-assisted retroperitoneoscopic versus standard laparoscopic donor nephrectomy. Transplantation. 2014 Jan 27;97(2):161-7. PMID 24092379. *PP-OR-NO Extract*
31. Dols LF, Kok NF, Terkivatan T, et al. Optimizing left-sided live kidney donation: hand-assisted retroperitoneoscopic as alternative to standard laparoscopic donor nephrectomy. Transplant International. 2010 Apr 1;23(4):358-63. PMID 19886969. *PP-OR-NO Extract*
32. Duchene DA, Woodruff DY, Gallagher BL, et al. Successful outcomes of older donors in laparoscopic donor nephrectomy. Journal of Endourology. 2010 Oct;24(10):1593-6. PMID 20836718. *PP-OR-NO Extract*
33. Eroglu M, Guvence N, Kiper A, et al. Rib resection for live-donor nephrectomy. International Urology and Nephrology. 2005 December;37(4):675-9. PMID 2006043230. *PP-OR-NO Extract*
34. Fehrman-Ekholm I, Moller S, Steinwall J, et al. Single or double arteries in the remnant kidney after donation: influence on the long-term outcome of the donor. Transplantation Proceedings. 2009 Mar;41(2):764-5. PMID 19328974. *PP-OR-NO Extract*
35. Friedersdorff F, Werthemann P, Cash H, et al. Outcomes after laparoscopic living donor nephrectomy: comparison of two laparoscopic surgeons with different levels of expertise. BJU International. 2013 Jan;111(1):95-100. PMID 22757693. *PP-OR-NO Extract*
36. Friedman AL, Cheung K, Roman SA, et al. Early clinical and economic outcomes of patients undergoing living donor nephrectomy in the United States. Archives of Surgery. 2010 Apr;145(4):356-62; discussion 62. PMID 20404286. *PP-OR-NO Extract*
37. Genc V, Ozgencil E, Orozakunov E, et al. Pure laparoscopic versus open live donor nephrectomy: evaluation of health survey and graft functions. Transplantation Proceedings. 2011 Apr;43(3):791-4. PMID 21486599. *PP-OR-NO Extract*
38. Goh YS, Cheong PS, Lata R, et al. A necessary step toward kidney donor safety: the transition from locking polymer clips to transfixion techniques in laparoscopic donor nephrectomy. Transplantation Proceedings. 2014 Mar;46(2):310-3. PMID 24655950. *PP-OR-NO Extract*
39. Gorodner V, Horgan S, Galvani C, et al. Routine left robotic-assisted laparoscopic donor nephrectomy is safe and effective regardless of the presence of vascular anomalies. Transplant International. 2006 Aug;19(8):636-40. PMID 16827680. *PP-OR-NO Extract*
40. Greco F, Hoda MR, Alcaraz A, et al. Laparoscopic living-donor nephrectomy: Analysis of the existing literature. European Urology. 2010 October;58(4):498-509. PMID 2010493890. *PP-OR-NO Extract*
41. Guo FF, Shao ZQ, Yang WY, et al. Clinical analysis of living related renal transplantation with donors older than 50 years in China. Transplantation Proceedings. 2010 Sep;42(7):2471-6. PMID 20832526. *PP-OR-NO Extract*
42. Gupta M, Singh P, Dubey D, et al. A comparison of kidney retrieval incisions in laparoscopic transperitoneal donor nephrectomy. Urologia Internationalis. 2008;81(3):296-300. PMID 18931546. *PP-OR-NO Extract*
43. Gures N, Gurluler E, Berber I, et al. Comparison of the right and left laparoscopic live donor nephrectomies: a clinical case load. European Review for Medical & Pharmacological Sciences. 2013 May;17(10):1389-94. PMID 23740454. *PP-OR-NO Extract*

44. Hadjianastassiou VG, Johnson RJ, Rudge CJ, et al. 2509 Living donor nephrectomies, morbidity and mortality, including the UK introduction of laparoscopic donor surgery. American Journal of Transplantation. 2007 November;7(11):2532-7. PMID 2007497988. *PP-OR-NO Extract*
45. Hakim NS. A fast and safe living donor "finger assisted" nephrectomy technique. International Surgery. 2007 Sep-Oct;92(5):304-7. PMID 18399104. *PP-OR-NO Extract*
46. Harper JD, Breda A, Leppert JT, et al. Experience with 750 consecutive laparoscopic donor nephrectomies--is it time to use a standardized classification of complications? Journal of Urology. 2010 May;183(5):1941-6. PMID 20303114. *PP-OR-NO Extract*
47. Hawasli A, Berri R, Meguid A, et al. Total laparoscopic live donor nephrectomy: a 6-year experience. American Journal of Surgery. 2006 Mar;191(3):325-9. PMID 16490540. *PP-OR-NO Extract*
48. Heimbach JK, Taler SJ, Prieto M, et al. Obesity in living kidney donors: clinical characteristics and outcomes in the era of laparoscopic donor nephrectomy. American Journal of Transplantation. 2005 May;5(5):1057-64. PMID 15816886. *PP-OR-NO Extract*
49. Helal I, Abdallah TB, Ounissi M, et al. Short- and long-term outcomes of kidney donors: a report from Tunisia. Saudi Journal of Kidney Diseases & Transplantation. 2012 Jul;23(4):853-9. PMID 22805410. *PP-OR-NO Extract*
50. Hofker HS, Nijboer WN, Niesing J, et al. A randomized clinical trial of living donor nephrectomy: a plea for a differentiated appraisal of mini-open muscle splitting incision and hand-assisted laparoscopic donor nephrectomy. Transplant International. 2012 Sep;25(9):976-86. PMID 22849958. *PP-OR-NO Extract*
51. Horgan S, Galvani C, Gorodner MV, et al. Effect of robotic assistance on the "learning curve" for laparoscopic hand-assisted donor nephrectomy. Surgical Endoscopy. 2007 Sep;21(9):1512-7. PMID 17287916. *PP-OR-NO Extract*
52. Hung CJ, Lin YJ, Chang SS, et al. Kidney grafts with multiple renal arteries is no longer a relative contraindication with advance in surgical techniques of laparoscopic donor nephrectomy. Transplantation Proceedings. 2012 Jan;44(1):36-8. PMID 22310572. *PP-OR-NO Extract*
53. Inoue T, Tsuchiya N, Narita S, et al. Laparoendoscopic single-site plus one trocar donor nephrectomy using the GelPort: initial clinical experience. Urology. 2013 Feb;81(2):308-12. PMID 23374790. *PP-OR-NO Extract*
54. Izquierdo L, Peri L, Alvarez-Vijande R, et al. Audit of an initial 100 cases of laparoscopic live donor nephrectomy. Transplantation Proceedings. 2010 Nov;42(9):3437-9. PMID 21094792. *PP-OR-NO Extract*
55. Jacobs SC, Cho E, Dunkin BJ, et al. Laparoscopic nephrectomy in the markedly obese living renal donor. Urology. 2000 Dec 20;56(6):926-9. PMID 11113733. *PP-OR-NO Extract*
56. Jacobs SC, Ramey JR, Sklar GN, et al. Laparoscopic kidney donation from patients older than 60 years. Journal of the American College of Surgeons. 2004 Jun;198(6):892-7. PMID 15194070. *PP-OR-NO Extract*
57. Jeon H, Johnston TD, Strup SE, et al. University of Kentucky experience with laparoscopic live donor nephrectomy using two different techniques. International Surgery. 2006 Nov-Dec;91(6):332-5. PMID 17256431. *PP-OR-NO Extract*
58. Johnson SR, Khwaja K, Pavlakis M, et al. Older living donors provide excellent quality kidneys: a single center experience (older living donors). Clinical Transplantation. 2005 Oct;19(5):600-6. PMID WOS:000231678900005. *PP-OR-NO Extract*

59. Kanashiro H, Falci R, Jr., Piovisan AC, et al. Subcostal mini incision: a good option for donor nephrectomy. Clinics (Sao Paulo, Brazil). 2010 May;65(5):507-10. PMID 20535369. *PP-OR-NO Extract*
60. Klop KW, Kok NF, Dols LF, et al. Can right-sided hand-assisted retroperitoneoscopic donor nephrectomy be advocated above standard laparoscopic donor nephrectomy: a randomized pilot study. Transplant International. 2014 Feb;27(2):162-9. PMID 24268098. *PP-OR-NO Extract*
61. Kocak B, Baker TB, Koffron AJ, et al. Laparoscopic living donor nephrectomy: a single-center sequential experience comparing hand-assisted versus standard technique. Urology. 2007 Dec;70(6):1060-3. PMID 18158014. *PP-OR-NO Extract*
62. Kocak B, Koffron AJ, Baker TB, et al. Proposed classification of complications after live donor nephrectomy. Urology. 2006 May;67(5):927-31. PMID 16698353. *PP-OR-NO Extract*
63. Kok NF, Alwayn IP, Lind MY, et al. Donor nephrectomy: mini-incision muscle-splitting open approach versus laparoscopy. Transplantation. 2006 Mar 27;81(6):881-7. PMID 16570012. *PP-OR-NO Extract*
64. Kok NF, Alwayn IP, Tran KT, et al. Psychosocial and physical impairment after mini-incision open and laparoscopic donor nephrectomy: A prospective study. Transplantation. 2006 Nov 27;82(10):1291-7. PMID 17130777. *PP-OR-NO Extract*
65. Kok NF, JN IJ, Schouten O, et al. Laparoscopic donor nephrectomy in obese donors: easier to implement in overweight women? Transplant International. 2007 Nov;20(11):956-61. PMID 17635838. *PP-OR-NO Extract*
66. Kok NF, Lind MY, Hansson BM, et al. Comparison of laparoscopic and mini incision open donor nephrectomy: single blind, randomised controlled clinical trial.[Reprint in Ned Tijdschr Geneeskd. 2007 Jun 16;151(24):1352-60; PMID: 17665628]. BMJ. 2006 Jul 29;333(7561):221. PMID 16847014. *PP-OR-NO Extract*
67. Kokkinos C, Nanidis T, Antcliffe D, et al. Comparison of laparoscopic versus hand-assisted live donor nephrectomy. Transplantation. 2007 Jan 15;83(1):41-7. PMID 17220789. *PP-OR-NO Extract*
68. Kostakis A, Bokos J, Stamatiades D, et al. The 10 years single center experience of using elderly donors for living related kidney transplantation. Geriatric Nephrology & Urology. 1997;7(3):127-30. PMID 9493033. *PP-OR-NO Extract*
69. Kroencke S, Fischer L, Nashan B, et al. A prospective study on living related kidney donors' quality of life in the first year: choosing appropriate reference data. Clinical Transplantation. 2012 Jul-Aug;26(4):E418-27. PMID 22882697. *PP-OR-NO Extract*
70. Lai IR, Yang CY, Yeh CC, et al. Hand-assisted versus total laparoscopic live donor nephrectomy: comparison and technique evolution at a single center in Taiwan. Clinical Transplantation. 2010 Sep-Oct;24(5):E182-7. PMID 20002465. *PP-OR-NO Extract*
71. Leventhal JR, Kocak B, Salvalaggio PR, et al. Laparoscopic donor nephrectomy 1997 to 2003: lessons learned with 500 cases at a single institution. Surgery. 2004 Oct;136(4):881-90. PMID 15467675. *PP-OR-NO Extract*
72. Leventhal JR, Paunescu S, Baker TB, et al. A decade of minimally invasive donation: experience with more than 1200 laparoscopic donor nephrectomies at a single institution. Clinical Transplantation. 2010 Mar-Apr;24(2):169-74. PMID 20070317. *PP-OR-NO Extract*
73. Lewis GR, Brook NR, Waller JR, et al. A comparison of traditional open, minimal-incision donor nephrectomy and laparoscopic donor nephrectomy. Transplant International. 2004 Nov;17(10):589-95. PMID 15517169. *PP-OR-NO Extract*

74. Lucas SM, Liaw A, Mhapsekar R, et al. Comparison of donor, and early and late recipient outcomes following hand assisted and laparoscopic donor nephrectomy. Journal of Urology. 2013 Feb;189(2):618-22. PMID 23017507. *PP-OR-NO Extract*
75. Marui Y, Nakamura M, Tanaka K, et al. Hand-assisted technique facilitates preserving graft viability in laparoscopic donor nephrectomy. Transplantation Proceedings. 2012 Jan;44(1):26-9. PMID 22310569. *PP-OR-NO Extract*
76. Maruyama M, Akutsu N, Ohtsuki K, et al. Single-site retroperitoneoscopic donor nephrectomy. Transplantation Proceedings. 2014 Mar;46(2):321-2. PMID 24655953. *PP-OR-NO Extract*
77. Minnee RC, Bemelman F, Kox C, et al. Comparison of hand-assisted laparoscopic and open donor nephrectomy in living donors. International Journal of Urology. 2008 Mar;15(3):206-9. PMID 18304213. *PP-OR-NO Extract*
78. Minnee RC, Bemelman WA, Maartense S, et al. Left or right kidney in hand-assisted donor nephrectomy? A randomized controlled trial. Transplantation. 2008 Jan 27;85(2):203-8. PMID 18212624. *PP-OR-NO Extract*
79. Minnee RC, Bemelman WA, Polle SW, et al. Older living kidney donors: surgical outcome and quality of life. Transplantation. 2008 Jul 27;86(2):251-6. PMID 18645487. *PP-OR-NO Extract*
80. Mitre AI, Denes FT, Nahas WC, et al. Comparative and prospective analysis of three different approaches for live-donor nephrectomy. Clinics (Sao Paulo, Brazil). 2009;64(1):23-8. PMID 19142547. *PP-OR-NO Extract*
81. Mjoen G, Oyen O, Holdaas H, et al. Morbidity and mortality in 1022 consecutive living donor nephrectomies: benefits of a living donor registry. Transplantation. 2009 Dec 15;88(11):1273-9. PMID 19996926. *PP-OR-NO Extract*
82. Nakajima I, Iwadoh K, Koyama I, et al. Nine-yr experience of 700 hand-assisted laparoscopic donor nephrectomies in Japan. Clinical Transplantation. 2012 Sep-Oct;26(5):797-807. PMID 22449123. *PP-OR-NO Extract*
83. Nanidis TG, Antcliffe D, Kokkinos C, et al. Laparoscopic versus open live donor nephrectomy in renal transplantation: a meta-analysis. Annals of Surgery. 2008 Jan;247(1):58-70. PMID 18156924. *PP-OR-NO Extract*
84. Narita S, Inoue T, Matsuura S, et al. Outcome of right hand-assisted retroperitoneoscopic living donor nephrectomy. Urology. 2006 Mar;67(3):496-500; discussion -1. PMID 16527565. *PP-OR-NO Extract*
85. Neipp M, Jackobs S, Jaeger M, et al. Living kidney donors >60 years of age: is it acceptable for the donor and the recipient? Transplant International. 2006 Mar;19(3):213-7. PMID 16441770. *PP-OR-NO Extract*
86. Nicholson ML, Kaushik M, Lewis GR, et al. Randomized clinical trial of laparoscopic versus open donor nephrectomy. British Journal of Surgery. 2010 Jan;97(1):21-8. PMID 19937983. *PP-OR-NO Extract*
87. O'Brien B, Mastoridis S, Sabharwal A, et al. Expanding the donor pool: living donor nephrectomy in the elderly and the overweight. Transplantation. 2012 Jun 15;93(11):1158-65. PMID 22495495. *LT-OR-NO extract*
88. Okamoto M, Akioka K, Nobori S, et al. Short- and long-term donor outcomes after kidney donation: analysis of 601 cases over a 35-year period at Japanese single center. Transplantation. 2009 Feb 15;87(3):419-23. PMID 19202449. *PP-OR-NO Extract*
89. Oyen O, Andersen M, Mathisen L, et al. Laparoscopic versus open living-donor nephrectomy: Experiences from a prospective, randomized, single-center study focusing on donor safety. Transplantation. 2005 15 May;79(9):1236-40. PMID 2005216492. *PP-OR-NO Extract*
90. Pandarinath SR, Choudhary B, Chouhan HS, et al. Transperitoneal laparoscopic left versus right live donor nephrectomy: Comparison of outcomes. Indian Journal of Urology. 2014 Jul;30(3):256-60. PMID 25097308. *PP-OR-NO Extract*

91. Paragi PR, Klaassen Z, Fletcher HS, et al. Vascular constraints in laparoscopic renal allograft: comparative analysis of multiple and single renal arteries in 976 laparoscopic donor nephrectomies. World Journal of Surgery. 2011 Sep;35(9):2159-66. PMID 21713578. *PP-OR-NO Extract*
92. Prasad GVR, Lipszyc D, Huang M, et al. A Prospective Observational Study of Changes in Renal Function and Cardiovascular Risk Following Living Kidney Donation. Transplantation. 2008 Nov;86(9):1315-8. PMID WOS:000260945600023. *PP-OR-NO Extract*
93. Reese PP, Feldman HI, Asch DA, et al. Short-term outcomes for obese live kidney donors and their recipients. Transplantation. 2009 Sep 15;88(5):662-71. PMID 19741463. *PP-OR-NO Extract*
94. Richstone L, Rais-Bahrami S, Waingankar N, et al. Pfannenstiel laparoendoscopic single-site (LESS) vs conventional multiport laparoscopic live donor nephrectomy: a prospective randomized controlled trial. BJU International. 2013 Sep;112(5):616-22. PMID 23826907. *PP-OR-NO Extract*
95. Rook M, Bosma RJ, van Son WJ, et al. Nephrectomy elicits impact of age and BMI on renal hemodynamics: Lower postdonation reserve capacity in older or overweight kidney donors. American Journal of Transplantation. 2008 Oct;8(10):2077-85. PMID WOS:000259269900016. *PP-OR-NO Extract*
96. Ruszat R, Sulser T, Dickenmann M, et al. Retroperitoneoscopic donor nephrectomy: donor outcome and complication rate in comparison with three different techniques. World Journal of Urology. 2006 Feb;24(1):113-7. PMID 16435146. *PP-OR-NO Extract*
97. Salazar A, Pelletier R, Yilmaz S, et al. Use of a minimally invasive donor nephrectomy program to select technique for live donor nephrectomy. American Journal of Surgery. 2005 May;189(5):558-62; discussion 62-3. PMID 15862496. *PP-OR-NO Extract*
98. Samarasekera D, Kim DS, Wang R, et al. Laparoscopy, dorsal lumbotomy and flank incision live donor nephrectomy: comparison of donor outcomes. Canadian Urological Association Journal. 2013 Jan-Feb;7(1-2):E69-73. PMID 23671511. *PP-OR-NO Extract*
99. Schnitzbauer AA, Loss M, Hornung M, et al. Mini-incision for strictly retroperitoneal nephrectomy in living kidney donation vs flank incision. Nephrology Dialysis Transplantation. 2006 Oct;21(10):2948-52. PMID 16891649. *PP-OR-NO Extract*
100. Schold JD, Goldfarb DA, Buccini LD, et al. Hospitalizations following living donor nephrectomy in the United States. Clinical Journal of The American Society of Nephrology: CJASN. 2014 Feb;9(2):355-65. PMID 24458071. *PP-OR-NO Extract*
101. Schostak M, Wloch H, Muller M, et al. Optimizing open live-donor nephrectomy - long-term donor outcome. Clinical Transplantation. 2004 Jun;18(3):301-5. PMID 15142052. *LT-OR-NO extract*
102. Seo SI, Kim JC, Hwangbo K, et al. Comparison of hand-assisted laparoscopic and open donor nephrectomy: a single-center experience from South Korea. Journal of Endourology. 2005 Jan-Feb;19(1):58-62. PMID 15735385. *PP-OR-NO Extract*
103. Shirodkar SP, Sageshima J, Bird VG, et al. Living donor nephrectomy: University of Miami technique and current results. Archivos Espanoles de Urologia. 2010 Apr;63(3):163-70. PMID 20431181. *PP-OR-NO Extract*
104. Shokeir AA. Open versus laparoscopic live donor nephrectomy: a focus on the safety of donors and the need for a donor registry. Journal of Urology. 2007 Nov;178(5):1860-6. PMID 17868736. *PP-OR-NO Extract*

105. Siebels M, Theodorakis J, Schmeller N, et al. Risks and complications in 160 living kidney donors who underwent nephroureterectomy. Nephrology Dialysis Transplantation. 2003 Dec;18(12):2648-54. PMID 14605291. *PP-OR-NO Extract*
106. Simforoosh N, Soltani MH, Hosseini Sharifi SH, et al. Mini-laparoscopic live donor nephrectomy: initial series. Urology Journal. 2013;10(4):1054-8. PMID 24469649. *PP-OR-NO Extract*
107. Srivastava A, Gupta N, Kumar A. Evolution of the technique of laparoscopic live donor nephrectomy at a single center: experience with more than 350 cases. Urologia Internationalis. 2008;81(4):431-6. PMID 19077405. *PP-OR-NO Extract*
108. Stamatakis L, Mercado MA, Choi JM, et al. Comparison of laparoendoscopic single site (LESS) and conventional laparoscopic donor nephrectomy at a single institution. BJU International. 2013 Jul;112(2):198-206. PMID 23480679. *PP-OR-NO Extract*
109. Taber DJ, Ashcraft E, Cattanach LA, et al. No difference between smokers, former smokers, or nonsmokers in the operative outcomes of laparoscopic donor nephrectomies. Surgical Laparoscopy, Endoscopy & Percutaneous Techniques. 2009 Apr;19(2):153-6. PMID 19390284. *PP-OR-NO Extract*
110. Tan JC, Busque S, Workeneh B, et al. Effects of aging on glomerular function and number in living kidney donors. Kidney International. 2010 Oct;78(7):686-92. PMID WOS:000281824200011. *PP-OR-NO Extract*
111. Taweemonkongsap T, Nualyong C, Amornvesukit T, et al. Laparoscopic live-donor nephrectomy: a comparison with the open technique and how to reach quality standards: a single-center experience in Thailand. Transplantation Proceedings. 2011 Dec;43(10):3593-8. PMID 22172811. *PP-OR-NO Extract*
112. Tent H, Rook M, Stevens LA, et al. Renal Function Equations before and after Living Kidney Donation: A Within-Individual Comparison of Performance at Different Levels of Renal Function. Clinical Journal of the American Society of Nephrology. 2010 Nov;5(11):1960-8. PMID WOS:000284018500010. *PP-OR-NO Extract*
113. Tent H, Sanders JS, Rook M, et al. Effects of preexistent hypertension on blood pressure and residual renal function after donor nephrectomy. Transplantation. 2012 Feb 27;93(4):412-7. PMID 22217533. *LT-OR-NO extract*
114. Textor SC, Taler SJ, Driscoll N, et al. Blood pressure and renal function after kidney donation from hypertensive living donors. Transplantation. 2004 Jul 27;78(2):276-82. PMID 15280690. *PP-OR-NO Extract*
115. Tokodai K, Takayama T, Amada N, et al. Retroperitoneoscopic living donor nephrectomy: short learning curve and our original hybrid technique. Urology. 2013 Nov;82(5):1054-8. PMID 24044910. *PP-OR-NO Extract*
116. Tomic A, Jevtic M, Novak M, et al. Changes of Glomerular Filtration After Nephrectomy in Living Donor. International Surgery. 2010 Oct-Dec;95(4):343-9. PMID WOS:000294533800013. *PP-OR-NO Extract*
117. Tooher RL, Rao MM, Scott DF, et al. A systematic review of laparoscopic live-donor nephrectomy. Transplantation. 2004 Aug 15;78(3):404-14. PMID 15316369. *PP-OR-NO Extract*
118. Troppmann C, Daily MF, McVicar JP, et al. The transition from laparoscopic to retroperitoneoscopic live donor nephrectomy: a matched pair pilot study. Transplantation. 2010 Apr 15;89(7):858-63. PMID 20065916. *PP-OR-NO Extract*
119. Tsoulfas G, Agorastou P, Ko D, et al. Laparoscopic living donor nephrectomy: is there a difference between using a left or a right kidney? Transplantation Proceedings. 2012 Nov;44(9):2706-8. PMID 23146499. *PP-OR-NO Extract*
120. Tsuchiya N, Satoh S, Sato K, et al. Hand assisted retroperitoneoscopic living donor nephrectomy in elderly donors. Journal of Urology. 2006 Jan;175(1):230-4. PMID WOS:000234001100062. *PP-OR-NO Extract*

121. Ungbhakorn P, Kongchareonsombat W, Leenanupan C, et al. Comparative outcomes of open nephrectomy, hand-assisted laparoscopic nephrectomy, and full laparoscopic nephrectomy for living donors. Transplantation Proceedings. 2012 Jan;44(1):22-5. PMID 22310568. *PP-OR-NO Extract*
122. Van der Merwe A, Heyns CF. Retroperitoneoscopic live donor nephrectomy: review of the first 50 cases at Tygerberg Hospital, Cape Town, South Africa. South African Journal of Surgery. 2014 Jun;52(2):53-6. PMID 25216097. *PP-OR-NO Extract*
123. Villeda-Sandoval CI, Rodriguez-Covarrubias F, Cortes-Aguilar G, et al. Hand-assisted laparoscopic versus open donor nephrectomy: a retrospective comparison of perioperative and functional results in a tertiary care center in Mexico. Transplantation Proceedings. 2013 Nov;45(9):3220-4. PMID 24182788. *PP-OR-NO Extract*
124. Yuzawa K, Shinoda M, Fukao K. Outcome of laparoscopic live donor nephrectomy in 2005: National survey of Japanese transplantation centers. Transplantation Proceedings. 2006 Dec;38(10):3409-11. PMID 17175288. *PP-OR-NO Extract*

Longterm Outcomes: Eligible Studies-Not extracted

1. Wu X, Moore D, Wansley S, et al. 3 Year comparative outcomes of live kidney donors over age 50 or with a BMI > 30: A single center experience. American Journal of Transplantation. 2012 May;12:330. PMID 70746986.
2. Tsai SF, Shu KH, Ho HC, et al. Long-term outcomes of living kidney donors over the past 28 years in a single center in Taiwan. Transplantation Proceedings. 2012 Jan;44(1):39-42. PMID 22310573.
3. Toyoda M, Yamanaga S, Kawabata C, et al. Long-term safety of living kidney donors aged 60 and older. Transplantation Proceedings. 2014 Mar;46(2):318-20. PMID 24655952.
4. Timsit MO, Nguyen KN, Rouach Y, et al. Kidney function following nephrectomy: similitude and discrepancies between kidney cancer and living donation. Urologic Oncology. 2012 Jul-Aug;30(4):482-6. PMID 20864365.
5. Tent H, Sanders JS, Rook M, et al. Effects of preexistent hypertension on blood pressure and residual renal function after donor nephrectomy. Transplantation. 2012 Feb 27;93(4):412-7. PMID 22217533.
6. Tavakol MM, Vincenti FG, Assadi H, et al. Long-term renal function and cardiovascular disease risk in obese kidney donors. Clinical Journal of The American Society of Nephrology: CJASN. 2009 Jul;4(7):1230-8. PMID 19443625.
7. Tan L, Tai BC, Wu FN, et al. Impact of Kidney Disease Outcomes Quality Initiative Guidelines on the Prevalence of Chronic Kidney Disease After Living Donor Nephrectomy. Journal of Urology. 2011 May;185(5):1820-5. PMID WOS:000289279600089.
8. Talseth T, Fauchald P, Skrede S, et al. LONG-TERM BLOOD-PRESSURE AND RENAL-FUNCTION IN KIDNEY DONORS. Kidney International. 1986 May;29(5):1072-6. PMID WOS:A1986C189100017.
9. Smith SW, Hitt R, Nazione S, et al. Comparison of communication and personal characteristics of living kidney donors and a matched quota sample. Clinical Transplantation. 2013 Jan-Feb;27(1):104-12. PMID 23072546.
10. Shrestha SM, Talbot D, Rix D, et al. Effect of age or obesity on the short-term and long-term outcomes in living kidney donors: A single centre experience (2001-2009). American Journal of Transplantation. 2011 April;11:199-200. PMID 70405602.

11. Schostak M, Wloch H, Muller M, et al. Optimizing open live-donor nephrectomy - long-term donor outcome. Clinical Transplantation. 2004 Jun;18(3):301-5. PMID 15142052.
12. Santos L, Macario F, Alves R, et al. Risks of Living Donor Nephrectomy. Transplantation Proceedings. 2010 Jun;42(5):1484-6. PMID WOS:000279236100018.
13. Rizvi SA, Naqvi SA, Jawad F, et al. Living kidney donor follow-up in a dedicated clinic. Transplantation. 2005 May 15;79(9):1247-51. PMID 15880079.
14. Ramesh Prasad GV, Lipszyc D, Sarker S, et al. Twenty four-hour ambulatory blood pressure profiles 12 months post living kidney donation. Transplant International. 2010 Aug;23(8):771-6. PMID 20059751.
15. Praga M, Hernandez E, Herrero JC, et al. Influence of obesity on the appearance of proteinuria and renal insufficiency after unilateral nephrectomy. Kidney International. 2000 Nov;58(5):2111-8. PMID WOS:000090154500030.
16. Patel N, Mason P, Rushton S, et al. Renal function and cardiovascular outcomes after living donor nephrectomy in the UK: quality and safety revisited. BJU International. 2013 Jul;112(2):E134-42. PMID 23795791.
17. Parasuraman R, Venkat KK. Utility of estimated glomerular filtration rate in live kidney donation. Clinical Journal of The American Society of Nephrology: CJASN. 2008 Nov;3(6):1608-9. PMID 18945996.
18. Padrao MB, Sens YA. Quality of life of living kidney donors in Brazil: an evaluation by the short form-36 and the WHOQOL-bref questionnaires. Clinical Transplantation. 2009 Sep-Oct;23(5):621-7. PMID 19664019.
19. Ohashi Y, Thomas G, Nurko S, et al. Association of metabolic syndrome with kidney function and histology in living kidney donors. American Journal of Transplantation. 2013 September;13(9):2342-51. PMID 2013551792.
20. O'Brien B, Mastoridis S, Sabharwal A, et al. Expanding the donor pool: living donor nephrectomy in the elderly and the overweight. Transplantation. 2012 Jun 15;93(11):1158-65. PMID 22495495.
21. Nogueira JM, Weir MR, Jacobs S, et al. A study of renal outcomes in obese living kidney donors. Transplantation. 2010 Nov 15;90(9):993-9. PMID 20844468.
22. Mjoen G, Oyen O, Midtvedt K, et al. Age, gender, and body mass index are associated with renal function after kidney donation. Clinical Transplantation. 2011 Nov-Dec;25(6):E579-83. PMID 21906171.
23. Lopes A, Frade IC, Teixeira L, et al. Depression and anxiety in living kidney donation: evaluation of donors and recipients. Transplantation Proceedings. 2011 Jan-Feb;43(1):131-6. PMID 21335170.
24. Lima DX, Petroianu A, Hauter HL. Quality of life and surgical complications of kidney donors in the late post-operative period in Brazil. Nephrology Dialysis Transplantation. 2006 Nov;21(11):3238-42. PMID 16921185.
25. Klop KW, Dols LF, Weimar W, et al. Quality of life of elderly live kidney donors. Transplantation. 2013 Oct 15;96(7):644-8. PMID 23860088.
26. Kido R, Shibagaki Y, Iwadoh K, et al. Persistent glomerular hematuria in living kidney donors confers a risk of progressive kidney disease in donors after heminephrectomy. American Journal of Transplantation. 2010 Jul;10(7):1597-604. PMID 20353466.
27. Kido R, Shibagaki Y, Iwadoh K, et al. Very low but stable glomerular filtration rate after living kidney donation: is the concept of "chronic kidney disease" applicable to kidney donors? Clinical & Experimental Nephrology. 2010 Aug;14(4):356-62. PMID 20339892.

28. Hildebrand L, Melchert TP, Anderson RC. Impression management during evaluation and psychological reactions post-donation of living kidney donors. Clinical Transplantation. 2014 Aug;28(8):855-61. PMID 24888484.
29. Goldfarb DA, Matin SF, Braun WE, et al. Renal outcome 25 years after donor nephrectomy. Journal of Urology. 2001 Dec;166(6):2043-7. PMID 11696703.
30. Garg AX, Meirambayeva A, Huang AJ, et al. Cardiovascular disease in kidney donors: matched cohort study. British Medical Journal. 2012 Mar;344PMID WOS:000301231900002.
31. Fourcade J, Labeeuw M, Demaziere J, et al. Compensatory renal hypertrophy in living kidney donors. Nephrologie. 2002 2002;23(4):173-7. PMID WOS:000176571400003.
32. Fallahzadeh MK, Jafari L, Roozbeh J, et al. Comparison of Health Status and Quality of Life of Related Versus Paid Unrelated Living Kidney Donors. American Journal of Transplantation. 2013 Dec;13(12):3210-4. PMID WOS:000327235300023.
33. Fallahzadeh M, Jafari L, Sagheb M, et al. Comparison of health status and quality of life of related versus paid unrelated living kidney donors: A single center experience from iran. American Journal of Transplantation. 2013 April;13:304. PMID 71057487.
34. Espinoza R, Gracida C, Cancino J, et al. Effect of obese living donors on the outcome and metabolic features in recipients of kidney transplantation. Transplantation Proceedings. 2006 Apr;38(3):888-9. PMID 16647499.
35. El-Agroudy AE, Wafa EW, Sabry AA, et al. The health of elderly living kidney donors after donation. Annals of Transplantation. 2009 Apr-Jun;14(2):13-9. PMID 19487788.
36. Eberhard OK, Kliem V, Offner G, et al. Assessment of long-term risks for living related kidney donors by 24-h blood pressure monitoring and testing for microalbuminuria. Clinical Transplantation. 1997 Oct;11(5):415-9. PMID WOS:A1997YD70400013.
37. Doshi M, Garg AX, Gibney E, et al. Race and renal function early after live kidney donation: An analysis of the United States Organ Procurement and Transplantation Network Database. Clinical Transplantation. 2010 September-October;24(5):153-7. PMID 2010706693.
38. Demir E, Balal M, Paydas S, et al. Dyslipidemia and weight gain secondary to lifestyle changes in living renal transplant donors. Transplantation Proceedings. 2005 Dec;37(10):4176-9. PMID 16387071.
39. Chandran S, Masharani U, Webber AB, et al. Prediabetic living kidney donors have preserved kidney function at 10 years after donation. Transplantation. 2014 Apr 15;97(7):748-54. PMID 24342975.
40. Bock HA, Bachofen M, Landmann J, et al. GLOMERULAR HYPERFILTRATION AFTER UNILATERAL NEPHRECTOMY IN LIVING KIDNEY DONORS. Transplant International. 1992 1992;5:S156-S9. PMID WOS:A1992JV18900050.
41. Albertsmeyer S, Renner FC, Yildiz S, et al. One hundred six live kidney donors in a single German transplantation center: renal, physical, and psychological follow-up. Transplantation Proceedings. 2010 Dec;42(10):3992-3. PMID 21168608.

Excluded Studies

1. Abdu A, Morolo N, Meyers A, et al. Living kidney donor transplants over a 16-year period in South Africa: a single center experience. Annals of African Medicine. 2011 Apr-Jun;10(2):127-31. PMID 21691019. *No relevant comparison*
2. Abrahams HM, Freise CE, Kang SM, et al. Technique, indications and outcomes of pure laparoscopic right donor nephrectomy. Journal of Urology. 2004 May;171(5):1793-6. PMID 2004174486. *No outcomes of interest*
3. Achille M, Soos J, Fortin MC, et al. Differences in psychosocial profiles between men and women living kidney donors. Clinical Transplantation. 2007 May-Jun;21(3):314-20. PMID WOS:000246151700005. *No relevant comparison*
4. Afaneh C, Aull MJ, Gimenez E, et al. Comparison of laparoendoscopic single-site donor nephrectomy and conventional laparoscopic donor nephrectomy: donor and recipient outcomes. Urology. 2011 Dec;78(6):1332-7. PMID 21996107. *No outcomes of interest*
5. Afaneh C, Ramasamy R, Leeser DB, et al. Is right-sided laparoendoscopic single-site donor nephrectomy feasible? Urology. 2011 Jun;77(6):1365-9. PMID 21397302. *Sample size not sufficient*
6. Afaneh C, Sheth S, Aull MJ, et al. Laparoendoscopic single-site nephrectomy in obese living renal donors. Journal of Endourology. 2012 Feb;26(2):140-6. PMID 22050506. *Sample size not sufficient*
7. Aggarwal N, Porter A, Tang I, et al. Post-nephrectomy renal outcomes in obese living kidney donors. American Journal of Transplantation. 2012 May;12:331. PMID 70746988. *Conference Abstract*
8. Ahmad N, Ahmed K, Khan MS, et al. Living-unrelated donor renal transplantation: an alternative to living-related donor transplantation? Annals of the Royal College of Surgeons of England. 2008 Apr;90(3):247-50. PMID 18430342. *PMC2430448 Not relevant to topic*
9. Ahmadi F, Alimadadi A, Lesan Pezeshki M. Slow graft function and related risk factors in living donor kidney transplantation. [Arabic]. Tehran University Medical Journal. 2008 January;65(10):30-5. PMID 2008088847. *Not available in English*
10. Ahmadi F, Ali-Madadi A, Lessan-Pezeshki M, et al. Pre-transplant calcium-phosphate-parathormone homeostasis as a risk factor for early graft dysfunction. Saudi Journal of Kidney Diseases & Transplantation. 2008 Jan;19(1):54-8. PMID 18087123. *Not relevant to topic*
11. Alagoz S, Cebi D, Akman C, et al. Progression of coronary artery calcification in living kidney donors: a follow-up study. Nephron. 2014;126(3):144-50. PMID 24776642. *No outcomes of interest*
12. Alfani D, Pretagostini R, Rossi M, et al. Living unrelated kidney transplantation: a 12-year single center experience. Transplantation Proceedings. 1997 Feb-Mar;29(1-2):191-4. PMID 9122959. *Nephrectomies before 1994*
13. Alfani D, Pretagostini R, Rossi M, et al. Analysis of 160 consecutive living unrelated kidney transplants: 1983-1997. Transplantation Proceedings. 1997 Dec;29(8):3399-401. PMID 9414764. *Nephrectomies before 1994*
14. Alnimri M, Laftavi MR, Kohli R, et al. African-American women and older patients are at risk for a greater decline in renal function following living kidney donation. Transplantation Proceedings. 2011 Mar;43(2):512-5. PMID 21440747. *Insufficient study duration*
15. Amer H, Prieto M, Heimbach JK, et al. Increasing mortality by living kidney donation?: the devil is in the details. Kidney International. 2014 Jun;85(6):1469. PMID 24875552. *No outcomes of interest*

16. Amico P, Honger G, Mayr M, et al. Clinical relevance of pretransplant donor-specific HLA antibodies detected by single-antigen flow-beads. Transplantation. 2009 Jun 15;87(11):1681-8. PMID 19502960. *Not relevant to topic*
17. Amin R, Tavakol M, Amirkiai S, et al. Effect of obesity on renal function and cardiovascular disease risk factors in long-term kidney donors. American Journal of Transplantation. 2012 May;12:100. PMID 70746195. *Conference Abstract*
18. Andersen MH, Mathisen L, Oyen O, et al. Postoperative pain and convalescence in living kidney donors-laparoscopic versus open donor nephrectomy: a randomized study. American Journal of Transplantation. 2006 Jun;6(6):1438-43. PMID 16686768. *No outcomes of interest*
19. Aniskevich S, Taner CB, Perry DK, et al. Ultrasound-guided transversus abdominis plane blocks for patients undergoing laparoscopic hand-assisted nephrectomy: a randomized, placebo-controlled trial. Local & Regional Anesthesia. 2014;7:11-6. PMID 24860252. *No outcomes of interest*
20. Apisarnthanarak P, Suvannarerg V, Muangsomboon K, et al. Renal vascular variants in living related renal donors: evaluation with CT angiography. Journal of the Medical Association of Thailand. 2012 Jul;95(7):941-8. PMID 22919990. *No outcomes of interest*
21. Arevalo Perez J, Gragera Torres F, Marin Toribio A, et al. Angio CT assessment of anatomical variants in renal vasculature: its importance in the living donor. Insights Into Imaging. 2013 Apr;4(2):199-211. PMID 23355302. *PMC3609954 Not relevant to topic*
22. Assimos DG. Re: Stone disease in living-related renal donors: long-term outcomes for transplant donors and recipients. Journal of Urology. 2014 Aug;192(2):440. PMID 25035002. *No outcomes of interest*
23. Bachmann A, Wolff T, Giannini O, et al. How painful is donor nephrectomy? Retrospective analysis of early pain and pain management in open versus laparoscopic versus retroperitoneoscopic nephrectomy. Transplantation. 2006 June;81(12):1735-8. PMID 2006303787. *No outcomes of interest*
24. Bardi R, Boujemaa B, Kallala C, et al. Predicting kidney graft failure by HLA antibodies detection in kidney transplanted patients. Tissue Antigens. 2011 May;77 (5):443-4. PMID 70652498. *Not relevant to topic*
25. Barlow AD, Taylor AH, Elwell R, et al. The performance of three estimates of glomerular filtration rate before and after live donor nephrectomy. Transplant International. 2010 Apr 1;23(4):417-23. PMID 19922429. *No outcomes of interest*
26. Barri YM, Parker T, 3rd, Daoud Y, et al. Definition of chronic kidney disease after uninephrectomy in living donors: what are the implications? Transplantation. 2010 Sep 15;90(5):575-80. PMID 20562736. *No outcomes of interest*
27. Barth RN, Phelan MW, Goldschen L, et al. Single-port donor nephrectomy provides improved patient satisfaction and equivalent outcomes. Annals of Surgery. 2013 Mar;257(3):527-33. PMID 22968070. *No outcomes of interest*
28. Beladi Mousavi SS, Alemzadeh Ansari MJ, Parsi A, et al. Reasons for Renal Donation among Living Unrelated Renal Donors in Khuzestan Province, Southwestern Iran. International Journal of Organ Transplantation Medicine. 2013;4(1):21-4. PMID 25013649. *No outcomes of interest*
29. Ben Abdallah T, Abderrahim E, Ben Hamida F, et al. Short- and long-term post-renal transplant follow-up at Charles Nicolle Hospital. Transplantation Proceedings. 1999 Dec;31(8):3116-8. PMID 10616399. *Not relevant to topic*
30. Ben Abdallah T, el Younsi F, Ben Hamida F, et al. Results of 144 consecutive renal transplants from living-related donors. Transplantation Proceedings. 1997 Nov;29(7):3071-2. PMID 9365670. *Not relevant to topic*

31. Ben Hamida F, Ben Abdallah T, Abdelmoula M, et al. Impact of donor/recipient gender, age, and HLA matching on graft survival following living-related renal transplantation. Transplantation Proceedings. 1999 Dec;31(8):3338-9. PMID 10616498. *Not relevant to topic*
32. Bergman S, Feldman LS, Mayo NE, et al. Measuring surgical recovery: the study of laparoscopic live donor nephrectomy. American Journal of Transplantation. 2005 Oct;5(10):2489-95. PMID 16162199. *No outcomes of interest*
33. Bieniasz M, Domagala P, Kwiatkowski A, et al. The assessment of residual kidney function after living donor nephrectomy. Transplantation Proceedings. 2009 Jan-Feb;41(1):91-2. PMID 19249485. *No relevant comparison*
34. Biglarnia AR, Tufveson G, Lorant T, et al. Efficacy and safety of continuous local infusion of ropivacaine after retroperitoneoscopic live donor nephrectomy. American Journal of Transplantation. 2011 Jan;11(1):93-100. PMID 21199350. *Not relevant to topic*
35. Boudville N, Garg AX. End-stage renal disease in living kidney donors. Kidney International. 2014 Jul;86(1):20-2. PMID 24978379. *No outcomes of interest*
36. Boyarsky BJ, Van Arendonk K, Deshpande NA, et al. Difficulty obtaining insurance after living kidney donation. American Journal of Transplantation. 2012 May;12:47. PMID 70746015. *Conference Abstract*
37. Branchereau J, Rigaud J, Normand G, et al. [Results and surgical complications of living donor nephrectomy: open vs hand-assisted laparoscopic nephrectomy]. Progres en Urologie. 2009 Jun;19(6):389-94. PMID 19467457. *Not available in English*
38. Briancon S, Germain L, Baudelot C, et al. [Quality of life of living kidney donor: a national report]. Nephrologie et Therapeutique. 2011 Jul;7 Suppl 1:S1-39. PMID 21907160. *No relevant comparison*
39. Buell JF, Lee L, Martin JE, et al. Laparoscopic donor nephrectomy vs. open live donor nephrectomy: A quality of life and functional study. Clinical Transplantation. 2005 February;19(1):102-9. PMID 2005076261. *No outcomes of interest*
40. Buer LC, Hofmann BM. How does kidney transplantation affect the relationship between donor and recipient? Tidsskrift for Den Norske Laegeforening. 2012 Jan 10;132(1):41-3. PMID 22240827. *Not relevant to topic*
41. Burgos Revilla FJ. Retroperitoneoscopic donor nephrectomy: A retrospective, non-randomized comparison of early complications, donor and recipient outcome with the standard open approach: Commentary. European Urology. 2005 July;48(1):96. PMID 2005271721. *No outcomes of interest*
42. Butt Z, Jensen SE, Daud A, et al. What is the quality of life impact of living donor nephrectomy? Clinical and Translational Science. 2010 April;3 (2):S29. PMID 70206101. *Not relevant to topic*
43. Capocasale E, Iaria M, Vistoli F, et al. Incidence, diagnosis, and treatment of chylous leakage after laparoscopic live donor nephrectomy. Transplantation. 2012 Jan 15;93(1):82-6. PMID 22143459. *No outcomes of interest*
44. Capolicchio JP, Saemi A, Trotter S, et al. Retroperitoneoscopic nephrectomy with a modified hand-assisted approach. Urology. 2011 Mar;77(3):607-11. PMID 20708224. *Sample size not sufficient*
45. Casagrande LH, Collins S, Warren AT, et al. Lack of health insurance in living kidney donors. Clinical Transplantation. 2012 Mar-Apr;26(2):E101-4. PMID 22050216. *No outcomes of interest*
46. Chang P, Gill J, Dong J, et al. Living donor age and kidney allograft half-life: Implications for living donor paired exchange programs. Clinical Journal of the American Society of Nephrology. 2012;7(5):835-41. PMID 2012267098. *Not relevant to topic*

47. Chen Z, Fang J, Li G, et al. Compensatory changes in the retained kidney after nephrectomy in a living related donor. Transplantation Proceedings. 2012 Dec;44(10):2901-5. PMID 23194993. *No relevant comparison*
48. Cheng EY, Leeser DB, Kapur S, et al. Outcomes of laparoscopic donor nephrectomy without intraoperative systemic heparinization. Journal of Urology. 2010 Jun;183(6):2282-6. PMID 20400133. *No outcomes of interest*
49. Cho A, Shin JH, Jang HR, et al. Association between uric acid concentration and postdonation kidney function after living donor nephrectomy. Nephrology Dialysis Transplantation. 2013 May;28:i280. PMID 71075849. *Conference Abstract*
50. Cho HJ, Lee JY, Kim JC, et al. How safe and effective is routine left hand-assisted laparoscopic donor nephrectomy with multiple renal arteries? A high-volume, single-center experience. Transplantation Proceedings. 2012 Dec;44(10):2913-7. PMID 23194996. *No outcomes of interest*
51. Choi KH, Yang SC, Joo DJ, et al. Clinical assessment of renal function stabilization after living donor nephrectomy. Transplantation Proceedings. 2012 Dec;44(10):2906-9. PMID 23194994. *No relevant comparison*
52. Chu KH, Poon CKY, Lam CM, et al. Long-term outcomes of living kidney donors: A single centre experience of 29 years. Nephrology. 2012 January;17(1):85-8. PMID 2012005574. *No outcomes of interest*
53. Chuang FP, Novick AC, Sun GH, et al. Graft outcomes of living donor renal transplantations in elderly recipients. Transplantation Proceedings. 2008 Sep;40(7):2299-302. PMID 18790218. *Not relevant to topic*
54. Clancy MJ, Geddes CC. Acceptable mortality after living kidney donation. Kidney International. 2014 May;85(5):1240-1. PMID 24786882. *No outcomes of interest*
55. Clemens K, Boudville N, Dew MA, et al. Erratum: The long-term quality of life of living kidney donors: A multicenter cohort study (American Journal of Transplantation (2010) 11 (463-469) DOI:10.1111/j.1600-6143.2010.03424.x). American Journal of Transplantation. 2011 April;11(4):874. PMID 2011179326. *No outcomes of interest*
56. Dasgupta P, Challacombe B, Compton F, et al. A systematic review of hand-assisted laparoscopic live donor nephrectomy. International Journal of Clinical Practice. 2004 May;58(5):474-8. PMID 15206504. *No outcomes of interest*
57. Davis CL. Living kidney donor follow-up: state-of-the-art and future directions. Advances in Chronic Kidney Disease. 2012 Jul;19(4):207-11. PMID 22732039. *No outcomes of interest*
58. De Groot IB, Stiggelbout AM, Van Der Boog PJM, et al. Reduced quality of life in living kidney donors: Association with fatigue, societal participation and pre-donation variables. Transplant International. 2012 September;25(9):967-75. PMID 2012466821. *No relevant comparison*
59. de la Vega LSP, Torres A, Bohorquez HE, et al. Patient and graft outcomes from older living kidney donors are similar to those from younger donors despite lower GFR. Kidney International. 2004 Oct;66(4):1654-61. PMID WOS:000223821000041. *Not relevant to topic*
60. Delanaye P, Weekers L, Dubois BE, et al. Outcome of the living kidney donor. Nephrology Dialysis Transplantation. 2012 Jan;27(1):41-50. PMID 22287701. *No outcomes of interest*
61. Devanand V, Chithrapavai SU. Correlation of 2 hours and 24 hours creatinine clearance in renal donors after unilateral nephrectomy. Journal of Clinical and Diagnostic Research JCDR. 2013 Oct;7(10):2119-21. PMID 24298453. *PMC3843444 Not relevant to topic*

62. Dew MA, DiMartini AF, DeVito Dabbs AJ, et al. Preventive intervention for living donor psychosocial outcomes: feasibility and efficacy in a randomized controlled trial. American Journal of Transplantation. 2013 Oct;13(10):2672-84. PMID 23924065. *NIHMS508325 [Available on 10/01/14]*

PMC3837427 [Available on 10/01/14] Not relevant to topic
63. Diez A, Sundaram C, Mujtaba M, et al. Residual renal function in living kidney donors: Does remaining kidney volume matter? American Journal of Transplantation. 2013 April;13:390-1. PMID 71057797. *Conference Abstract*
64. Dols LF, Ijzermans JN, Wentink N, et al. Long-term follow-up of a randomized trial comparing laparoscopic and mini-incision open live donor nephrectomy. American Journal of Transplantation. 2010 Nov;10(11):2481-7. PMID 20977639. *No relevant comparison*
65. Dols LF, Weimar W, Ijzermans JN. Long-term consequences of kidney donation. New England Journal of Medicine. 2009 May 28;360(22):2371-2; author reply 2. PMID 19484820. *Not relevant to topic*
66. Dols LFC, Ijzermans JNM, Wentink N, et al. Long-Term Follow-up of a Randomized Trial Comparing Laparoscopic and Mini-Incision Open Live Donor Nephrectomy. American Journal of Transplantation. 2010 Nov;10(11):2481-7. PMID WOS:000283595700013. *No relevant comparison*
67. Dubey D, Shrinivas RP. Trans-umbilical laparo-endoscopic single-site donor nephrectomy without the use of a single-port access device. Indian Journal of Urology. 2013 Apr;29(2):156-7. PMID 23956524. *No outcomes of interest*
68. Ellison MD, McBride MA, Taranto SE, et al. Living kidney donors in need of kidney transplants: a report from the organ procurement and transplantation network. Transplantation. 2002;74(9):1349-51. *No relevant comparison*
69. Elramah M, Patil V, Becker Y, et al. Development of new onset hypertension in living kidney donors: Are multiple renal arteries a risk factor? American Journal of Transplantation. 2013 April;13:391-2. PMID 71057800. *Conference Abstract*
70. Fauchald P, Holdaas H, Albrechtsen D, et al. THE USE OF ELDERLY LIVING DONORS. Kidney International. 1989 Jan;35(1):513-. PMID WOS:A1989R629001470. *Not relevant to topic*
71. Fauchald P, Sodal G, Albrechtsen D, et al. THE USE OF ELDERLY LIVING DONORS IN RENAL-TRANSPLANTATION. Transplant International. 1991 1991;4(1):51-3. PMID WOS:A1991FJ50000010. *Not relevant to topic*
72. Fayek SA, Keenan J, Haririan A, et al. Ureteral stents are associated with reduced risk of ureteral complications after kidney transplantation: a large single center experience. Transplantation. 2012 Feb 15;93(3):304-8. PMID 22179401. *No outcomes of interest*
73. Fehrman-Ekholm I. Living donor kidney transplantation. Transplantation Proceedings. 2006 Oct;38(8):2637-41. PMID 17098024. *No relevant comparison*
74. Fehrman-Ekholm I, Brink B, Ericsson C, et al. Kidney donors don't regret - Follow-up of 370 donors in Stockholm since 1964. Transplantation. 2000 May 27;69(10):2067-71. PMID WOS:000087421700016. *No relevant comparison*
75. Fehrman-Ekholm I, Duner F, Brink B, et al. No evidence of accelerated loss of kidney function in living kidney donors: results from a cross-sectional follow-up. Transplantation. 2001 Aug 15;72(3):444-9. PMID 11502974. *No relevant comparison*
76. FehrmanEkholm I, Elinder CG, Stenbeck M, et al. Kidney donors live longer. Transplantation. 1997 Oct 15;64(7):976-8. PMID WOS:A1997YB06500007. *No relevant comparison*

77. Fehrman-Ekholm I, Kvarnstrom N, Softeland JM, et al. Post-nephrectomy development of renal function in living kidney donors: a cross-sectional retrospective study. Nephrology Dialysis Transplantation. 2011 Jul;26(7):2377-81. PMID 21459783. *LT-OR-Extract*
78. Fehrman-Ekholm I, Norden G, Lennerling A, et al. Living kidney donors developing end-stage renal disease. Transplantation Proceedings. 2006 Oct;38(8):2642-3. PMID 17098025. *No relevant comparison*
79. Fehrman-Ekholm I, Norden G, Lennerling A, et al. Incidence of end-stage renal disease among live kidney donors. Transplantation. 2006 Dec 27;82(12):1646-8. PMID 17198252. *No relevant comparison*
80. Fernandez S, Mohan S, Zaky Z, et al. Role of estimated GFR CKD-EPI as screening tool for donor selection. American Journal of Transplantation. 2013 April;13:305-6. PMID 71057492. *Conference Abstract*
81. Ferrario M, Buckel E, Astorga C, et al. Results in laparoscopic living donor nephrectomy: a multicentric experience. Transplantation Proceedings. 2013;45(10):3716-8. PMID 24315006. *Sample size not sufficient*
82. Foster CE, 3rd, Borboroglu PG, Bartlett ST, et al. Nonelective laparoscopic donor nephrectomy can be done safely. Current Surgery. 2005 Jan-Feb;62(1):103-5. PMID 15708159. *No outcomes of interest*
83. Fournier C, Pallet N, Cherqaoui Z, et al. Very long-term follow-up of living kidney donors. Transplant International. 2012 Apr;25(4):385-90. PMID 22356210. *No relevant comparison*
84. Frade IC, Fonseca I, Dias L, et al. Impact assessment in living kidney donation: psychosocial aspects in the donor. Transplantation Proceedings. 2008 Apr;40(3):677-81. PMID 18454984. *No outcomes of interest*
85. Fraser SM, Rajasundaram R, Aldouri A, et al. Acceptable outcome after kidney transplantation using "expanded criteria donor" grafts. Transplantation. 2010 Jan 15;89(1):88-96. PMID 20061924. *Not relevant to topic*
86. Friedersdorff F, Wolff I, Deger S, et al. No need for systemic heparinization during laparoscopic donor nephrectomy with short warm ischemia time.[Erratum appears in World J Urol. 2011 Aug;29(4):567 Note: Florian Fuller, T [corrected to Fuller, Tom Florian]]. World Journal of Urology. 2011 Aug;29(4):561-6. PMID 21607574. *No outcomes of interest*
87. Garcia MF, Andrade LG, Carvalho MF. Living kidney donors--a prospective study of quality of life before and after kidney donation. Clinical Transplantation. 2013 Jan-Feb;27(1):9-14. PMID 22831164. *No relevant comparison*
88. Garg AX, Meirambayeva A, Huang A, et al. Cardiovascular disease risk in living kidney donors. American Journal of Transplantation. 2012 May;12:98. PMID 70746190. *Conference Abstract*
89. Ghahramani N, Behzadi S, Malek-Hosseini SA, et al. Occurrence of hypertension and proteinuria among kidney donors in Shiraz Nemazee Hospital. Transplantation Proceedings. 1999 Dec;31(8):3139. PMID 10616411. *No relevant comparison*
90. Giacomoni A, Di Sandro S, Lauterio A, et al. Evolution of robotic nephrectomy for living donation: from hand-assisted to totally robotic technique. The International Journal Of Medical Robotics + Computer Assisted Surgery: MRCAS. 2014 Sep;10(3):286-93. PMID 24599640. *Not relevant to topic*
91. Gibbons N, Nicol D, Cari. The CARI guidelines. Surgical techniques in living donor nephrectomy. Nephrology. 2010 Apr;15 Suppl 1:S88-95. PMID 20591051. *No outcomes of interest*
92. Giessing M. Laparoscopic living-donor nephrectomy. Nephrology Dialysis Transplantation. 2004 July;19(SUPPL. 4):iv36-iv40. PMID 2004366319. *No outcomes of interest*

93. Giessing M, Fuller TF, Deger S, et al. [Ten years of laparoscopic living kidney donation. From an extravagant to a routine procedure]. Urologe (Ausg. A). 2006 Jan;45(1):46-52. PMID 16328213. *Not available in English*
94. Giessing M, Reuter S, Deger S, et al. Laparoscopic versus open donor nephrectomy in Germany: Impact on donor health-related quality of life and willingness to donate. Transplantation Proceedings. 2005 Jun;37(5):2011-5. PMID WOS:000230024800009. *No relevant comparison*
95. Giessing M, Reuter S, Schonberger B, et al. Quality of life of living kidney donors in Germany: a survey with the Validated Short Form-36 and Giessen Subjective Complaints List-24 questionnaires. Transplantation. 2004 Sep 27;78(6):864-72. PMID 15385806. *No relevant comparison*
96. Giorgakis E, Fernandez-Diaz S. Diffuse subcutaneous emphysema after transperitoneal laparoscopic donor nephrectomy. Hippokratia. 2013 Jan;17(1):94. PMID 23935356. *PMC3738291 Not relevant to topic*
97. Glotzer OS, Singh TP, Gallichio MH, et al. Long-term quality of life after living kidney donation. Transplantation Proceedings. 2013 Nov;45(9):3225-8. PMID 24182789. *No relevant comparison*
98. Goldberg A, Storsley L. Teen donors, adult problems? Evaluating the long-term risks of living kidney donation from adolescents. Pediatric Transplantation. 2014 Jun;18(4):319-20. PMID 24802337. *No outcomes of interest*
99. Goldberg RJ, Smits G, Wiseman AC. Long-term impact of donor-recipient size mismatching in deceased donor kidney transplantation and in expanded criteria donor recipients. Transplantation. 2010 Oct 27;90(8):867-74. PMID 20697325. *Not relevant to topic*
100. Goldfarb DA. Obesity in living kidney donors: clinical characteristics and outcomes in the era of laparoscopic donor nephrectomy. Journal of Urology. 2005 Sep;174(3):1018-9. PMID 16094034. *No outcomes of interest*
101. Goldfarb DA. Kidney paired donation and optimizing the use of live donor organs. Journal of Urology. 2005 Nov;174(5):1911-2. PMID 16217343. *No outcomes of interest*
102. Goldfarb DA. Re: Expanding the donor pool: Living donor nephrectomy in the elderly and the overweight. Journal of Urology. 2013 February;189(2):623. PMID 2013026708. *No outcomes of interest*
103. Goldschen L, Munivenkatappa R, Phelan MW, et al. Donor satisfaction and safety support preferred approach of single-port donor nephrectomy. American Journal of Transplantation. 2012 May;12:506. PMID 70747614. *Conference Abstract*
104. Gong NQ, Ming CS, Zeng FJ, et al. Renal function of donors and recipients after living donor kidney transplantation in a Chinese cohort. Chinese Medical Journal. 2011 May;124(9):1290-5. PMID 21740735. *No relevant comparison*
105. Gossmann J, Wilhelm A, Kachel HG, et al. Long-term consequences of live kidney donation follow-up in 93% of living kidney donors in a single transplant center. American Journal of Transplantation. 2005 Oct;5(10):2417-24. PMID 16162190. *No relevant comparison*
106. Gracida C, Espinoza R, Cancino J. Can a living kidney donor become a kidney recipient? Transplantation Proceedings. 2004 Jul-Aug;36(6):1630-1. PMID 15350436. *Sample size not sufficient*
107. Gres P, Avances C, Iborra F, et al. [Long-term morbidity of living donor kidney harvesting]. Progres en Urologie. 2007 Apr;17(2):194-8. PMID 17489317. *Not available in English*
108. Guleria S, Reddy VS, Bora GS, et al. The quality of life of women volunteering as live-related kidney donors in India. National Medical Journal of India. 2011 Nov-Dec;24(6):342-4. PMID 22680258. *No outcomes of interest*

109. Guo P, Xie Z, Wang Y, et al. Prevalence of erectile dysfunction in living donors before and after nephrectomy in China. Urology. 2010 August;76(2):370-2. PMID 2010448318. *No outcomes of interest*
110. Gutierrez del Pozo R, Truan Cacho D, Franco de Castro A. [Living donor kidney transplantation: a surgical procedure]. Archivos Espanoles de Urologia. 2005 Jul-Aug;58(6):521-30. PMID 16138764. *Not available in English*
111. Guvence N, Oskay K, Ayli D. The assessment of long-term clinic and laboratory data of living related kidney donors. Transplantation Proceedings. 2012 Jul-Aug;44(6):1614-7. PMID 22841227. *No relevant comparison*
112. Hakim NS, Papalois VV. A fast and safe living-donor "finger-assisted" nephrectomy technique: results of 225 cases. Experimental & Clinical Transplantation: Official Journal of the Middle East Society for Organ Transplantation. 2008 Dec;6(4):245-8. PMID 19338483. *No outcomes of interest*
113. Han HH, Choi KH, Yang SC, et al. Clinical assessment of follow-up cystatin C-based eGFR in live kidney donors. Korean Journal of Urology. 2012 October;53(10):721-5. PMID 2012654937. *No outcomes of interest*
114. Hanif F, Clancy MJ. Hand-assisted laparoscopic living donor nephrectomy: initial Glasgow experience. Scottish Medical Journal. 2013 Nov;58(4):237-40. PMID 24215044. *Sample size not sufficient*
115. Herman ES, Rafey MA, Akalin E, et al. Blood pressure and renal function after kidney donation from hypertensive living donors. Transplantation. 2005 Jun 27;79(12):1768-9; author reply 9-70. PMID 15973187. *Not relevant to topic*
116. Hosgood SA, Thiyagarajan UM, Nicholson HF, et al. Randomized clinical trial of transversus abdominis plane block versus placebo control in live-donor nephrectomy. Transplantation. 2012 Sep 15;94(5):520-5. PMID 22902793. *No outcomes of interest*
117. Husted TL, Hanaway MJ, Thomas MJ, et al. Laparoscopic right living donor nephrectomy. Transplantation Proceedings. 2005 Mar;37(2):631-2. PMID 15848481. *No outcomes of interest*
118. Ibrahim HN, Kukla A, Cordner G, et al. Diabetes after Kidney Donation. American Journal of Transplantation. 2010 Feb;10(2):331-7. PMID WOS:000273884800023. *No relevant comparison*
119. Intissar H, Zoubeir S, Loubna B, et al. [Surgical complications of renal transplantation from living donors: experience of the CHU Ibn Sina, Rabat]. The Pan African medical journal. 2010;6:20. PMID 22087350. *Sample size not sufficient*
120. Ivanovski N, Popov Z, Kolevski P, et al. Use of advanced age donors in living renal transplantation - Is it justified? Transplantation Proceedings. 2001 Feb-Mar;33(1-2):1227-8. PMID WOS:000167629900577. *Not relevant to topic*
121. Jackobs S, Becker T, Luck R, et al. Quality of life following living donor nephrectomy comparing classical flank incision and anterior vertical mini-incision. World Journal of Urology. 2005 Nov;23(5):343-8. PMID 16180026. *No relevant comparison*
122. Jalali M, Rahmani S, Joyce AD, et al. Laparoscopic donor nephrectomy: an increasingly common cause for testicular pain and swelling. Annals of the Royal College of Surgeons of England. 2012 Sep;94(6):407-10. PMID 22943330. *No outcomes of interest*
123. Jeon HG, Lee SR, Joo DJ, et al. Predictors of kidney volume change and delayed kidney function recovery after donor nephrectomy. Journal of Urology. 2010 Sep;184(3):1057-63. PMID 20643435. *No outcomes of interest*
124. Jordan J, Sann U, Janton A, et al. Living kidney donors' long-term psychological status and health behavior after nephrectomy - A retrospective study. Journal of Nephrology. 2004 Sep-Oct;17(5):728-35. PMID WOS:000225123800015. *No relevant comparison*

125. Jordan J, Sann U, Janton A, et al. Living kidney donors' long-term psychological status and health behavior after nephrectomy - a retrospective study. Journal of Nephrology. 2004 Sep-Oct;17(5):728-35. PMID 15593042.
126. Kasiske BL, Anderson-Haag T, Ibrahim HN, et al. A prospective controlled study of kidney donors: baseline and 6-month follow-up. American Journal of Kidney Diseases. 2013 Sep;62(3):577-86. PMID 23523239. *Insufficient study duration*
127. Keller JE, Dolce CJ, Griffin D, et al. Maximizing the donor pool: use of right kidneys and kidneys with multiple arteries for live donor transplantation. Surgical Endoscopy. 2009 Oct;23(10):2327-31. PMID 19263162. *Sample size not sufficient*
128. Khauli RB, El-Hout Y, Hussein M. Technical modifications of laparoscopic donor nephrectomy: improved results with refinements in technique that mimic open nephrectomy. Transplantation Proceedings. 2005 Mar;37(2):635-6. PMID 15848483. *No outcomes of interest*
129. Kido R, Shibagaki Y, Iwadoh K, et al. How do living kidney donors develop end-stage renal disease? American Journal of Transplantation. 2009 Nov;9(11):2514-9. PMID 19681812. *Sample size not sufficient*
130. Kim HO, Chae SY, Baek S, et al. Factors affecting changes in the glomerular filtration rate after unilateral nephrectomy in living kidney donors and patients with renal disease. Nuclear Medicine and Molecular Imaging. 2010 April;44(1):69-74. PMID 2011155816. *Sample size not sufficient*
131. Kim SH, Hwang HS, Yoon HE, et al. Long-term risk of hypertension and chronic kidney disease in living kidney donors. Transplantation Proceedings. 2012 April;44(3):632-4. PMID 2012202895. *No relevant comparison*
132. Kitada H, Doi A, Nishiki T, et al. Living donor renal transplantation using grafts with multiple arteries procured by laparoscopic nephrectomy. Transplantation Proceedings. 2010 Sep;42(7):2427-9. PMID 20832520. *No outcomes of interest*
133. Klop KW, Hussain F, Karatepe O, et al. Incision-related outcome after live donor nephrectomy: a single-center experience. Surgical Endoscopy. 2013 Aug;27(8):2801-6. PMID 23392982. *No outcomes of interest*
134. Kok NF, Dols LF, Hunink MG, et al. Complex vascular anatomy in live kidney donation: imaging and consequences for clinical outcome. Transplantation. 2008 Jun 27;85(12):1760-5. PMID 18580468. *Not relevant to topic*
135. Kok NF, Ijzermans JN, Alwayn IP. Re: Laparoscopic versus open live donor nephrectomy in renal transplantation: a meta-analysis. Annals of Surgery. 2008 Oct;248(4):691-2; author reply 2-3. PMID 18936589. *Not relevant to topic*
136. Kok NF, van der Wal JB, Alwayn IP, et al. Laparoscopic kidney donation: The impact of adhesions. Surgical Endoscopy. 2008 May;22(5):1321-5. PMID 18027046. *No outcomes of interest*
137. Kong JM, Ahn J, Park JB, et al. ABO incompatible living donor kidney transplantation in Korea: highly uniform protocols and good medium-term outcome. Clinical Transplantation. 2013 Nov-Dec;27(6):875-81. PMID 24118271. *Not relevant to topic*
138. Kota AA, Nayak S, Mukha RP, et al. Acute jejunal obstruction following laparoscopic nephrectomy. Urology Journal. 2014 May-Jun;11(3):1717-20. PMID 25015624. *Sample size not sufficient*
139. Lafranca JA, Levolger S, Dols LFC, et al. The role of perirenal and intra-abdominal fat mass in laparoscopic donor nephrectomy. American Journal of Transplantation. 2012 May;12:504-5. PMID 70747609. *Conference Abstract*
140. Lai IR, Tsai MK, Lee PH. Hand-assisted versus total laparoscopic live donor nephrectomy. Journal of the Formosan Medical Association. 2004 Oct;103(10):749-53. PMID 15490024. *Sample size not sufficient*

141. Lan G, Yang L, Peng L, et al. Long-term results of renal transplant from living donors aged over 60 years. Experimental & Clinical Transplantation: Official Journal of the Middle East Society for Organ Transplantation. 2012 Oct;10(5):471-4. PMID 22537099. *Not relevant to topic*
142. LaPointe Rudow D, Iacoviello BM, Okunbor P, et al. Personality traits and resilience among live liver and kidney donors. American Journal of Transplantation. 2012 May;12:341. PMID 70747025. *Conference Abstract*
143. Leckstroem DC, Bhuvanakrishna T, McGrath A, et al. Prevalence and predictors of abdominal aortic calcification in healthy living kidney donors. International Urology & Nephrology. 2014 Jan;46(1):63-70. PMID 23783567. *No outcomes of interest*
144. Lee D, Otto B, Osterberg IEC, et al. Randomized controlled trial of laparoendoscopic single site donor nephrectomy versus. Conventional laparoscopic donor nephrectomy for living kidney donors. Journal of Urology. 2013 April;1):e869. PMID 71033060. *Conference Abstract*
145. Lee YS, Jeon HG, Lee SR, et al. The feasibility of solo-surgeon living donor nephrectomy: initial experience using video-assisted minilaparotomy surgery. Surgical Endoscopy. 2010 Nov;24(11):2755-9. PMID 20383533. *No outcomes of interest*
146. Lentine K, Schnitzler M, Xiao H, et al. Cancer incidence after living kidney donation: Use of linked OPTN registry and administrative claims. American Journal of Transplantation. 2011 April;11:309. PMID 70405985. *No outcomes of interest*
147. Lentine KL, Vijayan A, Xiao H, et al. Cancer diagnoses after living kidney donation: linking U.S. Registry data and administrative claims. Transplantation. 2012 Jul 27;94(2):139-44. PMID 22825543. *No outcomes of interest*
148. Lezaic V, Jaksic E, Simic S, et al. Remnant kidney function in kidney donors. Transplantation Proceedings. 1999 Feb-Mar;31(1-2):367-. PMID WOS:000078960600154. *No relevant comparison*
149. Liborio AB, Barros RM, Esmeraldo RM, et al. Creatinine-based equations predicting chronic kidney disease after kidney donation. Transplantation Proceedings. 2011 September;43(7):2481-6. PMID 2011512244. *No relevant comparison*
150. Lin J, Kramer H, Chandraker AK. Mortality among living kidney donors and comparison populations. New England Journal of Medicine. 2010 Aug 19;363(8):797-8. PMID 20818884. *No outcomes of interest*
151. Lind MY, Zur Borg IM, Hazebroek EJ, et al. The effect of laparoscopic and open donor nephrectomy on the long-term renal function in donor and recipient: a retrospective study. Transplantation. 2005 Sep 15;80(5):700-3. PMID 16177647. *No relevant comparison*
152. Liu XS, Narins HW, Maley WR, et al. Robotic-assistance does not enhance standard laparoscopic technique for right-sided donor nephrectomy. Journal of the Society of Laparoendoscopic Surgeons. 2012 Apr-Jun;16(2):202-7. PMID 23477166. *Sample size not sufficient*
153. Lumsdaine JA, Wray A, Power MJ, et al. Higher quality of life in living donor kidney transplantation: prospective cohort study. Transplant International. 2005 Aug;18(8):975-80. PMID 16008749. *No relevant comparison*
154. Lumsdaine JA, Wray A, Power MJ, et al. Higher quality of life in living donor kidney transplantation: prospective cohort study. Transplant International. 2005 Aug;18(8):975-80. PMID WOS:000230906000014. *No relevant comparison*
155. Lunsford KE, Harris MT, Nicoll KN, et al. Single-site laparoscopic living donor nephrectomy offers comparable perioperative outcomes to conventional laparoscopic living donor nephrectomy at a higher cost. Transplantation. 2011 Jan 27;91(2):e16-7. PMID 21239960. *No outcomes of interest*

156. Luu HY, Ulloa JG, Roll GR, et al. Emesis following laparoscopic left donor nephrectomy. American Journal of Transplantation. 2014 Jul;14(7):1701; quiz 0, 2. PMID 24954467. *Sample size not sufficient*
157. Ma L, Ye J, Huang Y, et al. Retroperitoneoscopic live-donor nephrectomy: 5-year single-center experience in China. International Journal of Urology. 2010 Feb;17(2):158-62. PMID 20377836. *No outcomes of interest*
158. Ma L, Ye J, Tian X, et al. Technical modifications of retroperitoneoscopic live donor nephrectomy: Chinese experience. Transplantation Proceedings. 2010 Nov;42(9):3440-3. PMID 21094793. *No outcomes of interest*
159. Ma LL, Li G, Huang Y, et al. Do multiple renal arteries in the remnant kidney have a negative influence on kidney donors after kidney donation? Nephrology. 2011 Aug;16(6):612-6. PMID 21676070. *No relevant comparison*
160. MacDonald D, Jackson S, Matas A, et al. Long term outcomes of young (< 18 years) kidney donors: A matched cohort analysis. American Journal of Transplantation. 2013 April;13:92. PMID 71056775. *Conference Abstract*
161. Marsden A, Waldron N, Cooke R, et al. What is the implication of pre-donation weight loss to the post-donation weight and outcome of living donors. American Journal of Transplantation. 2013 April;13:92. PMID 71056776. *Conference Abstract*
162. Martinez-Mier G, Avila-Pardo SF, Mendez-Lopez MT, et al. Results 5 years after living donor renal transplantation without calcineurin inhibitors. Nefrologia. 2014;34(4):531-4. PMID 25036071. *Not relevant to topic*
163. Massie A, Muzaale A, Wainright J, et al. Long-term risk of esrd attributable to live kidney donation: Matching with healthy non-donors. American Journal of Epidemiology. 2013 15 Jun;177:S169. PMID 71079792. *Conference Abstract*
164. Massie AB, Gentry SE, Montgomery RA, et al. Center-level utilization of kidney paired donation. American Journal of Transplantation. 2013 May;13(5):1317-22. PMID 23463990. *Not relevant to topic*
165. Matuchansky C. Perioperative mortality and long-term survival in live kidney donors. JAMA. 2010 Jun 9;303(22):2248; author reply 9-50. PMID 20530773. *No outcomes of interest*
166. McCune TR, Armata T, Mendez-Picon G, et al. The Living Organ Donor Network: a model registry for living kidney donors. Clinical Transplantation. 2004;18 Suppl 12:33-8. PMID 15217405. *No outcomes of interest*
167. Melcher ML, Veale JL, Javaid B, et al. Kidney transplant chains amplify benefit of nondirected donors. JAMA Surgery. 2013 Feb;148(2):165-9. PMID 23426593. *Not relevant to topic*
168. Minz M, Udgiri N, Sharma A, et al. Prospective psychosocial evaluation of related kidney donors: Indian perspective. Transplantation Proceedings. 2005 Jun;37(5):2001-3. PMID 15964323. *No outcomes of interest*
169. Mjoen G, Midtvedt K, Holme I, et al. One- and five-year follow-ups on blood pressure and renal function in kidney donors. Transplant International. 2011 Jan;24(1):73-7. PMID 20723180. *No relevant comparison*
170. Mjoen G, Reisaeter A, Hallan S, et al. Overall and cardiovascular mortality in Norwegian kidney donors compared to the background population. Nephrology Dialysis Transplantation. 2012 Jan;27(1):443-7. PMID 21636826. *No relevant comparison*
171. Modi P, Pal B, Modi J, et al. Retroperitoneoscopic living-donor nephrectomy and laparoscopic kidney transplantation: experience of initial 72 cases. Transplantation. 2013 Jan 15;95(1):100-5. PMID 23202533. *Not relevant to topic*
172. Moody WE, Tomlinson LA, Ferro CJ, et al. Effect of A Reduction in glomerular filtration rate after NEphrectomy on arterial STiffness and central hemodynamics: rationale and design of the EARNEST study. American Heart Journal. 2014 Feb;167(2):141-9.e2. PMID 24439974. *PMC3904213 Not relevant to topic*

173. Mueller TF, Luyckx VA. The natural history of residual renal function in transplant donors. Journal of the American Society of Nephrology. 2012 Sep;23(9):1462-6. PMID 22797183. *No outcomes of interest*
174. Nagib AM, Refaie AF, Hendy YA, et al. Long term prospective assessment of living kidney donors: single center experience. ISRN Nephrology. 2014;2014:502414. PMID 24967244. *No relevant comparison*
175. Naylor KL, Li AH, Lam NN, et al. Fracture risk in kidney transplant recipients: a systematic review. Transplantation. 2013 Jun 27;95(12):1461-70. PMID 23594857. *Not relevant to topic*
176. Nejatisafa AA, Mortaz-Hedjri S, Malakoutian T, et al. Quality of life and life events of living unrelated kidney donors in Iran: a multicenter study. Transplantation. 2008 Oct 15;86(7):937-40. PMID 18852659. *No outcomes of interest*
177. Nekouei S, Ahmadnia H, Abedi M, et al. Resistive index of the remaining kidney in allograft kidney donors. Experimental & Clinical Transplantation: Official Journal of the Middle East Society for Organ Transplantation. 2012 Oct;10(5):454-7. PMID 23031084. *No relevant comparison*
178. Nicholson ML, Elwell R, Kaushik M, et al. Health-related quality of life after living donor nephrectomy: a randomized controlled trial of laparoscopic versus open nephrectomy. Transplantation. 2011 Feb 27;91(4):457-61. PMID 21252828. *No outcomes of interest*
179. Nie HB, Yu LX, Hu WL, et al. [Comparison of the surgical approaches for nephrectomy in living related donors]. Nan Fang Yi Ke Da Xue Xue Bao = Journal of Southern Medical University. 2009 Mar;29(3):500-3. PMID 19304536. *Not available in English*
180. Nogueira JM, Weir MR, Jacobs S, et al. A study of renal outcomes in African American living kidney donors. Transplantation. 2009 Dec 27;88(12):1371-6. PMID 20029333. *Sample size not sufficient*
181. Nolan MT, Walton-Moss B, Taylor L, et al. Living kidney donor decision making: state of the science and directions for future research. Progress in Transplantation. 2004 Sep;14(3):201-9. PMID 15495779. *No outcomes of interest*
182. Noppakun K, Cosio FG, Dean PG, et al. Living donor age and kidney transplant outcomes. American Journal of Transplantation. 2011 Jun;11(6):1279-86. PMID 21564530. *Not relevant to topic*
183. O'Brien B, Mastoridis S, Crane J, et al. Safety of nephrectomy in morbidly obese donors. Experimental and Clinical Transplantation. 2012 December;10(6):579-85. PMID 2012741886. *Sample size not sufficient*
184. Oetting W, Guan W, Wildenbush W, et al. Telomere length of living kidney donors and recipients and chronic graft dysfunction in kidney transplants. American Journal of Transplantation. 2013 April;13:388. PMID 71057788. *Conference Abstract*
185. Oh CK, Yoon SN, Lee BM, et al. Beneficial effects on the renal function of both recipients and donors in living donor kidney transplantation. Transplantation Proceedings. 2008 Sep;40(7):2310-2. PMID 18790221. *No outcomes of interest*
186. Oien CM, Reisaeter AV, Leivestad T, et al. Living donor kidney transplantation: the effects of donor age and gender on short- and long-term outcomes. Transplantation. 2007 Mar 15;83(5):600-6. PMID 17353781. *Not relevant to topic*
187. Okamoto M, Suzuki T, Fujiki M, et al. The consequences of diabetic live kidney donors - Analysis of 444 cases for 23 yrs in japanese single center. American Journal of Transplantation. 2010 April;10:179. PMID 70463833. *Conference Abstract*

188. Olsburgh J, Thomas K, Wong K, et al. Incidental renal stones in potential live kidney donors: prevalence, assessment and donation, including role of ex vivo ureteroscopy. BJU International. 2013 May;111(5):784-92. PMID 23110544. *Not relevant to topic*
189. Omoto K, Nozaki T, Inui M, et al. Impact of right-sided nephrectomy on long-term outcomes in retroperitoneoscopic live donor nephrectomy at single center. Journal of transplantation. 2013;2013:546373. PMID 24228171. *PMC3818899 Not relevant to topic*
190. Oppenheimer Salinas F. [Short, medium and long-term follow-up of living donors]. Nefrologia. 2010;30 Suppl 2:100-5. PMID 21183969. *Not available in English*
191. Pereira RB, Scheeren J, Castro D, et al. Follow-up of kidney donors who developed uremia and went on the waiting list for a transplant: should they have allocation priority? Transplantation Proceedings. 2008 May;40(4):1012-3. PMID 18555102. *No relevant comparison*
192. Peters AM, Howard B, Neilly MD, et al. The reliability of glomerular filtration rate measured from plasma clearance: a multi-centre study of 1,878 healthy potential renal transplant donors. European Journal of Nuclear Medicine & Molecular Imaging. 2012 Apr;39(4):715-22. PMID 22223168. *Not relevant to topic*
193. Polle SW, Idu MM, Bemelman FJ, et al. [The first 100 hand-assisted laparoscopic donor nephrectomies at the Academic Medical Center in Amsterdam]. Nederlands Tijdschrift voor Geneeskunde. 2006 Apr 15;150(15):851-7. PMID 16676516. *Not available in English*
194. Power RE, Preston JM, Griffin A, et al. Laparoscopic vs open living donor nephrectomy: a contemporary series from one centre. BJU International. 2006 Jul;98(1):133-6. PMID 16831157. *No outcomes of interest*
195. Prasad GV, Lipszyc D, Huang M, et al. A prospective observational study of changes in renal function and cardiovascular risk following living kidney donation. Transplantation. 2008 Nov 15;86(9):1315-8. PMID 19005415. *No outcomes of interest*
196. Rajagopal P, Hakim N. The use of a powdered polysaccharide hemostat (HemoStase) in live donor nephrectomies controls bleeding and reduces postoperative complications. Transplantation Proceedings. 2011 Mar;43(2):424-6. PMID 21440724. *No outcomes of interest*
197. Ramcharan T, Matas AJ. Long-term (20-37 years) follow-up of living kidney donors. American Journal of Transplantation. 2002 Nov;2(10):959-64. PMID WOS:000179564100013. *No relevant comparison*
198. Ray K. Transplantation: Long-term outcomes of living kidney donors are affected by race. Nature Reviews Nephrology. 2010 November;6(11):630. PMID 2010601077. *No outcomes of interest*
199. Rea DJ, Heimbach JK, Grande JP, et al. Glomerular volume and renal histology in obese and non-obese living kidney donors. Kidney International. 2006 Nov;70(9):1636-41. PMID WOS:000241667200023. *Not relevant to topic*
200. Reese PP, Huverserian A, Bloom RD. Pregnancy outcomes among live kidney donors. American Journal of Transplantation. 2009 Aug;9(8):1967. PMID 19660022. *No outcomes of interest*
201. Reese PP, Simon MK, Stewart J, et al. Medical follow-up of living kidney donors by 1 year after nephrectomy. Transplantation Proceedings. 2009 Nov;41(9):3545-50. PMID 19917341. *No outcomes of interest*
202. Reeves-Daniel A, Freedman BI, Assimos D, et al. Short-term renal outcomes in African American and Caucasian donors following live kidney donation. Clinical Transplantation. 2010 Sep-Oct;24(5):717-22. PMID 20015268. *No outcomes of interest*

203. Reimer J, Rensing A, Haasen C, et al. The impact of living-related kidney transplantation on the donor's life. Transplantation. 2006 May;81(9):1268-73. PMID WOS:000237581100008. *No relevant comparison*
204. Rizzari MD, Suszynski TM, Gillingham KJ, et al. Outcome of living kidney donors left with multiple renal arteries. Clinical Transplantation. 2012 Jan-Feb;26(1):E7-11. PMID 22017317. *No relevant comparison*
205. Rodrigue JR, Fleishman A, Vishnevsky T, et al. Development and validation of a questionnaire to assess fear of kidney failure following living donation. Transplant International. 2014 Jun;27(6):570-5. PMID 24606048. *No outcomes of interest*
206. Rodriguez-Illana F, Magana F, Mariscal A, et al. [Clinical baseline and post-nephrectomy characteristics of renal donors with IgA nephropathy diagnosed by time-zero renal biopsy (T0-RBx) compared with donors with normal T0-RBx]. Revista de Investigacion Clinica. 2010 Sep-Oct;62(5):406-11. PMID 21416728. *Not available in English*
207. Rogers NM, Lawton PD, Jose MD. Indigenous Australians and living kidney donation. New England Journal of Medicine. 2009 Oct 8;361(15):1513-6. PMID 19812415. *Sample size not sufficient*
208. Rook M, Hofker HS, van Son WJ, et al. Predictive capacity of pre-donation GFR and renal reserve capacity for donor renal function after living kidney donation. American Journal of Transplantation. 2006 Jul;6(7):1653-9. PMID 16827867. *No outcomes of interest*
209. Rosenblatt GS, Nakamura N, Barry JM. End-stage renal disease after kidney donation: a single-center experience. Transplantation Proceedings. 2008 Jun;40(5):1315-8. PMID 18589095. *No relevant comparison*
210. Rowinski W, Chmura A, Wlodarczyk Z, et al. Are we taking proper care of living donors? A follow-up study of living kidney donors in Poland and further management proposal. Transplantation Proceedings. 2009 Jan-Feb;41(1):79-81. PMID 19249481. *No relevant comparison*
211. Rowley AA, Hong BA, Martin S, et al. Psychiatric disorders: are they an absolute contraindication to living donation? Progress in Transplantation. 2009 Jun;19(2):128-31. PMID 19588662. *Not relevant to topic*
212. Rudge CJ. Long-term follow-up of living donors. Transplantation. 2009 Oct 15;88(7):861-2. PMID 19935454. *Not relevant to topic*
213. Rule AD, Amer H, Cornell LD, et al. The association between age and nephrosclerosis on renal biopsy among healthy adults. Annals of Internal Medicine. 2010 May 4;152(9):561-7. PMID 20439574. *No outcomes of interest*
214. Lentine KL, Schnitzler MA, Xiao HL, et al. Depression Diagnoses After Living Kidney Donation: Linking US Registry Data and Administrative Claims. Transplantation. 2012 Jul;94(1):77-83. PMID WOS:000306117800019. *No relevant comparison*
215. Sansalone CV, Maione G, Aseni P, et al. Early and late residual renal function and surgical complications in living donors: a 15-year experience at a single institution. Transplantation Proceedings. 2006 May;38(4):994-5. PMID 16757241. *No outcomes of interest*
216. Sapir-Pichhadze R, Young A, Kim SJ. Living donor age and kidney transplant outcomes: An assessment of risk across the age continuum. Transplant International. 2013 May;26(5):493-501. PMID 2013255812. *Not relevant to topic*
217. Schnitzbauer AA, Hornung M, Seidel U, et al. Does mini-incision donor nephrectomy improve quality of life in living kidney donors? Clinical Transplantation. 2007 Mar-Apr;21(2):235-40. PMID WOS:000245229800014. *No relevant comparison*

218. Schnitzler MA, Gheorghian A, Axelrod D, et al. The cost implications of first anniversary renal function after living, standard criteria deceased and expanded criteria deceased donor kidney transplantation. Journal of Medical Economics. 2013;16(1):75-84. PMID 22905738. *No outcomes of interest*
219. Schover LR, Streem SB, Boparai N, et al. The psychosocial impact of donating a kidney: Long-term followup from a urology based center. Journal of Urology. 1997 May;157(5):1596-601. PMID 1997120484. *No relevant comparison*
220. Segev D, Muzaale A, Caffo B, et al. Short-term and long-term survival in a 15-year cohort of all live kidney donors in the United States. American Journal of Transplantation. 2010 April;10:178. PMID 70463831. *Conference Abstract*
221. Selvaggi FP, Ditonno P, Lucarelli G, et al. Transperitoneal deviceless hand-assisted laparoscopic living donor nephrectomy: an alternative technique for kidney recovery. Journal of Endourology. 2010 Oct;24(10):1617-23. PMID 20839955. *No outcomes of interest*
222. Shimmura H, Tanabe K, Ishikawa N, et al. Influence of donor renal reserve on the long-term results of living kidney transplantation from elderly donors. Transplantation Proceedings. 1999 Nov;31(7):2874-6. PMID 10578322. *Not relevant to topic*
223. Shrestha A, Shrestha A, Vallance C, et al. Quality of life of living kidney donors: a single-center experience. Transplantation Proceedings. 2008 Jun;40(5):1375-7. PMID 18589110. *No relevant comparison*
224. Simforoosh N, Basiri A, Tabibi A, et al. Comparison of laparoscopic and open donor nephrectomy: a randomized controlled trial. BJU International. 2005 Apr;95(6):851-5. PMID 15794797. *No outcomes of interest*
225. Siparsky N, Glotzer O, Singh T, et al. Long-term quality of life following living kidney donation. American Journal of Transplantation. 2013 April;13:396. PMID 71057815. *Conference Abstract*
226. Siskind E, Sameyah E, Goncharuk E, et al. Removal of foley catheters in live donor kidney transplant recipients on postoperative day 1 does not increase the incidence of urine leaks. International Journal of Angiology. 2013 March;22(1):45-8. PMID 2013165353. *Not relevant to topic*
227. Smith GC, Trauer T, Kerr PG, et al. Prospective psychosocial monitoring of living kidney donors using the Short Form-36 health survey: results at 12 months. Transplantation. 2004 Nov 15;78(9):1384-9. PMID 15548979. *No outcomes of interest*
228. Soneji ND, Vyas J, Papalois VE. Long-term donor outcomes after living kidney donation. Experimental & Clinical Transplantation: Official Journal of the Middle East Society for Organ Transplantation. 2008 Sep;6(3):215-23. PMID 18954300. *No relevant comparison*
229. Song T, Fu L, Huang Z, et al. Change in renal parenchymal volume in living kidney transplant donors. International Urology & Nephrology. 2014 Apr;46(4):743-7. PMID 24178754. *Not relevant to topic*
230. Srinivas TR, Poggio ED. Do living kidney donors have CKD? Advances in Chronic Kidney Disease. 2012 Jul;19(4):229-36. PMID 22732042. *No outcomes of interest*
231. Suarez-Sanchez L, Perales-Caldera E, Pelaez-Luna MC, et al. Postoperative Outcome of Open Donor Nephrectomy Under Epidural Analgesia: A Descriptive Analysis. Transplantation Proceedings. 2006 April;38(3):877-81. PMID 2006451155. *No outcomes of interest*

232. Tan L, Tai BC, Wu F, et al. Impact of Kidney Disease Outcomes Quality Initiative guidelines on the prevalence of chronic kidney disease after living donor nephrectomy. Journal of Urology. 2011 May;185(5):1820-5. PMID 21420113. *Sample size not sufficient*
233. Tanaka K, Sakai K, Nemoto T, et al. Hyperuricemia is associated with both histological alteration in implant biopsy and risk factor of donor's renal function decline after 1-year in living-kidney transplantation. American Journal of Transplantation. 2013 April;13:393. PMID 71057805. *Conference Abstract*
234. Tauzin-Fin P, Bernard O, Sesay M, et al. Benefits of intravenous lidocaine on post-operative pain and acute rehabilitation after laparoscopic nephrectomy. Journal of Anaesthesiology Clinical Pharmacology. 2014 Jul;30(3):366-72. PMID 25190945. *No outcomes of interest*
235. Thaunat O, Kervella D, Matillon X, et al. Allotransplantation of kidney from unrelated living donor with loin pain haematuria syndrome. Transplant International. 2014 Mar;27(3):e24-6. PMID 24237133. *Sample size not sufficient*
236. Thiel K, Thiel C, Schenk M, et al. [Is the traditional open donor nephrectomy in living donor renal transplantation still up to date?]. Wiener Klinische Wochenschrift. 2012 Jan;124(1-2):39-44. PMID 22124840. *Not available in English*
237. Thiessen Philbrook H, Barrowman N, Garg AX. Imputing variance estimates do not alter the conclusions of a meta-analysis with continuous outcomes: a case study of changes in renal function after living kidney donation. Journal of Clinical Epidemiology. 2007 Mar;60(3):228-40. PMID 17292016. *Not relevant to topic*
238. Timmerman L, Zuidema WC, Erdman RA, et al. Psychologic functioning of unspecified anonymous living kidney donors before and after donation. Transplantation. 2013 Jun 15;95(11):1369-74. PMID 23542471. *Sample size not sufficient*
239. Tong A, Chapman JR, Wong G, et al. Screening and follow-up of living kidney donors: a systematic review of clinical practice guidelines. Transplantation. 2011 Nov 15;92(9):962-72. PMID 21959214. *Not relevant to topic*
240. Tong A, Chapman JR, Wong G, et al. The motivations and experiences of living kidney donors: a thematic synthesis. American Journal of Kidney Diseases. 2012 Jul;60(1):15-26. PMID 22305757. *No outcomes of interest*
241. Traynor C, Jenkinson A, Williams Y, et al. Twenty-year survivors of kidney transplantation. American Journal of Transplantation. 2012 Dec;12(12):3289-95. PMID 22947033. *Not relevant to topic*
242. Troppmann C, Johnston WK, 3rd, Pierce JL, et al. Impact of laparoscopic nephrectomy on donor preoperative decision-making and postoperative quality of life and psychosocial outcomes. Pediatric Nephrology. 2006 Jul;21(7):1052-4; author reply 5. PMID 16773425. *No outcomes of interest*
243. Troppmann C, Perez RV, McBride M. Similar long-term outcomes for laparoscopic versus open live-donor nephrectomy kidney grafts: an OPTN database analysis of 5532 adult recipients. Transplantation. 2008 Mar 27;85(6):916-9. PMID 18360277. *Not relevant to topic*
244. Tyson MD, Castle EP, Andrews PE, et al. Ureteral stricture formation in laparoscopically procured living donor kidney transplantation. Canadian Journal of Urology. 2012 Apr;19(2):6188-92. PMID 22512964. *No outcomes of interest*
245. Tyson MD, Castle EP, Ko EY, et al. Living donor kidney transplantation with multiple renal arteries in the laparoscopic era. Urology. 2011 May;77(5):1116-21. PMID 21145095. *Not relevant to topic*
246. Underwood PW, Sheetz KH, Cron DC, et al. Cigarette smoking in living kidney donors: donor and recipient outcomes. Clinical Transplantation. 2014 Apr;28(4):419-22. PMID 24617506. *Nephrectomies before 1994*

247. Van Der Weerd NC, Nurmohamed A. Kidney donors live long and happily. [Dutch]

Nierdonoren leven lang en gelukkig. Nederlands Tijdschrift voor Geneeskunde. 2009 09 May;153(19):937. PMID 2009302683. *Not available in English*
248. Van Gogh J, Duerinckx N, Massey E, et al. Psychosocial characteristics predictive of post-operative mental health in living-related liver or kidney donors: A systematic literature review. Transplant International. 2011 September;24:154. PMID 70527617. *Not relevant to topic*
249. van Walraven SM, Straathof LM, Switzer GE, et al. Immediate and long-term somatic effects, and health-related quality of life of BM donation during early childhood. A single-center report in 210 pediatric donors. Bone Marrow Transplantation. 2013 Jan;48(1):40-5. PMID WOS:000313519100009. *No relevant comparison*
250. Vats HS, Rayhill SC, Thomas CP. Early postnephrectomy donor renal function: laparoscopic versus open procedure. Transplantation. 2005 Mar 15;79(5):609-12. PMID 15753853. *No outcomes of interest*
251. Verbesey J, Grafals M, Cooper M, et al. Evolving trends in living donor uninephrectomy techniques and impact on post-transplant outcomes: A review of the us national cohort. American Journal of Transplantation. 2013 April;13:90. PMID 71056770. *Conference Abstract*
252. Wafa EW, Refaie AF, Abbas TM, et al. End-stage renal disease among living-kidney donors: single-center experience. Experimental & Clinical Transplantation: Official Journal of the Middle East Society for Organ Transplantation. 2011 Feb;9(1):14-9. PMID 21605018. *No relevant comparison*
253. Wang K, Wan FC, Gao ZL, et al. Inguinal oblique incision as an alternative route to extract the kidney during laparoscopic donor nephrectomy. Experimental & Clinical Transplantation: Official Journal of the Middle East Society for Organ Transplantation. 2011 Oct;9(5):315-8. PMID 21967257. *Sample size not sufficient*
254. Warle MC, Berkers AW, Langenhuijsen JF, et al. Low-pressure pneumoperitoneum during laparoscopic donor nephrectomy to optimize live donors' comfort. Clinical Transplantation. 2013 Jul-Aug;27(4):E478-83. PMID 23795745. *Sample size not sufficient*
255. Watson JM, Behnke MK, Fabrizio MD, et al. Recipient Graft Failure or Death Impact on Living Kidney Donor Quality of Life Based on the Living Organ Donor Network Database. Journal of Endourology. 2013 Dec;27(12):1525-9. PMID WOS:000328568100019. *No outcomes of interest*
256. Weng FL, Reese PP, Waterman AD, et al. Health care follow-up by live kidney donors more than three yr post-nephrectomy. Clinical Transplantation. 2012 May-Jun;26(3):E300-6. PMID 22686954. *No outcomes of interest*
257. Westlie L, Fauchald P, Talseth T, et al. QUALITY-OF-LIFE IN NORWEGIAN KIDNEY DONORS. Nephrology Dialysis Transplantation. 1993 1993;8(10):1146-50. PMID WOS:A1993MN71700017. *No relevant comparison*
258. Wiedebusch S, Reiermann S, Steinke C, et al. Quality of life, coping, and mental health status after living kidney donation. Transplantation Proceedings. 2009 Jun;41(5):1483-8. PMID 19545662. *No relevant comparison*
259. Wolters HH, Brockmann JG, Diller R, et al. Kidney Transplantation Using Donors With History of Diabetes and Hypertension. Transplantation Proceedings. 2006 April;38(3):664-5. PMID 2006198492. *No relevant comparison*
260. Wolters HH, Vowinkel T. Risks in life after living kidney donation. Nephrology Dialysis Transplantation. 2012 August;27(8):3021-3. PMID 2012463386. *No outcomes of interest*

261. Wrenshall LE, McHugh L, Felton P, et al. Pregnancy after donor nephrectomy. Transplantation. 1996 Dec 27;62(12):1934-6. PMID WOS:A1996WA91600044. *No relevant comparison*
262. Xie L, He S, Fu L, et al. The prevalence and risk factors of thrombocytopenia after living-related renal transplantation in Chinese adult recipients. Transplantation Proceedings. 2013 Jan-Feb;45(1):197-9. PMID 23375299. *No outcomes of interest*
263. Xue W, Song Y, Tian P, et al. [Living-related donor kidney transplantation in 158 patients]. Zhong Nan da Xue Xue Bao. Yi Xue Ban = Journal of Central South University. Medical Sciences. 2009 Sep;34(9):867-73. PMID 19779258. *Not available in English*
264. Yan H, Hendren E, Dong J, et al. Glomerular size on time zero kidney allograft biopsies and the change in kidney function after live kidney donation. American Journal of Transplantation. 2013 April;13:309. PMID 71057504. *Conference Abstract*
265. Yap S, Park SW, Egan B, et al. Cytokine elevation and transaminitis after laparoscopic donor nephrectomy. American Journal of Physiology - Renal Physiology. 2012 May 1;302(9):F1104-11. PMID 22262478. *No outcomes of interest*
266. Yazawa M, Kido R, Shibagaki Y, et al. Kidney function, albuminuria and cardiovascular risk factors in post-operative living kidney donors: a single-center, cross-sectional study. Clinical & Experimental Nephrology. 2011 Aug;15(4):514-21. PMID 21499989. *Sample size not sufficient*
267. Young A, Boudville N, Geddes C, et al. Bone mineral metabolism and other biochemical measures after live donor nephrectomy. American Journal of Transplantation. 2010 April;10:180. PMID 70463837. *No outcomes of interest*
268. Young A, Hodsman AB, Boudville N, et al. Bone and mineral metabolism and fibroblast growth factor 23 levels after kidney donation. American Journal of Kidney Diseases. 2012 Jun;59(6):761-9. PMID 22093959. *No outcomes of interest*
269. Young A, Nevis IF, Geddes C, et al. Do biochemical measures change in living kidney donors? A systematic review. Nephron. 2007;107(3):c82-9. PMID 17890875. *No relevant comparison*
270. Young A, Nevis IFP, Geddes C, et al. Do biochemical measures change in living kidney donors? Nephron Clinical Practice. 2007;107(3):C82-C9. PMID WOS:000250314700002. *Not relevant to topic*
271. Yu S, Men C, Liu L, et al. Utility of inguinal incision in retroperitoneoscopic live donor nephrectomy. ANZ Journal of Surgery. 2014 Sep;84(9):649-52. PMID 24661643. *Sample size not sufficient*
272. Yu SJ, Peng LK, Xie XB, et al. Donor selective strategies and perioperative treatment in living related kidney transplantation. [Chinese]. Journal of Clinical Rehabilitative Tissue Engineering Research. 2009 29 Oct;13(44):8729-32. PMID 2010018192. *Not available in English*
273. Zhao YB, Shi BY, Chen Z, et al. [The safety analysis of living-related kidney donors in short term after transplantation]. Chung-Hua Wai Ko Tsa Chih [Chinese Journal of Surgery]. 2009 Sep 1;47(17):1316-8. PMID 20092727. *Not available in English*
274. Zunic G, Tomic A, Spasic S. Unilateral nephrectomy causes an early abrupt decrease in plasma arginine and simultaneous reduction in glomerular filtration rate in living kidney donors. Clinical Biochemistry. 2013 October;46(15):1394-8. PMID 2013592654. *Sample size not sufficient*

Appendix C. Peri/Post-Surgical Outcomes: Supporting Tables

Table C1. Peri/Post-Surgical Outcomes: Characteristics of Included Systematic Reviews

Study	Donor Population	Literature Search	Comparison Population	No of participants (studies)	Length of Follow-up, years (range)	Age (mean)	Sex (% women)	Outcomes
Fonouni 2014	Donors undergoing open donor nephrectomy.	PubMed	Donors undergoing laparoscopic nephrectomy.	N= NR (15 studies)	NR	NR	NR	Warm ischemia time, operative blood loss, operative time, perioperative complications
Lafranca 2013	All studies that focused on outcomes of laparoscopic living donor nephrectomy by Body Mass Index of the donors.	MEDLINE, EMBASE and CENTRAL databases were searched from inception to Jan 2011	Living donors from alternative BMI categories	N=7338 donors (14 studies)	1 week – 11 years	NR	NR	Operation duration, conversion risk, estimated blood loss, length of stay, perioperative complications, difference in serum creatinine, decrease in GFR
Liu 2014	Donors undergoing left laparoscopic nephrectomy	PubMed, Embase, Cochrane, Web of Science from inception to July 2013	Donors undergoing right laparoscopic nephrectomy	N=32,426 (29 studies)	NR	NR	NR	Intra and Post-operative complications, delayed renal function, conversion, warm ischemia time, operative time, length of hospital stay
Wilson 2011	Donors undergoing laparoscopic donor nephrectomy	MEDLINE (Jan 1966 – Jan 2010), EMBASE (Jan 1980 – Jan 2010),, and CENTRAL (The	Donors undergoing open donor nephrectomy	N= 596 donors (6 studies)	NR	NR	NR	Analgesia requirements, duration of procedures, blood loss, perioperative complications, reoperations, warm ischaemia time, hospital stay

Study	Donor Population	Literature Search	Comparison Population	No of participants (studies)	Length of Follow-up, years (range)	Age (mean)	Sex (% women)	Outcomes
		Cocherane Library 2010, Issue 2) diatabases.						
Young 2008		Literature search in MELINE 1950-Jan, 2008; EMBASE 1980-Jan, 2008; CINAHL (1982-Jan, 2008; BIOSIS 1969-Jan, 2008, Cochrane Library.			< 1 year	NR	NR	Perioperative outcomes, reported clinical and intermediate outcomes
Yuan 2013	Donors undergoing open donor nephrectomy or standard laparoscopic nephrectomy.	MEDLINE, EMBASE and CENTRAL databases were searched from inception to Oct 2011	Donors undergoing standard laparoscopic nephrectomy or hand-assisted laparoscopic nephrectomy.	N=2243 donors (30 studies)	NR	NR	NR	Operative time, warm ischemia time, intraoperative blood loss, hospital stay and time to return to work

BMI= Body Mass Index; ClCr= creatinine clearance; CMS= Center for Medicare and Medicaid Services; CV = Cardiovascular; ESRD = End-stage renal disease; GFR = Glomerular Filtration Rate; HTN = hypertension; IFG = Impaired Fasting Glucose; MetS = Metabolic Syndrome defined according to NCEP ATP III guidelines as the presence of 3 or more criteria: waist ci (1) waist circumference ≥88 cm in women and ≥102 cm in men; (2) hypertriglyceridemia
(≥150 mg/dL [_1.69 mmol/L] or treatment); (3) low high-density lipid in– cholesterol (HDL_C) (<50 mg/dL [_1.29 mmol/L] in women and <40 mg/dL [1.04 mmol/L] in men); (4) hyperglycemia (≥100 mg/dL [_5.6 mmol/L]); and (5) hypertension (≥130/85 mm Hg or treatment).; NDI= National Death Index; NR = Not reported; National Health and Nutrition Examination Survey (NHANES III) conducted between 1988 and 1994; OPTN= Organ Procurement and Transplantation Network; SBP = systolic blood pressure; SSDI= Social Security Death Master File

DvD= donor versus donor; DvND=donor versus non-dono

Table C2. Peri/Post-Surgical Outcomes: AMSTAR Assessments of Included Systematic Reviews

Systematic Review	*A priori* design	Duplicate extraction	Comprehen sive lit search	Publication status = inclusion criteria	Study list provided	Study characteristics provided	Scientific quality rated	Scientific quality used appropriately	Findings combining appropriate	Publication bias assessed	Conflicts of interest stated	Overall Quality Rating	Summary Statement
Fonouni 2014	No	No	No	No	Included: Yes Excluded: No	No	No	No	Yes	No	Yes	Low	This is a review of RCTs and meta-analyses attempting to assess the efficacy and safety of laparoscopic versus open live donor nephrectomy. It is unclear if this was a systematic review, since details of the review methods are very limited. The results seem to be summarized appropriately and the conclusions are based on findings that appeared largely consistent across the included studies.
Lafranca 2013	No	Yes	Yes	Yes	included - Yes excluded - No	Yes	Yes	Yes	yes	Yes	Yes	Moderate/ High	This is a recent systematic review of observational studies attempting to assess the impact of BMI on laparoscopic live kidney donation. The evidence base is weak, but reasonable methods were used in the review.

Liu 2014	Yes	Yes	Yes	Yes	Included: Yes Excluded: No	Yes	Yes	Yes	Yes	Yes	Yes	High	This is a systematic review of left vs right laparoscopic live donor nephrectomy (1 RCT and 28 observational studies). The evidence base was weak but the methods of review are well documented and of high quality.
Wilson 2011	Yes	Yes	Yes	Yes	included - Yes excluded - Yes	Yes	Yes	Yes	Yes	No	Yes	High	This is a recent Cochrane systematic review of RCT and CCT studies attempting to assess the impact of laproscopic vs open live kidney donation. The evidence base and methods of the review are both well documented and of high quality.
Young 2008	No	Yes	Yes	Yes	included - Yes excluded - No	Yes	No	Can't Answer	Yes	No	Yes	Moderate	This is a systematic review of observational studies attempting to assess the impact of live kidney donation among donors with isolated medical abormalities. The manuscript states that high quality methods were used but details are difficult to confirm regarding how study bias was incorporated into the review.

Yuan 2013	No	Yes	Yes	Yes	included - Yes excluded - No	Yes	Yes	Yes	Yes	No	No	Moderate/ High	This is a recent systematic review of RCT and CCT studies attempting to assess the impact of laproscopic vs open livekidney donation. The evidence base and methods of the review are reasonable to answer the research question. Authors may have conflicts of interest and publication bias was suspected.

Table C3. Open versus Laparoscopic Nephrectomy: Peri/Post Surgical Outcomes (1a)

Systematic Review	Intervention		Results		AMSTAR Assessment
	Arm 1	Arm 2	Arm 1	Arm 2	
PeriOperative Complications					
Fonouni 2014	Open Donor Nephrectomy (NR)	Laparoscopic Donor Nephrectomy (NR)	No quantitative synthesis reported. Data presented includes trials and systematic reviews including those trials.		Low/Moderate
Yuan 2013 12 studies	Open Donor Nephrectomy (569)	Laparoscopic Donor Nephrectomy (792)	OR (95% CI) 0.80 (0.56-1.14)		Moderate/High
Wilson 2011 5 trials	Open Donor Nephrectomy (264)	Laparoscopic Donor Nephrectomy (292)	RR (95% CI) 0.87 (0.47-1.59)		High
Operative Time					
Fonouni 2014	Open Donor Nephrectomy (NR)	Laparoscopic Donor Nephrectomy (NR)	No quantitative synthesis reported. Data presented includes trials and systematic reviews including those trials.		Low/Moderate
Yuan 2013 19 studies	Open Donor Nephrectomy (807)	Laparoscopic Donor Nephrectomy(1093)	MD (95% CI) 50.54 (32.66 to 68.41)		Moderate/High
Wilson 2011 6 trials	Open Donor Nephrectomy (284)	Laparoscopic Donor Nephrectomy (312)	No quantitative synthesis reported. Six trials show significantly longer operative time with laparoscopic.		High
Intraoperative Blood Loss					
Fonouni 2014	Open Donor Nephrectomy (NR)	Laparoscopic Donor Nephrectomy (NR)	No quantitative synthesis reported. Data presented includes trials and systematic reviews including those trials.		Low/Moderate
Yuan 2013 8 trials	Open Donor Nephrectomy (352)	Laparoscopic Donor Nephrectomy (371)	MD (95% CI) -101.23 (-153.52 to -48.94)		Moderate/High
Wilson 2011 5 trials	Open Donor Nephrectomy (NR)	Laparoscopic Donor Nephrectomy (NR)	No quantitative synthesis reported. Four of five trials show similar blood loss.		High
Reoperation					
Fonouni 2014	Open Donor Nephrectomy (NR)	Laparoscopic Donor Nephrectomy (NR)	No quantitative synthesis reported. Data presented includes trials and systematic reviews including those trials.		Low/Moderate
Wilson 2011 6 trials	Open Donor Nephrectomy (284)	Laparoscopic Donor Nephrectomy (312)	RR (95% CI) 0.57 (0.09 to 3.64) ARI (laparoscopic)=1.5%		High
Length of Hospital Stay (days)					
Fonouni 2014	Open Donor Nephrectomy (NR)	Laparoscopic Donor Nephrectomy (NR)	No quantitative synthesis reported. Data presented includes trials and systematic reviews including those trials.		Low/Moderate
Yuan 2013 16 trials	Open Donor Nephrectomy (709)	Laparoscopic Donor Nephrectomy (972)	MD (95% CI) -1.27 (-1.72 to -0.82)		Moderate/High

Wilson et al 5 trials	Open Donor Nephrectomy (292)	Laparoscopic Donor Nephrectomy (237)	No quantitative synthesis reported. Three of five trials report shorter hospital stay with laparoscopic.	High
Time to Return to Work (days)				
Yuan 2013 16 trials	Open Donor Nephrectomy (435)	Laparoscopic Donor Nephrectomy (581)	WMD (95% CI) -16.35 (-23.00 to -9.71)	Moderate/High

ARI=absolute risk increase: ARR=absolute risk reduction; RR=relative risk; WMD=weighted mean difference;

Table C4. Standard Laparoscopic versus Hand-Assisted Laparoscopic Nephrectomy: Peri/Post Surgical Outcomes (1b)

Systematic Review	Intervention		Results		AMSTAR Assessment
	Arm 1	Arm 2	Arm 1	Arm 2	
Peri-/post-operative Complications					
Yuan 2013 7 trials	Standard Laparoscopic Nephrectomy (183)	Hand-Assisted Laparoscopic Nephrectomy (159)	OR (95% CI) 0.62 (0.27 to 1.39)		Moderate/High
Operative Time					
Yuan 2013 9 trials	Standard Laparoscopic Nephrectomy (221)	Hand-Assisted Laparoscopic Nephrectomy (221)	WMD (95% CI) -24.55 (-50.81 to 1.71)		Moderate/High
Intraoperative Blood Loss					
Yuan 2013 6 trials	Standard Laparoscopic Nephrectomy (160)	Hand-Assisted Laparoscopic Nephrectomy (134)	WMD (95% CI) -20.65 (-43.88 to 2.57)		Moderate/High
Length of Hospital Stay (days)					
Yuan 2013 6 trials	Standard Laparoscopic Nephrectomy (170)	Hand-Assisted Laparoscopic Nephrectomy (150)	MD (95% CI) 0.33 (0.10 to 0.56)		Moderate/High

Table C5. Left versus right laparoscopic live donor nephrectomy (1c)

Systematic Review	Intervention		Results		AMSTAR Assessment
	Arm 1	Arm 2	Arm 1	Arm 2	
Peri-/post-operative Complications					
Liu 2014 21 studies	Left (1872)	Right (728)	OR (95% CI) 1.31 (0.89 to 1.94)		Moderate/High
Liu 2014 16 studies	Left (1792)	Right (675)	OR (95% CI) 1.27 (0.86 to 1.88)		Moderate/High
Operative Time					
Liu 2014 14 studies	Left (2193)	Right (463)	WMD (95% CI) 1.35 (-11.73 to 14.44)		Moderate/High
Intraoperative Blood Loss					
Liu 2014 15 studies	Left (2356)	Right (677)	WMD (95% CI) 4.36 (-19.83 to 28.55)		Moderate/High
Length of Hospital Stay (days)					
Liu 2014 11 studies	Left (1370)	Right (360)	WMD (95% CI) 0.05 (-0.08 to 0.19)		Moderate/High

Table C6. Peri/Post-Surgical Outcomes: Older versus Younger Donors (2a)

Systematic Review	Intervention		Results		AMSTAR Assessment
	Arm 1	Arm 2	Arm 1	Arm 2	
Operative Time (minutes)					
Young 2008 3 studies	Older Donors (91)	Younger Donors (248)	WMD (95% CI) 11 (-3 to 25)		Moderate
Blood Loss (milliliters)					
Young 2008 2 studies	Older Donors (56)	Younger Donors (90)	WMD (95% CI) 6 (-91 to 103)		Moderate
Length of Hospital Stay (days)					
Young 2008 3 studies	Older Donors (91)	Younger Donors (248)	WMD (95% CI) 0 (-1 to 1)		Moderate

OR=odds ratio; RR= Risk ratio; WMD=weighted mean difference

[a]-Donors with pre-existing isolated medical abnormalities including older age, obesity, hypertension, reduced glomerular filtration rate, proteinuria, microscopic hematuria and nephrolithiasis.

Table C7. Peri/Post-Surgical Outcomes: Obese versus Overweight and Normal Weight

Systematic Review	Intervention		Results		AMSTAR Assessment
	Arm 1	Arm 2	Arm 1	Arm 2	
Peri/post-operative Complications					
Lafranca 2012 Systematic Review	Donors with high BMI= ≥30.0 (1442)	Donors with low BMI= ≤29.9 (4427)	RR (95% CI) 1.01 (0.75-1.36)		Moderate/High
Operative Time (minutes)					
LaFranca 2012 8 studies	High BMI (380)	Low BMI (725)	WMD (95% CI) 16.91 (9.06 to 24.76)		Moderate/High
Blood Loss (milliliters)					
Lafranca 2012 7 studies	High BMI (284)	Low BMI (655)	WMD (95% CI) 34.46 (-6.73to 75.66)		Moderate/High
Length of Hospital Stay (days)					
Lafranca 2012 10 studies	High BMI (1487)	Low BMI (4532)	WMD (95% CI) 0.18 (-0.02 to 0.39)		Moderate/High

RR= Risk ratio; WMD=weighted mean difference

[a]-Donors with pre-existing isolated medical abnormalities including older age, obesity, hypertension, reduced glomerular filtration rate, proteinuria, microscopic hematuria and nephrolithiasis.

Appendix D. Long-Term Outcomes: Supporting Tables

Table D1. Long-Term Outcomes: Characteristics of Included Systematic Reviews

Study	Donor Population	Literature Search	Comparison Population	No of participants (studies)	Length of Follow-up, years (range)	Age (mean)	Sex (% women)	Outcomes
Ahmadi 2014	Extended criteria live donors with the following characteristics: 1. older age, 2. overweight and obesity, 3. hypertension, 4. vascular anomalies/multiplicity, 5. women of childbearing age, and 6. minors as donors	Literature search through November 2013	Donors without the listed characteristics or matched non-donors	Older donor age N=90,027 (38 studies) Obesity N=5924 (22 studies) HTN N=81,497 (7 studies) Vascular multiplicity N=14,878 (48 studies)	0-10 0-5 1-20 0-10	NR	NR	All clinically relevant outcomes by age, BMI, hypertension, vascular multiplicity are discussed but not summarized.
Boudville 2006	Included studies involving 10 or more normotensive adults who donated a kidney and in whom blood pressure was assessed at least 1 year later. 48 studies from 28 countries followed 5145 donors.	Literature search Medline and EMBASE 1966-Nov 2005	Healthy non-donor controls in 12 studies	N=5145 donors (48 studies)	Mean 7 (median 6, range = 1-25 years)	41 (at donation)	58%	SBP, use of antihypertensives, HTN
Clemens 2006	Included any English language study where psychological function was assessed using questionnaires in 10 or more donors after nephrectomy.	Literature search in Medline, EMBASE, Web of Science, Psych INFO, Sociological Abstracts and CIAHL databases from 1969	Non-donor controls (general population, medical outpatients, potential donors, healthy individuals, family members of the recipients	N=5139 donors (51 studies)	Mean 4 years (range 1 week to 37 years from donation)	Mean 42 years	61%	Social function Self-concept Body image Psychological function Quality of life

Study	Donor Population	Literature Search	Comparison Population	No of participants (studies)	Length of Follow-up, years (range)	Age (mean)	Sex (% women)	Outcomes
		through July 2006	in 29 studies					
Garg 2006	Included studies with 10 or more healthy adults donated a kidney, and proteinuria, or glomerular filtration rate (GFR) was assessed at least 1 year later. 48 studies from 27 countries followed 5048 donors.	Literature search Medline and EMBASE 1966-Nov 2005	Healthy non-donor controls in 11 studies	N=5048 donors (48 studies)	Mean 7 (median 6, range 1-25)	41 (at donation)	NR	GFR, proportion of donors with GFR< 60 ml/min, proteinuria
Young 2008				(30 studies) from 13 countries				

BMI= Body Mass Index; ClCr= creatinine clearance; CMS= Center for Medicare and Medicaid Services; CV = Cardiovascular; ESRD = End-stage renal disease; GFR = Glomerular Filtration Rate; HTN = hypertension; IFG = Impaired Fasting Glucose; MetS = Metabolic Syndrome defined according to NCEP ATP III guidelines as the presence of 3 or more criteria: waist ci (1) waist circumference ≥88 cm in women and ≥102 cm in men; (2) hypertriglyceridemia (≥150 mg/dL [_1.69 mmol/L] or treatment); (3) low high-density lipid in– cholesterol (HDL_C) (<50 mg/dL [_1.29 mmol/L] in women and <40 mg/dL [1.04 mmol/L] in men); (4) hyperglycemia (≥100 mg/dL [_5.6 mmol/L]); and (5) hypertension (≥130/85 mm Hg or treatment).; NDI= National Death Index; NR = Not reported; National Health and Nutrition Examination Survey (NHANES III) conducted between 1988 and 1994; OPTN= Organ Procurement and Transplantation Network; SBP = systolic blood pressure; SSDI= Social Security Death Master FileDvD= donor versus donor; DvND=donor versus non-

Table D2. Long-Term Outcomes: AMSTAR Assessments of Included Systematic Reviews

Systematic Review	*A priori* design	Duplicate extraction	Comprehen sive lit search	Publication status = inclusion criteria	Study list provided	Study characteristics provided	Sicentific quality rated	Scientific quality used appropriately	Findings combining appropriate	Publication bias assessed	Conflicts of interest stated	Overall Quality Rating	Summary Statement
Ahmadi 2014	No	Yes	Yes	NA	included - No excluded - No	No	Yes	Can't Answer	Can't Answer	Can't Answer	Yes	Moderate	This is a recent systematic review of observational studies attempting to assess the impact of individually applying a number of extended criteria for living kidney donation (i.e. older age, obesity, hypertension, vascular anomalies and women of childbearing age). The manuscript states that high quality methods were used, but it is very brief on both methods and results so it is difficult to confirm.
Boudville 2006	No	Yes	Yes	Yes	included - Yes excluded - No	Yes	Some assessment, but not documented	Yes	Yes	No	Yes	Moderate	This is a systematic review of observational studies attempting to assess the impact of live kidney donation on hypertension. The evidence base is weak, but reasonable methods were used in the review.

Clemens 2006	No	Yes	Yes	Yes	included - Yes excluded - No	Yes	Yes[a]	Can't Answer	Can't Answer	No	No	Moderate/ Low	This is a systematic review of observational studies attempting to assess the impact of live kidney donation on psychosocial health. The quality of the evidence base for this review was low and there is limited information about how the potential bias in these studies was handled.
Garg 2006	No	No	Yes	Yes	included - Yes excluded - No	Yes	No	Can't Answer	Yes	No	No	Moderate	This is a systematic review of observational studies attempting to assess the impact of live kidney donation on donor kidney function. The evidence base is weak, but reasonable methods were used in the review.
Young 2008	No	Yes	Yes	Yes	included - Yes excluded - No	Yes	No	Can't Answer	Yes	No	Yes	Moderate	This is a systematic review of observational studies attempting to assess the impact of living kidney donation among donors with isolated medical abnormalities. The manuscript states that high quality methods were used but details are difficult to confirm regarding how study bias was incorporated into the review.

[a] Some assessment, but not documented

Table D3. Long-Term Outcomes: Study Characteristics of Included Studies

Study Design Country	Donor Population Data Source (n=number analyzed)	Comparison(s) Comparison Population Data Sources (n=number analyzed)	Length of Follow-up mean or median years (range)	Attrition-% who did not participate), (n participants/ N total)	Age (mean)	Sex (% women)	Outcomes
Berger 2011 United States	LKDs from OPTN database aged ≥70 donating between 1990 and 2010 linked to SSDI for death (n=219)	DvND: NDs are NHANES-III participants without contraindications to donation, matched on age, BMI, SBP, education, ethnicity and smoking history. (n=219)	1, 5, and 10 years	0	D:72.1 ND:NR	45	Mortality (survival at 5 and 10 years)
Chandran 2014 UCSF, United States	Living donors who donated at UCSF from 11994-12/2007 with impaired fasting glucose> 100 mg/dl who were alive and agreed to participate (n=45)	Living donors with normal fasting glucose matched to inpaired glucose donors for age, sex, race and year of donation who agreed to participate (n=45).	10.4 years	31% of donors with impaired fasting glucose participated in the study	47	58%	Estimated GFR, albumin/creatinine, diabetes.
Cherikh 2011 United States	Living donors with ESRD identified through OPTN and CMS ; 1987-2003 (n=126)	All living donors identified through OPTN (n=56,458)	9.8	NR	D with ESRD: 38.4 D controls : 38.8 (at donation)	D with ESRD post donation: 42 All LKD:57.2	ESRD by sex, race
Clemens 2011 Australia, Canada, Scotland	Living donors recruited from 9 transplant centers in Canada, Australia and Scotland; 1970-2007 (n=203)	Healthy non-donors suggested by donor participants, no renal disease, HTN, diabetes, CVD, pulmonary disease, cancer (104)	5.5 median (3.8-8.4)	D: 52% (203/421) C:39.6% (104/172)	D: 44 C: 40	D: 62 C: 63	Psychosocial (SF-36), 15 D and feeling thermometer
Cuevas-Ramos 2011	Living donors with Metabolic Syndrome (MetS) (n=28)	DvD: Living donors without MetS (112)	MetS: 4(2.1-5.8) w/o MetS: 12(8.2-15.7)	61.9% (140/358)	D with MetS:41.2 D without MetS:36.0	D with MetS:46.4 D without MetS:58.9	GFR, proteinuria
Dols 2011 Netherlands	Living donors aged > 60; 1994-2006 (n=117)	Living donors aged <60 (422)	5.5	NR	D ≥60: 65 D<60: 46	D ≥60: 59 D<60: 56	Mortality, CV Mortality, HTN, proteinuria, GFR
Doshi 2013 United States	African American donors in Detroit, MI 1993-2006 (n=103)	Matched controls from CARDIA study (235) without contraindications to donation matched by age, gender,	D: 6.8 (2.3) C: 6.4 (2.2)	39.8% (103/171)	D:35(8) C:34(6)	D: 63% C:63%	HTN, GFR, proteinuria

Study Design Country	Donor Population Data Source (n=number analyzed)	Comparison(s) Comparison Population Data Sources (n=number analyzed)	Length of Follow-up mean or median years (range)	Attrition-% who did not participate), (n participants/ N total)	Age (mean)	Sex (% women)	Outcomes
		SBP, and duration of follow-up					
El-Agroudy 2007 Egypt	Living related kidney donors who donated 1976-2002 (n=339) Age groups Sex (male vs female)	Egyptian general population	10.7 (4.9) (5-30 years)	75.5% (339/1400)	47.8	61.9%	HTN, GFR, proteinuria, diabetes
Fehrman-Ekholm 2011 Sweden	Living kidney donors; 1965-2005 (n=573)	Present multiple regression with age as an independent variable with SBP and GFR as outcomes.	14(2-43)	48.4% (573/1110)	47.4	59	SBP, GFR, mortality
Garg 2012 (fractures) Canada	Adult Ontario donors; 1992-2009 (n=2015)	Non-donors from administrative healthcare dataset without medical conditions that would preclude donation. Matched on age, sex, rural or urban residence, income at time of nephrectomy and assigned index date. (N=20150)	D: 6.9 (3.8-11.0) C: 6.6 (3.5-10.7)	NR (0.8% of donors with history of fragility fracture before donation.	43	60	Fractures (lower and upper extremities)
Garg 2008 (CV) Canada	Living donors between 1993-2005 in Ontario, Canada. (n=1278)	DvD: age, sex Non-donors from administrative healthcare dataset without medical conditions that would preclude donation. Matched on age, sex, rural or urban residence, income at time of nephrectomy and assigned index date. (N=20280)	Mean 6.2 (SD 3.2) (range 1-13)	37.1% (1278/2033)	41	60	Mortality, CV events, HTN
Garg 2012 Canada	Living donors between 1992-2009 in Ontario, Canada. (n=2028)	DvD: age, sex DvND: overall, age, sex Matched on age, sex, rural or urban residence and income at time of nephrectomy.	Median 6.5 (max 17.7 years)	NR	43 at donation 50 at follow-up start	60	Mortality, CV events
Gibney 2007	Searched UNOS for	All living donors: African	17.6 (time	NA	32 at donation	36	ESRD

Study Design Country	Donor Population Data Source (n=number analyzed)	Comparison(s) Comparison Population Data Sources (n=number analyzed)	Length of Follow-up mean or median years (range)	Attrition-% who did not participate), (n participants/ N total)	Age (mean)	Sex (% women)	Outcomes
United States	patients who had donated a kidney and were now on the waiting list for a kidney. (102); 1993-2005 African American (45 (44%), Caucasian 41 (40%), Hispanic 11(12%), Asian 2 (2%), Native American 1(1%) donors on transplant waiting list	American 8889(14%), Caucasian 42,419(68%), Hispanic 7375(12%), Asian 1879(3%), Native American 487(0.8%) .	between donation and wait list)				
Gibney 2008 United States	Searched UNOS for patients who had donated a kidney and were now on the waiting list for a kidney. (n=126) ; 1988-2006	DvD: African American (50) donors who need kidney transplant versus White (54) donors.	NR	NA	31	35	ESRD
Gracida 2003 Mexico	Living donors between 1992 and 2001, "normal" donors (n=422)	Donors with HTN (16) (defined as under control with diet and or 1 medication), high cholesterol (62), obesity (BMI >30) (81), age > 60 (6)	6.7	NR	34.5	49	HTN, kidney function (creatinine, GFR)
Gross 2013 United States	Living donors (n=2455) at three major transplant centers in the United States; 1963-2005	National Health Measurement Survey (NHMS) results African American Health Project	17	29.3% (2455/3470 donors who were contacted)	58	61	Psychosocial
Ibrahim 2009 Pregnancy Minnesota, USA	Women who donated a kidney at UofMN 1963-2007 (n=2102), 1589 responded, 1085 reported 3213 pregnancies. Post-donation pregnancy only 317 in 141 D with post donation pregnancy	Pre-donation pregnancies (n=92519) in 846 D with pre-donation pregnancy only + 204 in 98 D with pre and post donation pregnancies Post-donation pregnancies 317 in 141 D with post-donation pregnancies only +	Women donated 1963-2007, questionnaires sent 2003-2007	2102 women donated, 180 did not respond, 333 were not contacted	39	100	Pregnancy outcomes: Adverse maternal outcomes (HTN, diabetes, preeclampsia), fetal loss, prematurity

Study Design Country	Donor Population Data Source (n=number analyzed)	Comparison(s) Comparison Population Data Sources (n=number analyzed)	Length of Follow-up mean or median years (range)	Attrition-% who did not participate), (n participants/ N total)	Age (mean)	Sex (% women)	Outcomes
	only + 173 in 98 D with pre and post donation pregnancies.	173 in 98 D with pre and post donation pregnancies.					
Ibrahim 2009 United States	Living kidney donors from the U of M 1963-2007 (N=3698) linked to death master file. For a random sample (n=255) from 2003-2007 other outcomes (HTN, GFR, albumin/cr) were collected	NHANES sample matched to donors by age, sex, race, ethnic group, BMI, at the time of the measurement of GFR. US population norms served as control for SF-12 and 36 results. Donors of opposite sex and other BMI categories served as references for comparison between groups.	For GFR subgroup 12.2(9.2)	14.3% of the 1785 contacted donors presented for iohexol GFR measurement	52.9	62.1	Mortality and ESRD rate for all donors, GFR, HTN, proteinuria, quality of life for subset
Johnson 1999 United States	Living kidney donors at the University of Minnesota;1984-1996(N=524)	General US population scores Scores of patients who have CHF and patients who are depressed	NR	40	41	61	Psychosocial
Karakayali 1998 Turkey	Living kidney donors (n=102)	DvD: Female donors (57) Male donors (45)	Mean 10.2 (range 8mos. – 22 years)	32	41	55.9	GFR, CKD
Lam 2012 Canada	All Ontario LKD 1992-2009 linked to administrative database for outcomes of acute dialysis (n=2027)	DvND: Ontario database, healthiest non-donors without claims for conditions that preclude donation prior to assigned index date. Matched1;10 on age, sex, rural or urban residence and income at time of nephrectomy. N=20227	Median 6.6 (max 17.7 years) D:6.6 ND: 6.5	7.1% (5.5% left Ontario, 1.5% on non-donors and 0.6% of donors died,)	43	60	Acute dialysis during any hospital stay
Lee 2007 Korea	Living kidney donors who donated 1990-2001 and had GFR data after	Compares LKDs with GFR >60 (normal) (78) to those with GFR <60 (CKD-GFR)	Median 7.4 (range 4.5-14.3) years	86.2 % (104/756 participated)	42.5	42	GFR, HTN, Proteinuria

Study Design Country	Donor Population Data Source (n=number analyzed)	Comparison(s) Comparison Population Data Sources (n=number analyzed)	Length of Follow-up mean or median years (range)	Attrition-% who did not participate), (n participants/ N total)	Age (mean)	Sex (% women)	Outcomes
	50 months of follow-up (n=104) Donors Age >50 (n=29) Donors with HTN (n=6) 1st degree relatives (n=28)	(26) at last follow-up. Donors Age <50 (75) Donors w/o HTN (98) Non 1st degree relatives (76)					
Lentine 2010 United States	Living donors 1987-2007 from OPTN who had post-donation nephrectomy benefits with a private US health insurer at some point from 2000 to 2007 (n=4650)	Black donors (13.1%) White donors (76.3%) Hispanic donors (8.2%) Also unselected NHANES 2005-2006 participants stratified by race and ethnicity	Median time from donation to end data file for individual 7.7 years	NR Study sample N=4650, all donors in OPTN=86107	37.2	54.6	ESRD, HTN, Diabetes, CKD diagnosed from insurance claims
Lentine 2012 United States	Living donors 1987-2007 from OPTN who had post-donation nephrectomy benefits with a private US health insurer at some point from 2000 to 2007 (n=4650)	General insurance beneficiaries matched by gender and age, follow-up limited to the shortest	Median time from donation to start of insurance 4.9 years and to the end of insurance 7.7 years	Study sample N=4650	37.2	54.6	Depression
Lentine 2014 United States	Living donors 1987-2008 from OPTN who had post-donation nephrectomy Medicare billing claims 2000-2008 (n=4,007)	Living donors 1987-2007 from OPTN who had post-donation nephrectomy benefits with a private US health insurer at some point from 2000 to 2007 (4650) from prior study	Median time from donation to end of insurance 6.0 years	NR	54.8	60	HTN, Diabetes, CKD, proteinuria diagnosed from insurance claims
Mac Donald 2014 UMN, USA	Living donors at the Uof Minnesota 1963-2012 who were < 18 years of age at donation (n=39)	Living donors at the Uof Minnesota 1963-2012, 18-30 years of age at donation, matched to to adolescent donors on gender, relation to the recipient, BMI at donation, MDRD eGFR, year of donation (128)	Mean Adolescent D follow-up: 31.8+8.0 years Mean Adult D follow-up: 29.2+10.3 years	NR, 39/42 adolescent donors included in the analyses	Adolescent D: 17.1+0.7 Adult D: 24.2+3.6	Adolescent D: 43.6 Adult D: 51.6	Mortality, eGFR, proteinuria, HTN, Diabetes

Study Design Country	Donor Population Data Source (n=number analyzed)	Comparison(s) Comparison Population Data Sources (n=number analyzed)	Length of Follow-up mean or median years (range)	Attrition-% who did not participate), (n participants/ N total)	Age (mean)	Sex (% women)	Outcomes
Mjoen 2011 Norway	Living kidney donors 1963-2007 in Norway who responded to questionnaires (n=1508), responses from 1414 used in analyses	Unselected non-institutionalized population 16-80 years from Akershus county in Norway (6800)	Median 12.6 years	24% (1508/2269 responded)	46	60.5	Quality of Life
Mjøen 2013 Norway	Living kidney donors who donated 1963-2007 in Norway after exclusion of donors with BP>140/70, BMI>30, age >70 or <20, microalbuminuria, or eGFR<70 ml/min (n= 1,901).	Matched to healthy participants from the HUNT population study, only subjects with BP<140/90, BMI<30, those without diabetes, CVD, or HTN (use of BP meds) were included (32,621)	D: median 15.1 (range 1.5-43.9) years C: median 24.9 (range 0.1-26.0) years	0 (no loss to follow-up)	D: 46.0 C: 37.6	D: 59 C: 53.1	Mortality CV Mortality ESRD
Muzaale 2014	OPTN Donors (n=96,217)who donated 4/1/1994-11/30/2011 linked to CMS to ascertain ESRD status (maintenance dialysis, placement on waiting list or receipt of transplant)	NHANES III participants after excluding those with contraindications to kidney donation matched on age, sex, race, education, BMI, smoking, SBP (20,024) linked to CMS to ascertain ESRD status.	D:7.6 (3.9-11.5) C:15 (13.7-15)	NA	40.2	59	ESRD
Okamoto, 2010 Cross-sectional Japan	Glucose intolerant donors who donated 1985-2008, n= 71 (diabetic n=21, impaired glucose tolerance m=44)	Non-glucose intolerant donors (373)	DM D: 7.3 $\pm$5.9 GIT D: 8.4$\pm$6.8 No GIT D: 10.7$\pm$6.8	7.9%	54	63	Mortality
Reese 2014 Retrospective United States	OPTN /UNOS donors $\geq$ 55 years at donation, who donated 1996-2006 and had a matched non-donor (3368) used for death outcome analysis, donors with Medicare used for CVD outcome	Participants in the Health and Retirement Study (NIH, nationally representative sample of adults > 50 years of age in the US) without HTN, diabetes, CVD, pulmonary disease, psychological or neurological	Median 7.8(IQR 5.1-10.2)	3368/5152 (65.4%) donors were matched 3368/7319 (46.0%) eligible non-donors were	51	59	Death, death or CVD event (ischemic cardiac disease, congestive heart failure, stroke, PVD), diabetes

Study Design Country	Donor Population Data Source (n=number analyzed)	Comparison(s) Comparison Population Data Sources (n=number analyzed)	Length of Follow-up mean or median years (range)	Attrition-% who did not participate), (n participants/ N total)	Age (mean)	Sex (% women)	Outcomes
	analysis (1312)	condition, BMI <40 who rated their health as good, very good or excellent who were matched to donors by index date, race, sex, neighborhood poverty level, BMI (3368).		matched for death outcomes			
Reisaeter 2009 Cross-Sectional Norway	Linked the Norwegian Renal Registry with the Medical Birth Registry of Norway to identify 326 donors with 726 pregnancies, 106 post-donation pregnancies;1967-2002	Medical Birth Registry of Norway Pre-donation pregnancies N=620 Random sample of birth registry 1% (N=21511)	NR	0	27	100	Chronic hypertension, gestational hypertension, preeclampsia, Mortality (stillbirths)
Segev 2010 United States	OPTN Donors who donated 1994-2009 linked to Social Security Death Master File (n=80,347)	NHANES III participants after excluding those with contraindications to kidney donation matched on age, sex, race, educational background, history of cigarette smoking, pre-operative body mass index (BMI), and preoperative systolic blood pressure (SBP) (n=9364)	6.3	0.001%	NR	58.5	Mortality
Storsley 2010 Canada	Aboriginal donors donating 1970- 2007(n=38)	Randomly selected white donor controls (n=76).	AD:14.6$\pm$9.3 WD:13.4$\pm$9.5	9%	AD: 32.0 WD: 40.0	Ad:61 WD:52	Death, ESRD, HTN, GFR
Thomas 2013 Canada	All Ontario LKD 1992-2009 linked to administrative database for outcomes of kidney stones (n=2019)	DvND: Ontario database, healthiest non-donors without claims for conditions that preclude donation prior to assigned index date and no h/o kidney stones. Matched1;10 on age, sex, rural or urban residence and	Median 8.4 (max 19.7years) D: 8.8 ND: 8.4	<7%	43	60	Kidney stones (claims for surgical interventions)

Study Design Country	Donor Population Data Source (n=number analyzed)	Comparison(s) Comparison Population Data Sources (n=number analyzed)	Length of Follow-up mean or median years (range)	Attrition-% who did not participate), (n participants/ N total)	Age (mean)	Sex (% women)	Outcomes
		income (n=20190)					
Thomas 2014 Canada	All Ontario LKD 1992-2009 linked to administrative database for outcomes of GI bleeding (n=2009)	DvND: Ontario database, healthiest non-donors without claims for conditions that preclude donation or GI bleeding episodes prior to assigned index date. Matched1;10 on age, sex, rural or urban residence and income at time of nephrectomy. (n=20090)	8.4, max 19.7 D: 8.8 ND:8.4	8.5% 6.5% moved from Ontario, 2% died.	42	60	GI bleed
Tsai 2013 Taiwan	105 LKDs; 1983-2011 in Taiwan	Donors with lower eGFR at donation (n=NR) Female donors (n=60) Male donors (n=45)	5.4±4.9	NR	46.3	60	ESRD, CKD, proteinuria
Von Zur-Muhlen 2014 Sweden	455 LKDs; 1974-2008 in Sweden, 395 LKDs who agreed to participate in the study	Female vs male donors Pre-donation GFR, age, BMI	11±7	18.5%	49	58	eGFR, HTN, proteinuria
Wafa, 2011 Egypt	Consecutive live donors between 1976 and 2008 (n=2000)	8 donors who developed ESRD	NR	NR	30.9	25	ESRD

BMI= Body Mass Index; ClCr= creatinine clearance; CMS= Center for Medicare and Medicaid Services; CV = Cardiovascular; D= Donors; ESRD = End-stage renal disease; GFR = Glomerular Filtration Rate; GI= Gastrointestinal; HTN = hypertension; IFG = Impaired Fasting Glucose; MetS = Metabolic Syndrome; ND= Non-Donors; NDI= National Death Index; NR = Not reported; National Health and Nutrition Examination Survey (NHANES III) conducted between 1988 and 1994; OPTN= Organ Procurement and Transplantation Network; SBP = systolic blood pressure; SSDI= Social Security Death Master File; DvD= donor versus donor; DvND=donor versus non-donor

Table D4. Long-Term Outcomes: Risk of Bias Assessments of Included Studies

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
Berger 2011 Retrospectively ided prospective registry cohort with matched non-donor controls	mortality	Moderate (all older donors were included, controls were matched based on NHANES data)	Low	Low	Differential follow-up start - at donation for D vs at data collection for non-donors. Also, despite matching, donors likely are more carefully selected compared to non-donors.	Moderate risk of bias. This study has better design than many, matched healthy controls. Despite the effort, control population likely differs from donor pool.
Berger 2011, retrospective, USA	Mortality	Comparison group appropriately selected and matched to study group; significant difference in baseline characteristics on some parameters (no of females, BMI>30, and prevalence of HTN). (high)	Statistical analysis appropriate though study not powered for subgroup interaction effect. (high)	Very low percentage (<5%) of attrition. (low)		Moderate risk of bias due to differences in baseline characteristics , and lack of power for subgroup interaction effect.
Chhandran 2014 Retrospective matched cohort	eGFR, albuminuria, diabetes, HTN	Moderate (donors who participated differed from those who didn't)	Low	High	Mached donors differed from impaired glucose donors (lower BMI, lower BP predonation).	High to moderate risk of bias
Cherikh 2011 (AJT). Retrospective	ESRD	moderate to high. Comparison to	Relatively short follow up of avg 9.8 yrs.	low	Avg duration of follow up 9.8 yrs. May be short to completely assess ESRD risks.	moderate to high risk of bias. No

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
cohort of donors between 1987 and 2003. Affect of age and ethnicity.		USRDS 2009 annual data report				appropriate control group.
Cherikh 2011 Restrospective cohort study of LKDs and risk for ESRD	ESRD	Low (Single arm study including only LKDs as defined by known registry data)	Low (Robust measurements for ESRD from multiple data sources, manual confirmation of data in some instances)	Low (No documentation of the extent of missing data, however likely low as patients cannot be "lost to follow-up" in these government datasets)	No	Low risk of bias. This retrospective study utilized multiple data sources with robust methods and did not attempt a comparison to a healthy non-donor population due to issues with selection bias.
Clemens 2011, Canada, Scotland, Australia, retrospective cohort	Psychosocial outcomes based on SF 36, 15D, feeling thermometer	High (17% of all donors participated), controls suggested by donors but were not able to donate	High, donors who responded might have been better of than the rest	High	There was correlation between D and ND controls were suggested by donors and are likely their family members.	High risk of bias, high attrition, outcomes are subjective.
Clemens, 2011 Retrospective cohort in Canada, Australia and Scotland	SF-36 and Feeling Thermometer	High - 44% of eligible donors participated, Controls were suggested by the donors themselves.	Moderate	Unclear - attrition is tough to assess in a one-time survey	Retrospective nature = potential recall bias	High - responders aren't likely entirely reflective of the entire sample, not all validated instruments used.

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
Cuevas-Ramos 2011 Retrospective Cohort Mexico	eGFR, Albuminuria	High - interim report only, but >20% of full sample included and no way of knowing how they compare to the full cohort.	Moderate - 5 year f/u	High - 40%		Moderate to high - selection bias, high attrition
Cuevas-Ramos 2011 Retrospective	Low eGFR	Moderate to high - age and gender possible confounding factors, enrollment bias	Unclear/high - not clear if statisticians were blinded to data	Low		Moderate risk of selection bias between the two groups due to confounding factors, enrollment bias
Dols 2011 Retrospective cohort study of the impact of age and LKD	eGFR, proteinuria	Unclear (No documentation of baseline co-morbidities between each group, could older patients have more chronic illness, less strict selection criteria?)	Low	Unclear (16% lost to follow-up at 1 year in both groups, no formal disclosure of lost to follow-up for later years)	Surgical technique differences by time period, more younger patients were included from earlier years before laparoscopic donation was standard of care	Moderate risk of bias. This retrospective study was a single center cohort and did not disclose if there were differential co-morbidities between groups that could explain their results aside from age alone.
Dols 2011 (AJT). Prospective cohort of consecutive donors compared by age.Compared donors older or	Estimated GFR	High. Not comparing elderly donors to age matched controls.	Moderate-high. Short term follow up (median 5.5yrs)	low. Data on 539 consecutive donors.	Renal function based on estimated GFR. May be less accurate in elderly compared to younger population (MDRD used).	High risk of bias. No age matched comparison group.

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
younger then 60.						
Doshi, 2013 Retrospective cohort	eGFR, albimin, creatinine	High - matching not entirely successful, eGFR and insurance status not well matched	Moderate - short follow-up at 6.8 years	High - only 69% of eligible donor participated		Moderate - high attrition, matching not entirely successful
Doshi, 2013 United States	Renal function, HTN, diabetes, proteinuria	Low (best possible selection from a prospective cohort, comorbidities excluded and non-donors matched by age, gender, BP, time of follow-up.	Low	Moderate	Low	Low to Moderate Risk of Bias.
El-Agroudy 2007 Egypt Retrospecitve study	HTN by sex groups; serum creatinine, proteinuria, HTN, diabetes by age group; diabetes, CV events for the general cohort.	High, only 24.2% of the cohort had prospective follow-up.	Unclear	High	High, general population comparison, only age and sex matched.	High risk of bias (high attrition, possible selective outcome reporting, poorly matched control population).
El-Agroudy, 2007 Egypt Retrospective cohort	HTN, serum creatinine and proteinuria, by age	High - 25% of potential participants		High (75%)		High

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
Fehrman-Ekholm 2011 (NDT). Cross-sectional retrospective sutdy in sweden.	GFR, measured and estimated	High. Donor function compared to previous studies of donors.	low	No data on deceased donors. 10% of donors with no data	Some donors deceased and 10% lost not included. Participation of 70% potential donors.	High risk of bias. No reported data of comparison group.
Fehrman-Ekholm 2011 Cross sectional study of LKDs and renal function over time	eGFR	High (Cross sectional study, survival bias given they excluded deceased patients from analysis, non-participation rate is moderately high)	Low	Low	No	Moderate to high risk of bias. This is a cross sectional study with a potential for a high degree of selection bias and immortal time bias which may tremendnously impact their results.
Garg 2008 (Transplantation) . Retrospective cohort sutdy of living donors in Ontario Canada. Donors between 1993 and 2005.	Composite of time to death or first major cardiovascular event.	moderate to high. Non-donors from general population.	Donors more frequently followed then general population	low	Short follow up of 6.2 years (range of 1-13).	moderate risk of bias. General population control group.
Garg 2008 Retrospective cohort study of LKDs and risk of cardiac disease	Time to death or major CV event	Unclear (Excellent study design with 5:1 matched controls on age, sex, income, and healthcare utilization but no information on control co-morbidities)	Low	Low	No	Low to moderate risk of bias. This is an excellently designed registry study using multiple data sources and decent controls, although they lacked co-morbidity

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
						information on controls. The comparison group could include patients that could have conditions that would excluded them from being a donor.
Garg 2012 Retrospective cohort study of LKDs and risk of cardiac disease	Time to death or major CV event	Low (Excellent study similar to previous 2008 study, but higher sample size and more variables used in matching controls to donors)	Low	Low	No	Low risk of bias. This study added on the previous study by making the controls more robust and comparable to the health of someone who would be a candidate for donation.
Garg 2012 (BMJ). Retrospective population based matched cohort study of donors in Ontario Canada. Donors between 1992 and 2009.	Composite of time to death or first major cardiovascular event.	moderate: matched donors from "the healthiest segment of the general population".	Follow up mean 6.5 yrs. May be to short for detection of composite primary end point	low	Poor reliability mentioned in cause of death	Moderate risk of bias. General population control group.
Garg 2012 Retrospectively ided prospective administrative database donor cohort with	Lower and upper extremity fragility fractures	Moderate (all donors in Ontario were included and controls were matched based	Authors state that database codes for fractures are sensitive. Both D and ND had	Moderate.	Non-donor characteristics are defined by claims (some have low sensitivity)	Moderate risk of bias due to claim - based definition of non-donor characteristics

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
matched non-doner controls.		on claims)	similar criteria for fracture diagnosis. Non-blinded. High.			(unknown other predictors of fractures, such as smoking, fitness, falling tendency etc).
Garg 2012, retrospective, Canada.	Fractures	Comparison group appropriately selected and matched to study group; no significant difference in baseline characteristics. (low)	Statistical analysis appropriate; sample size significantly large detect effect. Subgroups specified a priori (low)	Study based on database containing all the variables needed by the researchers so no missing data issues. (low)	Yes. Outcomes mainly assessed from claims data which may not reflect true clinical outcomes. Also a single center study	Moderate bias, mainly due to study based on claims data which may or may not reflect true clinical outcome.
Gibney, 2007 United States	GFR, ESRD by race	Uncertain – no between group comparisons by characteristics.	Moderate	Difficult to say in a chart review design	Outcomes are assessed entire through registry data.	Moderate to high
Gibney 2007 United States Retrospective	Low eGFR/ESRD (Race of donors on wait list for transplantation advanced CKD/ESRD in donors)	High/unclear - not entirely clear whether AA donor group and Caucasian donor group were well matched in terms of confounding factors	High	Unclear		Moderate to high risk of bias - probable significant confounding factors between the two outcomes groups
Gibney 2008 (Trans Pro). Retrospective study of donors with ESRD compared to all donors between 1988 and 2006	Characteristics of donors with ESRD	moderate. Both groups as donors but no baseline characteristic comparisons beyond age and race.	High. No information reported on donors with ESRD who were not listed or deceased with ESRD.	moderate.	Comparison groups of different time frames.	high risk of bias. May be differences in baseline characteristics between donors with and without ESRD.

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
Gibney 2008 Descriptive study of LKDs and age/sex/race and risk of ESRD	Frequencies of age/sex/race for LKDs on waitlist versus all LKDs	Low	Low	Unclear (see next comment)	The inclusion of LKDs from differential time periods (waitlist only assessed from 1996-2006) and not having any other data to control for possible confounding makes interpretation of the results of this study very challenging.	Moderate risk of bias. The study design is descriptive in nature and the groups were chosen in very arbitrary way. A correlation was observed with no control for confounding factors.
Gracida, 2003		Low	Low	Unclear	F/u time 6.7 years, SDs not reported. Authors mention	High
Gross 2013 (AJT). Observational cross sectional survey of living donors between 1963-2005 at 3 centers	Quality of life based on SF-36 survey	high. Control group unselected from US population. Not medically matched.	moderate. Poor response rate	moderate. Only 50% of eligible donors contacted, of these 2/3rd's returned questionnaire	Non-participants in survey differed from participants.	Moderate risk of bias due to missing eligible donors, comparison to general population in US which are not medically matched.
Gross 2013 Cross-sectional study examining health related QOL in LKDs	Health-related QOL	High (Cross sectional design with only 27% of all donors enrolled, high initial exclusion rate with potential of survival bias)	Low	Low (survey participation rate was high at 97% of those who consented)	No	High (results could be entirely explained by selection bias given the sheer number of donors who were initially excluded).

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
Ibrahim 2009 (NEJM). Single center retrospective cohort, donors between 1963 and 2007.	Survival and ESRD	Moderate to high, comparison to general population. Survival compared to life tables.	low	low	no	moderate to high risk of bias. No appropriate control group.
Ibrahim 2009 Long term consequences of kidney donation	Death, ESRD, eGFR, hypertension, QOL	Low (random selection of contacted donors within a stratified scheme lowers impact of selection bias, NHANES controls)	Low	Low	No	Low (well-designed study with random subpopulation from thousands of known donors, robust NHANEs controls)
Ibrahim 2009 Retrospective cohort of women who donated at the U of MN	Pregnancy outcomes such as maternal complications, fetal loss, prematurity	High, 75% responded to questionnaires	High, based on recall	High	Pre-donation pregnancies were more remote than post-donation (16. yrs vs 2.5 yrs from survey)	High risk of bias, though response rate is high, there were non-responders. Also, outcomes were based on recall many years later.
Ibrahim 2009, retrospective, USA.	Pregnancy outcomes.	Unclear if comparison group appropriate; no significant difference in baseline characteristics. (unclear)	Statistical analysis appropriate though many confounders not adjusted for, and ack of an internal control group.(high)	Missing data handled by imputation; responders differed from non-responders on some parameters.(unclear)	Yes. Possibility of both response and recall bias. (high)	High, due to inappropriate selection of comparison group, and high possibility of response and recall bias).
Johnson 1999 Cross sectional	Quality of life/psychosocia	Unclear - comparison	High	High - survey - cross sectional -		High risk of bias - survey

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
	l outcomes	group (?)		~60% response rate		with only 60% response rate
Karakayali, 1998	Hypertension by age	Low - Within donor comparisons	Unclear	Unclear		Moderate
Lam 2012 Retrospectively ided prospective administrative database donor cohort with matched non-doner controls.	Acute dialysis (procedure codes)	Moderate(all donors in Ontario were included and controls were matched based on claims)	High. Database codes for AKI are not very sensitive, though dialysis is easier to identify	Moderate, higher proportion of non-donors died.	Non-donor characteristics are defined by claims (some have low sensitivity)	Moderate risk of bias. Acute dialysis is a rare event, might not have the power to see the difference. Also bias due to claim-based definition of non-donor characteristics .
Lam 2012, retrospective, Canada.	Acute dialysis	Comparison group appropriately selected and matched to study group; no significant difference in baseline characteristics. (low)	Statistical analysis appropriate; sample size significantly large detect effect. However, study not powered for subgroup interaction effect though this could be negated by the large sample size(low)	Study based on database containing all the variables needed by the researchers so no missing data issues. (low)	Yes. Outcomes mainly assessed from claims data which may not reflect true clinical outcomes. Also a single center study	Moderate bias. Good study design and statistical analysis, but significant bias might result if claims data do not match significantly with clinical outcome. Also, study not powered for subgroup interaction effect.
Lee 2007 Retrospective	Low eGFR (eGFR <60 mL/min)	Moderate - low eGFR group with significantly greater age	High	Unclear		Moderate to high - significant age difference between the

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
						two groups being compared
Lentine, 2010 Retrospective	Cardiovascular disease, Hypertension, diabetes, CKD	Moderate – administrative database comparison group	Moderate			Moderate
Lentine, 2012 Retrospective	Depression	Moderate – administrative database comparison group	Moderate			Moderate
Lentine, 2014 Retrospective	HTN, CKD, Diabetes	Moderate, donots with insurance were selected	Moderate, CKD claims have low sensitivity	Low		Moderate
Mac Donald, 2014	Mortality, eGFR, proteinuria, HTN, diabetes	Moderate, younger donors were compared to older donors, longer follow-up of younger donors	Moderate, not all donors had creatinine measurements and proteinuria measurements thought the follow-up	High for lab outcomes: 23/39 and 88/128 donors had creatinine and HTN data available in 109 donors (subgroup distribution not given)	None	Moderate
Mjoen 2011 Cross-sectional study of LKDs and QOL	QOL	Low (high participate rate overall, limited survival bias)	Unclear (control group was a US population norm compared to a Norwegian donor population)	Low	No	Low (high participation rate given it's a cross-sectional survey design, possible bias from using a US control population)
Mjoen 2011 (AJT). Cross sectional study of donors between 1963 and 2007	Quality of life based on SF-36 survey	high. Control group unselected from Norwegian population. Not	moderate: 76 % response rate from donors in collection	low to moderate	No pre-donation comparison to see change with donation in SF-36	moderate-high. Comparison group not matched.

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
compared to general population in Norway.		medically matched.	period			Donors may be more healthy then comparison general population group
Mjoen 2013 (KI). Retrospective study of events 1963-2007 in Norwegian donors compared to potentially eligible kidney donor control group	ESRD, cardiovascular and all-cause mortality	moderate. Age of controls younger (46 vs 37.6 yrs). Also slightly lower BMI and systolic BP.	low	low	All donors and controls from single country. No data on renal function.	low to moderate: Study has in general longer follow up times and large number of events then others
Mjoen 2013 Retrospective cohort study of LKDs and long term outcomes	death, ESRD	High (Inclusion of donors prior to 1985, control population was not matched with donors to any variable, ie age/sex)	Low	Unclear (use of imputation for missing data)	No	Moderate (Lack of matching by key variables between donors and controls is a key limitation of this study; attempts to control this with regression, but matching would have been a better study design)
Muzaale 2014 (JAMA). Retrospective cohort matched to NHANES III healthy non-donors	Cumulative incidence and risk of ESRD	Moderate: screened non-donor population derives from NHANES III. May not all	moderate: Short follow up, mean of 7.6 years	low	Compared groups not of concurrent years. Donors were 1994-2011 and matched controls between 1988-1994.	Moderate risk of bias: moderate. Control population may differ from donor

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
		have been approved donors.				pool.
Muzaale 2014 Retrospective registry study of LKDs and risk of ESRD	ESRD	Low (Matched control population from NHANES, donors are from registry data)	Low	Low	No	Low (Well-designed study that took into account differential follow-up when comparing donors to non-donors, matched NHANES population, large N with enormous power).
Okamoto 2010 Cross sectional	Mortality and ESRD	Moderate - age difference between to groups	High	High - survey - cross sectional		Moderate to high risk of bias - age difference between the two groups, responder bias
Okamoto, 2010 Japan Cross-sectional survey	Survival, ESRD, HTN	GI group is older, non-GI group is more female	High	Moderate	Not detected	High risk of bias
Reese 2014, USA	Survival, Death or CVD, diabetes	Moderate – 65% of eligible donors and 46% of eligible non-donors were matched and used in	Low for death High for CVD as they used Medicare claims	Low – all donors included in the analysis were followed for outcomes	Not detected	Low to moderate risk of bias for death; Moderate to high risk of bias for CVD

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
		analysis of mortality. Matched donors were younger, less likely to be AA, more likely to come from neighborhoods with less poverty				outcomes.
Reisaeter 2009,Norway	Pregnancy outcomes such as maternal complications, fetal loss, prematurity	Low	Low	Low	Women who have deliveries after donation are older at delivery, increasing probability of complications.	High risk of bias. Comparison between pregnancies pre-and post-donation is biased by difference in mother characteristics, with older age at post-pregnancy being a predictor of poor pregnancy outcomes. Comparison of donor outcomes to non-donor is biased by selection: donors are healthier than random sample of women and should have

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
						better outcomes.
Reisaeter 2009, retrospective, Norway.	Pregnancy outcomes.	Appropriate selection of comparison group, though description of baseline characteristics not extensive.(High)	Statistical analysis test used (Fisher's) did not allow for adjusting of confounding, though a more sophisticated test GLMM (regression analysis) employed but ony used for two groups in this regard. (high)	No mention of missing data or attrition. (unclear)	Yes. Possible selective reporting of outcomes. (high)	High due to baseline characteristics of mothers not described thoroughly enough to explore possible differences that might affect pregnancy outcomes.
Segev, 2010	Death, ERSD	Administrative comparison group	Low	Low		Low-Moderate
Storsley, 2010	Mortality, renal function, HTN, diabetes, proteinuria			High		High

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
Storsley 2010, Canada, Manitoba	Death, ESRD, renal function, HTN, diabetes, proteinuria among Aboriginal donors and white donors (controls)	High (data available 31/38 AD and 64/76 WD)	Low	High	High, white donors were chosen other than matched Aboriginal non-donors, gen population outcomes are also different between A and W individuals. Unclear if donation modifies this risk.	High risk of bias
Thomas 2013 Canada Retrospectively	Stones	High, donors screened for donation. Controls were screened likely due to symptoms	Low to Moderate	Moderate	Moderate, non-donor's characteristics are defined by claims.	Moderate Risk of Bias
Thomas 2013 Canada Retrospectively ided prospective administrative database donor cohort with matched non-donor controls.	Kidney stones requiring surgical procedures and hospital encounters for kidney stones	High, donors had greater screening for history of prior kidney stones (in clinic) vs controls were screened based on claims over a certain time frame	Moderate, Claims for kidney stones requiring procedures or hospital visit not validated.	Moderate	None detected.	Moderate
Thomas 2014 Retrospectively ided prospective administrative database donor cohort with matched non-donor controls.	GI bleeding risk (ICD-9 codes)	Moderate(all donors in Ontario were included and controls were matched based on claims)	High, GI B identified based on ICD-9 codes, though they have PPV of 86%	Moderate	Non-donor characteristics are defined by claims (some have low sensitivity)	Moderate risk of bias due to claim - based definition of non-donor characteristics as well as claim based definition of the outcomes, though should not be differential between donors and

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
						non-donors.
Thomas 2014, retrospective, Canada	GI bleeding	Comparison group appropriately selected and matched to study group; no significant difference in baseline characteristics. (low)	Statistical analysis appropriate; sample size significantly large detect effect (low)	Study based on database containing all the variables needed by the researchers so no missing data issues. (low)	Yes. Outcomes mainly assessed from claims data which may not reflect true clinical outcomes. Also a single center study	Low to moderate bias. Good study design and statistical analysis, but significant bias might result if claims data do not match significantly with clinical outcome.
Tsai, 2013 Taiwan Retrospective	GFR, ESRD	Low – includes their entire cohort of donors	Low - Statistical methods appear appropriate	Low – attrition not an issue with a retrospective chart review.	Small sample size, short f/u time	Low to moderate
Tsai 2013 Retrospective	Low eGFR	Moderate	Low	Unclear		Moderate risk of bias - probable confounding factors between the two outcomes groups which were not measured
Von Zur-Muhlen 2014, Retrospective, Sweden	eGFR, BP, proteinuria	Moderate	Low	Moderate	No control group, donors compared to donors	Moderate

Author Year Study Design	Outcomes	Selection Bias	Detection Bias	Attrition Bias	Other Sources of Bias	Overall Risk of Bias
Wafa 2011 (exp and clin Tx). Retrospective cohort of donors at single center in Egypt. NO COMPARISON GROUP. Did make comment on no added risks over general population.	ESRD	Moderate	low. Easily define end point of ESRD	low. Data on 2000 consecutive donors		Moderate
Wafa 2011 Cross-sectional descriptive study of LKDs who developed ESRD	Descriptive study (rate of ESRD may not be accurate as no data on lost-to-follow up)	Low (not applicable)	Low (not applicable)	High (Measurement on ESRD rate depends on complete follow-up data for ESRD development on all donors, unclear if they actually have that as they don't disclose their lost-to-follow up rate. Authors claim they saw all of their donors, but do they see 2000 post-donor patients annually?)	No	High (Serious concern about how they measured ESRD in their population-- while the authors claim they have follow-up data on all their patients, how do they know they captured all the ESRD in the donor population? No linkage to ESRD registries is a huge problem)

Table D5. Long-term Outcomes of Living Kidney Donation: Living Kidney Donors compared to healthy non-donors

Study, Year, Country	Mean Follow-Up (years)	Intervention/Control (n)			Results			ROB
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	
Mortality								
Mjoen, 2013 Norway	D: 15.1 N-D: 24.9	Donors (1,901)	Non-Donors (32,621)		n/N (%) 224/1901 (11.7)	n/N (%) 2425/32621 (7.4)		Low-Moderate
					HR[a](95% CI) 1.30 (1.11 to 1.52) p=0.001			
Garg, 2012 Canada	Median 6.5	Donors (2,028)	Non-Donors (20,800)		n/N (%) 16/2,028 (0.8)	n/N (%) 365/20,280 (1.8)		Low
					RR:0.44 95% CI: 0.26 to 0.72			
Segev, 2010 United States	Up to 12 years	Donors (at 12 years: 10,436)	Non-Donors (at 12 years: 127)		Kaplan-Meir curves suggest mortality higher in matched controls at 5-12 years follow-up. No values provided, difference may be 1% at 12 years. Log-rank P<.001			Low-Moderate
Cardiovascular Events								
Mjoen, 2013 Norway	D: 15.1 N-D: 24.9	Donors (1,901)	Non-Donors (32,621)		Cardiovascular Deaths n/N (%) 68/1901 (3.6)	Cardiovascular Deaths n/N (%) 688/32621 (2.1)		Low - Moderate
					HR*(95% CI) 1.40 (1.03 to 1.91) p=0.03			
Garg, 2012 Canada	Median 6.5	Donors (2,028)	Non-Donors (20,280)		Major cardiovascular events n/N (%) 26/2,028 (1.3)	Major cardiovascular events n/N (%) 287/20,280 (1.4)		Low
					RR (95% CI) 0.91 (0.61 to 1.35)			
ESRD								
Muzaale, 2014 United States	At 15 years post-donation	Donors (8,781)	Non-Donors (50,124)		30.8 per 10,000 (CI: 24.3-38.5) p<.001	3.9 per 10,000 (CI: 0.8-8.9)		Low - Moderate
Mjoen, 2013	D: 15.1	Donors	Non-Donors		n/N (%)	n/N (%)		Low-Moderate

Study, Year, Country	Mean Follow-Up (years)	Intervention/Control (n)			Results			ROB
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	
Norway	N-D: 24.9	(1,901)	(32,621)		9/1,901 (0.5)	22/32,621 (.06)		
					HR[a](95% CI) 11.38 (4.37 to 29.63) p<0.001			
Renal Function								
Garg, 2006 SR	7	Donors (239)	Non-Donors (189)		eGFR (mL/min)[b] WMD (95% CI) -10 (-15 to -6)			Low
Acute Kidney Injury								
Lam, 2012 Canada	D: median 6.9 ND: Median 6.5	Donors (2,027)	Non-Donors (20,270)		Acute Dialysis 1/2,027 (0.05%) 6.5/100,000 person-years	Acute Dialysis 14/20,270(0.07%) 9.4/100,000 person-years		Moderate
					RR (95% CI) 0.58(0.08-4.47)			
Proteinuria								
Garg, 2006 SR	7	Donors (129)	Non-Donors (59)		24 hour Urine Protein (mg/day) WMD (95% CI) 66 (2 to 108)			Low
		Donors (67)	Non-Donors (51)		Microlabuminuria n/N (%) 14/67(20.9)	Microlabuminuria n/N (%) 2/52(3.9)		
					RR (95% CI) 3.9 (1.2 to 12.6)			
Hypertension								
Boudville, 2006 SR	Min 5	Donors (157)	Non-Donors (128)		Systolic Blood Pressure WMD(95% CI) 6 (1.6-10.5)			Moderate
Psychosocial								
Clemens,2011 Canada, Scotland, Australia	Median 5.5	Donors (203)	Non-Donors (104)		SF-36 component scores reported graphically (no SDs) p= NS			High
					15D QOL score Mean (SD): 0.93 (0.09) p=0.55	15D QOL score Mean (SD) 0.94 (0.06)		
					Feeling Thermometer score Mean (SD) 84 (16)	Feeling Thermometer score Mean (SD)		

Study, Year, Country	Mean Follow-Up (years)	Intervention/Control (n)			Results			ROB
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	
					p= 0.46	85 (10)		
Other: Fragility fractures								
Garg, 2012 Canada	Median 6.5	Donors (2,015)	Non-Donors (20,150)		Rate/10,000 person-years (95% CI) 16.4 (11.1 to 24.2)	Rate/10,000 person-years (95% CI) 18.7 (16.5 to 21.1)		Moderate
					Model-based Rate Ratio (95% CI): 0.88(0.58 to1.32)			
Other : GI Bleeding								
Thomas, 2014 Canada	Median 8.4	Donors (2,009)	Non-Donors (20,090)		Rate/10,000 person-years (95% CI) 18.5/10,000 person-years	Rate/10,000 person-years (95% CI) 14.9/10,000 person-years		Moderate
					Model-based Rate Ratio (95% CI) 1.24(0.85-1.81)			
					Time to first event (hospitalization with GI bleed) HR (95% CI) 1.25(0.87-1.79)			
Other: Kidney Stones								
Thomas, 2013 Canada	Median:8.4	Donors (2,019)	Non-Donors with no evidence of kidney stones (20,190)		Kidney Stones with surgical intervention 8.3/10,000 person-years	Kidney Stones with surgical intervention 9.7/10,000 person-years		Moderate
					Kidney Stones with surgical intervention RR (95% CI) 0.85 (0.47 to 1.53)			
					Kidney stones with hospital encounters 12.1/10,000 person-years	Kidney stones with hospital encounters 16.1/10,000 person-years		
					Kidney stones with hospital encounters RR (95% CI) 0.75 (0.45 to 1.24)			

CI= Confidence Interval; HR= Hazard Ratio; NS= Not statistically significant; QOL= Quality of Life; RR=Risk Ratio; SD= Standard Deviation; SR= Systematic Review; WMD= Weighted Mean Difference

[a]Hazard ratio adjusted for age, gender, year of inclusion, systolic BP, smoking, and BMI after multiple imputation.

[b]-Studies in this SR described method of GFR estimation as timed urine creatinine clearance, use of inulin or radioisotopes or a predictive equation for GFR.

Table D6. Long Term Living Kidney Donation Outcomes – Older donors versus Older Healthy Non-donor Controls

		Intervention/Control (n)			Results			
Study, Year, Country	**Mean Follow-Up**	**Arm 1**	**Arm 2**	**Arm 3**	**Arm 1**	**Arm 2**	**Arm 3**	**ROB**
Mortality								
Mjoen, 2013 Norway	D: 15.1 year N-D 24.9 years	Donors (1,901)	Non-Donors (32,621)		HR (95% CI) Age, years 1.10 (1.10 to 1.11)			Low to Moderate
Reese, 2014 United States	7.84 years	Donors age ≥55 (3368)	Non-Donors age ≥55 (3368)		n/N (%) 115/3368(3.4%) 4.9 deaths per 1000 person/years, p=0.21	n/N (%) 152/3368(4.5%) 5.6 deaths per 1000 person/years		Low to Moderate
					HR (95% CI) 0.90 (0.71-1.15)			
		Donors age ≥60 (1648)	Non-Donors age ≥60 (1648)		HR (95% CI) 0.68 (0.49-0.95), p=0.03			
Berger, 2011 United States	5 years	Donors age >70 (219)	Non-donors age >70 (219)		<u>Survival</u> n/N (%) (95% CI) 209/219 (95.8) (91.4-98.1)	<u>Survival</u> n/N(%) (95% CI) 201/219 (91.8) (87.3-94.7)		Moderate
	10 years				<u>Survival</u> n/N(%) (95% CI) 22/219 (90.0) (83.5-94.0)	<u>Survival</u> n/N(%) (95% CI) 160/219 (73.0) (65.6-79.0)		
					HR (95% CI) 0.37 (0.21-0.65)			
Segev, 2010 United States	Up to 12 years	Donors (80,347)	Non-Donors (80,347)		Kaplan-Meir curves suggest mortality higher in matched controls at 5-12 years follow-up. No numerical values provided, difference at 12 years: >60: matched controls have higher death rate until 12 years, then curves intersect 50-59: Donors have higher mortality until 9 years, then matched controls have higher death rate			Moderate

		Intervention/Control (n)			Results			
Study, Year, Country	**Mean Follow-Up**	**Arm 1**	**Arm 2**	**Arm 3**	**Arm 1**	**Arm 2**	**Arm 3**	**ROB**
					40-49: matched controls have higher death rate 5-12 years 18-39: matched controls have higher death rate at 5-12 years Log-rank P<.001 (due to very large sample size)			
Cardiovascular Outcomes								
Reese, 2014 United States	7.84 years	Donors age ≥55 (1312/3368) with Medicare	Non-Donors age ≥55 (1312/3368) with Medicare		CVD or death HR (95% CI) 1.02 (0.87-1.20), p=0.70			Low- Moderate
		Donors age ≥60 (?/1648)	Donors age ≥60 (?/ 1648)		Similar risk of CVD events or death, p=0.72			
Garg, 2012	Median 6.5 (max 17.7)	Donors age ≤55 (1741)	Non-Donors age <55 (17410)		Death censored CV event n/N (%) 18/1741(1.4)	Death censored CV event n/N (%) 181/17410(1.4)	P for interaction 0.48	Moderate
					HR (95% CI) 0.90 (0.60-1.5)			
		Donors age ≥55 (287)	Non-Donors age ≥55 (2870)		Death censored CV event n/N (%) 8/287(4.4)	Death censored CV event n/N (%) 106/2870(6.4)		
					HR (95% CI) 0.70(0.3-1.4)			
Psychosocial								
Clemens, 2011 Australia, Canada, Scotland	5.5 years (median)	Donor Age ≥43 (NR)	Non-Donors Age ≥43 (NR)		SF-36 Mental component summary Mean (SD) 54 (8) p=NS	SF-36 Mental component summary Mean (SD) 56 (6)		High
Other: Diabetes								
Reese, 2014 United States	7.84 years	Donors age ≥ 55 (1312/3368) with Medicare	Non-Donors age ≥ 55 (1312/3368) with Medicare		HR (95% CI) 1.05 (0.83-1.32), p=0.80			Low-Moderate

		Intervention/Control (n)			Results			
Study, Year, Country	**Mean Follow-Up**	**Arm 1**	**Arm 2**	**Arm 3**	**Arm 1**	**Arm 2**	**Arm 3**	**ROB**
Other: Fragility Fractures								
Garg, 2012 Canada	6.9 years	Donors age ≥55 (285)	Non –Donors age ≥55 (2,850)		n/N (%) 8/285 Event rate/10,000 person years 43.2	n/N (%) 70/2850 Event rate/10,000 person years 39.5		Moderate
					RR (95% CI) 1.14 (0.56 to 2.35)			
					Age did not influence association between donation and fractures P for interaction 0.5			
					AHR (95%) CI for a fragility fracture for every 5 year increase in age at donation: 1.28(1.05-1.54)			
Other: GI Bleeding								
Thomas, 2014 Canada	Median 8.4 years	Donors age ≥40 (1,190)	Non-Donors age ≥40 (11,900)		n/N (%) 25/1190 Event rate/10,000 person years 23.4	n/N (%) 209/11900 Event rate/10,000 person years 20.3		Low to Moderate
					RR (95% CI) 1.19 (0.79 to 1.80)			
Other: Kidney Stones								
Thomas, 2013	Median 8.4 years	Donors age >40 (1203)	Non-Donors age ≥40 (12,030)		Kidney stones with surgical intervention n/N (%) 10/1203 Event rate per 10,000 = 9.4	Kidney stones with surgical intervention n/N (%) 107/12,030 Event rate per 10,000 – 10.4		Moderate
					RR (95% CI) 0.93 (0.49 to 1.78)			
					RR (95% CI) for kidney stone with surgical intervention per 5 years older age: 1.15(0.90-1.50)			

		Intervention/Control (n)			Results			
Study, Year, Country	**Mean Follow-Up**	**Arm 1**	**Arm 2**	**Arm 3**	**Arm 1**	**Arm 2**	**Arm 3**	**ROB**
					Kidney Stones with Hospital Encounters n/N (%) 12/1203 Event rate per 10,000 = 11.1	Kidney Stones with Hospital Encounters n/N (%) 176/12,030 Event rate per 10,000 = 17.0		
					RR (95% CI) 0.68 (0.38 to 1.22)			
					RR (95% CI) for kidney stone hospitalization per 5 years older age: 1.02(0.82-1.26)			

CI= ; OR=Odds Ratio; RR= Risk Ratio; SBP= Systolic Blood Pressure; SD= Standard Deviation

Table D7. Long Term Living Kidney Donation Outcomes – Older versus Younger Donors

		Intervention/Control (n)			Results			
Study, Year, Country	**Mean Follow-Up**	**Arm 1**	**Arm 2**	**Arm 3**	**Arm 1**	**Arm 2**	**Arm 3**	**ROB**
Mortality								
Dols, 2011 Netherlands	Median: 5.5	Donors ≥60 (117)	Donors age<60 (422)		n/N (%) 3/117 (2.5)	n/N (%) 9/422 (2.1) RR (95% CI) 1.20 (0.33 to 4.37)		Moderate
Garg, 2012 Canada	6.8	Donors ≥55 (287)	Donors age <55 (1741)		n/N (%) 13/287 (4.5)	n/N (%) 29/1741(1.6) RR (95% CI) 2.72 (1.43 to 5.17)		Moderate
MacDonald 2014 United States	D<18: 31.8+8 D 18-30: 29.2+10.3	Donors <18 (39)	Donors 18-30 (128)		n/N (%) 2/39 (5.1) P>0.99	n/N (%) 8/128 (6.2)		Moderate
Segev, 2010 United States	Median: 6.3	Donors age>60 (3017)	Donors age 50-59 (13439)	Donors age 40-49 (24375) Donors age 18-39 (39516)	12 year mortality 9.4% HR (95% CI) 9.4 (7.3 to 12.1)	12 year mortality 3.5% HR (95% CI) 3.3 (2.6 to 4.1)	12 year mortality 1.3% HR (95% CI) 1.6 (1.2-2.0) reference	Low-Moderate
Cardiovascular Events								
Garg, 2012 Canada	Median 6.5	Donors age ≥55 (287)	Donors age <55 (1741)		Event rate. 10,000 person years 4.4	Event rate. 10,000 person years 1.4		Moderate
Lentine, 2010 United States	Median 7.7	Donors (4650)			Adjusted HR (95% CI) Age (per year) Medical Claims 1.09 (1.07 to 1.19)			
ESRD								
Muzaale, 2014 United States	Median 7.6 years	Donors age ≥60 (4,039)	Donors age 50-59 (16,840)	Donors age 40-49 (28,994)	Cum Incidence of ESRD at 15 years per 10,000 (95%CI) 70.2(30.4-161.8)	Cum Incidence of ESRD at 15 years per 10,000 (95%CI) 54.6 (34.8-85.4)	Cum Incidence of ESRD at 15 years per 10,000 (95%CI) 17.4(10.1-30.0)	Moderate

		Intervention/Control (n)			Results			
Study, Year, Country	**Mean Follow-Up**	**Arm 1**	**Arm 2**	**Arm 3**	**Arm 1**	**Arm 2**	**Arm 3**	**ROB**
				Donors age 18-39 (46,344)			Cum Incidence of ESRD at 15 years per 10,000 (95%CI) 29.4(21.4-40.2)	
Gibney, 2008 United States	NR	White Donors age <35 (17,281)	White Donors age ≥35 (38,463)		Donors on Transplant Wait-List n/N (%) 35/17,281 (0.2)	Donors on Transplant Wait-List n/N (%) 19/38,463 (.05)		High
					RR (95% CI) 4.10 (2.35 to 7.16)			
		AA Donors age <35 (5,061)	AA Donors age ≥35 (5,268)		Donors on Transplant Wait-List n/N (%) 44/5,061 (0.6)	Donors on Transplant Wait-List n/N (%) 6/5,268 (.11)		
					RR (95% CI) 7.68 (3.25 to 17.89)			
Renal Function								
Tsai, 2013 Taiwan	Mean: 5.4 years	Donors (105)			Multivariate Cox regression model predicting CKD: HR (CI) [a] Initial age: 0.999 (0.965-1.033)			Low-moderate
Dols, 2011 Netherlands	5.5 years	Donors ≥60 (117)	Donors <60 (422)		MDRD eGFR <60mL/min n/N (%) 94/117 (80) p<0.001	MDRD eGFR <60mL/min n/N (%) 131/422 (31)		Moderate
Fehrman-Ekholm, 2011 Sweden	14 years	Donors (573)			Multiple regression predicting eGFR: β, SE Current age: -0.6559 (0.0571)			High
Lentine, 2010 United States	Median 7.7 years	Donors (4650)			Chronic Kidney Disease Adjusted hazard ratio (95% CI) Age (per year) Medical Claims 1.04 (1.03-1.06) p<0.05			Moderate
MacDonald 2014 United States	D<18: 28.4 years	Donors <18 (23)	Donors 18-30 (88)		eGFR 66.7+10.9 ml/min/1.73m^2	eGFR 66.5+16.8 ml/min/1.73m^2		Moderate

		Intervention/Control (n)			Results			
Study, Year, Country	**Mean Follow-Up**	**Arm 1**	**Arm 2**	**Arm 3**	**Arm 1**	**Arm 2**	**Arm 3**	**ROB**
	D 18-30: 30.4 years				eGFR<60 (%) 26.1 P=0.19	eGFR<60 (%) 40.9		
					eGFR<45 (%) 4.3 P=0.97	eGFR<45 (%) 4.5		
					OR (95% CI) of eGFR <60 adol vs adult: 0.53(0.21-1.34) adjusted for age, gender, ethnicity, BMI, eGFR and BP at donation.			
Ibrahim, 2009 United States	12.2 years	Donors (255)			Iohexol GFR <60 mL/min/1.73m^2 Odds Ratio (95% CI) Age, per year: 1.15 (1.08-1.21)			Moderate
El-Argoudy, 2007 Egypt	10.7 years	Donors age 51-69 (44)	Donors age 36-50 (120)	Donors age 21-35 (175)	Serum Creatinine mg/dL Mean (SD) 0.8 (1.2) Range: 0.6-5.4 p=0.01	Serum Creatinine mg/dL Mean (SD) 1.0 (1.1) Range: 0.6-4.0	Serum Creatinine mg/dL Mean (SD) 1.0 (3.0) Range: 0.5-1.2	High
Lee, 2007 Korea	Median: 5.4 years	Donors (104)			MDRD eGFR<60 mL/min per 1.736 m^2 Odd Ratio (95% CI) Age, per year 1.06 (1.01-1.10)			High
Gracida, 2003 Mexico	6.7 years	Donors age >60 (81)	Normal donors[e] (422)		GFR (mL/min)[b] 71	GFR (mL/min)[b] 78.5		High
Von Zur-Muhlen 2014 Sweden	11±7	Donor Age			Higher donor age was correlated with lower eGFR at follow-up (p<0.0001)			Moderate
Proteinuria								
Dols, 2011 Netherlands	5 years	Donors age ≥60 (64)	Donors age<60 (206)		n/N (%) 3/64 (4.7)	n/N (%) 8/206(3.9)		Moderate
					RR (95% CI) 2.27 (0.63 to 8.14)			
	10 years	Donors age≥60 (15)	Donors age<60 (94)		n/N (%) 0/15	n/N (%) 6/94 (6.4)		
					RR (95% CI) 0.46 (0.03 to 7.72)			
El-Argoudy, 2007 Egypt	10.7	Donors age 51-69 (44)	Donors age 36-50 (120)	Donors age at 21-35 (175)	Proteinuria mg/24h, mean (SD) 141(53)	Proteinuria mg/24h, mean (SD) 133(49)	Proteinuria mg/24h mean (SD) 127(48)	High

		Intervention/Control (n)			Results			
Study, Year, Country	**Mean Follow-Up**	**Arm 1**	**Arm 2**	**Arm 3**	**Arm 1**	**Arm 2**	**Arm 3**	**ROB**
					p=0.5			
MacDonald 2014 United States	D<18: 31.8 D 18-30: 29.2	Donors <18 (39)	Donors 18-30 (128)		Proteinuria (≥1+ on random dipstick) (%): 15.4, P=0.80	Proteinuria (≥1+ on random dipstick) (%): 14.1		Moderate
					OR (95% CI) of proteinuria adol vs adult: 1.32(0.57-3.03)[c]			
Hypertension								
Dols, 2011 Netherlands	5.5 years	Donors ≥60 (117)	Donors <60 (422)		n/N (%) 12/117 (10%) p=0.56	n/N (%) 25/422 (6%)		Moderate
					RR (95% CI) 1.73 (0.90 to 3.34)			
Fehrman-Ekholm, 2011 Sweden	14 years	Donors (573)			Multiple regression predicting SBP: β (SE), p ? Current age: Systolic BP 0.527 (0.068) p=0.0000 Diastolic BP 0.033(0.041) p=0.42			High
Lentine, 2010 United States	Median 7.7 years	Donors (4,650)			Adjusted HR (95% CI) Age (per year) Medical Claims 1.06 (1.06-1.07) p<0.05 Drug-Treated 1.06 (1.05-1.07) p<0.05			Moderate
Ibrahim 2009 United States	12.2 years	Donors (255)			Hypertension requiring medication OR (95% CI) Age, per year: 1.09 (1.04-1.13)			Moderate
El-Argoudy, 2007 Egypt	10.7 years	Donors age 51-69 44	Donors age 36-50 120	Donors age 21-35 175	Hypertension requiring medication 1med: N=15 2med: N=7 3med: N=1 RR (95% CI) 6.09 (3.48-10.68)	Hypertension requiring medication 1med: N=28 2med: N=11 3med: N=1 RR (95% CI) 3.89 (2.25–6.71)	Hypertension requiring medication 1med: N=8 2med: N=6 3med: N=1	High
MacDonald 2014 United States	D<18: 31.8 D 18-30: 29.2	Donors <18 (39)	Donors 18-30 (128)		Hypertension requiring medication (%): 35.9, P=0.70	Hypertension requiring medication 39.4		Moderate
					OR (95% CI) of HTN adol vs adult: 1.36(0.71-2.61)[c].			

		Intervention/Control (n)			Results			
Study, Year, Country	**Mean Follow-Up**	**Arm 1**	**Arm 2**	**Arm 3**	**Arm 1**	**Arm 2**	**Arm 3**	**ROB**
Psychosocial								
Gross, 2013 United States	17 years	Donors (2,455)			Mental Health HRQoL Impairment 10 year increase in age at donation OR (95%CI) 0.74 (0.65 to 0.85)			High
Lentine, 2012 United States	Median 7.7 years	Donors (4650)			Depression diagnosis by claims HR(95% CI) Age at donation: 1.02(1.01-1.03), p: 0.04			Moderate
Clemens, 2011 Australia, Canada, Scotland	Median 5.5	Donor Age ≥43	Donor Age <43 Total N = 203		SF-36 Mental component summary Mean (SD) 54 (8) p=NS	SF-36 Mental component summary Mean (SD) 52 (9)		High
Mjoen, 2011 Norway	Median 15.1	Donors (71/1,377)			Older age at donation associated with decreased risk of having doubt towards donation OR (95% CI) 0.98 (0.95 – 1.00)			Moderate
Johnson, 1999 United States	NR	Donors age ≥40	Donors age <40 Total N = 524		SF-36 Mental health score[d] Mean (SD) 81 (NR)	SF-36 Mean Mental health score Mean (SD) 80 (NR)		High
Diabetes								
Lentine, 2010 United States	Median 7.7	Donors (4,650)			Adjusted HR (95% CI) Age (per year) Medical Claims 1.05 (1.03-1.06) Drug-Treated 1.05 (1.03-1.07)			Moderate
MacDonald 2014 United States	D<18: 31.8 year D 18-30: 29.2 years	Donors <18 (39)	Donors 18-30 (128)		Diabetes Requiring Medication (%): 5.1, P=0.19	Diabetes requiring Medication 12.5		Moderate
					OR (95% CI) of diabetes adol vs adult: 0.61(0.15-2.60)[c].			
Other – Fragility Fractures								
Garg, 2012 Canada	6.9	Donors age ≥55 years (285)	Donors age <55 years (1,730)		No. of events/ No. at risk 8/285 Event rate/10,000	No. of events/ No. at risk 17/1730 Event rate/10,000		Low

		Intervention/Control (n)			Results			
Study, Year, Country	**Mean Follow-Up**	**Arm 1**	**Arm 2**	**Arm 3**	**Arm 1**	**Arm 2**	**Arm 3**	**ROB**
					person years 43.2	person years 12.7		
					RR (95% CI) 2.85 (1.24 to 6.55)			
Other – GI Bleed								
Thomas, 2014 Canada	Median 8.4 years	Donors ≥40 (1190)	Donors <40 years (819)		n/N (%) 25/1,190 (2.1) Event rate/10,000 person years 23.4	n/N (%) 10/819 (1.2) Event rate/10,000 person years 11.9		Moderate
					RR (95% CI) 1.72 (0.83 to 3.56)			
Other – Kidney Stones								
Thomas, 2013	Median 8.4 years	Donors ≥40 (1203)	Donors <40 years (816)		Kidney Stones with Surgical Intervention n/N (%) 10/1,203 (.83) Event rate/10,000 person years 9.4	Kidney Stones with Surgical Intervention n/N (%) 6/816 (.73) Event rate/10,000 person years 6.8		Moderate
					RR (95% CI) 1.13 (0.41 to 3.09)			
					Kidney Stones with Hospital Encounters n/N (%) 12/1,203 (.99) Event rate/10,000 person years 11.1	Kidney Stones with Hospital Encounters n/N (%) 11/816 (1.3) Event rate/10,000 person years 13.5		
					RR (95% CI) 0.74 (0.33 to 1.67)			

CI= ; NR= Not Reported; NS= Not statistically different; OR=Odds Ratio; RR= Risk Ratio; SBP= Systolic Blood Pressure; SD= Standard Deviation

Table D8. Long Term Living Kidney Donation Outcomes – Male versus Female Comparisons in Donors versus Healthy Non-Donors

Study, Year, Country	Mean Follow-Up (years)	Intervention/Control (n)			Results			
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	ROB
Mortality								
Mjoen, 2013 Norway	Median D: 15.1 years C: 24.9 years	Male sex predicting all-cause mortality in a cohort of donors (1901) and controls (32,621)			Adjusted HR (95% CI)[a] 1.52 (1.41-1.65)			Moderate
Segev, 2010 United States	Up to 12 years	Male Donors (33,380)	Male Non-Donors (33,380)		Kaplan-Meir curves suggest mortality higher in matched controls at 5-12 years follow-up. No numerical values provided, difference at 12 years around 1% Log-rank P<.001			Low-Moderate
	Up to 12 years	Female Donors (46,967)	Female Non-Donors (46,967)		Kaplan-Meir curves suggest mortality higher in matched controls at 5-12 years follow-up. No numerical values provided, difference at 12 years around 1% Log-rank P<.001			
Cardiovascular Outcomes								
Garg, 2012 Canada	Median 6.5 (max 17.7)	Male Donors (812)	Male Non-Donors (8120)		Death censored CV event n/N (%) 20/812(3.3)	Death censored CV event n/N (%) 367/8120 (6.2)	P for interaction 0.1	Low-Moderate
					HR (95% CI) 0.50 (0.30-0.80)			
		Female Donors (1216)	Female Non-Donors (12160)		Death censored CV event n/N (%) 22/1216(2.4)	Death censored CV event n/N (%) 243/12160 (2.8)		
					HR (95% CI) 0.90 (0.60-1.40)			
ESRD								
Mjoen, 2013	Median	Male sex predicting ESRD in donors (1901) versus			Adjusted Hazard Ratio (95% CI)[a]			Moderate

Study, Year, Country	Mean Follow-Up (years)	Intervention/Control (n)			Results			
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	ROB
Norway	D: 15.1 C: 24.9	controls (32,621)			0.90 (0.43-1.88)			
Psychosicial								
Lentine, 2012 US	7.7 years	Male donors (2111)	Male non-donors (2111)		Depression diagnosis per 100 person-years 3.1	Depression diagnosis per 100 person-years 4.7		Moderate
		Female donors (2539)	Female Non-donors (2539)		Depression diagnosis per 100 person-years 6.6	Depression diagnosis per 100 person-years 9.2		
Fragility Fractures								
Garg, 2012 Canada	Median 6.5	Male Donors (805)	Male Non-Donors (8050)		n/N (%) 8/805 Event rate/10,000 person years 12.9	n/N (%) 79/8050 Event rate/10,000 person years 13.1	P for interaction 0.7	Moderate
					RR (95% CI) 1.0 (0.5 to 2.0)			
		Female Donors (1210)	Female Non-Donors (12100)		n/N (%) 17/1210 Event rate/10,000 person years 18.8	n/N (%) 197/12100 Event rate/10,000 person years 22.4		
					RR (95% CI) 0.8 (0.5 to 1.4)			
GI Bleeding								
Thomas, 2014 Canada	Median 8.4 years	Male Donors (808)	Male Non-Donors (8080)		n/N (%) 12/808 Event rate/10,000	n/N (%) 135/8080 Event rate/10,000	P value for interaction 0.2	Moderate

Study, Year, Country	Mean Follow-Up (years)	Intervention/Control (n)			Results			
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	ROB
					person years 15.7	person years 17.9		
		Female Donors (1201)	Female Non-Donors (12010)		n/N (%) 23/1201 Event rate/10,000 person years 20.1	n/N (%) 140/12010 Event rate/10,000 person years 12.9		
Kidney Stones								
Thomas, 2013 Canada	Median 8.4 years	Male Donors (806)	Male Non-Donors (8060)		n/N (%) Kidney stones with surgical intervention 7/806 Event rate/10,000 person years 9.1	n/N (%)Kidney stones with surgical intervention 72/8060 Event rate/10,000 person years 13.7	P for interaction 0.4	Moderate
					n/N (%) Hospitalizations for Kidney stones 7/806 Event rate/10,000 person years 9.1	n/N (%) Hospitalizations for Kidney stones 178/8060 Event rate/10,000 person years 14.2	P for interaction 0.03	
		Female Donors (1213)	Female Non-Donors (12130)		n/N (%) Kidney stones with surgical intervention	n/N (%)Kidney stones with surgical		

Study, Year, Country	Mean Follow-Up (years)	Intervention/Control (n)			Results			
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	ROB
					9/1213 Event rate/10,000 person years 7.7	intervention 77/12130 Event rate/10,000 person years 7.0		
					n/N (%) Hospitalizations for Kidney stones 16/1213 Event rate/10,000 person years 7.7	n/N (%) Hospitalizations for Kidney stones 122/12130 Event rate/10,000 person years 7.0		

CI=Confidence Interval ; ESRD= End-Stage Renal Disease; HR= Hazard Ratio

[a] adjusted for age, sex, year of inclusion, blood pressure, BMI and smoking status

Table D9. Long Term Living Kidney Donation Outcomes – Male versus Female Donors

Study, Year, Country	Mean Follow-Up (years)	Intervention/Control (n)			Results			ROB
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	
Mortality								
Tsai 2013 Taiwan	Mean: 5.4 years	Male Donors (45)	Female Donors (60)		n/N (%) 1/45(2.2)	n/N (%) 1/60 (1.7)		Low-moderate
Segev 2010 United States	Median: 6.3 years	Male Donors (33,380)	Female donors (46,967)		12 year mortality 2.7%	12 year mortality 1.9%		Low-Moderate
					HR (95% CI)[a]: Male Sex 1.7 (1.5 to 2.0)			
Cardiovascular Events								
Lentine 2010 United States	Median 7.7 years	Donors (4650)			Adjusted HR (95% CI)[b] Male sex Medial Claims 2.11 (1.43-3.10) p<0.05			Moderate
Garg 2012 Canada	Median 6.5 (max 17.7)	Female Donors (1216)	Male Donors (812)		Death censored CV event n/N (%) 22/1216(2.4)	Death censored CV event n/N (%) 20/812(3.3)		Low-Moderate
					HR of dath censred major cardiovascular event HR(95% CI): 0.57(0.26-1.23)			
ESRD								
Tsai 2013 Taiwan	Mean: 5.4 years	Male Donors (45)	Female Donors (60)		n/N (%) 1/45(2.2)	n/N (%) 1/60 (1.7)		Low-moderate
Cherikh 2011 United States	9.8 years	Male Donors (24,146)	Female Donors (32,312)		n/N (%) 73/24,146 (0.30)	n/N (%) 53/32,312 (0.16)		High
					RR (95% CI) 2.24 (1.30 to 3.86)			
Wafa 2011 Egypt	NR (>5 years)	Male Donors (953)	Female Donors (1047)		n/N (%) 6/953 (.62)	n/N (%) 2/1047 (.19)		Moderate- High
					RR (95% CI) 3.29 (0.67 to 16.29)			
Gibney 2008 United States	NR	White Male Donors (23,413)	White Female Donors (32,331)		White Male Donors on transplant waiting list n/N (%) 42/23,413 (.18)	White Female Donors on transplant waiting list n/N (%)		Moderate-High

Study, Year, Country	Mean Follow-Up (years)	Intervention/Control (n)			Results			
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	ROB
						12/32,331 (.04)		
					RR (95% CI) 4.83 (2.54 to 9.18)			
	NR	African American Male Donors (4,545)	African American Female Donors (5,784)		AA Male Donors on Transplant Wait-List n/N (%) 29/4,545 (.63)	AA Female Donors on Transplant Wait-List n/N (%) 21/5,784 (.36)		Moderate-High
					RR (95% CI) 1.76 (1.00 to 3.08)			
Muzaale 2014 United States	15 years post-donation	Male Donors (39449)	Female Donors (56768)		Cumulative Incidence of ESRD at 15 years per 10,000 (95% CI) 44.1(22.9-59.1)	Cumulative Incidence of ESRD at 15 years per 10,000 (95% CI) 21.1(14.9-29.9)		Low-Moderate
Renal Function								
Tsai 2013 Taiwan	Mean: 5.4 years	Male Donors (45)	Female Donors (60)		eGFR<60 n/N (%) 20/45(44.4)	eGFR<60 n/N (%) 16/60 (26.7)		Moderate
					RR (95% CI) 1.67 (0.98 to 2.84)			
Lentine 2010 United States	Median 7.7 years	Donors (4650)			Adjusted Hazard Ratio (95% CI) Male sex Medical Claims for CKD 1.64 (1.16-2.34)p<0.05			
Ibrahim 2009 United States	Mean 12.2 years	Donors (255)			Iohexol GFR <60 mL/min/1.73m^2 Female sex OR (95% CI) [c] 3.11 (1.11-8.67) p=0.003			Moderate
Lee 2007 Korea	Median: 5.4 years	Donors (104)			MDRD eGFR<60 mL/min per 1.736 m^2 Male sex OR (95% CI) 0.65 (0.17-2.45) p=0.52			Moderate-High
Karakayali 1998	10.2 years	Male Donors (45)	Female Donors (57)		GFR 81.6±10.2 P not provided	GFR 79.4±12.3		Moderate

Study, Year, Country	Mean Follow-Up (years)	Intervention/Control (n)			Results			
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	ROB
Von Zur-Muhlen 2014 Sweden	11±7 years	Male Donors (166)	Female Donors (229)		MDRD eGFRml/min/1.73m^2 69±13 P<0.01	MDRD eGFRml/min/1.73m^2 65±12		Moderate
Proteinuria								
Tsai 2013 Taiwan	Mean: 5.4 years	Male Donors (45)	Female Donors (60)		>150 mg/day or >1+ on UA n/N (%) 7/45(15.6)	>150 mg/day or >1+ on UA n/N (%) 5/60(8.3)		Moderate
					RR (95% CI) 1.87 (0.63 to 5.50)			
Ibrahim 2009 United States	Mean 12.2 years	Female sex predicting Albuminuria (255)			Albuminuria Odds Ratio (95% CI) 0.31 (0.12-0.79) p=0.01			Moderate
Hypertension								
Tsai 2013 Taiwan	Mean: 5.4 years	Male Donors (45)	Female Donors (60)		>140/90 mgHg n/N (%) 6/45(13.3)	>140/90 mgHg n/N (%) 4/60(6.7)		Moderate
					RR (95% CI) 2.00 (0.60 to 6.67			
Lentine 2010 United States	Median 7.7	Donors (4650)			Male sex predicting HTN Adjusted Hazard Ratio (95% CI) Medial Claims 1.13 (0.98-21.31) Drug-Treated 1.21 (1.03-1.43) p<0.05			Moderate
El-Argoudy 2007 Egypt	10.7 years	Male Donors (129)	Female Donors (201)		HTN (>140/90) 17.8% P=0.03	HTN (>140/90) 24.7%		High
Psychosocial								
Johnson 1999 United States	NR	Male Donors (204)	Female Donors (320)		Female donors were more likely to find the overall experience of donation more stressful. (SF-36) OR (95% CI) 1.8 p=0.1			High
Mjoen 2011, Norway	12.6 years	Male Donors 544 (39.5%)	Female Donors 833(60.5%)		Male donors were not more likely to have doubt towards donation Adjusted[d] OR (95% CI)			Moderate

Study, Year, Country	Mean Follow-Up (years)	Intervention/Control (n)			Results			
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	ROB
					1.1 (0.7-1.8)			
Lentine 2012 US	4.9 years	Male donors (2111)	Female donors (2539)		Depression diagnosis per 100 person-years 3.1	Depression diagnosis per 100 person-years 6.6		Moderate
Diabetes								
Lentine 2010 United States	Median 7.7 years	Donors (4650)			Male sex predicting Diabetes Adjusted HR (95% CI) Medial Claims 0.91 (0.68-1.22) Drug-Treated 1.10 (0.73-1.66)			Moderate
Other – Fragility Fractures								
Garg 2012 Canada	6.9 years	Male Donors (805)	Female Donors (1210)		n/N (%) 8/805 (.99) Event rate/10,000 person years 12.9	n/N (%) 17/1,210 (1.4) Event rate/10,000 person years 18.8		Moderate
					RR (95% CI) 0.71 (0.31 to 1.63)			
Other – GI Bleed								
Thomas 2014 Canada	Median 8.4 years	Male Donors (808)	Female Donors (1,201)		n/N (%) 12/808 (1.5) Event rate/10,000 person years 15.7	n/N (%) 23/1,201 (1.9) Event rate/10,000 person years 20.1		Moderate
					RR (95% CI) 0.78 (0.39 to 1.55)			

CI=Confidence Interval ; HTN= Hypertension ; OR=Odds Ratio; RR= Risk Ratio

[a] adjusted for sex, time since donation, current BMI, creatinine level at donation, smoking status and systolic and diastolic blood pressure.

[b] calculated by means of multivariate Cox regression

[c] adjusted for age, sex, year of inclusion, blood pressure, BMI and smoking status

[d] Adjusted for age, time since donation, relationship, medical problems, graft loss in recipient.

Table D10. Long Term Living Kidney Donation Outcomes: African American Donors versus Healthy African American Non-Donors

Study, Year, Country	Follow-Up (years)	Intervention/Control (n)			Results			
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	ROB
Mortality								
Segev 2010 United States	Median: 6.3	African American Donors	African American Non-donors		Kaplan-Meir curves suggest mortality higher in matched black non-donors compared to black donors starting at 2 years of follow-up, Log-rank P<0.001			Low-Moderate
		White Donors	White Non-donors		Kaplan-Meir curves suggest mortality higher in matched white non-donors compared to white donors starting at 2 years of follow-up, Log-rank P<0.001			
ESRD								
Muzaale 2014 United States	Median 7.6 years	African American Donors 12,387 (13)	African American Non-donors 12,387 (13)		Absolute risk of ESRD per 10,000 (95% CI) 74.7 (47.8-105.8)	Absolute risk of ESRD per 10,000 (95% CI) 23.9 (1.6-62.4)	RR (95% CI) 3.0 (1.9 to 4.7) Absolute risk increase per 10,000 50.8(p<0.001)	Low-Moderate
		Hispanic Donors 12,061 (13)	Hispanic Non-Donors 12,061 (13)		Absolute risk of ESRD per 10,000 (95% CI) 32.6 (17.9-59.1)	Absolute risk of ESRD per 10,000 (95% CI) 6.7 (0.0-15.0)	RR (95% CI) 4.7 (2.1 to 10.7) Absolute risk increase per 10,000 25.9 (p=0.002)	
		White Donors 71,769 (75)	White Non-Donors 71,769 (75)		Absolute risk of ESRD per 10,000 (95% CI) 22.7 (15.6-30.1)	Absolute risk of ESRD per 10,000 (95% CI) 0(0.0-0.0)	RR (95% CI) 45.0 (2.7 to 741.8) Absolute risk increase per 10,000 22.7 (p<0.001)	
Renal Function								
Doshi 2013 USA	6.8	African American Donors (103)	African American Non-donors (235)		Change in creatinine 0.9 ± 0.2 to 1.2 ± 0.3 mg/dL Change in eGFR 109 ± 20 to 77 ± 19 mL/min/1.73 m2	Change in creatinine (stable) 0.9 ± 0.2 mg/dL Change in eGFR (stable) 109 ± 17 mL/min/1.73	eGFR <60 mL/min/1.73 m2 RR (95% CI) 75 (4.5 to	Moderate

Study, Year, Country	Follow-Up (years)	Intervention/Control (n)			Results			
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	ROB
						m2	1236)	
					Proportion with eGFR <60 mL/min/1.73 m2 16 (15.5%) eGFR<45 mL/min/1.73 m2 6(6%) eGFR<30 mL/min/1.73 m2 0	Proportion with eGFR <60 mL/min/1.73 m2 0 eGFR<45 mL/min/1.73 m2 0 eGFR<30 mL/min/1.73 m2 0		
Proteinuria								
Doshi, 2013 United States	Mean D: 6.8 years ND: 6.4 years	African American Donors (103)	African American Non-donors (235)		Urinary Albumin mean (SD) 15lg/mg (41) p= 0.06	Urinary Albumin Mean (SD) 7lg/mg (11)		Moderate
					Microalbuminuria n/N (%) 6/103 (5.8)	Microalbuminuria n/N(%) 9/235 (3.8)		
					RR (95%CI) 1.52 (0.55 to 4.16)			
Hypertension								
Doshi, 2013 United States	Mean D: 6.8 ND: 6.4	African American Donors (103)	African American Non-donors (235)		HTN (BP>140/90 or medications) n/N (95% CI) 42/103(40.8)	HTN (BP>140/90 or medications) n/N(95%) 42/235(17.9)		Moderate
					Absolute difference 22.9% (12.2 to 33.6%) RR of HTN: 2.3(1.6 to 3.3) ARR: 2.4 (1.7-3.4)[a]			
Diabetes								
Doshi, 2013 United States	Mean D: 6.8 ND: 6.4	African American Donors (103)	African American Non-donors (235)		Diabetes 2 (1.9%)	Diabetes 4 (1.7%)		Moderate
					RR (95% CI) 1.14 (0.21 to 6.13)			

BP= Blood Pressure; D= Donors; HTN= Hypertension; ND=Non-Donors

[a]adjusted for baseline differences in medical insurance and eGFR.

Table D11. Long Term Living Kidney Donation Outcomes: Comparison between Donor Racial Subgroups

Study, Year, Country	Follow-Up (years)	Intervention/Control (n)			Results			
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	ROB
Mortality								
Segev 2010 United States	Median: 6.3 years	Black donors (10,505)	Hispanic donors (9,846)	White donors (9,846)	HR (95% CI) 1.3 (1.0-1.6) 12 year mortality 2.8%	HR (95% CI) 0.6 (0.4-0.9)	Reference 12 year mortality 1.7%	Low-Moderate
Storsley 2010 Canada	14 years	Aboriginal Donors (38)	White Donors (76)		n/N (%) 4/38 (10.5) p= NS	n/N (%) 6/76 (7.9)		High
					RR (95% CI) 1.33 (0.40 to 4.44)			
Cardiovascular Events								
Lentine 2010 United States	Median 7.7 years	Black Donors (609)	Hispanic Donors (381)	White (non-Hispanic) Donors (3548)	Cardiovascular Disease Adjusted RR[a] (95%CI) Medical Claims 1.15(0.63-2.11)	Cardiovascular Disease Adjusted RR[a] (95% CI) Medical Claims 0.91(0.37-2.26)	Reference	Moderate
ESRD								
Cherikh 2011 United States	9.8 years	Black donors (7,333)	White donors (40,398)		n/N (%) 59/7,333 (0.8)	n/N (%) 54/40,398 (.13)		Moderate
					RR (95% CI) 6.02 (4.16 to 8.70)			
Muzaale 2014 United States	Median 7.6years	Black Donors n (%) 12,387 (13)	Hispanic Donors n (%) 12,061 (13)	White Donors N (%) 71,769 (75)	Cum Incidence of ESRD at 15 years per 10,000 (95% CI) 74.7 (47.8-105.8)	Cum Incidence of ESRD at 15 years per 10,000 (95% CI) 32.6 (17.9-59.1)	Cum Incidence of ESRD at 15 years per 10,000 (95% CI) 22.7 (15.6-30.1)	Low-Moderate
Lentine 2010 United States	Median 7.7 years	Black Donors (271)	Hispanic Donors (179)	White (non-Hispanic) Donors (1,786)	CKD requiring dialysis n/N (%) 2/271 (0.7) p=0.02	CKD requiring dialysis n/N (%) 1/179 (0.5) p=0.10	CKD requiring dialysis n/N (%) 0/1786 (0)	Moderate
					RR(95% CI)[b]	RR(95% CI)[b]		

Study, Year, Country	Follow-Up (years)	Intervention/Control (n)			Results			
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	ROB
					13.19 (1.20 to 144.95)	29.78 (1.22 to 728.47)		
Storsley 2010 Canada	14 years	Aboriginal Donors (38)	White Donors (76)		n/N (%) 1/38 (2.6)	n/N (%) 0/76 (0)		High
					RR (95% CI) 5.92 (0.25 to 142.06)			
Gibney 2007 United States	Mean 17.6 years	African American Donors* n (%) 8889 (14)	Hispanic Donors n (%) 7375 (12)	White Donors n (%) 42,419 (68)	On Transplant Wait-list n/N(%) 45/8,889 (0.5)	On Transplant Wait-list n/N(%) 11/7,375 (.14)	On Transplant Wait-list n(%) 41(.09)	Moderate-High
					RR (95% CI)[a] 5.24 (3.43 to 7.99)	RR (95% CI)[a] 1.54 (0.79 to 3.0)		
Renal Function								
Lentine 2010 United States	Median 7.7 years	Black Donors Medicare Insured (271)	Hispanic Donors Medicare Insured (179)	White (non-Hispanic) Donors Medicare Insured (1,786)	AHR (95% CI) of Medical Claims for CKD 2.32(1.48-3.62)	AHR (95% CI) of Medical Claims for CKD 1.90(1.05-3.43)	Reference	Moderate
Lentine 2014 United States	Median 7.7 years	Black Donors (325) Medicare-Insured	Hispanic Donors (228) Medicare Insured	White (non-Hispanic) Donors (3,342) Medicare Insured	CKD Adjusted HR[a] (95% CI) 1.84 (1.37-2.47)	CKD Adjusted HR[a] (95% CI) 1.13 (0.75-1.70)	Reference	Moderate
		Black Donors (609) Privately Insured	Hispanic Donors (381) Privately Insured	White (non-Hispanic) Donors (3548) Privately Insured	CKD Adjusted HR[a] (95% CI) 2.32 (1.48-3.62)	CKD Adjusted HR[a] (95% CI) 1.90 (1.05-3.43) p<0.001	Reference	
Storsley 2010 Canada	14 years	Aboriginal Donors (31)	White Donors (64)		eGFR (MDRD) ml/min, mean (SD) 77 (17)	eGFR (MDRD) ml/min, mean (SD) 67 (13)		High
					Adjusted mean difference (95% CI[c] 5.9(-0.6-12.5)	Ref		
Proteinuria								
Lentine 2014	Median 6.0 years	Black Donors (325) Medicare-Insured	Hispanic Donors (228)	White (non-Hispanic)	Adjusted HR[a] (95% CI)	Adjusted HR[a] (95% CI)	Reference	Moderate

Study, Year, Country	Follow-Up (years)	Intervention/Control (n)			Results			
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	ROB
			Medicare Insured	Donors (3342) Medicare Insured	2.44 (1.45-4.11)	0.98 (0.40-2.44)		
		Black Donors (609) Privately Insured	Hispanic Donors (381) Privately Insured	White (non-Hispanic) Donors (3548) Medicare Insured	Adjusted HR[a] (95% CI) 2.27 (1.32-3.89)	Adjusted HR[a] (95% CI) 1.47 (0.67-3.26)	Reference	
Storsley 2010 Canada	14 years	Aboriginal Donors (29)	White Donors (57)		>0.3g/day or abnormal alb/cr n/N (%) 6/29(21)	>0.3g/day or abnormal alb/cr n/N(%) 2/57(4)		High
					RR (95% CI) 5.89 (1.27 to 27.41)			
Hypertension								
Lentine 2014	Median 6.0 years	Black Donors (325) Medicare-Insured	Hispanic Donors (228) Medicare Insured	White (non-Hispanic) Donors (3342) Medicare Insured	Adjusted HR[a] (95% CI) 1.41 (1.17-1.70)	Adjusted HR[a] (95% CI) 1.11 (0.95-1.46)	Reference	Moderate
		Black Donors (609) Privately Insured	Hispanic Donors (381) Privately Insured	White (non-Hispanic) Donors (3548) Medicare Insured	Adjusted Hazard Ratio[a] (95% CI) 1.52 (1.23-1.88)	Adjusted Hazard Ratio[a] (95% CI) 1.36 (1.04-1.78)	Reference	
Lentine 2010 United States	Median 7.7 years	Black Donors (609)	Hispanic Donors (381)	White (non-Hispanic) Donors (3548)	Adjusted RR[a] (95% CI) Drug-Treated 1.31 (1.02-1.68)	Adjusted RR[a] (95% CI) Drug-Treated 1.03 (0.73-1.46)	Reference	Moderate
Storsley 2010 Canada	14 years	Aboriginal Donors (31)	White Donors (64)		HTN (>140/90) 13(42%) Adjusted OR 6.3 (1.8-22.1)	HTN (>140/90) 12(18%) Ref		High
					HTN >10 yrs post donation 13/21 (62%) P=0.001	HTN >10 yrs post donation 7/38(18%)		
					HTN >20 yrs post donation	HTN >20 yrs post donation		

Study, Year, Country	Follow-Up (years)	Intervention/Control (n)			Results			
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	ROB
					11/11 (100%) P<0.0001	3/16(19%)		
					# of meds 1: 9 (29%) 2: 2 (6.5%) 3: 2 (6.5%) P= NS	# of meds 1: 6 (9.3%) 2: 4 (6.2%) 3: 2 (3.1%)		
Psychosocial								
Gross 2013 United States	17 years	White Donors (2282)	Black/African American Donors (113)		Whites reported higher level of social functioning than Black/African American. (p=0.0007). White donors likely to report good health than African Americans (p=0.0034) and other races (p=0.0004). Americans scored higher on the General Health Perceptions domain of the SF-36 compared to participants of the AAHP (African American Health Project).(p<0.0001).			High
Lentine 2012 United States	Median 7.7 years	Donors (4650)			Depression diagnosis by claims HR(95% CI) White, non-Hispanic (reference: non-white race or Hispanic ethnicity): 2.07(1.50-2.86), p<0.0001			Moderate
Diabetes								
Lentine 2014 United States	Median 6.0 years	Black Donors (325) Medicare-Insured	Hispanic Donors (228) Medicare Insured	White (non-Hispanic) Donors (3342) Medicare Insured	Adjusted HR[a] (95% CI) 1.57 (1.16-2.12)	Adjusted HR[a] (95% CI) 2.13 (1.56-2.92)	Reference	Moderate
		Black Donors (609) Privately Insured	Hispanic Donors (381) Privately Insured	White (non-Hispanic) Donors (3548) Pirvately Insured	Adjusted HR[a] (95% CI) 1.64 (1.07-2.51)	Adjusted HR[a] (95% CI) 1.86 (1.12-3.10)	Reference	
Lentine 2010 United States	Median 7.7 years	Black Donors (609)	Hispanic Donors (381)	White (non-Hispanic) Donors (3548)	Adjusted HR[a] (95% CI) Medical Claims 1.52 (1.00-2.30) Drug-Treated 2.31 (1.33-3.98)	Adjusted HR[a] (95% CI) Medical Claims 1.65(1.00-2.74) Drug-Treated 2.94(1.57-5.51)	Reference	Moderate
Storsley 2010 Canada	14 years	Aboriginal Donors (31)	White Donors (64)		Overall 6(19%) p=0.005	Overall 1(2%)		High
					>20 yrs of follow-up	>20 yrs of follow-		

Study, Year, Country	Follow-Up (years)	Intervention/Control (n)			Results			
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	ROB
					5/11(45%) P=0.007	up 1/15(6%)		

BP= Blood Pressure; CI=Confidence Interval; ESRD= End-Stage Renal Disease; GFR= Glomerular Filtration Rate; HR= Hazard Ratio; MDRD= Modification of Diet in Renal Disease, OR=Odds Ratio; RR= Risk Ratio, SD= Standard Deviation

[a] adjustment method unclear

[b] Risk Ratio is calculated with White donors as the comparison.

[c] Sample size for other races too small. No statistical differences.

Table D12. Long Term Living Kidney Donation Outcomes – Obese Donors versus non-obese donors

Study, Year	Mean Follow-Up (Years)	Intervention/Control (n) Pre-Donation BMI			Results			ROB
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	
Mortality								
Mjoen 2013 Norway	D: 15.1 year N-D 24.9 years	Donors (1,901)	Non-Donors (32,621)		HR (95% CI) BMI, kg/m^2 1.01 (0.99 to 1.03), p=0.21[d]			Moderate
Cardiovascular Events								
Mjoen 2013 Norway	D: 15.1 year N-D 24.9 years	Donors (1,901)	Non-Donors (32,621)		HR (95% CI) BMI, kg/m^2 1.03(1.00-1.07), p=0.03[d]			Moderate
ESRD								
Mjoen 2013 Norway	D: 15.1 year N-D 24.9 years	Donors (1,901)	Non-Donors (32,621)		HR (95% CI) BMI, kg/m^2 1.13 (0.96 to 1.32), p=0.14[d]			Moderate
Renal Function								
Gracida 2003 Mexico	Mean 6.7	Obese (BMI >30 kg/m^2) Donors (81)	Normal Donors[a] (422)		GFR (mL/min)[a]: 83.9 SD: NR	GFR (mL/min)[a]: 78.5 SD: NR		High
Ibrahim 2009 United States	Mean 12.2	Donors (255)			Iohexol GFR <60 mL/min/1.73m^2 OR (95% CI) BMI, per unit: 1.12 (1.02-1.23) p=0.02			Moderate
Von Zur_Muhlen 2014 Sweden	11±7	Donors (375)			Higher BMI at donation was correlated with lower eGFR at follow-up (P<0.0001)			Moderate
Hypertension								
Ibrahim 2009 United States	Mean 12.2	Donors (255)			Hypertension requiring medication OR (95% CI) BMI, per unit: 1.12 (1.04-1.21) p=0.003			Moderate
Gracida 2003 Mexico	Mean 6.7	Obese (BMI >30 kg/m^2) Donors (81)	Normal Donors (422)		Mean Arterial Pressure (MAP) 91.2 mmHg	Mean Arterial Pressure (MAP) 88.2 mmHg		High

Psychosocial								
Gross 2013 United States	Mean 17	Donors with BMI >=35 [b] (102)	Donors with BMI 30 – 34.9 (329)	Donors with BMI 25 – 29.9 (883)	Physical HRQoL impairment[c]: OR (95% CI): 4.32 (2.37-7.87)	Physical HRQoL impairment[c]: OR (95% CI): 2.85 (1.84-4.42)	Physical HRQoL impairment[c]: OR (95% CI): 1.84 (1.31-2.65)	Moderate-High

BMI= Body Mass Index; CI=Confidence interval; GFR= Glomerular Filtration Rate; HRQoL= Health-Related Quality of Life (higher score=higher quality); OR=Odds Ratio

[a] method of GFR estimation of measurement not reported

[b] reference group BMI <25

[c] Physical HRQoL impairment defined as PCS > - 1 SD below sex-by-age norms

dAdjusted for age, gender, year of inclusion, systolic BP, smoking and multiple imputations for missing values performed

Table D13. Long Term Living Kidney Donation Outcomes – Donors with lower renal function versus donors with normal renal function

Study, Year, Country	Mean follow-up (years)	Intervention/Control (n) Pre-donation GFR			Results			ROB
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	
Renal Function								
Lee 2007 Korea	Median: 5.4 years Range: 4.5-14.25	Donors (104)			MDRD GFR <60 Per unit change in CG-mGFR (ml/min per 1.73 m^2) OR (95% CI): 1.00 (0.98-1.03)			Moderate to High
Von Zur_Muhlen 2014 Sweden	11years	Donors (375)			Lower measured GFR at donation was correlated with lower eGFR at follow-up (P<0.0001)			High
Tsai 2013 Taiwan	Mean: 5.4 years	MDRD eGFR (ml/min per 1.73 m^2)≥ <90	MDRD eGFR (ml/min per 1.73 m^2)≥90		Median time to CKD 3.55 years	Median time to CKD >7 years		Low to Moderate
					AHR (95% CI) of developing CKD (eGFR<60 ml/min/1.73m2) per 1ml/min/1.73m2 if eGFR at donation: 0.95(0.92-0.99), p=0.021			
					AHR (95% CI) of developing CKD (eGFR<60 ml/min/1.73m2) per 1 mg/dL of serum creatinine at donation: 0.044(0.0-4.36), p=0.183			
Proteinuria								
Von Zur_Muhlen 2014 Sweden	11years	Donors (375)			Lower measured GFR at donation was not correlated to urine albumin creatinine ratio at follow-up.			Moderate
Hypertension								
Von Zur_Muhlen 2014 Sweden	11years	Donors (375)			Lower measured GFR at donation was correlated to Mean Arterial Pressure at follow-up.			Moderate

CG= Cockcroft-Gault; CI= Confidence Interval; CKD= Chronic Kidney Disease; eGFR= estimated Glomerular Filtration Rate; MDRD= Modification of Diet in Renal Disease; OR= Odds Ratio; SD= Standard Deviation

Table D14. Long Term Living Kidney Donation Outcomes – Donors with impaired glucose tolerance versus donors with normal glucose tolerance

Study, Year, Country	Mean Follow-Up (Years)	Intervention/Control (n)			Results			ROB
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	
Mortality								
Okamoto 2010 Japan	7.3 years	Glucose Intolerant Donors[a] (65)	Normal glucose tolerance Donors (330)		n/N(%): 3/65 (4.6)	n/N(%): 14/330 (4.1%)		Moderate to High
					RR (95% CI) 1.09 (0.32 to 3.68)			
ESRD								
Okamoto 2010 Japan	7.3 years	Glucose Intolerant Donors[a] (65)	Normal glucose tolerance Donors (330)		n/N (%) 0/65 (0)	n/N (%) 2/330 (0.6)		Moderate to High
					RR (95% CI) 1.00 (0.05 to 20.65)			
Renal function								
Chandran 2014 United States	Mean: 10.2	Impaired fasting glucose Donors[b] (45)	Normal fasting glucose Donors (45)		MDRD eGFR (mL/min/1.73m^2) mean (SD): 70.7 (16.1) p=.21	MDRD eGFR (mL/min/1.73m^2) mean (SD): 67.3 (16.6)		Moderate
Okamoto 2010	7.3	Glucose Intolerant Donors[c] (65)	Normal glucose tolerance Donors (330)		Renal Dysfunction self-report n/N(%): 5/65(7.7%)	Renal Dysfunction self-report n/N(%): 22/330(6.7%) P=0.690		Moderate to High
Proteinuria								
Chandran 2014 United States	Mean: 10.2	Impaired fasting glucose Donors[b] (45)	Normal fasting glucose Donors (45)		Albumin/creatine ratio (mg/g) mean (SD): 9.76 (23.6) p=.29	Albumin/creatine ratio (mg/g) mean (SD): 5.91 (11)		Moderate
Diabetes								
Chandran 2014 United States	Mean: 10.2	Impaired fasting glucose Donors[b] (45)	Normal fasting glucose Donors (45)		Diabetes n/N(%): 7/46(15.6%) p=.06	Diabetes n/N(%): 1/45 (2.2%)		Moderate
Okamoto 2010	Mean: 7.3	Glucose Intolerant Donors[c] (65)	Normal glucose tolerance Donors (330)		Diabetes by self-report n/N(%): 14/65(21.5%) Diabetes on meds	Diabetes by self-report n/N(%): 8/330 (2.4%) P<0.0001 Diabetes on meds		Moderate-High

Study, Year, Country	Mean Follow-Up (Years)	Intervention/Control (n)			Results			ROB
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	
					n/N(%): 17/65(26.2%)	n/N(%): 0/330(0%) P=NR		
Hypertension								
Chandran 2014 United States	Mean: 10.2	Impaired fasting glucose Donors[b] (45)	normal fasting glucose Donors (45)		HTN- n/N(%): 16/45 (35.6%) p=.16	HTN n/N(%): 10/45 (22.2%)		Moderate
Okamoto 2010 Japan	7.3 years	Glucose Intolerant Donors[a] (65)	Normal glucose tolerance Donors (330)		BP>140/90 n/N(%): 19/65 (29.2%)	BP>140/90 n/N(%): 73/330 (22.1%)		Moderate to High
					RR (95% CI) 1.32 (0.86 to 2.03)			
		Glucose Intolerant Donors[a] (65)	Normal glucose tolerance Donors (330)		HTN-(on medication) n/N(%): 9/65 (13.8%)	HTN-(on medication) n/N(%): 37/330 (11.2%)		
					RR (95% CI) 1.23 (0.63 to 2.43)			

CI= Confidence Interval; HTN= Hypertension; RR= Risk Ratio

[a] Glucose Intolerant Donors were those with fasting blood sugar= ≥110 mg/dL and 120-min blood sugar= ≥140 mg/dL; and/or diagnosed Diabetes.

Table D15. Long Term Living Kidney Donation Outcomes – Donors with metabolic syndrome versus donors without metabolic syndrome

Study, Year, Country	Mean Follow-Up (Years)	Intervention/Control (n)			Results			ROB
		Arm 1	Arm 2	Arm 3	Arm 1	Arm 2	Arm 3	
Renal Function								
Cuevas-Ramos 2011 Mexico	Median 5 years	Donors with MetS[a] (28)	Donors without MetS (112)		MDRD eGFR (mL/min/1.73 m^2) Mean (SD): 66.3 (12.7)	MDRD eGFR (mL/min/1.73 m^2) Mean (SD): 71.8 (16.2)		Moderate to High
Proteinuria								
Cuevas-Ramos 2011 Mexico	Median 5 years	Donors with MetS (28)	Donors without MetS (112)		Albuminuria mg/d mean(SD): 0.5 (0.6)	Albuminuria mg/d mean(SD): 0.2 (0.5)		Moderate to High

MetS= Metabolic Syndrome; SD= Standard Deviation

[a] MetS defined as having 3 or more of three criteria 1) waist circumference of >88 cm in women or >102 cm in men; 2) hypertriglyceridemia; 3) hyperdemia; 4) hyperglycemia; and 5) hypertension (>130/85).

Table D16. Long Term Living Kidney Donation Outcomes – Hypertensive donors versus normotensive donors

Study, Year, Country	Follow-Up (years)	Intervention/Control (n) Arm 1	Arm 2	Arm 3	Results Arm 1	Arm 2	Arm 3	ROB
Mortality								
Mjøen 2013 Norway	D:15.1 years ND: 24.9 years	Donors (1,901)	Non-Donors (32,621)		SBP Adjusted HR[f] (95% CI) per 1 mmHg SBP 1.00 (1.00-1.01)			Low to Moderate
Cardiovascular Mortality								
Mjøen 2013 Norway	D:15.1 years ND: 24.9 years	Donors (1,901)	Non-Donors (32,621)		SBP Adjusted HR[f] (95% CI) per 1 mmHg SBP 1.01 (1.00-1.02)			Low to Moderate
ESRD								
Mjøen 2013 Norway	D:15.1 years ND: 24.9 years	Donors (1,901)	Non-Donors (32,621)		SBP Adjusted HR[f] (95% CI) per 1 mmHg SBP 1.01 (1.00-1.06)			Low to Moderate
Renal Function								
Gracida 2003 Mexico	Mean: 6.7	Hypertensive Donors[a] (16)	Normal Donors[b] (422)		GFR (mL/min)[c] mean (SD): 78.1 (NR)	GFR (mL/min)[c] mean (SD): 78.5(NR)		High
Lee 2007 Korea	Median: 5.4 years	Hypertensive Donors[d] (6)	Normotensive Donors (98)		CKD[e] n/N(%): 4/6 (67%)	CKD[e] n/N (%) 22/98 (22%)		Moderate to High
					RR (95% CI) 2.97 (1.51 to 5.83)			
		Donors (104)			Predicting CKD among donors with HTN OR (95% CI) 7.88 (1.14-54.45)			Moderate to High

CKD=Chronic Kidney Disease; GFR= Glomerular Filtration Rate; HTN= Hypertension; SD= Standard Deviation

[a]-readily controlled with diet or one drug

[b]-normal donors were those under 60, non-obese without hypertension, elevated uric acid or 'high cholesterol'.

[c] - method of GFR measurement or estimation not reported
[d-] blood pressure >140/90
[e] - MDRD-GFR of less than 60 mL/min per 1.73 m^2

[f] - After adjustment for age, gender, year of inclusion, smoking, BMI

Table D17. Long Term Living Kidney Donation Outcomes – Donors Related to Recipients versus Not-Related

		Intervention/Control (n)			Results			
Study, Year, Country	**Mean Follow-Up (years)**	**Arm 1**	**Arm 2**	**Arm 3**	**Arm 1**	**Arm 2**	**Arm 3**	**ROB**
Death or cardiovascular events								
Garg 2008 Canada	6.2 years	Genetically related living donors (1,261)	Unrelated living donors (767)		1.2% HR (95% CI) 0.9 (0.5-3.0)	1.6% Reference		Low to Moderate
Garg 2012 Canada	Median 6.5 years	Genetically related living donors (1,261)	Unrelated living donors (767)		Event rate 1000 person years 1.6 HR (95% CI) 0.8 (0.5-1.4)	Event rate 1000 person years 1.9 HR (95% CI) 0.9 (0.4-1.8) P for interaction= 0.87		Low to Moderate
ESRD								
Muzaale 2014 United States	Median 7.6 years	Biological relationship to recipient	Non-biological relationship to recipient		Cum Incidence of ESRD at 15 years per 10,000 (95% CI) 34.1 (26.9-43.3)	Cum Incidence of ESRD at 15 years per 10,000 (95% CI) 15.1 (8.7-26.3)		Low to Moderate
Renal Function								
Lee 2007 Korea	Median: 7.4 years	Donors 1st degree relatives (28)	Donors non 1st degree relatives (76)		MDRD eGFR<60 mL/min per 1.736 m^2 n/N(%) 5/28(18%) P=0.31	MDRD eGFR<60 mL/min per 1.736 m^2 n/N(%) 21/76(28%)		Moderate-High
Hypertension								
Garg 2008 Canada	6.2 years	Genetically related living donors (1,261)	Unrelated living donors (767)		15.9% HR (95% CI) 1.0 (0.7-1.3)	17.3% Reference		Low to Moderate
Psychosocial								
Gross 2013 United States	17 years	Donor first degree relative of a recipient	Donor not a first degree		Being a first degree relative of a recipient was associated with OR(95% CI) 0.54(0.36-0.80),			Moderate-High

		Intervention/Control (n)			Results			
Study, Year, Country	**Mean Follow-Up (years)**	**Arm 1**	**Arm 2**	**Arm 3**	**Arm 1**	**Arm 2**	**Arm 3**	**ROB**
		(1,768)	relative of a recipient (687)		p<0.0025 of physical HRQOL impairment.			
Johnson 1999 United States	NR	Relatives other than first degree (26)	First degree relatives (398)		Relatives other than first degree were 3.5 times more likely to say they regretted donating compared to 1st degree relatives P=0.06			High
Mjoen 2011, Norway	12.6 years	Donors (71/1377)			Being an unrelated donor is associated with increased risk of having doubt towards donation Adjusted* OR (95% CI) 2.2 (1.2 to 3.9)			Moderate
Lentine 2012 US	4.9 years	Biologically related to recipient (3780)	Spouse/partner of recipient (353)	Not biologically related or spouse to recipient (520)	Depression diagnosis per 100 person-years 4.9	Depression diagnosis per 100 person-years 5.0	Depression diagnosis per 100 person-years 5.8	Moderate
					Reference	1.16(0.79-1.71)	1.30(0.93-1.81)	

*Adjusted for age, time since donation, gender, medical problems, graft loss in recep.

Table D18. Long Term Living Kidney Donation Outcomes – Post Donation Pregnancy-related Outcomes

Study, Year, Country	Population	Intervention/Control (n)		Results		ROB
		Arm 1	Arm 2	Arm 1	Arm 2	
Miscarriage						
Ibrahim 2009 United States	Donors with pre or post pregnancies(987)	Post-donation pregnancy (317)	Pre-donation pregnancy (2,519)	n/N (%) 42/317 (13.2)	n/N (%) 207/2,519 (8.2)	High
				RR (95% CI) 1.61 (1.18 to 2.20)		
	Donors with pre and post donation pregnancy (98)	Post-donation pregnancy (173)	Pre-donation pregnancy (204)	n/N (%) 36/173 (21)	n/N (%) 33/204 (16)	
				RR (95% CI) 1.29 (0.84 to 1.97)		
Stillbirth/Fetal Death						
Ibrahim 2009 United States	Donors with pre or post pregnancies(987)	Post-donation pregnancy (317)	Pre-donation pregnancy (2,519)	n/N (%) 1/317 (.32)	n/N (%) 13/2,519 (.52)	High
				RR (95% CI) 0.61 (0.08 to 4.66)		
	Donors with pre and post donation pregnancy (98)	Post-donation pregnancy (173)	Pre-donation pregnancy (204)	n/N (%) 1/173 (.58)	n/N (%) 2/204 (1.0))	
				RR (95% CI) 0.59 (0.05 to 6.45)		
Reisaeter 2009 Norway	Donors with pre- or post- donation pregnancy (326)	Post-donation pregnancy (106)	Pre-donation pregnancy (620)	n/N (%) 3/106 (2.8)	n/N (%) 7/620 (1.1)	High
				RR (95% CI) 0.40 (0.10 to 1.52)		
Prematurity						
Ibrahim 2009, United States	Donors with pre or post pregnancies (987)	Post-donation pregnancy (317)	Pre-donation pregnancy (2,519)	n/N (%) 20/317 (6)	n/N (%) 95/2,519 (3.7)	High
				RR (95% CI) 1.67 (1.05 to 2.67)		
	Donors with pre and post donation pregnancies (98)	Post-donation pregnancy (173)	Pre-donation pregnancy (204)	n/N (%) 15/173 (8.7)	n/N (%) 15/204 (7.4)	
				RR (95% CI) 1.18 (0.59 to 2.34)		
Reisaeter 2009 Norway	Donors with pre- or post- donation pregnancy (326)	Post-donation pregnancy (106)	Pre-donation pregnancy (620)	<22 weeks n/N (%) 1/106 (1)	<22 weeks n/N (%) 2/620 (0.3)	High
				RR (95% CI) 2.92 (0.27 to 31.97)		
				<37 weeks n/N (%)	<37 weeks n/N (%)	

Study, Year, Country	Population	Intervention/Control (n)		Results		ROB
		Arm 1	Arm 2	Arm 1	Arm 2	
				10/106 (9.8)	44/620 (7.5)	
				RR (95% ci) 1.33 (0.69 to 2.56)		
Gestational Hypertension						
Ibrahim 2009 United States	Donors with pre or post pregnancies(987)	Post-donation pregnancy (317)	Pre-donation pregnancy (2,519)	n/N (%) 22/317(6.9)	n/N (%): 16/2,519 (0.6)	High
				RR (95% CI) 10.93 (5.80 to 20.58)		
	Donors with pre and post donation pregnancies (98)	Post-donation pregnancy (173)	Pre-donation pregnancy (204)	n/N (%) 6/173 (3.5)	n/N (%) 1/204 (0.5)	
				RR (95% CI) 7.08 (0.86 to 58.20)		
Reisaeter 2009 Norway	Donors with pre- or post- donation pregnancy (326)	Post-donation pregnancy (106)	Pre-donation pregnancy (620)	n/N (%) 3/106 (2.8)	n/N (%) 11/620 (1.8)	High
				RR (95% CI) 1.59 (0.45 to 5.62)		
Gestational Diabetes						
Ibrahim 2009 United States	Donors with pre or post pregnancies (987)	Post-donation pregnancy (317)	Pre-donation pregnancy (2,519)	n/N (%) 12/317 (3.8)	n/N (%) 19/2,519 (0.8)	High
				RR (95% CI) 5.02 (2.46 to 10.24)		
	Donors with pre and post donation pregnancies (98)	Post-donation pregnancy (173)	Pre-donation pregnancy (204)	n/N (%): 1/173 (0.6%)	n/N (%) 1/204 (0.5)	
				RR (95% CI) 1.18 (0.07 to 18.71)		
Preeclampsia						
Ibrahim 2009 United States	Donors with pre or post pregnancies (987)	Post-donation pregnancy (317)	Pre-donation pregnancy (2519)	n/N (%) 21/317(6.6)	n/N (%) 22/2519 (0.9)	High
				RR (95% CI) 7.58 (4.22 to 13.63)		
	Donors with pre and post donation pregnancies (98)	Post-donation pregnancy (173)	Pre-donation pregnancy (204)	n/N (%) 6/173 (3.5)	n/N (%) 1/204 (0.5)	
				RR (95% CI) 7.07 (0.86 to 58.20)		
Reisaeter 2009 Norway	Donors with pre- or post- donation pregnancy (326)	Post-donation pregnancy (106)	Pre-donation pregnancy (620)	n/N (%) 6/106 (5.7)[a] p=0.026	n/N (%): 16/620 (2.6)[a]	High
				RR (95% CI) [Unadjusted] 2.19 (0.88 to 5.48)		
Proteinuria						

Study, Year, Country	Population	Intervention/Control (n)		Results		ROB
		Arm 1	Arm 2	Arm 1	Arm 2	
Ibrahim 2009 United States	Donors with pre or post pregnancies (987)	Post-donation pregnancy (317)	Pre-donation pregnancy (2519)	n/N (%) 13/317 (4.1)	n/N (%): 25/2519 (1.0)	High
				RR (95% CI) 4.13 (2.13 to 7.99)		
	Donors with pre and post donation pregnancies (98)	Post-donation pregnancy (173)	Pre-donation pregnancy (204)	n/N (%) 8/173 (4.6)	n/N (%): 4/204 (1.5)	
				RR (95% CI) 2.36 (0.72 to 7.70)		
Low birth weight						
Reisaeter 2009 Norway	Donors with pre- or post- donation pregnancy (326)	Post-donation pregnancy (106)	Pre-donation pregnancy (620)	<500g n/N (%) 1/106 (0.9)	<500g n/N (%) 3/620 (0.5)	High
				RR (95% CI) 1.95 (0.20 to 18.57)		
				500-2500g n/N (%): 8/106 (7.5)	500-2500g n/N (%) 34/620 (5.5)	
				RR (95% CI) 1.38 (0.65 to 2.89)		

CI= Confidence Interval; RR=Risk Ratio

[a]-adjusted for maternal age, birth order, and year of birth