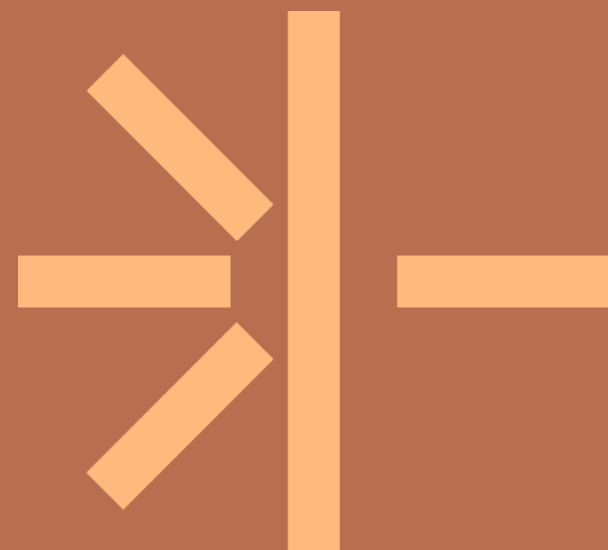




Entwicklung der Spender- nephrektomie

vom Flankenschnitt zum Roboter

Prof. Helge Seifert
Urologie



Was sind die Ziele der Operation?

Entnahme einer unversehrten, voll funktionstüchtigen Niere, die sich gut transplantieren lässt durch eine komplikationsfreie Operation ohne akute oder dauerhafte Beeinträchtigung des Spenders

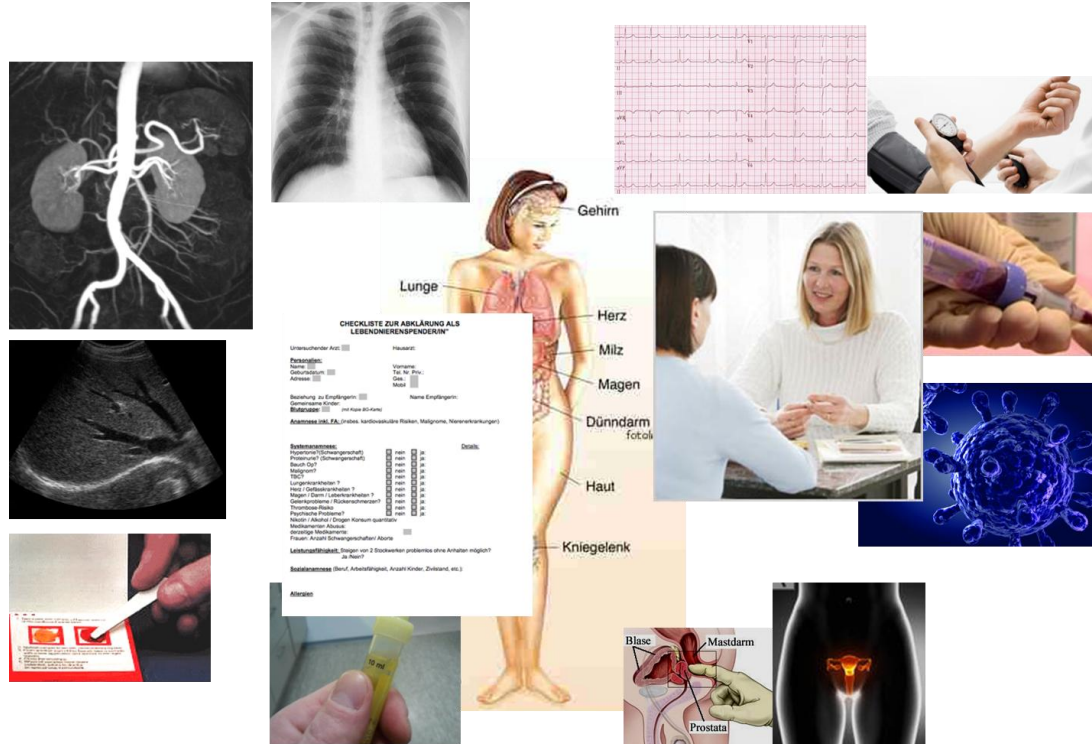
Wie kann man das sicherstellen:

Qualitätskontrolle: OP-Zeit, Blutverlust, warme Ischämiezeit, Komplikationserfassung (Clavien-Dindo), Schmerzmittelverbrauch, Spitalaufenthalt, QL, Proms, Nierenfunktion Empfänger

Register!

Bildgebung zur Festlegung der Entnahmeseite

Entscheid über den Zugangsweg

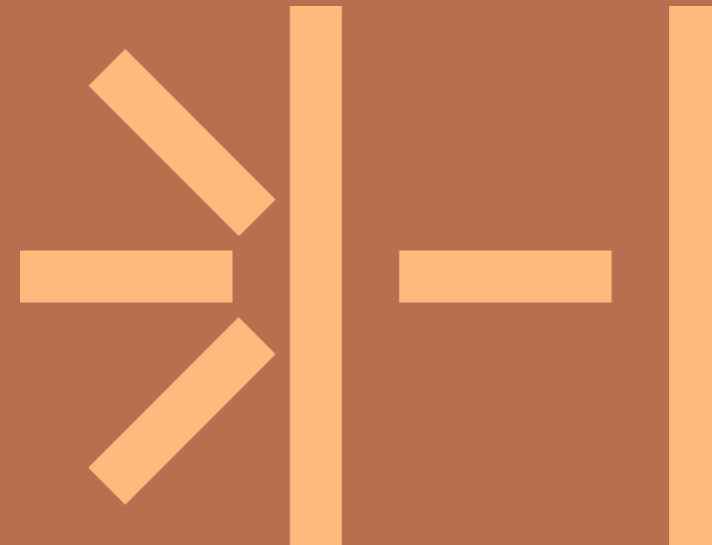


Die Zeit vor 1995

Entwicklung der Spender-
nephrektomie

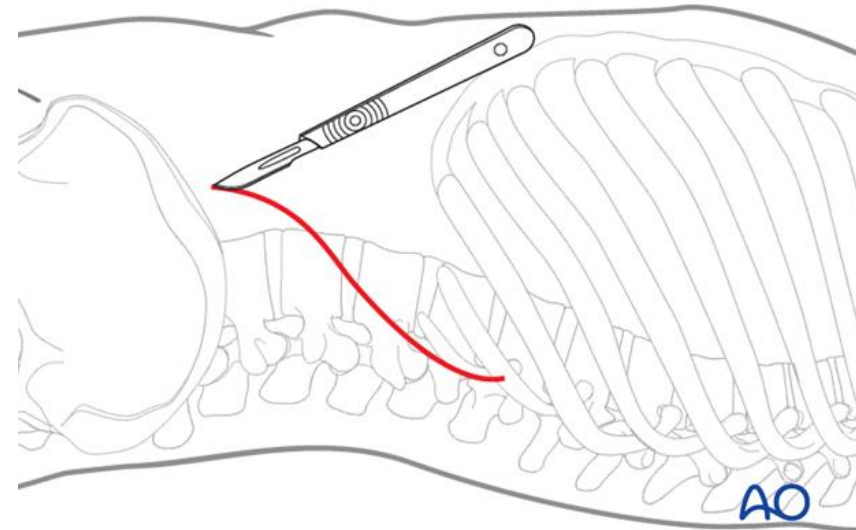
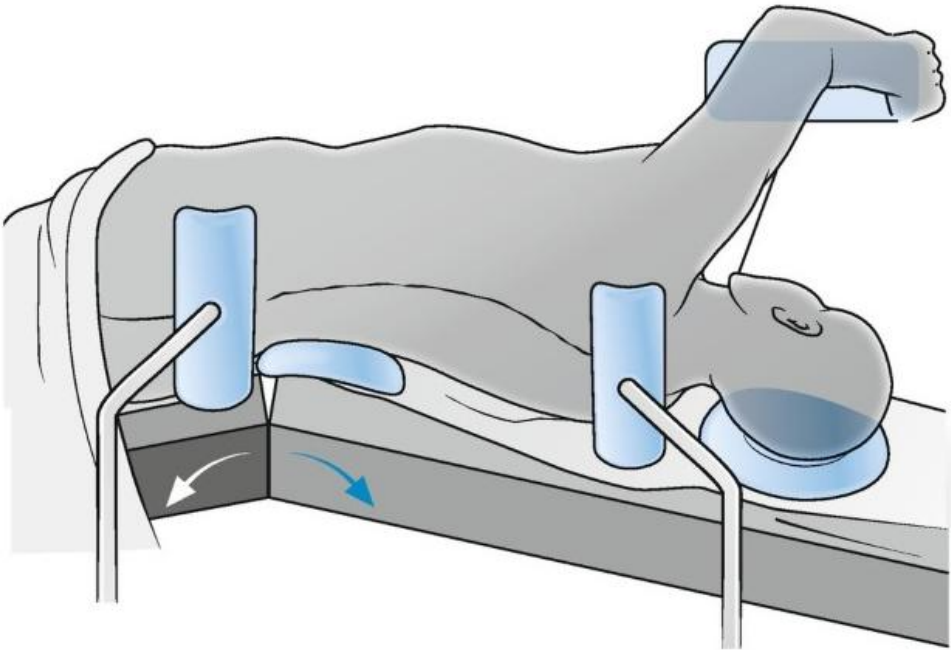
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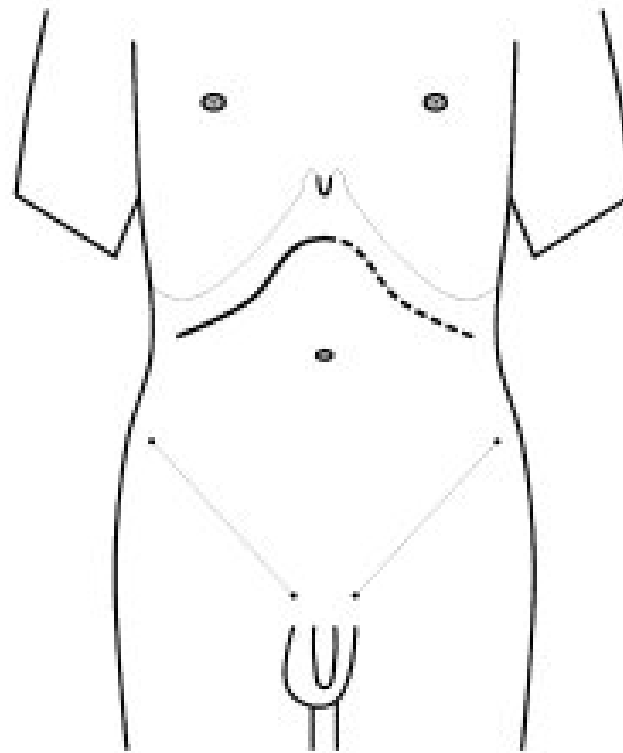
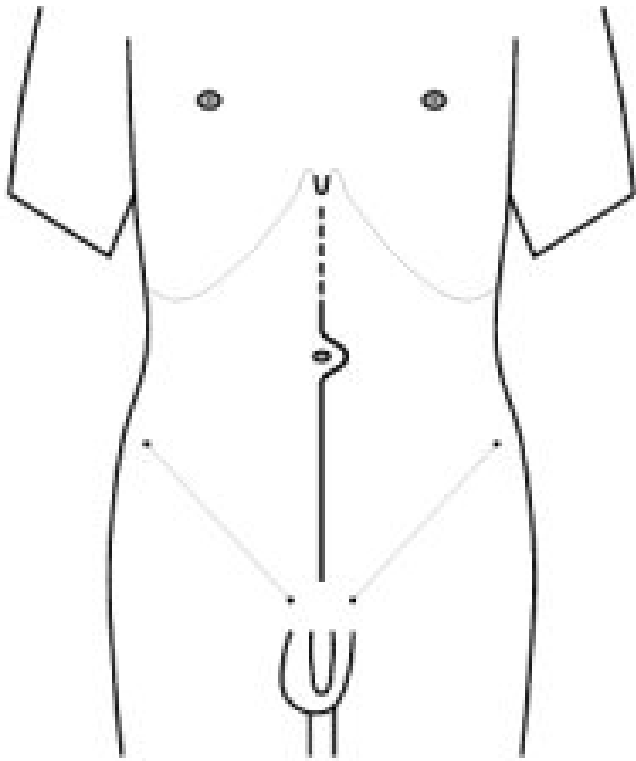
Techniken der Entnahme

- Offene Operation durch Lumbotomie (Flankenschnitt)



Techniken der Entnahme

- Offene Operation durch einen Bauchschnitt



[Save](#)[Email](#)[Send to](#)[Display options](#) ⚙[Case Reports](#) > [Transplantation](#). 1995 Nov 15;60(9):1047-9.

Laparoscopic live donor nephrectomy

L E Ratner¹, L J Ciseck, R G Moore, F G Cigarroa, H S Kaufman, L R Kavoussi

Affiliations + expand

PMID: 7491680

Abstract

A laparoscopic live-donor nephrectomy was performed on a 40-year-old man. The kidney was removed intact via a 9-cm infraumbilical midline incision. Warm ischemia was limited to less than 5 min. Immediately upon revascularization, the allograft produced urine. By the second postoperative day, the recipient's serum creatinine had decreased to 0.7 mg/dl. The donor's postoperative course was uneventful. He experienced minimal discomfort and was discharged home on the first postoperative day. We conclude that laparoscopic donor nephrectomy is feasible. It can be performed without apparent deleterious effects to either the donor or the recipient. The limited discomfort and rapid convalescence enjoyed by our patient indicate that this technique may prove to be advantageous.

[PubMed Disclaimer](#)

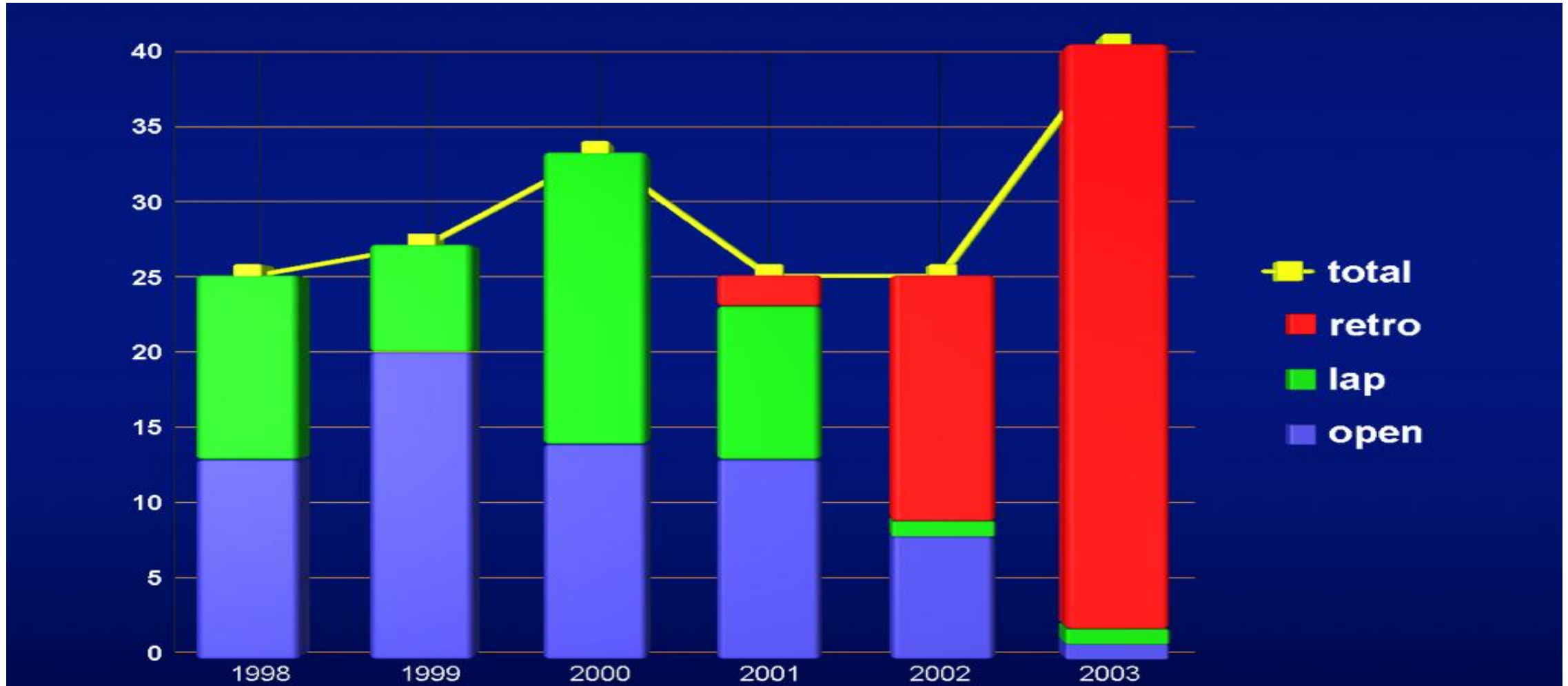
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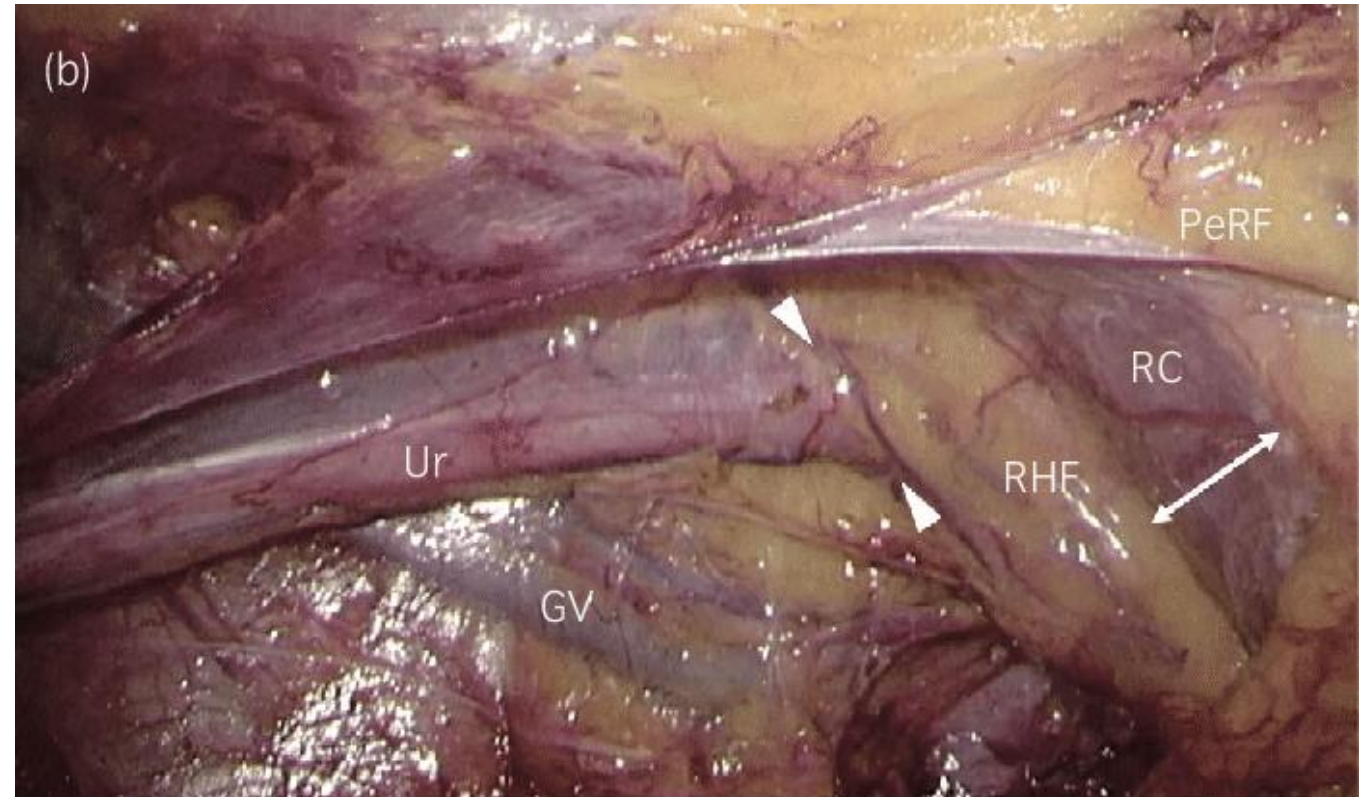
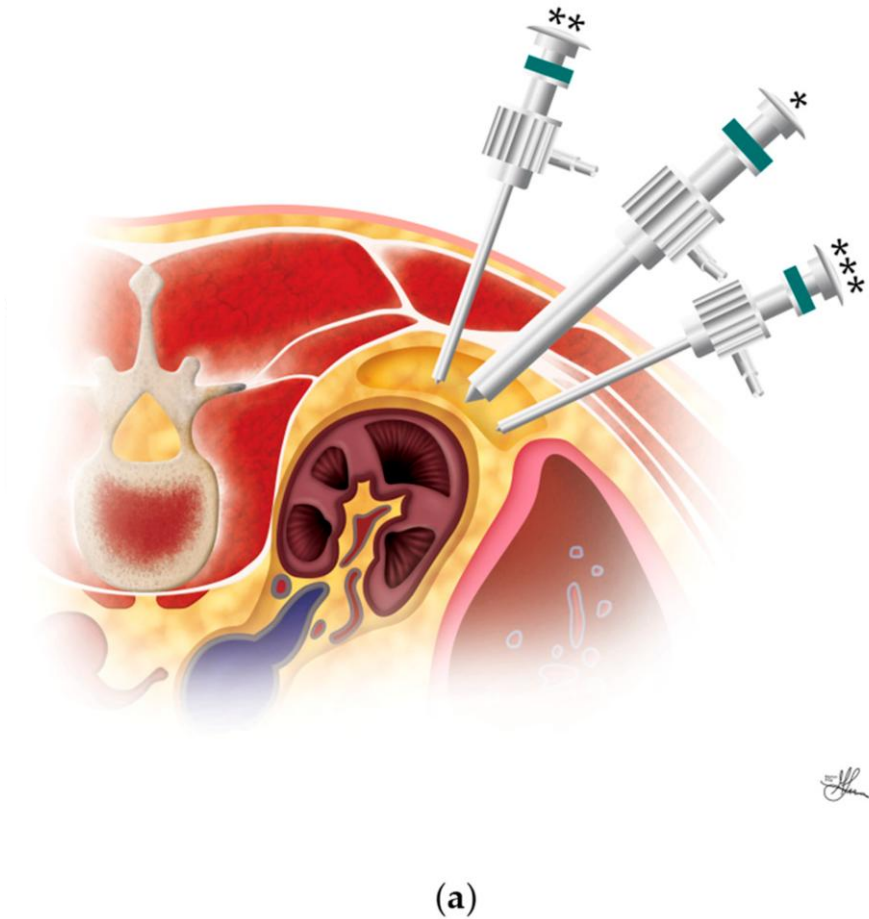
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Entwicklung der Entnahmetechnik in Basel

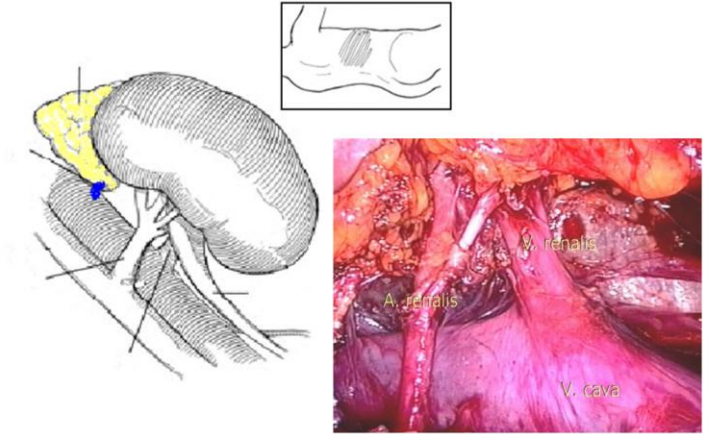
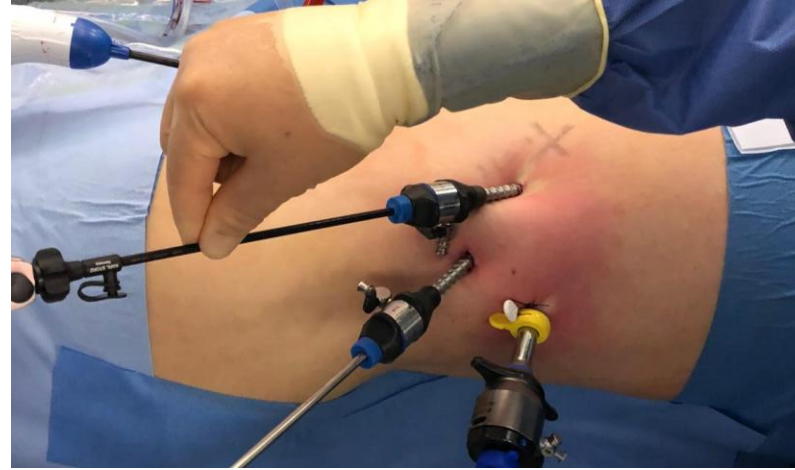
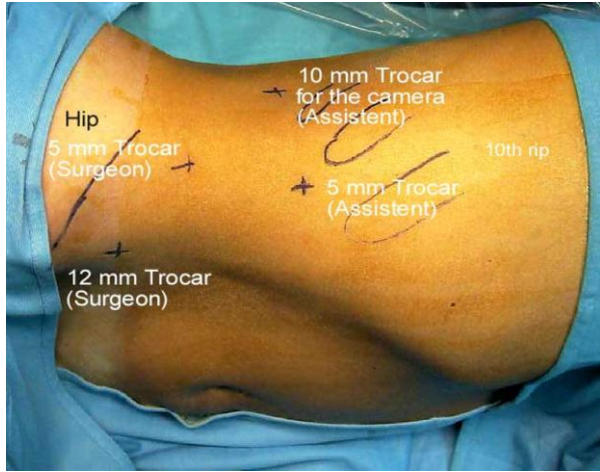


Techniken der Entnahme

- Von der Lumbotomie (Flankenschnitt) zur Retroperitoneoskopie



Der neue Goldstandard: minimalinvasive Entnahme



Retroperitoneoskopische Lebendnierenspende



Ergebnisse der laparoskopischen und retroperitoneoskopischen Operationen sind exzellent

Swiss Medical Weekly

Formerly: Schweizerische Medizinische Wochenschrift

An open access, online journal • www.smw.ch

Original article | Published 25 August 2017 | doi:10.4414/smw.2017.14497

Cite this as: Swiss Med Wkly. 2017;147:w14497

Early complications after living donor nephrectomy: analysis of the Swiss Organ Living Donor Health Registry

Burkhalter Felix^{ab}, Huynh-Do Uyen^c, Hadaya Karine^d, Matter Marice^e, Mueller Thomas F.^f, Binet Isabelle^g, Nolte Christa^h, Steiger Juerg^{ah}

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^b Division of Nephrology, Kantonsspital Baselland, Liestal, Switzerland

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^h Swiss Organ Living Donor Health Registry, University Hospital of Basel, Switzerland

Ergebnisse der laparoskopischen und retroperitoneoskopischen Operationen sind exzellent

Table 3: Donor complications.

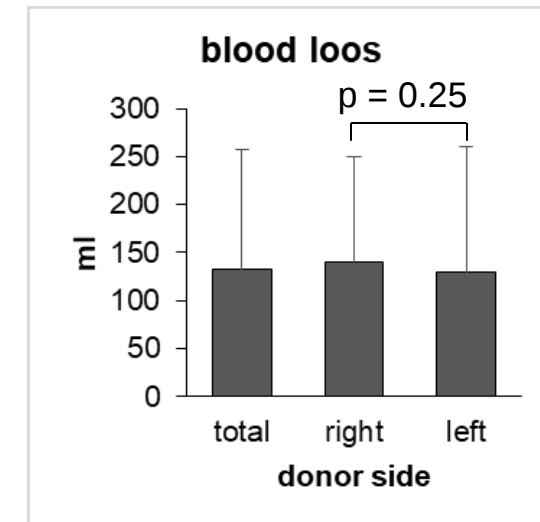
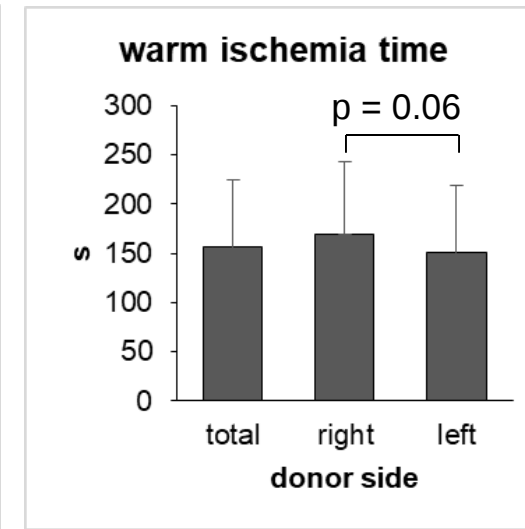
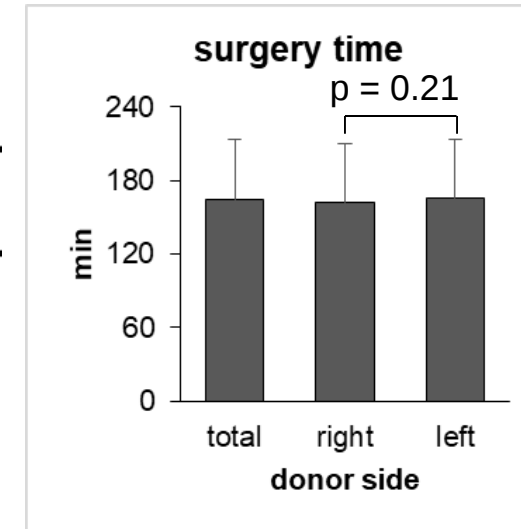
Complication	Comment	n
Clavien 4b		
Pulmonary embolism	Reanimation with ICU admission with full recovery	1
Clavien 4a		
Myocardial infarction	NSTEMI with ICU admission	1
Aortical lesion	life threatening intraoperative bleeding	1
Clavien 3b		
Retroperitoneal haematoma	Reoperation	7
Chylous leakage	Reoperation	3
Hernia	Reoperation (1 inguinal, 1 incisional)	2
Small bowel perforation	Reoperation	2
Mechanical ileus	Reoperation (1 ileum resection)	2
Testicular torsion	Reoperation with orchiectomy	1
Benign prostatic hyperplasia with recurrent urinary retention	Reoperation with TURP	1
Arterial lesion	Renal arterial branch (intraoperative), internal iliac artery (reoperation)	2
Carotid dissection	Reoperation	1
Clavien 3a		
Pneumothorax	Chest drain	5
Chylous leakage	Percutaneous drainage	4
Pulmonary oedema	ICU admission and loop diuretics	1

Ergebnisse Basel 2002-2019 (523 Patienten)

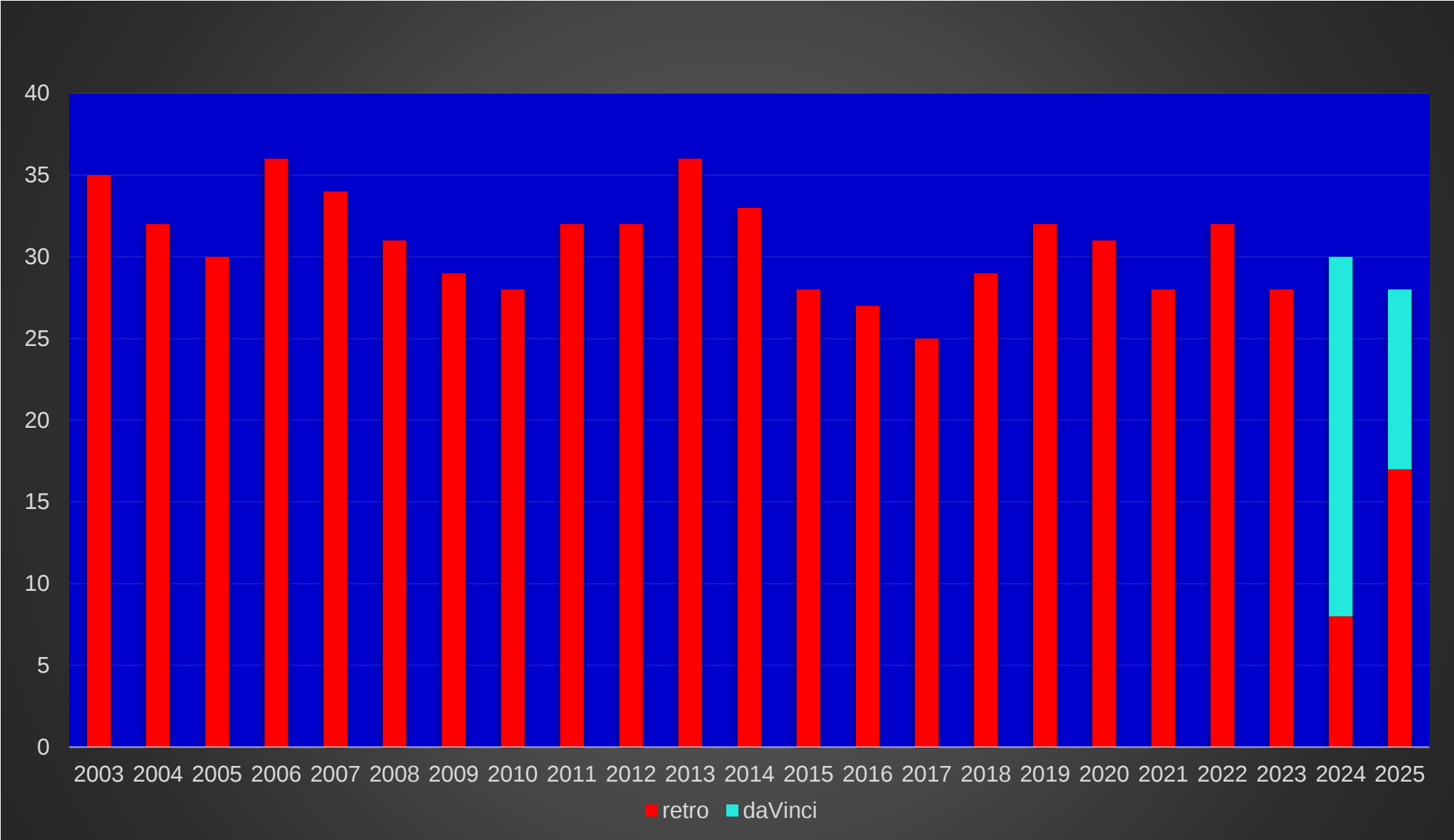
Clavien Dindo classification for complications after living kidney donation			
Clavien grade	n°		
3a	4		pneumothorax
3b	10	4	bleeding
		1	small bowel perforation
		5	lympatic vessel injury
4a	5	4	rhabdomyolysis
		1	cardiac ischaemia
4b	0		
5	0		

Ergebnisse Basel (523 Patienten) 2002-2019:

Retroperitoneoscopic living kidney donation at University Hospital Basel		
age	(y)	55 ± 10.5 (26 - 79)
sex		female 334 male 187
hospital stay	(d)	6 ± 3
donor side	(%)	left 78 right 22
surgery time	(min)	165 ± 48
conversion to laparotomy		2
blood loss	(ml)	133 ± 125 (< 50 – 1100)
warm ischemia time	(s)	156 ± 69 (30 – 660)



Entwicklung der Entnahmetechnik in Basel



Neu: Roboter-assistierte OP (daVinci)



Neu: Roboter-assistierte OP (daVinci)

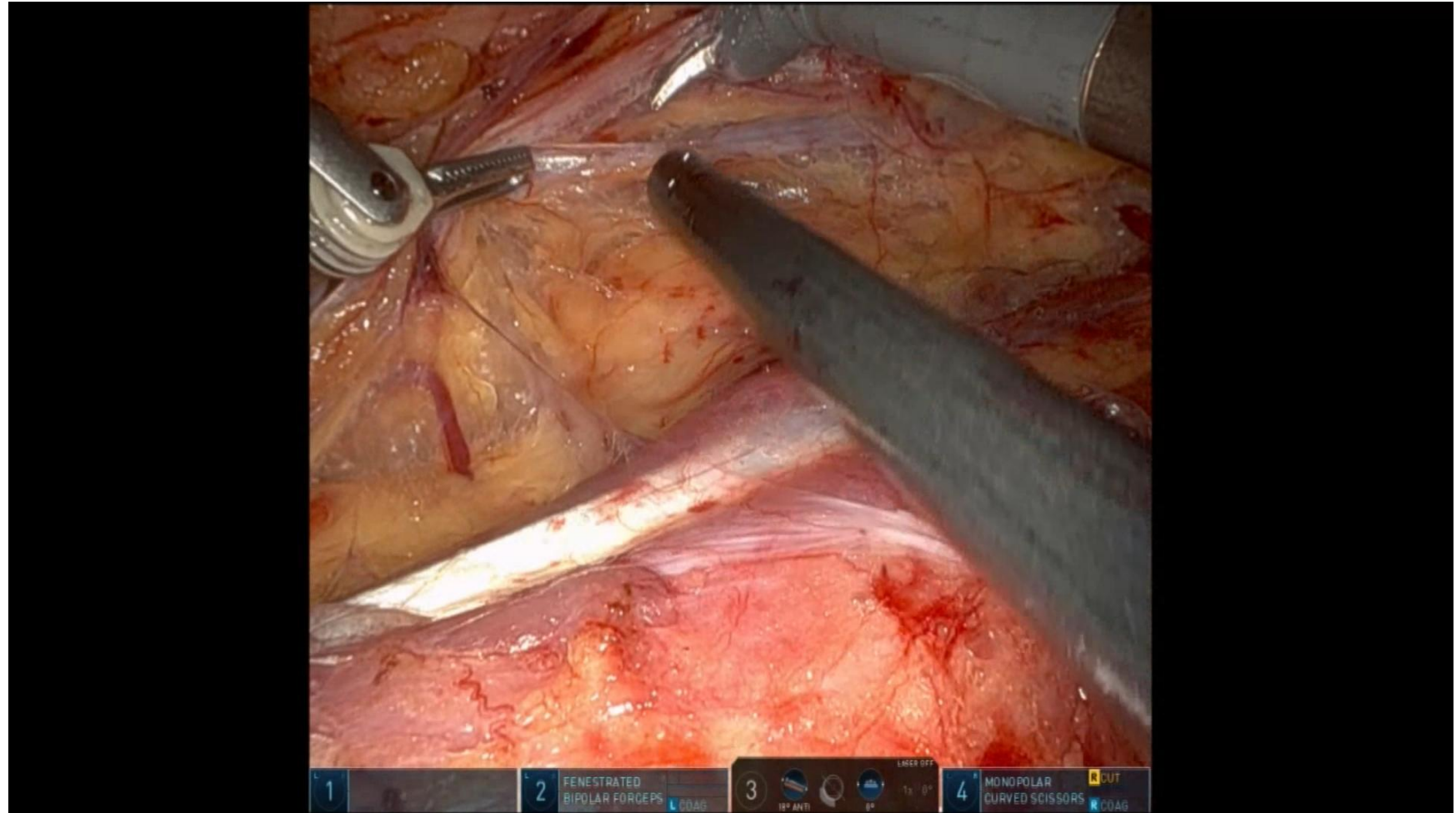


Die Präzisionsinstrumente bewegen sich genau wie die menschliche Hand

Neu: Roboter-assistierte OP (daVinci)



Neu: Roboter-assistierte OP (daVinci)



Ergebnisse der robotischen Lebendspende:



Royal College
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ADVANCING SURGICAL CARE

REVIEW

Ann R Coll Surg Engl 2023; **105**: 7–13
doi 10.1308/rcsann.2021.0357

Robotic-assisted versus laparoscopic living donor nephrectomy for renal transplantation: a systematic review and meta-analysis

DE Hinojosa-Gonzalez¹, A Roblesgil-Medrano¹, VC Tellez-Giron¹, M Torres-Martinez¹,
CA Galindo-Garza¹, RJ Estrada-Mendizabal¹, C Alanis-Garza¹, EA Gonzalez-Bonilla¹,
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³Laboratorio Nacional de Manufactura Aditiva y Digital (MADIT), México

ABSTRACT

Introduction Renal transplantation remains the definitive treatment for end-stage renal disease. Currently employed minimally invasive techniques include robotic-assisted laparoscopy and laparoscopy. This study aims to determine whether either method provides an advantage.

Methods Following PRISMA guidelines, a systematic review was conducted. Data were analysed using Review Manager 5.3.

Results A total of 12 studies were included. Operative time and operative bleeding were similar between both approaches, with a mean difference (MD) of 16min (95% confidence interval (CI) –4.06, 37.38; $p=0.11$) and 10.44ml (95% CI –43.89, 64.78; $p=0.71$), respectively. Robotics had longer warm ischemia time (MD 1.14min; 95% CI 0.65, 1.63; $p=0.00001$) but reduced length of stay (LOS) (MD –0.23days; 95% CI –0.45, –0.01; $p=0.04$) and pain (MD –1.26 VAS; 95% CI –1.77, 0.75). Similar complication and conversion rates were seen among groups.

Conclusions Robotic approaches provide a viable alternative to laparoscopic surgery. Operative time, bleeding volumes, complications and conversion rates are similar between both techniques; apparent robotic advantages on LOS and Pain need to be better analysed by future studies.

Ergebnisse der robotischen Lebendspende:

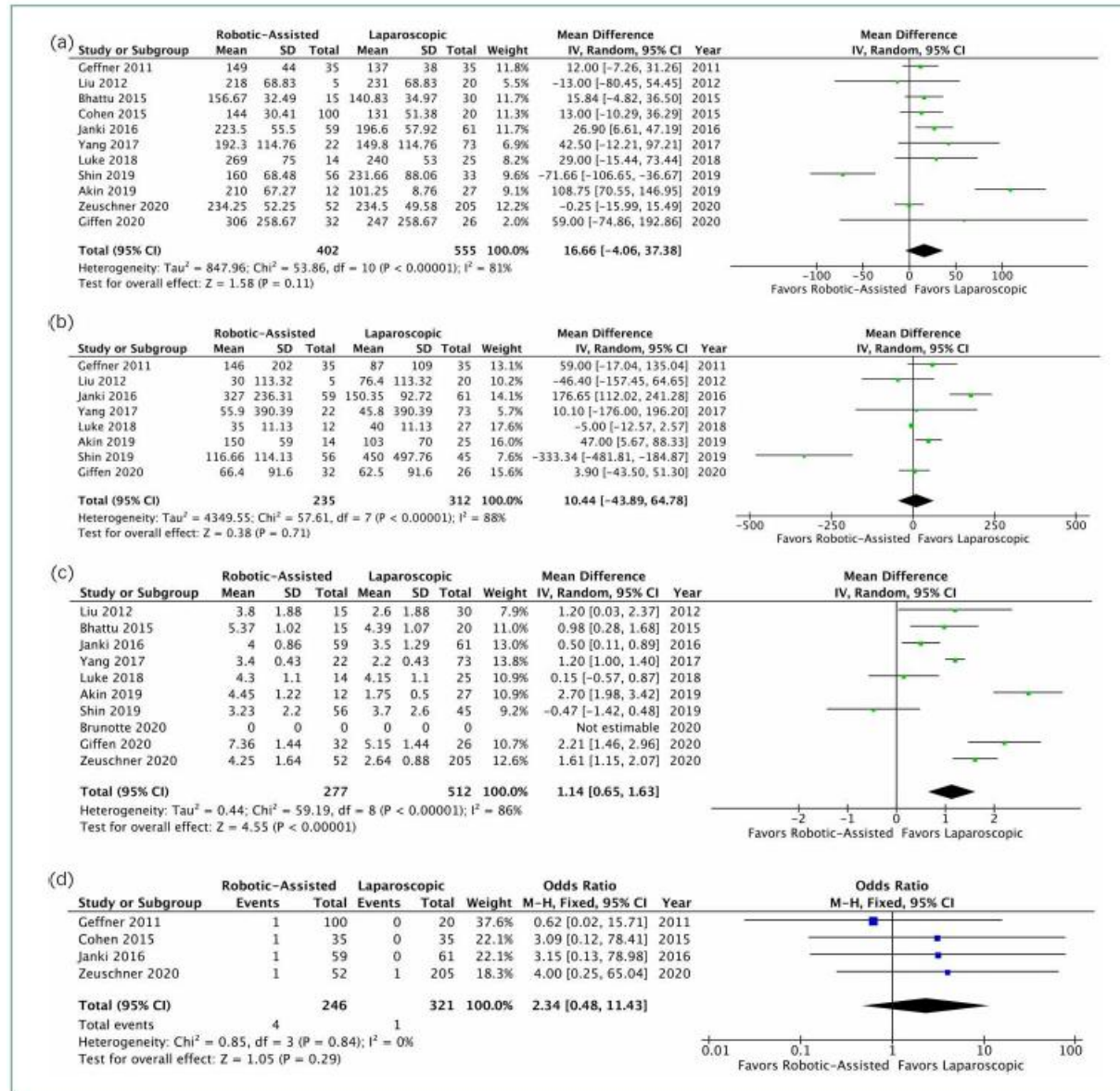


Figure 2 Forest plots of the meta analysis of the following variables: (a) operative time, (b) operative blood loss, (c) warm ischemia time, (d) conversion rates

Ergebnisse der robotischen Lebendspende:

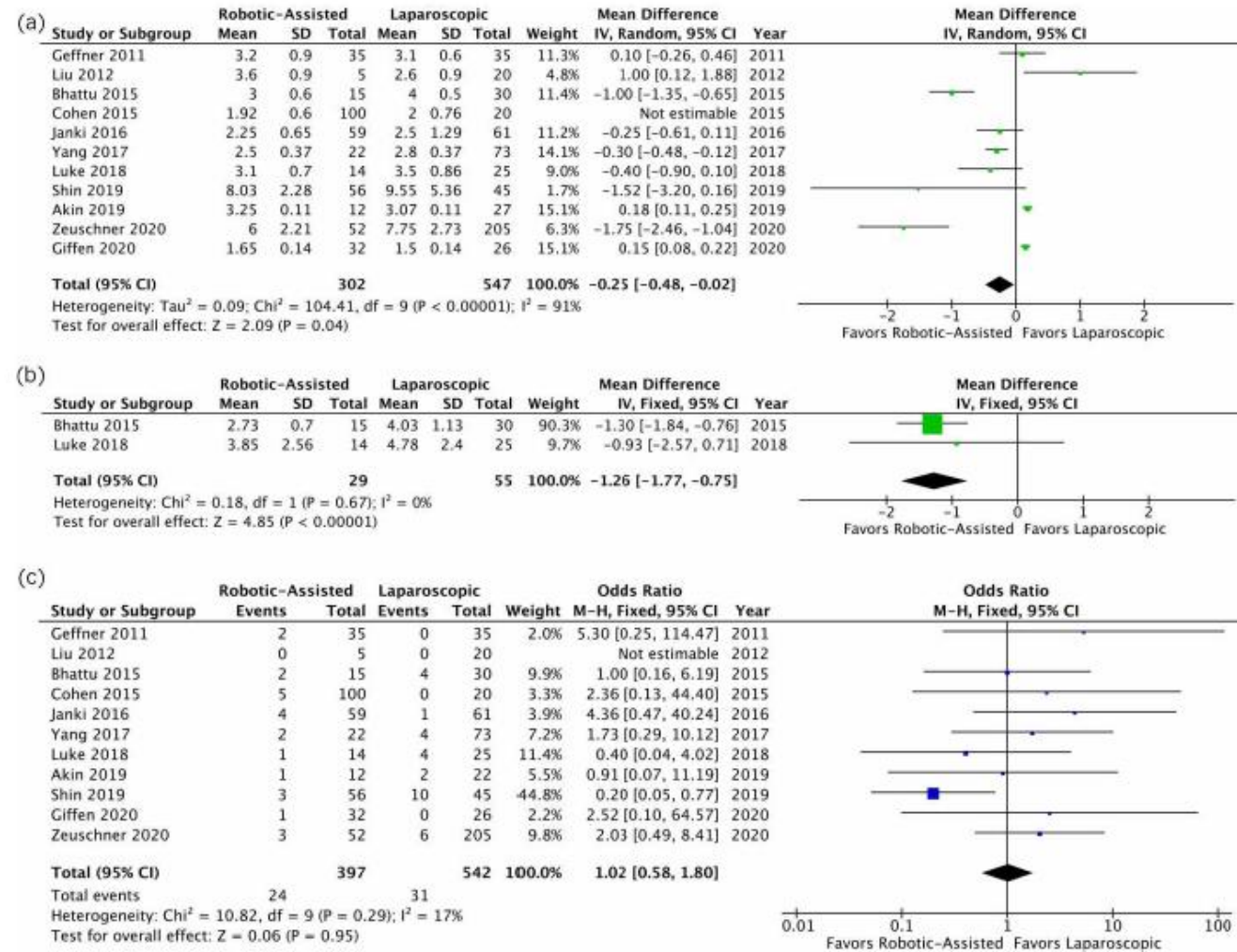
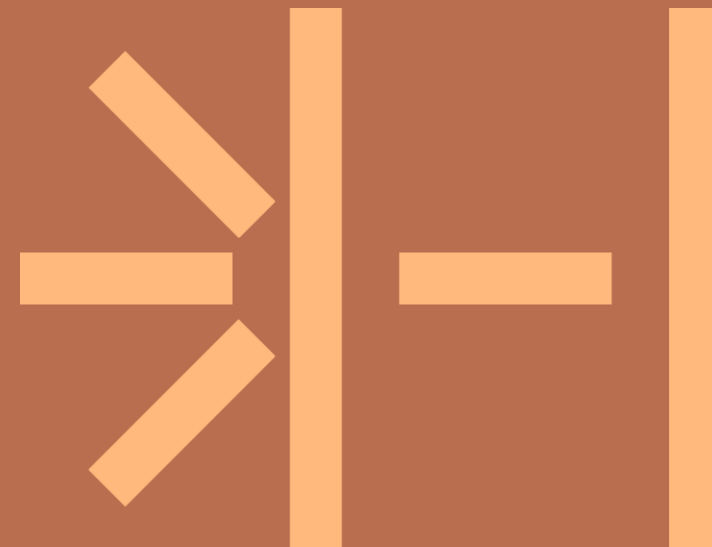


Figure 3 Forest plots of the meta analysis of the following variables: (a) LOS, (b) pain VAS, (c) complications. LOS = length of stay; VAS = visual analogue scale.

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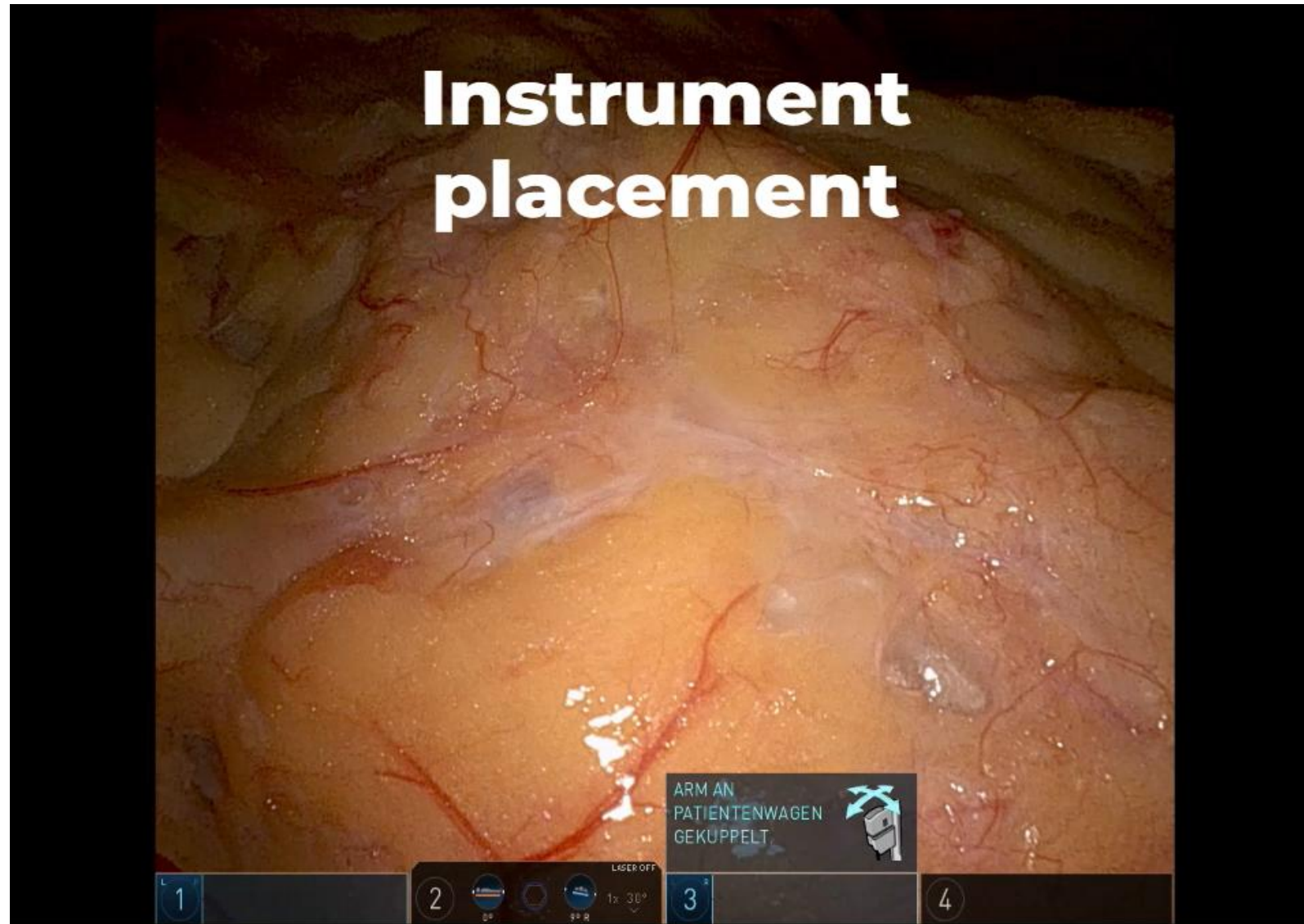
Transperitoneale Roboter-assistierte (daVinci) Nephrektomie bei Autosomal Dominant Polycystic Kidney Disease (ADPKD)



Transperitoneale Roboter-assistierte (daVinci) Nephrektomie bei Autosomal Dominant Polycystic Kidney Disease (ADPKD)



Transperitoneale Roboter-assistierte (daVinci) Nephrektomie bei Autosomal Dominant Polycystic Kidney Disease (ADPKD)



Lebendspende in der Schweiz. Ausblick:

