

# III SIMPÓSIO INTERNACIONAL

**GU - REVIEW 2019 - LACOG**

**I CONSENSO BRASILEIRO  
DE CÂNCER DE PÊNIS**

**I SIMPÓSIO MULTIPROFISSIONAL ABRENFOH-LACOG GU**  
29 e 30 de Novembro | Hotel Intercontinental





HOSPITAL ISRAELITA  
ALBERT EINSTEIN



# Nefrectomia Parcial

Fernando Korkes, MD, PhD

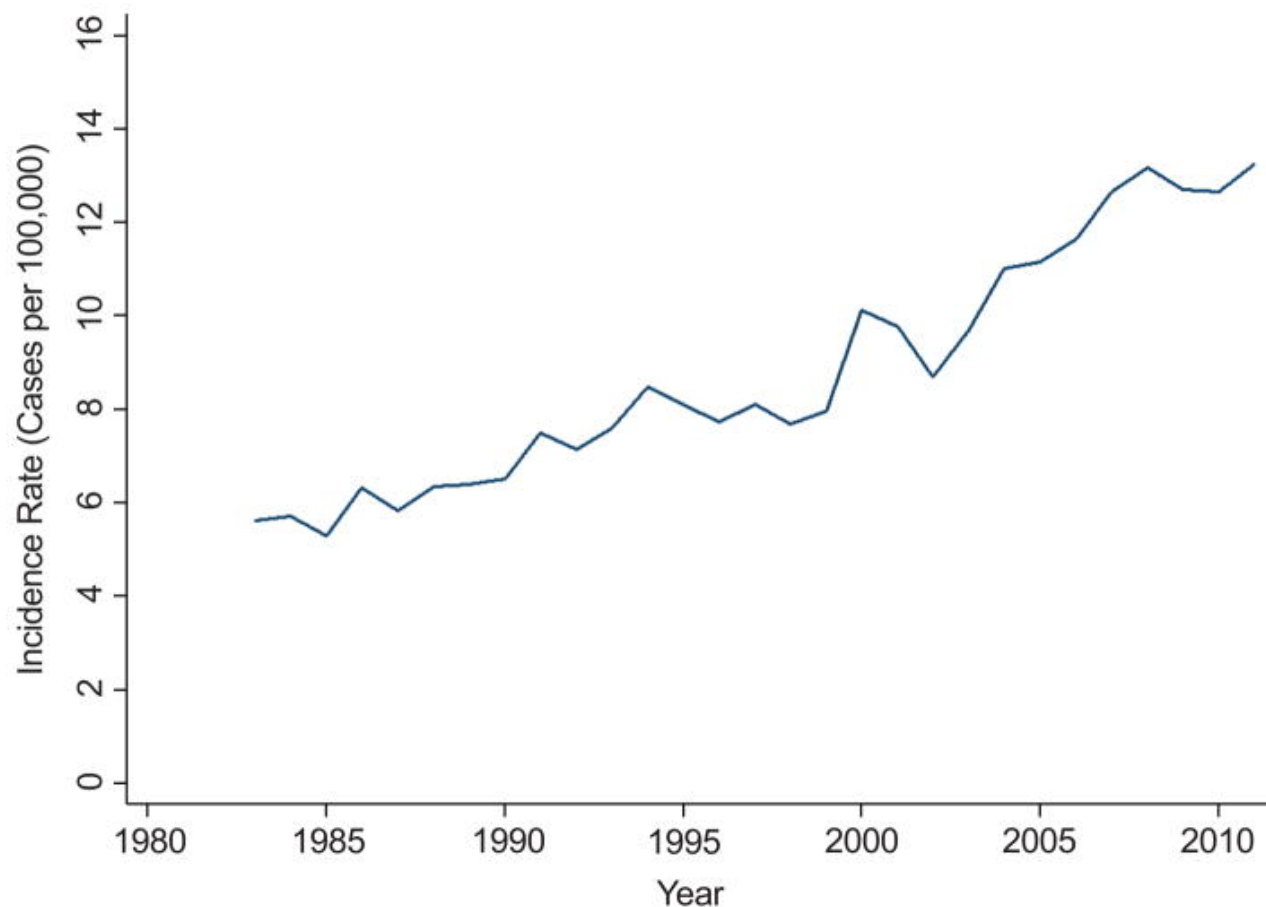


HOSPITAL ISRAELITA  
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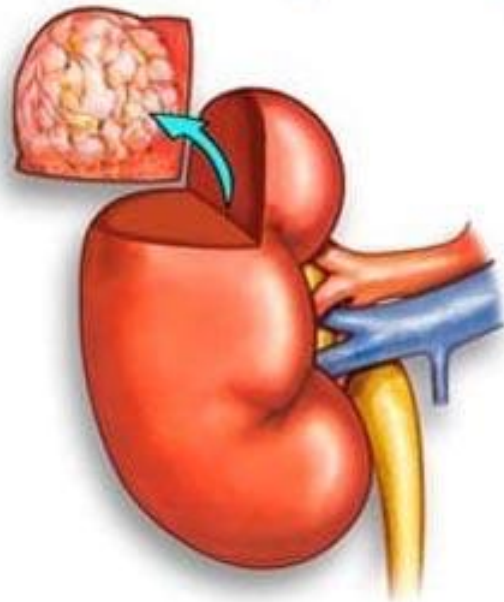
Sem conflitos de interesse a declarar

## Incidência de RCC nos EUA (1983-2011)



- Aumento em todas as faixas etárias, mas principalmente em >65 anos (fazem mais exames )
- Aumento em todos os estadios, mas principalmente T1a (triplicou o dx de T1a)

## Partial Nephrectomy



Nefrectomia  
Radical  
(Robson)

exames  
de  
imagem

nefrectomia  
radical  
laparoscópica  
(Clayman)

NP  
estabeleceu-se  
Para T1a

Expansão,  
Cirurgia  
minimamente  
Invasiva e NP

1963

1980

1990

1999

2000

# AS tem sido mais frequente

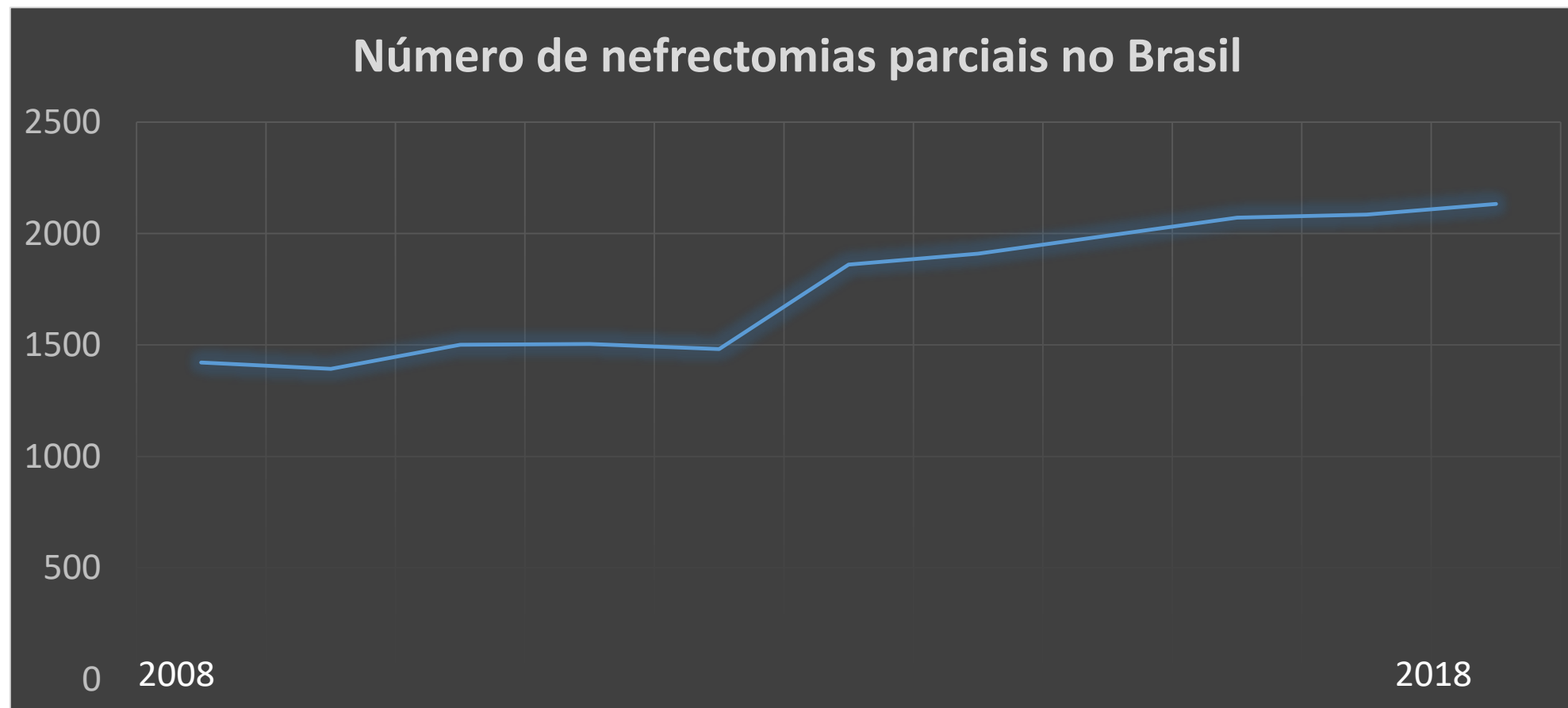
Série epidemiológica de Helsinki n=1.719  
(2006 e 2016)

## Evolving Clinical Picture of Renal Cell Carcinoma: A Population-Based Study from Helsinki

Kaisa Erkkilä<sup>a</sup> Sara V. Tornberg<sup>a</sup> Petrus Järvinen<sup>a</sup> Riikka Järvinen<sup>a</sup>  
Tuomas P. Kilpeläinen<sup>a</sup> Harri Visapää<sup>a,b</sup> Petteri Hervonen<sup>a,b</sup> Kimmo Taari<sup>a</sup>  
Harry Nisen<sup>a</sup>

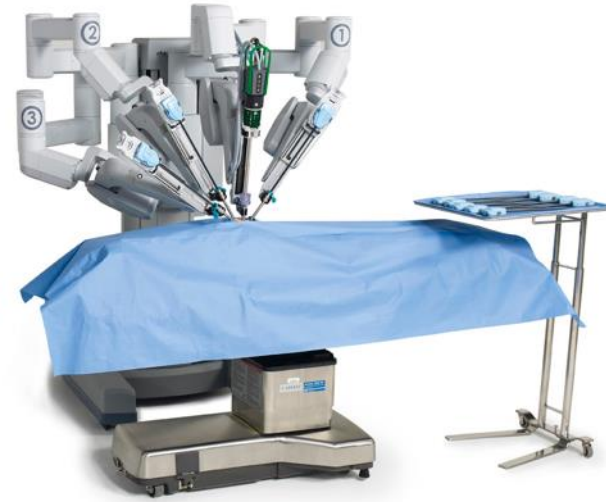
<sup>a</sup>Department of Urology, University of Helsinki and Helsinki University Hospital, Helsinki, Finland; <sup>b</sup>Department of Urology and Comprehensive Cancer Center, Helsinki University and Helsinki University Hospital, Helsinki, Finland

Variable	All (n = 1,457), n (%)	2006–2008 (n = 265), n (%)	2009–2011 (n = 397), n (%)	2012–2014 (n = 462), n (%)	2015–2016 (n = 333), n (%)	p value
Initial urological treatment						
Radical nephrectomy	625 (42.9)	176 (66.4)	194 (48.9)	156 (33.8)	99 (29.7)	<0.001 <sup>a</sup>
Partial nephrectomy	482 (33.1)	65 (24.5)	123 (31.0)	166 (35.9)	128 (38.4)	
RFA	5	1	3	0	1	
Observation <sup>d</sup>	345 (23.7)	23 (8.7)	77 (19.4)	140 (30.3)	105 (31.5)	<0.001 <sup>b</sup>
Use of RTB	142 (9.7)	20 (7.5)	32 (8.1)	34 (7.4)	56 (16.8)	<0.001
Observation						
Active surveillance	260 (17.8)	22 (8.3)	59 (14.9)	98 (21.2)	81 (24.3)	<0.001 <sup>c</sup>
Patient unfit for treatment	76 (5.2)	1 (0.4)	16 (4.0)	38 (8.2)	21 (6.3)	
Patient refuses treatment	9	0	2	4	3	

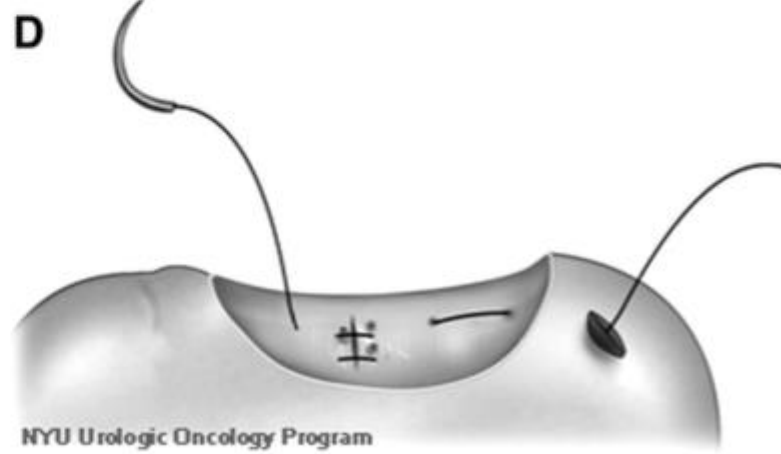
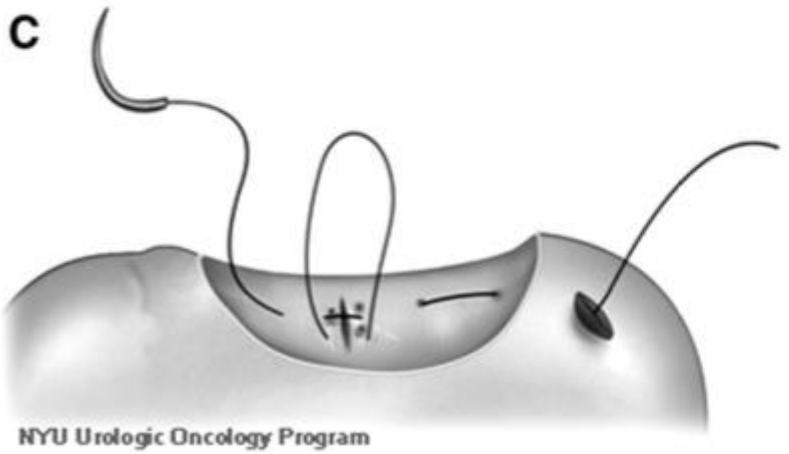
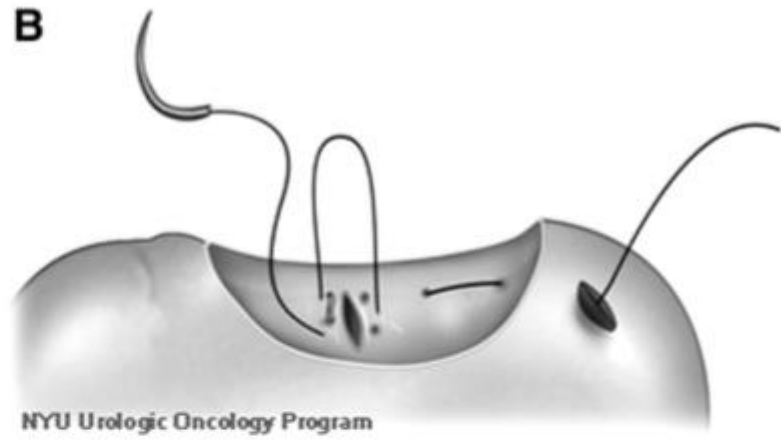
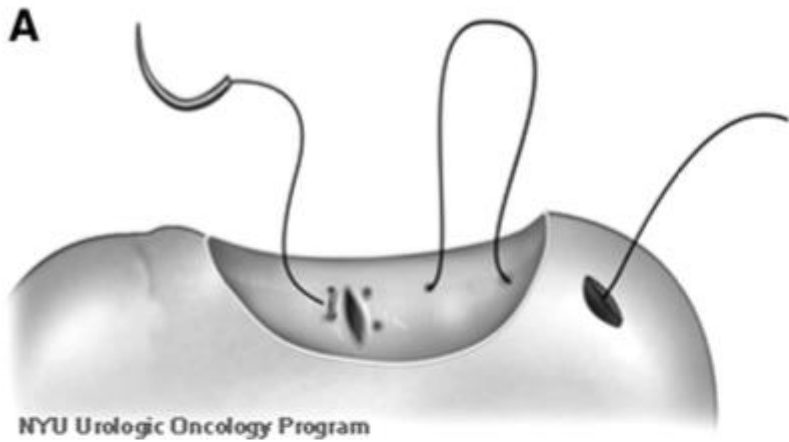


Fonte: Ministério da Saúde - Sistema de Informações Hospitalares do SUS (SIH/SUS)

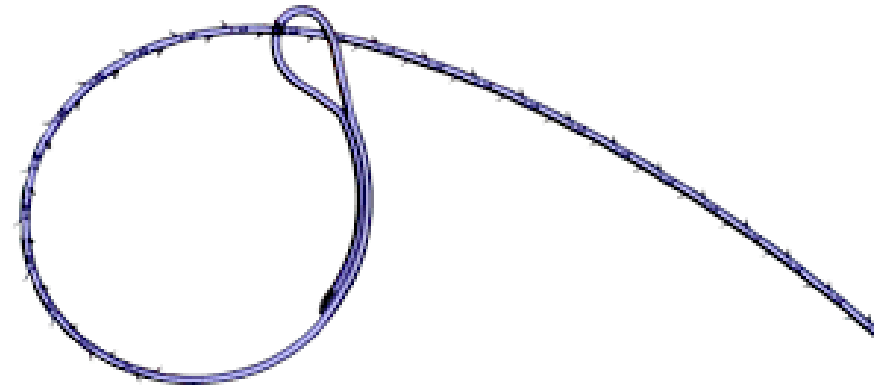








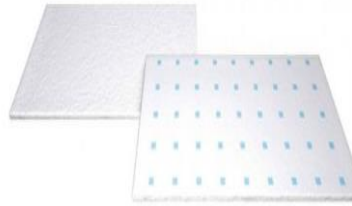
# Fios de sutura



# Hemostáticos e selantes

- Colágeno

- INSTAT MCH (JJ)
- AVITENE MCH (Bard)
- HEMOPATCH (Baxter)



- Celulose oxidada regenerada

- SURGICELL (JJ)



- Gelatina

- GELFOAM (Pfizer)
- SURGIFOAM (JJ)



- Gelatinas fluídas

- Floseal (Baxter)
- Surgiflow (JJ)

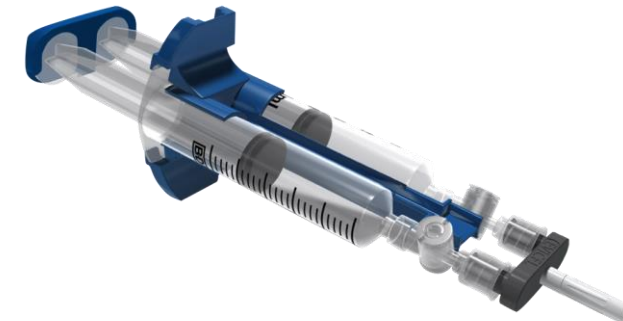


- Trombina

- Evithrom (JJ)

- Selantes de Fibrina

- EVICEL (JJ)
- TISSEEL (Baxter)



available at [www.sciencedirect.com](http://www.sciencedirect.com)  
 journal homepage: [www.europeanurology.com](http://www.europeanurology.com)



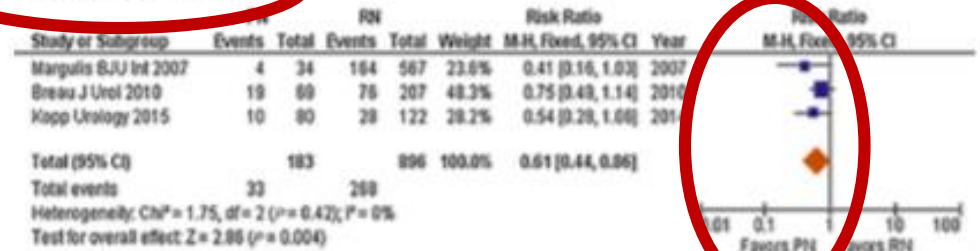
Review – Kidney Cancer

# Partial Nephrectomy Versus Radical Nephrectomy for Clinical T1b and T2 Renal Tumors: A Systematic Review and Meta-analysis of Comparative Studies

Maria Carmen Mir<sup>a</sup>, Ithaar Derweesh<sup>b</sup>, Francesco Porpiglia<sup>c</sup>, Homayoun Zargar<sup>d</sup>,  
 Alexandre Mottrie<sup>e</sup>, Riccardo Autorino<sup>f,\*</sup>

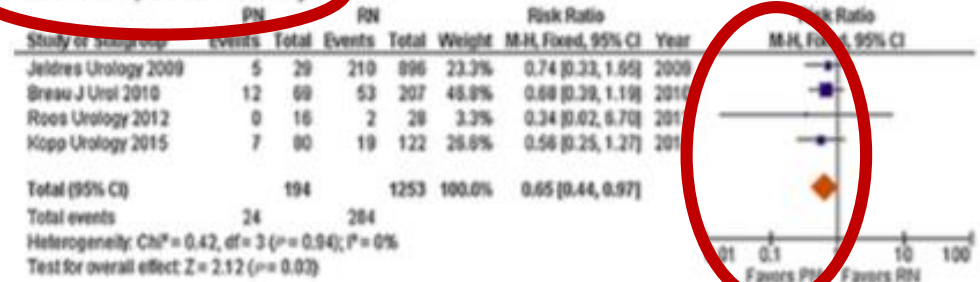
N=11.204  
 Controle oncológico =  
 (até melhor para NP)  
 melhor preservação de função renal  
 T1b – T2

**Tumor recurrence**



NP

**Cancer-specific mortality**



## Pior em PN vs. RN

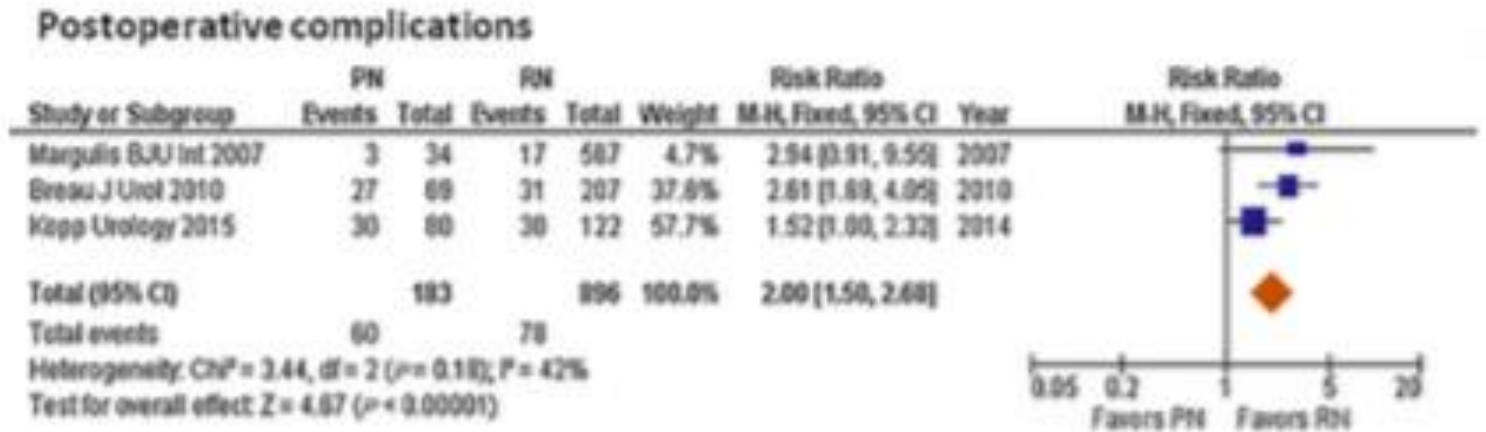
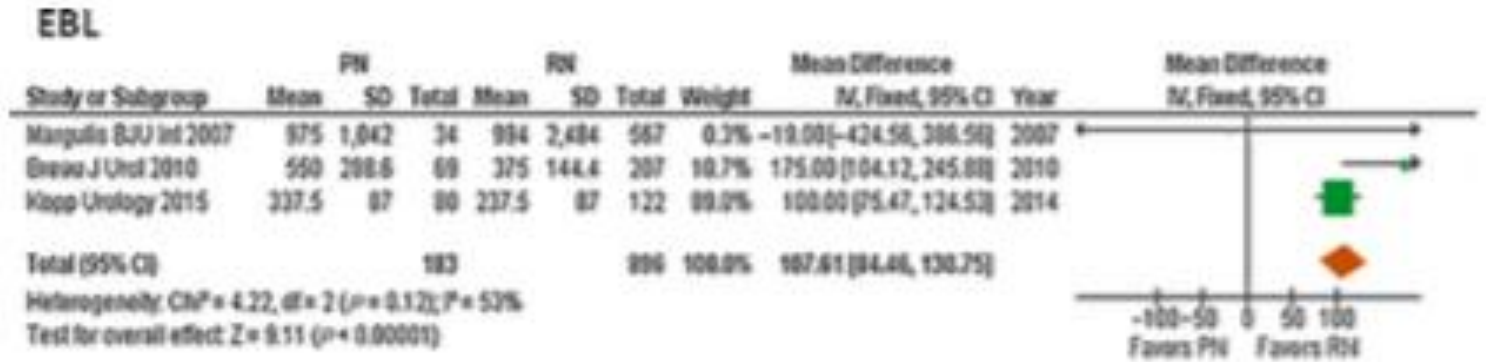
Hemorragia: 3,1 vs 1,2%

Fístula urinária: 4,4 vs 0%

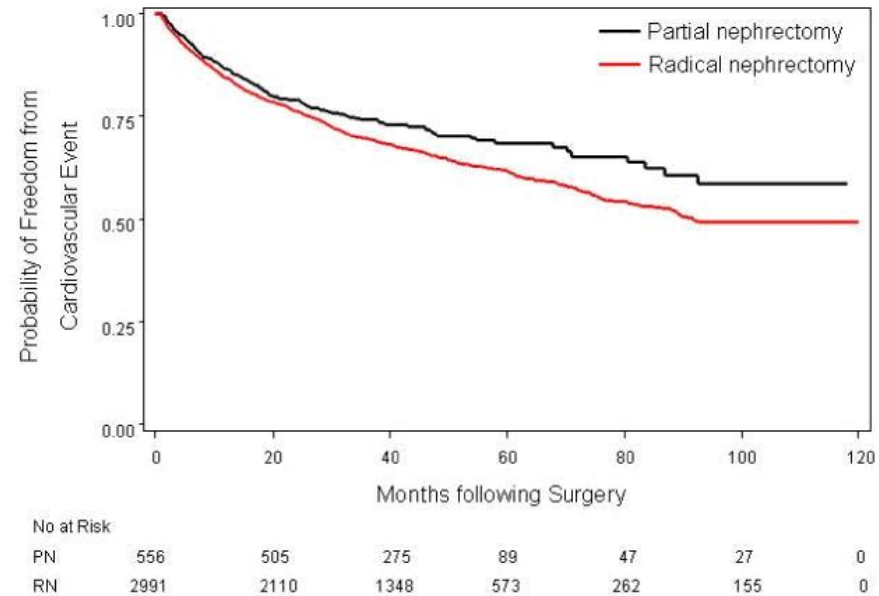
Reoperação: 4,4 vs 2,4%

sangramento

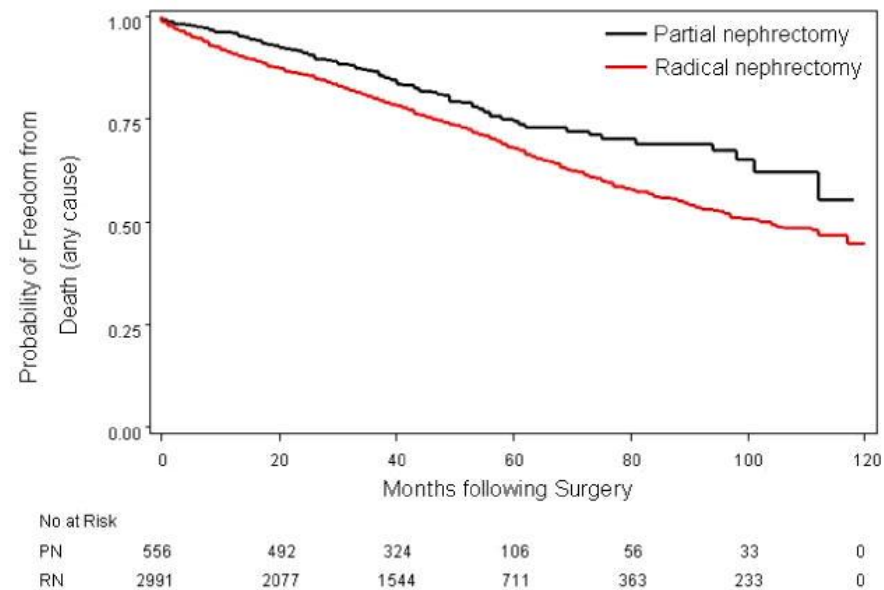
complicações



### 1a. Cardiovascular Events



### 1b. Overall Mortality (Death from Any Cause)



T1a:  
NP associada a:  
menos eventos cardiovasculares  
menor mortalidade

# EAU Guidelines on Renal Cell Carcinoma

B. Ljungberg (Chair), K. Bensalah, A. Bex (Vice-chair),  
S. Canfield, R.H. Giles (Patient Advocate), M. Hora,  
M.A. Kuczyk, T. Lam, A.S. Merseburger, T. Powles,  
M. Staehler, A. Volpe  
Guidelines Associates: S. Dabestani,  
S. Fernández-Pello Montes, F. Hofmann, L. Marconi,  
R. Tahbaz

## Nephrectomia Radical Vs Parcial

- T1a: guidelines AUA, EAU, NCCN
- NSS é a primeira opção de tratamento (AS, técnicas ablativas- alternativas)
- CSS semelhante em 10 anos
- Recorrência local semelhante
- Melhor função renal



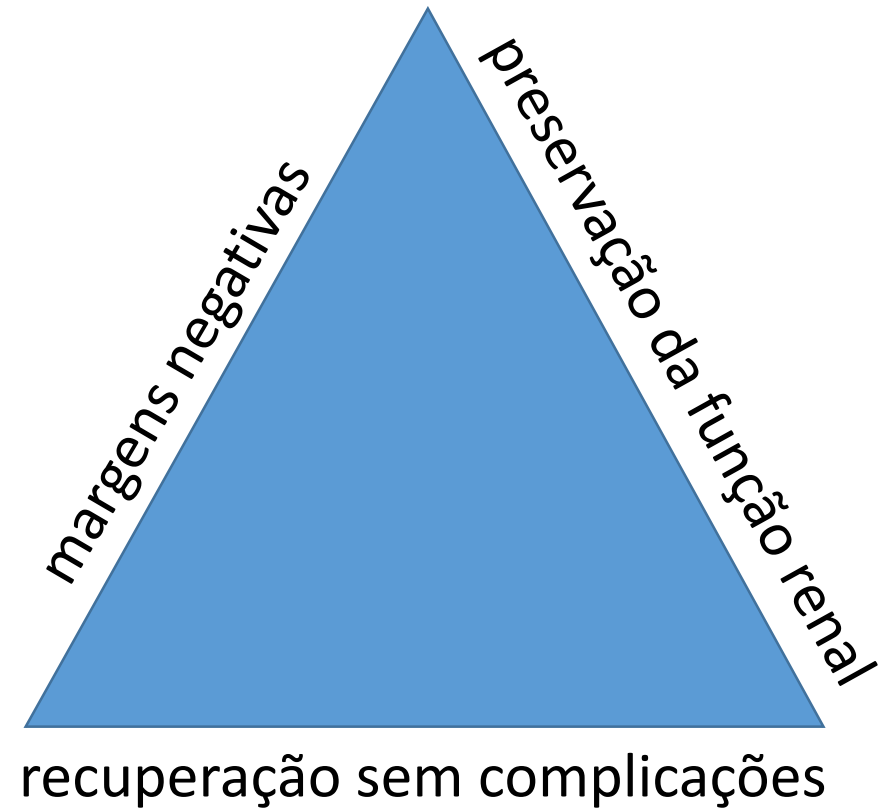
## VLP vs. aberta

- Resultados oncológicos semelhantes

Lane BR, Campbell SC, Gill IS. 10-year oncologic outcomes after laparoscopic and open partial nephrectomy. J Urol 2013; 190:44–49.

# Nefrectomia parcial

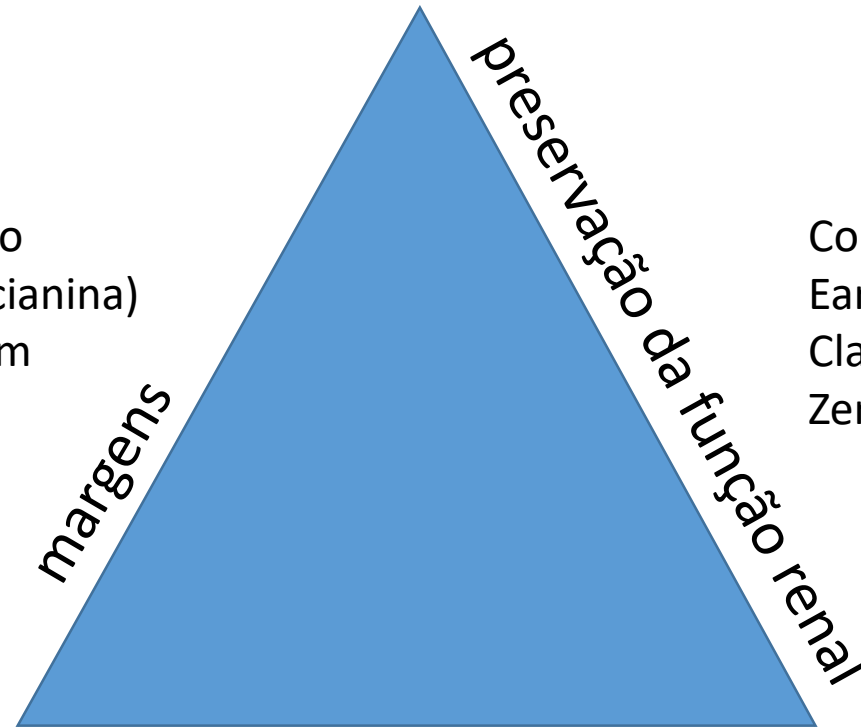
- TRIFECTA da nefrectomia parcial



# Nefrectomia parcial

- TRIFECTA da nefrectomia parcial

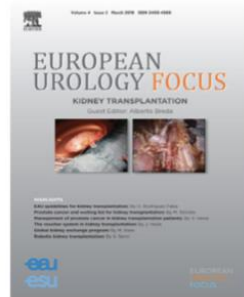
USG intra-operatório  
Fire-fly (verde indocianina)  
Modelo 3D / imagem



Controle do hilo  
Early unclamping  
Clampeamento superseletivo  
Zero-ischemia

recuperação sem complicações

Aberta/laparoscopia/robótica  
Trans / retroperitoneoscópica  
Fios / agentes hemostáticos



# Perioperative Outcomes of Open, Laparoscopic, and Robotic Partial Nephrectomy: A Prospective Multicenter Observational Study (The RECORd 2 Project).

Bravi CA<sup>1</sup>, Larcher A<sup>1</sup>, Capitanio U<sup>1</sup>, Mari A<sup>2</sup>, Antonelli A<sup>3</sup>, Artibani W<sup>4</sup>, Barale M<sup>5</sup>, Bertini R<sup>1</sup>, Bove P<sup>6</sup>, Brunocilla E<sup>7</sup>, Da Pozzo L<sup>8</sup>, Di Maida F<sup>2</sup>, Fiori C<sup>9</sup>, Gontero P<sup>5</sup>, Li Marzi V<sup>10</sup>, Longo N<sup>11</sup>, Mirone V<sup>11</sup>, Montanari E<sup>12</sup>, Porpiglia F<sup>9</sup>, Schiavina R<sup>7</sup>, Schips L<sup>13</sup>, Simeone C<sup>3</sup>, Siracusano S<sup>4</sup>, Terrone C<sup>14</sup>, Trombetta C<sup>15</sup>, Volpe A<sup>16</sup>, Montorsi F<sup>1</sup>, Ficarra V<sup>17</sup>, Carini M<sup>2</sup>, Minervini A<sup>18</sup>.

**Table 4 – Multivariable logistic and linear regression model to predict Clavien–Dindo  $\geq 2$  complications, positive surgical margins, ischemia time, and acute kidney injury in PADUA  $< 10$  lesions.**

	Laparoscopic vs Open OR – estimate (95% CI)	p Value	Robotic vs Open OR – estimate (95% CI)	p Value	Robotic vs Laparoscopic OR – estimate (95% CI)	p Value
Clavien–Dindo $\geq 2$ complications	0.50 (0.32–0.79)	0.003	0.25 (0.13–0.47)	<0.0001	0.54 (0.30–0.95)	0.031
Warm ischemia time	1.95 (0.76–3.14)	0.001	5.05 (3.57–6.53)	<0.0001	2.95 (1.72–4.18)	<0.0001
Acute kidney injury	0.49 (0.35–0.68)	<0.0001	0.48 (0.32–0.71)	0.0003	0.98 (0.69–1.38)	0.9
Positive margins	1.41 (0.84–2.39)	0.2	0.89 (0.47–1.70)	0.7	0.59 (0.35–0.99)	0.045

CI = confidence interval; eGFR = estimated glomerular filtration rate; OR = odd ratio, PADUA = Preoperative Aspects and Dimensions Used for an Anatomical (score).  
Models adjusted for age, gender, Charlson comorbidity index, body mass index, single kidney status, preoperative eGFR, total PADUA score, peritoneal access, type of resection, and median annual caseload per center.

**ROBÓTICA:**  
Menos complicações  
Menos lesão renal  
Menos margens +

## Perioperative Outcomes of Open, Laparoscopic, and Robotic Partial Nephrectomy: A Prospective Multicenter Observational Study (The RECORd 2 Project).

Bravi CA<sup>1</sup>, Larcher A<sup>1</sup>, Capitanio U<sup>1</sup>, Mari A<sup>2</sup>, Antonelli A<sup>3</sup>, Artibani W<sup>4</sup>, Barale M<sup>5</sup>, Bertini R<sup>1</sup>, Bove P<sup>6</sup>, Brunocilla E<sup>7</sup>, Da Pozzo L<sup>8</sup>, Di Maida F<sup>2</sup>, Fiori C<sup>9</sup>, Gontero P<sup>5</sup>, Li Marzi V<sup>10</sup>, Longo N<sup>11</sup>, Mirone V<sup>11</sup>, Montanari E<sup>12</sup>, Porpiglia F<sup>9</sup>, Schiavina R<sup>7</sup>, Schips L<sup>13</sup>, Simeone C<sup>3</sup>, Siracusano S<sup>4</sup>, Terrone C<sup>14</sup>, Trombetta C<sup>15</sup>, Volpe A<sup>16</sup>, Montorsi F<sup>1</sup>, Ficarra V<sup>17</sup>, Carini M<sup>2</sup>, Minervini A<sup>18</sup>.



**Table 3 – Multivariable logistic model to predict the achievement of the modified trifecta according to baseline nephrometry score.**

	Laparoscopic vs Open OR (95% CI)	p Value	Robotic vs Open OR (95% CI)	p Value	Robotic vs Laparoscopic OR (95% CI)	p Value
PADUA						
<10	1.29 (0.92–1.82)	0.14	1.66 (1.09–2.53)	0.018	1.34 (0.94–1.90)	0.11
≥10	1.68 (0.79–3.58)	0.2	0.84 (0.40–1.77)	0.7	0.58 (0.23–1.06)	0.071

CI = confidence interval; OR = odd ratio; PADUA = Preoperative Aspects and Dimensions Used for an Anatomical (score).

**ROBÓTICA:**  
Mais trifectas  
(PADUA<10)

Tratamento padrão do câncer renal:

**nefrectomia parcial**

(preferencialmente por técnica minimamente invasiva)

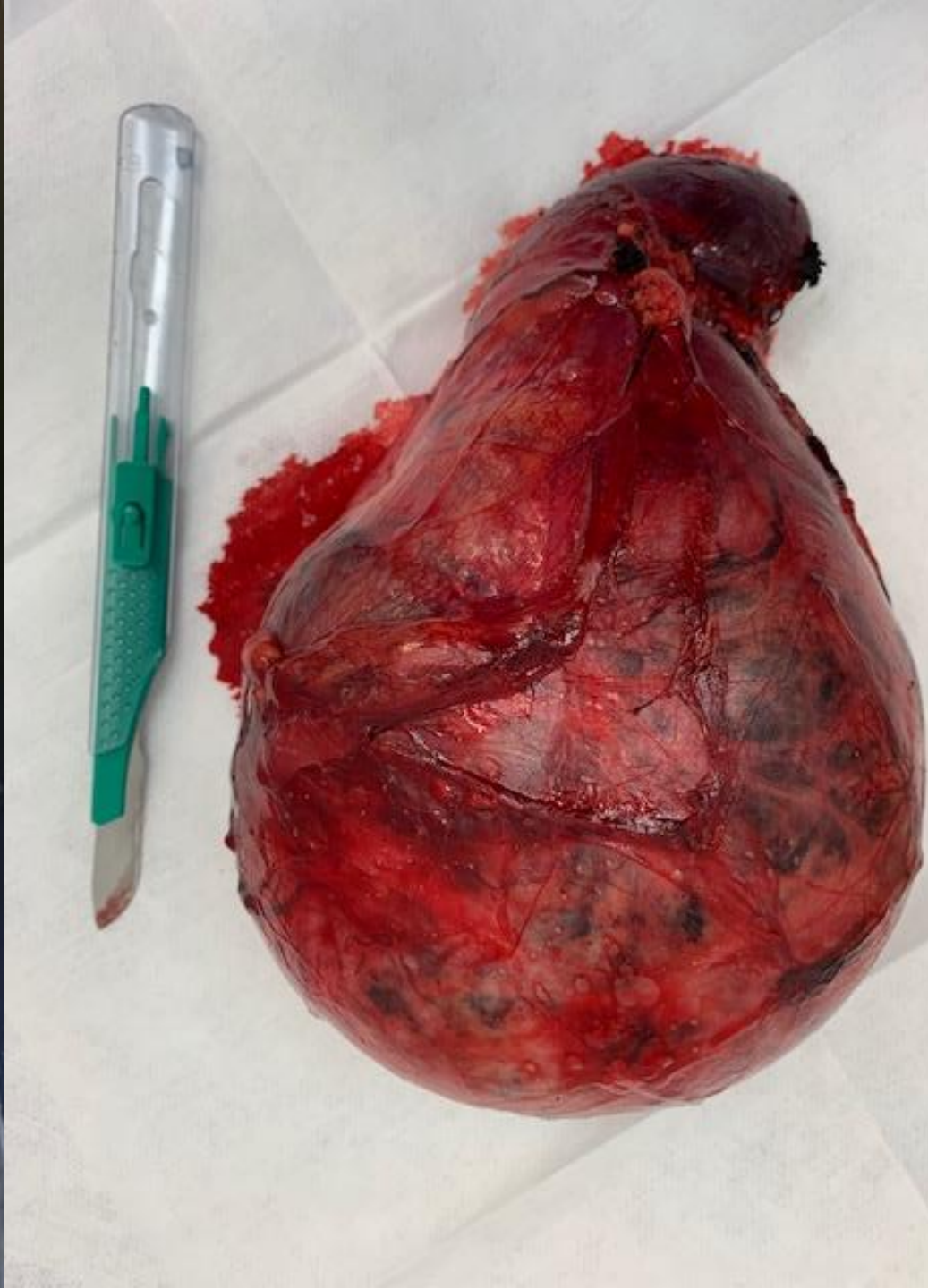
Nefrectomia radical passa a ser a primeira escolha em:

- Tumores muito volumosos
- Ressecção parcial não possível devido a localização desfavorável
- Condições clínicas ruins

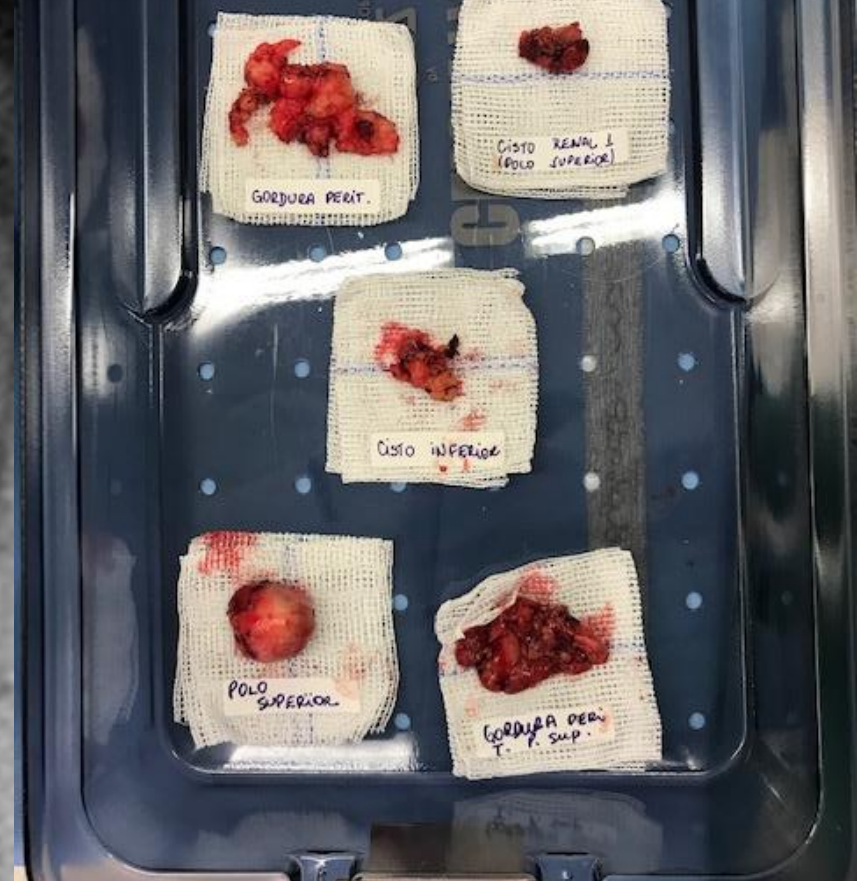


Abdome Total  
al Portal

1:13)







## RN vs. PN

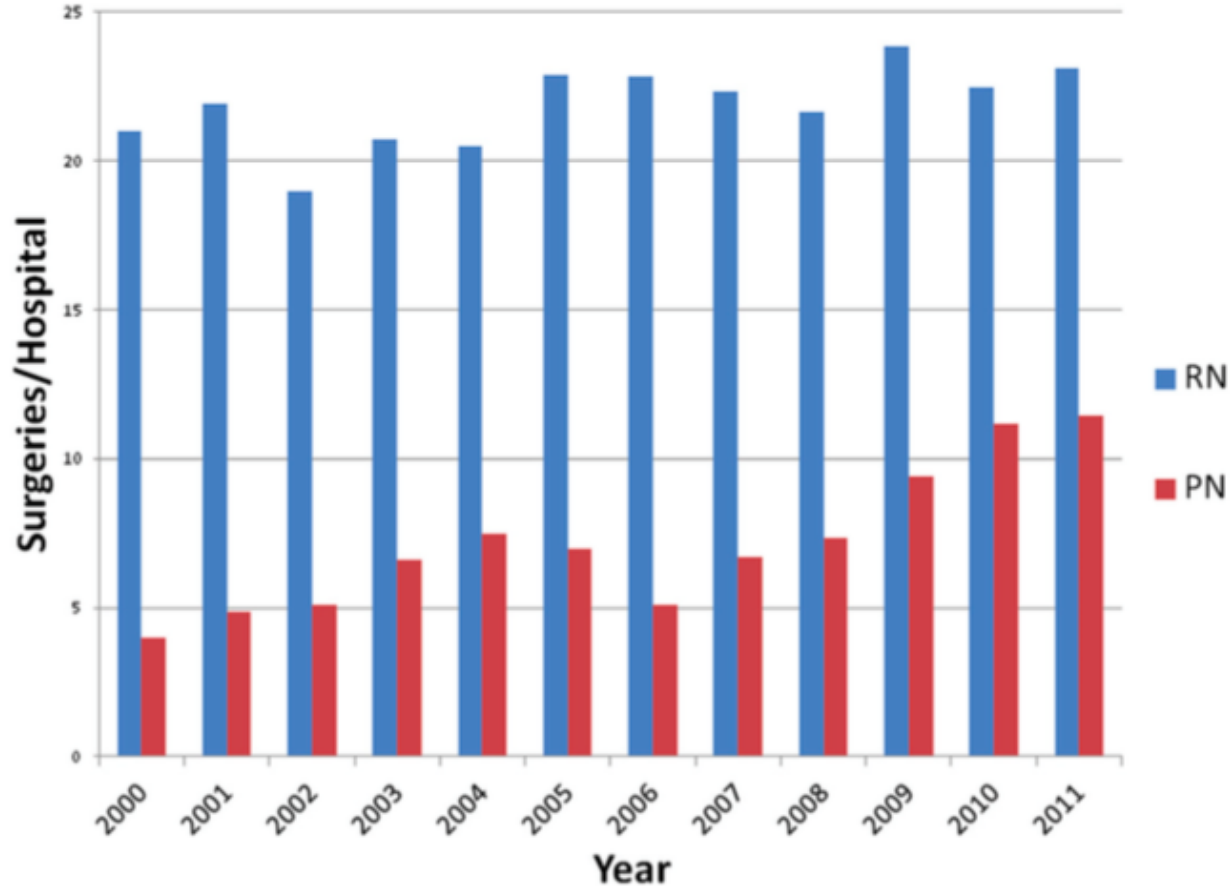
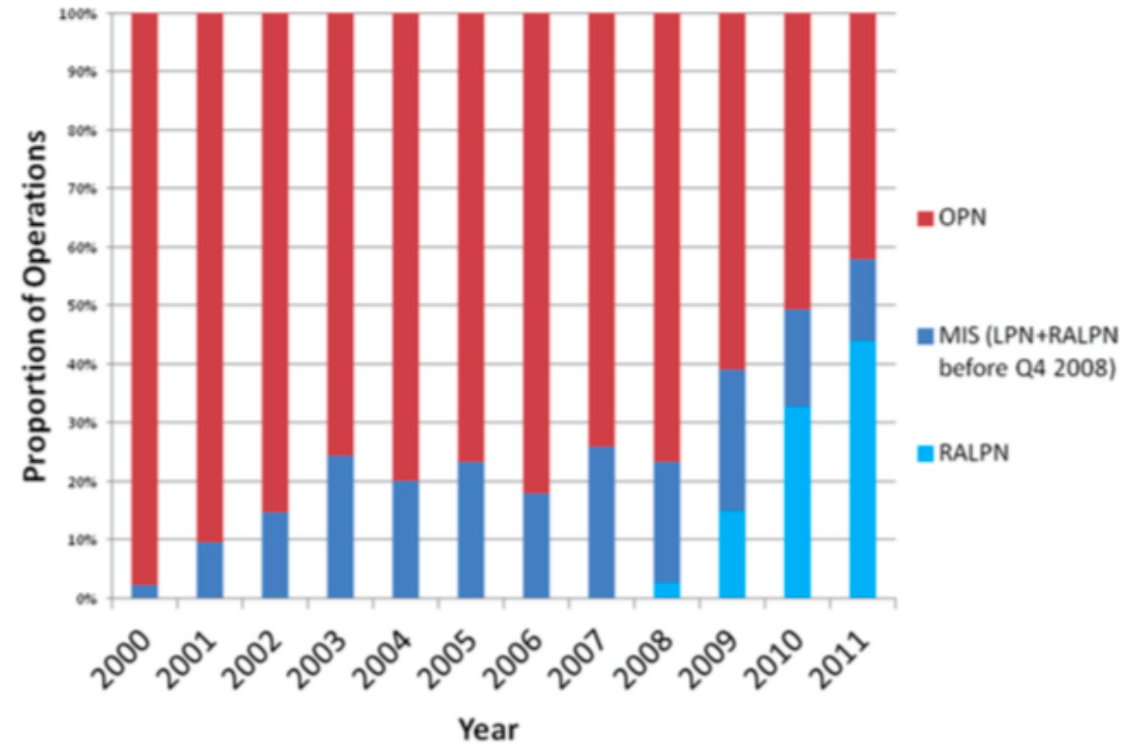


Figure 1. Mean number of RNs and PNs per Maryland hospital from 2000 to 2011

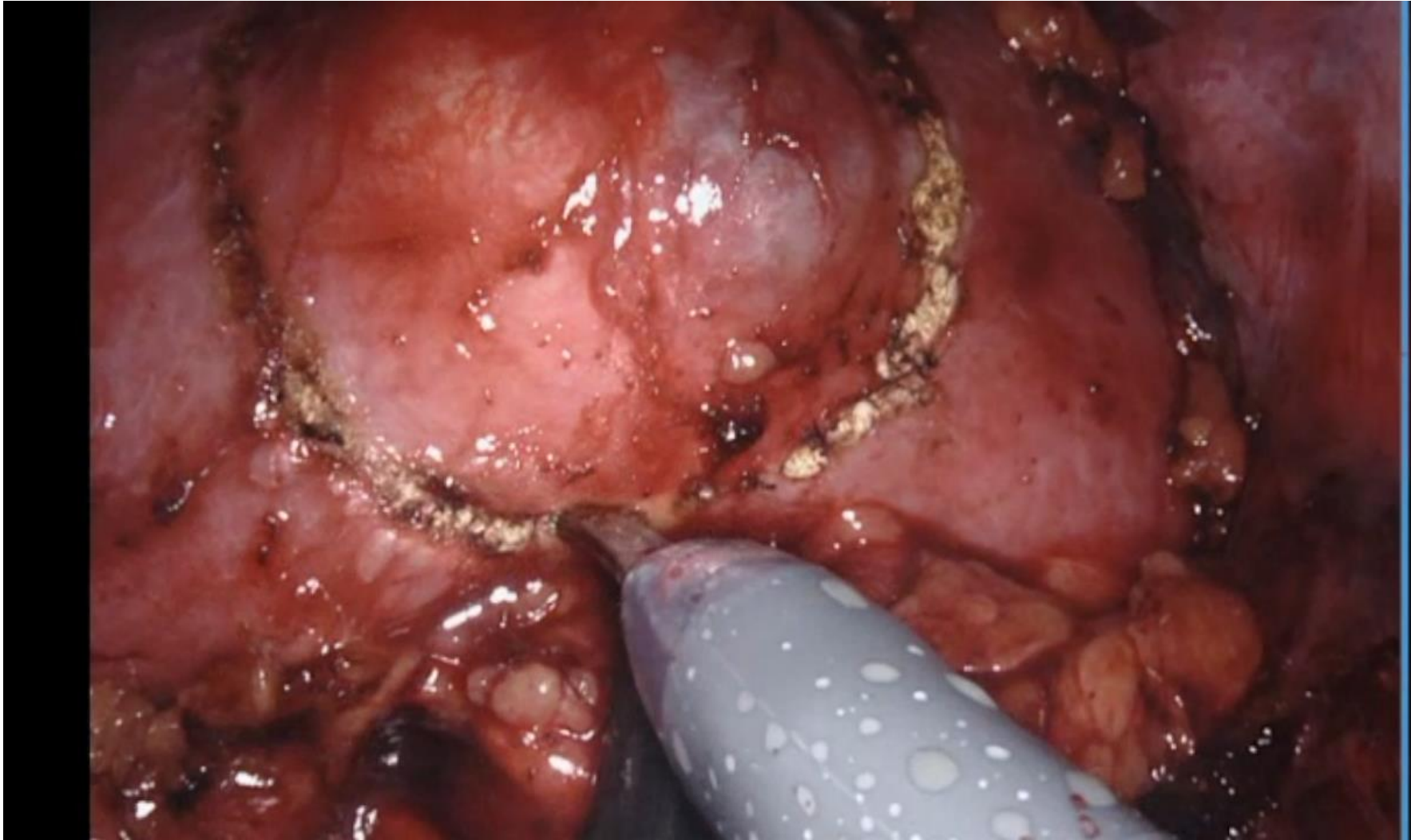
## Via de acesso PN



n=14.260  
Maryland, EUA

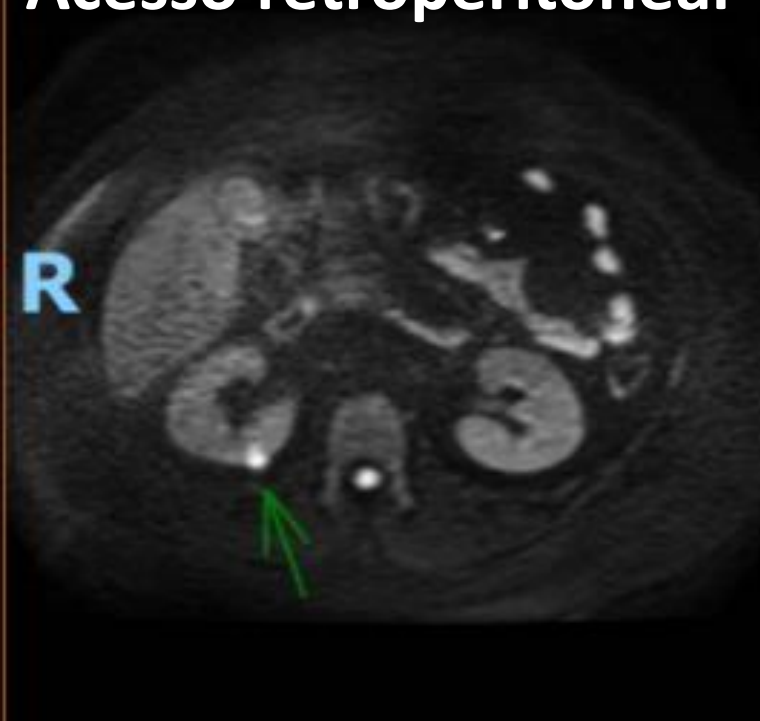


# Via de acesso: transperitoneal vs. retroperitoneal





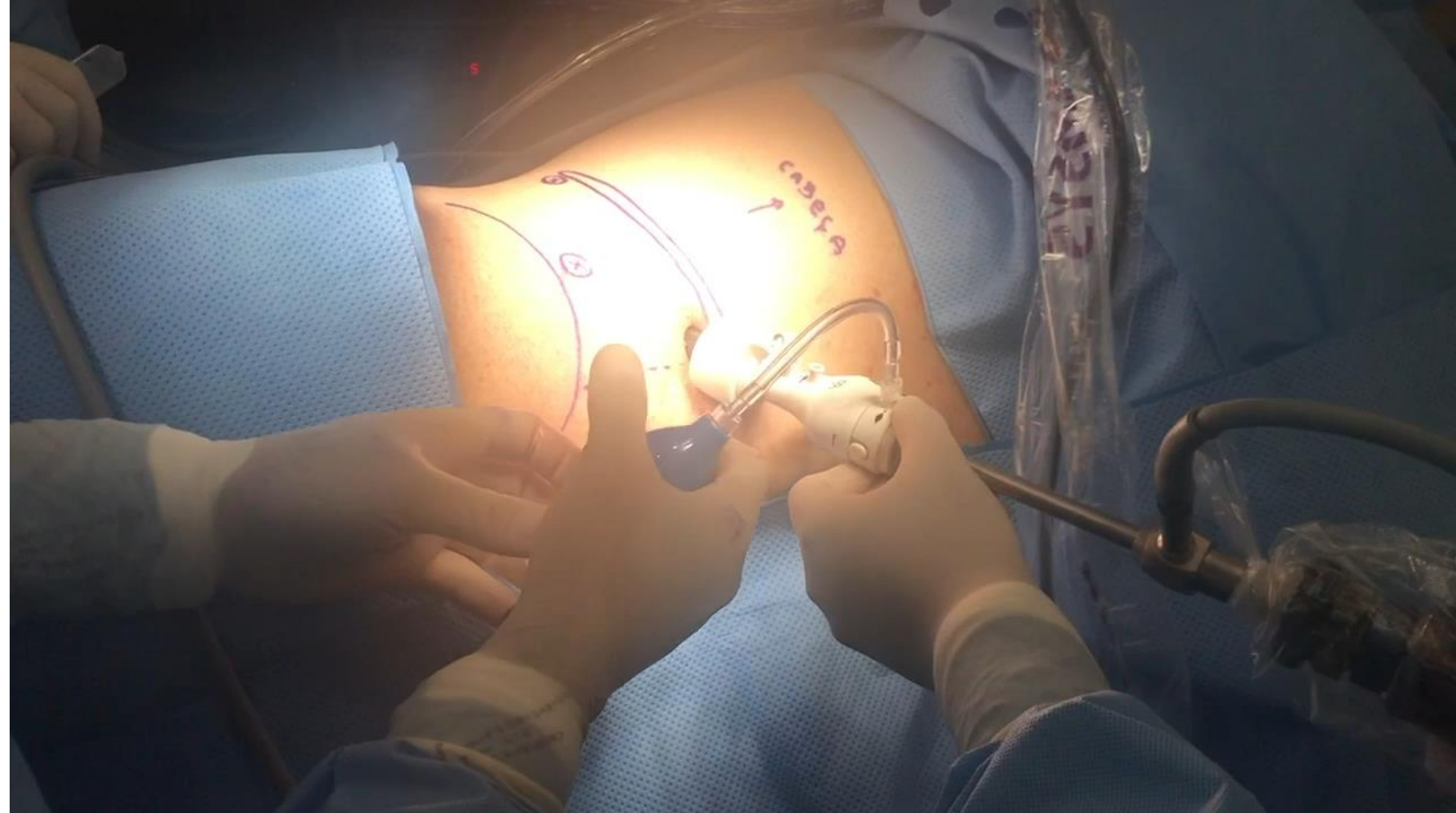
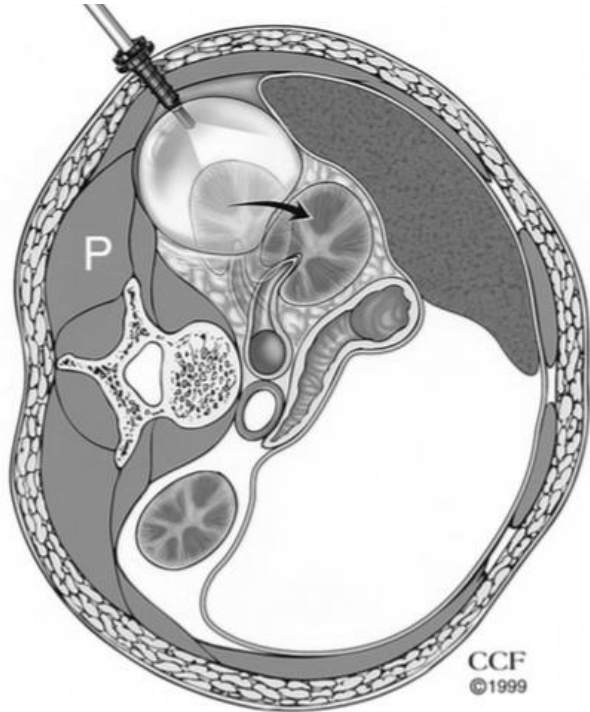
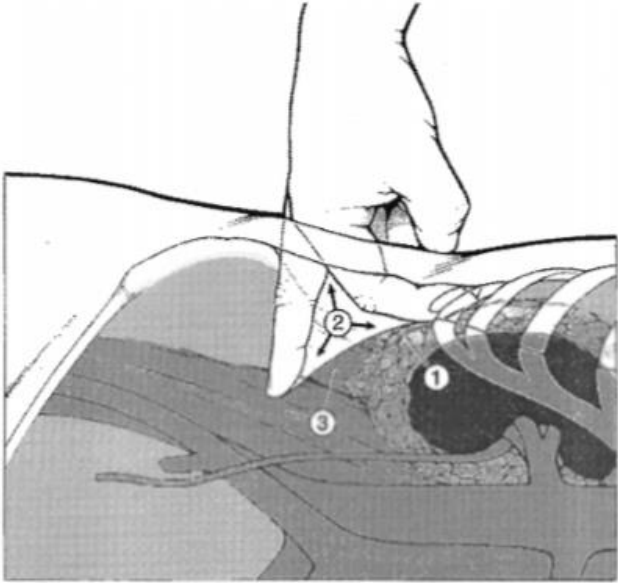
# Acesso retroperitoneal



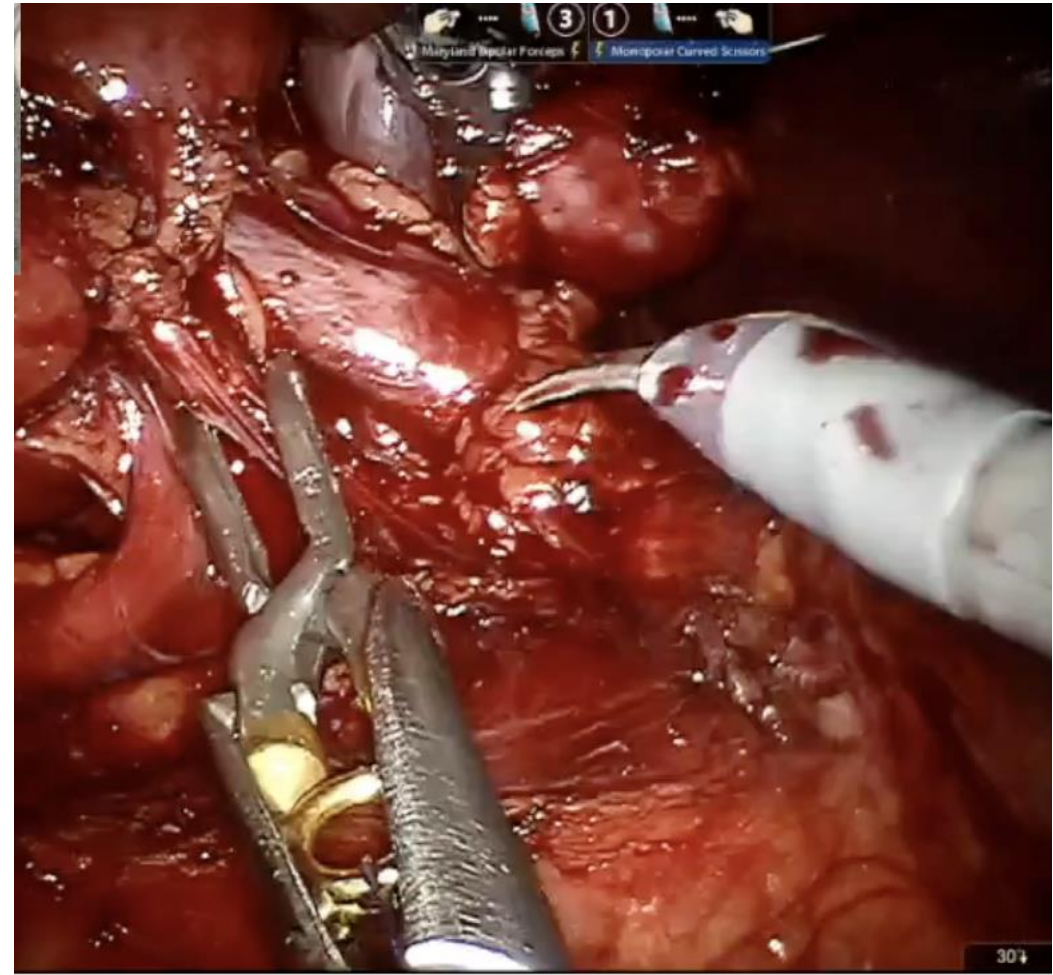
Microscopia e Conclusão Diagnóstica  
**CARCINOMA DE CÉLULAS RENAIS PAPILIFERO**  
Tamanho: 1,5 cm no maior eixo



# Acesso retroperitoneal

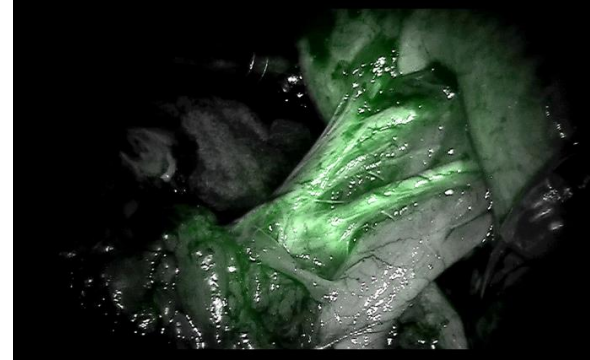
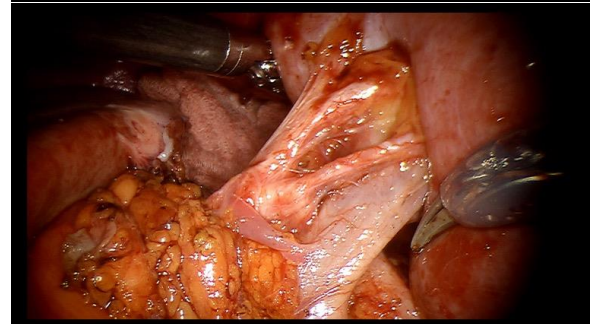
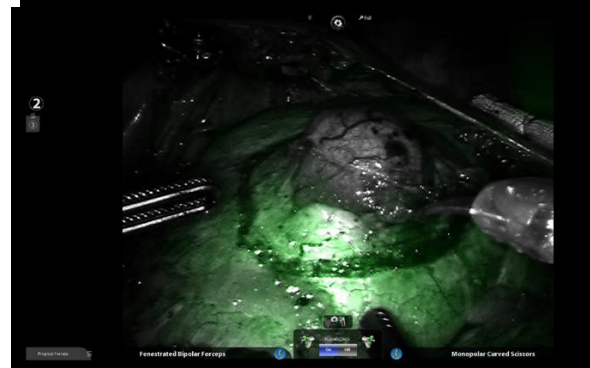
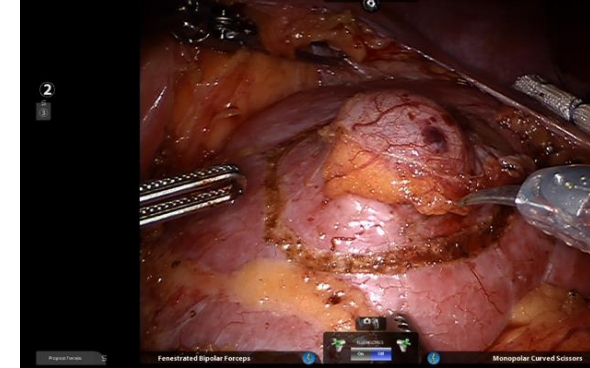


Clampeamento  
Vs.  
Sem-clampeamento

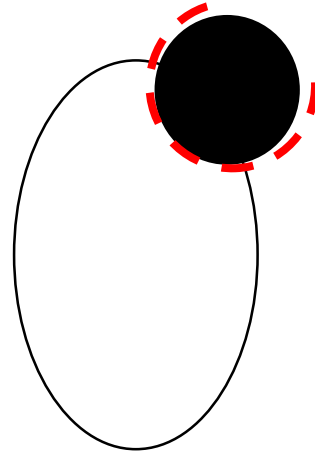




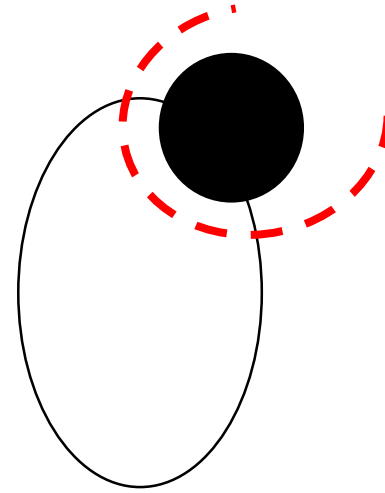
# Firefly Fluorescence Imaging



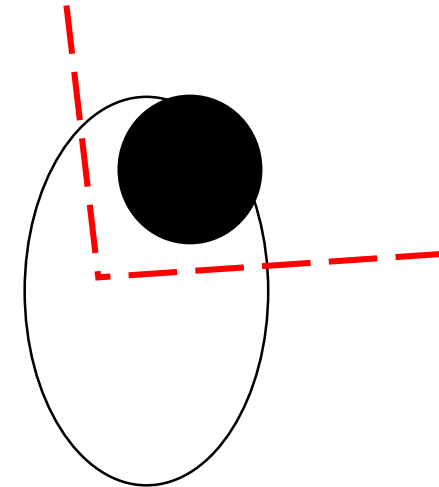
enucleação



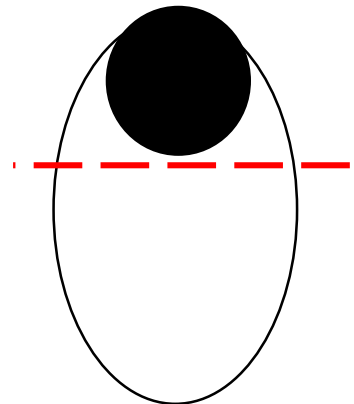
enucleo-ressecção



ressecção em cunha



nefrectomia transversal





# Enucleação: é seguro?

Estudo multicêntrico retrospectivo , n=536, 16 centros

- |                     | Ressecção | vs. | enucleação |
|---------------------|-----------|-----|------------|
| • PFS:              |           |     |            |
| • 5 anos:           | 88,9%     | vs. | 91,4       |
| • 10 anos:          | 82%       | vs. | 90,8       |
| • CSS               |           |     |            |
| • 5 anos:           | 93,9%     | vs. | 91,6%      |
| • 10 anos:          | 94,3%     | vs. | 93,2%      |
| • Recorrência local |           |     |            |

**Semelhantes**

Minervini A, Ficarra V, Rocco F, Antonelli A, Bertini R, Carmignani G, et al. Simple enucleation is equivalent to traditional partial nephrectomy for renal cell carcinoma: results of a nonrandomized, retrospective, comparative study. J Urol. 2011;185(5):1604–10.

## Surgical Margin Does Not Influence Recurrence Rate in pT1 Clear Cell Renal Cell Carcinoma After Partial Nephrectomy: A Multicenter Study

HO WON KANG, MD, PhD,<sup>1</sup> SANG KEUN LEE, MD,<sup>1</sup> WON TAE KIM, MD, PhD,<sup>1</sup>  
 SEOK JOONG YUN, MD, PhD,<sup>1</sup> SANG-CHEOL LEE, MD, PhD,<sup>1</sup> WUN-JAE KIM, MD, PhD,<sup>1</sup>  
 EU CHANG HWANG, MD, PhD,<sup>2</sup> SEOK HO KANG, MD, PhD,<sup>3</sup> SUNG-HOO HONG, MD, PhD,<sup>4</sup>  
 JINSOO CHUNG, MD, PhD,<sup>5</sup> TAE GYUN KWON, MD, PhD,<sup>6</sup> HYEON HOE KIM, MD, PhD,<sup>7</sup>  
 CHEOL KWAK, MD, PhD,<sup>7</sup> SEOK-SOO BYUN, MD, PhD,<sup>8\*</sup> AND YONG-JUNE KIM, MD, PhD,<sup>1\*\*</sup>

### THE KORCC (KOREAN RENAL CELL CARCINOMA) GROUP

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<sup>4</sup>Department of Urology, College of Medicine, The Catholic University of Korea, Seoul, Korea

<sup>5</sup>Department of Urology, National Cancer Center, Goyang, Korea

<sup>6</sup>Department of Urology, Kyungpook National University College of Medicine, Daegu, Korea

<sup>7</sup>Department of Urology, Seoul National University College of Medicine, Seoul, Korea

<sup>8</sup>Department of Urology, Seoul National University Bundang Hospital, Seongnam, Korea

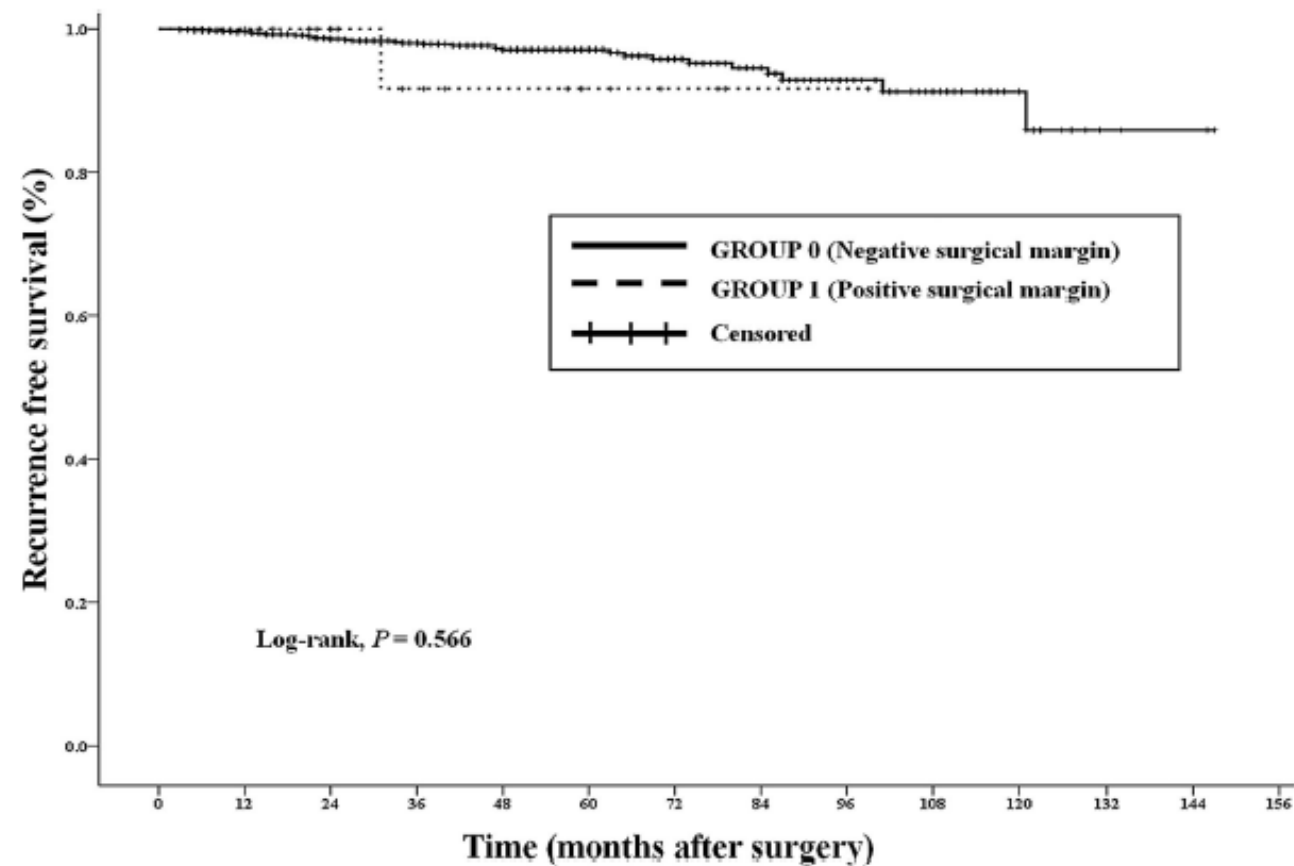
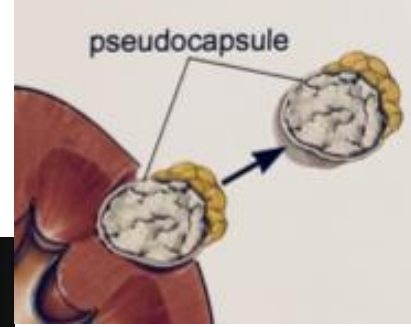
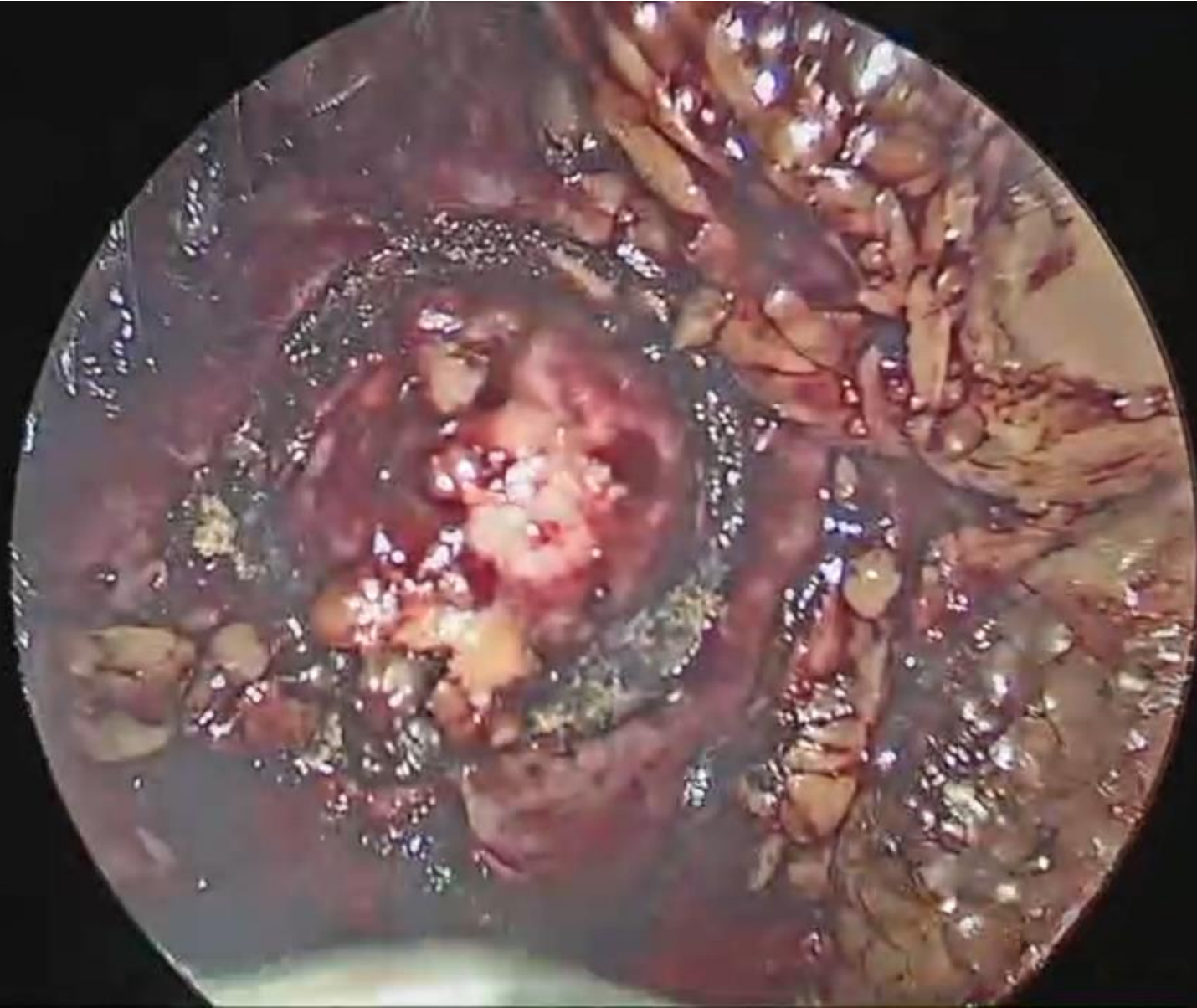


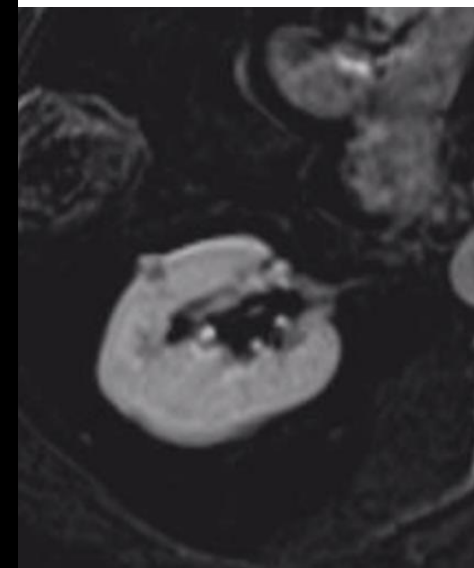
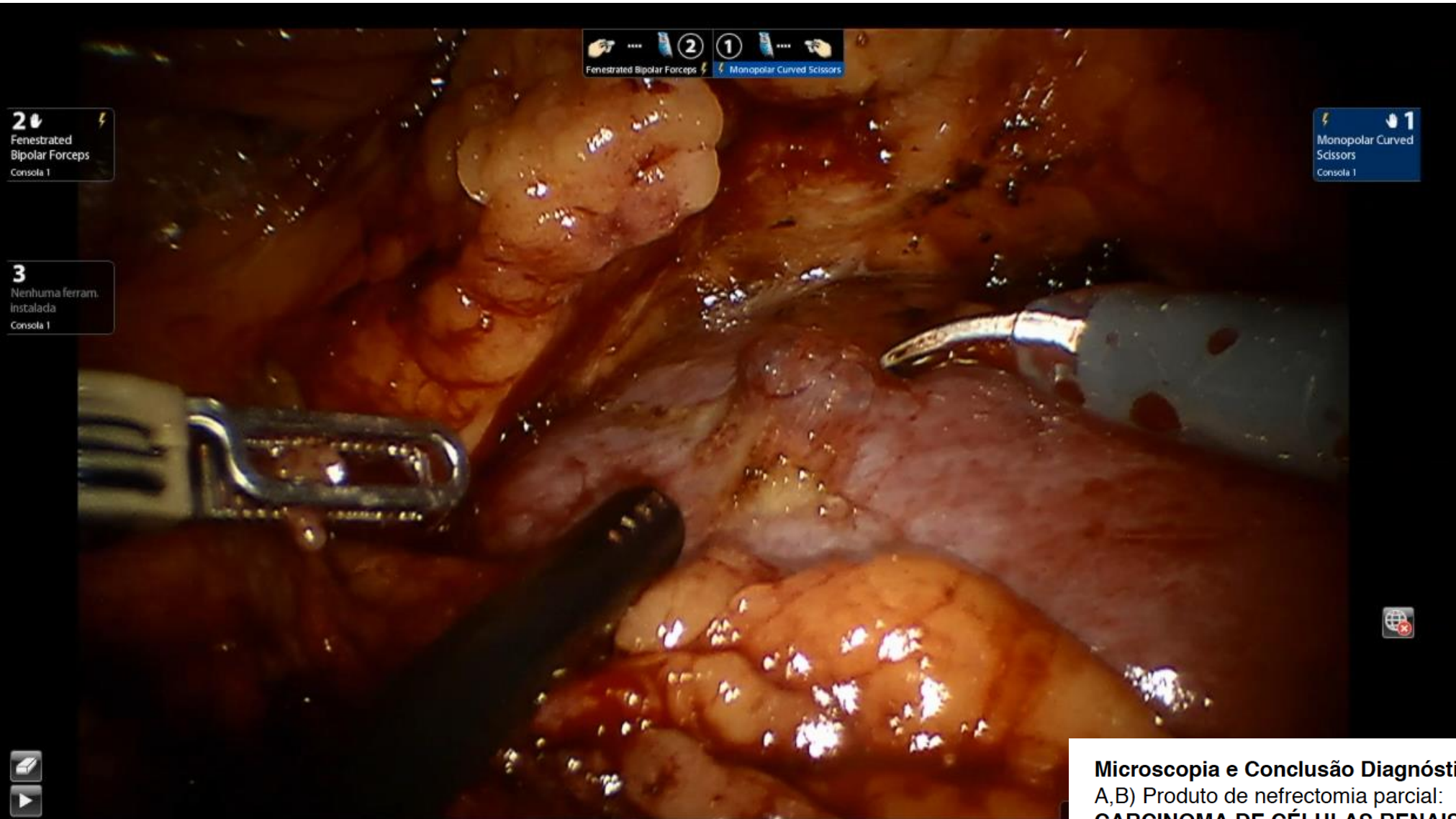
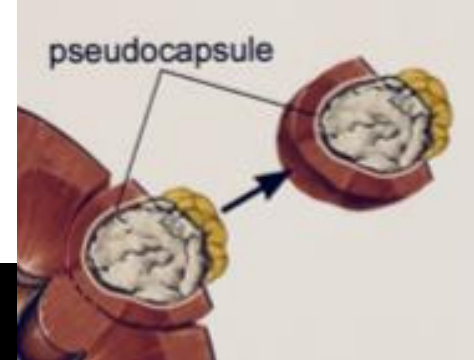
Fig. 1. Analysis of recurrence-free survival by surgical margin status in pT1 clear cell renal cell carcinoma following partial nephrectomy.



# enucleação



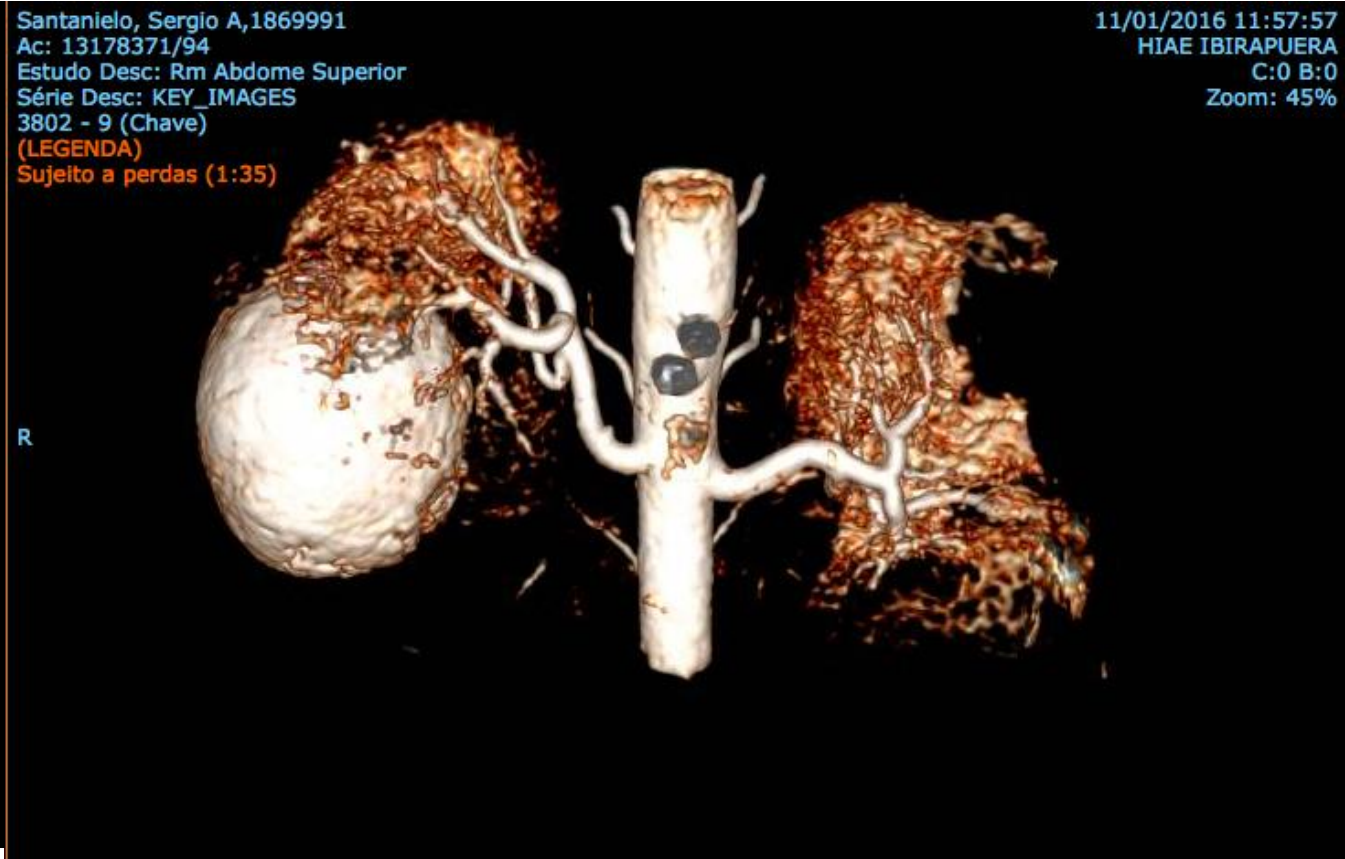
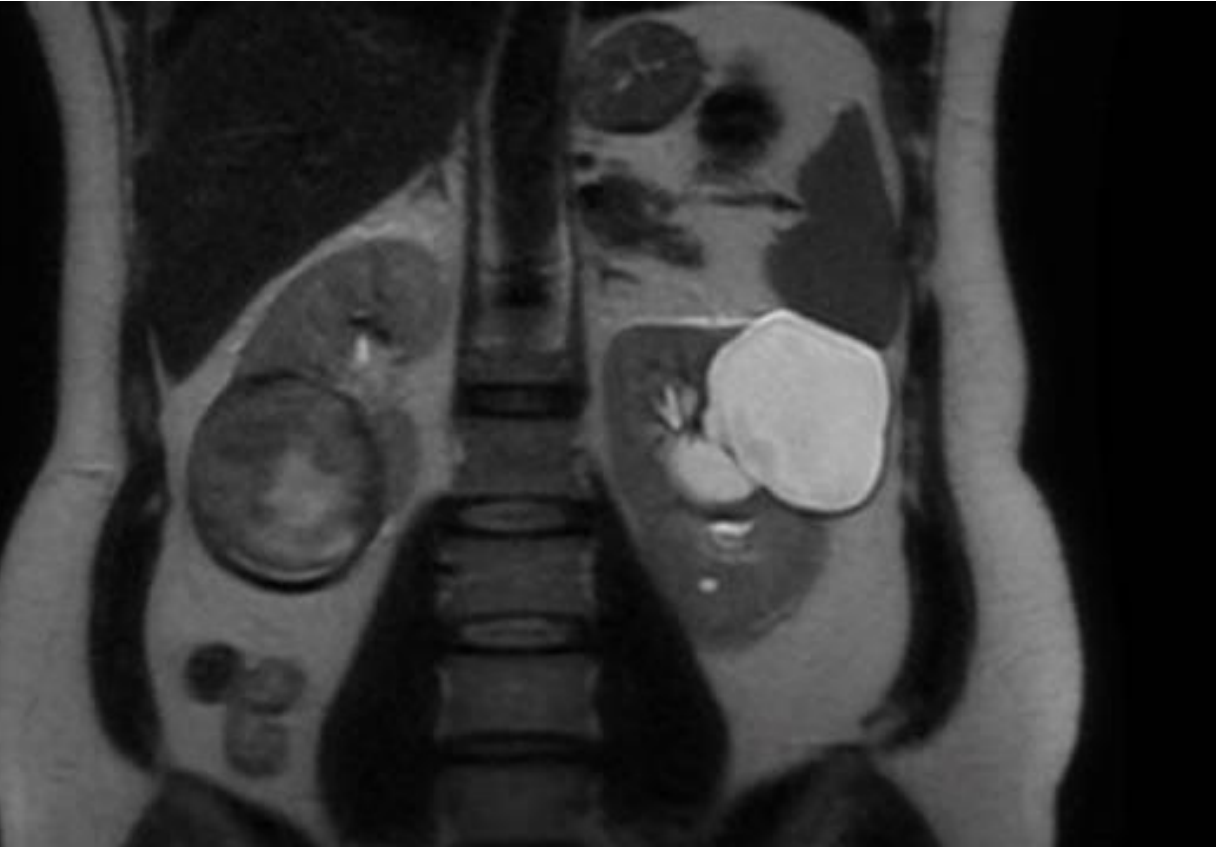
# enucleo-resssecção



**Microscopia e Conclusão Diagnóstica**  
A,B) Produto de nefrectomia parcial:  
**CARCINOMA DE CÉLULAS RENAS DO TIPO CÉLULAS CLARAS**



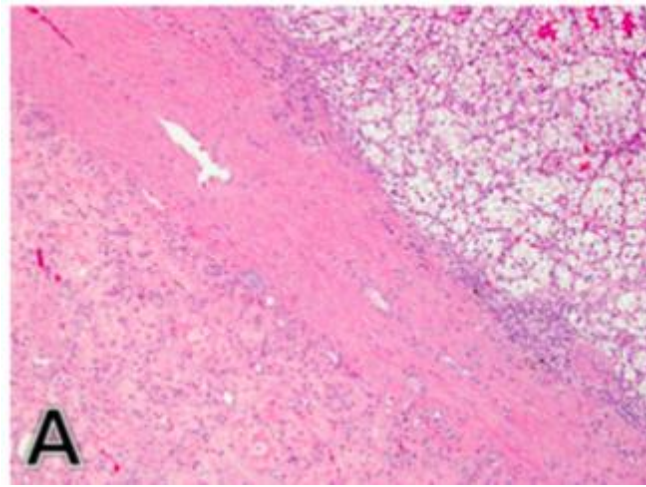
# heminefrectomia





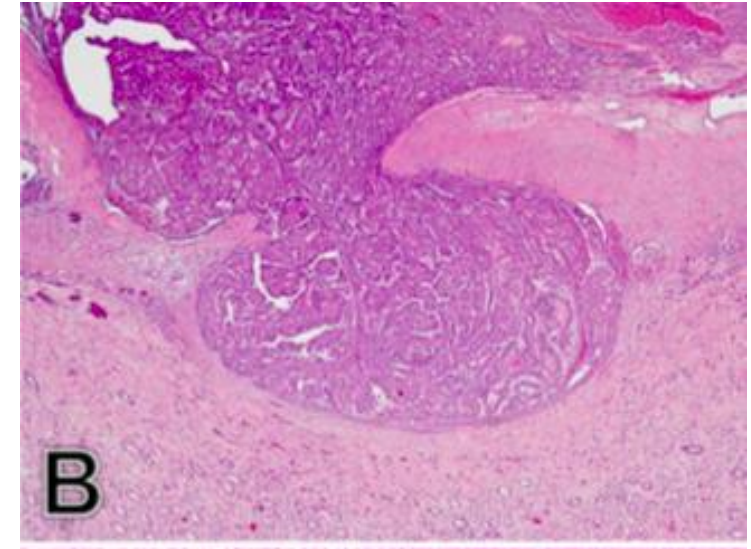
## Céls. Claras

100% tem PC



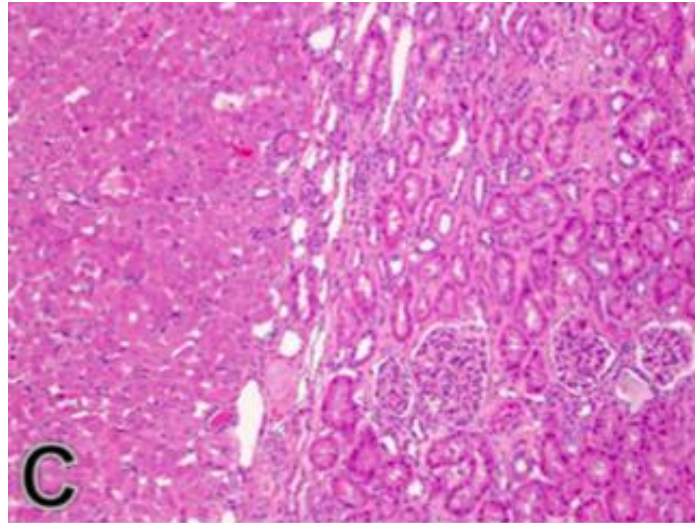
## Papilífero

94% tem PC



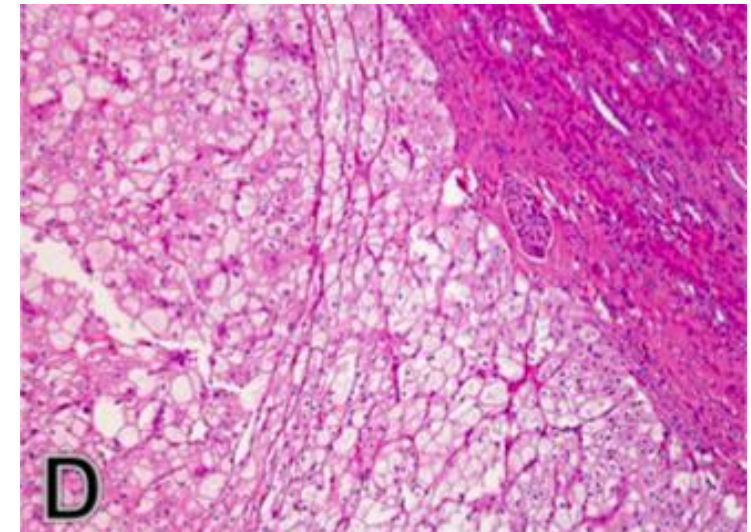
## Cromófobos:

28% não tem PC



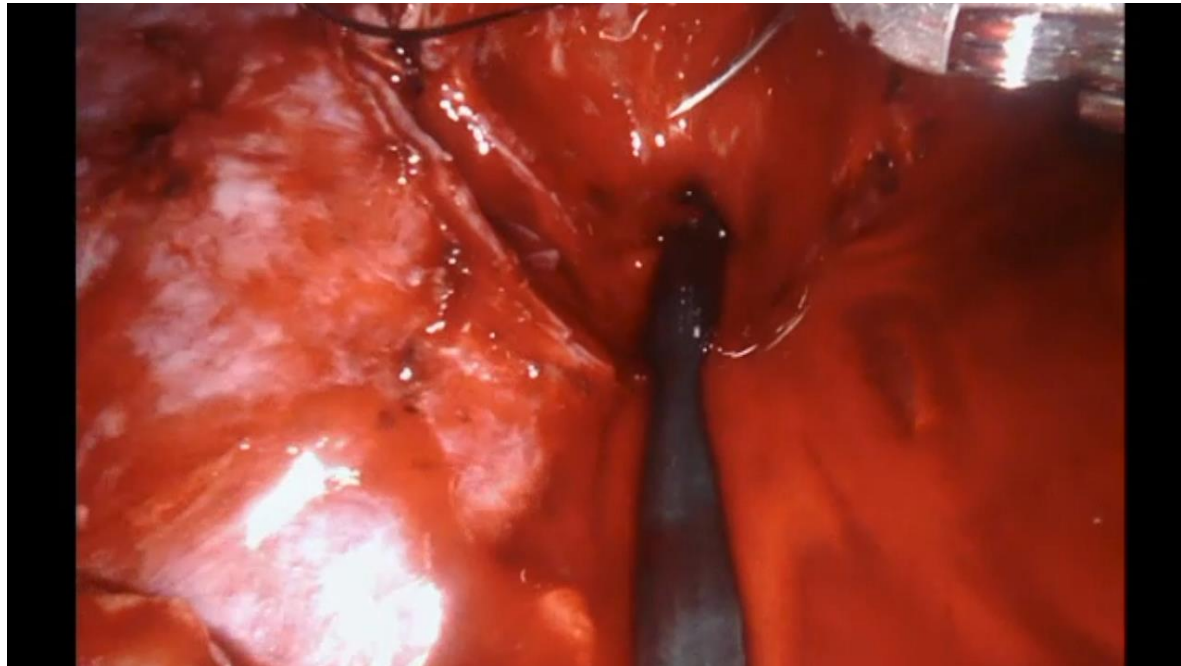
## Oncocitomas:

40% não tem PC



# Hemostasia:

- Coagulação
- Sutura em 1 plano
- Sutura em 2 planos (com ou sem *early unclamping*)





## Repeat Robotic Partial Nephrectomy: Characteristics, Complications, and Renal Functional Outcomes

[Matthew J. Watson](#), DO,<sup>1</sup> [Abhinav Sidana](#), MD,<sup>1</sup> [Annerleim Walton Diaz](#), MD,<sup>1</sup> [M. Minhaj Siddiqui](#), MD,<sup>2</sup>  
[Ryan A. Hankins](#), MD,<sup>3</sup> [Gennady Bratslavsky](#), MD,<sup>4</sup> [W. Marston Linehan](#), MD,<sup>1</sup> and [Adam R. Metwalli](#), MD<sup>✉1</sup>

- Nx parciais repetidas
- Tumores metastáticos
- Trombo em cava

### Partial nephrectomy for metastatic renal cell carcinoma: Where do we stand?

[Mohammed Shahait](#), [Deborah Mukherji](#),<sup>1</sup> and [Yaser El-Hout](#)

Krisnamurti	1990	10	30.4	-	-	-
Krambeck	2006	16	16*	81.3	-	49.2
Hutterer	2007	45	21	86.6	75	-
Capitani	2008	46	23.5	79.4	-	40.3
Hellenthal	2013	70	6**	49	-	-

\*Median follow-up (0-132 months), \*\*Median follow-up (0-212 months), NSS=Nephron-sparing surgery

[Urol Oncol.](#) 2018 Jul;36(7):339.e1-339.e8. doi: [10.1016/j.urolonc.2018.04.007](https://doi.org/10.1016/j.urolonc.2018.04.007). Epub 2018 May 24.

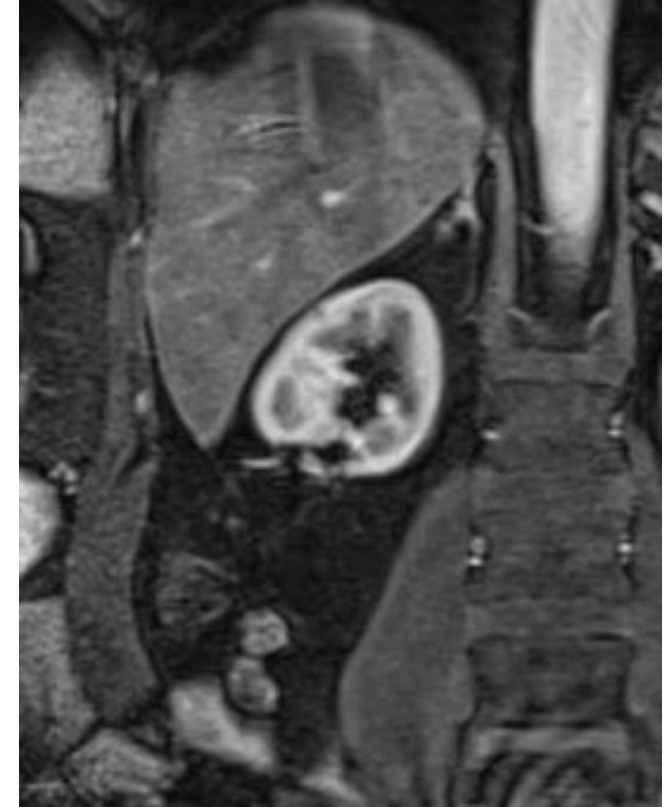
## Is imperative partial nephrectomy feasible for kidney cancer with venous thrombus involvement? Outcomes of 42 cases and matched pair analysis with a large radical nephrectomy cohort.

[Marra G](#)<sup>1</sup>, [Gontero P](#)<sup>2</sup>, [Brattoli M](#)<sup>2</sup>, [Filippini C](#)<sup>2</sup>, [Capitani U](#)<sup>3</sup>, [Montorsi F](#)<sup>3</sup>, [Daneshmand S](#)<sup>4</sup>, [Huang WC](#)<sup>5</sup>, [Linares Espinós E](#)<sup>6</sup>, [Martínez-Salamanca JI](#)<sup>7</sup>, [McKiernan JM](#)<sup>8</sup>, [Zigeuner R](#)<sup>9</sup>, [Libertino JA](#)<sup>10</sup>.

# Nefrectomia parcial

## Expansão das indicações;

- Não há um limite de tamanho
- Tumores hilares
- Tumores múltiplos
- Resultados oncológicos seguros
- Imagem pós-operatório fácil



*J Robot Surg.* 2019 Sep 26. doi: 10.1007/s11701-019-01028-8. [Epub ahead of print]

**A multi-institutional analysis of 263 hilar tumors during robot-assisted partial nephrectomy.**

Sunaryo PL<sup>1</sup>, Paulucci DJ<sup>2</sup>, Okhawere K<sup>2</sup>, Beksac AT<sup>2</sup>, Sfakianos JP<sup>2</sup>, Abaza R<sup>3</sup>, Eun DD<sup>4</sup>, Bhandari A<sup>5</sup>, Hemal AK<sup>6</sup>, Porter J<sup>7</sup>, Badani KK<sup>2</sup>.



HOSPITAL ISRAELITA  
ALBERT EINSTEIN



# Nefrectomia Parcial

Fernando Korkes, MD, PhD

# III SIMPÓSIO INTERNACIONAL

**GU - REVIEW 2019 - LACOG**

**I CONSENSO BRASILEIRO  
DE CÂNCER DE PÊNIS**

**I SIMPÓSIO MULTIPROFISSIONAL ABRENFOH-LACOG GU**  
29 e 30 de Novembro | Hotel Intercontinental

