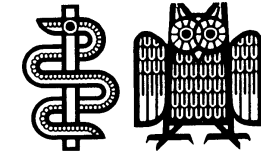




Elective nephron-sparing surgery in 69 patients with renal cell carcinoma > 4 cm



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INTRODUCTION

→ Elective nephron-sparing surgery for tumors < 4cm has become an established surgical standard procedure

→ Similar complication and survival rates comparable to radical nephrectomy

↳ **Question:**

elective nephron-sparing surgery in localized tumors > 4 cm???

→ Retrospective analysis of patients from the Homburg database

PATIENTS AND METHODS

1975 - 2003: n = 463 nephron-sparing surgery

→ n = 368 / 463 (79.5%) elective indications

→ n = 94 / 368 (25.5%) elective nephron-sparing surgery of tumors > 4cm

→ 69 / 94 (73.4%) renal cell carcinoma

- **Current follow-up:** collected data from 86.2% of all patients

- **Statistics:** SPSS™ for Windows

Kaplan-Meier-method (survival)

- **TNM-Classification** for kidney tumors: 6th edition (2002)

- **Mean age:** 54.2 years (median 57 years)

- **Surgical approach:** 100% retroperitoneal (flank incision)

- **Surgical technique:** → n = 83 (88.3%) warm ischaemia

→ n = 10 (10.6%) no ischaemia

→ n = 1 (0.1%) cold ischaemia (*perfusion*)

RESULTS

	n	%
total:	94	100
gender:		
male	51	54.3
female	43	45.7
side:		
right	50	53.2
left	44	46.8
incidental:	79	84.1
symptomatic:	15	15.9
→ 13x flank pain; 2x haematuria		

→ Table 1: general characteristics of patients/tumors

- **Complications:** → 7 / 94 (7,4 %) urinoma
→ 2 / 94 (2,1 %) haematoma
→ 3 / 94 (3,2 %) other complications

→ surgical reintervention in 2 / 94 cases

→ **no nephrectomy necessary**

- **Histological findings:**

→ n = 25 (26.6%) benign tumors

- n = 9 angiomyolipoma

- n = 7 oncocytoma

- n = 8 complicated cysts

- n = 1 inflammatory pseudotumor

→ n = 69 (73.4%) renal cell carcinoma

	n	%	
pT-stage	pT1b	62	89.9
	pT2	4	5.8
	pT3a	3	4.3
grading	G I	10	14.5
	G II (GII-III)	54	78.3
	G III (GIII-IV)	5	7.2
histopathology	conventional	55	79.7
	papillary	9	13.0
	chromophobe	5	7.3
mean diameter of tumor: 5.33 cm			

→ Table 2: histological findings in 69 patients with renal cell carcinoma

- **Mean follow-up time:** 74.5 months (range: 0.5 – 240.1 months)

- **Tumor recurrence:** n = 4

→ n = 3 lung metastasis

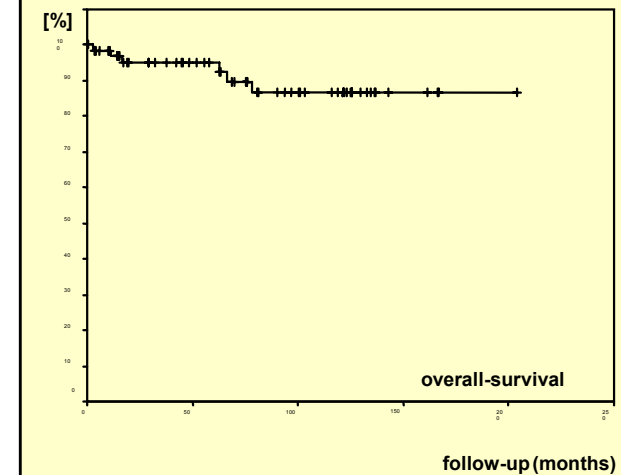
→ n = 1 hilar lymph nodes

→ all tumors stage pT1b

→ 1, 4, 6 and 11 years after surgery

→ **no local recurrence !**

	5-year	10-year	15-year
survival (overall):	94.9%	86.7%	86.7%
tumor specific survival:	100%	100%	100%



→ Fig. 1: overall survival of patients with renal cell carcinoma

CONCLUSIONS

→ Excellent survival after elective nephron-sparing surgery of renal cell carcinoma > 4cm

→ Low complication rates

→ 26.6 % benign tumors

→ Depending on technical feasibility, elective nephron-sparing surgery can also be considered for tumors exceeding 4 cm in size !