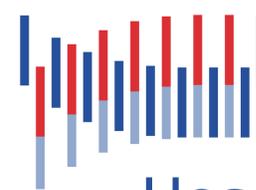


Surgical management of localised renal cell carcinoma in Hessian hospitals – a population-based analysis

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Hessisches Krebsregister

BACKGROUND

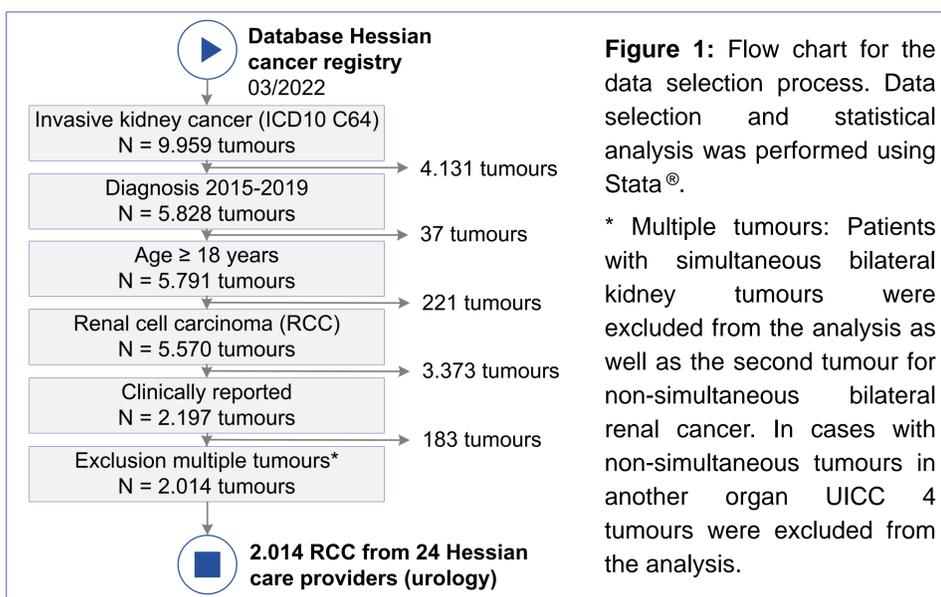
During the past decade, the treatment paradigm for localised renal cell carcinoma (RCC) has shifted towards nephron-sparing surgery as oncologic outcomes have shown to be equivalent to radical nephrectomy and towards minimally invasive surgery with reduced intraoperative blood loss and shorter convalescence^{1,2}.

To date, little data are available on the implementation of laparoscopy in partial and radical nephrectomy in Germany.

AIM OF THE STUDY

The purpose of this study was to analyse the surgical management of localised RCC and compare the rates of organ-saving and minimally invasive resections among different care providers.

METHODS



Definition of localised RCC in this study:

- UICC 1 = T1 (≤ 7cm, limited to kidney), N0, M0
- UICC 2 = T2 (> 7cm, limited to kidney), N0, M0

RESULTS

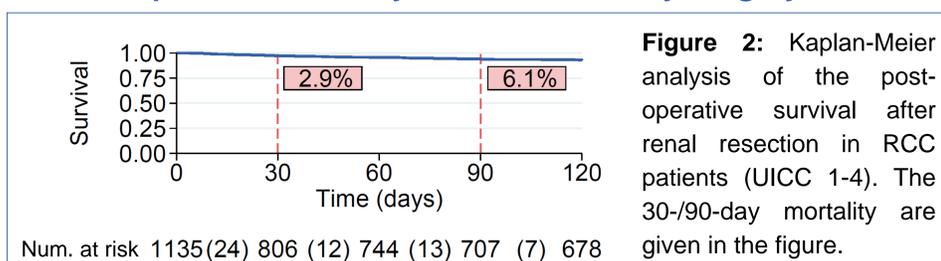
1. UICC stage distribution and renal surgery of RCC in Hesse

Table 1: UICC stages of RCC patients in Hesse.

UICC	N	%
1	1168	58%
2	152	8%
3	264	13%
4	375	19%
U	55	3%

- Localised RCC** (UICC 1, 2) was diagnosed in 66% of the patients (Tab. 1).
- Surgical treatment** was reported for 77% of all RCC patients and for 87% of the patients with localised RCC.
- R0-resection** of the primary tumour was achieved in 90% of all surgically treated patients and 94% of the localised RCC.

2. Post-operative mortality after initial kidney surgery



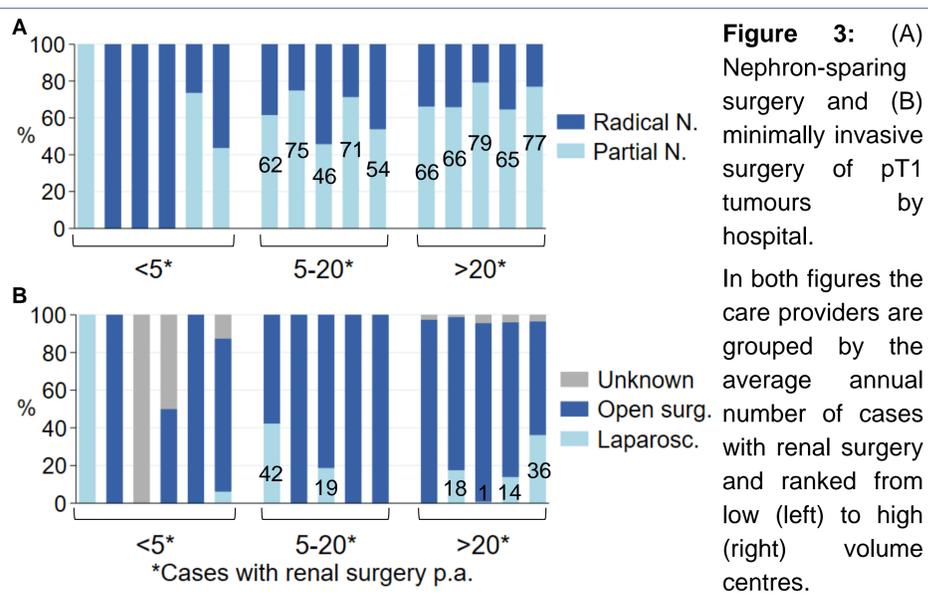
3. Surgical procedures in patients with localised RCC

Table 2: Rates of nephron-sparing and minimally invasive renal surgery in patients with localised RCC and primary tumour resection by UICC stage.

Extend of renal surgery	Surgical procedure	UICC 1 (T1)		UICC 2 (T2)		Total	
		N	%	N	%	N	%
partial nephrectomy (5-553)	laparoscopy	76	7%	0	0%	76	7%
	open surgery	551	54%	22	18%	573	50%
	unknown	18	2%	0	0%	18	2%
radical nephrectomy (5-554)	laparoscopy	62	6%	4	3%	66	6%
	open surgery	225	22%	94	76%	319	28%
	unknown	20	2%	3	2%	23	2%
excision/destruction (5-552)		73	7%	0	0%	73	6%
Total		1025	100%	123	100%	1148	100%

- Nephron-sparing surgery was reported in 63% of patients with UICC stage 1 and in 18% of the patients with UICC stage 2 RCC (Tab. 2).
- Of all laparoscopically removed T1 tumours 56% (N=76) were partially resected, 44% (N=62) were radically resected (Tab. 2).

4. Surgical treatment of pT1 RCC in Hessian hospitals



- Among the Hessian hospitals with more than 5 annual cases with renal surgery, the rates of nephron-sparing surgery for pT1 tumours varied between 46-79% (Fig. 3A) and the rates of minimally invasive renal surgery ranged between 0-42% (Fig. 3B).
- Half of the Hessian hospitals exclusively reported open surgical resection of pT1 RCC (Fig. 3B).

CONCLUSION

- Comprehensive implementation of nephron-sparing resections and especially minimally invasive surgery have not been achieved.
- High disparities among Hessian hospitals were detected with regard to the surgical management of pT1 tumours.
- The low 30-day post-operative mortality and high R0-resection rate indicated an overall high quality of surgical excisions in Hesse.

References

- Gratzke C., Seitz M. et al., Quality of life and perioperative outcomes after retroperitoneoscopic radical nephrectomy (RN), open RN and nephron-sparing surgery in patients with renal cell carcinoma, 2009, BJU Int
- Hemal A.K. et al., Laparoscopic Versus Open Radical Nephrectomy for Large Renal Tumors: A Long-Term Prospective Comparison, 2007, J Urol