Trends from 1999 to 2007 in the surgical treatments of kidney cancer in Europe: data from the Veneto Region, Italy.

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OBJECTIVE To investigate trends in the incidence of overall renal oncological surgery, and the trends and determinants of nephron-sparing (NSS) and minimally invasive surgery, in the Veneto region of North-eastern Italy. PATIENTS AND METHODS The regional archive of hospital discharge records (HDRs) in the Veneto region of North-eastern Italy was assessed to identify discharged patients with a diagnosis of neoplasm of the kidney and intervention codes for partial nephrectomy (PN) or radical nephrectomy (RN) in 1999-2007. An indirect method for identifying minimally invasive surgery was also adopted. Demographic characteristics, year of intervention, presence of comorbidities, and hospital nephrectomy volume were retrieved from HDRs. The influence of patient and hospital variables on the adoption of nephron-sparing surgery (NSS) was assessed through multivariate models. RESULTS The crude rate of surgery for kidney cancer increased from 11.5 to 17.0 per 100 000 population and overall 7221 procedures were included in the evaluated period. The use of PN increased through the study period, reaching 31% of kidney cancer operations in 2007. Younger age, male sex and being hospitalized in facilities with a higher procedural volume were strongly associated with NSS. Laparoscopic nephrectomies, uncommon in 1999, increased to approximately 18% of all procedures by the end of the study period, irrespective of hospital volume. CONCLUSIONS The proportion of open RNs declined to about half of all kidney cancer surgery by 2007; this was the result of an increase in NSS and an even greater increase in laparoscopic RN.

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