World J Urol. 2017 Jan;35(1):57-65. doi: 10.1007/s00345-016-1837-z. Epub 2016 Apr 30.

American Confederation of Urology (CAU) experience in minimally invasive partial nephrectomy.

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Abstract

PURPOSE: To describe the perioperative and oncology outcomes in a series of laparoscopic or robotic **partial** nephrectomies (PN) for renal tumors treated in diverse institutions of Hispanic America from the beginning of their **minimally invasive** (MI) PN **experience** through December 2014.

METHODS: Seventeen institutions participated in the **CAU** generated a MI PN database. We estimated proportions, medians, 95 % confidence intervals, Kaplan-Meier curves, multivariate logistic and Cox regression analyses. Clavien-Dindo classification was used.

RESULTS: We evaluated 1501 laparoscopic (98 %) or robotic (2 %) PNs. Median age: 58 years. Median surgical time, warm ischemia and intraoperative bleeding were 150, 20 min and 200 cc. 81 % of the lesions were malignant, with clear cell histology being 65 % of the total. Median maximum tumor diameter is 2.7 cm, positive margin is 8.2 %, and median hospitalization is 3 days. One or more postoperative complication was recorded in 19.8 % of the patients: Clavien 1: 5.6 %; Clavien 2: 8.4 %; Clavien 3A: 1.5 %; Clavien 3B: 3.2 %; Clavien 4A: 1 %; Clavien 4B: 0.1 %; Clavien 5: 0 %. Bleeding was the main cause of a reoperation (5.5 %), conversion to radical **nephrectomy** (3 %) or open **partial nephrectomy** (6 %). Transfusion rate is 10 %. In multivariate analysis, RENAL nephrometry score was the only variable associated with complications (OR 1.1; 95 % CI 1.02-1.2; p = 0.02). Nineteen patients presented disease progression or died of disease in a median follow-up of 1.37 years. The 5-year progression or kidney cancer mortality-free rate was 94 % (95 % CI 90, 97). Positive margins (HR 4.98; 95 % CI 1.3-19; p = 0.02) and females (HR 5.6; 95 % CI 1.7-19; p = 0.005) were associated with disease progression or kidney cancer mortality after adjusting for maximum tumor diameter.

CONCLUSION: Laparoscopic PN in these centers of Hispanic America seem to have acceptable perioperative complications and short-term oncologic outcomes.

KEYWORDS: Kidney cancer; Laparoscopy; Nephron sparing; **Partial nephrectomy**

PMID: 27137994 DOI: 10.1007/s00345-016-1837-z

[Indexed for MEDLINE]

Publication type, MeSH terms, Supplementary concept

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