



Letter to the Editor

Re: Bimal Bhindi, Christine M. Lohse, Phillip J. Schulte, et al. Predicting Functional Outcomes After Partial and Radical Nephrectomy. Eur Urol 2019;75:766–72

Partial Nephrectomy: “Geocentrism” of the 21st century in the Church of Urology?

Bhindi et al. [1] developed models to predict kidney function outcomes after partial nephrectomy (PN) and radical nephrectomy (RN) that are based on preoperative features. Relative to PN, RN does not predispose to higher overall mortality among patients with T1a renal cell carcinoma. This was clearly shown by the EORTC 30904 trial [2], despite a huge amount of retrospective data supporting PN. Regarding the limitations for retrospective data, Shuch et al. [3] used Surveillance, Epidemiology and End Results data and found that patients undergoing PN had better overall survival (OS) compared with controls, while OS was similar between RN and control groups, suggesting possible selection bias for PN, whereby patients who can afford medical insurance tend to be referred to centers with PN capability and urologic surgeons might avoid PN for patients with comorbidity or surgical risk. Thus, a “PN group” with even better prognosis than normal controls might be unconsciously formed.

Other level 1 evidence regarding renal function exists [4]. Compared with RN, PN reduced the incidence of moderate chronic kidney disease (CKD; estimated glomerular filtration rate [eGFR] <60 ml/min/1.73 m²), although the incidence of advanced CKD (eGFR <30 ml/min/1.73 m²) was similar and the incidence of kidney failure (eGFR <15 ml/min/1.73 m²) was nearly identical. In reply to a comment that the results contrast with numerous retrospective observational studies, Emil Scosyrev stated [5]: “A randomized trial should be given much more weight than observational studies. The data does not support the hypothesis that excess risk of moderate renal dysfunction resulting from RN has major adverse consequences for QOL [quality of life] or OS such as need for dialysis or cardiovascular events. A large cohort of kidney donors that showed no excess risk of kidney failure or death relative to the general population, even after 30 yr of follow-up.”

The effect of PN or RN on renal function has been measured in terms of eGFR. However, there is considerable controversy regarding overdiagnosis of eGFR-defined CKD [6]. A very small percentage of patients with moderate CKD develop end-stage renal disease. Renal dysfunction detected via eGFR measurement is not necessarily reflected in any actual patient symptoms. Renal dysfunction after RN, if it exists, is simply a problem of anxiety and QOL.

Most urologic surgeons have been confused about nephrectomy. If a patient has two kidneys, RN is not total nephrectomy but a type of PN, which we might well call 50% PN. RN versus PN can thus be considered as 50% versus 5–20% nephrectomy. It is unlikely that preservation of 30–45% of the renal parenchyma would make a significant difference.

Preservation of renal function measured in terms of eGFR after PN might be an aerial fancy derived from misinterpretation of retrospective data (or the enthusiasm of urologic surgeons). By contrast, PN carries a higher risk of perioperative complications and positive surgical margins with increasing tumor complexity. These events may be rare but do actually occur. It would be reasonable for clinical urologists to care more about these risks than about preservation of renal function of uncertain existence and inconceivable to both doctors and patients in the overly ambitious use of PN.

Conflicts of interest: The author has nothing to disclose.

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