

Letter to the Editor

Glomerular Function Time Trends in Long-Term Survivors of Childhood Cancer: A Longitudinal Study—Letter

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The recent publication of Mulder and colleagues (1) is an important contribution to the existing literature on potentially nephrotoxic effects of chemotherapy, radiotherapy, and surgery in childhood cancer survivors.

We have focused our attention on the finding that 154 patients who underwent nephrectomy or partial nephrectomy for renal tumor presented with a decrease in renal dysfunction probability during the first decade since diagnosis. Conversely, patients who received other potentially nephrotoxic therapies, presented with a progressive increase in renal dysfunction probability during the first decade since diagnosis (Fig. 4 in the article).

In a cohort of 54 children with unilateral renal tumor, we have found a similar time course of changes in

estimated glomerular filtration rate (eGFR) (2). Before surgery, 30 of 52 patients (58%) presented with a renal dysfunction (eGFR < 90 mL/min/1.73m²). Following the first decade since diagnosis, only 18 of 54 (33%) patients presented with a renal dysfunction ($P = 0.01$).

The longitudinal study of renal function showed that 12 children who underwent nephron-sparing surgery (NSS) presented with a significant increase in mean eGFR and following excision of unilateral tumor, none of them presented with a renal dysfunction. In addition, patients who underwent nephrectomy presented with a nonsignificant increase in mean eGFR that was significantly lower than that following NSS.

The increase in eGFR after NSS and the absence of renal function loss following nephrectomy suggest that renal tumors can cause a renal function loss. In addition, our findings suggest that NSS may have a renal function advantage over nephrectomy.

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No potential conflicts of interest were disclosed.

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