

# Dialysis Should Be Started When Absolutely Necessary, Not Early and Incrementally



**To the Editor:** The commentary by Obi and Kalantar-Zadeh<sup>1</sup> and clinical paper by Chin *et al.*<sup>2</sup> on incremental dialysis deserves further scrutiny. The first issue is which patients, if any, are “optimal” for the incremental dialysis approach? Patients who are dialyzed early, at an estimated glomerular filtration rate (eGFR) >10 ml/min per 1.73 m<sup>2</sup>, may not have a better survival with incremental dialysis versus waiting to initiate standard dialysis at lower eGFR levels.<sup>3</sup> Increasing urea clearance with 3 times per week dialysis, although used for assessing dialysis adequacy, has not been shown to have a survival benefit. Thus, the incremental increase in small molecule/urea clearance above endogenous renal clearance, does not justify starting dialysis in these patients with significant residual renal function, especially when considering the potential harms of dialysis. In contrast, maximizing diuretic therapy for patients with intractable fluid overload may be a good approach to delay dialysis initiation. Patients in whom diuretic management fails are not candidates for twice weekly incremental dialysis with limited weekly ultrafiltration, but may be appropriate candidates for conventional hemodialysis with an “early start” in some cases. Nephrologists who want to consider twice weekly hemodialysis for palliative care need to consider the high 3- and 6-month mortality rates in many of these high-risk patients.<sup>4</sup> Twice weekly hemodialysis may be used in 25% of patients dialyzed in China, a country where few patients initiate dialysis early.<sup>5</sup> This approach makes good sense in countries with limited resources for dialysis and may have the added benefit of preserving residual endogenous renal function with its potential survival benefit.

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**The Authors Reply:** We thank Dr. Rosansky for his comments.<sup>1</sup> First, we are in full agreement that dialysis should not be started until the patient requires renal replacement therapy. Patients in our study<sup>2</sup> were started on conventional hemodialysis (HD) 3 times per week, not on incremental HD, by their nephrologists who believed that initiation of dialysis was clinically needed, although we could not determine the exact reason for each dialysis initiation due to the retrospective nature of our study. Moreover, our study patients (based on 386 of the 410 study patients in whom immediate predialysis start serum creatinine values were available) had a mean modification of diet in renal disease estimated glomerular filtration rate (eGFR) of 9.7 ml/min per 1.73 m<sup>2</sup> (SD of 4.5), and 38% of the study cohort initiated dialysis with eGFR ≥10 ml/min per 1.73 m<sup>2</sup>. These statistics are similar to those reported in the most recent United States Renal Data System report,<sup>3</sup> in which the mean eGFR at initiation of dialysis in 2014 was 10.2 ml/min per 1.73 m<sup>2</sup> and 39% of incident end-stage renal disease cases started with eGFR ≥10 ml/min per 1.73 m<sup>2</sup>. Therefore, our study group did not appear to have been started on dialysis any earlier than what was observed nationally.

Our study aim was to assess the proportion of a clinically stable incident HD cohort who could have theoretically started dialysis on a twice weekly

