

The Authors Reply: We thank Hemmelgarn *et al.* for their interest¹ and appreciate that they reanalyzed their data regarding the association of multidisciplinary care (MDC) and risk of death among chronic kidney disease (CKD) patients.² Time-dependent analyses showed that about 25 and 16% of the unadjusted and adjusted associations, respectively, were due to immortal time.

In their first analysis, the overall association of MDC with risk of death was almost entirely due to a strong, protective association during the first year of follow-up (Table 1). The protective effect subsequently disappeared. Hence, we argued that immortal time bias was an especially important limitation of the study.³ Of course, other mechanisms, including unmeasured confounding and reverse causation (i.e., substantial perceived risk of death in the short run precluded referral to MDC), may have influenced results during early follow-up. As Hemmelgarn *et al.* noted, only a randomized clinical trial can provide definitive evidence of the effect of MDC on outcomes among CKD patients.

Table 1 | Kaplan-Meier estimates of survival and interval-specific relative hazards of death for patients receiving multidisciplinary care (referent: patients not receiving multidisciplinary care)

Time (years)	Survival probability ^a		Interval-specific HR ^b
	MDC	No MDC	
0.0	1.00	1.00	
0.5	0.98	0.82	0.14
1.0	0.94	0.76	0.51
2.0	0.79	0.65	1.06
3.5	0.70	0.59	1.34

Abbreviations: HR, hazard ratio; MDC, multidisciplinary care.

^aFrom visual inspection of Figure 1 in Hemmelgarn *et al.*²

^bDuring interval beginning at previously listed time and ending at listed time (e.g., HR = 0.14 between 0.0 and 0.5 years of follow-up); hazards were calculated from the discrete hazard function, with survival probabilities as inputs.

1. Hemmelgarn BR, Zhang J, Manns BJ *et al.* Multidisciplinary care and immortal time bias. *Kidney Int* 2013; **84**: 1052.
2. Hemmelgarn BR, Manns BJ, Zhang J *et al.* Association between multidisciplinary care and survival for elderly patients with chronic kidney disease. *J Am Soc Nephrol* 2007; **18**: 993–999.
3. Liu J, Weinhandl ED, Gilbertson DT *et al.* Issues regarding ‘immortal time’ in the analysis of the treatment effects in observational studies. *Kidney Int* 2012; **81**: 341–350.

Jiannong Liu¹, Eric D. Weinhandl¹, Allan J. Collins¹ and Wendy L. St Peter^{1,2}

¹Chronic Disease Research Group, Minneapolis Medical Research Foundation, Minneapolis, Minnesota, USA and ²College of Pharmacy, University of Minnesota, Minneapolis, Minnesota, USA

Correspondence: Wendy L. St Peter, Chronic Disease Research Group, Minneapolis Medical Research Foundation, 914 South 8th Street, Suite S4.100, Minneapolis, MN 55404, USA. E-mail: wstpeter@cdrg.org

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Nephrology follow-up and all-cause mortality of severe acute kidney injury survivors

To the Editor: We have read with interest the article by Harel *et al.*,¹ in which they examined retrospectively the impact of early nephrology follow-up (within 90 days of discharge) on mortality in survivors (within a maximum follow-up of 2 years) of dialysis requiring acute kidney injury (AKI) using a propensity score-based matching of patients with and without nephrology follow-up on over 40 demographic and clinical variables. They found that the incidence of all-cause mortality was lower in those patients with early nephrology follow-up compared with those without (8.4 compared with 10.6 per 100 patient-years, hazard ratio 0.76 (95% confidence interval 0.62–0.93)). This observation strongly argues the value of the specialist follow-up after hospitalization in survivors of severe AKI as it has been shown in other severe acute conditions (i.e., myocardial infarction, heart failure, and chronic obstructive pulmonary disease).^{2–4} Besides the limitations pointed out in the article, the authors have not evaluated the number of patients admitted to intensive care unit (ICU) and have not mentioned the causes of death. We should remember that AKI in the ICU should be distinguished from AKI in other clinical settings, as the underlying pathophysiology, severity of illness, and risk for permanent sequelae may be different. Furthermore, the identification of causes of death among AKI survivors followed up and not followed up by nephrologists could contribute to clarify the optimal care for AKI survivors and the role played by nephrologists.

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José A. Lopes¹ and Sofia C. Jorge¹

¹Department of Nephrology and Renal Transplantation, Hospital de Santa Maria, Centro Hospitalar de Lisboa Norte, EPE, Lisboa, Portugal

Correspondence: José A. Lopes, Department of Nephrology and Renal Transplantation, Hospital de Santa Maria, Centro Hospitalar de Lisboa Norte, EPE, Avenida Professor Egas Moniz, 1649-035 Lisboa, Portugal. E-mail: jalopes93@hotmail.com

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