

<b>Title</b>	<b>Shorter dialysis times are associated with higher mortality among incident hemodialysis patients.</b>
<b>Author(s)</b>	<b>SM Brunelli, GM Chertow, ED Ankers, EG Lowrie, R Thadani, USA</b>
<b>Journal</b>	<i>Kidney International, online publication, 20th January 2010</i>
<b>Introduction</b>	There is an association between HD session length and mortality independent of the effects of session duration on urea clearance. However, previous studies did not consider changes in session length over time nor did they control the influence of time-dependent confounding.
<b>Material and Methods</b>	<ul style="list-style-type: none"><li>• Using data from a national cohort of 8552 incident patients on thrice-weekly in-center HD, the association between dialysis session length and mortality was analyzed.</li><li>• <b>To better account for the influence of time-dependent confounding on the session length – mortality association, marginal structural analysis, a novel statistical method, was applied.</b> In this analysis, session length and time-varying covariates were updated at each month of the study.</li><li>• Exposure was based on prescribed session length with the outcome being death from any cause. On the 31<sup>st</sup> day after initiating dialysis, the patients were considered at-risk and remained so until death, censoring, or completion of 1 year on dialysis.</li></ul>
<b>Results and Conclusions</b>	<ul style="list-style-type: none"><li>• <b>In marginal structural analysis, session lengths &lt; 4 h were associated with a 42% increase in mortality.</b></li><li>• Further analyses showed a dose–response relationship between session duration and mortality.</li><li>• These results were also consistent regarding findings across prespecified subgroups for age, gender, vascular access, heart failure, dialysis dose, and hospitalisation.</li></ul> <p>The results of the study suggest that shorter HD sessions are associated with higher mortality when marginal structural analysis was used to adjust for time-dependent confounding. Further studies are needed to confirm these findings and determine causality.</p>