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### Authors

Rhee, Connie  
You, Amy  
Danh, Nguyen  
[et al.](#)

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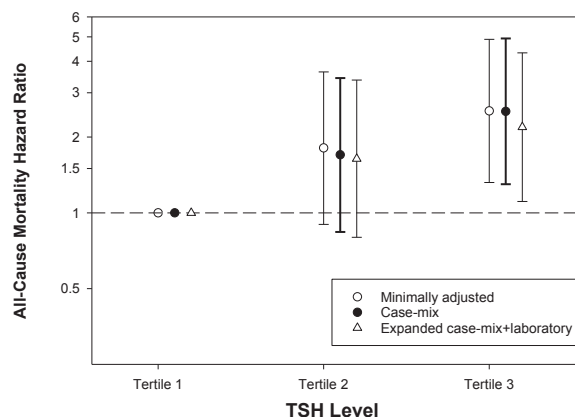
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### THYROID FUNCTION AND MORTALITY RISK IN A PROSPECTIVE HEMODIALYSIS COHORT: FINDINGS FROM THE MADRAD STUDY

Connie Rhee<sup>1</sup>, Amy You<sup>1</sup>, Danh Nguyen<sup>1</sup>, Steven Brunelli<sup>2</sup>, Jennie Jing<sup>1</sup>, Tracy Nakata<sup>1</sup>, Elani Streja<sup>1</sup>, Matthew Budoff<sup>3</sup>, Csaba Kovedy<sup>4</sup>, Gregory Brent<sup>5</sup>, Kamyar Kalantar-Zadeh<sup>1</sup>  
<sup>1</sup>UCI, Orange, CA; <sup>2</sup>DaVita Inc., Minn., MN; <sup>3</sup>LABiomed, Torrance, CA; <sup>4</sup>Univ Tenn Health Sci Ctr, Memphis, TN; <sup>5</sup>UCLA, LA, CA

Hemodialysis (HD) patients have a substantially higher risk of both hypothyroidism, defined by elevated serum thyrotropin (TSH) levels, and cardiovascular (CV) mortality compared to the general population. In the general population, higher serum TSH levels have been associated with CV disease and death, whereas studies examining the association between thyroid function and mortality in HD patients have been inconsistent. We examined the association between thyroid function and all-cause mortality among 541 HD patients recruited across 16 Southern California dialysis centers in the prospective MADRAD study (study period 10/2011-8/2015) who underwent protocolized measurement of repeated TSH levels over time. We examined the association between TSH levels categorized into tertiles using time-dependent Cox models with three adjustment levels: minimally adjusted, case-mix, and expanded case-mix+laboratory adjusted models. Compared with the lowest tertile, the highest TSH tertile was associated with higher mortality risk in minimally adjusted, case-mix, and expanded case-mix+laboratory adjusted models: HRs (95%CI) 2.54 (1.32-4.89), 2.53 (1.30-4.93), and 2.19 (1.11-4.32), respectively (Figure). The second TSH tertile was associated with numerically greater risk in all models, but estimates were not statistically significant.



Higher TSH levels are associated with higher mortality risk in HD patients. Further studies are needed to determine whether thyroid-modulating therapies improves survival in this population.