Article

Circulating Arsenic is Associated with Long-Term Risk of Graft Failure in Kidney Transplant Recipients: A Prospective Cohort Study

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Table 1. Verification of linearity of the association between plasma arsenic and risk of death-censored graft failure.

	HR (95% CI)	*p*	BIC	$p_{comparison}$*
Model 1a				
Log_2 arsenic	1.31 (1.05—1.62)	0.015	914.03	
Model 1b				Model 1b vs model 1a: 0.69
Log_2 arsenic	1.46 (0.82—2.61)	0.20	918.14	
Log_2 arsenic^2	0.97 (0.82—1.14)	0.69		
Model 1c				Model 1c vs model 1a: 0.83
Log_2 arsenic	1.18 (0.42—3.36)	0.76	922.20	
Log_2 arsenic^2	1.15 (0.55—2.41)	0.71		
Log_2 arsenic^3	0.97 (0.85—1.11)	0.64		
Model 2a				
Log_2 arsenic	1.36 (1.10—1.69)	0.0053	915.82	
Model 2b				Model 2b vs model 2a: 0.63
Log_2 arsenic	1.56 (0.86—2.81)	0.14	919.87	
Log_2 arsenic^2	0.96 (0.81—1.14)	0.64		
Model 2c				Model 2c vs model 2a: 0.82
Log_2 arsenic	1.29 (0.45—3.76)	0.64	923.98	
Log_2 arsenic^2	1.12 (0.53—2.37)	0.77		
Log_2 arsenic^3	0.97 (0.85—1.11)	0.69		
Model 3a				
Log_2 arsenic	1.52 (1.20—1.92)	0.0005	916.98	
Model 3b				Model 3b vs model 3a: 0.48
Log_2 arsenic	1.86 (1.00—3.48)	0.050	920.76	
Log_2 arsenic^2	0.94 (0.79—1.12)	0.50		
Model 3c				Model 3c vs model 3a: 0.78
Log_2 arsenic	1.83 (0.61—5.46)	0.28	925.04	
Log_2 arsenic^2	0.96 (0.46—2.00)	0.90		
Log_2 arsenic^3	1.00 (0.88—1.14)	0.97		

*p values are for the comparison with the referent model based on a likelihood ratio test. Model 1: crude model. Model 2: adjusted for age and sex. Model 3: model 2 + fish consumption and alcohol consumption. BIC, Bayesian information criterion. HR, hazard ratio.

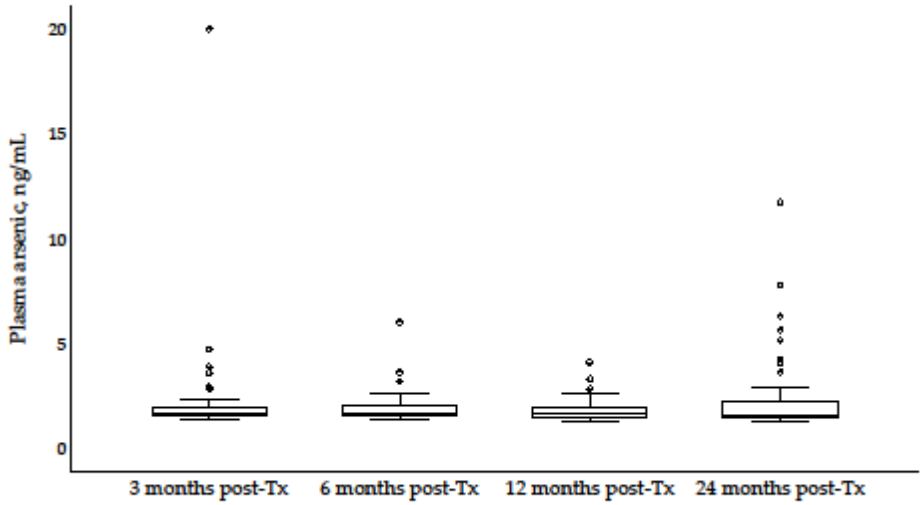

Figure 1. Plasma arsenic concentration of 46 kidney transplant recipients from the TransplantLines Prospective Cohort and Biobank Study (Eisenga, M.F.; et al. *BMJ Open* **2018,** *8,* e024502), at different follow-up visits after transplantation. Box plots show medians (interquartile range). Significance of potential change during follow-up visits was tested using the Kruskal Wallis test, which indicated no significant change over time ($p = 0.64$).