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The EARNEST Study: Interarm blood pressure differences should also be recorded

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On behalf of the EARNEST Study Investigators

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The EARNEST Study: Inter-arm blood pressure differences should also be recorded

We thank Dr Jolobe for his comments on our study. When designing EARNEST, we made the *a priori* decision not to measure blood pressure in both arms for numerous reasons.

Firstly, while the measurement of blood pressure in both arms is important for the diagnosis of hypertension and supported by several guidelines, the EARNEST study is not designed, or indeed powered, to diagnose hypertension after kidney donation.¹ The incidence of newly diagnosed hypertension in kidney donors is extremely low one year after nephrectomy. Secondly, EARNEST is planned to assess longitudinal changes in blood pressure before and after nephrectomy rather than absolute values, which necessitates use of the same arm rather than both arms. Thirdly, guidelines recommend using only the arm with the highest blood pressure if the difference between both arms is greater than 20/10 mmHg.² This is an extremely unlikely scenario in EARNEST study participants who will have been deemed fit to donate a kidney and already screened for peripheral vascular disease. Finally, for many of the previous studies that performed blood pressure measurements in both arms, it remains unclear whether perceived inter-arm blood pressure differences are “real” or merely the consequence of performing sequential readings;³ in most subjects blood pressure falls with repeated measurement because of diminishing white-coat effects, such that intra-arm differences are comparable to inter-arm differences.⁴ Indeed, given that sequential measurements have been shown to more than double the prevalence of a significant inter-arm difference,⁵ we would have had to measure blood pressure in both arms simultaneously. This would have had significant implications in terms of resourcing equipment as well as adding further intrusiveness into already heavily timetabled study visits.

Notwithstanding the above, all investigators have to make difficult decisions on what measurements to incorporate or exclude in studies. For EARNEST, the case for measuring blood pressure in both arms was just not strong enough to warrant inclusion.

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