

### **In response to letter to the Editor: “Ultrasound guided radial artery catheterization: A superior technique for expert clinicians?”**



*Dear Editor,*

We read carefully with great interest the letter to the editor entitled “Ultrasound guided radial artery catheterization: A superior technique for expert clinicians?” by Leigh White, Ruan Vlok, and Thomas Melhuish. We concluded in our meta-analysis that ultrasound (US)-guided technique for radial artery access is associated with higher first-attempt success and lower failure rate compared with manual palpation. The letter agreed with our conclusion and the clear benefit of routine use of US guidance for radial artery catheterization, even with expert operators. However, Dr White and colleagues expressed their concern regarding the significant heterogeneity between studies included in the meta-analysis. The heterogeneity was indeed high especially for the outcome of interest. However, this could be for a number of reasons including operator’s preference for US or palpation, or different inclusion and exclusion criteria. Such factors were difficult to evaluate or control for because not enough data were available in any of the included studies, rendering the sensitivity analysis not possible. As stated in the letter, Zaremski et al reported very high first success rate (>85%)

in radial artery catheterization.<sup>1</sup> This is one of many more reasons why heterogeneity was high in the outcomes of interest. We did mention such limitation and stated that the significant methodological and statistical heterogeneity present across the included studies may limit the ability to determine the benefit of US guidance. Regardless, the US-guided access for radial access seems to be safe and to increase chances of successful radial artery cannulation, and might even decrease the risk of complications for junior operators and interventionalist trainees.

*Am Heart J* 2019;e1.

0002-8703

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<https://doi.org/10.1016/j.ahj.2019.02.004>

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### **Reference**

1. Zaremski L, Quesada R, Kovacs M, et al. Prospective comparison of palpation versus ultrasound-guided radial access for cardiac catheterization. *J Invasive Cardiol* 2013;25(10):538-42.