

LETTERS

The authors respond to “Is it premature to SPRINT?”

We thank Allen¹ for his letter and are grateful for the opportunity to discuss further the SPRINT findings.² Allen points out that antihypertensive drug deprescribing was performed in the standard blood pressure arm to maintain systolic blood pressure levels near 140 mm Hg and that this type of deprescribing may not be done in real-world clinical practice. Thus, deprescribing may have disadvantaged patients in the standard blood pressure arm, given that the trial ultimately found that intensive blood pressure reduction reduced cardiovascular events and mortality. Although this point may be valid, it could not have been deduced until after the trial results were known. Separation of blood pressure targets in the two study arms was needed to optimize internal validity. If the SPRINT trial results were null, this aspect of the trial design would have supported deprescribing in this patient population, which would have been an important and clinically relevant finding.

Although blood pressure mortality curves commonly follow a U-shaped or J-shaped distribution, the nadir of risk varies according to patient characteristics and mortality cause.³ Regardless, these data are observational in nature and, although they represent gold standard prognostic data, they should not be used to infer optimal treatment targets. For this, we require randomized controlled trials, preferably those with a treat-to-target design (like SPRINT). The broader treat-to-target trial literature beyond SPRINT indicates that intensive blood pressure reduction to mean levels around 130 mm Hg (relative to 140 mm Hg)

reduces cardiovascular events.⁴ We agree with Allen¹ that more studies examining more intensive blood pressure treatment targets are needed.

Lastly, it was the nearly 50% lower-than-anticipated event rate in study sample recruited for the ACCORD-BP trial, not the initial sample size, that undermined statistical power.⁵ Given that the study was ultimately underpowered, it is difficult to predict if the results would have been deemed clinically important by patients. This requires an individual assessment, and opinions likely differ widely among patients.

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References

1. Allen DM. Is it premature to SPRINT? [letter]. *CMAJ* 2017;189:E217.
2. SPRINT Research Group; Wright JT Jr, Williamson JD, Whelton PK, et al. A randomized trial of intensive versus standard blood-pressure control. *N Engl J Med* 2015;373:2103-16.
3. Ivanovic B, Tadic M. When does low normal blood pressure become too low? The J-curve phenomenon. *Acta Cardiol* 2014;69:121-9.
4. Xie X, Atkins E, Lv J, et al. Effects of intensive blood pressure lowering on cardiovascular and renal outcomes: updated systematic review and meta-analysis. *Lancet* 2016;387:465-43.
5. ACCORD Study Group; Cushman WC, Evans GW, Byington RP, et al. Effects of intensive blood-pressure control in type 2 diabetes mellitus. *N Engl J Med* 2010;362:1575-85.

Competing interests: None declared.