

## Beta-blockers and perioperative outcomes in vascular surgery

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To the Editor:

We read with interest the review by Galyfos et al. [1] that was published in the December 2016 issue of the *Journal of Anesthesia*. The authors present the pertinent evidence on the potential benefits of perioperative use of beta-blockers (BB) in patients undergoing non-cardiac vascular surgery, and conclude that BB may be protective against myocardial ischemia but may increase the risk of perioperative stroke or hypotension. In a systematic review and meta-analysis recently published by our group, we demonstrated that perioperative use of BB do not confer improved perioperative outcomes [2].

The difference between our findings and those of Galyfos et al. may be principally due to different approaches to the analysis of bibliographic data. We pooled data from comparative studies and used statistical tests to investigate the outcomes, while Galyfos et al. applied a narrative approach. Most of the comparative studies included in the study by Galyfos et al. were included in our analysis as well; therefore, the difference in findings is unlikely to be

due to differences in baseline characteristics of the included subjects, differences in dose, titration, duration or mode of administration of BB, or any differences in outcome definitions.

In conclusion, we believe that perioperative use of BB should not be routinely used in vascular and endovascular surgery. Future research should focus on potential beneficial effects in selected groups of patients, such as those with known ischemic heart disease with preserved left ventricular function.

### Compliance with ethical standards

**Conflict of interest** The authors declare that they have no competing interests.

### References

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