



Letters to the Editor

Cardiac Risk Index and Vascular Surgery: Not the Same for Everyone

To the Editor:

I would like to add some comments to the discussion on the paper by Nicola Troisi et al, recently published in the *Annals of Vascular Surgery*.¹

The authors of the aforementioned paper published their work on aortic surgery and their cardiac assessment before surgical therapy (open or endovascular). They report their morbidity and mortality with numbers that are similar for those reported by other groups on the same surgery.

In the Discussion section they state that based on different cardiac risk indexes, they found that “...no parameter significantly affected perioperative cardiac mortality, except for age >80 years, chronic renal failure, congestive heart failure and valvular heart disease, and only valvular heart disease was an independent risk factor for perioperative morbidity.”

How is this possible?

There are many cardiac risk assessment scales published in the literature in the past 30 years.^{2,3} They have tried to stratify cardiac risk before surgery, in cardiac and noncardiac surgery. Of those, vascular surgery has had a relevant place on this analysis because of the nature of the cardiovascular condition of the underlying disease.

Most of the scales analysis published are complex and not easy to apply into the clinical work. Most of them have been changed by the authors along the years because of the technical advances in this complex type of surgery, and also because of the fact that there is a growing knowledge on how the experience of the surgical team may affect the results.⁴

Although the scales are built retrospectively and based on big populations, they are not useful individually; thus, morbidity and mortality are specific for every institution and for every surgical team (surgeons, anesthesiologist, intensivists, and ancillary availabilities of the center).

There is evidence in the previously published data regarding the effects that the surgical team may have in the outcomes of some surgery in terms of morbidity and mortality.⁴

Every center has their own results, and those results are not easily extrapolated to other groups. The authors of this paper have built a robust preoperative cardiac evaluation on patients' schedule for aortic surgery, but we have to be cautious when trying to duplicate that analysis

in centers with different experience on the subject. No paper, to my knowledge, has tried to disclose these facts in details, maybe because it touches sensitive aspect of the surgical experience at different places.

I do believe that clinical judgment and experience of each center remains the most reliable way to apply risk analysis individually.

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REFERENCES

1. Troisi N, Dorigo W, Lo Sapio P, et al. Preoperative cardiac assessment in patients undergoing aortic surgery: analysis of factors affecting the cardiac outcomes. *Ann Vasc Surg* 2010;24:733-740.
2. Goldman L. The revised cardiac risk index delivers what it promised. *Ann Intern Med* 2010;152:57-58.
3. Fleisher LA. Improving perioperative outcomes: my journey into risk, patient preferences, guidelines, and performance measures. *Anesthesiology* 2010;112:794-801.
4. Wener RM, Goldman LE, Dudley RA. Comparison of change in quality of care between safety-net and non-safety net hospitals. *JAMA* 2008;14:2180-2187.

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Reply to: Cardiac Risk Index and Vascular Surgery: Not the Same for Everyone

To the Editor:

We read with interest the comment of Prof. Lema and thank him for the attention paid to our paper.

We completely agree with the author about the influence of several, different factors on the outcomes, not only patient-related but also center-related (i.e., the experience, the habits, and the facilities of the centers), and we strongly believe in the importance of adjusting the pathway of care in a single-patient, hospital-related basis.¹

We think that a multicentric analysis comparing different strategies of treatment in different hospitals could provide, if feasible, a more precise insight of the everyday practice. In the absence of such an analysis, we

tried to describe our strategy,² which is probably not the best one and is probably also difficult to reproduce in different settings, but nonetheless allowed us to obtain satisfactory results.

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REFERENCES

1. Gordon AJ, Macpherson DS. Guideline chaos: conflicting recommendations for preoperative cardiac assessment. *Am J Cardiol* 2003;91:1299-1303.
2. Troisi N, Dorigo W, Lo Sapio P, et al. Preoperative cardiac assessment in patients undergoing aortic surgery: analysis of factors affecting the cardiac outcomes. *Ann Vasc Surg* 2010;24:733-740.

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