

## INVITED COMMENTARY

### Commentary to “Endovascular Repair of Infrarenal Abdominal Aortic Aneurysms in High Surgical Risk Patients.”

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In this article, the Authors claim that their results support elective early endovascular repair (EVAR) of asymptomatic abdominal aortic aneurysm (AAA) in high-surgical risk patients. Although it is important to challenge current practice, these statements are rather provocative and not fully supported by data in the study.<sup>1</sup>

Indeed, recent level 1 evidence has dampened enthusiasm for EVAR in unfit patients: EVAR2 trial failed to demonstrate any benefit of endovascular repair over observation in high-risk patients showing a high perioperative mortality rate (9%) and no difference in 4 years overall survival rate (as low as 36%) in the two groups.<sup>2</sup> On the contrary, in the present study the Authors showed a low perioperative mortality of 4.3% and an exceptionally high long-term survival of up to 85% at 3 years.

What is the matter of debate?

Large disparity in outcomes of EVAR for high risk patients is the inevitable consequence of the impossibility to reach a standardized consensus to define high-risk criteria.<sup>1–4</sup> Different grading of comorbidities and disparate evaluations of multiple risk factors in the same patient continue to be suggested and applied to stratify the patient risks. Therefore there is the chance to puzzle within the same category both patients with unacceptable high risk and patients with fair-moderate risk.

For example, in the present study 38 patients were considered at risk for pulmonary disease according to rather soft criteria. Indeed the patient who failed EVAR and was immediately converted to open repair

underwent surgery without complications, confirming his good surgical fitness. Oppositely, 4 perioperative deaths occurred in patients with prohibitive surgical risks: over-octogenarians with an ASA IV score, all with previous cardiac antecedents and chronic obstructive pulmonary disease. For this latter group it might have been safer to recognize the limits of whichever treatment over the natural history of the patient.

The long-term survival reported, as high as 85% at 3 years, should be considered with caution, since this rate is similar or even better than that of a population at low cardiovascular risk. These results are even more astonishing considering that about half of the population was represented by ultra-octogenarians. It is evident that in addition to EVAR treatment, a small number of observations as well as careful patient selection had a great influence on the study outcomes. Unfortunately, we do not have information on the number and health status of the patients refused for surgery in the same study period to better understand the inclusion criteria used by the Authors. Furthermore, there is more than a chance that only very few of the 92 high risk operated patients reached follow-up at 3 years (the numbers of patients at risk for each survival interval were not displayed) to generalize good survival outcome.

Lessons from this and other studies on high risk patients suggest that without homogeneity in the definition, any generalization of EVAR outcomes and indications should not be accepted. The excessively high enthusiasm for the satisfactory results shown in the present article should be cautiously trimmed down and a more realistic picture of outcomes and survival in severe risk patients should be considered.

The very good results of early EVAR reported here confirm that aortic endografting remains a safe option

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only in the presence of optimal anatomical suitability and after careful evaluation of individual patient characteristics in a thorough pre-operative risk-benefit assessment that cannot be generalized.

### References

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