this is inaccurate. Certainly, 8 of 9 patients came from some distance outside the Houston area, but we do not know what proportion were willing to come from distance nor do we know how many of those willing to travel were unable to because of barriers. An easy and another, not so easy to capture aspect is how many of those presenting from outside metropolitan Houston were Black or Hispanic and what was the outcome for the non-White patients presenting elsewhere.

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Commentary: Socioeconomic impact on aortic surgery: Is it about the individual, the community, or the surgeon?

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CENTRAL MESSAGE

Socioeconomic factors contribute to disparities in aortic presentation, although thoracoabdominal aortic aneurysm repair outcomes may not differ in high-volume centers.

Chatterjee and colleagues¹ present a well done analysis of socioeconomic status (SES) in patients with thoracoabdominal aortic aneurysm in this month's issue of *The Journal of Thoracic and Cardiovascular Surgery*. There are a few key take-home points that roughly translate to most cardiovascular patients. First, patients from low-SES communities present with higher acuity illness and more advanced disease. In this case, low-SES patients were more likely to present with acute symptoms, to present with dissections, and to be operated on urgently. Second, after adjustment for the differing risk profiles, low-SES itself does not affect operative outcomes (at high-performing centers like this one). Third, race and SES are inextricably linked in this country, and

Chatterjee and colleagues¹ found that a majority of black patients were of low SES. Notably, Chatterjee and colleagues¹ report that long-term survival did not differ by SES. This differs from other studies, which have shown higher mortality with low SES, such as with coronary artery bypass grafting. In this case, the aortic pathology may be an important component, because coronary disease and heart failure are associated with greater persistent health care needs unable to be fulfilled in more distressed communities.^{2,3}

This study highlights both the greatest strengths and worst weaknesses of the United States health care system. The private/public patchwork of insurance programs and fragmented primary care networks simply cannot provide the preventive care needed for low-SES patients.

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Cardiovascular disease in particular seems to be an Achilles heel for our country. Our work has previously highlighted the impact of distressed communities on disease prevalence and acuity of presentation for peripheral vascular disease.^{4,5} The end result is more advanced disease, leading to higher risk surgery. While we are failing on the preventive medicine side, studies such as this show how high-volume, technologically advanced centers are able to provide safe and effective operative care.

As a final point, although Chatterjee and colleagues¹ have identified important associations with SES and aortic surgery, we are left with few solutions. The first issue relates to the data. The use of ZIP-code level data to estimate income is incredibly imprecise. More importantly, Chatterjee and colleagues¹ are unable to differentiate between individual and community level socioeconomic factors. The pathways to improving disparities are very different depending on whether individual versus community level inequality drives disparate outcomes. The second issue relates to our role as the surgeon. Partnerships with primary care physicians will be essential if we as a specialty are to have any possibility to improve cardiovascular surgical disparities. Third, how do we as a specialty account for these and other health disparities? Should hospitals be penalized for treating patients of lower SES, who may have worse risk-adjusted outcomes after certain operations? How do we disentangle the effects of race, income, insurance, and

the multitude of other components that comprise socioeconomic status? If we risk adjust these disparities out of the rating systems, we eliminate a strong incentive for change. As surgeons, however, we are not directly responsible for preventive and primary care. As a complete overhaul of our health care system appears unlikely in the near term, these questions should be addressed now, and research should be performed to help identify the disparities that do exist so that we can devise methods to eliminate them.

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