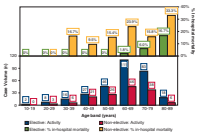

THE LIFE IN THEIR YEARS VERSUS THE YEARS IN THEIR LIFE

To the Editor:

It has been established, over recent years, that older age has significant adverse impact on outcomes in complex aortic surgery and this is becoming more relevant considering the aging population we are facing. The latest study by Ikeno and colleagues[1] emphasized this fact in their series of 740 patients who underwent total arch replacement, with 139 patients being older than the age of 80 years with operative mortality of 8.6%.[1] There were 52 late deaths with an 8-year survival rate of 55.4% ± 5.0% at 5 years and 32.2% ± 6.1%. While these figures sound acceptable for such complex procedures, attention also needs to be focused on the quality of life once these patients are discharged from hospital. Assessment of frailty and the ability to perform daily activities following discharge from hospital can be a significant factor contributing toward the success in survival and the overall impact of such procedure on their life. Several other studies have reported that frailty and poor quality of life may impact numerical survival figures.[2-4] The extent of the pathology is not the only factor that is contributing to the overall survival but rather a combination of many other factors that has been reported in literature.[5] Our experience over 20 years of providing complex aortic surgery suggests that the inclusion of a period of deep hypothermic circulatory arrest (DHCA), for whatever indication, impacts on outcomes following aortic surgery in patients who are octogenarian. We have examined 457 patients (24 octogenarian) who underwent a period of DHCA (22-25 c), between April 2003 and December 2016, using either antegrade or retrograde cerebral perfusion according to age decade; we reported comparative activities and mortality for elective and nonelective cohorts (Figure 1). Our data starkly showed elective in-hospital mortality and stroke rates being higher in patients who are octogenarian (16.7% and 22.2%,

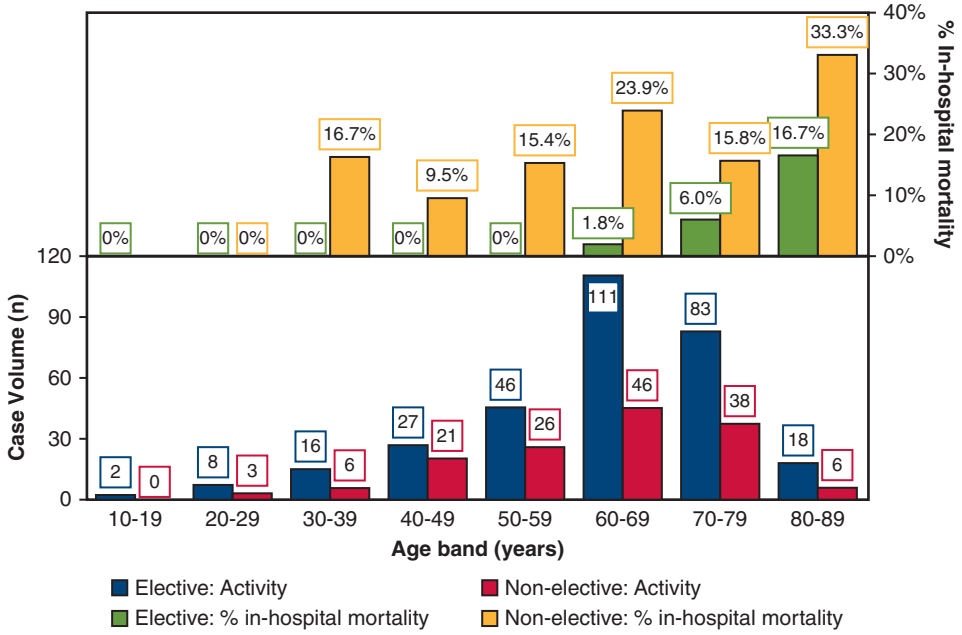

FIGURE 1. Age distribution among elective and nonelective patients in correlation with mortality.

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The authors reported no conflicts of interest.

The *Journal* policy requires editors and reviewers to disclose conflicts of interest and to decline handling or reviewing manuscripts for which they may have a conflict of interest. The editors and reviewers of this article have no conflicts of interest.

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respectively). However, between 2003 and 2013, our in-hospital mortality for patients who were octogenarian was 30% whereas from 2014 to 2016 it was 14%, and this reflects the reduction in mortality rate over time in line with Ikeno and colleagues' study. Equally important is that we found the discharge arrangements for patients who were octogenarian to be concerning; among our octogenarian cohort, 56% of these patients were discharged home safely, 22% required local hospitalized care, 16% were transferred to intermediate care, and 6% of the patients were transferred for stroke rehabilitation.

We would like to emphasize the observation that while the operative success in our cohort and other series of patients who are octogenarians is barely acceptable for an elective technique, the discharge destination, quality of life, and survival of these patients needs careful consideration. The fact that in our octogenarian cohort with elective mortality of 16.7%, stroke rate of 22%, and urgent mortality of 33.3% for those undergoing DHCA, with only just over one half being discharged home, is important information that we use to consent patients and make decisions on a regular basis.

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Our institutional data reported in this letter have not been published before or under consideration for publication anywhere else.

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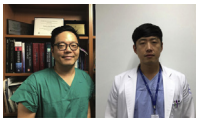

REPLY: "WE WILL FIND A WAY. WE ALWAYS HAVE"

Reply to the Editor:

Aging of the worldwide population has been rapidly progressing over the last decades, mainly led by high-income countries, in which the average life expectancy is expected to be more than 90 years by 2030 by the acceleration of its pace.[1] Along with this global super-aging trend, cardiovascular (CV) diseases, most of which are strongly associated with aging in their pathogenesis, are also on the rise in their incidence and prevalence, and thoracic aortic aneurysm is no exception.[2] In line with this trend, the feasibility of extensive thoracic aortic surgery in older patients such as octogenarians has been one of the most important issues of focus in the CV surgical community in recent years. A recent paper in the *Journal* conducted by Ikeno and colleagues,[3] which is an example of such timely research, evaluated 139 octogenarian and nonagenarian patients undergoing total arch replacement with resultant 8.6% of operative mortality. Of note, the surgical mortality rate in this cohort has decreased markedly over time, recording 4.8% only during the recent 6 years. In addition, long-term survival beyond the 1-year point in these patients demonstrated comparable results with an age- and sex-matched general population on landmark analysis. These excellent results from a center of excellence, although they may not be generalizable to low-volume centers, are obviously encouraging to older patients as well as to the CV surgical community. These excellent survival outcomes, however, may not necessarily mean returning to normal quality of life after the surgery.

Harkey and colleagues[4] shared their 15-year experience with complex arch surgery requiring hypothermic circulatory arrest including 24 octogenarian patients among 457 entire patients. Although the surgical mortality rate among octogenarian patients decreased markedly from 30% to 14% over time, it was much