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EDITORIAL COMMENTARY

Frailty: It's hard to define, but you know it when you see it

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See related article on pages 3110-7.

In their article in this issue of the *Journal* entitled, “The impact of frailty on outcomes after cardiac surgery: A systematic review,” Sepehri and colleagues¹ analyze the influence that “frailty” has on predicting poor outcomes after cardiac surgery. In their review of 6 contemporary, prospective studies published during the last 4 years and encompassing more than 4500 patients, Sepehri and colleagues¹ conclude, not surprisingly, that patients deemed frail by an objective assessment tool have a higher likelihood of mortality, morbidity, functional decline, and major adverse cardiac and cerebrovascular events after cardiac surgery, regardless of how frailty is defined. Sepehri and colleagues¹ are to be complimented for highlighting the adverse impact that frailty has on cardiac surgical outcomes; however, a key question is whether the concept of frailty is based on a matrix of several standardized tests or there is one test alone that would be most predictive. To paraphrase former Supreme Court Justice Potter Stewart, frailty is hard to define but I know it when I see it.

Current risk models either overestimate (euroSCORE) or underestimate (Society of Thoracic Surgeons) perioperative risk; discrepancies between predicted and observed outcomes may be confounded by a disproportionate weight placed on chronologic age alone without taking into account the biology of the aged. Advanced age is not necessarily synonymous with vulnerability to adverse health

outcomes; furthermore, the potential to use age alone inappropriately to ration increasingly expensive and technologically advanced health care, such as transcatheter aortic valve replacement, has made the concept of frailty very timely. In surgical parlance, frailty is an ambiguous but well understood phrase that encompasses a patient's inability to withstand and successfully recovery from surgery. Surgeons, whether consciously or unconsciously, have always evaluated frailty. Watching the patient get out of bed and walk across the room and testing the firmness of the handshake are all part of a seasoned surgeon's “eyeball” test for frailty. Of the 6 studies in this systematic review, 5 incorporated a physical function assessment as part of the determination of frailty, including hand grip strength, timed get up and go test, and gait speed. Although Sepehri and colleagues¹ were unable to determine which frailty test is best, it's clear from their review that a more “standardized eyeball” test, such as the Clinical Frailty Scale, may better predict postoperative outcomes.

Although standardized frailty scores may be predictive of poor surgical outcomes, the use of them to justify less-invasive procedures with the hope of achieving better outcomes may be misguided. It is clear that frailty predicts worse outcomes with either surgical or nonsurgical procedures (frail patients have worse outcomes than nonfrail patients even without subjecting them to a procedure). The critical question that needs to be asked is this: Does frailty identify a group of patients who would derive preferential benefit from one or another form of treatment? Within the review of Sepehri and colleagues,¹ patients labeled as frail had a higher hazard ratio for death when undergoing less-invasive procedures, such as transcatheter aortic valve replacement, than when undergoing more-invasive open procedures. Given the same frailty definition within each study, one would expect to be able to perform less-invasive procedures on more frail patients and have better outcomes—not worse. This paradox might be

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explained by the “extreme” frailty of patients examined in this review who underwent transcatheter aortic valve replacement because they were not candidates for open surgery.

With 10,000 baby boomers reaching retirement age every day and Medicare’s insolvency predicted by 2026, being able to “ration” expensive health care by some means other than a patient’s chronologic age will be critical. Surgeons are increasingly asked to make decisions of operability on an older and sicker population of patients. Unfortunately, our own literature bombards us with reports of “successful” outcomes in patients at extreme risk, often without regard to quality of life or cost of care. Furthermore, unrealistic patient and family expectations of medical miracles make it even harder to withhold aggressive treatment in the futile setting. Finally, despite what patients say in advance, many people will in fact choose to be treated aggressively for a critical illness even when there is a good chance that it will not save them—but it just might. Robert Frost summarized this attitude best when he wrote, “The woods are

lovely, dark and deep. But I have promises to keep, and miles to go before I sleep.” Not all of us can resist the lure of a slightly longer life, despite what we may have said in advance; however, it’s the quality of life and not its length that should be the goal of good medicine.

Surgeons need objective, standardized frailty criteria to confirm their bedside “eyeball” test. In today’s environment, the notion that we *can* operate does not always equate to we *should* operate. The vernacular of frailty will continue to be refined and incorporated into risk stratification strategies to help physicians and society decide who gets the increasingly limited resource of health care. The article by Sepehri and colleagues¹ provides an excellent starting point for this important discussion and highlights the need for further research in this area.

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