The study by Yei and coauthors describes 6-year results of abdominal aortic aneurysm (AAA) repair performed via open aneurysm repair (OAR) vs endovascular aneurysm repair (EVAR) using the Vascular Quality Initiative (VQI) Vascular Implant Surveillance and Interventional Outcomes Network (VISION) registry, a multicenter registry that collects granular clinical data on the patients and procedures and links it with Medicare claims for long-term follow up. Among a cohort of more than 32,000 patients, Yei et al determined that despite an increased perioperative mortality associated with OAR compared with EVAR, patients treated with OAR experienced superior long-term outcomes. Specifically, patients who underwent OAR, compared with propensity score–matched patients who underwent EVAR, had decreased 6-year mortality (548 deaths [35.6%] vs 608 deaths [41.2%]; hazard ratio [HR], 0.83; 95% CI, 0.74-0.94; \( P = .002 \)), were less likely to experience late AAA rupture after their index repair (117 participants [5.8%] vs 149 participants [8.3%]; HR, 0.76; 95% CI, 0.60-0.97; \( P < .001 \)), and were less likely to require reinterventions (additional procedures after the initial repair to treat their AAA) (190 participants [11.6%] vs 267 participants [16.0%]; HR, 0.67; 95% CI, 0.55-0.80; \( P < .001 \)). These important findings highlight the need for studying both clinical results after AAA repair and long-term surveillance among patients who undergo EVAR.

AAAs remain 1 of the most commonly treated vascular diseases in the United States and around the world. If untreated, aneurysm rupture confers a near-certain risk of mortality. Accordingly, surgical repair is performed to prevent this event in patients who are candidates for surgery. Currently, 2 primary repair options exist: OAR, in which a patient undergoes direct surgical reconstruction of the aorta via a laparotomy or a retroperitoneal incision, and the less invasive EVAR, in which the aorta is lined with stent-grafts to exclude the aneurysm sac from systemic pressurized perfusion. Randomized trials comparing these surgical techniques among patients who were candidates for either procedure have documented increased perioperative mortality for patients who underwent OAR, but no difference in the long-term risk of mortality were reported. As such, EVAR has been rapidly adopted since its inception in the 1990s and currently represents 3 of every 4 AAA repairs performed in the United States.

However, patients who are included in randomized trials do not always reflect patients treated in clinical practice, where significant comorbidities and unfavorable anatomy are common. In these settings, many patients who may not be ideal physiologic candidates for conventional OAR may be offered EVAR. Likewise, some patients may undergo EVAR outside the anatomic instructions for use criteria for that device. In both instances, these patients would not be eligible for inclusion in most randomized trials. Therefore, current seminal results documented from earlier randomized trials of AAA repair are not always generalizable to clinical practice.

In an attempt to better inform contemporary practice, the VQI has partnered with Medicare to create VISION, a clinical registry combined with Medicare claims that permits long-term outcome analyses that were previously unavailable. This new registry effort aims to evaluate clinical results for patients undergoing a variety of vascular procedures, including AAA repair. Given the nature of the registry, VISION outcomes may be more reflective of daily clinical practice than the outcomes documented in the randomized clinical trials.

Results from Yei et al using the VISION registry have important implications for patients considering AAA repair. First, while prior randomized studies documented no difference in long-term
mortality between OAR and EVAR, the results in this study indicate that, in practice, long-term outcomes may be superior among patients who undergo OAR.\textsuperscript{2,5} In addition, Yei et al\textsuperscript{1} determined that there was an increased likelihood of reintervention among patients who underwent EVAR compared with those who underwent OAR.\textsuperscript{5,6} Finally, Yei and coauthors\textsuperscript{1} documented that patients who underwent EVAR experienced increased rates of late AAA rupture, despite their index aortic repair. These findings would suggest that while EVAR remains an important mainstay therapy, OAR may ultimately confer superior durability among selected patients with anticipated life expectancy. Moreover, these findings demonstrate the imperative for life-long longitudinal surveillance among patients who have undergone EVAR, given the documented rates of reintervention and late rupture.\textsuperscript{7}

Findings from the study by Yei et al\textsuperscript{1} also identified important opportunities for ongoing analysis. If long-term documented results were inferior among patients who underwent EVAR, it remains uncertain what the optimal role is that this modality should play in current aneurysm care. EVAR is clearly the more prevalent technique for AAA repair in the United States and now represents 75\% of all AAA repairs. However, the results presented by Yei et al\textsuperscript{1} call into question an EVAR-first paradigm. It is conceivable that certain patients, especially younger patients currently treated with EVAR, may be better served with a primary OAR. Therefore, clear delineation of the rightful role for EVAR in contemporary practice is an important area of investigation with significant implications for patient care. In addition, the underlying causes for late EVAR rupture remain poorly understood. Despite documented reinterventions among patients who have undergone EVAR, late rupture events remained high. Accordingly, it remains unclear whether reinterventions are effective in preventing late rupture, despite their perceived intent. Identifying specific factors contributing to these events would likely lead to improved long-term outcomes for patients undergoing EVAR.

The findings described by Yei et al\textsuperscript{1} highlight the importance of studying short and long-term results among patients undergoing surgical procedures in practice settings. Yei et al\textsuperscript{1} have added important long-term outcome data to inform patients and clinicians alike in choosing AAA repair options. They also raise important clinical research questions that will likely be the focus of work for the next several years.

**ARTICLE INFORMATION**

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