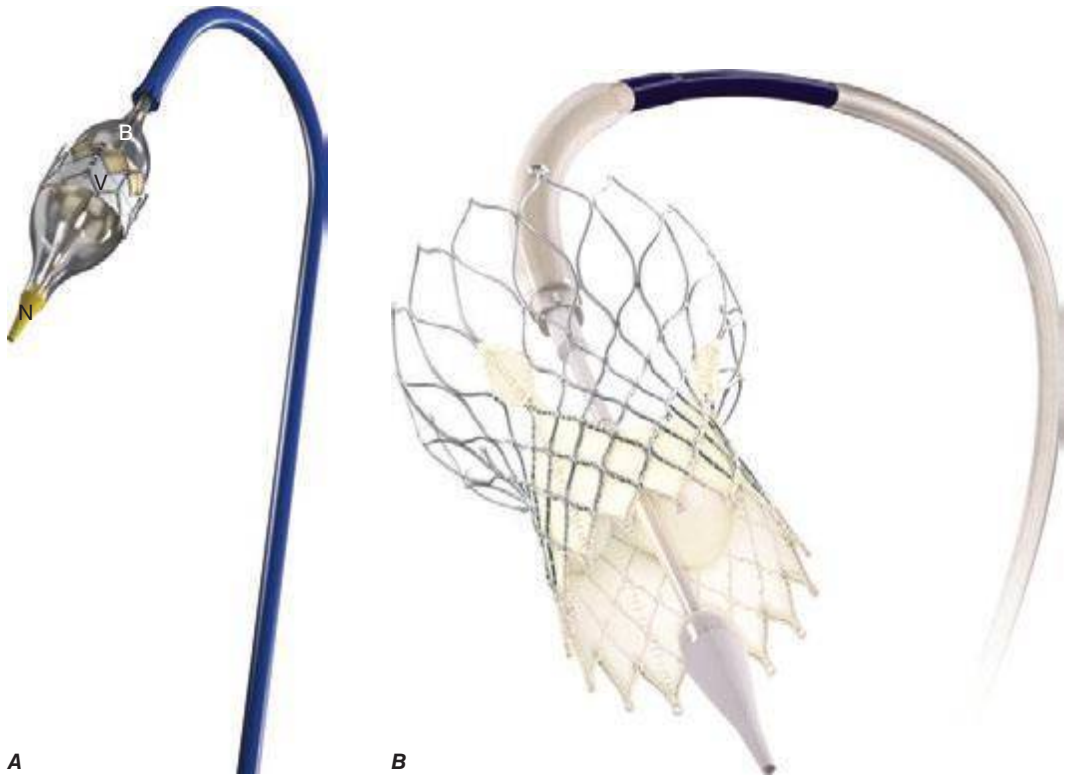


FIGURE 283-3 Balloon-expandable (***A***) and self-expanding (***B***) valves for transcatheter aortic valve replacement (TAVR). B, inflated balloon; N, nose cone; V, valve. *(Part A, courtesy of Edwards Lifesciences, Irvine, CA; with permission. NovaFlex+ is a trademark of Edwards Lifesciences Corporation. Part B, © Medtronic, Inc. 2015. Medtronic CoreValve Transcatheter Aortic Valve. CoreValve is a registered trademark of Medtronic, Inc.)*

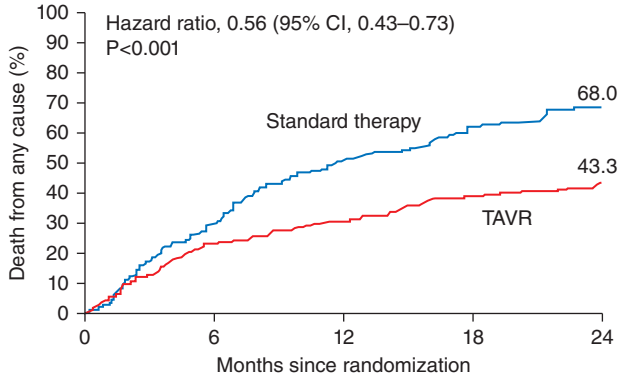
transformative technology have been very favorable and have allowed the extension of AVR to groups of patients previously considered at high or prohibitive risk for conventional surgery. Nevertheless, some patients are not candidates for this procedure because their comorbidity profile, including an assessment of frailty, would make its undertaking inappropriate. The heart team is specifically charged with making challenging decisions of this nature. The use of these devices for the treatment of patients at intermediate operative risk and for those with structural deterioration of bioprosthetic aortic and mitral valves ("valve-in-valve"), as an alternative to reoperative valve replacement, is under active study.

AORTIC REGURGITATION

ETIOLOGY

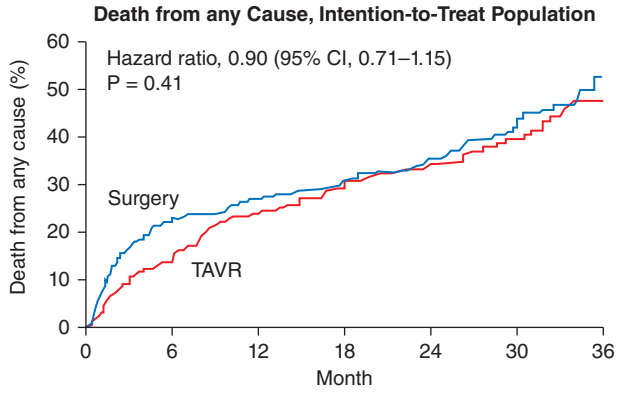
(Table 283-1) AR may be caused by primary valve disease or by primary aortic root disease.

Primary Valve Disease Rheumatic disease results in thickening, deformity, and shortening of the individual aortic valve cusps, changes that prevent their proper opening during systole and closure during diastole. A rheumatic origin is much less common in patients with isolated AR who do not have associated rheumatic mitral valve disease. Patients with congenital BAV disease may develop predominant AR,



No. at Risk					
TAVR	179	138	124	110	83
Standard therapy	179	121	85	62	42

FIGURE 283-4 **Twenty-four-month outcomes following transcatheter aortic valve replacement (TAVR)** for inoperable patients in the PARTNER I trial (cohort B). CI, confidence interval. *(Adapted from RR Makkar et al: N Engl J Med 366:1696, 2012; with permission.)*



No. at Risk							
TAVR	348	298	260	234	172	70	31
Surgery	351	252	236	217	165	65	32

FIGURE 283-5 **Thirty-six-month outcomes following transcatheter aortic valve replacement (TAVR)** for high-surgical-risk patients (cohort A) in the PARTNER I trial. CI, confidence interval. *(Adapted from SK Kodali et al: New Engl J Med 366:1686, 2012.)*