screening. Cost-effectiveness becomes more favorable overtime. Repeat screening of patients whose initial scan result is normal is not justified.

Summary: The United Kingdom Multicentre Aneurysm Screening Study (MASS) has provided most of the randomized evidence for mortality benefit for AAA screening (Cochrane Database Syst Rev 2007;CD002945) The authors sought to answer some remaining questions concerning AAA screening, including longer-term benefits of mortality and cost-effectiveness, and whether rescreening after a normal scan result is indicated. The data presented are from the randomized MASS trial with 10 years of follow-up. Data were acquired in four centers in the United Kingdom, with screening and surveillance delivered primarily in primary care centers. The population sample included 67,770 men aged 65 to 70 years. Participants in the original MASS study were allocated to ultrasound screening or to a control group not offered screening. When an AAA was detected, the participants underwent surveillance and were offered surgery if they met prespecified criteria. Main outcome measures have been mortality and costs related to AAA repair and cost per life-year gained.

There were 155 deaths related to AAA over 10 years in the group invited for screening (absolute risk, 0.46%) and 296 deaths related to AAA in the control group (0.87%). Relative risk reduction was 45% (95% confidence interval [CI], 37%-57%). The benefits seen in the early years of follow-up were maintained in later years. Incremental cost per man invited to screening was £100 (95% CI, £82-£118), with an incremental cost-effectiveness ratio of £7,600 (95% CI, £5,100-£13,000) per life-year gained. The incidence of ruptured AAA in patients with an originally normal screening result increased after 8 years. Total mortality at 10 years was about 30% in each group, with AAAs comprising about 2% of all deaths. There was no clear difference in any other cause of death, with only a small difference in all-cause mortality (hazard risk, 0.97, 95% CI, 0.95-1.00).

There were 25 ruptures that occurred after men had normal initial scan results and 19 were fatal. Rate of ruptures increased noticeably after 8 years of follow-up. Time since initial scan rather than age was the main determinant of the increased risk of rupture.

Comment: AAA screening appears to be effective in reducing AAA-related deaths out to 10 years after the initial screening examination. A crucial question is whether rescreening participants is justified at any stage. The authors contend that rescreening is not justified because the number of fatal ruptures occurring after 8 years in the screened group was relatively small. Additional follow-up will be required to determine if there is a noticeable increase in ruptures in the screened group that is not sufficiently offset by the reduction in number of deaths related to the original aortic aneurysm screening.

Short-term Outcomes of Borderline Stenoses in Vascular Accesses with PTFE Grafts

Tuka V, Slavikova M, Krupickova Z, et al. Neph Dialysis Transplant 2009; 24:3193-7.

Conclusion: Borderline stenoses associated with polytetrafluoroethylene (PTFE) dialysis access grafts can be safely followed up and do not require transluminal angioplasty.

Summary: The authors previously performed a randomized trial indicating ultrasound surveillance significantly prolongs patency of PTFE dialysis access grafts (Kidney Int 2005;65:1554-8). They identified certain stenoses they termed "borderline." They believed a "watch and wait" strategy for such stenoses that were asymptomatic was appropriate but had a relatively small number of patients in the original study. The present study tested the hypothesis that it is safe to delay treatment of borderline stenoses in patients without evidence of impaired dialysis function. They also sought to determine possible risk factors for progression of such stenoses and the long-term outcomes of such lesions. A stenosis of a PTFE dialysis access graft was classified as significant if a there was >50% lumen reduction on B-mode imaging and a peak systolic velocity (PSV) ratio (PSV within the stenoses/PSV in an adjacent unaffected prestenotic segment) of >2. In addition, a residual diameter of <2 mm, blood flow of <600 ml/min, or blood flow reduction of >25% was required for the stenoses to be considered significant. Borderline stenoses have a >50% lumen reduction by B-mode imaging and a PSV >2, but none of the other additional criteria noted above.

The authors identified 102 borderline stenoses. After 11 ± 6 weeks, 55 remained nonprogressive and 38 progressed. Eight underwent percutaneous transluminal angioplasty (PTA) for a clinical indication, and only one graft thrombosed. Risk factors for developing significant stenosis in previously borderline lesions included prior PTA (relative risk, 1.91; 95% confidence interval [CI], 1.27-2.88; $P = .002$), and female gender was a risk for increasing stenosis (relative risk, 2.29; 95% CI, 1.29-4.06; $P = .025$).

Comment: The data indicate, at least using the definition provided by the authors, that borderline stenoses remain stable for approximately 3 months and delaying treatment is safe when clinical monitoring is performed. Most of the stenoses in this study did progress, however, and median follow-up was only 3 months. The authors' approach has the possibility of reducing, in the short-term, the number angioplasties performed for PTFE dialysis access grafts, but it is unclear if it will extend the useful life a PTFE access before it must be abandoned for a new access graft or access site.