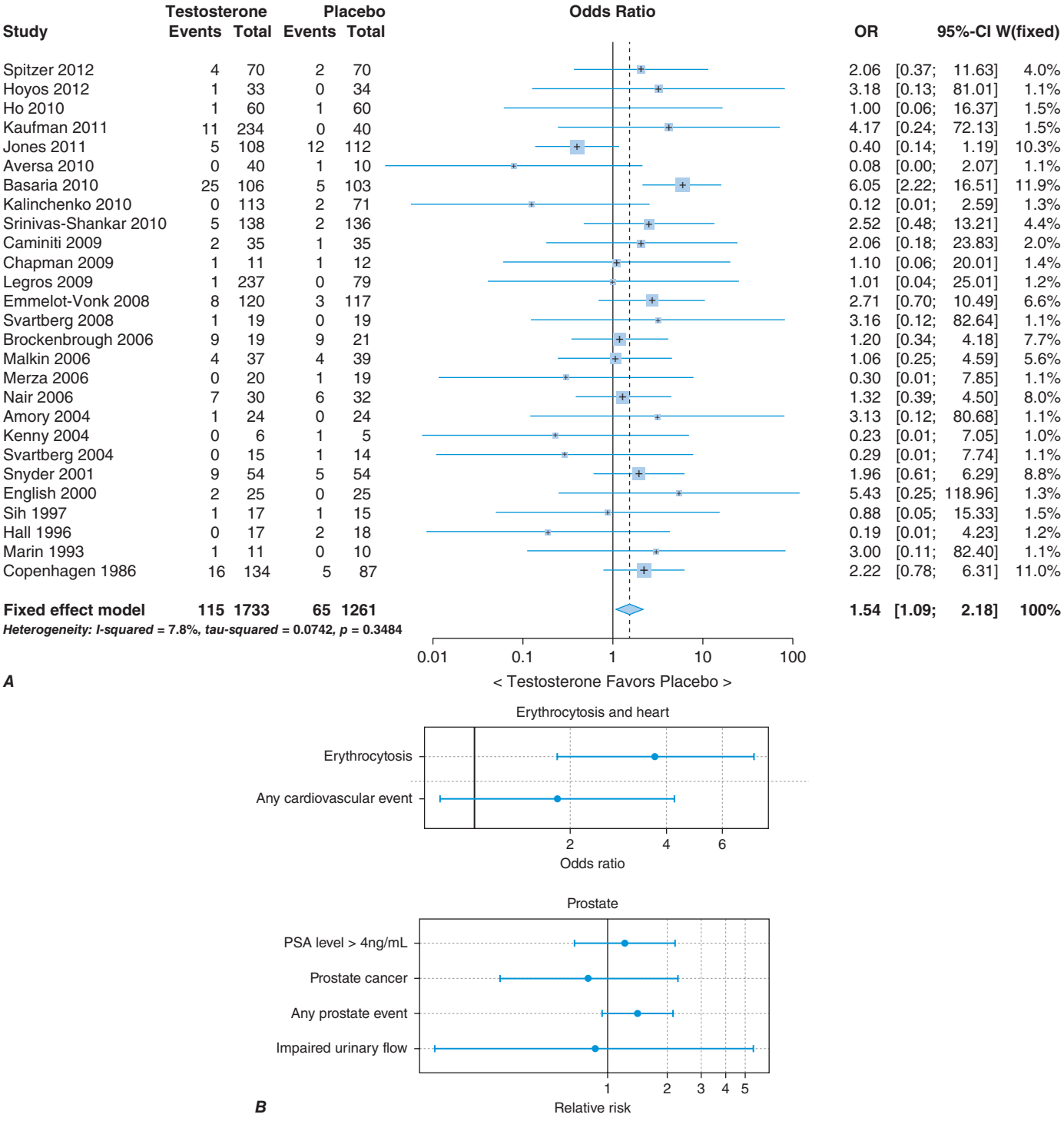

FIGURE 411-7 **Meta-analyses of cardiovascular and prostate adverse events associated with testosterone therapy. *A.*** A meta-analysis of cardiovascular-related events in randomized testosterone trials of 12 weeks or longer in duration. Randomization to testosterone was associated with a significantly increased risk of cardiovascular-related event (odds ratio [OR] 1.54). *(Modified with permission from L Xu et al: Testosterone therapy and cardiovascular events among men: a systematic review and meta-analysis of placebo-controlled randomized trials BMC Med 11:108, 2013.)* ***B.*** The relative risk of prostate events and the associated 95% confidence intervals (CIs) in a meta-analysis of randomized testosterone trials. PSA, prostate-specific antigen. *(Data were derived from a meta-analysis by MM Fernández-Balsells et al: J Clin Endocrinol Metab 95:2560, 2010, and the figure was reproduced with permission from M Spitzer et al: Nat Rev Endocrinol 9:414, 2013.)*

One randomized testosterone trial in older men with mobility limitation and high burden of chronic conditions, such as diabetes, heart disease, hypertension, and hyperlipidemia, reported a greater number of cardiovascular events in men randomized to the testosterone arm of the study than in those randomized to the placebo arm. Since then, two large retrospective analyses of patient databases have reported higher frequency of cardiovascular events, including myocardial infarction, in older men with preexisting heart disease (Fig. 411-7).

Population screening of all older men for low testosterone levels is not recommended, and testing should be restricted to men who have symptoms or physical features attributable to androgen deficiency. Testosterone therapy is not recommended for all older men with low testosterone levels. In older men with significant symptoms of androgen deficiency who have testosterone levels below 200 ng/dL, testosterone therapy may be considered on an individualized basis and should be instituted after careful