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BACKGROUND: Prostate cancer is the most common nonskin cancer in men in the United States, and prostate cancer screening has increased in recent years. In 2002, the U.S. Preventive Services Task Force concluded that evidence was insufficient to recommend for or against screening for prostate cancer with prostate-specific antigen (PSA) testing. PURPOSE: To examine new evidence on benefits and harms of screening asymptomatic men for prostate cancer with PSA. DATA SOURCES: English-language articles identified in PubMed and the Cochrane Library (search dates, January 2002 to July 2007), reference lists of retrieved articles, and expert suggestions. STUDY SELECTION: Randomized, controlled trials and meta-analyses of PSA screening and cross-sectional and cohort studies of screening harms and of the natural history of screening-detected cancer were selected to answer the following questions: Does screening for prostate cancer with PSA, as a single-threshold test or as a function of multiple tests over time, decrease morbidity or mortality? What are the magnitude and nature of harms associated with prostate cancer screening, other than overtreatment? What is the natural history of PSA-detected, nonpalpable, localized prostate cancer? DATA EXTRACTION: Studies were reviewed, abstracted, and rated for quality by using predefined U.S. Preventive Services Task Force criteria. DATA SYNTHESIS: No good-quality randomized, controlled trials of screening for prostate cancer have been completed. In 1 cross-sectional and 2 prospective cohort studies of fair to good quality, false-positive PSA screening results caused psychological adverse effects for up to 1 year after the test. The natural history of PSA-detected prostate cancer is poorly understood. LIMITATIONS: Few eligible studies were identified. Long-term adverse effects of false-positive PSA screening test results are unknown. CONCLUSION: Prostate-specific antigen screening is associated with psychological harms, and its potential benefits remain uncertain.

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