BACKGROUND/RATIONALE: Prostate cancer is the most common cancer among American men and has the second highest mortality rate. As the population of male veterans grows older, this disease is a growing problem in the Veterans Affairs (VA) health care system. Although "official" recommendations for screening are controversial, prostate specific antigen (PSA) testing has become increasingly common and digital rectal examination (DRE) is frequently performed. No data exist, however, to establish a beneficial effect of either method of screening for prostate cancer on mortality.

OBJECTIVE: The goal of this research is to evaluate the effectiveness of PSA, with or without DRE, in screening for prostate cancer. The hypothesis being tested is that screening (vs. no screening) is associated with improved survival.

METHODS: The research uses an observational cohort design with nested case-control sampling of subjects, an established method of determining benefits of screening for cancer that avoids problems in feasibility associated with a randomized trial (e.g., "contamination" of results when screening occurs in the usual care group). The study cohort consists of 71,938 patients receiving ambulatory care during 1989-1990 at any of the ten VA Medical Centers in New England. Case subjects are men in this cohort diagnosed with adenocarcinoma of the prostate from 1991-1995, who die during 1991-1999. Verification of death among men with prostate cancer includes searches of the Beneficiary Identification and Records Locator Subsystem (BIRLS) and the National Death Index (NDI). Control subjects (1:1 ratio with cases) are men who are alive at the time of death of the corresponding case, matched for age (year of birth) and VA facility. The exposure variables are screening with PSA, or PSA and DRE, done for screening purposes prior to the diagnosis of prostate cancer or the corresponding date for matched controls; the determination that screening occurred will be blind to case-control status. If screening is effective, fewer cases than controls will have a history of exposure to screening for prostate cancer.

FINDINGS/RESULTS: We have identified 449 matched-pair case and control subjects. The medical records for 962 (96%) of these 998 subjects have been obtained and are currently being reviewed.

STATUS: Final report for this award; research is ongoing.

IMPACT: The results of the study can have important clinical and economic implications for prostate cancer screening practices in the VA system.