

# BRIEF COMMUNICATION

## Prostate Cancer Incidence and Mortality in the United States and the United Kingdom

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Rates of diagnosed prostate cancer have increased substantially in the United States. To provide clues to the impact of screening and other diagnostic procedures on this increase, we compared secular trends in prostate cancer incidence and mortality rates between white men in the United States and men in the United Kingdom, where screening has been less intense (1).

Prostate cancer incidence rates were calculated for the 5-year periods centered approximately on 1970, 1975, 1980, 1985, and 1990 and for the 3-year period centered on 1993 (data for 1990–1994 were used for U.K. incidence rates;

Fig. 1). For U.S. whites, we used average incidence rates of five Surveillance, Epidemiology, and End Results (SEER)<sup>1</sup> regions: Atlanta, Connecticut, Detroit, Iowa, and the San Francisco Bay Area, the only regions providing data for all of these periods (2–5). For the British, we used cancer registry data from the Birmingham and West Midlands region (2) (all races; data for 1990–1994 provided by L. Somerville: personal communication). Prostate cancer mortality rates were calculated for the same time periods for U.S. whites and for England and Wales (all races), respectively (6–9). All rates were adjusted to the age distribution of the world standard population by the direct method. We found similar trends, regardless of whether all age groups were included or rates were restricted to men aged younger than 75 years, so we present only trends based on all age groups.

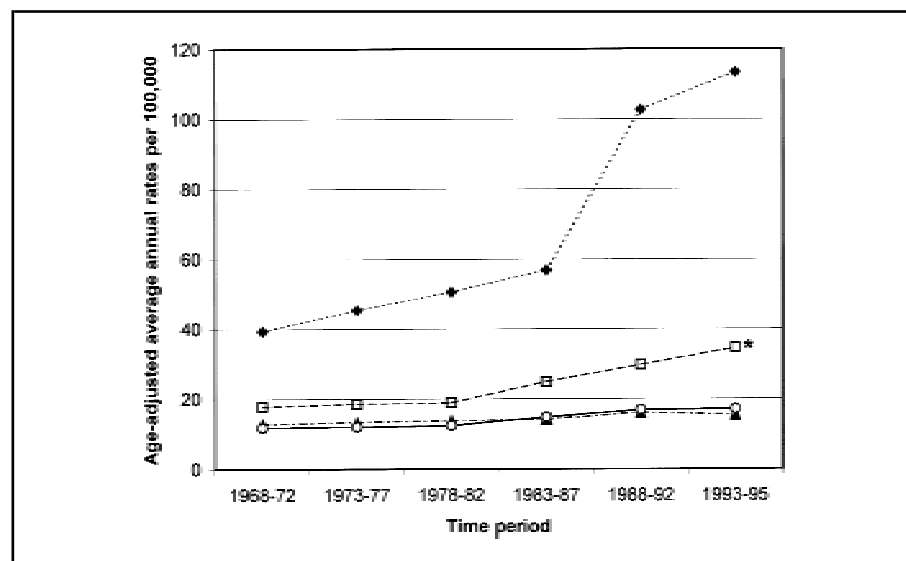
As shown in Fig. 1, incidence rates in U.S. whites were 2.2–2.4 times those in U.K. men until 1987. Thereafter, this ratio rose to 3.4 in 1988–1992 due to an 80% increase in incidence rates among U.S. white men between 1983–1987 and 1988–1992. In contrast, mortality rates in the two populations were similar throughout the 20-year period. The slight increase in mortality among British men after 1982 may reflect changes

in the cause-of-death coding rules implemented in U.K. in 1984 (10).

Similarity of mortality rates between the two populations supports the hypothesis that risk of fatal prostate cancer among British men does not differ from that among U.S. white men. More intensive use of screening procedures, such as prostate-specific antigen testing, in the United States is the most likely explanation for the widening gap in incidence between U.S. white and U.K. populations. In support of this interpretation, the U.S. SEER regions, which vary in the intensity of screening, exhibit substantial variation in prostate cancer incidence but similar prostate cancer mortality (11).

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**Fig. 1.** Incidence and mortality rates of prostate cancer in U.S. white men and U.K. men (all ages). Note that the last data point on all curves (except for U.K. incidence) represents data for a 3-year period instead of a 5-year period. ◆ = incidence, U.S. white men; □ = incidence, U.K. men; ▲ = mortality, U.S. white men; ○ = mortality, U.K. men; \* = data for 1990–1994 were used for U.K. incidence rates, since separate data for 1993–1994 were not available.

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(Deaths for 282 selected causes by 5-year age groups, race, and sex: United States, 1979–95; <http://www.cdc.gov/nchswww/datawh/statab/unpubd/mortabs/gmwk292.htm>) and POP7095 (United States population by age, race, and sex, 1970–79, 1980–89, and 1990–95; <http://www.cdc.gov/nchswww/datawh/statab/unpubd/mortabs/pop7095.htm>).

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## Notes

<sup>1</sup>*Editor's note:* SEER is a set of geographically defined, population-based central tumor registries in the United States, operated by local nonprofit organizations under contract to the National Can-

cer Institute (NCI). Each registry annually submits its cases to the NCI on a computer tape. These computer tapes are then edited by the NCI and made available for analysis.

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