

Figure S1. CONSORT flow diagram of this study.

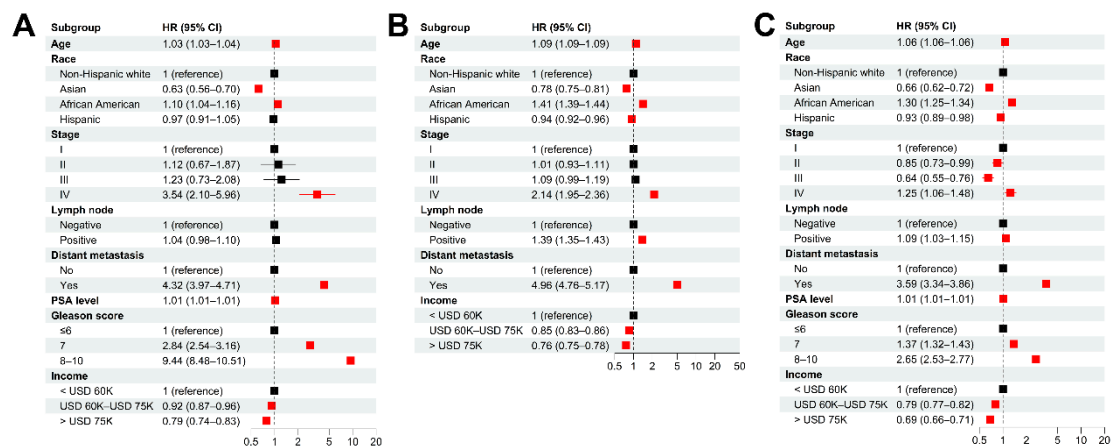


Figure S2. Adjusted hazard ratios of clinical characteristics for CSS in 2009+ patients (A), OS in all patients (B) and OS in 2009+ patients (C). Multivariable Cox models were adjusted for age, race, tumor stage, lymph node involvement, distant metastasis, PSA level, Gleason score and income. 95% CIs were presented in parentheses. Red color indicates a significance level of $p < 0.05$.

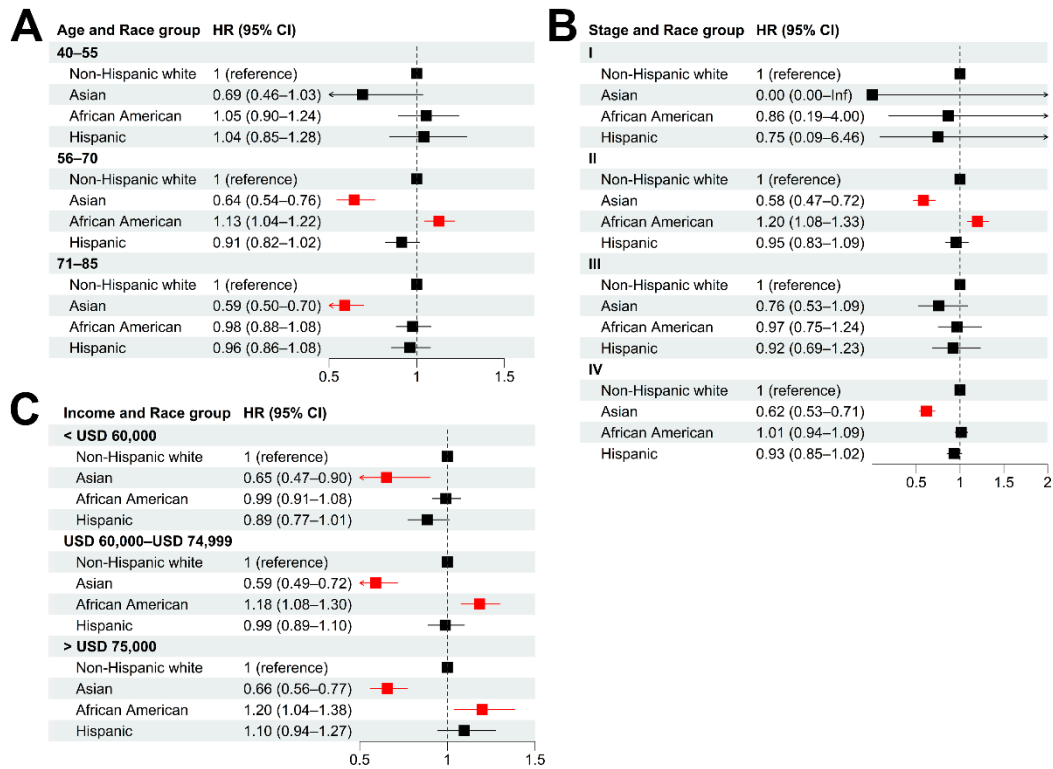


Figure S3. Racial disparities in different patient subgroups diagnosed after 2009. (A–C): Hazard ratios of race for cancer-specific death in patient subgroups stratified by age (A), tumor stage (B) and income (C) using non-Hispanic white as baseline. Multivariable Cox models were adjusted for age, race, tumor stage, lymph node involvement, distant metastasis, PSA level, Gleason score and income. 95% CIs were presented in parentheses. Red color indicates a significance level of $p < 0.05$.

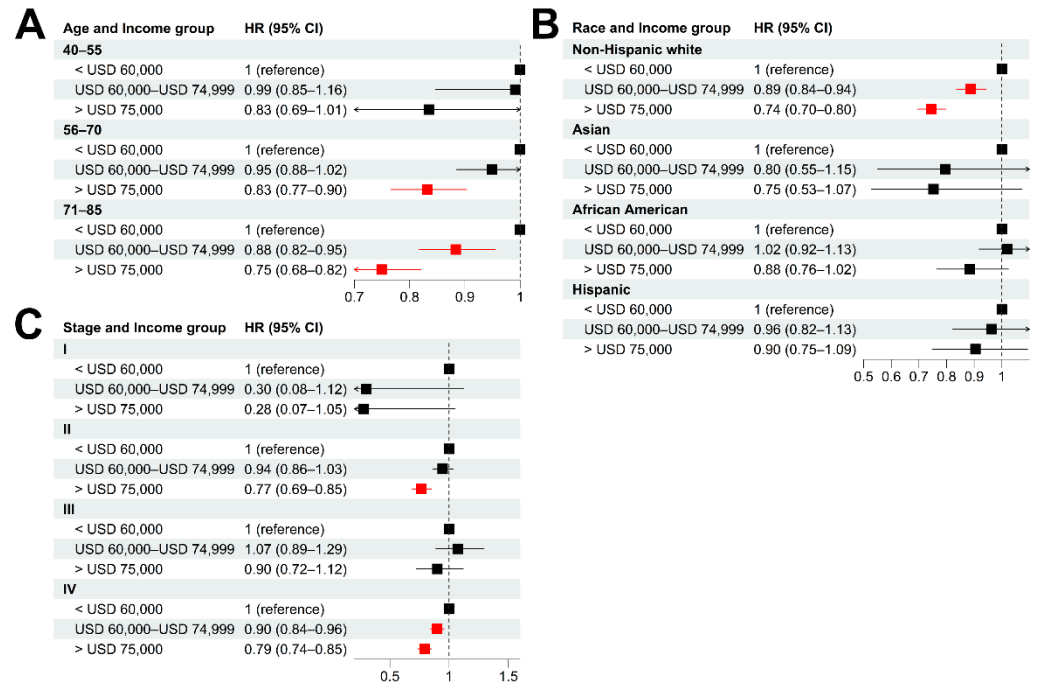


Figure S4. Socioeconomic disparities in different patient subgroups diagnosed after 2009. (A–C): Hazard ratios of income for cancer-specific death in patient subgroups stratified by age (A), race (B) and tumor stage (C) using low-income (<USD 60,000) group as baseline. Multivariable Cox models were adjusted for age, race, tumor stage, lymph node involvement, distant metastasis, PSA level,

Gleason score and income. 95% CIs were presented in paratheses. Red color indicates a significance level of $p < 0.05$.

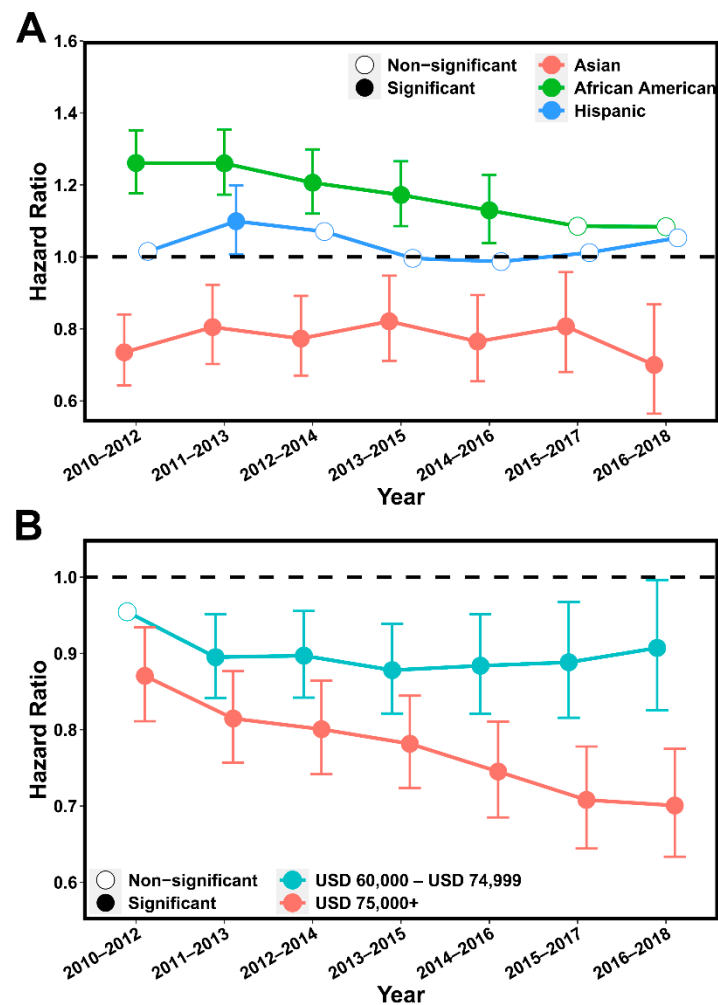


Figure S5. The change in racial and socioeconomic disparity from 2010 to 2018. **A:** Hazard ratio of Asian, Black and Hispanic for cancer-specific death using non-Hispanic white as baseline. Multivariable Cox models were adjusted for age, tumor stage and income. **B:** Hazard ratio of intermediate-income (USD 60,000–USD 74,999) and high-income (>USD 75,000) groups for cancer-specific death using low-income (<USD 60,000) group as baseline. Multivariable Cox models were adjusted for age, race, tumor stage, lymph node involvement, distant metastasis, PSA level, Gleason score and income. p values below 0.05 were considered significant.

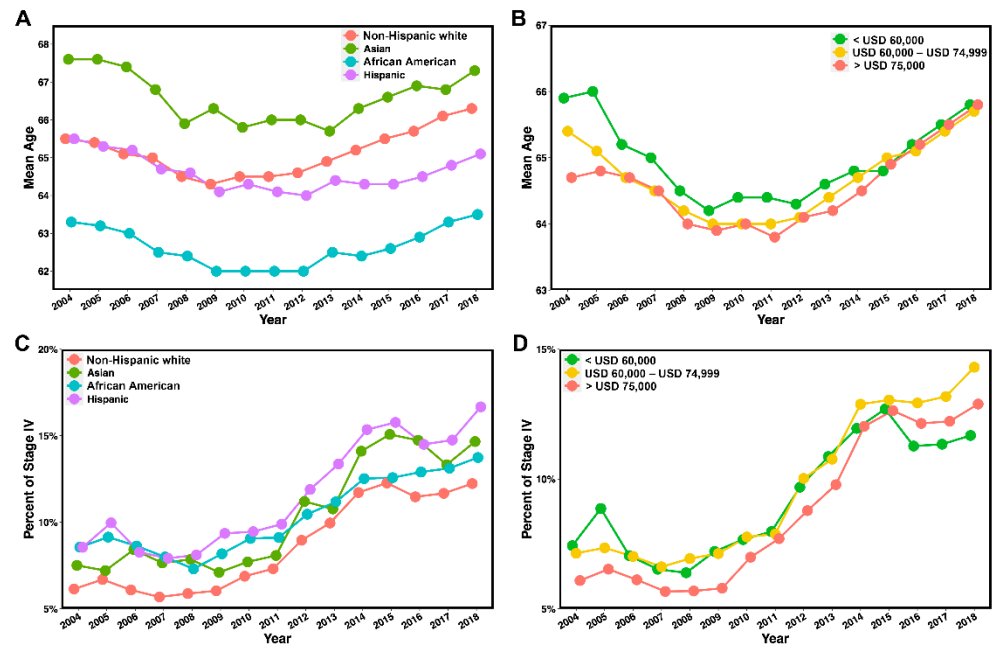


Figure S6. The change of age and tumor stage in different race and socioeconomic groups from 2004 to 2018. A–B: The mean age in the four race groups (A) and the three income groups (B). (C–D) The percentage of stage IV patients in the four race groups (C) and the three income groups (D). The four race groups contain White, Asian, Black and Hispanic. The three income groups contain low (<USD 60,000), intermediate (USD 60,000–USD 74,999) and high-income (>USD 75,000) groups.

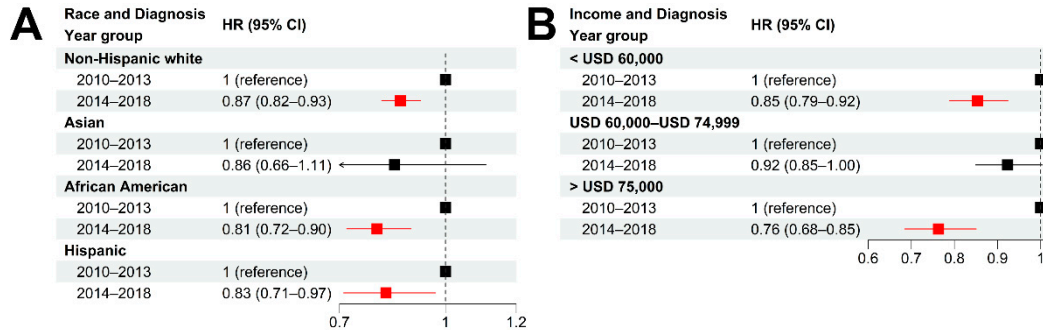


Figure S7. Survival improvements in different race and socioeconomic groups (after 2009). (A–B): Hazard ratios of diagnosis year for cancer-specific death in patient subgroups stratified by race (A), and income (B) using non-Hispanic white and low-income (<USD 60,000) group as baseline, respectively. Multivariable Cox models were adjusted for age, race, tumor stage, lymph node involvement, distant metastasis, PSA level, Gleason score and income. 95% CIs were presented in parentheses. Red color indicates a significance level of $p < 0.05$.