**Supplementary Text 1: Detailed MEC and SCCS Sample Description**

The MEC is a population-based prospective cohort that was initiated in 1993-1996 in California and Hawaii to investigate cancer etiology in a multiethnic population. The Department of Motor Vehicles, voter registration lists, and Health Care Financing Administration data files were used to identify participants. Over 215,000 men and women, between the ages 45 and 75, and from five major ethnic/racial groups (African Americans, Japanese Americans, Latinos, Native Hawaiians and whites) were enrolled. Enrollment and informed consent was gathered using a mailed baseline questionnaire which collected data on demographics, anthropometric measures, diet, and lifestyle factors.

Cancer cases are identified in the MEC through annual linkage to California and Hawaii cancer state registries which are part of the National Cancer Institute's Surveillance, Epidemiology, and End Results Program. Vital status and reason for death among participants is collected through linkage of participant data to the National Death Index and death certificate files for California.

The nested case-control sample of the MEC included participants with incident PC and available DNA. Incident PC cases were individually matched to an equal number of controls based on age, sex, and race/ethnicity. This sample, along with SCCS cases and controls, were genotyped using the 2M Multiethnic Genotyping Array (the ‘MEGA’ chip) from Illumina (San Diego, CA).

In addition to these newly genotyped controls, additional controls were selected from ~18,000 MEC participants genotyped using the MEGA array as part of other genetic studies. These earlier samples were genotyped for prior MEC studies at the Center for Inherited Disease (CIDR) and at the USC Norris Molecular Genomic Core facility.

The SCCS participants were selected from the prospective cohort study of >85,000 black and white men and women, initiated in 2002. Average age at cohort entry was 52 years. Each participant completed an extensive baseline questionnaire which ascertained information about demographic, anthropometric, medical, lifestyle and other factors. The educational and income levels of the SCCS members are low compared with other established cohorts and the prevalence of obesity (45%) and current smoking (44%) are high in this cohort. Ascertainment of cancer incidence is done by annual linkage of the cohort with the 12 state cancer registries covering the SCCS catchment area. Approximately 90% of participants provided biological samples at baseline (blood or buccal).