**SUPPLEMENTARY TABLES**

Supplementary Table S1. Characteristics of PROSPR participants with a positive fecal occult blood test with no covariate information missing, 2011-2012 (N=47,827)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Characteristic** | **Overall**  **N=47,827** | **GH**  **N=2,402**  (5.02%) | **KPNC**  **N=24,229**  (50.66%) | **KPSC**  **N=21,024**  (43.96%) | **PHHS-UTSW**  **N=172**  (0.36%) |
|  | **Col. %** | **Col. %** | **Col. %** | **Col. %** | **Col. %** |
| Age (years) at positive test |  |  |  |  |  |
| 50-54 | 14.26 | 11.62 | 13.90 | 14.88 | 26.16 |
| 55-59 | 20.21 | 17.53 | 20.12 | 20.42 | 43.60 |
| 60-64 | 21.17 | 20.98 | 21.76 | 20.42 | 30.23 |
| 65-69 | 18.99 | 17.99 | 19.74 | 18.39 | 0 |
| 70-75 | 18.99 | 17.11 | 19.24 | 19.08 | 0 |
| 76-84 | 5.12 | 11.45 | 4.23 | 5.47 | 0 |
| 85-89 | 1.26 | 3.33 | 1.02 | 1.33 | 0 |
| Gender |  |  |  |  |  |
| Female | 49.73 | 50.25 | 49.38 | 49.92 | 68.02 |
| Male | 50.27 | 49.75 | 50.62 | 50.08 | 31.98 |
| Charlson comorbidity score in calendar year before positive test |  |  |  |  |  |
| 0 | 53.02 | 50.62 | 56.99 | 48.80 | 43.60 |
| 1 | 21.16 | 17.36 | 21.68 | 20.87 | 34.30 |
| 2 | 11.85 | 12.41 | 11.42 | 12.31 | 9.30 |
| 3+ | 13.97 | 19.61 | 9.91 | 18.02 | 12.79 |
| Race/ethnicity |  |  |  |  |  |
| NH White | 57.87 | 79.27 | 61.61 | 51.47 | 14.53 |
| Hispanic | 19.29 | 4.37 | 13.68 | 27.34 | 34.88 |
| NH Asian/Pacific Islander | 13.60 | 8.37 | 16.51 | 10.93 | 3.49 |
| NH Black | 8.58 | 4.08 | 7.51 | 10.01 | 46.51 |
| NH Other | 0.65 | 3.91 | 0.69 | 0.24 | 0.58 |
| Body mass index (kg/m2) in calendar year before positive test |  |  |  |  |  |
| <25 | 22.36 | 20.69 | 23.61 | 21.17 | 15.70 |
| 25 to <30 | 34.85 | 33.10 | 34.76 | 35.19 | 31.40 |
| 30 to <35 | 23.99 | 23.90 | 23.48 | 24.55 | 26.74 |
| 35+ | 18.80 | 22.31 | 18.14 | 19.09 | 26.16 |
| Type of fecal blood test |  |  |  |  |  |
| FIT | 97.77 | 68.94 | 98.68 | 100 | 99.42 |
| Guaiac | 2.23 | 31.06 | 1.32 | 0 | 0.58 |
| Prior colorectal cancer screening |  |  |  |  |  |
| No | 14.67 | 33.01 | 13.42 | 13.95 | 23.84 |
| Yes | 85.33 | 66.99 | 86.58 | 86.05 | 76.16 |

FIT: fecal immunohistochemical test; GH: Group Health; KPNC: Kaiser Permanente Northern California; KPSC: Kaiser Permanente Southern California; NH: non-Hispanic; PHHS-UTWS: Parkland Health and Hospital System – University of Texas Southwestern Medical Center; PROSPR: Population-Based Research Optimizing Screening through Personalized Regimens

Supplementary Table S2. Associations between patient characteristics and time to colonoscopy follow-up after positive fecal occult blood test in PROSPR healthcare systems, 2011-2012, over different follow-up periodsa

|  |  |  |
| --- | --- | --- |
| **Characteristic** | **90 days follow-up** | **180 days follow-up** |
|  | **Hazard ratio**  **(95% confidence interval)** | **Hazard ratio**  **(95% confidence interval)** |
| Age (years) |  |  |
| 50-54 | Reference | Reference |
| 55-59 | 1.03 (0.99-1.07) | 1.02 (0.99-1.06) |
| 60-64 | 0.99 (0.95-1.02) | 0.98 (0.95-1.02) |
| 65-69 | 1.01 (0.97-1.04) | 0.99 (0.96-1.03) |
| 70-75 | 0.92 (0.89-0.96) | 0.91 (0.87-0.94) |
| 76-84 | 0.68 (0.64-0.72) | 0.66 (0.62-0.70) |
| 85-89 | 0.36 (0.31-0.41) | 0.34 (0.29-0.39) |
| Gender |  |  |
| Female | Reference | Reference |
| Male | 1.03 (1.01-1.05) | 1.03 (1.00-1.05) |
| Charlson comorbidity score |  |  |
| 0 | Reference | Reference |
| 1 | 0.93 (0.90-0.95) | 0.93 (0.91-0.96) |
| 2 | 0.87 (0.84-0.90) | 0.87 (0.84-0.90) |
| ≥3 | 0.69 (0.66-0.71) | 0.69 (0.67-0.72) |
| Body mass index (kg/m2) |  |  |
| <25 | Reference | Reference |
| 25 to <30 | 1.06 (1.03-1.09) | 1.06 (1.03-1.09) |
| 30 to <35 | 1.06 (1.03-1.10) | 1.07 (1.03-1.10) |
| ≥35 | 1.00 (0.96-1.03) | 1.01 (0.97-1.04) |
| Race/ethnicity |  |  |
| White, non-Hispanic | Reference | Reference |
| Hispanic (any race) | 1.00 (0.97-1.03) | 1.01 (0.98-1.03) |
| Asian/Pacific Islander | 0.95 (0.92-0.98) | 0.96 (0.93-0.99) |
| Black | 0.96 (0.92-1.00) | 0.97 (0.93-1.01) |
| Other | 0.92 (0.80-1.07) | 0.95 (0.83-1.09) |
| Prior colorectal cancer screening |  |  |
| No | Reference | Reference |
| Yes | 1.31 (1.27-1.36) | 1.31 (1.27-1.35) |
| Healthcare system |  |  |
| Kaiser Permanente Southern California | Reference | Reference |
| Group Health | 0.54 (0.51-0.58) | 0.61 (0.58-0.65) |
| Kaiser Permanente Northern California | 0.92 (0.90-0.95) | 0.97 (0.95-0.99) |
| Parkland Health and Hospital System – University of Texas Southwestern Medical Center | 0.13 (0.09-0.20) | 0.24 (0.18-0.31) |

aMultivariate regression limited to 47,827 persons with complete covariate information

PROSPR: Population-Based Research Optimizing Screening through Personalized Regimens