**Table S1. Summary of Community Health Survey data collected, 2002-2006.**

|  |  |  |
| --- | --- | --- |
| Survey measure | Variable or question | Years of available data |
| Demographics | Age, gender, United Health Fund (UHF) neighborhood, ethnicity, education level, Poverty level based on zipcode poverty percentage, US or foreign born | 2002- 2006 |
|  | sexual orientation | 2003-2006 |
|  | Self-assessed neighborhood safety | 2002 |
| General physical health | Self-reported health status, body mass index (BMI) | 2002-2006 |
| Past medical history | Told had high blood pressure by doctor, | 2002, 2005, 2006 |
|  | informed about high cholesterol | 2002 |
|  | ever received diagnosis of diabetes mellitus, | 2002-2004, 2006 |
|  | Asthma episode in past test months, | 2002-2004, 2006 |
| Access to health care | Presence of primary care physician, insured or uninsured status | 2002-2006 |
| Medical screening | HIV test in past 12 months | 2003, 2005, 2006 |
|  | Ever been tested for HIV | 2004-2005 |
|  | PAP test in past 3 years | 2002, 2004-2006 |
|  | mammogram in past 2 years | 2002, 2004-2006 |
|  | Ever had colonoscopy | 2003, 2004, 2006 |
| Lifestyle habits | binge drinking (≥ 5 drinks on one occasion in past 30 days) | 2002-2005 |
|  | Smoking status (smoking is defined as >100 cigarettes in lifetime) | 2002-2006 |
|  | Heavy smoking ( > 10 cigarettes/day) | 2002-2004, 2006 |
|  | number of sex partners | 2002 |
|  | Exercise in last 30 days | 2002-2005 |
|  | Recreational needle use | 2004 |
|  | Fruits and vegetables servings per day | 2002 |

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**Figure S1**. Geographic location the three neighborhoods of Upper Manhattan studied: Upper East Side (10021, 10028, 10044, 10128), Central Harlem (10026, 10027, 10030, 10037, 10039), and East Harlem (10029,10035) (source: <http://www.nyc.gov/html/doh/downloads/pdf/survey/uhf_map_100604.pdf>)

**Figure S2. Age-standardized cancer incidence rates for specific cancers by United Health Fund New York City neighborhood and sex, 2007 to 2011. Vertical bars indicate 95% confidence intervals.**

**Table S2. Associations of neighborhood and race with cancer incidence for other common cancer sites, 2007-2011**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cancer type or cancer site | Model | | | Race | | | UHF neighborhood | | | | Community Health Survey (CHS) variables | | | Likelihood ratio test | |
|  | |  | Black vs. White | | Hispanic vs. White | | | East Harlem vs. Upper East Side | Central Harlem vs. Upper East Side | | |  | P- value | |
|  |  | | |  | | |  | | | |  | | |  | |
| Oral | Model 1 | | | 1.17  (0.77, 1.77) | | 0.90  (0.58, 1.38) | 0.95  (0.62, 1.46) | | | 0.94  (0.62, 1.44) |  | | |  | |
| Model 2 | | | **2.69 (1.43, 5.05)** | | **2.45 (1.30, 4.61)** | **1.86 (1.07, 3.22)** | | | **1.78 (1.10, 2.90)** | Sex and age interaction  Fruit and vegetable consumption  Ever been HIV tested | | | <0.001 | |
| Esophagus | Model 1 | | | **2.15**  **(1.18, 3.91)** | | 1.24  (0.67, 2.31) | **0.62**  **(0.33, 1.15)** | | | **0.46**  **(0.25, 0.86)** |  | | |  | |
| Model 2 | | | 2.00 (0.99, 4.03) | | 1.08 (0.55, 2.13) | **0.51 (0.27, 0.97)** | | | **0.40 (0.21, 0.76)** | Neighborhood safety  Current smoking | | | 0.01 | |
| Stomach | Model 1 | | | **2.27**  **(1.36, 3.82)** | | **2.47**  **(1.49, 4.09)** | 1.34  (0.81, 2.23) | | | 1.50  (0.91, 2.49) |  | | |  | |
| Model 2 | | | **3.33 (1.79, 6.19)** | | **3.15 (1.74, 5.71)** | 1.03 (0.59, 1.82) | | | 1.10 (0.57, 1.86) | Healthcare insurance  Alcohol binge drinking | | | <0.001 | |
| Colon | Model 1 | | | **1.35**  **(1.04, 1.77)** | | 1.02  (0.77, 1.34) | 1.17  (0.89, 1.54) | | | 1.18  (0.90, 1.54) |  | | |  | |
| Model 2 | | | **5.89**  **(12.62, 13.25)** | | **4.20 (1.71, 10.33)** | **2.39 (1.53, 3.73)** | | | **1.79 (1.25, 2.56)** | College education level  Ever tested for HIV  Never smoking  Hypertension | | | <0.001 | |
| Rectum | Model 1 | | | 1.35  (0.88, 2.06) | | 1.03  (0.66, 1.59) | 0.91  (0.58, 1.43) | | | 1.20  (0.79, 1.82) |  | | |  | |
| Model 2 | | | 1.41  (0.84, 2.08) | | 0.83  (0.43, 1.58) | 0.94 (0.59, 1.49) | | | 1.33 (0.86, 2.07) | Presence of primary care physician  Heavy smoking (>10 cigarettes /day) | | | <0.001 | |
| Liver | Model 1 | | | **3.37**  **(2.20, 5.17)** | | **3.10 (2.05, 4.71)** | 0.97 (0.64, 1.46) | | | 0.98 (0.65, 1.46) |  | | |  | |
| Model 2 | | | **6.54 (1.41, 30.40)** | | **32.38 (2.13, 491.59)** | 2.32 (0.98, 5.49) | | | **2.90 (1.28, 6.58)** | BMI  Recreational needle use  Fruit and vegetable consumption  Heavy smoking (>10 cigarettes /day)  Foreign born  Asthma  Alcohol bing drinking | | | <0.001 | |
| Pancreas | Model 1 | | | **1.55**  **(1.08, 2.21)** | | 0.70  (0.47, 1.03) | 0.98  (0.68, 1.42) | | | 0.83  (0.58, 1.20) |  | | |  | |
| Model 2 | | | **1.71**  **(1.18, 2.46)** | | 0.84  (0.55, 1.30) | 0.93  (0.63, 1.36) | | | 0.81  (0.56, 1.16) | Number of sex partners | | | 0.04 | |
| Larynx | Model 1 | | | **2.43 (1.23, 4.80)** | | 1.20 (0.58, 2.49) | 1.13 (0.56, 2.26) | | | 0.85 (0.43, 1.70) |  | | |  | |
| Model 2 | | | **2.95 (1.45, 6.01)** | | 1.52  (0.74, 3.12) | **0.003**  **(0.001, 0.30)** | | | **0.004**  **(0.001, 0.26)** | Recreational needle use  Ever HIV tested  Poverty level | | | <0.0001 | |
| Melanoma | Model 1 | | | **0.04 (0.01, 0.10)** | | **0.19 (0.11, 0.33)** | **0.26 (0.14, 0.48)** | | | **0.43 (0.27, 0.69)** |  | | |  | |
| Model 2 | | | **0.02**  **(0.01, 0.07)** | | **0.11**  **(0.05, 0.24)** | **0.22**  **(0.12, 0.41)** | | | **0.42 (0.26, 0.66)** | Current smoking | | | <0.001 | |
| Cervix | Model 1 | | | 1.53  (0.69, 3.42) | | 1.08  (0.47, 2.49) | **2.37**  **(1.02, 5.51)** | | | 2.23  (0.97, 5.12) |  | | |  | |
| Model 2 | | | **2.29 (1.02, 5.17)** | | 1.32 (0.62, 2.78) | **2.30 (1.08, 4.90)** | | | 1.70 (0.77, 3.74) | Mammogram in the past 2 years | | | 0.05 | |
| Endometrium | Model 1 | | | 0.96 (0.68, 1.35) | | **0.68 (0.48, 0.98)** | 1.07 (0.75, 1.52) | | | 1.00 (0.71, 1.41) |  | | |  | |
| Model 2 | | | **2.78 (1.02, 7.61)** | | 1.44 (0.67, 3.12) | 1.63 (0.99, 2.67) | | | 1.20 (0.80, 1.78) | BMI | | | <0.001 | |
| Ovary | Model 1 | | | 0.88 (0.51, 1.53) | | **0.43 (0.23, 0.79)** | 0.88 (0.50, 1.57) | | | 0.73 (0.42, 1.29) |  | | |  | |
| Model 2 | | | 2.47 (0.62, 9.83) | | 0.92 (0.30, 2.90) | 1.64 (0.78, 3.46) | | | 0.99 (0.53, 1.84) | Pap smear in past 3 years  BMI | | | 0.01 | |
| Testis | Model 1 | | | 0.28  (0.06, 1.31) | | 0.16  (0.02, 1.34) | 0.30  (0.04, 2.53) | | | 0.87  (0.25, 3.06) |  | | |  | |
| Model 2 | | | **0.09**  **(0.01, 0.68)** | | **0.01**  **(<0.001, 0.42)** | 0.112  (0.01, 1.32) | | | 1.14  (0.37, 3.57) | Asthma | | | 0.04 | |
| Bladder | Model 1 | | | **0.54**  **(0.37, 0.79)** | | **0.53**  **(0.36, 0.78)** | 0.70  (0.47, 1.02) | | | 0.86  (0.60, 1.23) |  | | |  | |
| Model 2 | | | **0.57 (0.36, 0.91)** | | 0.66  (0.36, 1.20) | **0.67**  **(0.36, 0.96)** | | | 0.92  (0.64, 1.31) | Current smoker  Exercise in the past 30 days | | | <0.001 | |
| Kidney | Model 1 | | | 1.16 (0.78, 1.73) | | 0.87 (0.58, 1.30) | 1.38 (0.93, 2.03) | | | 0.82 (0.54, 1.24) |  | | |  | |
| Model 2 | | | 0.56  (0.30, 1.04) | | 0.47  (0.21, 1.07) | **0.88**  **(0.50, 1.56)** | | | **0.54**  **(0.29, 0.98)** | Self-assessed health  Fruit and vegetable consumption  Foreign born  hypercholesterolemia | | | <0.0001 | |
| Brain | Model 1 | | | 0.66  (0.32, 1.36) | | 0.98  (0.52, 1.88) | 0.55  (0.26, 1.14) | | | 0.77  (0.39, 1.49) |  | | |  | |
| Model 2 | | | 0.51  (0.23, 1.18) | | 0.57  (0.21, 1.52) | **0.01**  **(<0.001, 0.35)** | | | **0.01**  **(<0.001, 0.52)** | Current Asthma  Poverty level | | | 0.01 | |
| Thyroid | Model 1 | | | **0.40**  **(0.26, 0.62)** | | **0.65**  **(0.44, 0.97)** | 0.73  (0.48, 1.12) | | | 0.85  (0.57, 1.27) |  | | |  | |
| Model 2 | | | **0.40**  **(0.26, 0.62)** | | 0.65  (0.53, 3.65) | 0.74  (0.48, 1.13) | | | 0.86  (0.57, 1.50) | Sex and age interaction | | | 0.02 | |
| Hodgkin lymphoma | Model 1 | | | 1.51  (0.57, 4.01) | | 1.39  (0.53, 3.65) | 1.49  (0.57, 3.88) | | | 0.96  (0.36, 2.58) |  | | |  | |
| Model 2 | | | 1.43  (0.53, 3.91) | | 1.33  (0.50, 3.51) | 1.09  (0.37, 3.15) | | | 1.51  (0.46, 4.95) | Recreational needle use  Ever been tested for HIV | | | < 0.001 | |
| Non-Hodgkin lymphomas | Model 1 | | | 1.04  (0.75, 1.44) | | 1.06  (0.78, 1.44) | **0.59**  **(0.42, 0.83)** | | | **0.65**  **(0.47, 0.89)** |  | | |  | |
| Model 2 | | | 0.76  (0.52, 1.10) | | 0.74  (0.51, 1.07) | **0.61**  **(0.45, 0.84)** | | | **0.68**  **(0.50, 0.94)** | Current smoking | | | < 0.001 | |
| Myeloma | Model 1 | | | **3.01**  **(1.85, 4.90)** | | 1.36  (0.80, 2.30) | 0.82  (0.50, 1.37) | | | 0.86  (0.53, 1.39) |  | | |  | |
| Model 2 | | | **5.69**  **(2.10, 15.14)** | | **3.27**  **(0.94, 11.36)** | 1.29  (0.65, 2.58) | | | 1.31 (0.71, 2.44) | Homosexual orientation  College graduate | | | 0.03 | |
| Leukemia | Model 1 | | | **0.57**  **(0.37, 0.88)** | | **0.60**  **(0.39, 0.93)** | 1.14  (0.74, 1.76) | | | 1.27  (0.84, 1.94) |  | | |  | |
| Model 2 | | | **0.51**  **(0.31, 0.84)** | | **0.50**  **(0.30, 0.83)** | **0.05**  **(0.004, 0.56)** | | | **0.07 (0.01, 0.68)** | Fruit and vegetable consumption  Poverty level | | | <0.001 | |

aModel 1 includes terms for age category, gender, race/ethnicity, and United Health Fund neighborhood.

bModel 2 includes terms for the four categories in Model 1 in addition to statistically significant Community Health Survey (CHS) variables.