**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 interactionFruit and vegetable consumptionEver 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 safetyCurrent 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 insuranceAlcohol 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 levelEver tested for HIVNever smokingHypertension | <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 consumptionHeavy smoking (>10 cigarettes /day)Foreign bornAsthma 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 useEver 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 yearsBMI | 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 smokerExercise 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 healthFruit and vegetable consumptionForeign bornhypercholesterolemia | <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 AsthmaPoverty 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 useEver 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 consumptionPoverty 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.