**Table S1.** Model 1: Multivariable Analysis of the Association Between Lung Cancer and Demographics, 1999-2018.

|  |  |  |
| --- | --- | --- |
| **Variables** | **Odds ratio (95% CI)** | ***p* value** |
| **Age** |  |  |
| 40-59 vs. 20-39 | 9.454(2.854-31.323) | <0.001 |
| 60+ vs. 20-39 | 26.568(8.341-84.622) | <0.001 |
| **Sex** |  |  |
| Men vs. Women | 1.448(1.017-2.061) | 0.040 |
| **Race/Ethnicity** |  |  |
| White vs. Black | 1.269(0.829-1.943) | 0.273 |
| Hispanic/Mexican vs. Black | 0.046(0.006-0.343) | 0.003 |
| Other vs. Black | 0.730(0.381-1.395) | 0.341 |
| **Marital status** |  |  |
| Married vs. Not married | 0.934(0.649-1.344) | 0.714 |
| **Health insurance** |  |  |
| Covered vs. Not covered | 2.335(1.000-5.453) | 0.050 |
| **Education levels** |  |  |
| High school or equivalent vs. Less than high school | 0.948(0.604-1.489) | 0.817 |
| Greater than high school vs. Less than high school | 0.815(0.528-1.258) | 0.356 |
| **Citizenship status** |  |  |
| US citizenship vs. Non-US citizenship | 1.062(0.406-2.776) | 0.903 |
| **Family income to poverty ratio** |  |  |
| PIR ≤1.0 vs. PIR 1.0-4.0 | 1.047(0.657-1.668) | 0.848 |
| PIR ≥4.0 vs. PIR 1.0-4.0 | 0.431(0.257-0.723) | 0.001 |

Data are from the National Health and Nutrition Examination Survey (NHANES) between 1999-2018 (N=49,720). Marital status missing from 489 participants, health insurance missing from 49 participants, education missing from 59 participants, citizenship status missing from 70 participants.

**Table S2.** Model 1: Multivariable Analysis of the Association Between Breast Cancer and Demographics, 1999-2018.

|  |  |  |
| --- | --- | --- |
| **Variables** | **Odds ratio (95% CI)** | ***p* value** |
| **Age** |  |  |
| 40-59 vs. 20-39 | 11.442(6.720-19.485) | <0.001 |
| 60+ vs. 20-39 | 37.786(22.534-63.360) | <0.001 |
| **Sex** |  |  |
| Men vs. Women | 0.003(0.001-0.011) | <0.001 |
| **Race/Ethnicity** |  |  |
| White vs. Black | 1.539(1.244-1.905) | <0.001 |
| Hispanic/Mexican vs. Black | 1.002(.729-1.377) | 0.991 |
| Other vs. Black | 0.978(0.728-1.314) | 0.882 |
| **Marital status** |  |  |
| Married vs. Not married | 0.911(0.776-1.070) | 0.256 |
| **Health insurance** |  |  |
| Covered vs. Not covered | 2.330(1.570-3.460) | <0.001 |
| **Education levels** |  |  |
| High school or equivalent vs. Less than high school | 1.013(0.803-1.278) | 0.913 |
| Greater than high school vs. Less than high school | 1.299(1.054-1.600) | 0.014 |
| **Citizenship status** |  |  |
| US citizenship vs. Non-US citizenship | 1.591(1.041-2.431) | 0.032 |
| **Family income to poverty ratio** |  |  |
| PIR ≤1.0 vs. PIR 1.0-4.0 | 1.041(0.832-1.303) | 0.725 |
| PIR ≥4.0 vs. PIR 1.0-4.0 | 1.203(1.001-1.446) | 0.049 |

Data are from the National Health and Nutrition Examination Survey (NHANES) between 1999-2018 (N=49,720). Marital status missing from 489 participants, health insurance missing from 49 participants, education missing from 59 participants, citizenship status missing from 70 participants.

**Table S3.** Model 1: Multivariable Analysis of the Association Between Esophagus Cancer and Demographics, 1999-2018.

|  |  |  |
| --- | --- | --- |
| **Variables** | **Odds ratio (95% CI)** | ***p* value** |
| **Age** |  |  |
| 40-59 vs. 20-39 | 1316432.168(0.000-4.304E+251) | 0.963 |
| 60+ vs. 20-39 | 669270.625(0.000-2.189E+251) | 0.961 |
| **Sex** |  |  |
| Men vs. Women | 3.730(1.567-8.881) | 0.003 |
| **Race/Ethnicity** |  |  |
| White vs. Black | 2.787(0.946-8.211) | 0.063 |
| Hispanic/Mexican vs. Black | 0.366(0.037-3.650) | 0.392 |
| Other vs. Black | 0.394(0.042-3.717) | 0.416 |
| **Marital status** |  |  |
| Married vs. Not married | 0.508(0.235-1.100) | 0.086 |
| **Health insurance** |  |  |
| Covered vs. Not covered | 3.399(0.434-26.630) | 0.244 |
| **Education levels** |  |  |
| High school or equivalent vs. Less than high school | 0.604(0.214-1.703) | 0.340 |
| Greater than high school vs. Less than high school | 0.785(0.321-1.923) | 0.597 |
| **Citizenship status** |  |  |
| US citizenship vs. Non-US citizenship | 0.795(0.090-7.045) | 0.837 |
| **Family income to poverty ratio** |  |  |
| PIR ≤1.0 vs. PIR 1.0-4.0 | 0.959(0.344-2.677) | 0.937 |
| PIR ≥4.0 vs. PIR 1.0-4.0 | 0.511(0.181-1.446) | 0.206 |

Data are from the National Health and Nutrition Examination Survey (NHANES) between 1999-2018 (N=49,720). Marital status missing from 489 participants, health insurance missing from 49 participants, education missing from 59 participants, citizenship status missing from 70 participants.

**Table S4.** Model 1: Multivariable Analysis of the Association Between Stomach Cancer and Demographics, 1999-2018.

|  |  |  |
| --- | --- | --- |
| **Variables** | **Odds ratio (95% CI)** | ***p* value** |
| **Age** |  |  |
| 40-59 vs. 20-39 | 11.776(1.513-91.651) | 0.018 |
| 60+ vs. 20-39 | 19.681(2.635-146.996) | 0.004 |
| **Sex** |  |  |
| Men vs. Women | 1.101(0.587-2.066) | 0.764 |
| **Race/Ethnicity** |  |  |
| White vs. Black | 0.660(0.307-1.421) | 0.288 |
| Hispanic/Mexican vs. Black | 0.804(0.295-2.188) | 0.669 |
| Other vs. Black | 0.775(0.280-2.144) | 0.624 |
| **Marital status** |  |  |
| Married vs. Not married | 0.594(0.307-1.152) | 0.123 |
| **Health insurance** |  |  |
| Covered vs. Not covered | 8.152(1.073-61.923) | 0.043 |
| **Education levels** |  |  |
| High school or equivalent vs. Less than high school | 0.497(0.213-1.160) | 0.106 |
| Greater than high school vs. Less than high school | 0.421(0.191-0.924) | 0.031 |
| **Citizenship status** |  |  |
| US citizenship vs. Non-US citizenship | 0.903(0.286-2.854) | 0.862 |
| **Family income to poverty ratio** |  |  |
| PIR ≤1.0 vs. PIR 1.0-4.0 | 0.686(0.304-1.545) | 0.363 |
| PIR ≥4.0 vs. PIR 1.0-4.0 | 0.496(0.182-1.352) | 0.171 |

Data are from the National Health and Nutrition Examination Survey (NHANES) between 1999-2018 (N=49,720). Marital status missing from 489 participants, health insurance missing from 49 participants, education missing from 59 participants, citizenship status missing from 70 participants.

**Table S5. Model 1:** Multivariable Analysis of the Association Between Colon and Rectum Cancer and Demographics, 1999-2018.

|  |  |  |
| --- | --- | --- |
| **Variables** | **Odds ratio (95% CI)** | ***p* value** |
| **Age** |  |  |
| 40-59 vs. 20-39 | 6.718(3.182-14.183) | <0.001 |
| 60+ vs. 20-39 | 31.644(15.598-64.197) | <0.001 |
| **Sex** |  |  |
| Men vs. Women | 1.076(.873-1.326) | 0.493 |
| **Race/Ethnicity** |  |  |
| White vs. Black | 1.497(1.137-1.970) | 0.004 |
| Hispanic/Mexican vs. Black | 0.561(0.345-0.911) | 0.020 |
| Other vs. Black | 0.926(0.620-1.384) | 0.707 |
| **Marital status** |  |  |
| Married vs. Not married | 0.833(0.670-1.036) | 0.100 |
| **Health insurance** |  |  |
| Covered vs. Not covered | 2.418(1.367-4.276) | 0.002 |
| **Education levels** |  |  |
| High school or equivalent vs. Less than high school | 0.731(0.548-0.975) | 0.033 |
| Greater than high school vs. Less than high school | 0.822(0.635-1.064) | 0.136 |
| **Citizenship status** |  |  |
| US citizenship vs. Non-US citizenship | 2.964(1.361-6.454) | 0.006 |
| **Family income to poverty ratio** |  |  |
| PIR ≤1.0 vs. PIR 1.0-4.0 | 1.061(0.793-1.420) | 0.689 |
| PIR ≥4.0 vs. PIR 1.0-4.0 | 0.891(0.686-1.157) | 0.386 |

Data are from the National Health and Nutrition Examination Survey (NHANES) between 1999-2018 (N=49,720). Marital status missing from 489 participants, health insurance missing from 49 participants, education missing from 59 participants, citizenship status missing from 70 participants.

**Table S6. Model 1:** Multivariable Analysis of the Association Between Liver Cancer and Demographics, 1999-2018.

|  |  |  |
| --- | --- | --- |
| **Variables** | **Odds ratio (95% CI)** | ***p* value** |
| **Age** |  |  |
| 40-59 vs. 20-39 | 9.285(1.169-73.717) | 0.035 |
| 60+ vs. 20-39 | 19.317(2.577-144.793) | 0.004 |
| **Sex** |  |  |
| Men vs. Women | 0.982(0.497-1.939) | 0.958 |
| **Race/Ethnicity** |  |  |
| White vs. Black | 1.311(0.517-3.321) | 0.569 |
| Hispanic/Mexican vs. Black | 0.985(0.242-4.014) | 0.983 |
| Other vs. Black | 1.633(0.521-5.121) | 0.400 |
| **Marital status** |  |  |
| Married vs. Not married | 1.045(0.512-2.134) | 0.903 |
| **Health insurance** |  |  |
| Covered vs. Not covered | 3.462(0.459-26.117) | 0.228 |
| **Education levels** |  |  |
| High school or equivalent vs. Less than high school | 0.829(0.301-2.287) | 0.718 |
| Greater than high school vs. Less than high school | 1.212(0.509-2.884) | 0.664 |
| **Citizenship status** |  |  |
| US citizenship vs. Non-US citizenship | 595092.958(.000) | 0.977 |
| **Family income to poverty ratio** |  |  |
| PIR ≤1.0 vs. PIR 1.0-4.0 | 0.870(0.317-2.385) | 0.787 |
| PIR ≥4.0 vs. PIR 1.0-4.0 | 0.627(0.266-1.475) | 0.285 |

Data are from the National Health and Nutrition Examination Survey (NHANES) between 1999-2018 (N=49,720). Marital status missing from 489 participants, health insurance missing from 49 participants, education missing from 59 participants, citizenship status missing from 70 participants.

**Table S7.** Model 2: Multivariable Analysis of the Association Between Lung Cancer, Demographics and Cancer Risk Factors, 1999-2018.

|  |  |  |
| --- | --- | --- |
| **Variables** | **Odds ratio (95% CI)** | ***p* value** |
| **Age** |  |  |
| 40-59 vs. 20-39 | 4.729(1.330-16.822) | 0.016 |
| 60+ vs. 20-39 | 11.954(3.549-40.260) | <0.001 |
| **Sex** |  |  |
| Men vs. Women | 1.221(0.708-2.105) | 0.473 |
| **Race/Ethnicity** |  |  |
| White vs. Black | 1.057(0.565-1.977) | 0.863 |
| Hispanic/Mexican vs. Black | 0.000(0.000) | 0.975 |
| Other vs. Black | 0.411(0.141-1.197) | 0.103 |
| **Marital status** |  |  |
| Married vs. Not married | 0.852(0.499-1.457) | 0.559 |
| **Health insurance** |  |  |
| Covered vs. Not covered | 3.572(0.835-15.272) | 0.086 |
| **Education levels** |  |  |
| High school or equivalent vs. Less than high school | 0.706(0.324-1.537) | 0.380 |
| Greater than high school vs. Less than high school | 1.183(0.614-2.278) | 0.615 |
| **Citizenship status** |  |  |
| US citizenship vs. Non-US citizenship | 0.919(0.206-4.108) | 0.912 |
| **BMI, kg/m2** |  |  |
| 25.0-29.9 vs. <25.0 | 0.571(0.308-1.059) | 0.076 |
| ≥30.0 vs. <25.0 | 0.651(0.358-1.184) | 0.159 |
| **Drinking status** |  |  |
| ＜2drinks/d vs. Non-drinker | 0.558(0.061-5.079) | 0.604 |
| ≥2drinks/d vs. Non-drinker | 0.891(0.105-7.573) | 0.916 |
| **Smoking status** |  |  |
| Former smoker vs. Non-smoker | 0.000(0.000) | 0.989 |
| Current smoker vs. Non-smoker | 1.695(0.614-4.675) | 0.308 |
| **Leisure time physical activity** |  |  |
| Moderate vs. Never | 0.944(0.123-7.264) | 0.956 |
| Vigorous vs. Never | 1.295(0.161-10.414) | 0.808 |
| **Family income to poverty ratio** |  |  |
| PIR ≤1.0 vs. PIR 1.0-4.0 | 1.333(0.653-2.721) | 0.430 |
| PIR ≥4.0 vs. PIR 1.0-4.0 | 0.452(0.234-0.875) | 0.019 |

Data are from the National Health and Nutrition Examination Survey (NHANES) between 1999-2018 (N=49,720). Marital status missing from 489 participants, health insurance missing from 49 participants, education missing from 59 participants, citizenship status missing from 70 participants. BMI missing from 3,060 participants, drinking status missing from 14,713 participants, smoking status missing from 13,228 participants.

**Table S8.** Model 2: Multivariable Analysis of the Association Between Breast Cancer, Demographics and Cancer Risk Factors, 1999-2018.

|  |  |  |
| --- | --- | --- |
| **Variables** | **Odds ratio (95% CI)** | ***p* value** |
| **Age** |  |  |
| 40-59 vs. 20-39 | 11.351(6.070-21.225) | <0.001 |
| 60+ vs. 20-39 | 38.696(20.953-71.466) | <0.001 |
| **Sex** |  |  |
| Men vs. Women | 0.002(0.000-0.015) | <0.001 |
| **Race/Ethnicity** |  |  |
| White vs. Black | 1.577(1.190-2.090) | 0.002 |
| Hispanic/Mexican vs. Black | 0.842(0.551-1.287) | 0.427 |
| Other vs. Black | 1.070(0.739-1.550) | 0.719 |
| **Marital status** |  |  |
| Married vs. Not married | 0.935(0.765-1.141) | 0.506 |
| **Health insurance** |  |  |
| Covered vs. Not covered | 1.873(1.190-2.947) | 0.007 |
| **Education levels** |  |  |
| High school or equivalent vs. Less than high school | 0.968(0.711-1.317) | 0.835 |
| Greater than high school vs. Less than high school | 1.273(0.964-1.680) | 0.089 |
| **Citizenship status** |  |  |
| US citizenship vs. Non-US citizenship | 1.729(1.005-2.974) | 0.048 |
| **BMI, kg/m2** |  |  |
| 25.0-29.9 vs. <25.0 | 0.854(0.674-1.082) | 0.190 |
| ≥30.0 vs. <25.0 | 0.829(0.658-1.046) | 0.114 |
| **Drinking status** |  |  |
| ＜2drinks/d vs. Non-drinker | 1.358(0.314-5.866) | 0.682 |
| ≥2drinks/d vs. Non-drinker | 1.151(0.273-4.848) | 0.848 |
| **Smoking status** |  |  |
| Former smoker vs. Non-smoker | 1.506(0.796-2.847) | 0.208 |
| Current smoker vs. Non-smoker | 0.889(0.616-1.283) | 0.529 |
| **Leisure time physical activity** |  |  |
| Moderate vs. Never | 0.786(0.189-3.278) | 0.742 |
| Vigorous vs. Never | 0.791(0.185-3.379) | 0.752 |
| **Family income to poverty ratio** |  |  |
| PIR ≤1.0 vs. PIR 1.0-4.0 | 1.223(0.911-1.641) | 0.181 |
| PIR ≥4.0 vs. PIR 1.0-4.0 | 1.127(0.899-1.412) | 0.300 |

Data are from the National Health and Nutrition Examination Survey (NHANES) between 1999-2018 (N=49,720). Marital status missing from 489 participants, health insurance missing from 49 participants, education missing from 59 participants, citizenship status missing from 70 participants. BMI missing from 3,060 participants, drinking status missing from 14,713 participants, smoking status missing from 13,228 participants.

**Table S9.** Model 2: Multivariable Analysis of the Association Between Esophagus Cancer, Demographics and Cancer Risk Factors, 1999-2018.

|  |  |  |
| --- | --- | --- |
| **Variables** | **Odds ratio (95% CI)** | ***p* value** |
| **Age** |  |  |
| 40-59 vs. 20-39 | 396166.753(0.000-3.036E+235) | 0.962 |
| 60+ vs. 20-39 | 576109.505(0.000-4.416E+235) | 0.961 |
| **Sex** |  |  |
| Men vs. Women | 2.841(0.724-11.148) | 0.134 |
| **Race/Ethnicity** |  |  |
| White vs. Black | 2.029(0.399-10.309) | 0.393 |
| Hispanic/Mexican vs. Black | 1.645(0.140-19.279) | 0.692 |
| Other vs. Black | 1.198(0.103-13.872) | 0.885 |
| **Marital status** |  |  |
| Married vs. Not married | 0.194(0.049-0.767) | 0.019 |
| **Health insurance** |  |  |
| Covered vs. Not covered | 2.125(0.241-18.722) | 0.497 |
| **Education levels** |  |  |
| High school or equivalent vs. Less than high school | 0.000(0.000-5.972E+298) | 0.970 |
| Greater than high school vs. Less than high school | 0.981(0.271-3.559) | 0.977 |
| **Citizenship status** |  |  |
| US citizenship vs. Non-US citizenship | 137639.128(0.00) | 0.978 |
| **BMI, kg/m2** |  |  |
| 25.0-29.9 vs. <25.0 | 0.539(0.148-1.964) | 0.348 |
| ≥30.0 vs. <25.0 | 0.291(0.057-1.483) | 0.137 |
| **Drinking status** |  |  |
| ＜2drinks/d vs. Non-drinker | 0.361(0.000) | 0.999 |
| ≥2drinks/d vs. Non-drinker | 0.318(0.000) | 0.999 |
| **Smoking status** |  |  |
| Former smoker vs. Non-smoker | 638456.590(0.000-9.253E+201) | 0.954 |
| Current smoker vs. Non-smoker | 422843.551(0.000-6.107E+201) | 0.955 |
| **Leisure time physical activity** |  |  |
| Moderate vs. Never | 218066.463(0.000) | 0.987 |
| Vigorous vs. Never | 465908.495(0.000) | 0.986 |
| **Family income to poverty ratio** |  |  |
| PIR ≤1.0 vs. PIR 1.0-4.0 | 0.285(0.034-2.358) | 0.244 |
| PIR ≥4.0 vs. PIR 1.0-4.0 | 0.373(0.075-1.856) | 0.229 |

Data are from the National Health and Nutrition Examination Survey (NHANES) between 1999-2018 (N=49,720). Marital status missing from 489 participants, health insurance missing from 49 participants, education missing from 59 participants, citizenship status missing from 70 participants. BMI missing from 3,060 participants, drinking status missing from 14,713 participants, smoking status missing from 13,228 participants.

**Table S10.** Model 2: Multivariable Analysis of the Association Between Stomach Cancer, Demographics and Cancer Risk Factors, 1999-2018.

|  |  |  |
| --- | --- | --- |
| **Variables** | **Odds ratio (95% CI)** | ***p* value** |
| **Age** |  |  |
| 40-59 vs. 20-39 | 9.193(1.126-75.038) | 0.038 |
| 60+ vs. 20-39 | 7.759(0.910-66.134) | 0.061 |
| **Sex** |  |  |
| Men vs. Women | 1.039(0.369-2.923) | 0.942 |
| **Race/Ethnicity** |  |  |
| White vs. Black | 0.742(0.224-2.459) | 0.626 |
| Hispanic/Mexican vs. Black | 1.493(0.376-5.937) | 0.569 |
| Other vs. Black | 0.323(0.036-2.909) | 0.314 |
| **Marital status** |  |  |
| Married vs. Not married | 0.665(0.247-1.789) | 0.419 |
| **Health insurance** |  |  |
| Covered vs. Not covered | 5.110(0.626-41.739) | 0.128 |
| **Education levels** |  |  |
| High school or equivalent vs. Less than high school | 0.256(0.053-1.241) | 0.091 |
| Greater than high school vs. Less than high school | 0.515(0.167-1.590) | 0.249 |
| **Citizenship status** |  |  |
| US citizenship vs. Non-US citizenship | 1.007(0.189-5.362) | 0.994 |
| **BMI, kg/m2** |  |  |
| 25.0-29.9 vs. <25.0 | 0.742(0.211-2.610) | 0.642 |
| ≥30.0 vs. <25.0 | 1.082(0.343-3.415) | 0.892 |
| **Drinking status** |  |  |
| ＜2drinks/d vs. Non-drinker | 2.665(0.191-37.254) | 0.466 |
| ≥2drinks/d vs. Non-drinker | 0.769(0.071-8.365) | 0.829 |
| **Smoking status** |  |  |
| Former smoker vs. Non-smoker | 2.413(0.276-21.132) | 0.426 |
| Current smoker vs. Non-smoker | 2.650(0.736-9.542) | 0.136 |
| **Leisure time physical activity** |  |  |
| Moderate vs. Never | 0.873(0.100-7.647) | 0.902 |
| Vigorous vs. Never | 0.141(0.010-1.893) | 0.139 |
| **Family income to poverty ratio** |  |  |
| PIR ≤1.0 vs. PIR 1.0-4.0 | 0.334(0.073-1.529) | 0.158 |
| PIR ≥4.0 vs. PIR 1.0-4.0 | 0.329(0.069-1.568) | 0.163 |

Data are from the National Health and Nutrition Examination Survey (NHANES) between 1999-2018 (N=49,720). Marital status missing from 489 participants, health insurance missing from 49 participants, education missing from 59 participants, citizenship status missing from 70 participants. BMI missing from 3,060 participants, drinking status missing from 14,713 participants, smoking status missing from 13,228 participants.

**Table S11.** Model 2: Multivariable Analysis of the Association Between Colon and Rectum Cancer, Demographics and Cancer Risk Factors, 1999-2018.

|  |  |  |
| --- | --- | --- |
| **Variables** | **Odds ratio (95% CI)** | ***p* value** |
| **Age** |  |  |
| 40-59 vs. 20-39 | 7.845(3.062-20.100) | <0.001 |
| 60+ vs. 20-39 | 28.911(11.629-71.876) | <0.001 |
| **Sex** |  |  |
| Men vs. Women | 1.196(.883-1.621) | 0.248 |
| **Race/Ethnicity** |  |  |
| White vs. Black | 1.532(1.041-2.255) | 0.031 |
| Hispanic/Mexican vs. Black | 0.528(0.271-1.028) | 0.060 |
| Other vs. Black | 0.632(0.339-1.177) | 0.148 |
| **Marital status** |  |  |
| Married vs. Not married | 0.767(0.569-1.033) | 0.081 |
| **Health insurance** |  |  |
| Covered vs. Not covered | 1.932(0.989-3.773) | 0.054 |
| **Education levels** |  |  |
| High school or equivalent vs. Less than high school | 0.586(0.387-0.886) | 0.011 |
| Greater than high school vs. Less than high school | 0.737(0.514-1.055) | 0.096 |
| **Citizenship status** |  |  |
| US citizenship vs. Non-US citizenship | 2.047(0.797-5.256) | 0.137 |
| **BMI, kg/m2** |  |  |
| 25.0-29.9 vs. <25.0 | 1.509(1.036-2.198) | 0.032 |
| ≥30.0 vs. <25.0 | 1.444(0.984-2.118) | 0.060 |
| **Drinking status** |  |  |
| ＜2drinks/d vs. Non-drinker | 2.560(0.897-7.304) | 0.079 |
| ≥2drinks/d vs. Non-drinker | 1.393(0.511-3.795) | 0.517 |
| **Smoking status** |  |  |
| Former smoker vs. Non-smoker | 0.747(0.231-2.411) | 0.625 |
| Current smoker vs. Non-smoker | 1.242(0.775-1.990) | 0.368 |
| **Leisure time physical activity** |  |  |
| Moderate vs. Never | 0.717(0.280-1.841) | 0.490 |
| Vigorous vs. Never | 0.415(0.153-1.122) | 0.083 |
| **Family income to poverty ratio** |  |  |
| PIR ≤1.0 vs. PIR 1.0-4.0 | 1.009(0.660-1.542) | 0.968 |
| PIR ≥4.0 vs. PIR 1.0-4.0 | 0.733(0.516-1.041) | 0.083 |

Data are from the National Health and Nutrition Examination Survey (NHANES) between 1999-2018 (N=49,720). Marital status missing from 489 participants, health insurance missing from 49 participants, education missing from 59 participants, citizenship status missing from 70 participants. BMI missing from 3,060 participants, drinking status missing from 14,713 participants, smoking status missing from 13,228 participants.

**Table S12.** Model 2: Multivariable Analysis of the Association Between Liver Cancer, Demographics and Cancer Risk Factors, 1999-2018.

|  |  |  |
| --- | --- | --- |
| **Variables** | **Odds ratio (95% CI)** | ***p* value** |
| **Age** |  |  |
| 40-59 vs. 20-39 | 7.106(0.791-63.804) | 0.080 |
| 60+ vs. 20-39 | 11.525(1.319-100.709) | 0.027 |
| **Sex** |  |  |
| Men vs. Women | 0.380(0.121-1.196) | 0.098 |
| **Race/Ethnicity** |  |  |
| White vs. Black | 1.864(0.397-8.749) | 0.430 |
| Hispanic/Mexican vs. Black | 0.750(0.065-8.639) | 0.818 |
| Other vs. Black | 0.547(0.048-6.177) | 0.626 |
| **Marital status** |  |  |
| Married vs. Not married | 0.719(0.247-2.096) | 0.546 |
| **Health insurance** |  |  |
| Covered vs. Not covered | 287821.412(0.000) | 0.974 |
| **Education levels** |  |  |
| High school or equivalent vs. Less than high school | 0.822(0.157-4.316) | 0.817 |
| Greater than high school vs. Less than high school | 1.151(0.266-4.989) | 0.851 |
| **Citizenship status** |  |  |
| US citizenship vs. Non-US citizenship | 190229.919(0.000) | 0.980 |
| **BMI, kg/m2** |  |  |
| 25.0-29.9 vs. <25.0 | 1.169(0.407-3.357) | 0.772 |
| ≥30.0 vs. <25.0 | 0.114(0.014-0.963) | 0.046 |
| **Drinking status** |  |  |
| ＜2drinks/d vs. Non-drinker | 0.000(0.000) | 0.988 |
| ≥2drinks/d vs. Non-drinker | 0.000(0.000) | 0.989 |
| **Smoking status** |  |  |
| Former smoker vs. Non-smoker | 0.000(0.000) | 0.988 |
| Current smoker vs. Non-smoker | 0.314(0.034-2.870) | 0.305 |
| **Leisure time physical activity** |  |  |
| Moderate vs. Never | 85766.712(0.000) | 0.989 |
| Vigorous vs. Never | 226274.353(0.000) | 0.988 |
| **Family income to poverty ratio** |  |  |
| PIR ≤1.0 vs. PIR 1.0-4.0 | 2.341(0.557-9.831) | 0.245 |
| PIR ≥4.0 vs. PIR 1.0-4.0 | 1.079(0.330-3.530) | 0.900 |

Data are from the National Health and Nutrition Examination Survey (NHANES) between 1999-2018 (N=49,720). Marital status missing from 489 participants, health insurance missing from 49 participants, education missing from 59 participants, citizenship status missing from 70 participants. BMI missing from 3,060 participants, drinking status missing from 14,713 participants, smoking status missing from 13,228 participants.