

**Supplementary Table S1\*:** Quasi-Poisson regression output of the three models to identify the association of county-level factors (2019 rate, sociodemographic, and rurality) with the county-level 2020 age- adjusted rates (per 100,000) in Pennsylvania. COVID-19 and Cancer Mortality in Pennsylvania. (Underlying cause of death, Source: CDC WONDER).

| <b>Model 1</b>                            |                 |                   |                 |                |
|---|-----------------|-------------------|-----------------|----------------|
| <b>Variable</b>                           | <b>Estimate</b> | <b>Std. Error</b> | <b>95% CI</b>   | <b>p-value</b> |
| Intercept                                 | 4.71            | 0.09              | (4.52, 4.89)    | <0.001         |
| 2019 Age-Adjusted Cancer Mortality Rate   | 0.002           | 0.0006            | (0.001, 0.003)  | <0.001         |
| <b>Model 2</b>                            |                 |                   |                 |                |
| Intercept                                 | 4.82            | 0.48              | (3.88, 5.75)    | <0.001         |
| 2019 Age-Adjusted Cancer Mortality Rate   | 0.002           | 0.0006            | (0.0008, 0.003) | <0.001         |
| Sex (Percent Female)                      | -0.002          | 0.01              | (-0.02, 0.02)   | 0.85           |
| Race (Percent Non-White)                  | -0.0009         | 0.002             | (-0.004, 0.002) | 0.59           |
| Ethnicity (Percent Hispanic or Latino)    | -0.0007         | -0.003            | (-0.007, 0.005) | 0.81           |
| SES                                       | 0.005           | 0.015             | (-0.02, 0.03)   | 0.73           |
| <b>Model 3</b>                            |                 |                   |                 |                |
| Intercept                                 | 4.86            | 0.51              | (3.85, 5.85)    | <0.001         |
| 2019 Age-Adjusted Cancer Mortality Rate   | 0.002           | 0.0006            | (0.0008, 0.003) | <0.001         |
| Sex (Percent Female)                      | -0.002          | 0.01              | (-0.02, 0.02)   | 0.81           |
| Race (Percent Non-White)                  | -0.001          | 0.002             | (-0.005, 0.003) | 0.57           |
| Ethnicity (Percent Hispanic or Latino)    | -0.0009         | 0.003             | (-0.007, 0.006) | 0.78           |
| SES                                       | 0.006           | 0.02              | (-0.03, 0.04)   | 0.70           |
| RUCC (0, metro/urban; 1, non-metro/rural) | -0.006          | 0.03              | (-0.07, 0.06)   | 0.84           |