## Ulcer of Stomach and Duodenum, Deaths: Relation with Medical Radiation

Box 1 of Chap. 37
Summary: Regression Outputs, Ulcer of Stomach and Duodenum, Death Rates.

Below are the summary-results from all the regressions of MortRates upon PhysPops. MortRates are from Table 37-A, and PhysPops are from Table 3-A.

|                  | MALES.          |           |          |        | • |           |
|------------------|-----------------|-----------|----------|--------|---|-----------|
| Year<br>MortRate | Year<br>PhysPop | R-squared | Constant | Coeff. | Std Err                                 | Coeff/S.E |
| 1940             | 1921            | 0.4257    | 0.9566   | 0.0765 | 0.0336                                  | 2.2778    |
| 940              | 1923            | 0.4434    | 1.7250   | 0.0728 | 0.0308                                  | 2.3615    |
| 940              | 1925            | 0.4114    | 3.0135   | 0.0651 | 0.0294                                  | 2.2120    |
| 940              | 1927            | 0.4088    | 3.5173   | 0.0621 | 0.0282                                  | 2.1999    |
| 940              | 1929            | 0.4326    | 3.6185   | 0.0618 | 0.0268                                  | 2.3101    |
| 40               | 1931            | 0.4420    | 4.1778   | 0.0570 | 0.0242                                  | 2.3547    |
| 40               | 1934            | 0.4115    | 5.2106   | 0.0484 | 0.0219                                  | 2.2122    |
| 40               | 1936            | 0.4210    | 5.3403   | 0.0471 | 0.0209                                  | 2.2559    |
| 10               | 1938            | 0.4036    | 5.7852   | 0.0433 | 0.0199                                  | 2.1767    |
| 40               | 1940            | 0.3864    | 6.3609   | 0.0381 | 0.0182                                  | 2.0994    |
| 50               | 1950            | 0.5962    | 3.5228   | 0.0374 | 0.0116                                  | 3.2147    |
| 960              | 1960            | 0.6064    | 4.4028   | 0.0328 | 0.0100                                  | 3.2842    |
| 70               | 1970            |           |          |        |   |           |
| 80               | 1980            |           |          |        |   |           |
| 90               | 1990            |           |          |        |   |           |

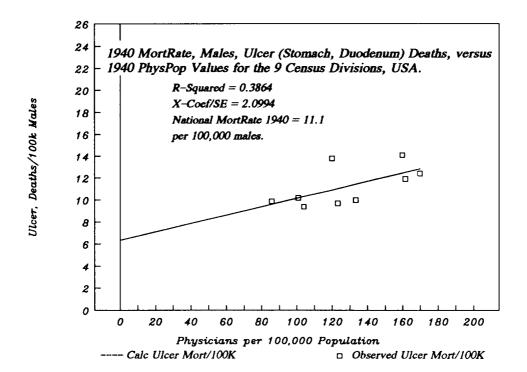


Figure 37-A

Table 37-A Ulcer of Stomach and Duodenum: Rates by Census Divisions and National.

Annual death-rates per 100,000 are age-adjusted to the 1940 reference year. There are no exclusions by color or "race." Entries for the Nine Census Divisions are population-weighted; the averages below them are not. "National Rates" for both sexes: Deaths per 100,000 population (males + females). Males: Deaths per 100,000 male population. Females: Deaths per 100,000 female population.

|                    | MALES    | •••••• | •••••• | •••••                                   | • | ************* |
|--------------------|----------|--------|--------|---|---|---------------|
| Census Division    | 1940     | 1950   | 1960   | 1970                                    | 1980                                    | 1990          |
| Pacific            | 14.1     | 8.5    | 8.8    |   |   |               |
| New England        | 11.9     | 9.5    | 10.3   |   | <del></del> -                           |               |
| West North Central | 9.7      | 7.7    | 7.9    |   |   |               |
| Mid-Atlantic       | 12.4     | 9.8    | 9.4    |   |   |               |
| East North Central | 10.0     | 8.5    | 9.3    |   |   |               |
| Mountain           | 13.8     | 9.9    | 9.2    |   |   |               |
| West South Central | 9.4      | 5.8    | 6.8    |   |   |               |
| East South Central | 9.9      | 6.7    | 6.7    |   |   |               |
| South Atlantic     | 10.2     | 7.4    | 7.9    |   |   |               |
| Average ALL        | 11.3     | 8.2    | 8.5    |   |   | i             |
| Average High-Five  | 11.6     | 8.8    | 9.1    |   |   |               |
| Average Low-Four   | 10.8     | 7.5    | 7.7    |   |   |               |
| Ratio (High/Low)   | 1.07     | 1.18   | 1.19   |   |   |               |
|                    | FEMALES. | •••••• | •••••  | • | •••••                                   | ••••          |
|                    | 1940     | 1950   | 1960   | 1970                                    | 1980                                    | 1990          |
| Pacific            |          |        |        |   |   |               |

New England West North Central Mid-Atlantic East North Central Mountain West South Central East South Central South Atlantic

The National Rates below reflect a severe "small numbers problem" for the female rates, so we did not analyze the female data at all.

Average ALL Average High-Five Average Low-Four Ratio (High/Low)

|                                | NATIONAL           | RATES             | •••••             | •••••• | •••••• | • |
|--------------------------------|--------------------|-------------------|-------------------|--------|--------|---|
|                                | 1940               | 1950              | 1960              | 1970   | 1980   | 1990                                    |
| Both Sexes<br>Males<br>Females | 6.8<br>11.1<br>2.3 | 5.0<br>8.3<br>1.8 | 5.4<br>8.6<br>2.5 | <br>   | <br>   | <br>                                    |

- - 1940, 1950, 1960: All rates come from Grove 1968, Table 67, Pages 737-740, Death-rates from "Ulcer of Stomach and Duodenum (540, 541)" ICD/7.
- - Omitted data are only marginally related to examination of Hypotheses 1+2, as noted in Chapter 4, Part 2c.