U.S. Predicted Cancer Incidence, 1999: Complete Maps by County and State From Spatial Projection Models

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Foreword

While NCI has published U.S. cancer mortality maps since 1974, this monograph presents, for the first time, state- and county-level maps of estimated cancer incidence. These estimates are based on a statistical modeling of county-level demographic and lifestyle characteristics, in addition to data from the Surveillance, Epidemiology, and End Results (SEER) Program. This new ability to map both incidence and mortality enables us to explore issues including survival and effects of screening. Data are included for total cancers; for the four most frequent cancers—lung and bronchus, colon and rectum, prostate, and breast; and for all other cancer sites combined.

The maps presented here represent a qualitative advance in their use of state- and county-level sociodemographic and lifestyle data for estimation. Previous estimates of cancer incidence by state have assumed that the ratio of each state's incidence to mortality is the same as that found for the combined SEER registries, an assumption we know is not justified in all cases.

These data fill gaps where state cancer registries have not yet reached the level of complete reporting required for inclusion in the United States Cancer Statistics (USCS). However, rapid progress is being made toward that goal, but even after it is reached these data will prove valuable on both national and state levels.

From a national perspective, the maps included in this monograph allow examination of the geographic distribution of cancer incidence across the country and of the magnitude of differences among states. They show higher predicted incidence rates for lung cancer in states in the Southeast, for colorectal cancer in midwestern states, and for all cancers combined in northeastern states. A greater range of predicted incidence rates among states is observed for lung and colorectal cancers than for other cancers.

Smoothed maps of county-level incidence allow us to see the differences among geographic regions other than by state only. This is important because using administrative boundaries, such as state borders, may not be the most accurate or meaningful method of tabulating differences in cancer rates. For example, the high predicted female lung cancer incidence rates for counties along the northern Pacific coast are clearly visible in smoothed county maps. Smoothed county-level maps of cancer incidence may also allow correlation with geologic data or environmental data of other types. County-level maps may allow those with community-level knowledge to see correlations between local conditions and cancer incidence patterns.

From the perspective of individual states, these data offer the ability to utilize county-level data to provide estimates of the numbers of new cancer cases expected at the beginning of the data collection year. Importantly, this will allow cancer control specialists to target interventions to specific areas by using these data in conjunction with information from various state programs (e.g., screening and early detection) and with demographic characteristics including income, race/ethnicity, medical insurance, etc. These data are also useful for quality control both for states that are in the process of improving their cancer registries and for states where the variation in cancer incidence from the national levels is sufficiently great that predictions are needed that emphasize local conditions rather than the national average.

We hope that the presentation of this data will excite and stimulate researchers and those involved in cancer surveillance, control, and prevention activities to utilize this novel approach to further reduce the cancer burden in America.

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Introduction

The primary source of information about cancer incidence in the United States for the past 30 years has been the Surveillance, Epidemiology, and End Results (SEER) program of the National Cancer Institute (NCI) (see **http://seer.cancer.gov**). With the most recent expansion of the SEER Program, these population-based cancer registries now cover approximately 26% of the U.S. population. However, even in combination with high-quality registries from additional states funded by the CDC National Program for Cancer Registries (NPCR), gaps in the collection of data prevent the calculation of cancer incidence statistics for many states, for regions, and for the U.S. as a whole (USCS 2002). In this report, we present the results of a statistical model that predicts the number of new cases and incidence rates for the major types of cancer for every U.S. state and county.

Estimates of the numbers of new cancer cases and rates expected in an area are useful for cancer surveillance, cancer control, health resource planning, and quality control activities. Geographic targeting of cancer-related activities to local areas with the most need has been shown to greatly improve their effectiveness (Kerner et al. 1988). For example, scarce health department resources for cancer prevention programs can be allocated to locations of the greatest need. In addition, with more accurate estimates of expected cases, the cancer registrar can monitor the cumulative number of cases found throughout the year to judge the degree of completeness of data collection and to identify locations with unexpectedly high counts that may require further investigation. This independent source of expected case counts can also provide an objective means of deriving a completeness index for certification purposes (Tucker and Howe 2001). Finally, by providing a complete set of predicted rates for each state and region, state registries may compare their cancer experience with that of neighboring states.

Currently, the only source of complete estimates of expected case counts and rates by state is the American Cancer Society's annual report *Cancer Facts and Figures* (ACS 2003). These figures are the result of both spatial and temporal projections. For each year, they compute the estimated number of new cancer cases and rates for each state using the cancer incidence rates and cancer incidence-mortality ratios aggregated across all SEER registries and each state's mortality and population for that year (Wingo et al. 1998). Then these state estimates are projected ahead in time several years using a time series model to provide a set of expected numbers for the next calendar year. This method has the potential for improvement, particularly for cancers whose rates vary by geographic area.

The results presented here are computed by a spatial projection model that predicts the number of cases in each county based on the sociodemographic and lifestyle profile for that county. The utility of this approach was demonstrated by an analysis of SEER breast cancer incidence using similar methods with a simpler model (Frey et al. 1993). By the inclusion of these additional cancer risk factors and by allowing the cancer rates to vary by geographic area, these results should form a better basis for the temporal projection of state data. We are currently working to extend this method to project these spatial estimates ahead in time to provide state estimates for the upcoming calendar year. Collaborations are underway with the ACS to incorporate these improvements into their annual report.

The purpose of this report is to present complete county and state maps and tables of rates and case counts for 1999 estimated by these new statistical models. Numbers of cases and rates are shown with and without adjustment for reporting delay (Clegg et al. 2002) and figures reported in the recently published *United States Cancer Statistics: 1999 Incidence* are shown for comparison (USCS 2002). Differences between the predicted cancer incidence figures and those reported in USCS cannot be ascribed to any particular source without further exploration, and we urge readers to take a systematic approach in exploring them. This monograph demonstrates that this new method can successfully be used to predict cancer incidence. Not only can this method fill in the current gaps in cancer data collection, but even when all U.S. states collect their own cancer data, it can provide a baseline expectation for the cancer incidence in each state for the coming year.

Methods

Data Sources

Numbers of cases of cancer reported as first diagnosed during 1999 and reported to the NCI by the SEER cancer registries on November 1, 2001, were stratified by sex, race (white, black, other), age group (0–4, 5–14, 15–24, …, 75–84, 85+) and county. Cancers of the lung and bronchus, colon and rectum, female breast, and prostate were analyzed separately; all other types of cancer were grouped together for analysis (for International Classification of Disease codes for these sites, see **http://seer.cancer.gov/siterecode/icdo2_d04152002**). Statistics for all cancers combined are the aggregation of these five cancer groups. Only malignant tumors were included; in situ and other benign tumors were excluded. These incidence data were available for the 480 counties included in the SEER Program in 1999, including 10 rural counties in Georgia and the first SEER data submission by the registries in Greater California, Kentucky, New Jersey, and Louisiana.

The numbers of deaths that occurred in 1999 were provided by the National Center for Health Statistics. Mortality was available for all 3074 U.S. counties, stratified by county, sex, race, age, and underlying cause of death. Stratified rates for death due to lung and bronchus, colorectal, breast, prostate, and other cancer were used as predictors of incidence for those cancers.

Population intercensal estimates for 1999, modified after the 2000 Census, were provided by the Census Bureau (see **http://seer.cancer.gov/popdata/methods.pdf** and **http://www.cancer.gov/newscenter/pressreleases/Census2000**). These counts were stratified in the same way as the incidence and mortality counts above.

Sociodemographic variables constructed for each county from the Area Resource File (Bureau of Health Professions 1999) and Census data (GeoLytics Inc. 1998) included urban/rural status (Butler and Beale 1994), household characteristics, income, education, occupation, medical facilities, and the percentage distribution of the population by race and ethnicity. The percentages of state and county residents who ever smoked cigarettes (males and females separately), who were at risk of obesity, who had no health care coverage, and female residents aged 50–64 who had had a mammogram in the last two years were lifestyle covariates calculated by aggregating public-use data for 1992–1998 from the CDC Behavioral Risk Factor Surveillance System (BRFSS) surveys (see **http://www.cdc.gov/brfss**; Pickle and Su 2002) at the state and county level. Age and race were available for each individual case but were grouped into the strata defined above for computational convenience. Geographic units for the analysis were county, state, and Census Region (Northeast, South, Midwest, West).

Statistical Methods

A hierarchical Poisson regression model was used to estimate the number of cases for all U.S. counties by their demographic and lifestyle profiles, based on the association of these profiles with cancer occurrence in the SEER counties. Specifically, the number of new cancer cases in county i (i = 1,...,3074), age group j (j = 1,...,10), denoted d_{ij}, was assumed to be distributed as a Poisson random variable, with mean $n_{ij}\lambda_{ij}$ where n_{ij} is the corresponding population at risk and λ_{ij} is the incidence rate in county i, age group j. We assumed a log-linear rate structure, i.e.,

$$\ln(\lambda_{ij}|\boldsymbol{\alpha}, \boldsymbol{\beta}, \gamma, \boldsymbol{\delta}, \boldsymbol{\zeta}) = \alpha_r + f(a_j)\boldsymbol{\beta} + \ln(m_{ij})\,\gamma + \mathbf{X}'_i\,\boldsymbol{\delta} + \mathbf{Y}'_i\,\boldsymbol{\zeta}$$

where α_r is the intercept for region r (r = 1,2,3,4) where county i is located, a_j is the centered midpoint of age group j, and for county i m_{ij} is the age j-specific mortality rate, $\mathbf{X}_i$ is a vector of demographic covariates, and $\mathbf{Y}_i$ is a vector of lifestyle covariates. A cubic function of age (a_j) was used to accommodate possible downturns in some cancer rates among the oldest groups.

Because the self-reported lifestyle covariates (smoking, obesity, health insurance and mammography use) from the BRFSS telephone surveys were thought to be fairly stable estimates of state values but likely to be measured with more error at the county level, an additional variance term was included for the "county residuals," i.e., the differences in county and state percentages for each of these covariates. That is, the vector $\mathbf{Y}_i$ was decomposed into state effect $\mathbf{Y}_{s(i)}$ and county residual $\mathbf{Y}^*_i$. Then the observed (BRFSS) county residuals $\boldsymbol{\gamma}^*_i$ were assumed to be normally distributed with mean 0 and variance $\sigma^2_{\gamma_i}$ where $\sigma^2_{\gamma_i}$ is inversely proportional to the population. This is equivalent to assuming that the observed county values vary randomly about their respective state values, with greater variation in small counties than in larger ones. This type of model is referred to as an errors-in-covariates model (Carroll et al. 1995).

The incident cases of cancer were analyzed separately by gender and location of the primary malignancy: breast, colon and rectum, prostate, lung and bronchus, and all other. Because of the computational difficulty in estimating the parameters when many of the age-county strata had no cases, we constrained the ages for analysis to be a minimum of 25 for breast cancer, 35 for lung and colorectal cancer, and 45 for prostate cancer. No age constraints were needed for other cancers. These age restrictions deleted 1.75% of the total cases from the analysis.

Covariates listed in the previous section were entered into the model as either scaled continuous variables or a series of binary variables. Collinearity diagnostics were used to select representative variables from each of the broad variable groups to include in the model. For example, only three of the four lifestyle covariates could be included in any one model; we kept smoking but excluded obesity in the lung cancer model, but did the reverse for the other sites. All main effects and two-way interactions were first included in the model but only very significant interactions ($p < 0.0001$)

were selected for the final models using backward stepwise fixed effects regression (SAS 1999). A Markov Chain Monte Carlo iterative process was then used to estimate the parameters of the full errors-in-covariates model structure described above (Spiegelhalter et al. 1999). With the inclusion of so many predictor variables, it was not necessary to include spatial correlation in the covariance structure.

This model was validated in several ways. First, the set of SEER counties with data available for 1995–1996 was split randomly into a training half and a validation half. Observed counts from the validation set were compared to predictions for these counties derived from the model on the training data. Results demonstrated the validity of the model and suggested ways to improve it. Then, for 1999 data from all SEER counties, predictions were compared to the observed SEER data; the model explained most of the variation in counts by age, sex, race, and county, and fewer outliers than expected were seen. Finally, predictions for other states (not in the SEER Program) were compared to the data reported to CDC (USCS 2002). All comparisons showed that this method provides accurate estimates of state incidence counts and rates. More detail on the parameter estimation methods and validation studies is available (Pickle et al. 2001; **http://srab.cancer.gov/incidence**).

The posterior mean predicted numbers of cases of each type of cancer were calculated for each combination of age, race, sex, and county. These estimates were summed to provide corresponding estimates for each state and region and for all cancers combined. Age-adjusted predicted incidence rates were calculated using the direct method of adjustment and the 2000 standard million population (Fleiss 1981). All rates are shown as cases per 100,000 population. The model predictions were also adjusted for reporting delay, as recently suggested by Clegg et al., in order to provide the numbers of cases that would be expected after data collection is complete at some time in the future (Clegg et al. 2002).

Graphical Methods

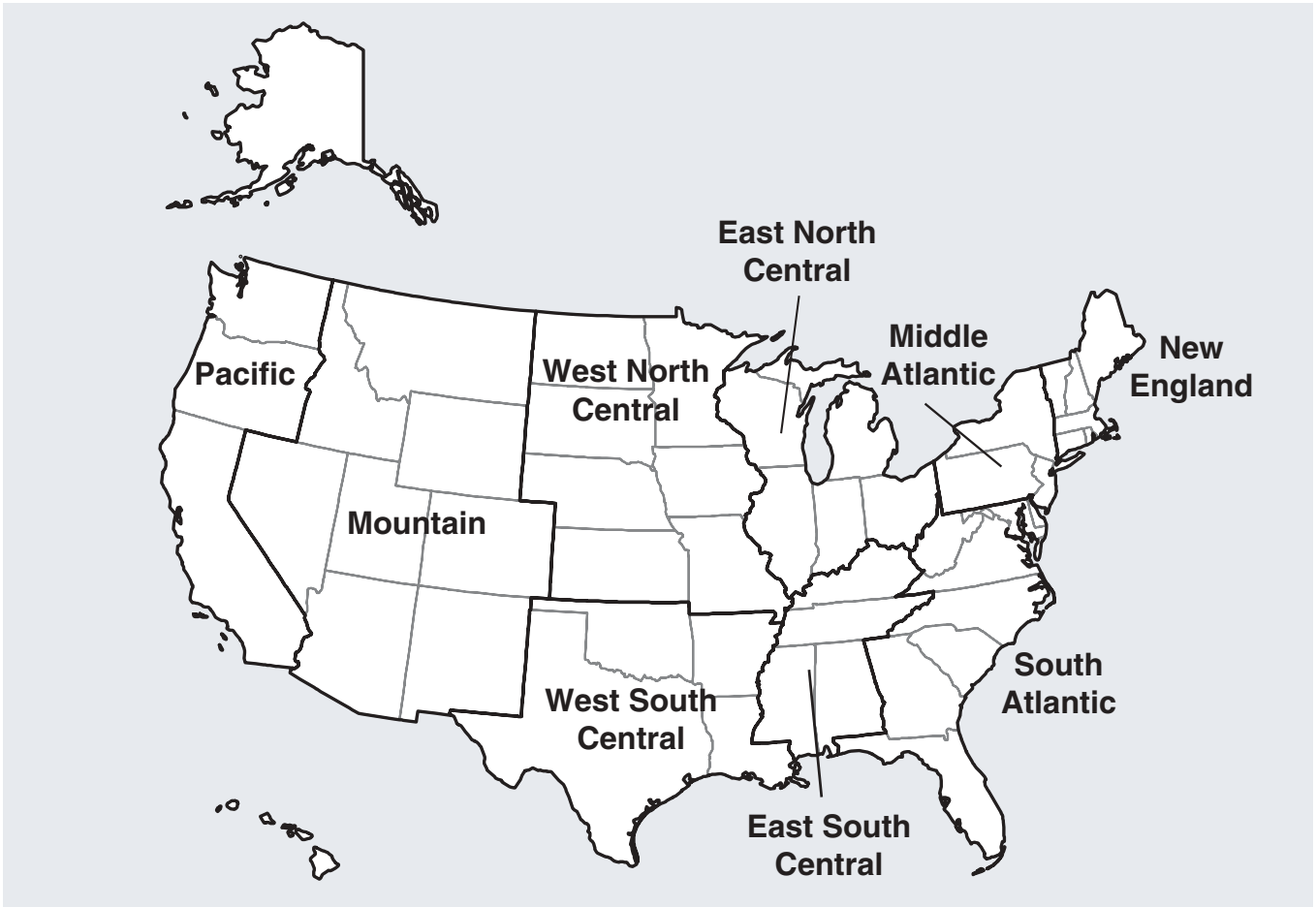
Results are presented in tables, maps, and graphs. All maps are shaded by county or state using colors chosen to permit use by color-blind readers (Brewer et al. 2003). Colors for state maps are assigned according to quintiles, i.e., about 10 states fall into each color category. A second series of maps shows these same age-adjusted state rates relative to the overall U.S. predicted rate. In this presentation, colors are assigned to equal intervals representing the proportional difference of each state's rate from the U.S. rate.

Although the basic geographic unit of the model was county, many counties have small populations that lead to a high degree of uncertainty about their expected number of cases. This uncertainty is greatly reduced by summing the predictions to the state level. However, interesting within-state patterns of incidence were apparent in maps of the county predictions. As a compromise, we present smoothed maps of age-adjusted county rates.

A nonparametric algorithm that included population weights was used to smooth away some of the underlying random variation of the county rates while highlighting broad patterns in the data (Mungiole et al. 1999). This algorithm is a two-dimensional version of a median-based moving average that readers may be familiar with from time series graphs. Because these maps present the same statistic as the state quintile maps, the same color scheme was used.

A graphic combining predicted counts and rates with maps of the rates is included for comparison of the relative (rate) and absolute (count) measures of the cancer burden by state. States are ordered by rates. In this graphic, the statistical estimates are shown as dots on the graphs, linked to the maps in the leftmost panel by color. Ninety-five percent confidence limits are shown as bars for each predicted rate and count, although the large dot size masks the bars for all but the most uncertain predictions. Note that the standard errors for model-based rates are generally smaller than those for empirical rates as shown in USCS. Guidance on the use of this and the other graphics is provided in the next section.

Figure 1. Definitions of Census Divisions in the United States



Reader's Guide

Tables

The predicted rates and counts for males and females are presented in separate tables, each ordered by state within Census Division (see Figure 1, page 8). Within a table, three columns of data for each of the cancer sites list the original prediction (rate or count), the delay-adjusted prediction, and the state's reported data from *United States Cancer Statistics: 1999 Incidence* (USCS 2002). The original predictions may be compared to the USCS report to judge the reasonableness of the model. The model predictions may also be used to supplement the USCS report where state and regional reports were unavailable. Data from high-quality cancer registries in 37 states and the District of Columbia were included in the USCS report (see USCS 2002, p. 4–5, for eligibility criteria).

Comparison of the predictions with and without delay adjustment can provide an estimate of the change in the numbers of cases or in rates that will occur in the future as more cancer cases that were diagnosed in 1999 are identified. As discussed by Clegg et al. (2002), the delay-adjusted figures provide a more accurate measure of the cancer burden in an area by removing variations due to reporting delay and updates in the records over time. Since these models are fit to SEER data, the modeled predictions implicitly project the counts assuming a reporting delay equivalent to that in the SEER registries. Variations from this assumed timing of data collection will affect the closeness of the predictions and the USCS reported figures. However, the delay-adjusted predictions do reflect what each state registry ultimately should report as data collection continues, assuming that the ultimate level of completeness is equivalent to that in SEER registries and that the ecologic associations inherent in the model hold for that area.

The reader will note that not all regions show counts or rates in the USCS report. Count totals were only published for two regions where all states reported data; rates were not computed if an insufficient number of states reported data (see Appendix L, USCS 2002, for details). The model predictions help to fill in these gaps and thus provide estimates for all regions. Since no delay adjustment is available for our "other cancer" group, only rates without adjustment are shown for this aggregated site; delay-adjusted counts were calculated by subtracting the sum of lung, colorectal, and prostate or breast cancer from this total count.

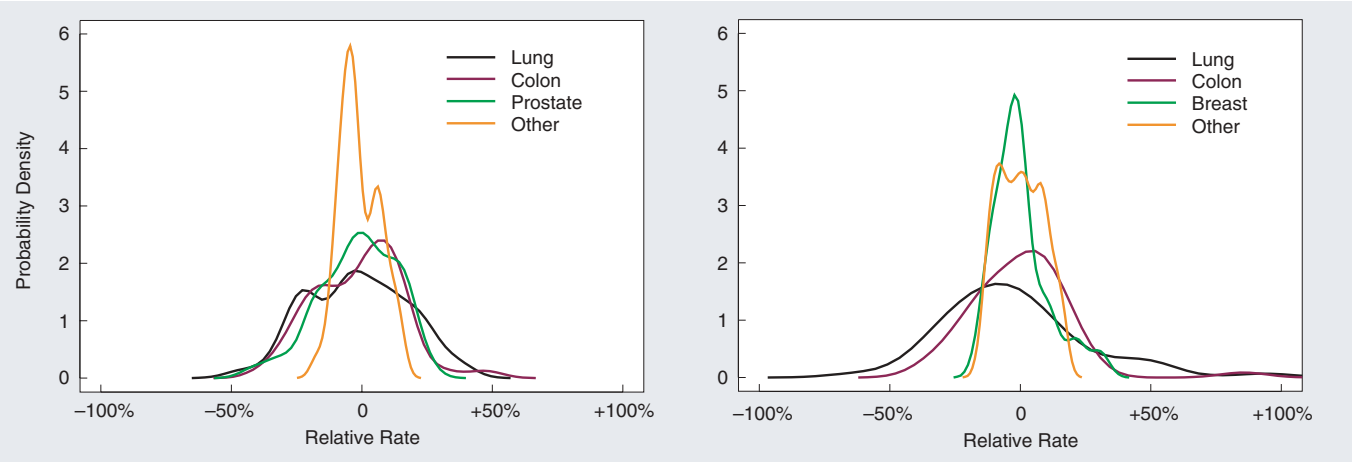
What might account for any differences between the predicted and reported cancer incidence? The prediction model assumes that the associations between the covariates and incidence rates is the same in all states as in the SEER areas; if this is not the case, the predictions will be inaccurate. Sudden spikes in screening

rates, as were observed for prostate cancer in the early and mid 1990s, perturb incidence and are difficult to capture accurately in models of this type. At the top of the table, predicted rates are given for the aggregated SEER and NPCR states for comparison. Also, regions with more population coverage by the SEER Program, e.g., Pacific, are expected to be estimated more accurately than those with lower SEER coverage. On the other hand, there is natural year-to-year variation in cancer incidence, especially in small population areas, and the model smooths over these to provide a more stable estimate of incidence than the observed data itself. Also, even though all the states included in the USCS report are certified as high quality, differences may arise from variations in registry operations such as completeness, timeliness, and specificity in coding the cancer site (Wingo et al. 2003). Finally, it should be noted that the USCS age-adjusted rates were calculated using 1999 population estimates extrapolated from the 1990 census, whereas we used updated estimates interpolated between the 1990 and 2000 censuses. These denominator differences will affect the calculated rates and their comparisons.

State Maps

State rates are presented as a series of small maps to facilitate the comparison of patterns across cancer type and gender and between predicted incidence and observed mortality rates (Tufte 1983). The map design is uncluttered; e.g., the legend is not shown on each map so the reader can focus on the patterns. A reader who wishes to know the actual rate predicted for a state should refer to the tables. Predicted incidence rates are presented both as age-adjusted rates and relative rates, i.e., the age-adjusted rate for the state divided by the corresponding U.S. rate. The quintile color categorization of the age-adjusted rates illustrates the patterns of rankings of the states whereas the equal interval color categorization of the relative rates illustrates patterns of the actual levels of the rates. For example, the age-adjusted rate map for other cancer among males shows a strong cluster of highest-ranking rates in the Northeast and low rates in the South but the relative rate map shows that these are all within 15% of the U.S. rate. This comparison highlights the small differences in age-adjusted rates that can appear to be striking on a rank-based map. It is important for the reader to remember that the colors are assigned for each map independently, so that the same color represents different ranges of actual rates for each type of cancer, although these ranges correspond to the same quintile category (lowest 20% of states, etc.). The rank-based quintile maps can best be used to answer the question, "Where are there rate differences?", while the relative maps best answer the question, "How large are these differences?". The relative maps illustrate the range of rates in comparison to the overall U.S. rate. Figure 2, page 11, shows the distribution of these predicted state rates for the four cancer sites overlaid on one density graph (a smoothed histogram). From these graphs, it is obvious that the breast and "other" cancer rates have narrower ranges than those of the lung, colon/rectum, and prostate.

Figure 2. Distribution of Predicted State Relative Incidence Rates by Cancer Site for Males (Left) and Females (Right), 1999



County Maps

The purpose of the smoothed county maps is to show within-state patterns of the predicted rates. These maps are shown in half-page size to facilitate identification of patterns at this scale. As noted above in the discussion of state maps, it can be misleading to compare similar colors across different types of maps or cancers. For example, Montana is classified as an average-rate state for prostate cancer incidence although many of its counties are in the highest quintile categories. This is the result of different distributions of state and county rates; the range of rates for the middle color category is 154.2–163.2 for states and 128.8–142.7 for counties.

The predicted county rates have been smoothed to remove some of the inherent variability in rates calculated for small populations. An example of a proper use of these maps would be to characterize the lung cancer rates among Texas males as being higher in the eastern than western parts of the state. It would be incorrect to try to identify the rate predicted for a particular county because its original prediction from the model may have been changed by the smoothing algorithm to be more like rates in neighboring counties.

Micromap Plots

The micromap plots summarize the results of the state maps and tables, but provide more detail than is possible in the color-categorized maps. For example, it is clear from this graphic that Utah's lung cancer rate is predicted to be much lower than New Mexico's, the second lowest state, but the state map categorizes all of the southwestern states into the low color category. Comparison of the rate and count panels demonstrates the dependence of the cancer count on population size—the highest number of male lung cancer cases is predicted in Florida, whose rate ranks only 9th. A glance at the series of small maps can identify clusters of similar-rate states, such as the band of high rates of male lung cancer along the Mississippi and Ohio rivers.

Highlights

Tables

• Rates and counts are presented for all states and regions. Clear differences are seen among the regional rates.

• The effect of the exclusion of some states from the pooled regional rates in USCS can be seen, for example, by the comparison of the predicted and USCS-reported rates for colorectal cancer among males in New England (Table 3). Vermont and Maine, states not reported in USCS, have the highest predicted rates of the six New England states. The predicted regional rate with all states included is 73.4, higher than the 70.2 calculated from the four New England states included in the USCS report.

• In general, greater differences between predicted and reported results are seen for states with smaller populations, such as Alaska, Delaware, North Dakota, New Hampshire, and the District of Columbia

• States that did not contribute data to the USCS report had the greatest impact on prostate cancer rates—the predicted rate for these states is 20% lower than for the contributing states. Rates for breast, other, and total cancer are approximately 12%–15% lower in nonreporting states; lung cancer rates are slightly higher in the nonreporting states.

• Rates in SEER registries are lower than in NPCR registries. It cannot be determined whether this is a real difference in incidence patterns or one due to other causes.

State Maps

• Comparison of male and female predicted incidence rates shows few differences in their geographic patterns. Alaska is notable for its higher ranking for lung and total cancer among women.

• Predicted incidence rates are higher in the Southeast for lung cancer, in the Midwest for colorectal cancer, in the Great Lakes for prostate cancer, and in the Northeast for breast, other, and total cancer.

• Patterns of incidence and mortality are similar except for breast and prostate cancer, sites for which screening may play a major role. Thus patterns of incidence for breast and prostate cancer may reflect the changing intensity of screening rather than any differential in risk factors across the country.

• Relative rate maps show that there is a greater range of rates across the country for lung and colorectal cancers than the others (also seen in Figure 2, page 11).

County Maps

• In addition to the state patterns noted above, these maps identify within-state differences. For example, lung cancer rates among women are higher in northern than southern California.

• The lung cancer excess among women living along the northern Pacific coast, first seen in mortality rates in the 1970s, is more apparent in these county maps.

• Prostate cancer incidence rates are high in the Northwest and New England where mortality rates are high for whites, and in South Carolina where mortality rates are high for blacks.

• The sharp change in colorectal cancer rates predicted at the edge of the western region suggests that the model is unable to identify localized patterns in this large area of low rates.

Summary

Results presented here provide a complete picture of cancer incidence patterns across the U.S. at the regional, state and county level. We hope that they will prove useful in providing a complete picture of the cancer burden at both the national and local levels, in planning cancer control activities, and in stimulating further thought, debate, and research about the associations between cancer rates and geography. While the models utilized have been validated to provide a reasonable fit across the entire nation, the ecologic associations inherent in these models may not fit well in every area. We encourage readers to systematically explore the possible causes of differences between the predicted and observed figures in their areas (e.g., interesting local exceptions to ecologic associations, spikes in screening rates, differences in the population estimates used for this report and the USCS, and registry operation issues).

Experience has shown that cancer patterns tend to change slowly, particularly for the major sites included in this report. This suggests that current cancer incidence patterns would strongly resemble those for 1999 shown in this report, except where rates are perturbed due to the sudden change in screening utilization or diagnostic technology. However, because health planners would prefer projections for the current calendar year and beyond, we are working to extend the models to project forward over time as well as over space. In addition, since registry operations have been expanding in this country since the early 1970s, those studying past trends have had to rely on trends for only a portion of the U.S. We will be investigating the potential of these models to project backward in time to provide truly national trends of cancer incidence. We feel that models of the type developed here have the potential to be extended to serve both of these important needs.

Table 1. Predicted Number of New Cancer Cases by Type of Cancer and State, Males, 1999

State	Lung			Colorectal			Prostate			Other			Total		
	Delay Adjustment			Delay Adjustment			Delay Adjustment			Delay Adjustment			Delay Adjustment		
	Without	With	USCS Report*	Without	With	USCS Report*	Without	With	USCS Report*	Without	With**	USCS Report*	Without	With	USCS Report*
Total U.S.	110,548	112,228	NR	79,083	80,404	NR	189,679	202,255	NR	279,495	286,186	NR	658,805	681,073	NR
Comparison of counts by source of data															
States in USCS report***	85,830	87,135	82,869	62,218	63,257	60,642	155,520	165,831	151,711	223,844	229,016		527,412	545,239	515,975
SEER registries	23,971	24,335	23,860	18,132	18,435	17,988	45,931	48,976	45,791	68,994	70,590	68,570	157,029	162,337	156,209
NPCR registries	61,859	62,799	59,009	44,086	44,822	42,654	109,589	116,855	105,920	154,850	158,427		370,384	382,903	359,766
States not in USCS report	24,718	25,094		16,865	17,147		34,159	36,424		55,651	57,170		131,393	135,834	
New England	5,790	5,878	NR	4,465	4,540	NR	11,178	11,919	NR	16,347	16,720	NR	37,781	39,058	NR
Connecticut	1,313	1,333	1,293	1,128	1,147	1,091	2,529	2,697	2,559	3,925	4,019	NR	8,895	9,196	8,907
Maine	646	656	NR	475	483	NR	1,147	1,223	NR	1,601	1,638	NR	3,869	4,000	NR
Massachusetts	2,596	2,635	2,440	1,941	1,973	1,904	5,246	5,594	5,002	7,510	7,674	NR	17,292	17,876	16,331
New Hampshire	492	499	419	368	374	280	971	1,035	764	1,386	1,417	NR	3,217	3,326	2,702
Rhode Island	498	506	493	342	348	356	824	879	861	1,235	1,266	NR	2,900	2,998	2,998
Vermont	246	250	NR	210	214	NR	461	492	NR	690	708	NR	1,608	1,662	NR
Middle Atlantic	16,462	16,712	15,312	14,311	14,550	12,739	33,146	35,344	29,505	45,509	46,521	NR	109,429	113,128	100,790
New Jersey	3,113	3,160	3,164	2,706	2,751	2,770	6,808	7,259	6,989	9,359	9,559	NR	21,987	22,730	22,354
New York	7,060	7,167	6,480	6,275	6,380	5,566	14,636	15,606	12,280	20,306	20,755	NR	48,277	49,909	43,416
Pennsylvania	6,289	6,385	5,668	5,330	5,419	4,403	11,702	12,478	10,236	15,844	16,207	NR	39,165	40,489	35,020
East North Central	18,549	18,830	NR	13,292	13,514	NR	34,338	36,615	NR	47,057	48,104	NR	113,236	117,064	NR
Illinois	4,400	4,467	4,831	3,516	3,575	3,520	8,421	8,979	7,861	12,064	12,341	NR	28,402	29,362	28,386
Indiana	2,567	2,606	NR	1,827	1,858	NR	4,426	4,719	NR	6,278	6,425	NR	15,098	15,608	NR
Michigan	4,281	4,346	3,973	2,741	2,787	2,580	8,371	8,926	8,534	10,573	10,784	NR	25,965	26,843	25,667
Detroit	1,778	1,805	1,734	1,089	1,107	1,089	3,610	3,849	3,805	4,340	4,422	NR	10,818	11,184	10,973
Ohio	5,085	5,162	5,132	3,422	3,479	3,452	9,164	9,772	7,709	12,352	12,625	NR	30,023	31,038	27,746
Wisconsin	2,216	2,250	1,950	1,786	1,816	1,643	3,955	4,217	3,787	5,790	5,930	NR	13,748	14,213	12,744
West North Central	7,140	7,248	NR	6,329	6,435	NR	12,719	13,563	NR	19,990	20,493	NR	46,178	47,739	NR
Iowa	1,179	1,197	1,232	1,056	1,074	1,062	2,175	2,319	2,164	3,191	3,268	NR	7,601	7,858	7,723
Kansas	875	888	1,079	907	922	787	1,482	1,580	1,990	2,648	2,721	NR	5,912	6,112	6,529
Minnesota	1,576	1,600	1,514	1,413	1,437	1,267	3,169	3,379	3,668	4,833	4,947	NR	10,991	11,362	11,491
Missouri	2,473	2,511	2,610	1,863	1,894	1,676	4,010	4,276	3,515	6,156	6,311	NR	14,501	14,991	13,196
Nebraska	570	579	596	602	612	539	1,031	1,099	1,329	1,697	1,741	NR	3,899	4,031	4,149
North Dakota	212	215	216	222	226	213	414	441	599	671	688	NR	1,519	1,570	1,653
South Dakota	255	259	NR	268	272	NR	438	467	NR	794	816	NR	1,755	1,814	NR
South Atlantic	24,876	25,254	NR	13,491	13,716	NR	36,128	38,523	NR	51,025	52,269	NR	125,520	129,763	NR
Delaware	411	417	368	190	193	214	638	680	559	775	791	NR	2,014	2,082	1,918
District of Columbia	202	205	258	119	121	149	373	398	542	442	450	NR	1,135	1,173	1,554
Florida	10,071	10,224	8,851	5,758	5,854	6,270	13,599	14,501	13,820	20,186	20,712	NR	49,614	51,291	50,472
Georgia	2,503	2,541	NR	1,468	1,493	NR	4,091	4,362	NR	5,938	6,077	NR	14,000	14,473	NR
Atlanta	649	659	674	430	437	432	1,371	1,462	1,383	1,887	1,927	NR	4,338	4,485	4,375
Rural Georgia	52	53	NR	28	28	NR	72	77	NR	95	97	NR	247	255	NR
Maryland	2,062	2,093	1,904	1,018	1,035	1,289	3,904	4,163	3,866	4,604	4,688	NR	11,588	11,980	11,956
North Carolina	3,792	3,850	3,336	1,883	1,914	1,701	5,178	5,521	4,630	7,332	7,514	NR	18,185	18,800	16,302
South Carolina	1,809	1,836	1,820	920	935	1,031	2,660	2,836	2,888	3,538	3,622	NR	8,928	9,230	9,528
Virginia	2,865	2,909	NR	1,553	1,579	NR	4,364	4,653	NR	6,186	6,333	NR	14,968	15,474	NR
West Virginia	1,161	1,179	1,164	582	592	643	1,322	1,410	1,322	2,024	2,081	NR	5,089	5,261	5,228

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Table 1. Predicted Number of New Cancer Cases by Type of Cancer and State, Males, 1999 (continued)

State	Lung			Colorectal			Prostate			Other			Total		
	Delay Adjustment			Delay Adjustment			Delay Adjustment			Delay Adjustment			Delay Adjustment		
	Without	With	USCS Report*	Without	With	USCS Report*	Without	With	USCS Report*	Without	With**	USCS Report*	Without	With	USCS Report*
East South Central	8,432	8,561	NR	4,596	4,673	NR	10,236	10,915	NR	15,904	16,344	NR	39,169	40,493	NR
Alabama	2,167	2,200	NR	1,081	1,099	NR	3,049	3,251	NR	4,206	4,308	NR	10,503	10,858	NR
Kentucky	2,227	2,261	2,321	1,159	1,178	1,170	2,296	2,448	2,613	3,948	4,067	NR	9,629	9,954	10,213
Mississippi	1,260	1,279	NR	819	833	NR	1,654	1,764	NR	2,457	2,524	NR	6,190	6,399	NR
Tennessee	2,778	2,820	NR	1,538	1,564	NR	3,238	3,453	NR	5,292	5,445	NR	12,847	13,281	NR
West South Central	11,357	11,529	NR	8,745	8,891	NR	13,881	14,802	NR	26,143	26,937	NR	60,127	62,159	NR
Arkansas	1,433	1,455	NR	961	977	NR	1,609	1,716	NR	2,719	2,802	NR	6,722	6,949	NR
Louisiana	2,042	2,073	2,005	1,191	1,211	1,201	2,543	2,712	2,817	4,044	4,157	NR	9,821	10,153	10,111
Oklahoma	1,301	1,321	NR	1,030	1,047	NR	1,640	1,749	NR	3,251	3,348	NR	7,221	7,465	NR
Texas	6,581	6,681	NR	5,563	5,656	NR	8,090	8,626	NR	16,129	16,629	NR	36,363	37,592	NR
Mountain	5,063	5,140	NR	3,813	3,876	NR	11,757	12,536	NR	16,784	17,129	NR	37,416	38,681	NR
Arizona	1,523	1,546	1,643	1,196	1,216	1,166	3,422	3,649	2,525	5,059	5,168	NR	11,200	11,579	9,960
Colorado	1,079	1,095	952	722	734	829	2,820	3,007	2,621	3,798	3,867	NR	8,419	8,704	7,975
Idaho	373	379	361	324	329	271	834	889	828	1,196	1,221	NR	2,726	2,818	2,678
Montana	318	323	327	229	233	266	686	731	684	974	994	NR	2,207	2,282	2,177
Nevada	817	829	NR	529	538	NR	1,397	1,490	NR	2,090	2,141	NR	4,834	4,997	NR
New Mexico	458	465	435	364	370	389	1,014	1,081	1,096	1,589	1,624	NR	3,425	3,541	3,445
Utah	345	350	306	361	367	349	1,179	1,257	1,269	1,584	1,611	NR	3,468	3,585	3,511
Wyoming	151	153	144	88	89	136	405	432	367	494	502	NR	1,138	1,176	1,147
Pacific	12,880	13,075	12,910	10,039	10,207	10,027	26,294	28,038	28,034	40,736	41,669	NR	89,949	92,989	92,413
Alaska	130	132	140	170	173	117	161	172	280	481	497	NR	942	974	996
California	8,863	8,998	8,995	7,153	7,272	7,232	18,589	19,821	19,886	29,233	29,903	NR	63,837	65,995	66,149
San Francisco/Oakland	1,160	1,178	1,172	970	986	1,014	2,534	2,702	2,785	3,948	4,037	NR	8,612	8,903	9,096
San Jose/Monterey	512	520	521	477	485	459	1,131	1,206	1,413	1,950	1,996	NR	4,069	4,207	4,302
Los Angeles	2,093	2,125	2,131	1,858	1,889	1,872	4,820	5,140	5,261	7,465	7,631	NR	16,236	16,785	16,991
Other counties	5,098	5,175	NR	3,848	3,912	NR	10,104	10,774	NR	15,870	16,239	NR	34,920	36,100	NR
Hawaii	402	408	397	343	349	351	742	791	774	1,185	1,215	NR	2,673	2,763	2,736
Oregon	1,366	1,387	1,319	970	986	864	2,653	2,829	2,715	3,816	3,901	NR	8,805	9,103	8,601
Washington	2,119	2,151	2,059	1,403	1,426	1,463	4,150	4,425	4,379	6,020	6,151	NR	13,691	14,154	13,931
Seattle	1,420	1,442	1,436	955	971	965	2,842	3,030	3,026	4,131	4,221	NR	9,348	9,664	9,632

NR = Not Reported

*Source: *United States Cancer Statistics: 1999 Incidence.* Aggregated SEER and NPCR registry counts calculated by summing corresponding rows in table.

**Delay-adjusted count for other cancer calculated by subtracting corresponding counts for lung, colorectal, and prostate cancer from the total delay-adjusted count.

***Registries that report to both the SEER and the NPCR programs were counted as SEER (KY, LA, NJ, CA). Data from Georgia, Michigan, and Washington were split into appropriate categories by county, since some counties are in the SEER system and some are not in these states.

Note: Unshaded rows indicate SEER registries that provided data for model input.

Table 2. Predicted Number of New Cancer Cases by Type of Cancer and State, Females, 1999

State	Lung			Colorectal			Breast			Other			Total		
	Delay Adjustment			Delay Adjustment			Delay Adjustment			Delay Adjustment			Delay Adjustment		
	Without	With	USCS Report*	Without	With	USCS Report*	Without	With	USCS Report*	Without	With**	USCS Report*	Without	With	USCS Report*
Total U.S.	86,271	87,824	NR	76,551	77,891	NR	200,961	205,523	NR	272,802	284,827	NR	636,585	656,064	NR
Comparison of counts by source of data															
States in USCS report***	69,528	70,780	63,929	60,341	61,397	59,892	160,434	164,076	155,069	219,515	229,166		509,818	525,418	495,954
SEER registries	19,213	19,559	19,079	17,659	17,968	17,527	49,229	50,346	48,916	67,437	70,364	67,076	153,539	158,237	152,598
NPCR registries	50,314	51,220	44,850	42,682	43,429	42,365	111,205	113,729	106,153	152,079	158,804		356,280	367,182	343,356
States not in USCS report	16,743	17,044		16,210	16,494		40,527	41,447		53,287	55,661		126,767	130,646	
New England	5,012	5,102	NR	4,497	4,576	NR	12,193	12,470	NR	16,749	17,479	NR	38,451	39,628	NR
Connecticut	1,143	1,164	1,079	1,138	1,158	1,148	2,845	2,910	2,865	4,048	4,225	NR	9,175	9,456	8,990
Maine	474	483	NR	417	424	NR	1,334	1,364	NR	1,582	1,652	NR	3,807	3,923	NR
Massachusetts	2,371	2,414	2,185	2,047	2,083	2,016	5,410	5,533	5,123	7,749	8,086	NR	17,577	18,115	16,488
New Hampshire	431	439	375	344	350	306	1,077	1,101	844	1,379	1,440	NR	3,231	3,330	2,662
Rhode Island	407	414	406	365	371	416	937	958	821	1,299	1,356	NR	3,008	3,100	3,005
Vermont	185	188	NR	187	190	NR	590	603	NR	691	722	NR	1,653	1,704	NR
Middle Atlantic	13,355	13,595	12,453	13,555	13,792	13,169	34,809	35,600	30,099	46,055	48,085	NR	107,775	111,072	100,703
New Jersey	2,615	2,662	2,710	2,641	2,687	2,653	6,449	6,595	6,529	9,387	9,793	NR	21,092	21,737	21,565
New York	6,002	6,110	5,595	5,939	6,043	6,000	15,926	16,288	13,412	21,367	22,300	NR	49,234	50,741	45,288
Pennsylvania	4,738	4,823	4,148	4,975	5,062	4,516	12,435	12,717	10,158	15,301	15,991	NR	37,448	38,594	33,850
East North Central	13,428	13,670	NR	13,256	13,488	NR	32,273	33,006	NR	47,666	49,722	NR	106,623	109,886	NR
Illinois	3,365	3,426	3,654	3,612	3,675	3,505	8,651	8,847	8,879	12,530	13,071	NR	28,158	29,020	28,302
Indiana	1,806	1,839	NR	1,834	1,866	NR	4,333	4,431	NR	6,285	6,559	NR	14,259	14,695	NR
Michigan	3,260	3,319	3,098	2,714	2,761	2,624	7,025	7,184	6,977	10,636	11,095	NR	23,636	24,359	23,263
Detroit	1,373	1,398	1,387	1,128	1,148	1,134	2,927	2,993	2,951	4,440	4,630	NR	9,867	10,169	10,037
Ohio	3,477	3,540	3,712	3,365	3,424	3,407	8,326	8,515	8,631	12,419	12,953	NR	27,587	28,431	27,444
Wisconsin	1,520	1,547	1,366	1,730	1,760	1,471	3,938	4,027	3,798	5,795	6,045	NR	12,983	13,380	11,839
West North Central	5,423	5,521	NR	6,570	6,684	NR	14,268	14,592	NR	20,070	20,951	NR	46,331	47,749	NR
Iowa	832	847	826	1,071	1,090	1,068	2,254	2,305	2,254	3,249	3,391	NR	7,406	7,633	7,351
Kansas	642	654	787	919	935	769	1,975	2,020	1,965	2,616	2,731	NR	6,151	6,339	6,214
Minnesota	1,301	1,324	1,148	1,490	1,516	1,225	3,485	3,564	3,484	5,028	5,245	NR	11,304	11,650	10,726
Missouri	1,859	1,892	1,894	1,962	1,996	1,645	4,262	4,359	3,914	6,009	6,276	NR	14,092	14,523	12,995
Nebraska	440	448	436	602	613	524	1,273	1,302	1,216	1,717	1,793	NR	4,032	4,155	3,886
North Dakota	170	173	137	245	249	167	482	493	460	687	717	NR	1,584	1,632	1,333
South Dakota	180	183	NR	280	285	NR	538	550	NR	764	797	NR	1,761	1,815	NR
South Atlantic	22,375	22,778	NR	13,017	13,245	NR	36,415	37,242	NR	48,450	50,673	NR	120,257	123,937	NR
Delaware	479	488	274	178	181	231	566	579	563	776	812	NR	1,998	2,059	1,893
District of Columbia	160	163	168	146	149	190	401	410	435	539	564	NR	1,247	1,285	1,373
Florida	9,175	9,340	6,767	5,066	5,155	5,862	13,218	13,518	12,934	17,109	17,918	NR	44,567	45,931	44,912
Georgia	1,942	1,977	NR	1,568	1,595	NR	4,594	4,698	NR	6,097	6,367	NR	14,203	14,638	NR
Atlanta	575	585	571	458	466	461	1,634	1,671	1,648	1,926	2,011	NR	4,593	4,734	4,576
Rural Georgia	27	27	NR	30	31	NR	71	73	NR	103	107	NR	231	238	NR
Maryland	2,354	2,396	1,542	1,094	1,113	1,256	3,730	3,815	3,711	4,887	5,111	NR	12,066	12,435	11,295
North Carolina	3,199	3,257	2,208	1,899	1,932	1,833	5,253	5,372	5,159	7,240	7,568	NR	17,591	18,129	15,884
South Carolina	1,394	1,419	1,003	926	942	954	2,564	2,622	2,667	3,562	3,721	NR	8,446	8,704	8,078
Virginia	2,695	2,744	NR	1,574	1,602	NR	4,737	4,845	NR	6,268	6,553	NR	15,275	15,742	NR
West Virginia	976	994	817	566	576	640	1,352	1,383	1,403	1,973	2,063	NR	4,866	5,015	5,017

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Table 2. Predicted Number of New Cancer Cases by Type of Cancer and State, Females, 1999 (continued)

State	Lung			Colorectal			Breast			Other			Total		
	Delay Adjustment			Delay Adjustment			Delay Adjustment			Delay Adjustment			Delay Adjustment		
	Without	With	USCS Report*	Without	With	USCS Report*	Without	With	USCS Report*	Without	With**	USCS Report*	Without	With	USCS Report*
East South Central	5,212	5,305	NR	4,622	4,703	NR	11,089	11,341	NR	15,478	16,166	NR	36,401	37,515	NR
Alabama	1,338	1,362	NR	1,117	1,137	NR	2,862	2,927	NR	4,052	4,230	NR	9,369	9,656	NR
Kentucky	1,529	1,557	1,580	1,166	1,186	1,194	2,733	2,795	2,785	3,820	3,993	NR	9,248	9,531	9,579
Mississippi	560	570	NR	735	748	NR	1,707	1,746	NR	2,401	2,506	NR	5,404	5,569	NR
Tennessee	1,785	1,817	NR	1,604	1,632	NR	3,787	3,873	NR	5,204	5,437	NR	12,380	12,759	NR
West South Central	7,024	7,151	NR	8,093	8,235	NR	19,190	19,625	NR	24,072	25,155	NR	58,379	60,165	NR
Arkansas	717	730	NR	871	886	NR	1,875	1,918	NR	2,501	2,613	NR	5,964	6,146	NR
Louisiana	1,207	1,229	1,223	1,125	1,145	1,113	2,807	2,871	2,826	3,809	3,979	NR	8,949	9,223	9,043
Oklahoma	875	891	NR	1,062	1,081	NR	2,437	2,492	NR	3,048	3,184	NR	7,421	7,648	NR
Texas	4,225	4,301	NR	5,035	5,123	NR	12,071	12,345	NR	14,715	15,379	NR	36,045	37,148	NR
Mountain	3,370	3,431	NR	3,286	3,343	NR	11,288	11,545	NR	15,224	15,865	NR	33,169	34,184	NR
Arizona	1,014	1,032	1,254	1,049	1,067	1,053	3,298	3,373	3,099	4,460	4,649	NR	9,821	10,122	9,551
Colorado	760	774	785	673	685	768	2,752	2,814	2,829	3,609	3,760	NR	7,794	8,032	7,818
Idaho	205	209	260	264	269	250	791	809	807	1,108	1,154	NR	2,368	2,440	2,468
Montana	198	202	247	202	206	218	662	677	606	918	957	NR	1,981	2,042	1,927
Nevada	563	573	NR	413	420	NR	1,367	1,398	NR	1,707	1,782	NR	4,049	4,173	NR
New Mexico	338	344	320	298	303	284	1,080	1,105	1,077	1,475	1,537	NR	3,191	3,289	3,174
Utah	178	181	185	307	312	297	1,009	1,032	994	1,490	1,550	NR	2,984	3,075	2,984
Wyoming	114	116	116	80	81	121	329	336	325	457	476	NR	980	1,010	958
Pacific	11,071	11,270	11,053	9,656	9,825	9,707	29,435	30,103	29,871	39,038	40,731	NR	89,199	91,928	90,223
Alaska	154	157	125	160	163	87	363	371	294	426	446	NR	1,103	1,137	907
California	7,761	7,901	7,828	6,887	7,008	7,028	21,165	21,645	21,439	28,260	29,480	NR	64,073	66,034	65,183
San Francisco/Oakland	1,074	1,093	1,104	954	971	1,051	3,094	3,164	3,135	3,789	3,955	NR	8,911	9,184	9,166
San Jose/Monterey	478	487	481	454	462	420	1,518	1,552	1,482	1,910	1,992	NR	4,360	4,493	4,348
Los Angeles	1,806	1,839	1,826	1,818	1,850	1,890	5,414	5,537	5,460	7,823	8,151	NR	16,860	17,376	17,070
Other counties	4,402	4,481	NR	3,661	3,725	NR	11,140	11,393	NR	14,739	15,381	NR	33,942	34,981	NR
Hawaii	272	277	265	314	319	319	815	834	869	1,027	1,071	NR	2,427	2,501	2,544
Oregon	1,132	1,152	1,144	929	945	947	2,722	2,784	2,792	3,543	3,698	NR	8,325	8,580	8,273
Washington	1,753	1,785	1,691	1,366	1,390	1,326	4,369	4,468	4,477	5,783	6,033	NR	13,270	13,676	13,316
Seattle	1,209	1,231	1,248	934	950	927	3,077	3,147	3,109	3,979	4,153	NR	9,199	9,480	9,319

NR = Not Reported

*Source: *United States Cancer Statistics: 1999 Incidence*. Aggregated SEER and NPCR registry counts calculated by summing corresponding rows in table.

**Delay-adjusted count for other cancer calculated by subtracting corresponding counts for lung, colorectal, and breast cancer from the total delay-adjusted count.

***Registries that report to both the SEER and the NPCR programs were counted as SEER (KY, LA, NJ, CA). Data from Georgia, Michigan, and Washington were split into appropriate categories by county, since some counties are in the SEER system and some are not in these states.

Note: Unshaded rows indicate SEER registries that provided data for model input.

Table 3. Predicted Cancer Incidence Rates by Type of Cancer and State, Males, 1999

State	Lung			Colorectal			Prostate			Other			Total		
	Delay Adjustment			Delay Adjustment			Delay Adjustment			Delay Adjustment			Delay Adjustment		
	Without	With	USCS Report*	Without	With	USCS Report*	Without	With	USCS Report*	Without	With**	USCS Report*	Without	With	USCS Report*
Total U.S.	93.5	94.9	89.1	68.3	69.5	66.4	159.1	169.7	162.0	232.8	NR	NR	553.7	572.4	552.3
Comparison of rates by source of data															
States in USCS report***	91.9	93.3	89.1	67.9	69.0	66.4	165.2	176.2	162.0	236.5			561.6	580.6	552.3
SEER registries	82.9	84.2	82.5	63.6	64.7	63.2	157.7	168.2	157.3	230.0		228.8	534.1	552.2	531.7
NPCR registries	96.0	97.5		69.9	71.1		168.6	179.8		239.5			574.0	593.4	
States not in USCS report	99.1	100.6		69.7	70.9		136.3	145.3		218.6			523.7	541.4	
New England	93.8	95.2	88.2	73.4	74.6	70.2	179.5	191.4	174.0	261.6	NR	NR	608.2	628.8	586.4
Connecticut	85.0	86.3	84.5	74.0	75.2	72.1	162.6	173.4	166.5	251.9	NR	NR	573.5	592.9	580.6
Maine	105.2	106.8	NR	79.3	80.6	NR	185.7	198.0	NR	262.6	NR	NR	632.8	654.2	NR
Massachusetts	94.2	95.7	88.1	71.4	72.6	70.0	188.8	201.4	180.1	268.3	NR	NR	622.8	643.8	588.6
New Hampshire	94.8	96.2	83.5	72.4	73.6	58.3	184.8	197.1	151.7	260.0	NR	NR	612.0	632.7	534.1
Rhode Island	104.6	106.2	105.0	73.0	74.2	76.8	172.5	183.9	185.1	258.9	NR	NR	608.9	629.5	644.7
Vermont	91.6	92.9	NR	80.1	81.4	NR	169.6	180.9	NR	252.9	NR	NR	594.2	614.2	NR
Middle Atlantic	92.8	94.2	86.4	82.3	83.7	73.3	185.5	197.8	164.9	255.6	NR	NR	616.2	637.0	569.1
New Jersey	85.1	86.4	86.1	75.2	76.5	77.0	184.3	196.5	188.4	252.5	NR	NR	597.1	617.3	606.9
New York	88.0	89.4	80.7	79.8	81.2	70.7	181.1	193.1	151.1	249.9	NR	NR	598.9	619.1	537.9
Pennsylvania	103.8	105.4	94.2	89.8	91.3	74.6	191.8	204.5	169.0	265.5	NR	NR	650.9	672.9	587.4
East North Central	97.1	98.5	NR	71.3	72.4	NR	178.3	190.1	NR	243.1	NR	NR	589.7	609.6	NR
Illinois	87.7	89.0	95.8	71.5	72.7	71.3	166.3	177.3	155.2	234.9	NR	NR	560.4	579.3	558.8
Indiana	101.1	102.6	NR	74.0	75.3	NR	173.0	184.5	NR	244.0	NR	NR	592.1	612.1	NR
Michigan	102.3	103.8	94.6	67.3	68.4	62.5	198.8	211.9	202.2	249.3	NR	NR	617.5	638.4	607.8
Detroit	107.8	109.4	100.5	67.6	68.7	64.3	217.5	232.0	219.0	257.8	NR	NR	650.8	672.8	633.1
Ohio	101.7	103.3	102.5	70.3	71.5	70.8	181.7	193.7	153.6	246.5	NR	NR	600.2	620.5	555.4
Wisconsin	93.5	94.9	83.0	76.7	78.0	70.6	166.0	177.0	161.2	241.8	NR	NR	578.0	597.5	540.9
West North Central	83.4	84.7	88.8	75.2	76.5	68.9	148.0	157.8	162.3	232.1	NR	NR	538.8	557.0	548.4
Iowa	83.9	85.1	88.0	76.1	77.3	76.6	154.2	164.4	154.4	228.4	NR	NR	542.5	560.9	554.4
Kansas	74.5	75.6	91.9	78.1	79.4	67.2	125.9	134.2	169.4	222.8	NR	NR	501.3	518.2	553.4
Minnesota	77.4	78.6	74.4	70.2	71.4	63.1	154.9	165.1	181.7	230.9	NR	NR	533.4	551.5	561.5
Missouri	98.8	100.3	105.2	76.4	77.6	69.2	159.0	169.6	139.9	246.6	NR	NR	580.8	600.4	533.4
Nebraska	74.4	75.6	78.3	79.7	81.0	71.8	134.1	143.0	174.4	220.3	NR	NR	508.6	525.7	545.5
North Dakota	67.8	68.9	69.3	71.6	72.8	69.1	132.6	141.4	192.9	215.4	NR	NR	487.3	503.8	534.1
South Dakota	71.7	72.8	NR	76.1	77.4	NR	122.9	131.0	NR	223.6	NR	NR	494.3	511.0	NR
South Atlantic	107.6	109.2	NR	59.9	60.8	NR	154.3	164.5	NR	220.8	NR	NR	542.5	560.8	NR
Delaware	119.3	121.1	109.9	57.0	57.9	66.4	181.6	193.7	163.3	225.8	NR	NR	583.7	603.4	568.3
District of Columbia	90.0	91.4	111.4	53.8	54.7	66.1	163.2	174.0	234.7	192.1	NR	NR	499.1	515.9	667.1
Florida	111.6	113.3	101.8	64.6	65.7	72.9	148.6	158.5	155.5	231.9	NR	NR	556.7	575.5	587.5
Georgia	89.1	90.4	NR	54.0	54.9	NR	145.9	155.6	NR	201.7	NR	NR	490.7	507.3	NR
Atlanta	82.3	83.6	89.1	54.8	55.7	57.4	170.1	181.4	172.4	210.5	NR	NR	517.7	535.2	532.6
Rural Georgia	94.5	96.0	NR	53.7	54.5	NR	130.9	139.5	NR	175.1	NR	NR	454.1	469.4	NR
Maryland	98.4	99.9	92.1	49.8	50.6	63.2	182.2	194.3	184.7	214.0	NR	NR	544.4	562.8	567.3
North Carolina	115.4	117.1	103.2	59.4	60.4	53.4	156.1	166.4	140.8	220.8	NR	NR	551.7	570.4	499.5
South Carolina	108.4	110.0	109.5	57.5	58.4	64.3	158.5	169.0	176.1	211.9	NR	NR	536.2	554.3	578.3
Virginia	102.7	104.2	NR	57.4	58.3	NR	154.1	164.3	NR	215.6	NR	NR	529.7	547.6	NR
West Virginia	126.3	128.3	126.3	65.6	66.7	73.3	142.9	152.4	144.8	225.4	NR	NR	560.3	579.2	579.5

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Table 3. Predicted Cancer Incidence Rates by Type of Cancer and State, Males, 1999 (continued)

State	Lung			Colorectal			Prostate			Other			Total		
	Delay Adjustment			Delay Adjustment			Delay Adjustment			Delay Adjustment			Delay Adjustment		
	Without	With	USCS Report*	Without	With	USCS Report*	Without	With	USCS Report*	Without	With**	USCS Report*	Without	With	USCS Report*
East South Central	117.1	118.9	NR	66.2	67.3	NR	142.0	151.4	NR	220.3	NR	NR	545.6	564.1	NR
Alabama	112.3	114.0	NR	58.0	59.0	NR	157.3	167.7	NR	218.7	NR	NR	546.3	564.8	NR
Kentucky	129.0	130.9	135.6	69.8	70.9	71.4	133.0	141.8	155.5	227.8	NR	NR	559.6	578.5	599.9
Mississippi	110.2	111.9	NR	74.0	75.3	NR	145.9	155.6	NR	213.9	NR	NR	544.1	562.4	NR
Tennessee	115.7	117.5	NR	66.5	67.7	NR	134.2	143.1	NR	219.3	NR	NR	535.7	553.8	NR
West South Central	95.9	97.3	NR	75.7	76.9	NR	116.8	124.5	NR	213.6	NR	NR	501.9	518.9	NR
Arkansas	115.1	116.9	NR	79.3	80.6	NR	128.3	136.8	NR	221.1	NR	NR	543.8	562.2	NR
Louisiana	115.9	117.7	114.9	69.9	71.1	70.5	144.6	154.2	163.1	226.5	NR	NR	556.9	575.7	579.6
Oklahoma	85.0	86.3	NR	69.1	70.2	NR	106.4	113.4	NR	212.2	NR	NR	472.5	488.5	NR
Texas	90.2	91.5	NR	77.8	79.1	NR	110.3	117.6	NR	209.5	NR	NR	487.7	504.2	NR
Mountain	69.6	70.6	NR	53.4	54.3	NR	159.2	169.8	NR	224.0	NR	NR	506.2	523.3	NR
Arizona	66.4	67.4	75.8	53.2	54.1	54.7	147.0	156.7	114.4	220.8	NR	NR	487.4	503.8	458.9
Colorado	71.5	72.6	63.2	47.8	48.6	54.8	181.8	193.8	166.7	231.3	NR	NR	532.3	550.3	503.1
Idaho	70.9	72.0	69.0	62.3	63.3	52.2	157.0	167.4	157.4	221.2	NR	NR	511.4	528.7	503.6
Montana	73.7	74.8	76.6	53.9	54.8	63.3	157.8	168.2	157.1	225.6	NR	NR	511.0	528.2	507.2
Nevada	96.4	97.9	NR	65.2	66.3	NR	160.9	171.5	NR	244.0	NR	NR	566.4	585.6	NR
New Mexico	60.9	61.8	60.5	49.3	50.1	53.5	133.1	141.9	148.2	206.7	NR	NR	450.0	465.2	466.6
Utah	50.3	51.0	44.3	53.0	53.9	50.7	169.7	180.9	182.8	213.0	NR	NR	485.9	502.3	490.7
Wyoming	70.9	72.0	68.9	42.5	43.2	65.9	188.1	200.6	172.0	226.9	NR	NR	528.4	546.3	542.1
Pacific	75.0	76.2	74.1	58.8	59.8	58.0	151.7	161.7	159.7	225.9	NR	NR	511.4	528.7	519.1
Alaska	75.1	76.2	77.3	100.8	102.4	67.3	92.8	99.0	155.8	237.2	NR	NR	505.9	523.0	526.8
California	70.7	71.8	70.5	57.4	58.4	57.1	146.8	156.5	154.7	221.0	NR	NR	495.9	512.7	506.3
San Francisco/Oakland	69.6	70.7	68.9	58.1	59.1	60.0	149.2	159.1	162.1	224.9	NR	NR	501.8	518.8	521.1
San Jose/Monterey	62.0	62.9	62.5	57.2	58.2	54.1	133.5	142.3	166.1	214.9	NR	NR	467.6	483.4	490.6
Los Angeles	65.1	66.1	64.1	58.1	59.1	56.8	148.6	158.5	156.6	216.1	NR	NR	488.0	504.5	497.1
Other counties	74.7	75.8	NR	57.0	57.9	NR	146.9	156.6	NR	223.1	NR	NR	501.7	518.6	NR
Hawaii	71.1	72.2	69.1	60.9	61.9	61.8	131.2	139.9	135.5	206.7	NR	NR	469.8	485.7	478.0
Oregon	89.3	90.7	86.1	64.0	65.0	56.7	172.1	183.5	176.2	245.0	NR	NR	570.4	589.7	556.5
Washington	89.4	90.8	86.6	59.5	60.5	62.1	173.1	184.6	182.4	243.0	NR	NR	565.0	584.1	574.9
Seattle	89.3	90.6	90.3	60.1	61.1	61.0	176.1	187.7	187.5	245.8	NR	NR	571.2	590.5	590.0

NR = Not Reported

*Source: *United States Cancer Statistics: 1999 Incidence.* Aggregated SEER registry rates calculated using SEER*Stat databases (SEER 2002). Aggregated NPCR registry rates not available.

**No delay adjustment is available for other cancer rates

***Registries that report to both the SEER and the NPCR programs were counted as SEER (KY, LA, NJ, CA). Data from Georgia, Michigan, and Washington were split into appropriate categories by county, since some counties are in the SEER system and some are not in these states.

Note: Unshaded rows indicate SEER registries that provided data for model input.

Table 4. Predicted Cancer Incidence Rates by Type of Cancer and State, Females, 1999

State	Lung			Colorectal			Breast			Other			Total		
	Delay Adjustment			Delay Adjustment			Delay Adjustment			Delay Adjustment			Delay Adjustment		
	Without	With	USCS Report*	Without	With	USCS Report*	Without	With	USCS Report*	Without	With**	USCS Report*	Without	With	USCS Report*
Total U.S.	56.1	57.1	53.4	48.4	49.2	48.5	134.5	137.6	134.1	179.5	NR	NR	418.5	431.3	420.1
Comparison of rates by source of data															
States in USCS report***	57.3	58.3	53.4	48.3	49.1	48.5	136.7	139.8	134.1	183.5			425.7	438.7	420.1
SEER registries	51.3	52.2	50.9	46.1	46.9	45.7	132.8	135.8	131.9	179.3		178.3	409.5	422.0	406.8
NPCR registries	60.0	61.1		49.2	50.1		138.5	141.6		185.5			433.2	446.5	
States not in USCS report	51.6	52.5		49.0	49.9		126.6	129.5		164.4			391.6	403.6	
New England	60.6	61.7	58.3	51.8	52.7	52.7	153.6	157.1	145.1	205.6	NR	NR	471.6	486.1	454.3
Connecticut	55.5	56.4	54.3	52.7	53.6	54.2	144.4	147.6	150.1	200.1	NR	NR	452.6	466.5	458.0
Maine	60.5	61.5	NR	51.0	51.9	NR	176.6	180.6	NR	206.8	NR	NR	494.8	510.0	NR
Massachusetts	62.9	64.0	59.0	51.5	52.4	51.2	150.0	153.4	144.7	208.3	NR	NR	472.6	487.0	451.5
New Hampshire	65.8	67.0	61.0	50.8	51.7	47.4	164.3	168.0	137.9	209.1	NR	NR	490.0	505.0	427.7
Rhode Island	62.4	63.5	65.2	52.3	53.2	61.8	153.1	156.6	139.7	203.5	NR	NR	471.4	485.8	487.0
Vermont	54.4	55.3	NR	52.8	53.7	NR	174.4	178.4	NR	203.2	NR	NR	484.8	499.6	NR
Middle Atlantic	55.5	56.5	52.4	54.5	55.4	53.3	152.1	155.6	133.5	196.7	NR	NR	458.7	472.8	434.1
New Jersey	52.7	53.6	55.5	51.9	52.8	52.6	135.5	138.6	139.6	193.6	NR	NR	433.6	446.8	450.0
New York	54.9	55.9	51.5	52.8	53.7	53.5	150.8	154.2	128.7	198.6	NR	NR	457.1	471.1	423.9
Pennsylvania	58.2	59.2	51.9	58.2	59.2	53.5	164.4	168.2	136.2	196.0	NR	NR	476.8	491.4	438.5
East North Central	53.5	54.5	NR	51.0	51.9	NR	132.6	135.7	NR	192.1	NR	NR	429.2	442.3	NR
Illinois	50.1	51.0	54.8	51.9	52.8	50.4	132.6	135.6	136.6	187.6	NR	NR	422.2	435.1	426.2
Indiana	53.9	54.9	NR	53.0	53.9	NR	133.3	136.4	NR	189.9	NR	NR	430.1	443.2	NR
Michigan	60.3	61.4	57.4	48.9	49.8	47.2	133.0	136.0	131.6	198.5	NR	NR	440.7	454.2	432.6
Detroit	61.5	62.6	59.6	49.4	50.3	47.9	134.2	137.3	129.9	200.6	NR	NR	446.0	459.6	436.1
Ohio	52.4	53.4	56.1	49.1	49.9	50.0	130.5	133.5	135.8	191.2	NR	NR	423.2	436.1	422.8
Wisconsin	50.8	51.7	46.9	54.6	55.5	47.3	136.1	139.2	132.8	194.7	NR	NR	436.1	449.5	405.3
West North Central	49.6	50.5	50.6	56.3	57.3	48.9	135.9	138.9	133.1	184.9	NR	NR	426.7	439.7	413.6
Iowa	46.0	46.8	46.2	54.3	55.3	55.0	132.6	135.6	132.3	183.1	NR	NR	416.0	428.7	417.6
Kansas	42.6	NR	52.8	NR	NR	48.0	NR	NR	135.8	NR	NR	NR	NR	NR	416.4
Minnesota	50.7	51.6	45.8	54.5	55.4	45.5	137.8	140.9	140.1	193.4	NR	NR	436.4	449.7	422.8
Missouri	56.8	57.9	59.2	57.3	58.3	48.9	135.9	139.0	127.7	187.0	NR	NR	437.1	450.4	410.6
Nebraska	45.3	46.1	44.4	57.6	58.6	50.7	137.1	140.2	130.4	178.1	NR	NR	418.1	430.9	406.0
North Dakota	45.1	46.0	37.2	59.5	60.5	42.0	135.1	138.2	130.3	183.8	NR	NR	423.5	436.5	364.3
South Dakota	41.0	41.8	NR	59.3	60.3	NR	130.9	133.9	NR	177.8	NR	NR	409.0	421.5	NR
South Atlantic	74.6	75.9	NR	42.7	43.4	NR	126.8	129.6	NR	166.1	NR	NR	410.2	422.7	NR
Delaware	108.3	110.2	65.8	39.8	40.5	54.4	132.4	135.4	138.0	179.6	NR	NR	460.1	474.2	457.5
District of Columbia	48.7	49.6	50.8	43.8	44.6	55.3	127.7	130.6	138.0	166.6	NR	NR	386.9	398.7	422.0
Florida	82.4	83.9	62.9	44.3	45.1	53.0	131.8	134.8	132.9	165.0	NR	NR	423.4	436.4	441.6
Georgia	51.4	52.4	NR	41.0	41.7	NR	118.5	121.2	NR	157.0	NR	NR	368.0	379.2	NR
Atlanta	52.7	53.6	55.1	41.0	41.7	43.5	133.3	136.3	141.3	159.6	NR	NR	387.0	398.8	405.1
Rural Georgia	37.6	38.3	NR	40.3	41.0	NR	101.2	103.4	NR	146.4	NR	NR	325.0	334.9	NR
Maryland	84.5	86.0	57.0	38.8	39.5	45.6	133.1	136.1	137.0	174.5	NR	NR	430.9	444.1	415.2
North Carolina	72.5	73.8	51.0	42.5	43.2	42.1	121.8	124.6	123.2	166.4	NR	NR	403.2	415.5	374.3
South Carolina	63.1	NR	46.2	NR	NR	44.1	NR	NR	125.6	NR	NR	NR	NR	NR	377.8
Virginia	73.5	74.8	NR	42.5	43.2	NR	128.7	131.7	NR	170.3	NR	NR	415.1	427.8	NR
West Virginia	82.1	83.6	67.5	45.8	46.6	52.2	119.9	122.6	123.5	172.7	NR	NR	420.6	433.4	432.5

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Table 4. Predicted Cancer Incidence Rates by Type of Cancer and State, Females, 1999 (continued)

State	Lung			Colorectal			Breast			Other			Total		
	Delay Adjustment			Delay Adjustment			Delay Adjustment			Delay Adjustment			Delay Adjustment		
	Without	With	USCS Report*	Without	With	USCS Report*	Without	With	USCS Report*	Without	With**	USCS Report*	Without	With	USCS Report*
East South Central	54.4	55.3	NR	47.1	47.9	NR	118.9	121.6	NR	163.9	NR	NR	384.3	396.0	NR
Alabama	51.6	52.5	NR	42.2	42.9	NR	114.6	117.2	NR	160.0	NR	NR	368.3	379.6	NR
Kentucky	67.7	68.9	70.4	50.3	51.2	52.2	123.7	126.5	126.8	171.1	NR	NR	412.8	425.4	430.4
Mississippi	36.3	36.9	NR	46.4	47.2	NR	114.2	116.8	NR	157.2	NR	NR	354.0	364.8	NR
Tennessee	55.9	56.9	NR	49.2	50.0	NR	121.2	124.0	NR	165.2	NR	NR	391.5	403.5	NR
West South Central	45.8	46.6	NR	51.8	52.7	NR	125.9	128.8	NR	155.7	NR	NR	379.2	390.8	NR
Arkansas	44.8	45.6	NR	52.5	53.4	NR	123.4	126.2	NR	161.1	NR	NR	381.8	393.4	NR
Louisiana	51.5	52.4	52.4	47.4	48.2	47.5	121.9	124.6	123.1	163.3	NR	NR	384.0	395.8	391.0
Oklahoma	44.4	45.1	NR	51.9	52.8	NR	128.7	131.6	NR	157.7	NR	NR	382.5	394.2	NR
Texas	44.9	45.7	NR	52.7	53.7	NR	126.6	129.5	NR	152.5	NR	NR	376.8	388.3	NR
Mountain	38.5	39.2	NR	37.3	37.9	NR	129.6	132.5	NR	173.5	NR	NR	378.9	390.5	NR
Arizona	36.8	37.5	47.7	37.9	38.5	40.0	125.2	128.0	123.6	167.2	NR	NR	367.1	378.3	375.0
Colorado	39.8	40.5	40.7	34.6	35.2	39.4	137.9	141.0	139.4	181.2	NR	NR	393.4	405.4	391.6
Idaho	32.9	33.5	42.0	41.2	42.0	38.7	127.8	130.7	131.4	176.6	NR	NR	378.5	390.1	397.1
Montana	38.9	39.6	48.5	38.3	39.0	41.9	132.8	135.8	122.2	183.1	NR	NR	393.1	405.1	385.4
Nevada	59.7	60.8	NR	45.3	46.1	NR	144.1	147.3	NR	182.4	NR	NR	431.5	444.7	NR
New Mexico	36.8	37.5	36.3	32.4	32.9	32.3	118.1	120.7	122.8	160.9	NR	NR	348.1	358.8	361.4
Utah	21.4	21.7	22.4	36.3	36.9	35.4	119.0	121.7	119.3	169.0	NR	NR	345.5	356.1	349.6
Wyoming	45.6	46.5	46.5	31.5	32.0	48.4	131.1	134.0	131.2	182.3	NR	NR	390.4	402.4	387.8
Pacific	51.0	52.0	50.9	43.7	44.5	43.8	135.8	138.9	138.9	178.0	NR	NR	408.5	421.0	414.8
Alaska	84.0	85.5	69.3	89.9	91.4	49.6	160.9	164.6	127.8	194.7	NR	NR	529.5	545.7	437.5
California	48.5	49.4	48.8	42.4	43.1	42.9	132.5	135.5	135.1	174.4	NR	NR	397.7	409.8	405.3
San Francisco/Oakland	49.4	50.3	49.6	42.8	43.5	45.9	142.4	145.7	143.8	173.2	NR	NR	408.0	420.5	414.1
San Jose/Monterey	45.3	46.1	44.5	42.2	43.0	38.4	139.0	142.2	137.1	174.2	NR	NR	401.0	413.3	398.3
Los Angeles	42.7	43.5	41.5	42.4	43.1	42.2	126.3	129.2	125.5	179.4	NR	NR	391.0	403.0	385.9
Other counties	51.6	52.6	NR	42.3	43.0	NR	132.1	135.1	NR	172.1	NR	NR	398.0	410.2	NR
Hawaii	40.5	41.3	39.5	47.3	48.1	48.0	126.6	129.5	134.0	158.5	NR	NR	373.0	384.4	392.1
Oregon	59.8	60.9	60.8	47.2	48.0	48.4	146.4	149.7	151.5	188.8	NR	NR	442.2	455.7	442.9
Washington	59.6	60.7	58.5	45.0	45.8	44.3	147.4	150.8	153.8	193.7	NR	NR	445.8	459.4	455.2
Seattle	60.7	61.8	63.3	45.5	46.3	45.7	151.8	155.3	156.1	195.4	NR	NR	454.0	467.9	466.0

NR = Not Reported

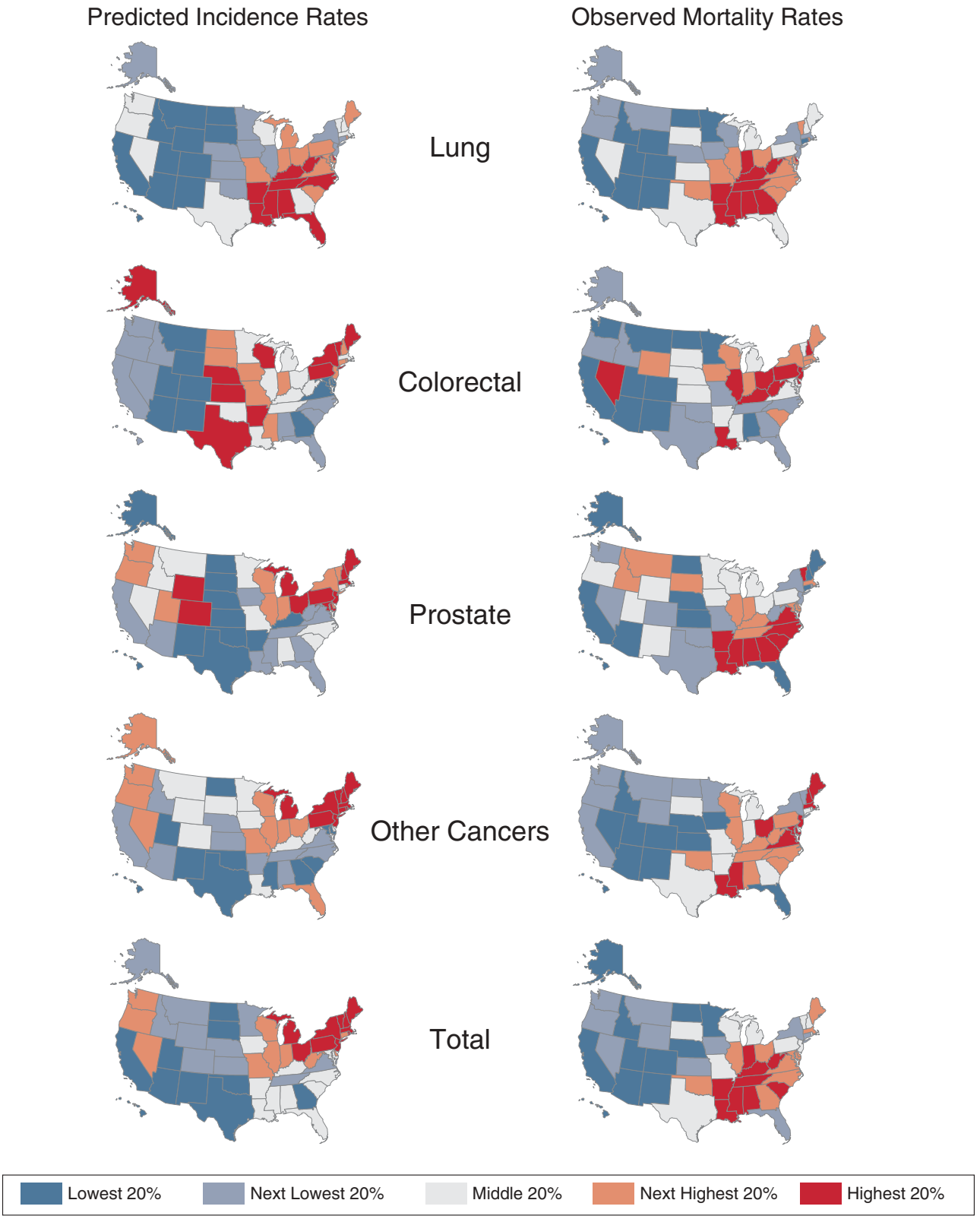
*Source: *United States Cancer Statistics: 1999 Incidence.* Aggregated SEER registry rates calculated using SEER*Stat databases (SEER 2002). Aggregated NPCR registry rates not available.

**No delay adjustment is available for other cancer rates

***Registries that report to both the SEER and the NPCR programs were counted as SEER (KY, LA, NJ, CA). Data from Georgia, Michigan, and Washington were split into appropriate categories by county, since some counties are in the SEER system and some are not in these states.

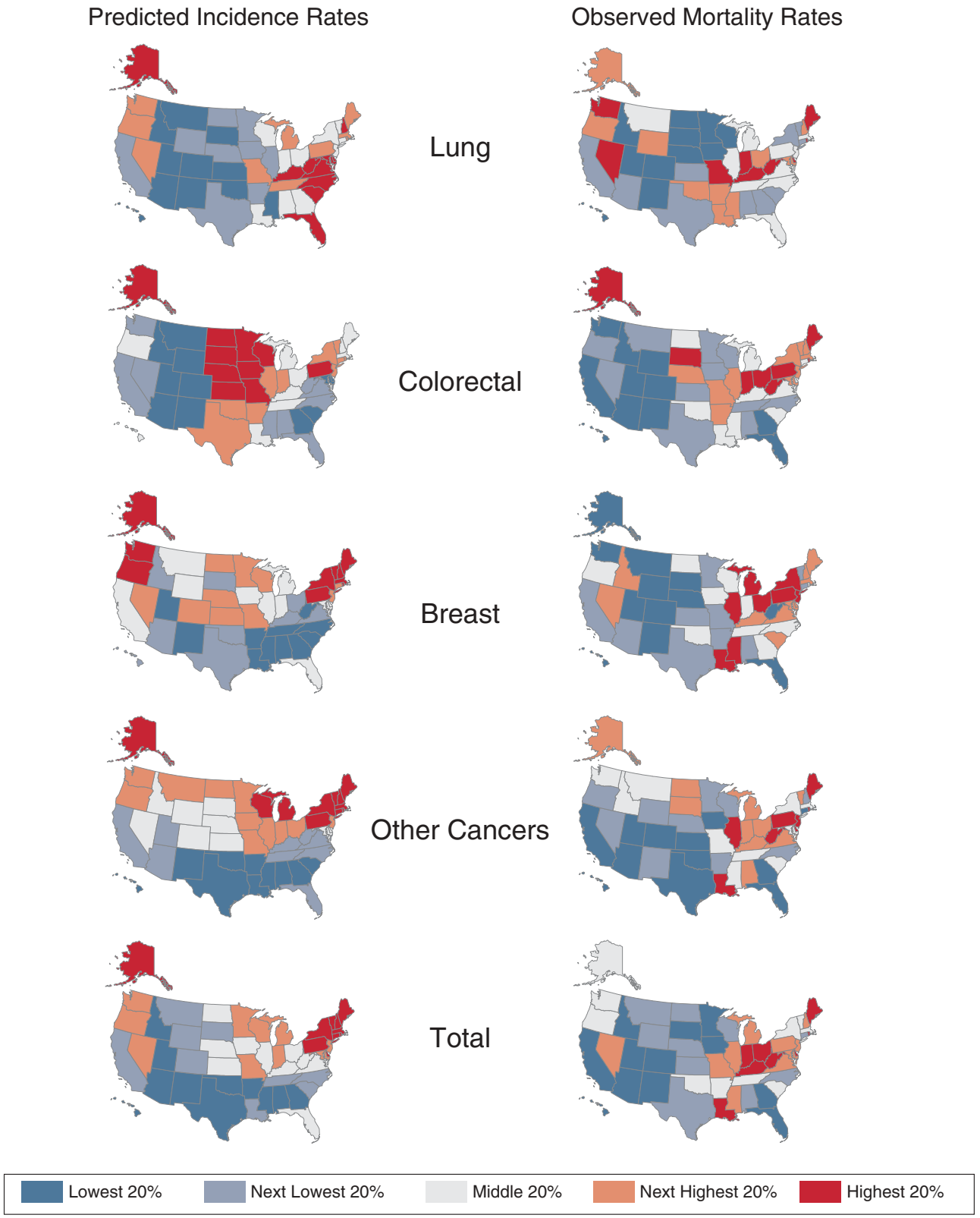
Note: Unshaded rows indicate SEER registries that provided data for model input.

Predicted Cancer Incidence Rates and Observed Mortality Rates by Type of Cancer and State*, Males, 1999



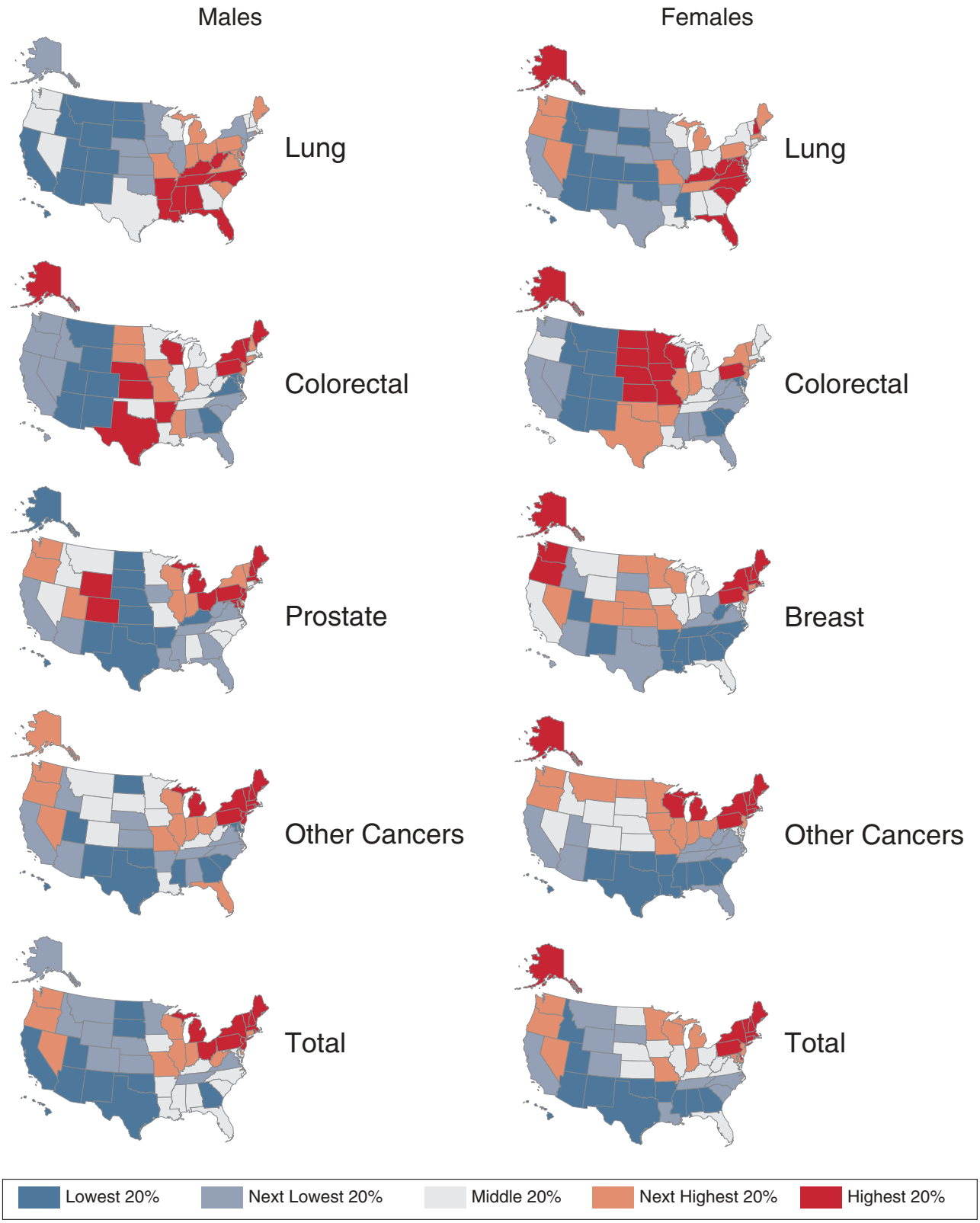
*States are color coded according to quintiles of the 50 states plus the District of Columbia.

Predicted Cancer Incidence Rates and Observed Mortality Rates by Type of Cancer and State*, Females, 1999



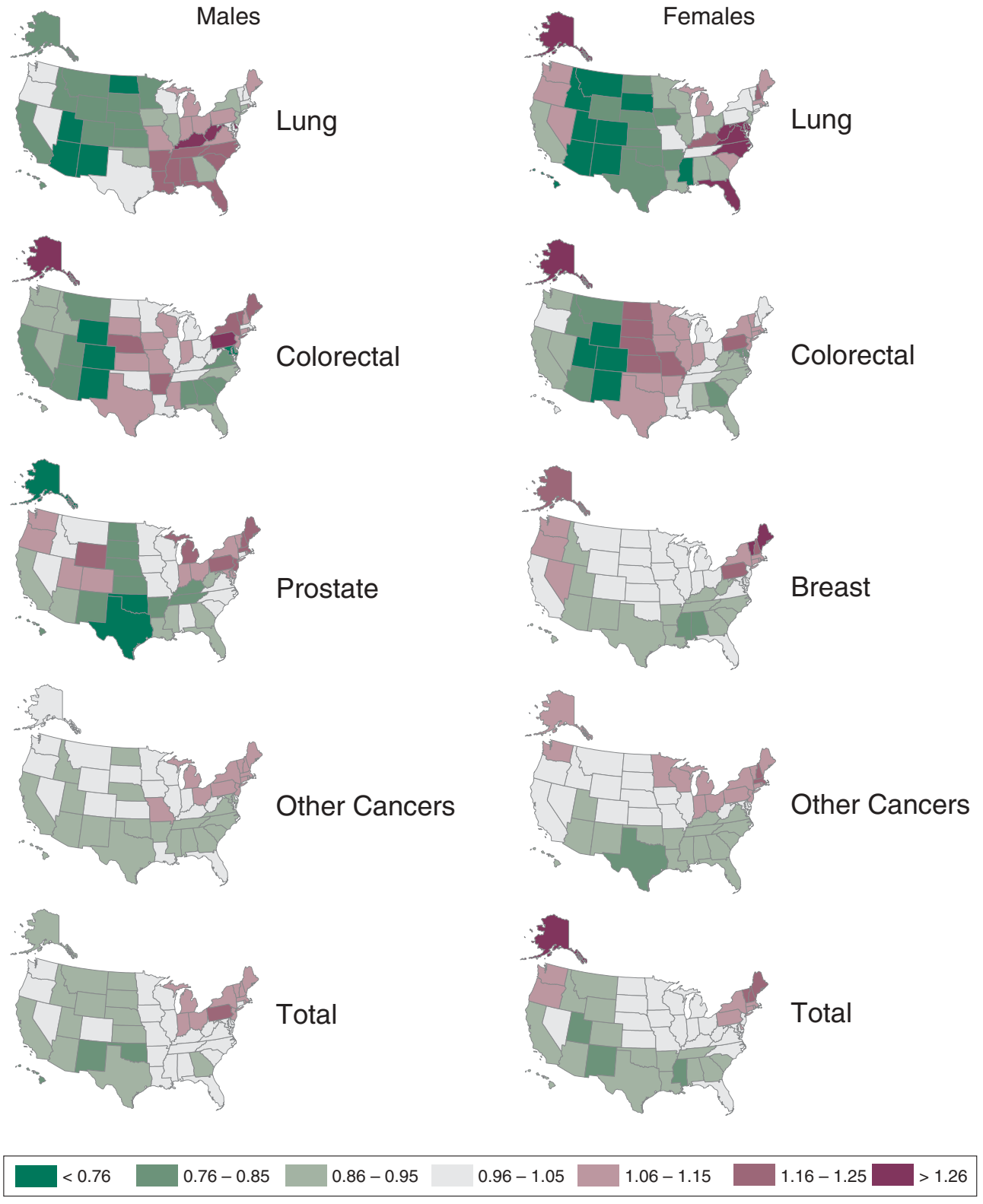
*States are color coded according to quintiles of the 50 states plus the District of Columbia.

Predicted Cancer Incidence Rates by Type of Cancer and State*, Males and Females, 1999



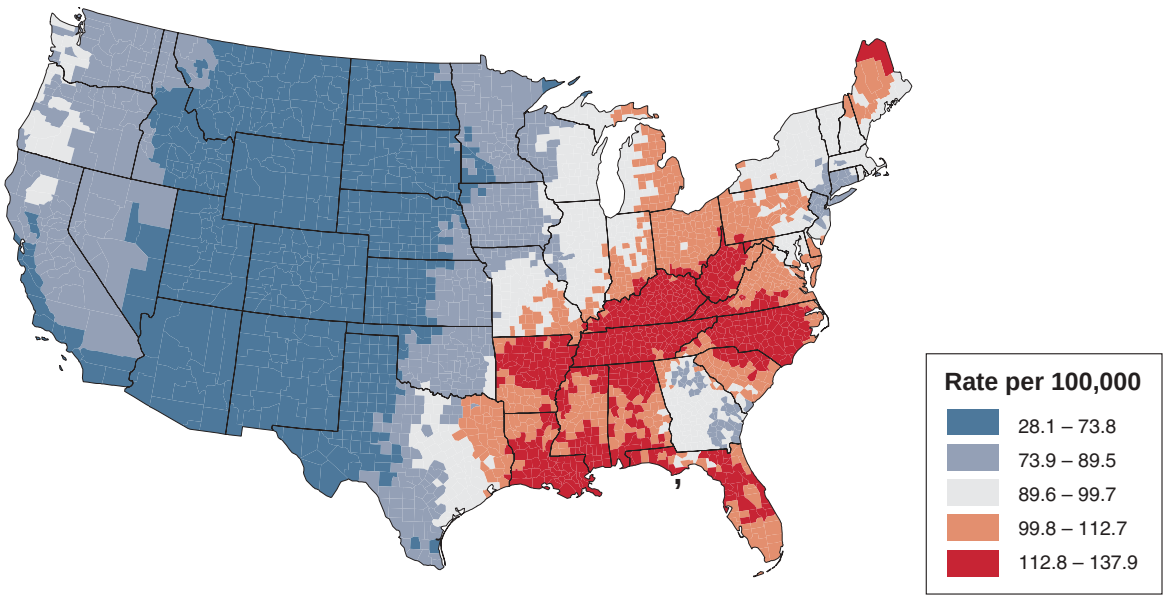
*States are color coded according to quintiles of the 50 states plus the District of Columbia.

Predicted Cancer Incidence Rates Relative to the U.S. Rate by Type of Cancer and State, Males and Females, 1999

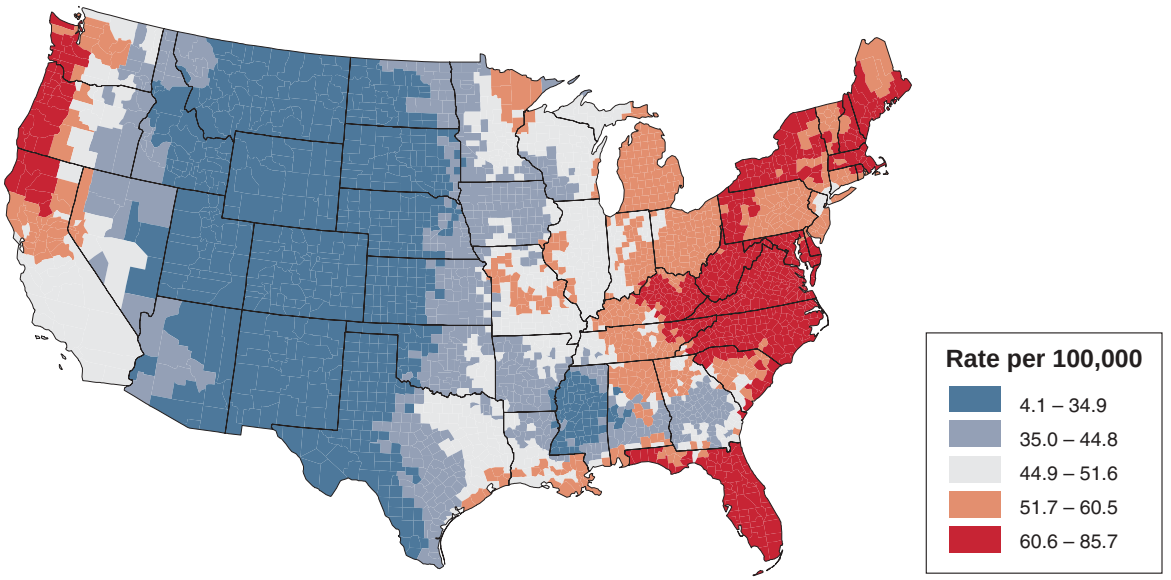


Smoothed Predicted Lung Cancer Incidence Rates by County, Males and Females, 1999

Males

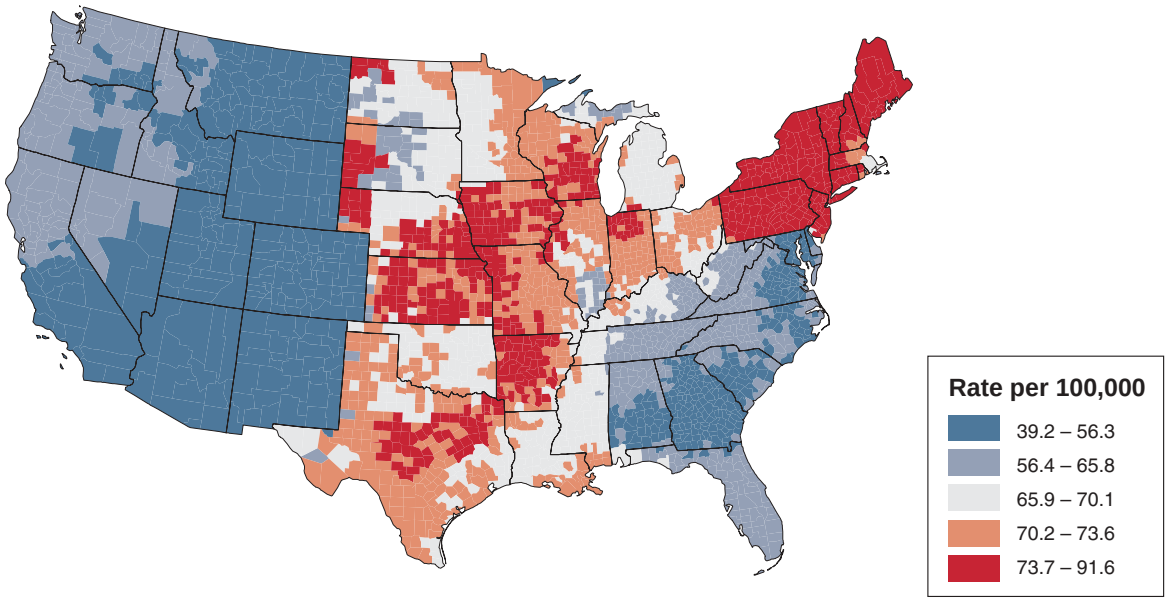


Females

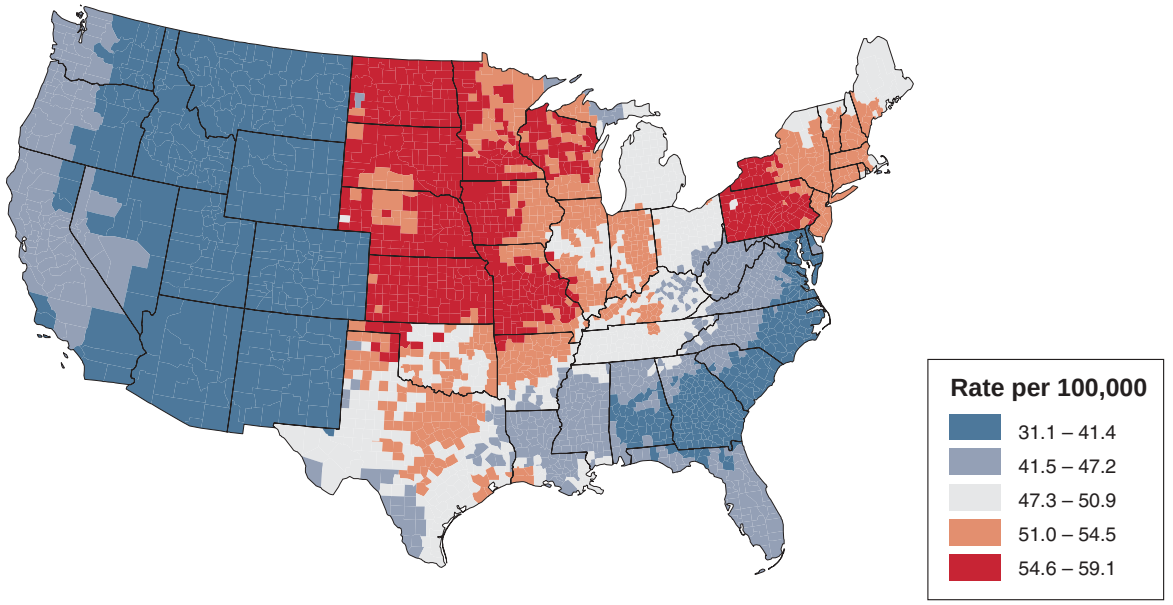


Smoothed Predicted Colorectal Cancer Incidence Rates by County, Males and Females, 1999

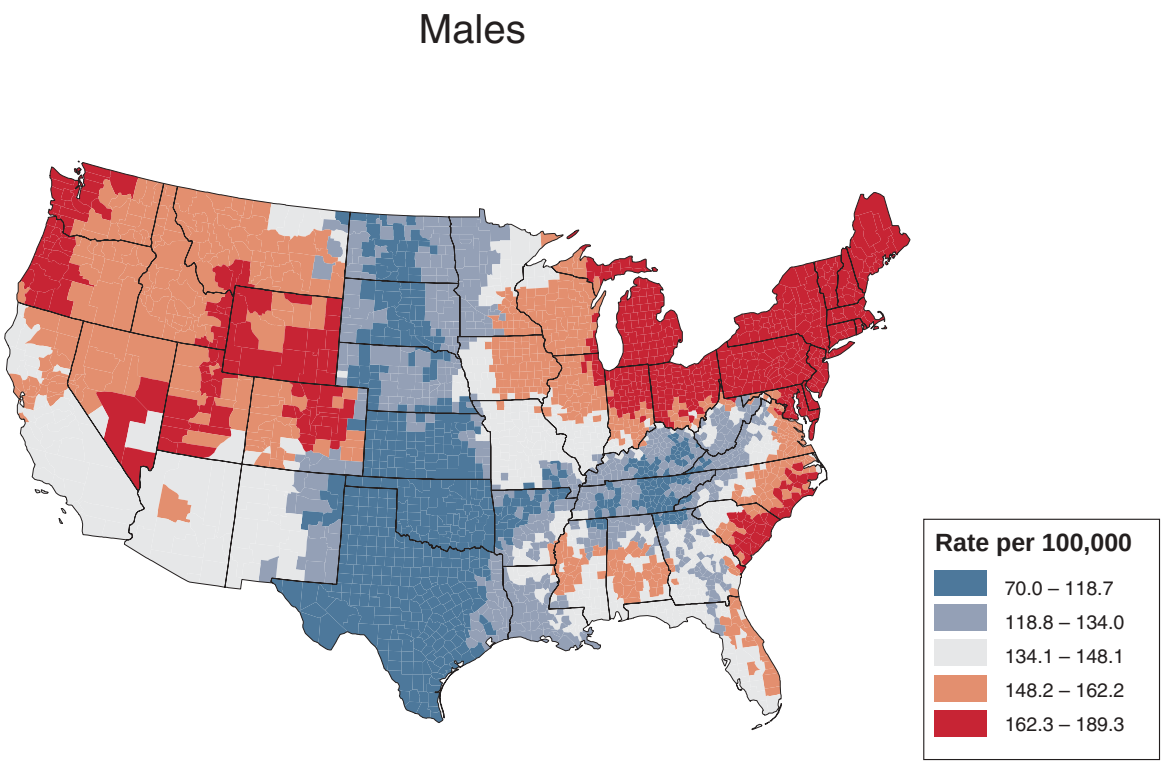
Males



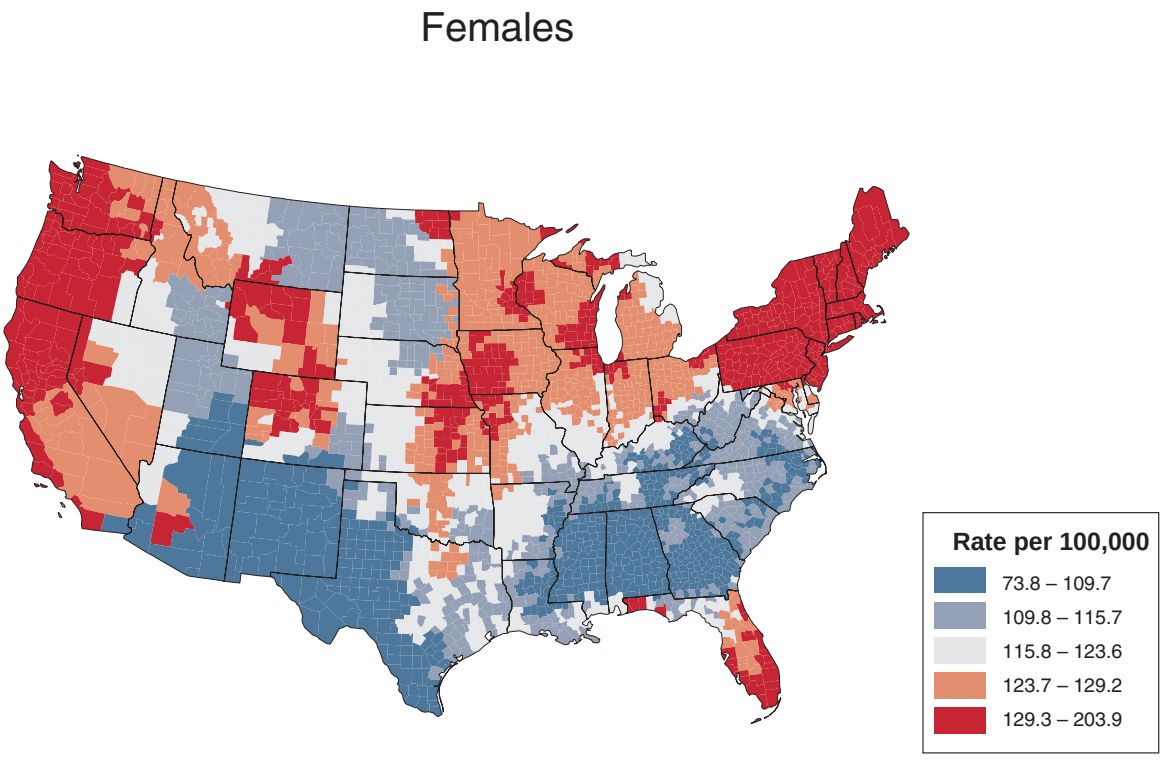
Females



Smoothed Predicted Prostate Cancer Incidence Rates by County, Males, 1999

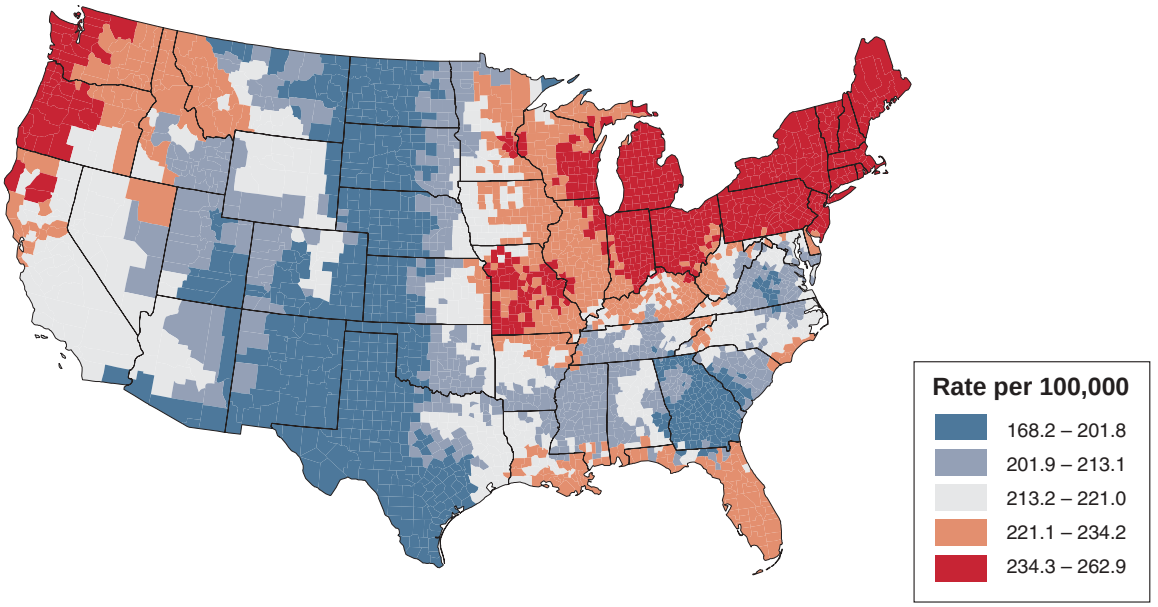


Smoothed Predicted Breast Cancer Incidence Rates by County, Females, 1999

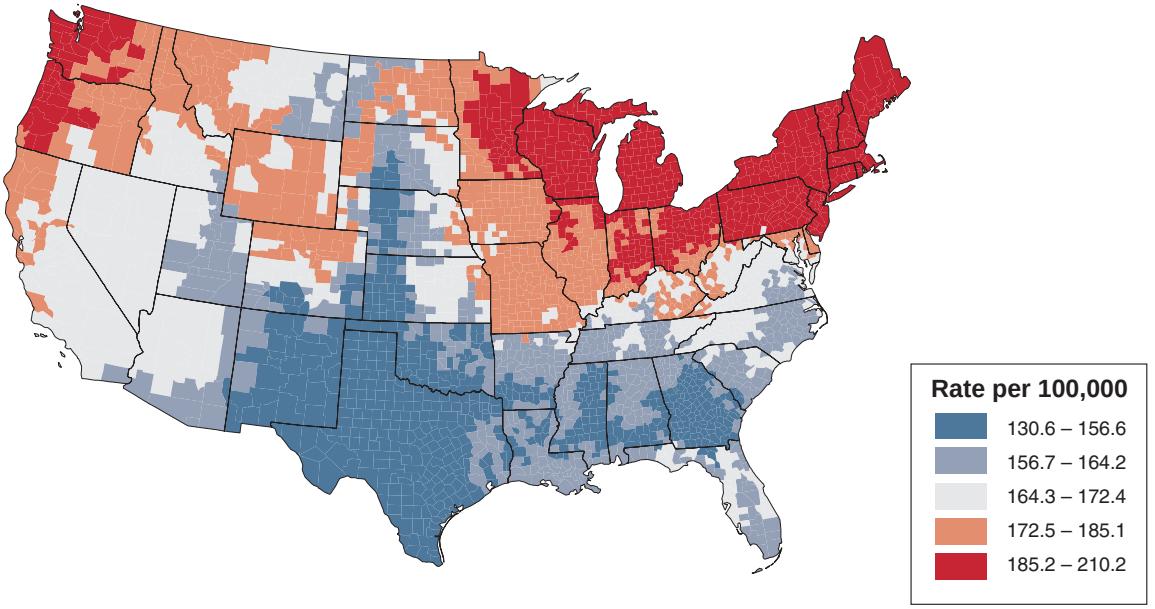


Smoothed Predicted Other Cancer Incidence Rates by County, Males and Females, 1999

Males

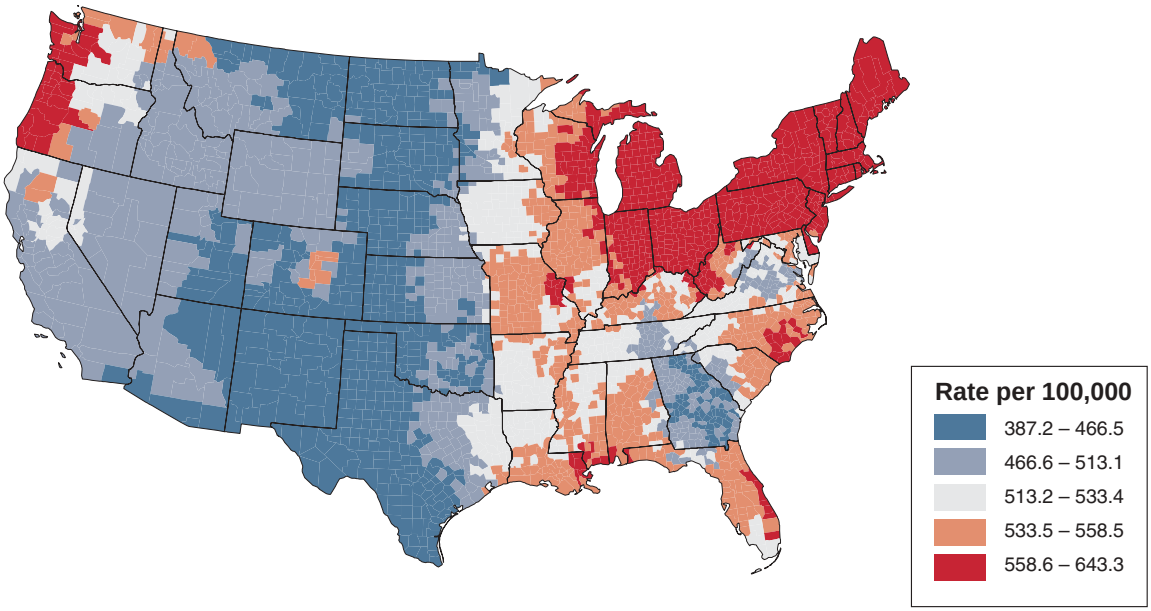


Females

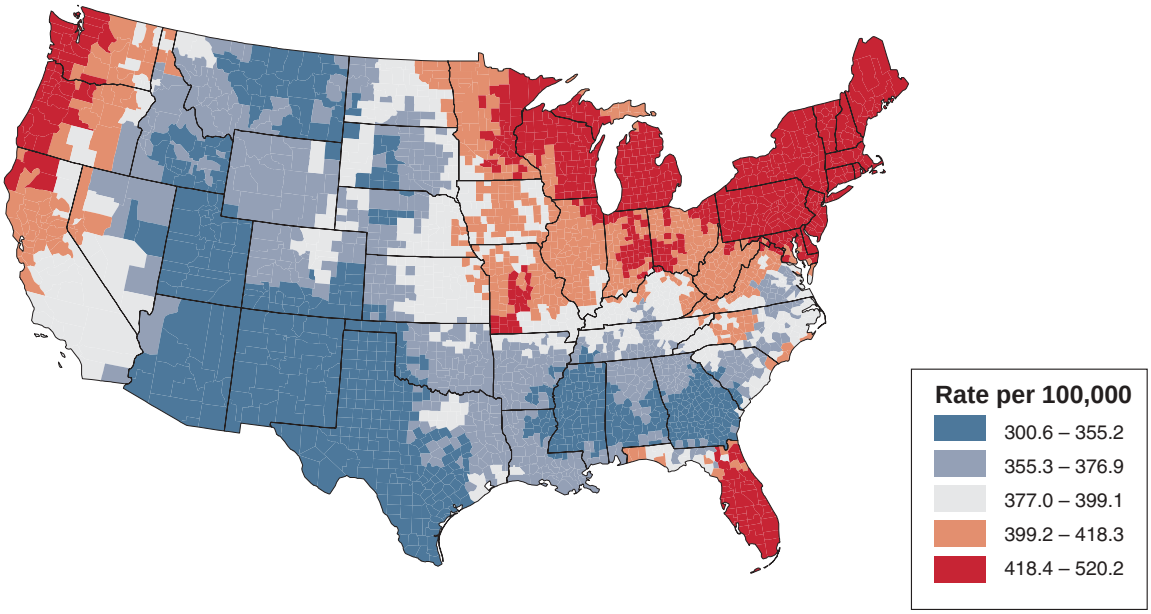


Smoothed Predicted Total Cancer Incidence Rates by County, Males and Females, 1999

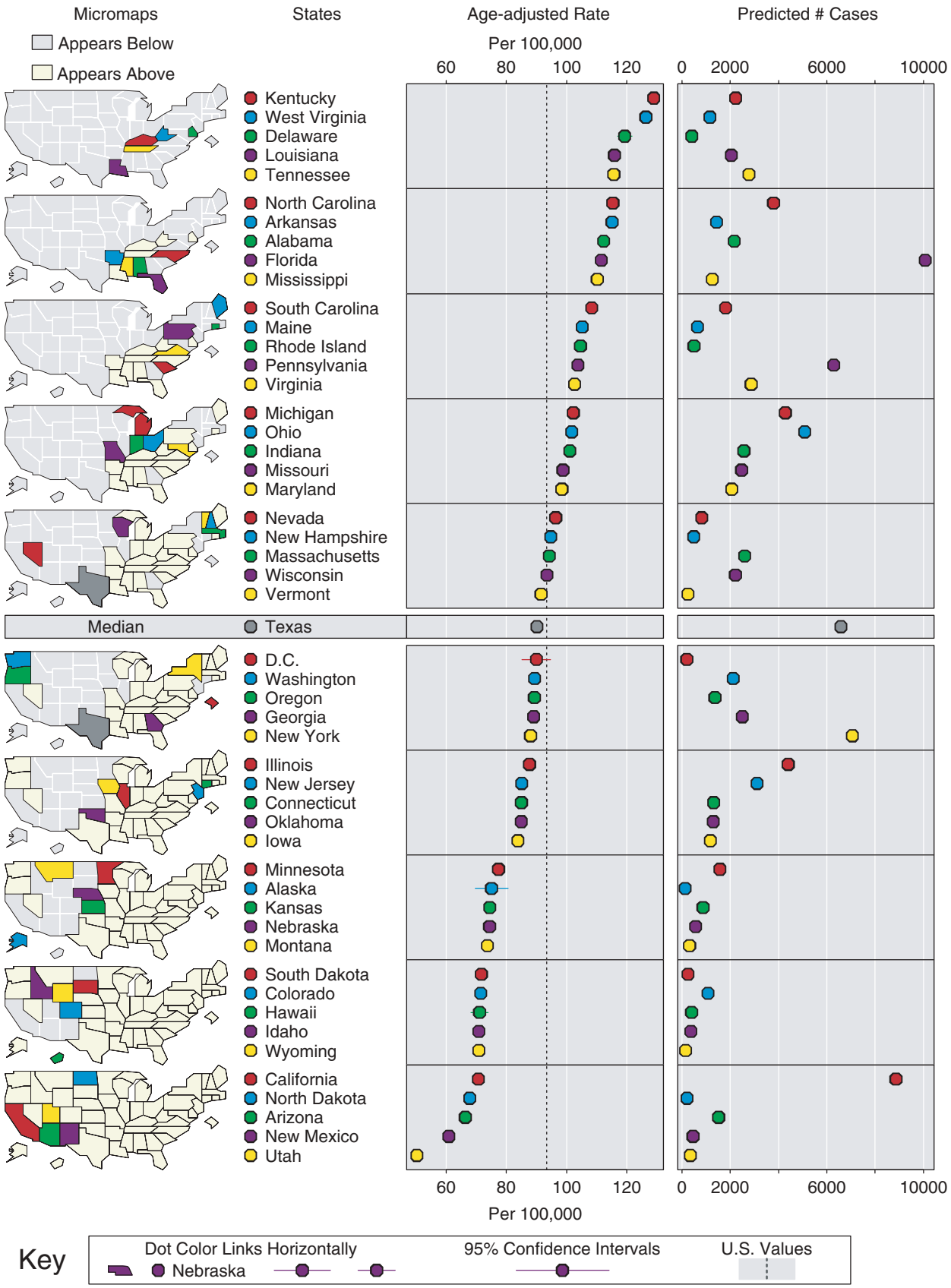
Males



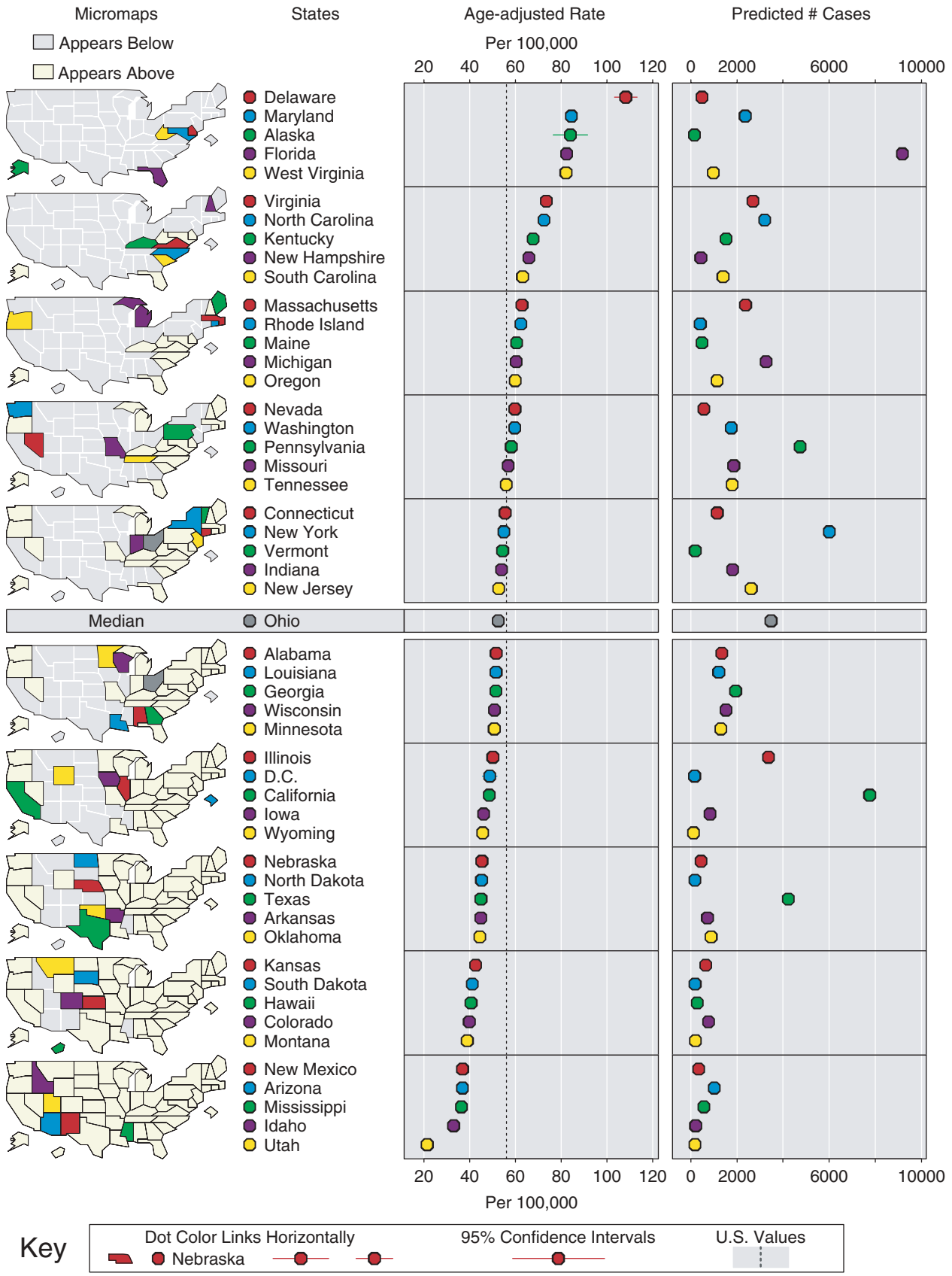
Females



Predicted Lung Cancer Incidence Rates and Counts by State, Males, 1999

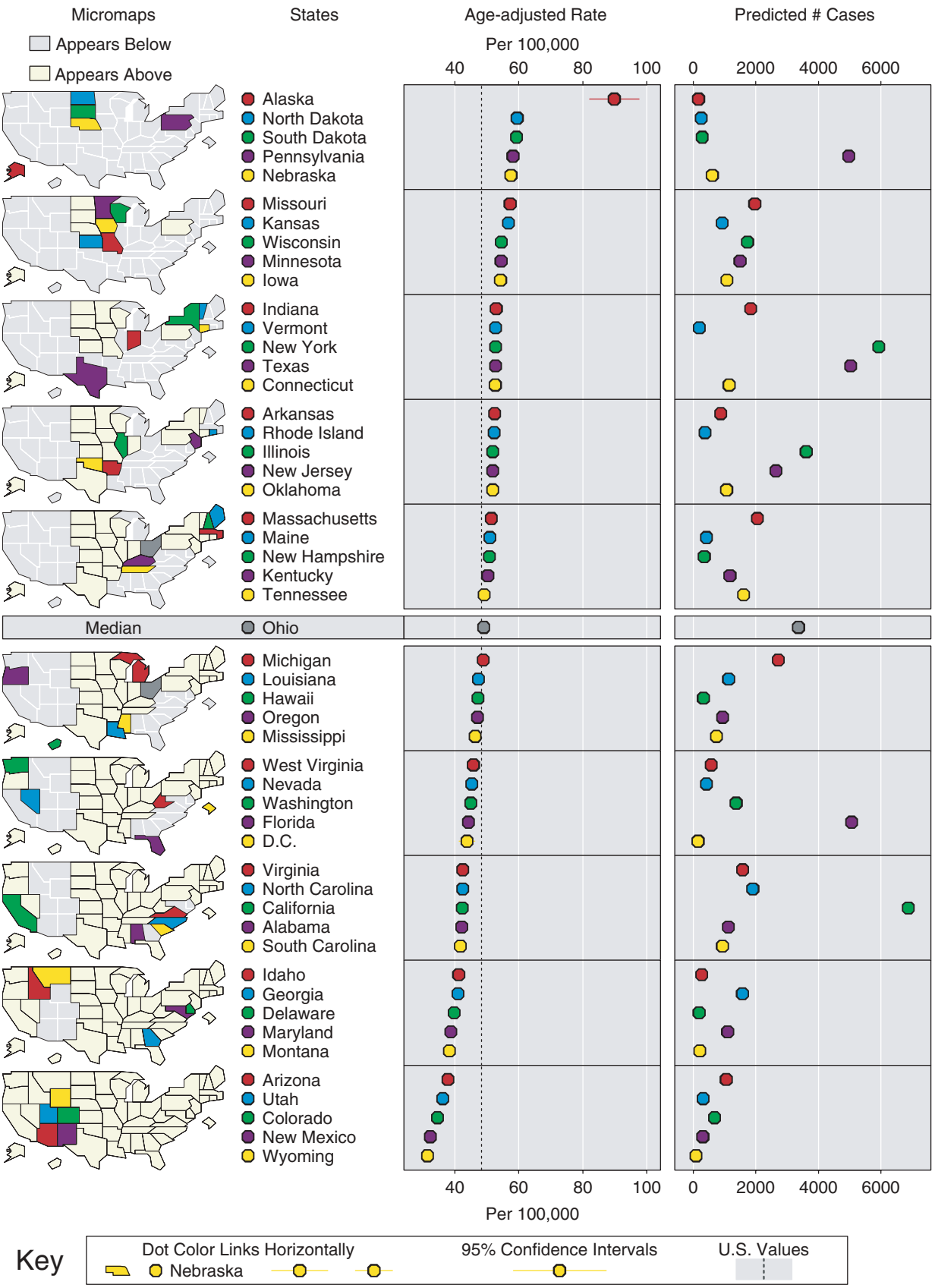


Predicted Lung Cancer Incidence Rates and Counts by State, Females, 1999

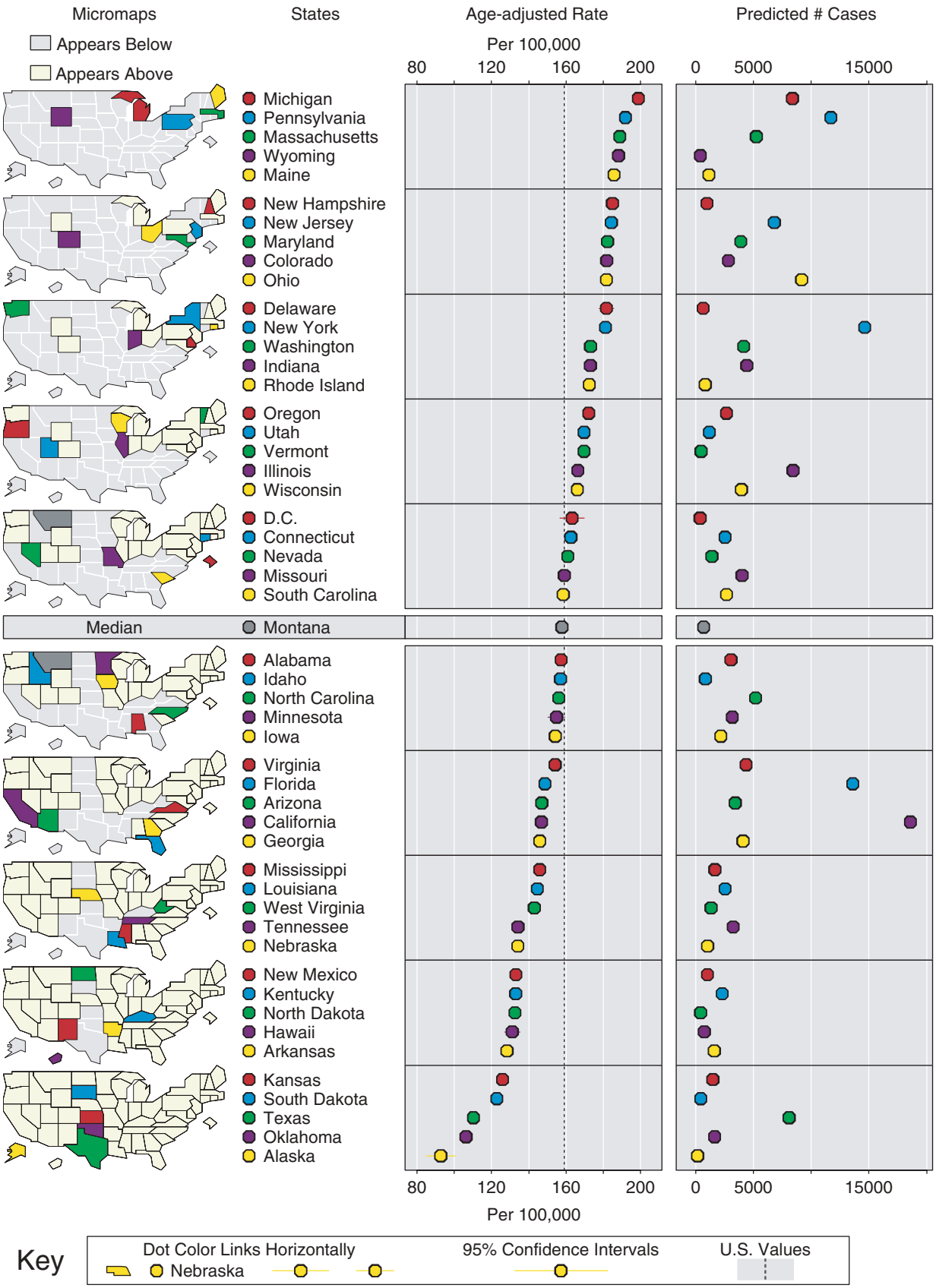


Predicted Colorectal Cancer Incidence Rates and Counts by State, Males, 1999

Predicted Colorectal Cancer Incidence Rates and Counts by State, Females, 1999

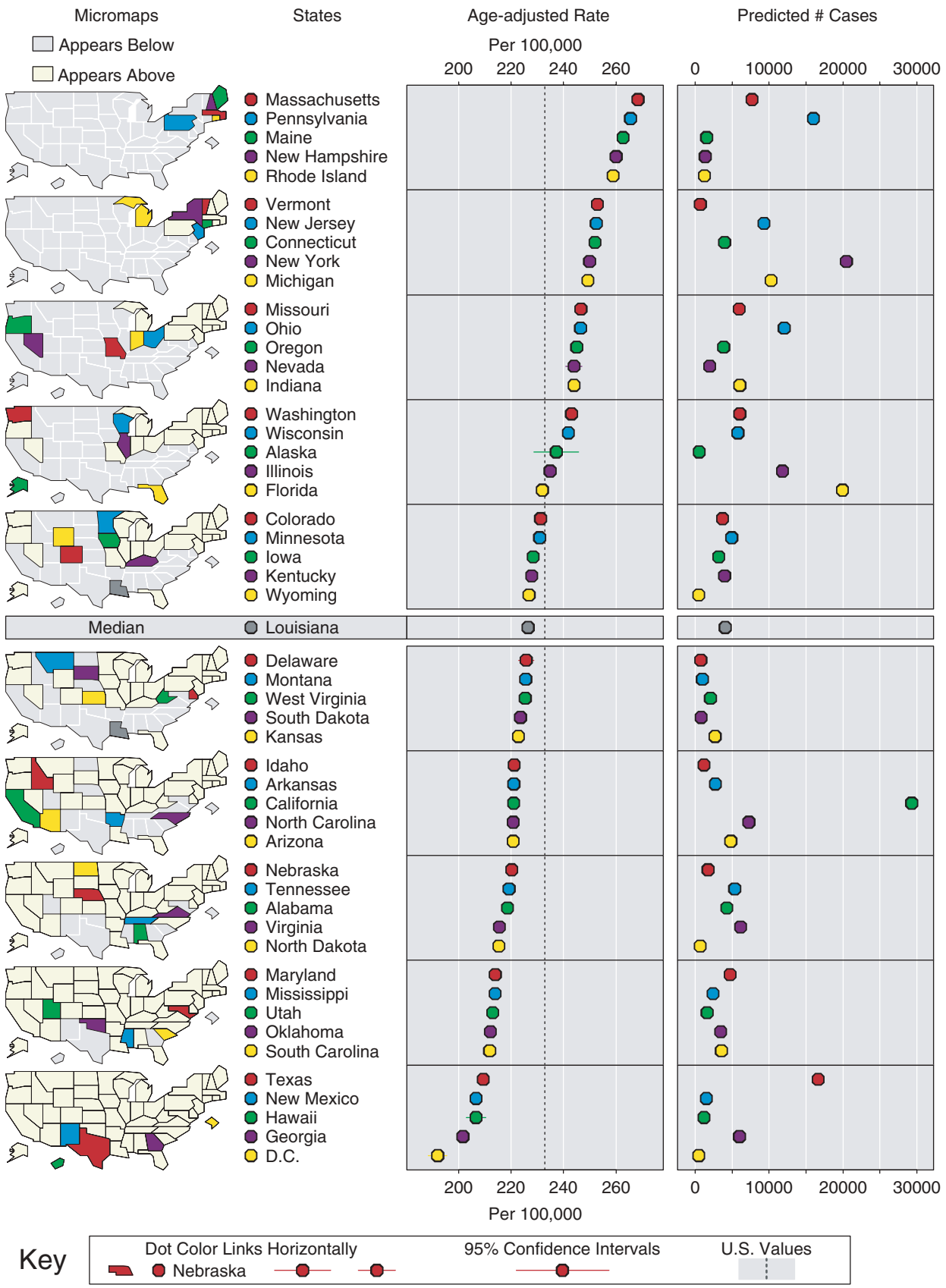


Predicted Prostate Cancer Incidence Rates and Counts by State, Males, 1999

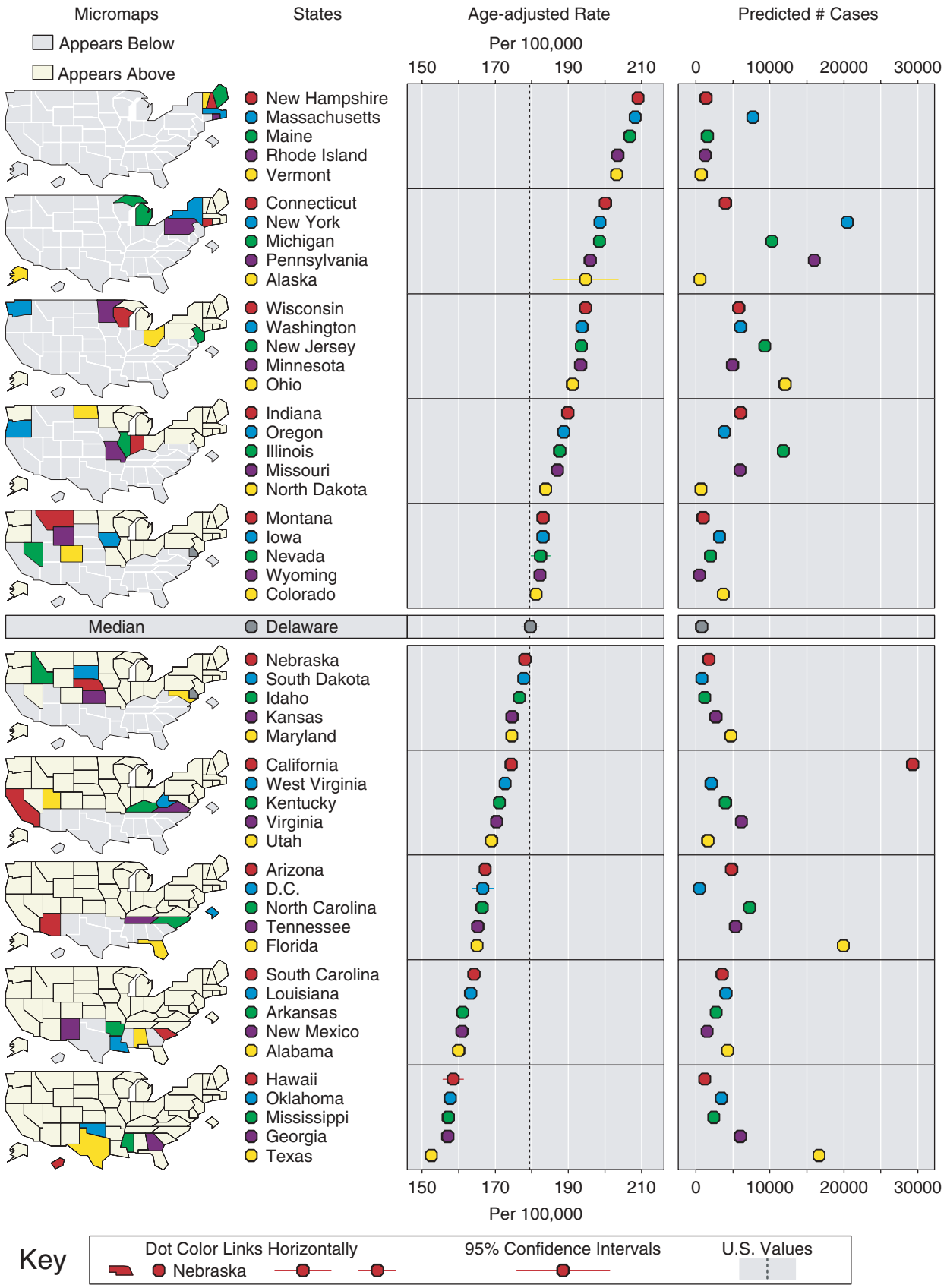


Predicted Breast Cancer Incidence Rates and Counts by State, Females, 1999

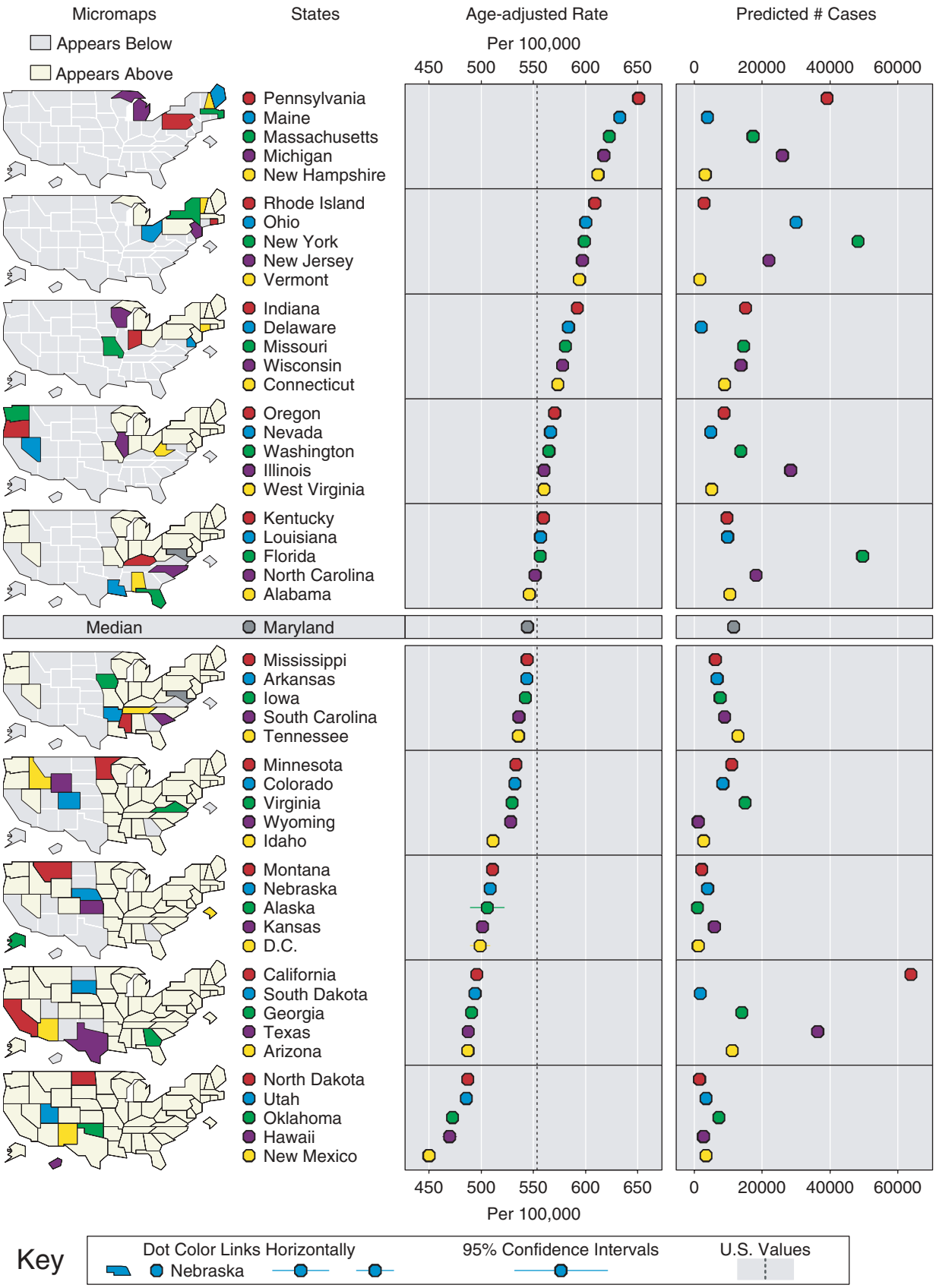
Predicted Other Cancer Incidence Rates and Counts by State, Males, 1999



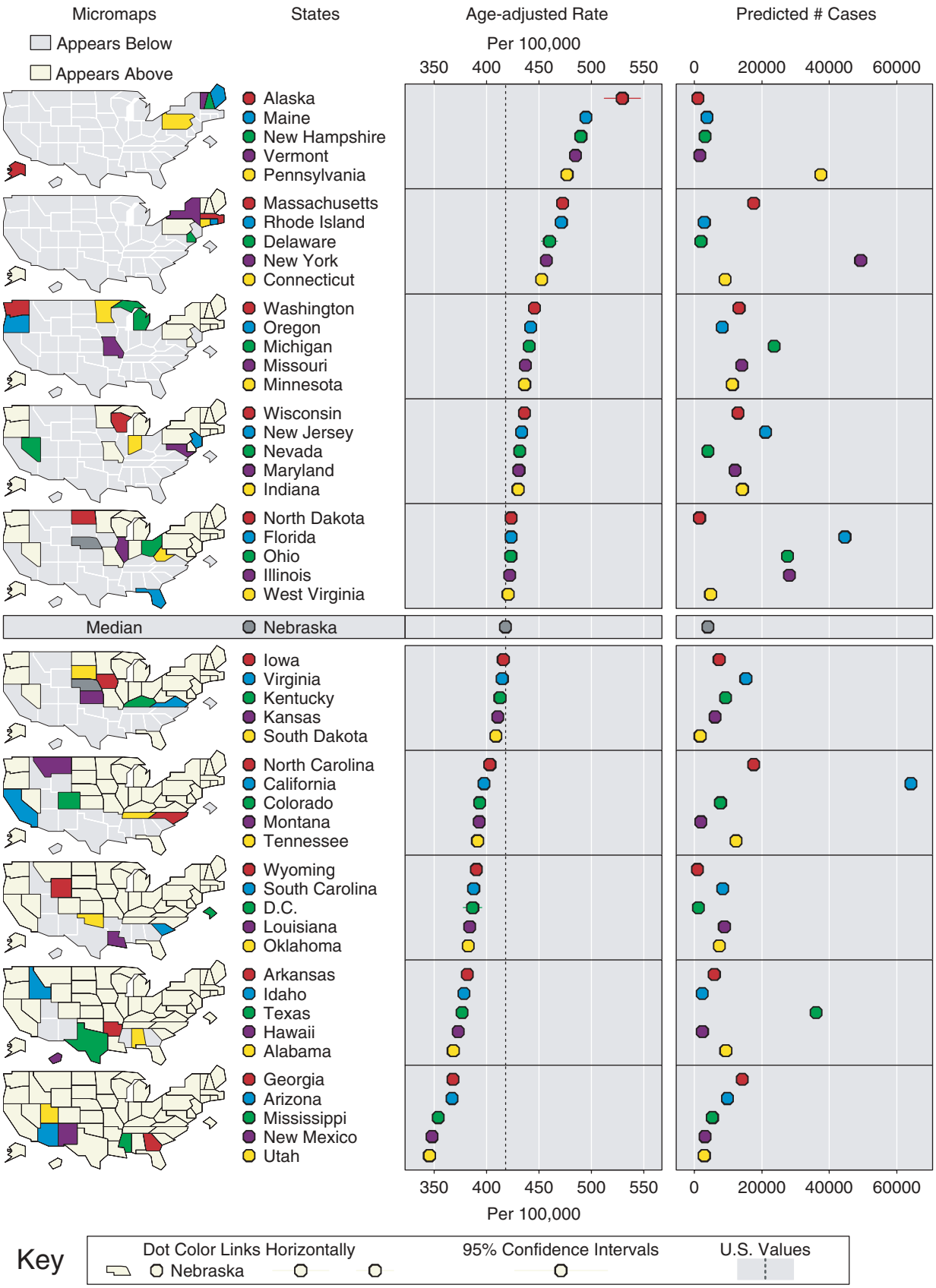
Predicted Other Cancer Incidence Rates and Counts by State, Females, 1999



Predicted Total Cancer Incidence Rates and Counts by State, Males, 1999



Predicted Total Cancer Incidence Rates and Counts by State, Females, 1999



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