

Current State of Lung Cancer



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Lung cancer related deaths in the U.S



| Decade | Deaths in Women | Deaths in Men | Deaths men & Women |
|--------------|----------------------|----------------------|----------------------|
| 1930s | 14,724 | 33,715 | 48,439 |
| 1940s | 28,087 | 94,325 | 122,412 |
| 1950s | 55,750 | 220,282 | 276,032 |
| 1960s | 77,505 | 404,780 | 482,285 |
| 1970s | 185,775 | 630,002 | 815,777 |
| 1980s | 334,558 | 830,655 | 1,165,213 |
| 1990s | 579,069 | 917,445 | 1,496,514 |
| 2000s | 684,174 | 894,825 | 1,578,999 |
| 2021s | 688,911 | 826,325 | 1,515,236 |
| 2020-present | 247,360 and counting | 280,478 and counting | 527,838 and counting |



Lung cancer related deaths in the U.S



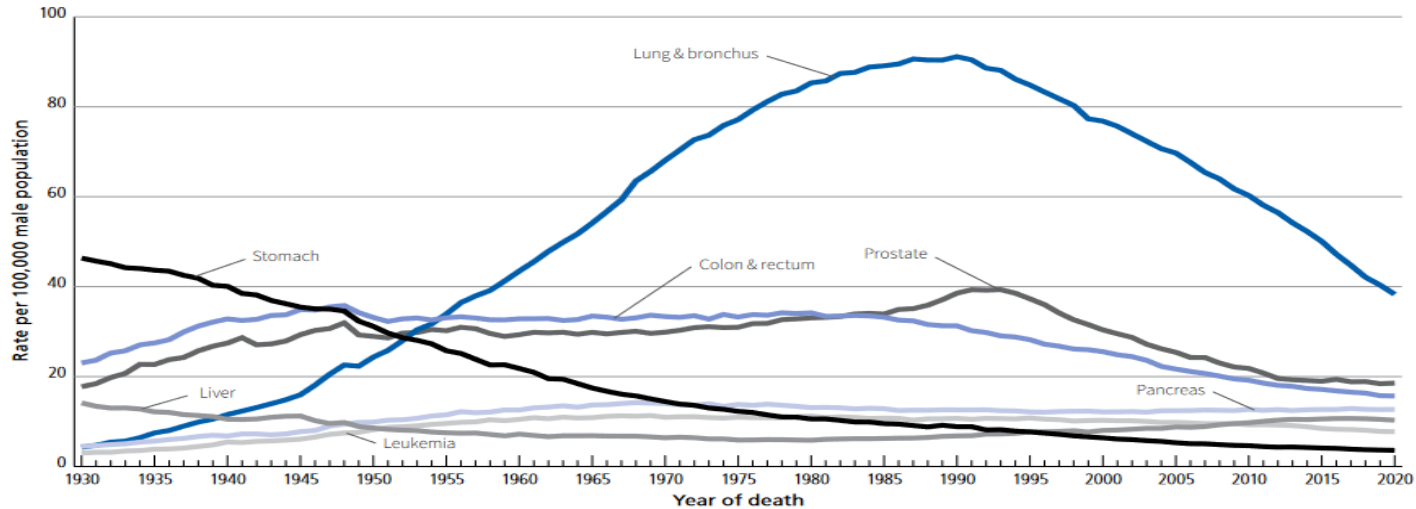
| Decade | Deaths in Women | Deaths in Men | Deaths men & Women |
|--------------|---|----------------------|----------------------|
| 1930s | 14,724 | 33,715 | 48,439 |
| 1940s | 28,087 | 94,325 | 122,412 |
| 1950s | Over 8 million deaths, including 5 million men and about 3 million women | | |
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| 1980s | 334,558 | 830,655 | 1,165,213 |
| 1990s | 579,069 | 917,445 | 1,496,514 |
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Number one cause of cancer-death in men, but rapidly declining



Figure 1. Trends in Age-adjusted Cancer Death Rates* by Site, Males, US, 1930-2020



*Age adjusted to the 2000 US standard population. Rates exclude deaths in Puerto Rico and other US territories. Note: Due to changes in ICD coding, numerator information has changed over time for cancers of the liver, lung and bronchus, and colon and rectum.

Source: US Mortality Volumes 1930 to 1959, US Mortality Data 1960 to 2020, National Center for Health Statistics, Centers for Disease Control and Prevention.

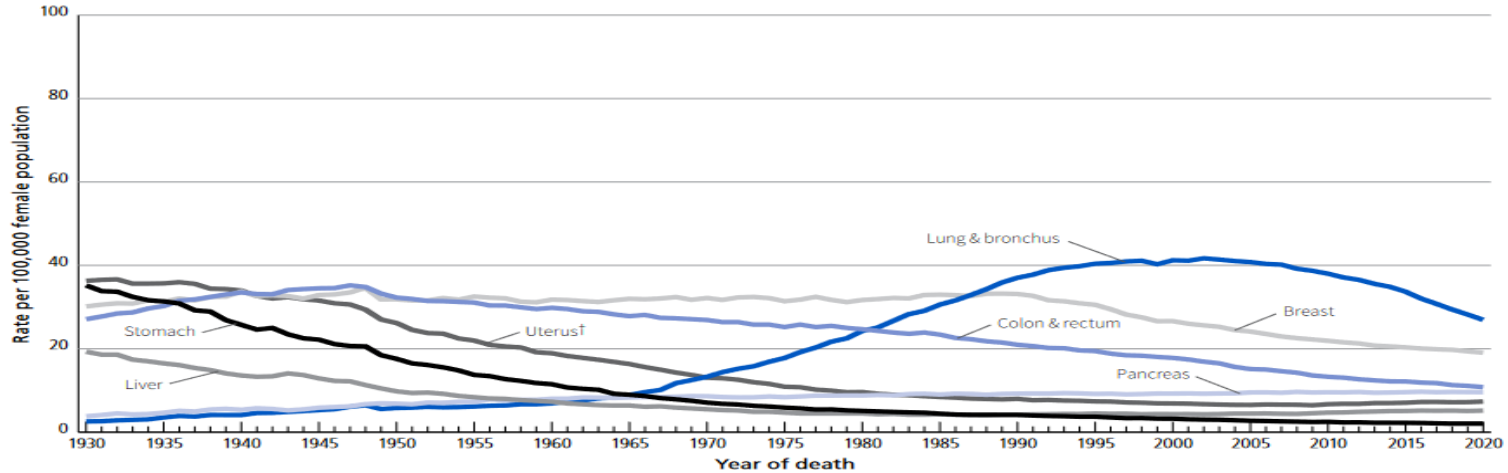
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Same for women



Figure 2. Trends in Age-adjusted Cancer Death Rates* by Site, Females, US, 1930-2020



*Age adjusted to the 2000 US standard population. Rates exclude deaths in Puerto Rico and other US territories. †Uterus refers to uterine cervix and uterine corpus combined. Note: Due to changes in ICD coding, numerator information has changed over time for cancers of the liver, lung and bronchus, colon and rectum, and uterus.

Source: US Mortality Volumes 1930 to 1959, US Mortality Data 1960 to 2020, National Center for Health Statistics, Centers for Disease Control and Prevention.

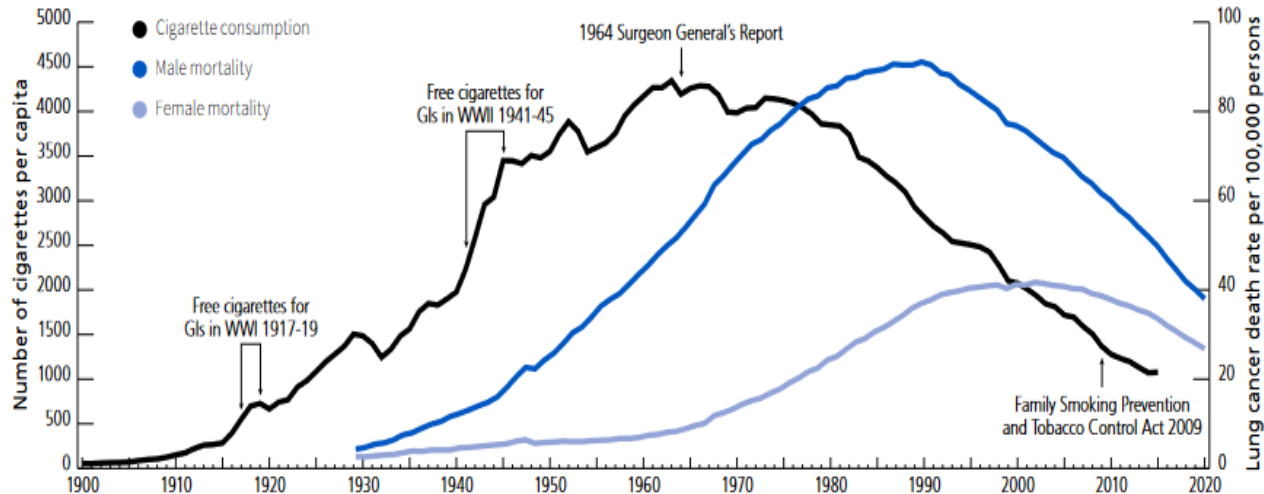
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Advocates are winning the war on cancer



Figure S6. Trends in Tobacco Consumption and Lung Cancer Mortality Rates* by Sex, 1900-2020



*Age adjusted to the 2000 US standard population. Rates exclude deaths in Puerto Rico and other US territories. Note: Due to changes in ICD coding, numerator information for mortality rates has changed over time.

Source: Death rates: US Mortality Data, 1960-2020, US Mortality Volumes, 1930-1959, National Center for Health Statistics. Cigarette consumption: 1900-1999: US Department of Agriculture. 2000-2015: Consumption of Cigarettes and Combustible Tobacco – United States, 2000-2015. *MMWR Weekly Rep* 2016; 65(48):1357-1363.

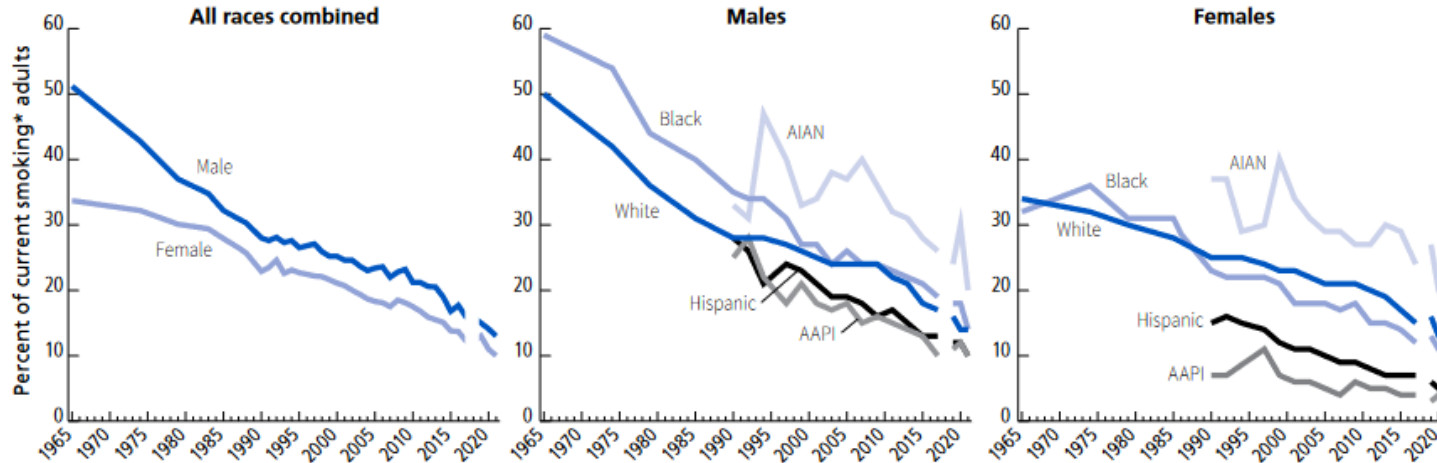
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Cigarette consumption is declining across all groups in the U.S.



Figure S4. Trends in Smoking Prevalence by Sex, Race, and Ethnicity, US, 1965-2021



AAPI: Asian American and Pacific Islander individuals; AIAN: American Indian and Alaska Native individuals. *Ever smoked 100 cigarettes in lifetime and now smoke every day or some days. All racial groups are exclusive of individuals identifying as Hispanic beginning in 1990. All estimates are age adjusted. Due to changes in National Health Interview Survey (NHIS) survey design, estimates from 2019 onward are not directly comparable to prior years and are separated from the trend line.

Sources: Adult cigarette smoking prevalence 1965-2018, Health United States: 2019; NHIS 1990-2021.

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Substantial therapeutic advances in treatment over the last decade

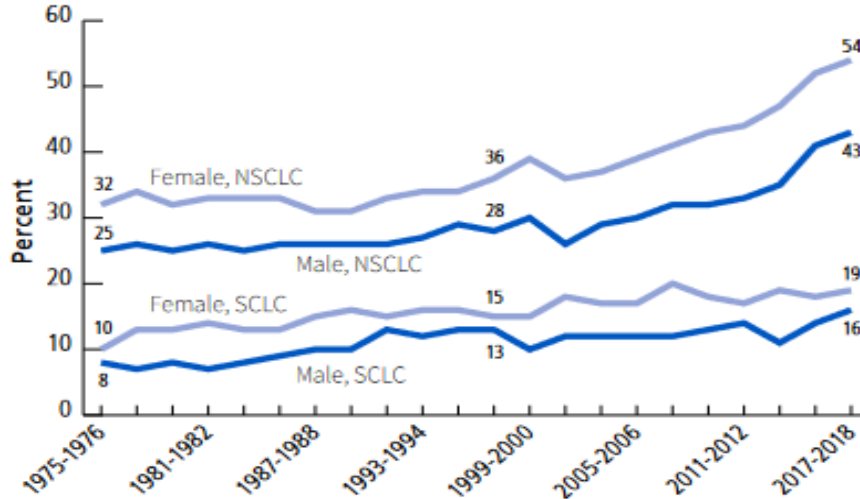
- Use of immunotherapy in all stages of lung cancer
 - Marked increase in cure rates for stage I-III
 - Prolonged survival for stage IV, including cures
- Use of molecularly targeted therapies
 - Marked increase in cure rates in stage I-III
 - Prolonged survival by years in patients with stage IV disease



More effective treatment is making a difference



Figure S8. Trends in 2-year Relative Survival Rates for Lung Cancer by Sex and Subtype, US, 1975-2018



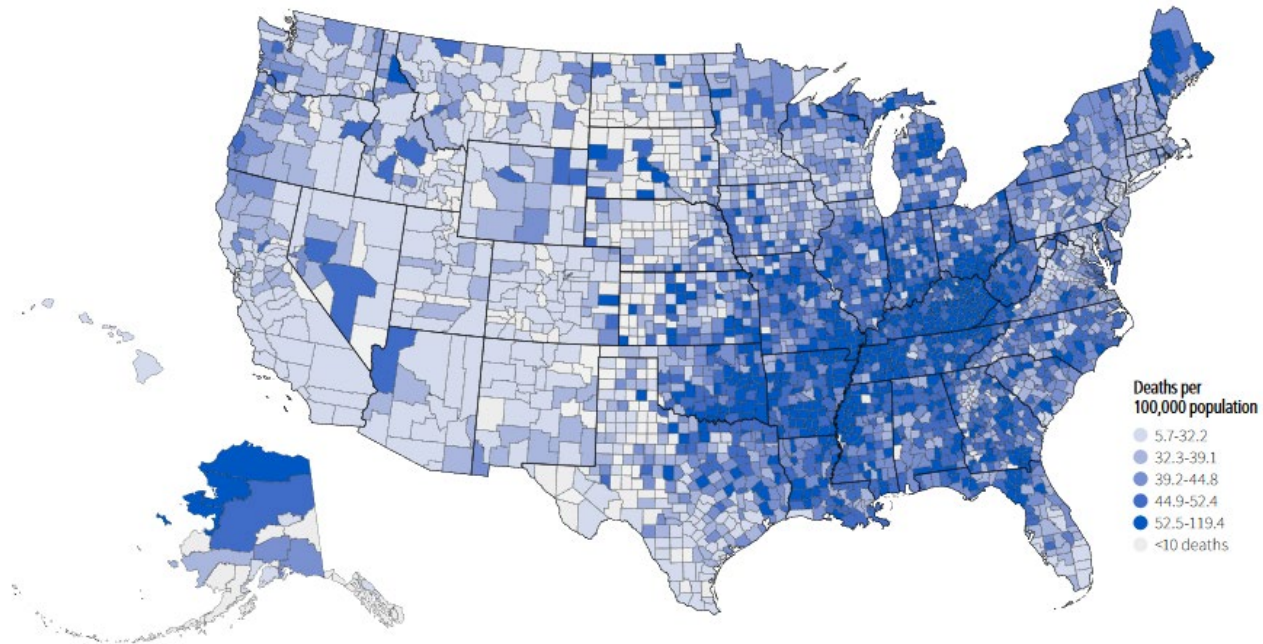
NSCLC: Non-small cell lung cancer; SCLC: Small cell lung cancer. Survival is based on patients diagnosed during 1975 through 2018, followed through 2019.

Source: Surveillance, Epidemiology, and End Results 8 Registries, 2022.

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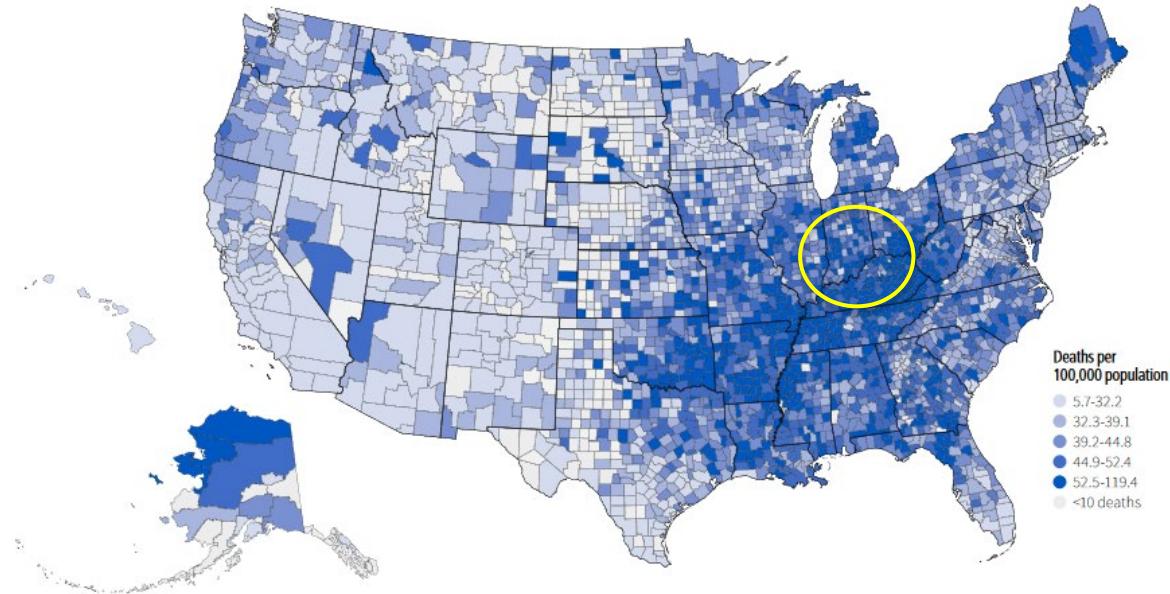
Figure S5. Lung Cancer Mortality Rates* by County, 2016-2020



*Age adjusted to the 2000 US standard population.
Source: National Center for Health Statistics, 2022.

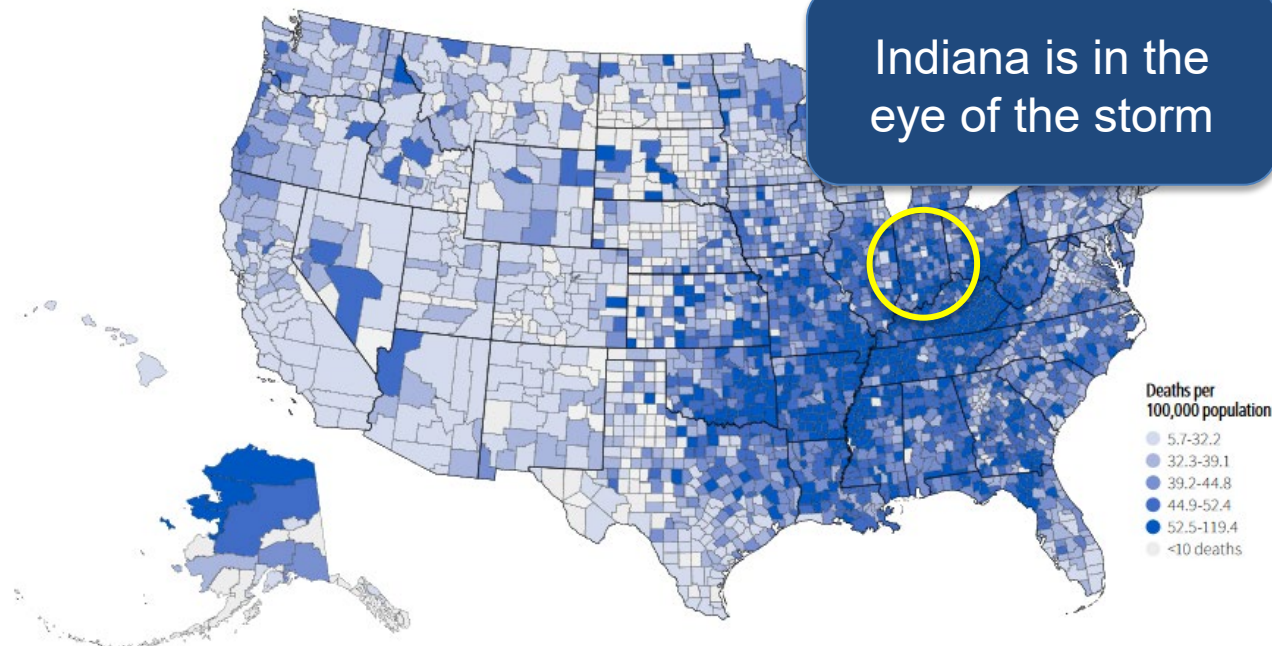


Figure S5. Lung Cancer Mortality Rates* by County, 2016-2020



*Age adjusted to the 2000 US standard population.
Source: National Center for Health Statistics, 2022.

Figure S5. Lung Cancer Mortality Rates* by County, 2016-2020

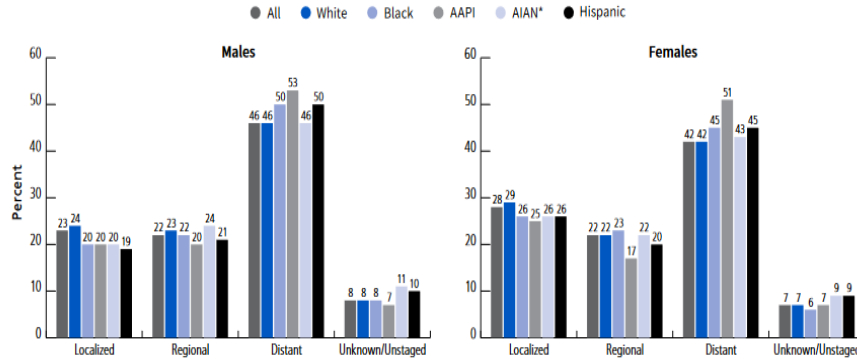


*Age adjusted to the 2000 US standard population.
Source: National Center for Health Statistics, 2022.

Early screening is important!



Figure S10. Stage at Diagnosis by Sex, Race, and Ethnicity, US, 2015-2019

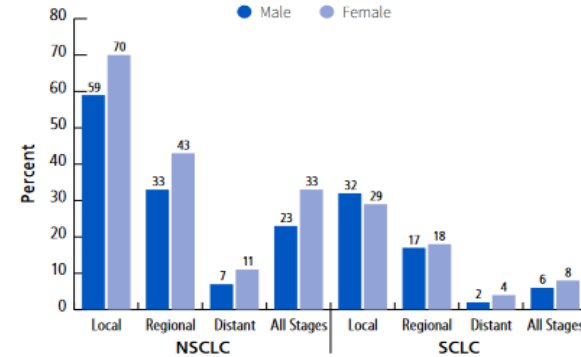


AAPI: Asian American and Pacific Islander individuals; AIAN: American Indian and Alaska Native individuals. *Data for AIAN individuals are restricted to Purchased/Referred Care Delivery Area counties. All racial groups are exclusive of individuals identifying as Hispanic.

Source: North American Association of Central Cancer Registries, 2022.

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Figure S11. 5-year Relative Survival Rates for Lung Cancer by Subtype, Stage at Diagnosis, and Sex, US, 2012-2018



NSCLC: Non-small cell lung cancer; SCLC: Small cell lung cancer. Survival rates are for patients diagnosed during 2012-2018, all followed through 2019.

Source: Surveillance, Epidemiology, and End Results 17 Registries, 2022.

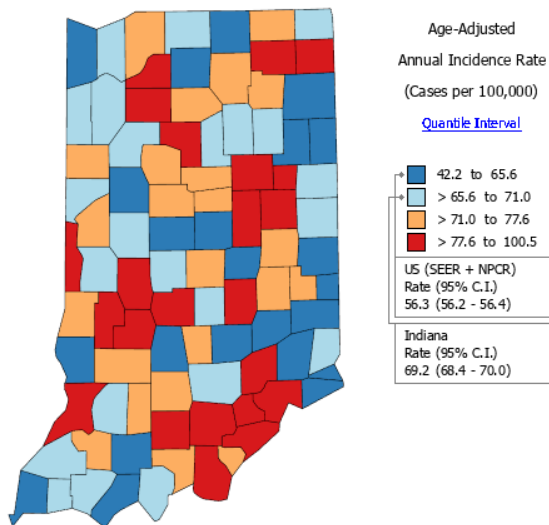
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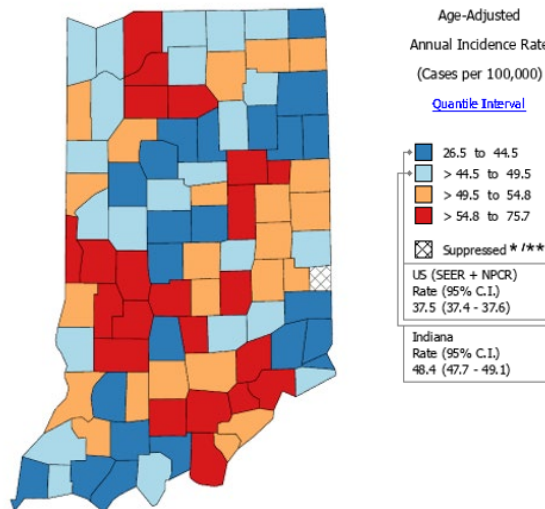
Addressing Geographic Disparities



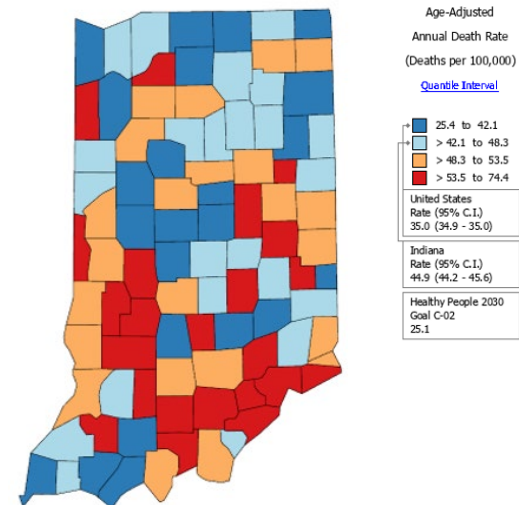
Lung Cancer Incidence



Late-Stage Diagnosis



Death Rates



Notes:

State Cancer Registries may provide more current or more local data.
Data presented on the State Cancer Profiles Web Site may differ from statistics reported by the State Cancer Registries ([for more information](#)).
* Incidence rates (cases per 100,000 population per year) are age-adjusted to the 2010 US resident population (19 age groups: <1, 1-4, 5-9, ..., 80-84, 85+). Rates are for invasive cancer only (except for bladder which is invasive and in situ) or unless otherwise specified. Rates calculated using SEER*Stat. Population counts for denominators are based on Census populations as modified by ICR. The US Population Data File is used for SEER and NPCR incidence rates.
Rates are computed using cancers classified as malignant based on ICD-O-3. For more information see [malignant.html](#).
Data for the United States does not include data from Puerto Rico.

Notes:

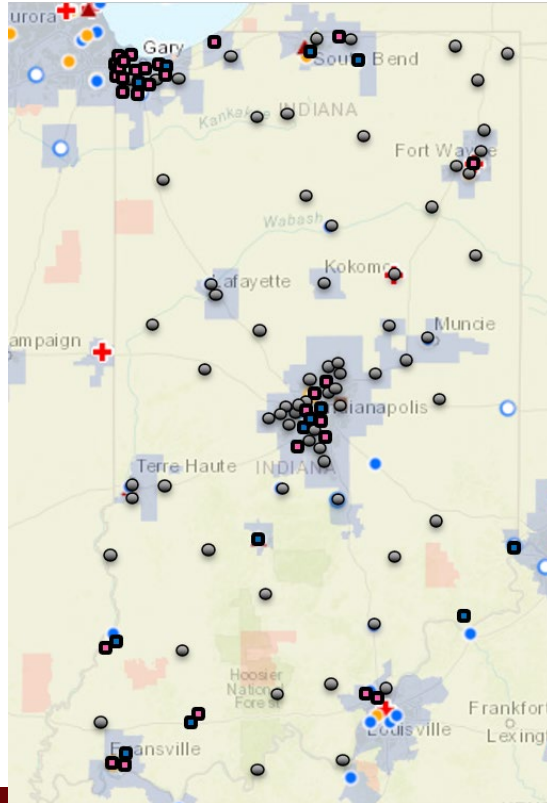
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Data presented on the State Cancer Profiles Web Site may differ from statistics reported by the State Cancer Registries ([for more information](#)).
* Data have been suppressed to ensure confidentiality and stability of rate estimates. Rates are currently being suppressed if there are fewer than 16 counts for the time period.
* Late Stage is defined as cases determined to be regional or distant. Due to changes in stage coding, Combined Summary Stage (C04+) is used for data from Surveillance, Epidemiology, and End Results (SEER) databases and Merged Summary Stage is used for data from [National Program of Cancer Registries](#) databases. Due to the increased complexity with staging, other staging variables may be used if necessary.
Data for the United States does not include data from Puerto Rico.

Notes:

State Cancer Registries may provide more current or more local data.
Data presented on the State Cancer Profiles Web Site may differ from statistics reported by the State Cancer Registries ([for more information](#)).
Source: Death data provided by the [National Vital Statistics System](#); public use data file. Death rates calculated by the National Cancer Institute using SEER*Stat. Death rates (deaths per 100,000 population per year) are age-adjusted to the 2010 US resident population (19 age groups: <1, 1-4, 5-9, ..., 80-84, 85+). The Healthy People 2030 goal is based on rates adjusted using different methods but the difference should be minimal. Population counts for denominators are based on the Census US Population Data File as modified by ICR.
Healthy People 2030 Goal C-02: Reduce the lung cancer death rate to 25.1.
[Healthy People 2030](#). Objectives provided by the [Centers for Disease Control and Prevention](#).
Data for the United States does not include data from Puerto Rico.



Location, location, location



Lung Cancer Screening Facilities

Pink:



Blue:



Gray:
minimal
equipment
for LCS

***Your zip code should
not be your destiny!***



Coming soon...



Indiana's first-ever mobile lung cancer screening unit!

Made possible by a
\$4.5 million gift from the
**Tom and Julie Wood
Family Foundation!**



Indiana University Health



A portion of the gift will be matched by IU Health, bringing its total impact to \$8.5 million.

The unit is a **collaborative partnership** between **Indiana University Health** and the **Indiana University Melvin and Bren Simon Comprehensive Cancer Center**.

The gift will **support both patient care** via the statewide screening program and **research efforts** focused on enhancing lung cancer screening and lowering lung cancer incidence and deaths.



Indiana University Health

There is so much work to do



INDIANA UNIVERSITY MELVIN AND BREN SIMON COMPREHENSIVE CANCER CENTER

There is so much work to do



- Lung cancer was once a rare diagnosis



There is so much work to do



- Lung cancer was once a rare diagnosis
- We will make it rare again



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- We will make it rare again
 - Reduce cigarette consumption to < 1% of the population



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 - Increase screening rates at level of breast, colon, cervical, and prostate cancer screening because SCREENING SAVES LIVES



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 - Expand screening criteria to reflect a broader group that is at highest risk



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 - Promote participation in research because RESEARCH CURES CANCER



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 - Reduce cigarette consumption to < 1% of the population
 - Increase screening rates at level of breast, colon, cervical, and prostate cancer screening because **SCREENING SAVES LIVES**
 - Expand screening criteria to reflect a broader group that is at highest risk
 - Promote participation in research because **RESEARCH CURES CANCER**
 - Advocate for patients and kill the stigma because **NO ONE DESERVES LUNG CANCER** and **ANYONE WITH LUNGS CAN GET LUNG CANCER**

