**SUPPLEMENTAL MATERIALS**

**Supplemental Table 1:** American Cancer Society list of top ten cancer types and percent contributing to overall cancer incidence and mortality in males and females, 2019[38](https://paperpile.com/c/hHqRZO/uxI7Q).

|  |  |  |  |
| --- | --- | --- | --- |
| MALE |  | FEMALE |  |
| *Incidence* |  | *Incidence* |  |
|  Prostate | 20% |  Breast | 30% |
|  Lung & bronchus | 13% |  Lung & bronchus | 13% |
|  Colon & rectum | 9% |  Colon & rectum | 7% |
|  Urinary bladder | 7% |  Uterine corpus | 7% |
|  Melanoma of the skin | 7% |  Melanoma of the skin | 5% |
|  Kidney & renal pelvis | 5% |  Thyroid | 4% |
|  Non-Hodgkin lymphoma | 5% |  Non-Hodgkin lymphoma | 4% |
|  Oral cavity & pharynx | 4% |  Kidney & renal pelvis | 3% |
|  Leukemia | 4% |  Pancreas | 3% |
|  Pancreas | 3% |  Leukemia | 3% |
| *Mortality* |  | *Mortality* |  |
|  Lung & bronchus | 24% |  Lung & bronchus | 23% |
|  Prostate | 10% |  Breast | 15% |
|  Colon & rectum | 9% |  Colon & rectum | 8% |
|  Pancreas | 7% |  Pancreas | 8% |
|  Liver & intrahepatic bile duct | 7% |  Ovary | 5% |
|  Leukemia | 4% |  Uterine corpus | 4% |
|  Esophagus | 4% |  Liver & intrahepatic bile duct | 4% |
|  Urinary bladder | 4% |  Leukemia | 3% |
|  Non-Hodgkin lymphoma | 4% |  Non-Hodgkin lymphoma | 3% |
|  Brain & other nervous system | 3% |  Brain & other nervous system | 3% |

**Supplemental Figure 1: Crude Average Annual Incidence per 100,000 persons aged 50-79**



Crude average annual incidence per 100,000 of selected cancer types by AJCC stage at diagnosis for persons aged 50-79 years, SEER18, 2006-2015. These diagnosis years were chosen to ensure consistent AJCC 6th edition staging classification across the time period, as stage at patients diagnosed in 2016 and beyond is only available in a different system (SEER Combined Stage). Unknown stage not shown.

**Supplemental Figure 2: Cancer-related Death Five Years Post Diagnosis**



Cumulative probability of cancer-related death five years after diagnosis for selected cancer types by AJCC stage at diagnosis among persons aged 50-79 years, SEER18, averaged over the diagnosis years 2006-2015. These diagnosis years were chosen to ensure consistent AJCC 6th edition staging classification across the time period, as stage at patients diagnosed in 2016 and beyond is only available in a different system (SEER Combined Stage). Unknown stage not shown.

**Supplemental Table 2: Absolute numbers of cancer cases and deaths expected in a hypothetical cohort of 100,000 persons after 5 years of follow-up, assuming a stage shift whereby all stage IV cancers had outcome similar to stage III, based on incidence and cancer specific mortality rates for persons aged 40-79 years from SEER18, 2006-2015.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Cancer diagnoses in first year** | **Deaths after 5 years** | **Deaths after hypothetical stage shift** | **Absolute deaths averted** | **Proportion deaths averted\*** |
| **All cancers** | **804** | **241** | **203** | 38 | 0.16 |
| Selected cancers |  |
| Lung | 102 | 74 | 66 | 8 | 0.11 |
| Colorectal | 70 | 21 | 13 | 8 | 0.39 |
| Pancreas | 21 | 19 | 18 | 0 | 0.01 |
| Liver | 18 | 13 | 13 | 0 | 0.02 |
| Breast | 134 | 12 | 9 | 3 | 0.26 |
| Non Hodgkin Lymphoma | 33 | 7 | 6 | 1 | 0.10 |
| Prostate | 135 | 6 | 3 | 4 | 0.56 |
| Kidney | 29 | 6 | 3 | 3 | 0.46 |
| Oral Cavity and Pharynx | 22 | 6 | 5 | 1 | 0.23 |
| Ovary | 12 | 6 | 5 | 1 | 0.12 |
| Esophagus | 8 | 6 | 5 | 1 | 0.10 |
| Bladder | 14 | 4 | 4 | 1 | 0.17 |
| Uterine | 29 | 5 | 4 | 1 | 0.18 |
| Melanoma | 37 | 3 | 3 | 1 | 0.17 |
| Thyroid | 22 | 1 | 0 | 0 | 0.77 |

\*Estimated deaths shown rounded up to the nearest integer, while proportion based on division of estimates with 2 decimal places.

**Supplemental Table 3: Absolute numbers of cancer cases and deaths expected in a hypothetical cohort of 1,000,000 persons after 5 years of follow-up, assuming a stage shift whereby one-third of stage IV cancers had outcome similar to stage III, one-third had outcome similar to stage II and one-third had outcome similar to stage I, based on incidence and cancer specific mortality rates for persons aged 40-79 years from SEER18, 2006-2015.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Cancer diagnoses in first year** | **Deaths after 5 years** | **Deaths after hypothetical stage shift** | **Absolute deaths averted** | **Proportion deaths averted\*** |
| **All cancers** | **804** | **241** | **182** | 59 | 0.24 |
| Selected cancers |  |
| Lung | 102 | 74 | 55 | 19 | 0.26 |
| Colorectal | 70 | 21 | 11 | 10 | 0.46 |
| Pancreas | 21 | 19 | 16 | 2 | 0.11 |
| Liver | 18 | 13 | 12 | 1 | 0.06 |
| Breast | 134 | 12 | 8 | 4 | 0.32 |
| Non Hodgkin Lymphoma | 33 | 7 | 6 | 1 | 0.19 |
| Prostate | 135 | 6 | 3 | 4 | 0.57 |
| Kidney | 29 | 6 | 3 | 3 | 0.54 |
| Oral Cavity and Pharynx | 22 | 6 | 4 | 2 | 0.36 |
| Ovary | 12 | 6 | 4 | 1 | 0.25 |
| Esophagus | 8 | 6 | 5 | 1 | 0.19 |
| Bladder | 14 | 4 | 3 | 1 | 0.25 |
| Uterine | 29 | 5 | 4 | 1 | 0.23 |
| Melanoma | 37 | 3 | 2 | 1 | 0.25 |
| Thyroid | 22 | 1 | 0 | 0 | 0.79 |

\*Estimated deaths shown rounded up to the nearest integer, while proportion based on division of estimates with 2 decimal places.