

# tobacco and cancer

## The relationship between smoking and cancer is well established. To understand the opportunities for cancer prevention that lie within tobacco control, we're highlighting the key facts about tobacco and cancer.

Since the beginning of the "War on Cancer," the most notable cancer successes have been due to the power and efficacy of prevention. The massive reductions in lung, cervical, colorectal and gastric cancer mortality rates are almost entirely due to a focus on public health and prevention approaches.

- Association of Schools and Programs of Public Health letter to Vice President Biden (March 21, 2016)

#### It's hard to find someone who doesn't know the connection between lung cancer and tobacco:

Lung cancer is the leading cause of cancer death in the U.S., for men and women.<sup>1</sup>

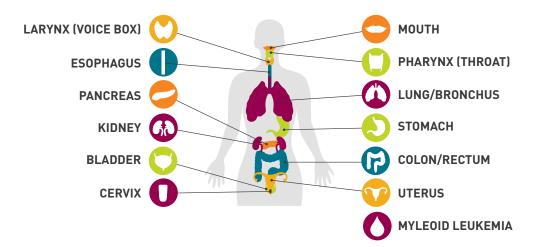
Cigarette smoking is the leading cause of lung cancer.<sup>2</sup> And tobacco use causes **87 percent of deaths** from lung cancer.<sup>3</sup>

The American Cancer Society estimates that in 2015 alone, there were 221,200 new cases of lung cancer diagnosed in the U.S., and 158,040 deaths from lung cancer.<sup>4</sup>

#### But tobacco causes more cancer and more cancer death than just lung cancer – a lot more:

According to the U.S. Surgeon General, **one-third of cancer deaths are caused by smoking** – cancer deaths that are avoidable by dramatically reducing tobacco use.<sup>5</sup>

Tobacco has firmly established links to at least 12 different kinds of cancer:6



<sup>1</sup> http://www.cdc.gov/cancer/lung/

<sup>6</sup> http://www.cancer.org/cancer/cancercauses/tobaccocancer/

<sup>&</sup>lt;sup>2</sup> http://www.cdc.gov/cancer/lung/basic\_info/risk\_factors.htm

<sup>&</sup>lt;sup>3</sup> http://www.surgeongeneral.gov/library/reports/50-years-of-progress/fact-sheet.html

<sup>&</sup>lt;sup>4</sup> http://www.cancer.org/acs/groups/content/@editorial/documents/document/acspc-044552.pdf

<sup>&</sup>lt;sup>5</sup> http://www.surgeongeneral.gov/library/reports/50-years-of-progress/fact-sheet.html





## **BY THE NUMBERS**

Type of Cancer	Estimated new cases per year in the U.S. <sup>7</sup>	Estimated share of total U.S. new cases per year <sup>7</sup>	Estimated U.S. deaths per year <sup>7</sup>	Estimated share of total U.S. cancer deaths <sup>7</sup>	Estimated share of U.S. cancer deaths attributable to cigarette use <sup>8</sup>
Lung & Bronchus	224,390	13.32%	158,080	26.54%	80%
Colon/Rectum	134,490	7.98%	49,190	8.26%	Not Available
Pancreas	53,070	3.15%	41,780	7.01%	22.04%
Bladder	76,960	4.57%	16,390	2.75%	40%
Esophagus	16,910	1%	15,690	2.63%	68.01%
Kidney & Renal Pelvis	62,700	3.72%	14,240	2.39%	25.37%
Stomach	26,370	1.56%	10,730	1.80%	20.56%
Uterus	60,050	3.56%	10,470	1.76%	Not Available
Acute Myeloid Leukemia	19,950	1.18%	10,430	1.75%	16.84%
Oral Cavity, Pharynx	48,330	2.87%	9,570	1.61%	64.21%
Cervix	12,990	0.77%	4,120	0.69%	11.84%
Larynx	13,430	.08%	3,620	0.61%	79.98%

Recent studies indicate that long-term, heavy smoking may increase breast cancer risk, particularly among women who start smoking before their first pregnancy.<sup>9</sup>

## **PREVENTING CANCER COSTS A FRACTION OF TREATING CANCER**

The Centers for Disease Control and Prevention estimates it spends \$393 per year of life saved through its tobacco public education campaign.<sup>10</sup> That compares to a cost of \$20,000-\$50,000 per quality adjusted life year for cancer treatment according to an analysis published in 2010.<sup>11</sup>

<sup>&</sup>lt;sup>7</sup> American Cancer Society, Cancer Facts & Figures 2016 (1998-2012 US mortality data, National Center for Health Statistics, Centers for Disease Control and Prevention)

<sup>&</sup>lt;sup>8</sup> Centers for Disease Control and Prevention. Smoking-attributable mortality, years of potential life lost, and productivity losses – United States, 2000-2004. MMWR Morb Mortal Wkly Rep. 2008; 57[45]:1226-1228

<sup>&</sup>lt;sup>9</sup> https://www.ncbi.nlm.nih.gov/pubmed/25307527

<sup>&</sup>lt;sup>10</sup> http://www.cdc.gov/tobacco/campaign/tips/about/campaign-overview.html

<sup>&</sup>lt;sup>11</sup> http://jnci.oxfordjournals.org/content/102/2/82.short





#### TOBACCO PREVENTION AND CESSATION ARE SAVING MORE LIVES THAN ANY OTHER INTERVENTION – AND COULD SAVE MORE

The cancer death rate reached its peak in the U.S. in 1991 – driven in great part by increases in lung cancer linked to tobacco use. According to the American Cancer Society, reductions in smoking along with other improvements in prevention, detection and treatment have driven U.S. **cancer death rates down 23 percent between 1991 and 2012**. They estimate that translates to more than **1.7 million lives saved** through cancer avoidance.<sup>12</sup>

Researchers looking at the period between 1975 and 2000 estimate that tobacco education and other tobacco control policies and programs **prevented an estimated 800,000 lung cancer deaths** in just that span of 25 years.<sup>13</sup>

Since the first U.S. Surgeon Generals' report on smoking and health in 1964, it is estimated that tobacco control efforts have led to at least **8 million fewer premature smoking-caused deaths**.<sup>13</sup>

### TOBACCO USE IS DOWN, BUT THE FIGHT IS STILL A LONG WAY FROM OVER

Cigarette use is down among youth and adults. Teen cigarette use is down to 7.0% overall,<sup>14</sup> and adult use is down to 16.8%.<sup>15</sup>

Youth tobacco use trends show increasing use of alternative tobacco products. The percentage of U.S. teens that used tobacco increased to 11.2% when taking into account the use of cigarillos.<sup>14</sup> The FDA recently brought other forms of tobacco under the agency's jurisdiction.

## SUPPORT FOR TOBACCO PREVENTION AND CESSATION COULD:

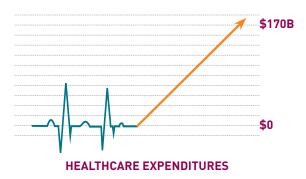
Prevent nearly half a million premature deaths every year, including 170,000 cancer deaths each year.<sup>13</sup>



Prevent 5.6 million U.S. children alive today from premature death due to smoking.<sup>13</sup>



Save at least \$170 billion in health care expenditures each year.<sup>13,16</sup>



<sup>&</sup>lt;sup>12</sup> Cancer Statistics, 2016; http://onlinelibrary.wiley.com/doi/10.3322/caac.21332/full

<sup>&</sup>lt;sup>13</sup> 2014 Surgeon General's Report: The Health Consequences of Smoking—50 Years of Progress

<sup>&</sup>lt;sup>14</sup> Monitoring the Future 2015

<sup>&</sup>lt;sup>15</sup> http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6444a2.htm?s\_cid=mm6444a2\_w; National Health Interview Survey 2014

<sup>&</sup>lt;sup>16</sup> http://www.prevent.org/data/files/actiontoquit/ajpm\_annual\_healthcare\_spending\_smoking,%2012-10-14.pdf