Visualize the Story:
A Process for Creating Infographics

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Creating infographics for medical and scientific deliverables is challenging. Data are often highly complex, and it can be difficult to discern a story. We present a stepwise process for identifying key messages and creating visuals that tell an engaging story using an example of the humanistic and economic burden of cigarette smoking.

1 Determine the Question You Want to Answer or the Story You Want to Tell

Consider the following questions:
- Who is your audience?
- What is your goal for the infographic?
- Why is an infographic the right choice?

Audience:	Payers who determine whether to add a drug to their formulary
Goal:	Inform payers about the effects of smoking and the cost to the healthcare system
Why:	Convince payers that eliminating addiction to cigarette smoking benefits patients and reduces the economic burden to the healthcare system
Story:	The effects of smoking are detrimental to one's health and expensive for the healthcare system.

(!) Use the information gathered about your audience, goal, and why to develop your story. This story will help focus the creation process.

2 Gather the Data

Look for data to support the question you are trying to answer and the story you want to tell.
- What are the health effects of smoking?
- How many deaths are attributed to smoking?
- Smoking is costly to the healthcare industry. Why? How costly?
- Nonsmokers are also affected by smoking. Does cessation benefit them?

3 Distill and Organize the Data to Tell Your Story

Review the content and identify information to answer the main question and support the overall story you want to tell.
- Create a question pyramid to make sure that the data support your goals.
- Break down complex content into concise, easy-to-understand points.
- Organize the content in order of its importance in telling your story.
- Use terminology and language that your audience will understand.

Main question you want to answer — How much does smoking cost the healthcare industry?

2-3 Supporting questions (what / which) — What factors contribute to the costs of smoking for the healthcare industry? What are the main health effects of smoking? How bad are the effects of smoking on health?

1-2 Probing questions (why) — How do people stop smoking? Are current methods effective? How does smoking contribute to the severity of major diseases? Why is smoking so costly to the healthcare industry? Does the cessation of smoking benefit nonsmokers?

(!) The more you simplify the content, the easier it will be to create visuals later in the process.

## 4 Choose an Infographic Type to Guide Design

Decide which of the following types of infographics is best suited to your content. The type selected will help guide the creation of your visuals and the layout of your infographic.

- Statistical
- Hierarchical
- Informational
- Timeline
- Comparison
- Process
- Geographic
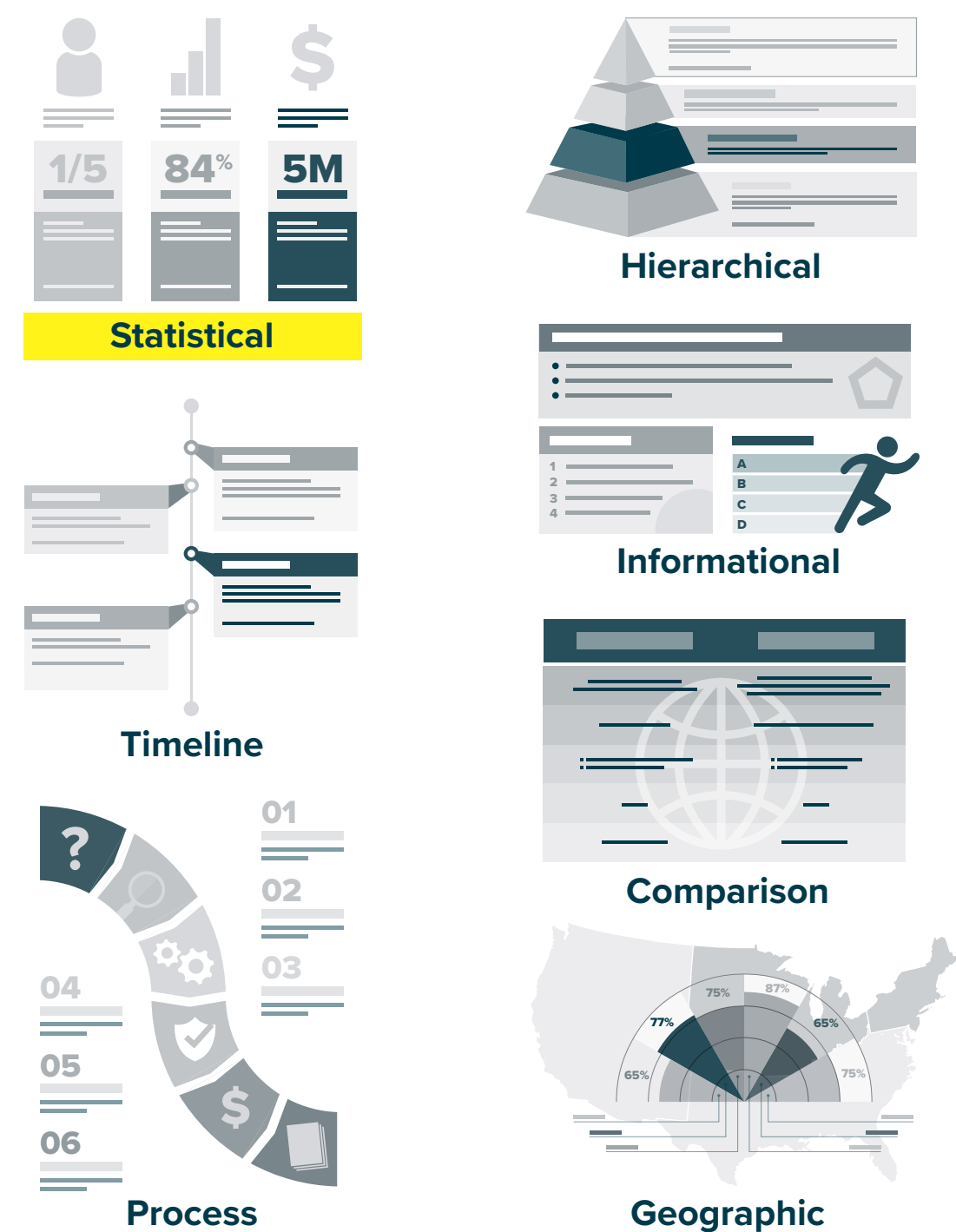
(!) Use online resources, like Creative Marketplace, VectorStock, Canva, and Venngage, for visual inspiration or examples of each of these infographic types.

5 Identify a Visual Concept or Theme to Unify Content

An overall visual concept will not only serve as a framework for creating visuals but will also make your infographic unique. Your visual concept or theme can be a single graphic or a group of graphics and photos that relate to your story.

The elements you gather for your visual concept will serve as inspiration in the final steps of the process.
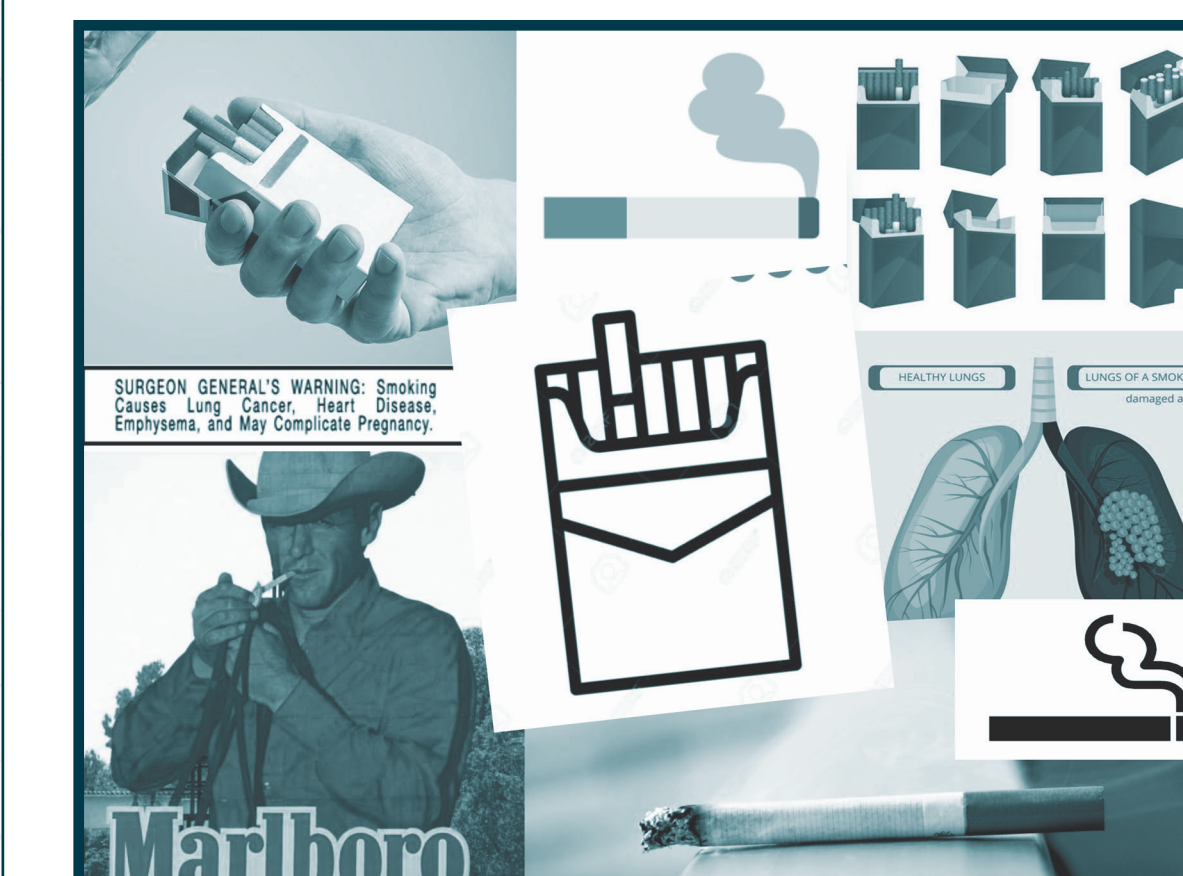
(!) Think of this step like creating a mood board or Pinterest page for your infographic.

6 Visualize the Data

The most challenging step in creating an infographic is visualizing your content or data. Keep in mind your overall visual concept (**Step 5**) and use it as inspiration for your visuals. Visualizations almost always involve one or more of the following elements: numbers, text, basic illustrations (think icons), and graphs.

Assess the data points in the question pyramid that you organized in **Step 3**. Look for numbers, progression (x leads to y), relationships or comparisons, and complex ideas.
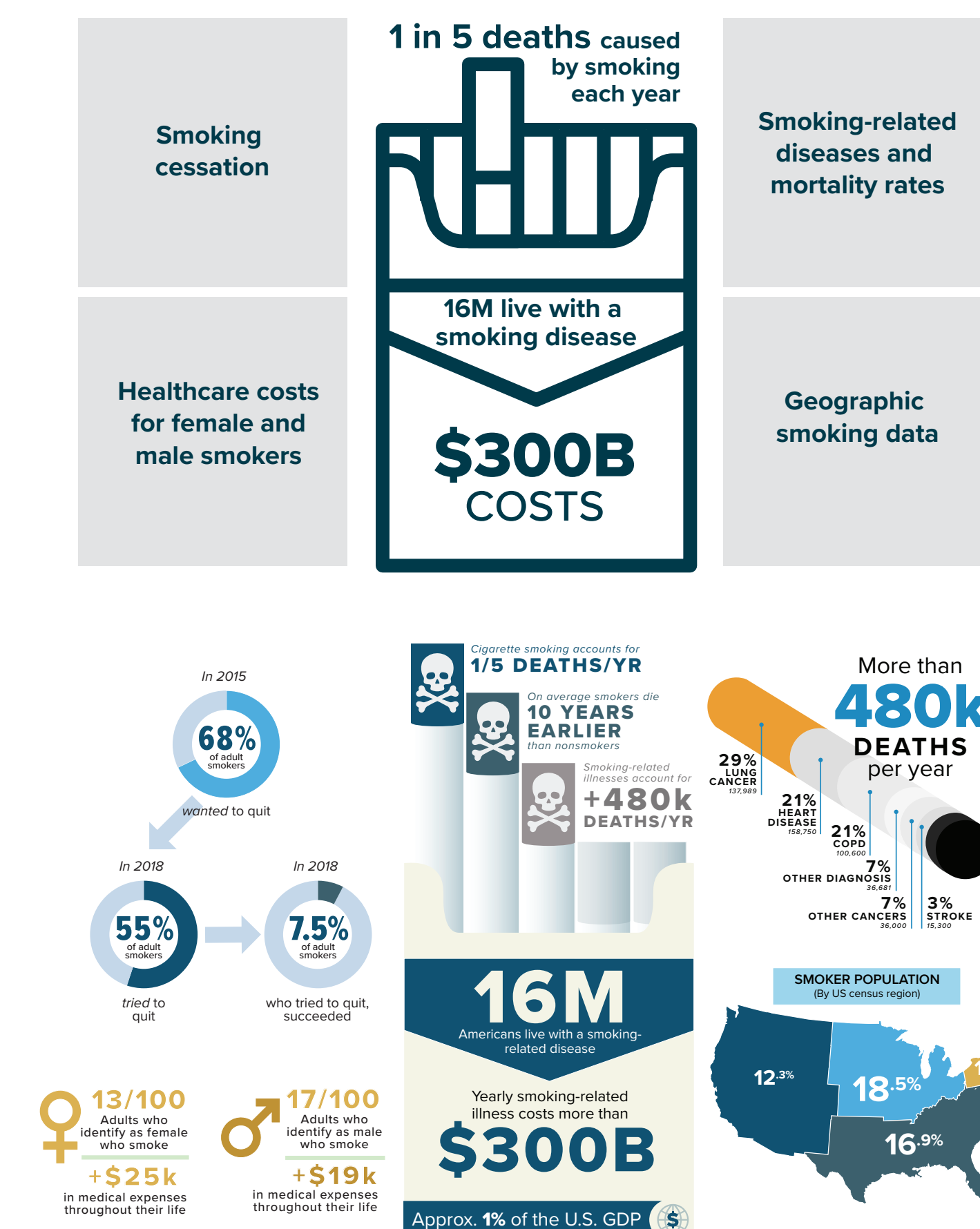
16 Million Americans live with a smoking-related disease → **16M** Americans live with a smoking-related disease

Numbers readily translate into graphs (e.g., bar charts, pie charts) or representative graphics (groups of objects that communicate an amount). Highlight important numbers by making them large and bold. Add icons to create visual interest.

For progression, use icons or basic illustrations and shapes with arrows to show how one thing leads to another.

16M Americans live with a smoking-related disease

Resulting in **$300B** spent yearly on smoking-related illness and loss in productivity

or approximately **1%** of the US GDP

Graphs work well for showing comparisons and relationships.

- 29% LUNG CANCER 137,989
- 21% HEART DISEASE 158,750
- 7% OTHER CANCERS 36,000
- 21% COPD 100,600
- 7% OTHER DIAGNOSIS 36,681
- 3% STROKE 15,300

In 2015 — 68% of adult smokers wanted to quit
In 2018 — 55% of adult smokers tried to quit
In 2018 — 7.5% of adult smokers who tried to quit, succeeded

(!) Complex ideas are sometimes best communicated with a combination of text and icons. Refer to your visual concept or theme for inspiration.
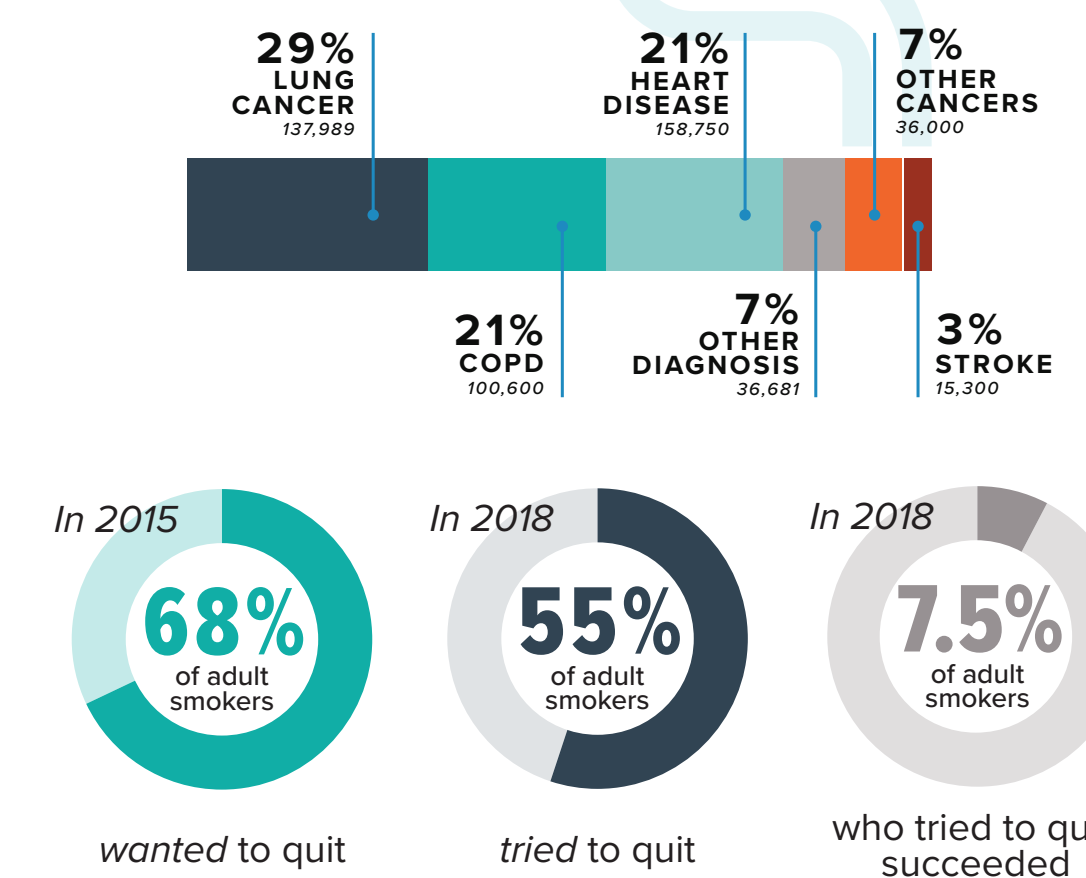
7 Arrange the Visualizations

Arrange visualizations according to their hierarchy or importance in telling the story. Use the infographic type selected in **Step 4** as a guide for arranging content. The visual concept identified in **Step 5** can also guide the order and placement of visualizations.

- Smoking cessation
- 1 in 5 deaths caused by smoking each year
- Smoking-related diseases and mortality rates
- 16M live with a smoking disease
- $300B COSTS
- Healthcare costs for female and male smokers
- Geographic smoking data

8 Evaluate and Repeat

Test the arrangement of your visualizations against your story. Did you meet your goals? Adjust designs, hierarchy, and layout as needed. Remember that design is an iterative process, and continue to refine to the final product until you have achieved your objectives.

Cigarette smoking accounts for **1/5 DEATHS/YR**

More than **480k DEATHS** per year

16M Americans live with a smoking-related disease

Yearly smoking-related illness costs more than **$300B**

Approx. **1%** of the US GDP

In 2015 — 68% of adult smokers wanted to quit
In 2018 — 55% of adult smokers tried to quit
In 2018 — 7.5% of adult smokers who tried to quit, succeeded

- LUNG CANCER 137,989 (29%)
- HEART DISEASE 158,750 (21%)
- COPD 100,600 (21%)
- OTHER DIAGNOSIS 36,681 (7%)
- OTHER CANCERS 36,000 (7%)
- STROKE 15,300 (3%)

On average, smokers die **10 YEARS EARLIER** THAN NONSMOKERS