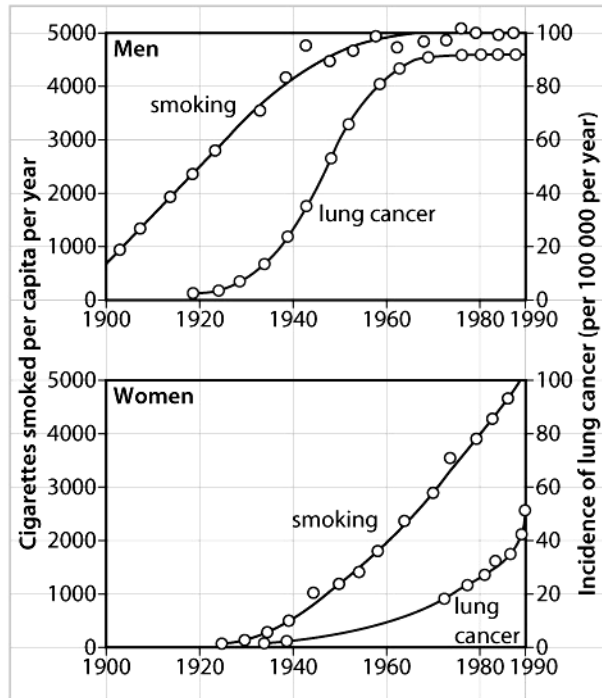


## Thought Lab 18.3: Investigating Cancer Genes

**Question:** What can the data indicate about the relationship between human activities and mutation rates?

The changing rates of lung cancer in men and women between 1900 and 1990



### Procedure

1. Study the graphs. Write a brief summary of the relationships shown in the graph.
2. Record your ideas about the molecular reactions that may be occurring based on what you have learned in this chapter.

<b>CHAPTER 18</b>	<b>Thought Lab 18.3: Investigating Cancer Genes (cont'd)</b>	<b>BLM 18.3.3</b>
<b>HANDOUT</b>		

3. Conduct research to describe one of the molecular reactions that might contribute to the relationship you see in the graph. You may find the following keywords helpful to guide your research:
  - oncogenes
  - tumour-suppressor genes
  - stability genes
  - p53 gene

<b>CHAPTER 18</b>	<b>Thought Lab 18.3: Investigating Cancer Genes (cont'd)</b>	<b>BLM 18.3.3</b>
<b>HANDOUT</b>		

### Analysis

1. Write a brief report to describe how your personal choices can affect the chemical reactions that take place in your cells. How can these reactions in individual cells result in changes to your health and well-being?

## Thought Lab 18.3: Investigating Cancer Genes (cont'd)

2. Compare your research on the molecular reactions related to smoking with your classmates' research. How many different mutagens did your class find?
3. Suppose that you are a communications officer for the Canadian Lung Association. Your job is to help youth between the ages of 10 and 15 understand the risks of smoking. How would you reach this audience? What would your main messages be?