

March 28, 2019

1) Mutations and Cancer

## Warm-Up

In 2017, over  Canadians will be diagnosed with Cancer.

**Mutations** are changes in the genetic code

How do you think mutations occur?



## How do mutations occur?

simple copying errors that are introduced when DNA replicates itself.

DNA damage through environmental agents including sunlight, cigarette smoke, and radiation.

Our cells have built in mechanisms that catch and repair most of the changes that occur during DNA replication or from environmental damage.

As we age, however, our DNA repair does not work as effectively and we accumulate changes in our DNA.

Are all mutations negative?



<https://www.youtube.com/watch?v=uaNHUTlbqdo>



curing/treating diseases



organisms such as bacteria and some mosquitos  
developing resistance to pesticide

One set of damaging mutations are those  
that cause **Cancer.**

**Cell division that has gone out of control.**