**Cancer Cells**

<http://ed.ted.com/lessons/how-do-cancer-cells-behave-differently-from-healthy-ones-george-zaidan#watch>

We all start life as a single cell, but **about how many cells** are in an adult human body?

What is a **DNA mutation**?

There are some checkpoints (example: G2 phase) that prevent cells from moving through the cell cycle improperly (dividing too quickly, or dividing even when mutated). **What happens when a cell “sneaks past” these fail-safes**?

When is **surgery** a good option to treat cancer?

When is **radiation** a good option to treat cancer?

When is **chemotherapy** necessary to treat cancer?

Chemotherapy attacks cells that are rapidly dividing. Hair, skin, gut, and blood cells are examples of “normal” cells in our body that divide quickly. **What happens to these cells during chemotherapy?**

What are some unfortunate **side effects** to chemotherapy?

Ultimately, chemotherapy helps to treat cancer by trying to eliminate rapidly dividing cells. What must be true in order for the cancer to be **completely eliminated?**

**Homework:**

Visit the class page **documents** section [www.mrtranscience.weebly.com](http://www.mrtranscience.weebly.com)

View the powerpoint titled “what is cancer?” and complete the guided notes below

**What is Cancer? Guided Notes**

**Definition:**

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**What normally happens in our bodies?**

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**When does the problem arise?**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or change in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ material (DNA) of cells by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ factors sometimes results in cells that do not \_\_\_\_\_ and continue to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ until a mass of cancer cells or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ develops

**What is metastasis?**

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**Categorizations:**

* **Malignant tumors: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **Benign tumors: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**