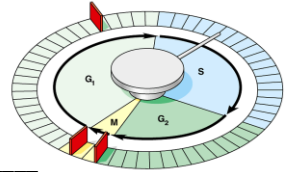


NOTES: Unit 5B (Cancer)



Topic 2: Sometimes healthy cells begin to stop obeying the cell cycle _____, start to divide _____, and refuse to _____ = _____

- Healthy cells move through the stages of cell division in an _____ way as they obey a complex set of START and STOP _____
- Cancer is caused by the accumulation of DNA _____ to various _____ and _____ genes in a cell.

A) Cancer has many _____: Here are a few _____ cancer loves to use.

- Activate _____ = _____ cell division (i.e., step on the cell division _____)
- Deactivate _____ genes = _____ cancer-fighting _____ (i.e., break the cell division _____)
- Deactivate _____ gene (i.e., avoid programmed cell _____ for broken cells)
- Deactivate _____ genes = _____ mutation rate → _____ loss of control
- Build a large network of _____ = _____ resources and **fuel** for _____
- Rebuild _____ for unlimited cell division = never reach the limit of _____ cell divisions

Let's Review:

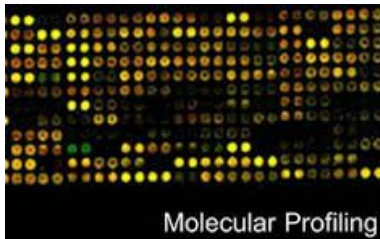
- Cell division is _____ in cancer.
- Cancer cells form disorganized clumps called _____.
 - _____ tumors remain clustered and can be removed.
 - _____ tumors **metastasize**, or **break away**, and can form more tumors.
- Scientists are busy researching _____ to better understand the CAUSES of many human diseases in hopes of developing better treatments.
- One area of intense cell research is the quest to cure _____ by examining how healthy body cells are transformed into rebel cells that divide _____.
- Researchers are trying to understand how various combinations of _____ can lead to many different types of cancer.

B) Cancer Statistics

- **1 of _____ men** and **1 of _____ women** will be diagnosed with cancer
- _____ Americans die from cancer every day
- One American dies of cancer _____
- The most **common** type of cancer is? _____
- The **deadliest** type of cancer is? _____

C) Diagnosing Cancer

- Cancer tumors can be _____:Examples:
- Cancer tumors have a _____:Explain:
- Cancer _____ (DNA & Proteins) and free-floating cancer _____ are recently being detected in the _____: Explain:
- Doctors are even beginning to diagnose cancer by determining the exact combination of _____ in the cancer = _____



D) Treating Cancer

- Several traditional weapons are often used to treat cancer:
 - 1) _____
 - 2) _____
 - 3) _____
- A variety of new _____-based weapons are emerging
 - 1) _____
 - Some attack _____ proteins
 - Others deliver medicine by attaching to a cancer-only surface protein with an _____
 - 2) _____
 - Train the _____ to attack cancer
 - 3) _____
 - Use _____ to attack cancer