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Can You Help Me Find Patterns in Cancer Cells?

Work with Amani, the cancer scientist, to detect cancer in cells and find the best treatment. Follow along with the slides on the website and work with your team to answer the questions Amani asks as she does her work. Fill in your answers in the spaces below.

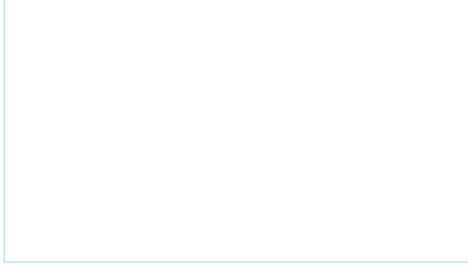
Slide 7: Now let's compare some different types of cells from different parts of the body.

Slide 8: Describe some of the characteristics you see from each cell type. What patterns do you see in these healthy cells?

Cell type	Parts of cell visible	Shape	Arrangement of cells
#1			
#2			
#3			
#4			

What similarities and differences do you notice?





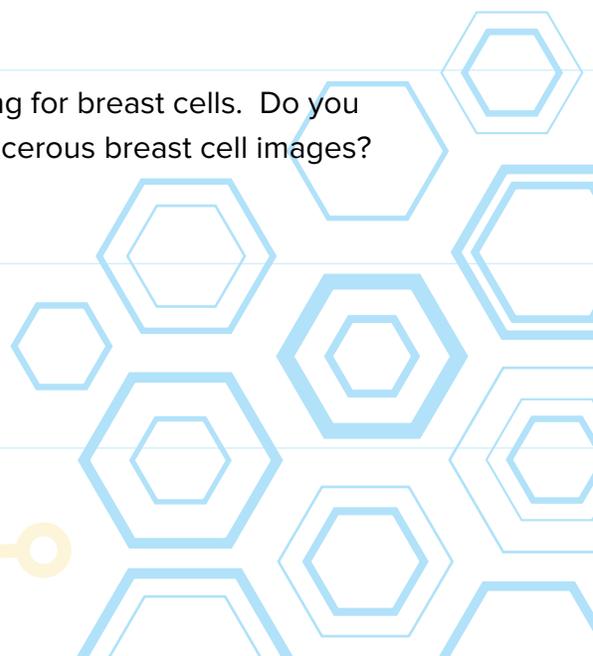
Slide 10: Now that you are familiar with healthy cells, we need to be able to look at a sample to identify when cancer is present.

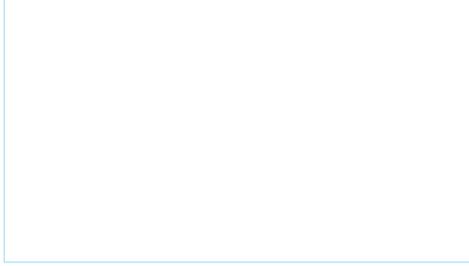
Slide 11: What do you notice is different about the healthy pancreatic cells from the ones with cancer?

Slide 13: Do you think cancer looks the same in all parts of the body? Let's compare healthy breast cells with breast cells with cancer. What do you notice?

Slide 18: Compare the color images of the normal and cancerous pancreas cell images on the right side. What do you notice?

Slide 22: We can do the same laser microscope color imaging for breast cells. Do you see the same color trends here between the normal and cancerous breast cell images?



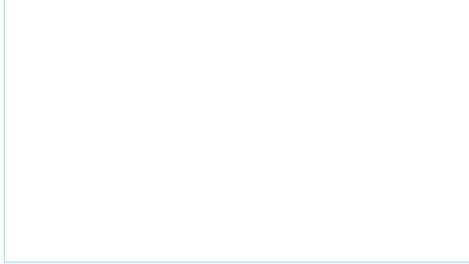


Slide 28: The “control” cells are cancer cells that don’t receive a treatment.

The other five boxes show treatments we gave the cells to slow down the cancer. Which ones do you think are working? How can you tell?

Image	Describe color pattern	Does the treatment work?
(Cancer) Control A		No treatment given
Treatment B		
Treatment C		
Treatment D		
Treatment E		
Treatment F		





Slide 34: This time, the “control” cells are healthy cells without cancer that don’t receive a treatment.

The other five boxes show the same treatments we tried before. Which ones do you think are safe for healthy cells? How can you tell?

Image	Describe color pattern	Does the treatment work?
(Normal) Control A		No treatment given
Treatment B		
Treatment C		
Treatment D		
Treatment E		
Treatment F		

Which treatment do you think is best overall? Why?



