Listening for Cancer

By Ryan Johnson

What if someone told you cancerous cells could be identified by the sound that they make? Would you look at them in a very strange way or would you believe them? Science has taken some extraordinary leaps in technology in the last decade to improve the effectiveness of diagnosing if a person has cancerous cells within his or her body.

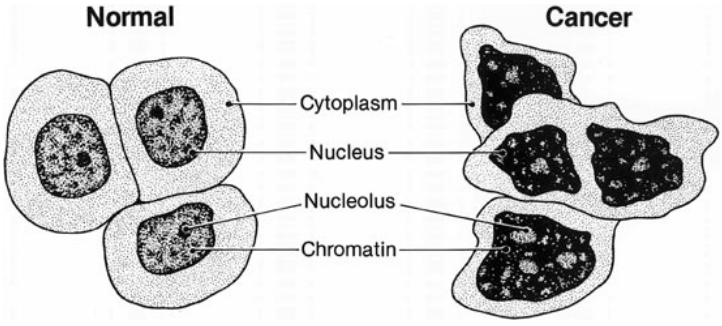
In fact, it is true, with the help of Ryan Stables, a musician and digital media technologist at the Birmingham City University in England, along with the help of an analytic chemist and a physicist they were able to transform visual signals given off by cancerous cells to audio sounds. The ear can determine changes in sound faster than the eye can determine changes. The ear can detect change within thousandths of a second, while the eye needs about a fifteenth of a second to detect change.

In medicine, this could speed up the analysis of a cancer biopsy. Normally a pathologist would have to see how light would reflect off the proteins associated with cancer. Light that is reflecting off the proteins associated with cancer cells reflects differently than light reflecting off healthy cells. The ways the light reflects is very subtle and can take a while to find cancerous cells making this a time-consuming process.

In a trial 150 clinicians listened to sounds of healthy cells and cancerous cells and were able to distinguish between the two 90% of the time (Fischman, 2015). Having clinicians to be able to quickly diagnose cancerous cells would help anxious patients receive information that is vital to their health.

If you would like to hear the sound clips of healthy and cancerous cells the link is listed below.

http://www.scientificamerican.com/article/detecting-cancer-by-sound-audio1/



Resource:

Fischman, J. (2015, February 17). Detecting Cancer by Sound. Retrieved March 11, 2015.