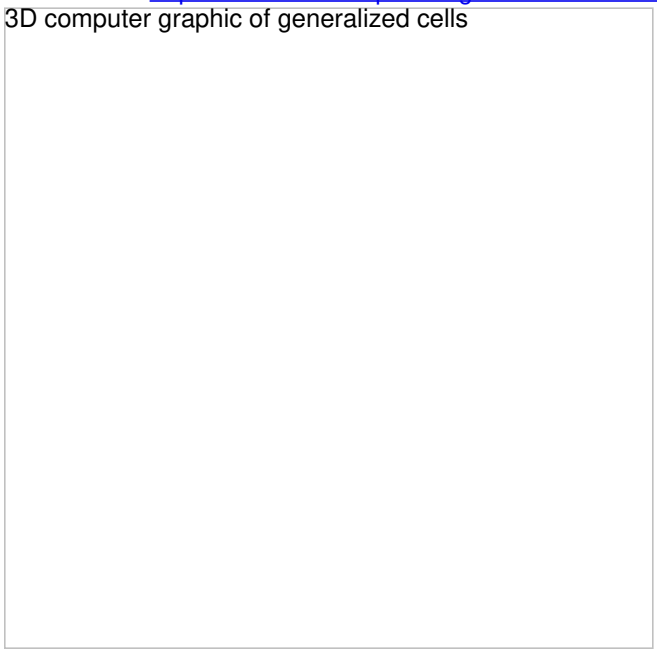
Putting The Squeeze To Cancer Cells


3D computer graphic of generalized cells

Our bodies are made up of trillions of cells. Because cancer is characterized by uncontrollable cell reproduction, it can get very crowded in a tumor! Researchers in Europe have been investigating how tumor cells continue to thrive despite their crowded environment – it turns out that cells can tell when they are being squished.

When a cell is being squeezed, the membrane around the nucleus begins to unfold and stretch out. Special proteins can detect these changes and activate the ability to contract, helping the cell get out of that tight space. They believe that the nucleus acts as a ruler that measures a cell's personal space and responds when that is invaded.

How does this information help us fight cancer? By using inhibitors to suppress the activity of the size-sensing proteins, tumor cells may not be able to survive and spread when they are crowded. This would be very helpful for treating tumors and preventing the spread of cancer (metastasis). Drug companies are currently testing inhibitors.

Source
https://science.ccri.at/2020/10/16/how-cancer-cells-escape-crowded-tumor/
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