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# SOFT CELL SOLUTION?

Are cancerous cells softer and squishier than healthy cells? That's what some researchers suspect, although the answer is probably more complicated, depending the type and stage of the disease.

At the University of Ottawa, Andrew Pelling wants to find new ways to detect disease based on the physical properties of cells. He uses an atomic force microscope, which he says is like a record player. The arm is less than the width of a hair, and the needle is the size of a few atoms. It pushes down on a cell, and Dr. Pelling can tell from the cell's response whether it is squishy or hard.

The work is preliminary, but might lead to new diagnostic tools, said Dr. Pelling.

The chemical signatures of cells and tissue offer another imaging approach that doesn't involve isotopes, said John Pezacki at the National Research Council in Ottawa.

Molecules vibrate at specific frequencies, the basis of an imaging technique called CARS, or coherent anti-Stokes Raman scattering. It allows scientists to look for disease markers, he said, such as how chemical signatures in cells change during a chronic infection.

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