

Real-Time Biopsy Would Save Time, Alleviate Worry

Rebecca Rudolph, editor

The biopsy device will be able to take samples of cells during surgery and, within a second, let the surgeon know what kind of cells they are. "This is going to be a new technology that's just going to give the surgeons more information than he had when he (went to) operate," explained Donald Spector, the scientist who patented the idea in March.



The way this real-time biopsy system works is a small prong takes a photo of just a few cells, which is connected to a microprocessor that sends the image to a diagnosing center. The image of the cells is treated like a slide and is compared to other diseases or bacteria until a match is found. Then, a treatment is identified and all this information is sent back to the surgeon's microprocessor, he described in the patent, filed in September 2013.

When surgeons operate, they are focused on the task at hand, like removing organs, tumors or growths he said; once it's removed, they take a biopsy and send it to a lab to see if there are any bacteria or diseased cells left. That means it's about a week of the surgeon not being sure if all the cells have been removed, a week of worry for the patient and the possibility of another surgery, Spector said. The real-time biopsy system should be able to remove all of those concerns, because it provides instantaneous information, he said.

Spector hasn't contracted a manufacturer or university to start producing this device yet, but he hopes to make this tool available to surgeons within two years. Most of the technology has already been developed, so the big steps are to connect those pieces and develop the probe that photographs the cells, he said.

He says this patent, like the hundreds of others he holds, was only possible because of his diverse scientific career. "I think it's not really how long it takes you to develop an idea, it's the experiences that you go through in multiple fields, that takes decades, and also keeping up with what's happening in every field so you can add your piece, put the puzzle

together and know what's available," he said.

Using computers and robotics is where the science of medicine is headed, he said. Although people attribute the evolving nature of healthcare to health insurance, he said it's really the science, research and investigation behind procedures that cause it to develop. "Insurance is just insurance," he explained.

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