Health & Medicine

Gene Test Could Inform Prostate-Cancer Treatment

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One of the challenges in dealing with prostate cancer is deciding when it is worth treating.

Since the disease strikes men late in life and tends to progress very slowly, taking a decade or longer to have any serious effects, physicians often advise against treatment — which may involve surgery or radiation therapy, possibly resulting in impotence and urinary incontinence.

A small percentage of men with prostate cancer have a form of the disease that can turn aggressive, however. And physicians today struggle to identify these cases, even when examining a man's biopsied cancer cells under a microscope.

Physicians soon may be able to determine more reliably if a man's prostate cancer requires quick attention, with the help of a gene test designed by a team of Columbia researchers. The researchers, led by urologist Cory Abate-Shen, have identified three genes whose collective presence they say indicates that a man has the less dire form of the disease. In a study of forty-three men with prostate cancer published in *Science Translational Medicine* last fall, they showed that their genetic test accurately predicted in every case which form of the disease a patient had.

"This could take much of the guesswork out of the diagnostic process and ensure that patients are neither over-treated nor under-treated," says Abate-Shen, whose coauthors include her husband and frequent collaborator, the Columbia medical geneticist Michael Shen; systems biologist Andrea Califano; and urologists Mitchell C. Benson and Sven Wenske.

The researchers are currently planning a larger clinical trial. If that trial is successful, they say, their screening technology could be made widely available within three years.

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