Diagnostic tool for differentiating low-risk and high-risk prostate cancer using genetic biomarkers

Technology #3000

Current technologies for categorizing prostate cancer patients as low- or high-risk are not sufficiently accurate. This increases the number of overly aggressive treatments, which in turn increases the cost of care, the potential for unnecessary adverse side effects, and decreases overall quality of life. This technology utilizes three genes that can predict whether prostate cancer in a given patient is low-risk (indolent) or high-risk (lethal), and can further subdivide patients based on the risk that their cancer will transition from indolent to lethal over time. By improving the accuracy of diagnoses, this technology may allow physicians to better manage treatment for individual prostate cancer patients.

Individualize treatment strategies for patients by predicting progression to lethal prostate cancer.

This technology provides vital information that predicts whether indolent prostate cancer will progress to the lethal form. It may allow physicians to develop more effective treatment strategies and help patients with indolent prostate cancer avoid over-treatment and prostatectomies, which can lead to impotence and incontinence. It also has the potential to speed treatment and improve clinical outcomes in patients with lethal prostate cancer. This technology can be easily incorporated into the current clinical diagnostic setting for prostate cancer and makes strides towards individualized medicine.

The accuracy of this technology has been demonstrated by examining the genetic biomarkers of current prostate cancer patients, where the lethal form was predicted in 88.9% of patient samples.

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Applications:

- Tool for diagnosis and prognosis evaluation of patients with prostate cancer
- Diagnostic tool for distinguishing between indolent and lethal prostate cancer
• Can be used as part of a diagnostic genetic biomarker test kit for use with PCR, FISH or other techniques

**Advantages:**

• Can be easily incorporated into the current clinical diagnostic setting
• Can improve the accuracy of prostate cancer diagnosis and prognosis
• Allows for individualization of patient treatment strategies based on risk assignment
• Helps to prevent prostate cancer patient under-treatment or over-treatment

**Patent Information:**

Patent Pending (WO/2014/028907)

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**Related Publications:**


**Inventors**

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