

New genetic marker could help diagnose aggressive prostate cancer

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Scientists have discovered a link between certain genetic mutations, the aggressiveness of prostate cancer, risk of developing the disease and poorer survival rates of patients. The gene, called ANO7, could play a vital role in improving diagnosis of prostate cancer patients. There are over 50,000 new cases and 11,000 deaths from prostate cancer each year in the U.K.

There is currently no clear way to diagnose aggressive prostate cancer at an [early stage](#). Genetic [mutations](#), such as those revealed in this study, could lead to the development of accurate diagnostic tests that will ultimately mean patients receive better, faster treatment.

The researchers studied DNA from over 1,700 prostate cancer patients and a comparable number of healthy men seeking [genetic mutations](#) that were associated with the disease. They were particularly interested in studying mutations to the ANO7 gene because their previous research suggested this could be a gene of interest for prostate cancer.

"We found that small genetic changes to the ANO7 gene increase a patient's risk of aggressive prostate cancer. One of the current biggest unmet needs in prostate cancer care is being able to diagnose aggressive cancers at an early stage. Genetic testing for ANO7 could help identify these patients sooner and may bring new opportunities for precision oncology in prostate cancer," says the leading author of the study, Professor Johanna Schleutker from the Institute of Biomedicine of the University of Turku, Finland.

The researchers found one particular genetic mutation that correlated with an increased risk of developing [prostate cancer](#) as well as the severity of the disease. They also found a separate mutation that correlated with shorter survival.

Analysis of tissue samples from [prostate](#) tumours revealed that mutations to ANO7 were associated with the gene being more active, suggesting that the biological function of ANO7 may play an important role in why these cancers are more aggressive. The function of ANO7 is not fully understood, but further research could lead to new ways to treat the disease.

Although the study involved a large population, it is limited by the fact

that it is primarily a Caucasian population from Northern Europe. Further research involving other demographics is needed to validate the findings. The research was published in the *International Journal of Cancer*.

More information: Elina Kaikkonen et al, ANO7 is associated with aggressive prostate cancer, *International Journal of Cancer* (2018). [DOI: 10.1002/ijc.31746](https://doi.org/10.1002/ijc.31746)

Provided by University of Turku

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