

Research breakthrough could lead to better prostate cancer treatment

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Cancer researchers from the University of Glasgow and Royal Philips Cancer researchers have identified a gene which could help doctors to predict the aggressiveness of prostate cancer in patients.

Their research, reported in the current edition of the *British Journal of Cancer*, could lead to more effective personalised treatment for [prostate cancer](#) and significantly reduce the number of unnecessary prostate cancer surgeries.

Prostate cancer is the fourth most common cause of [cancer death](#) in the UK, claiming the lives of approximately 11,000 men each year¹. It is also the most common cancer in men in the UK, accounting for a quarter of all new cases of cancer in males – around 42,000 each year in total.

They examined 1,475 patient samples to learn more about the expression of a particular gene, known as PDE4D7. They found that the gene provided a valuable insight into the aggressiveness of prostate cancer, and the likely recurrence of the disease after treatment.

Professor George Baillie, of the University of Glasgow, said: "Prostate cancer, like any other cancer, is a genetic disease which is driven by the activation of cancer-causing oncogenes and at the same time by inactivation of tumor-suppressor genes.

The gene we examined acts as a more effective biomarker to predict the aggressiveness of patients' prostate cancer than any others which have

been used before.

"Men at risk of dying from prostate cancer need early and aggressive therapy for optimal care. Those with lower-risk forms of the disease could receive more benefit from much milder forms of treatments. This biomarker gives us a much more reliable way of determining which form of treatment patients require, which could prevent thousands of [unnecessary surgeries](#) every year."

Dr Ralf Hoffmann, of Philips Research Eindhoven, said: "Treating prostate cancer today leads to significant side effects for patients which inevitably impact on their quality of life. This breakthrough, therefore, offers hope for many thousands and may have the potential to reduce the unnecessary treatment of non-aggressive prostate cancer. Additionally, those with an aggressive form of the disease might benefit from the development of innovative therapies in the future."

More information: R Böttcher et al. Human phosphodiesterase 4D7 (PDE4D7) expression is increased in TMPRSS2-ERG-positive primary prostate cancer and independently adds to a reduced risk of post-surgical disease progression, *British Journal of Cancer* (2015). [DOI: 10.1038/bjc.2015.335](#)

Provided by University of Glasgow

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