



FURTHER FASTER TOGETHER

EVOTEST

A NOVEL METHOD FOR
PROSTATE CANCER PROGNOSIS



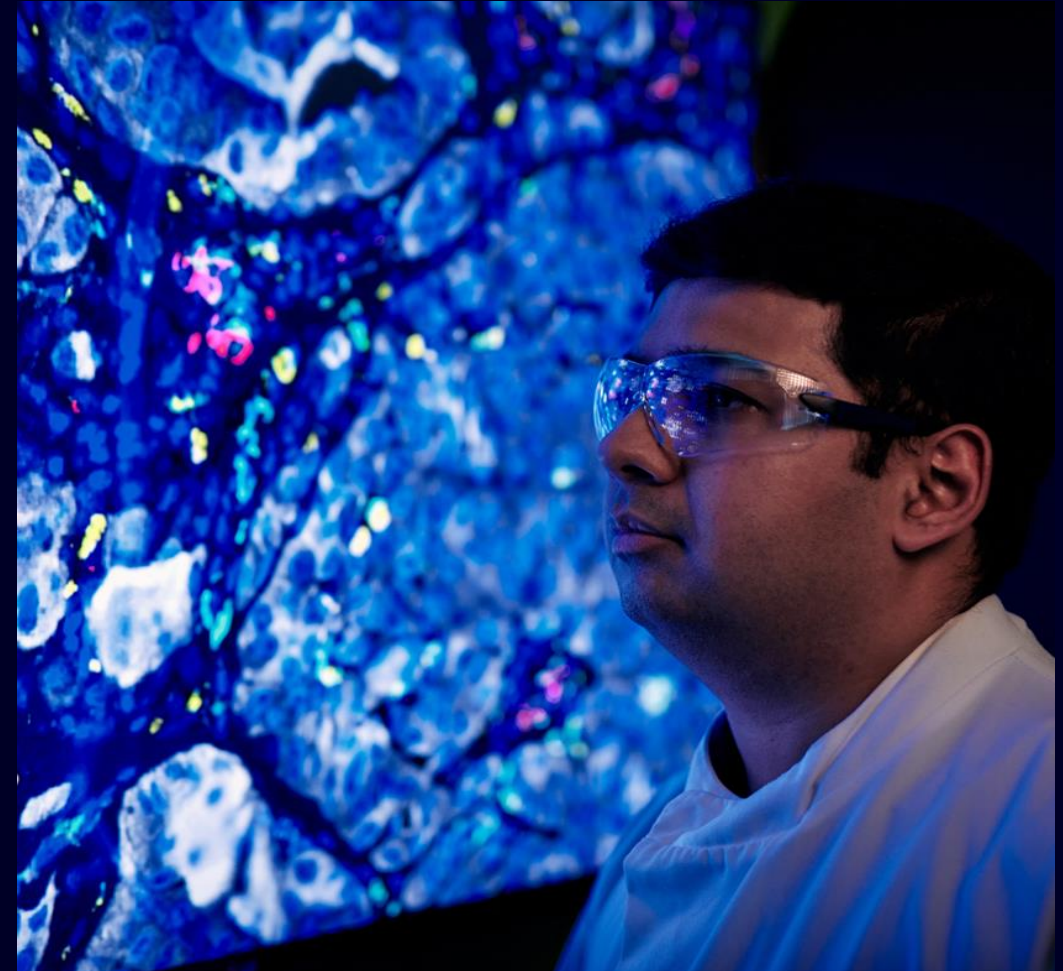
EVOTEST – SUMMARY OF OPPORTUNITY

- **Technology:** Evotest is a novel method of analysis of genetic alterations for prostate cancer prognosis.
- **Problem:** There is a lack of powerful risk stratification methods in prostate cancer for classification and informing clinical decisions. The Gleason score, based on histological analysis of biopsies, is currently used for prognosis but is susceptible to interobserver variability.
- **Solution:** Evotest is a novel prognostic method for stratifying patients based on the accumulation of genetic alterations determined by the behaviour of the androgen receptor.
- **Unique Value:** There is no similar genetic test routinely used in the clinic for prostate cancer prognosis. This method can be applied in conjunction with histological Gleason grade (standard of care) to create a risk stratifier with exceptional performance that allows patient prognosis to be determined with higher accuracy.
- **Stage of Development:** Proof of principle – the method has been developed using 159 prostatectomy samples and validated on 900 samples.
- **Clinical Impact:** Prostate cancer is currently treated as one type of disease, whilst Evotest can distinguish between two distinct types of prostate cancer: Canonical and Alternative evotype. Alternative-evotype tumours account for over 20% of low-intermediate tumours, displaying poorer prognosis. Evotest can be used to identify this group to better inform treatment decisions for these patients.
- **The Team:** Dan Woodcock (University of Oxford), David Wedge (University of Manchester), and Colin Cooper (University of East Anglia).
- **Intellectual Property Status:** PCT filed in September 2022 (PCT/GB2022/052435). National/Regional phase entry in March 2024 in US, Europe, South Korea, and Japan, Australia, Canada, and New Zealand.
- **Publication:** Woodcock *et al.* Cell Genomics 2024, <https://doi.org/10.1016/j.xgen.2024.100511>

We are looking for industry partners for co-development or licensing to progress Evotest into clinical settings.

THERE IS A LACK OF GENETIC TESTS FOR PROSTATE CANCER PROGNOSIS

- Prostate cancer is the second most diagnosed cancer in men, with an estimated 1.4 million diagnoses and 375,000 deaths worldwide in 2020, and accounts for 15% of cancers. The number of new cases annually is estimated to rise to 2.9 million by 2040 (*James N. D. et al., The Lancet Commissions 2024*).
- Prognosis normally depends on histopathological verification in prostate biopsy cores. The current standard of care employs Gleason score which is based on microscopic appearance of the tissue from biopsies and can be subject to interobserver variability (*Lomas D. J. and Ahmed H. U., Nature Reviews 2020*).
- No genetic test is currently used in the clinic, as such there is a need for methods which can classify cancer types in a clinically useful manner.



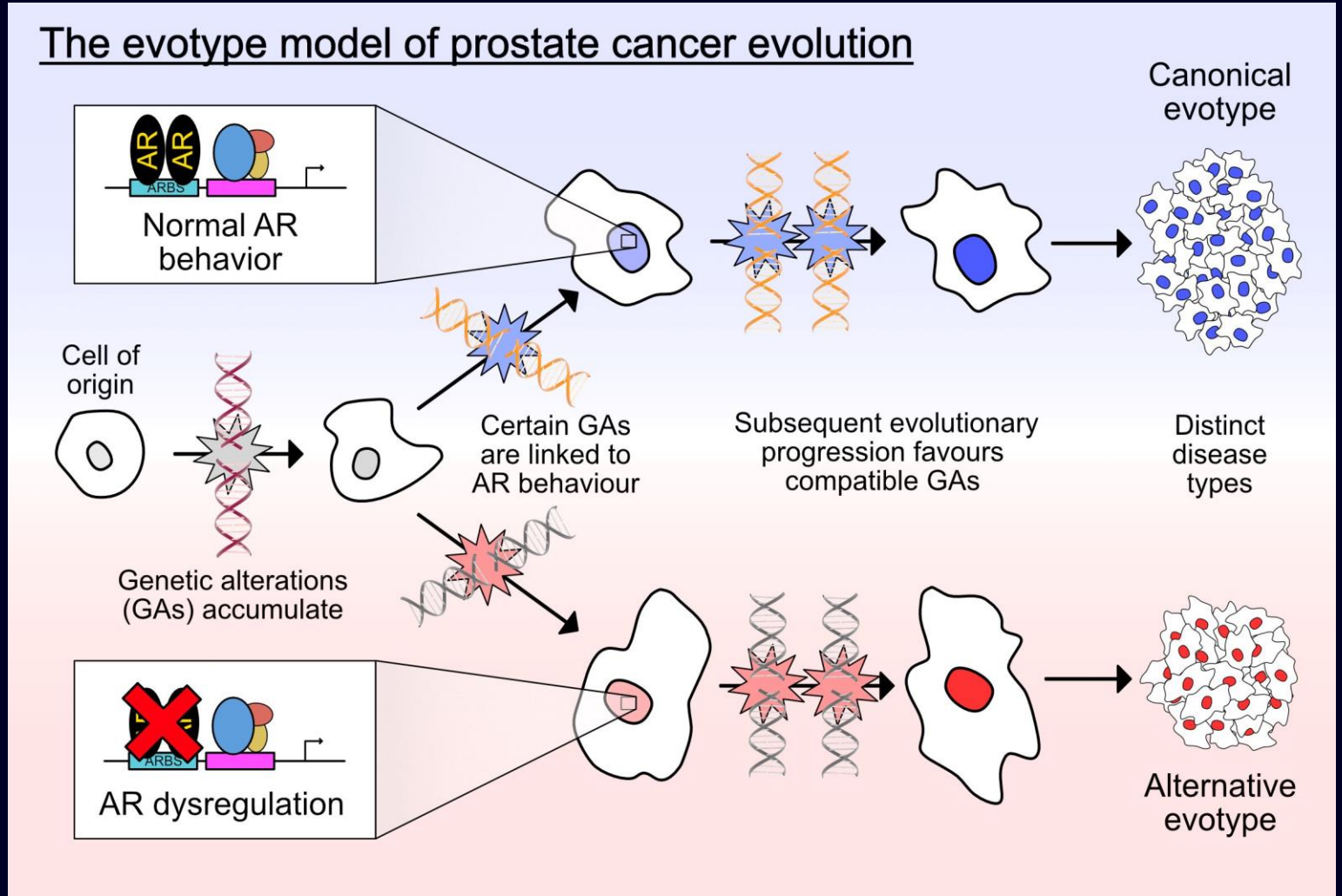
GENETIC ALTERATIONS CAN BE LINKED TO PROGNOSIS AND TREATMENT SUSCEPTIBILITY

- Tumor evolution is a dynamic process involving the accumulation of genetic alterations. The evolutionary processes that give rise to these genetic alterations are complex and not well understood, however, in some malignancies these have been related to prognosis and treatment susceptibility
- There are no current methods routinely used in the clinic for prostate cancer risk stratification based on the evolution of genetic alternations, and this cancer is currently treated as one type of disease.

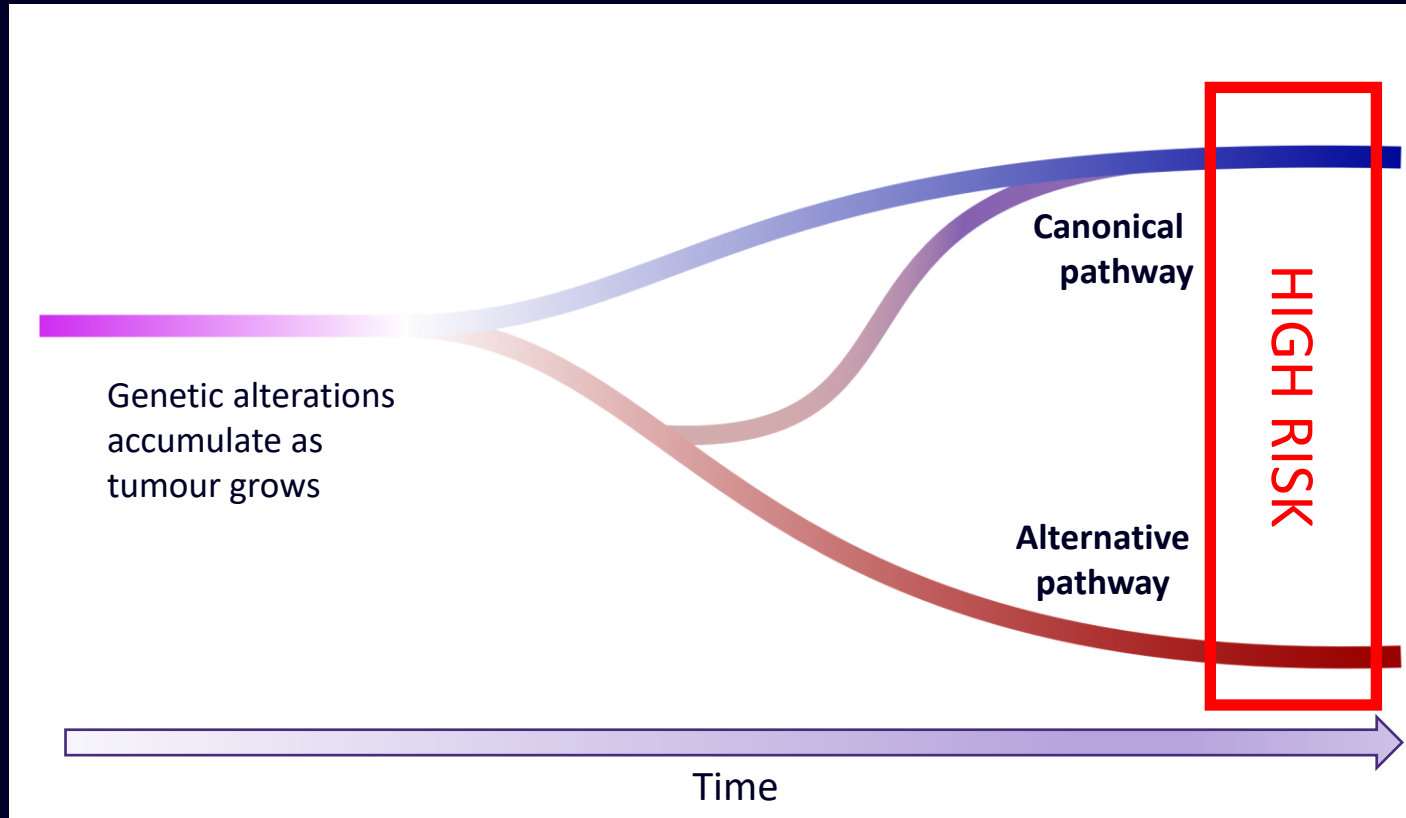


EVOTEST IS A NOVEL METHOD FOR RISK STRATIFICATION BASED ON GENETIC ALTERATIONS

- Evotest provides a method based on DNA/RNA sequencing, for stratifying prostate cancer patients into one of two prognostic groups: Canonical-evotype and Alternative-evotype.
- These evotypes are based on the evolutionary accumulation of genetic alterations (GA) caused by the androgen receptor (AR).
- Evotest is a genomic marker panel with a machine learning classifier that outputs 2D risk score, informing on:
 - Most likely evotype
 - Degree of disease progression relative to evotype.



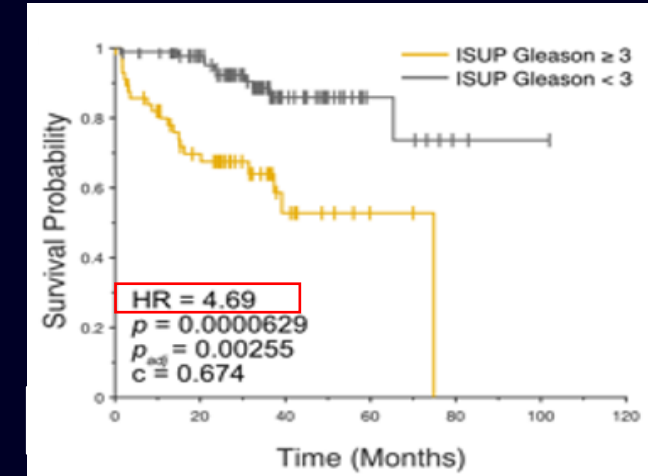
EVOTEST IN COMBINATION WITH GLEASON SCORE GENERATES A HIGHLY ACCURATE RISK STRATIFIER



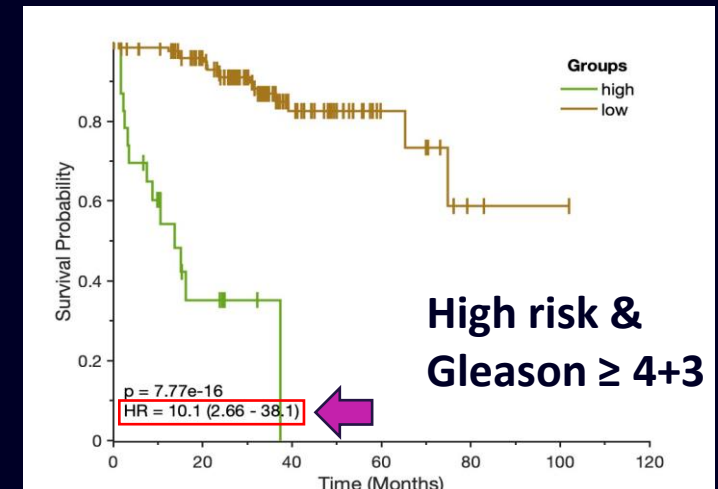
Evotest can be applied in conjunction with histological Gleason Grade (Standard of Care) to create a risk stratifier with exceptional performance that allows patient prognosis to be determined with higher accuracy.

(High risk score using Gleason Grade alone = 4.69 vs Gleason Grade + Evotest = 10.1).

Survival probability using Gleason Score



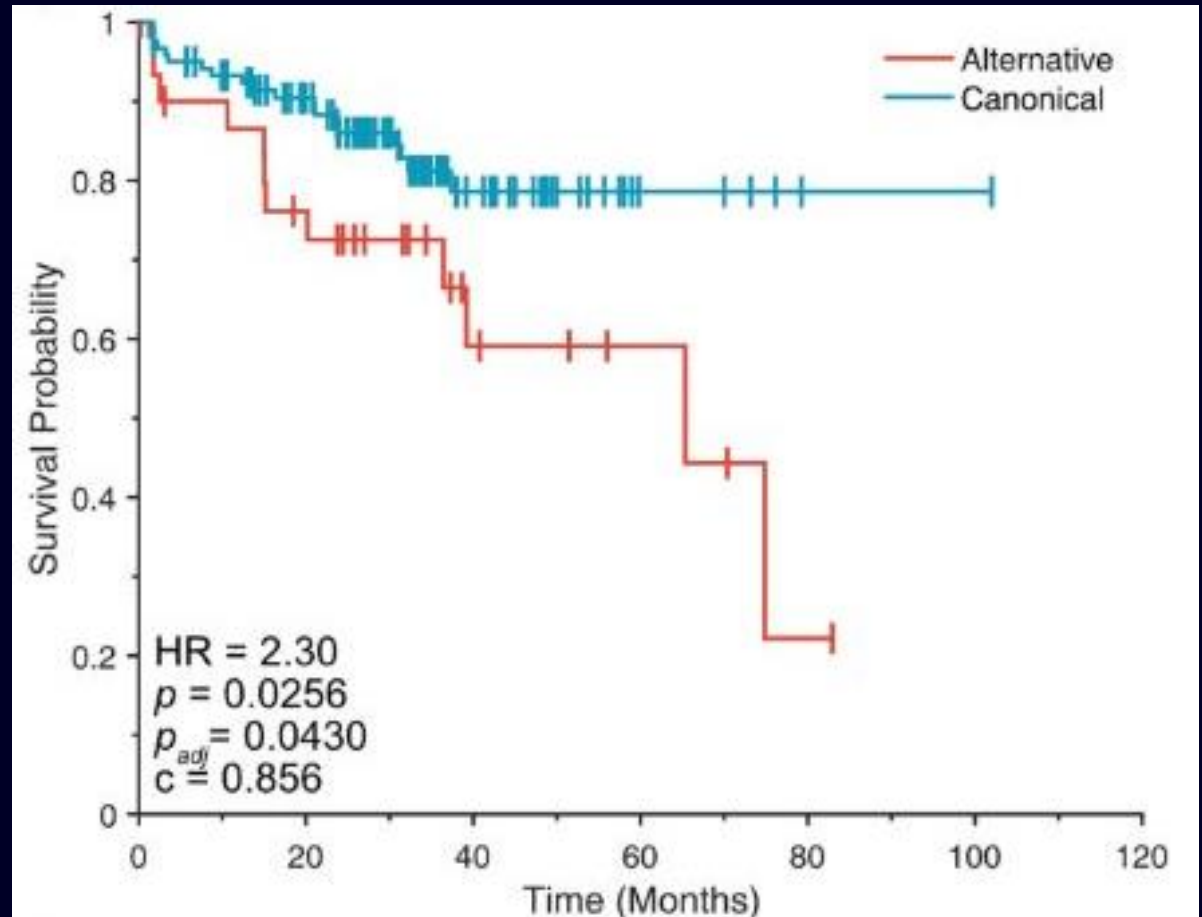
Improved survival probability using Gleason + Evotest



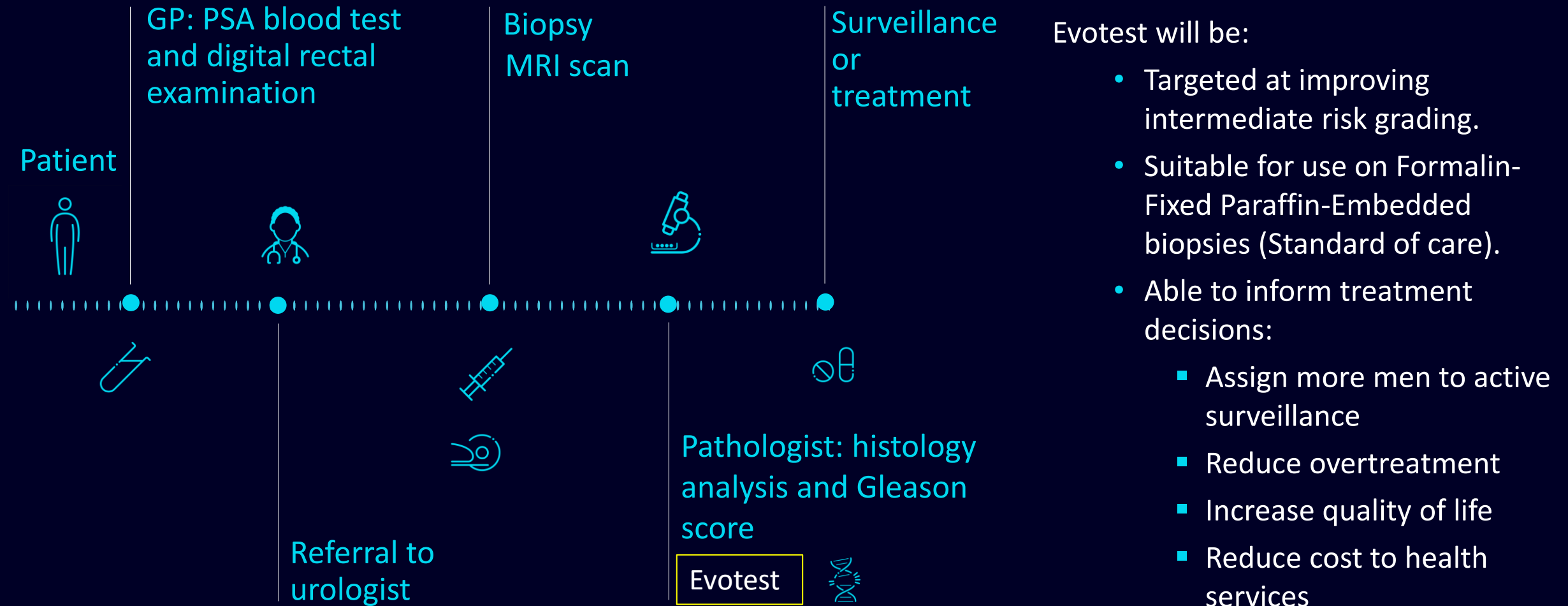
EVOTEST CAN IDENTIFY PATIENTS WITH POORER PROGNOSIS THAT MIGHT BE SUITABLE FOR EARLY TREATMENT

- Stratification using Evotest technology can distinguish groups that are likely to have a poorer prognosis and could be used to inform clinical decision making, such as the applicability of radical and/or targeted therapies.
- Alternative-evotype tumours, account for over 20% of intermediate tumours, displaying poorer prognosis.
- Non-White racial groups display an increased incidence of Alternative-evotype aberrations and may therefore have a higher predisposition for this disease type.
- Cancers with aberrations found more commonly in the Alternative-evotype have been shown to be susceptible to ionizing radiation and have a better response to treatment with PARP inhibitors and androgen ablation.

Prognosis for Alternative evotype is poorer than for Canonical evotype



EVOTEST CAN ASSIGN MORE PATIENTS TO ACTIVE SURVEILLANCE REDUCING OVERTREATMENT AND IMPROVING QUALITY OF LIFE



EVOTEST PATENT PORTFOLIO

Patent family and application number	Publication Number	Filing Date	Status
Methods of cancer prognosis PCT/GB2022/052435	WO2023047140A1	27/09/2022	Pending in: US, Europe, Australia, Japan, Canada, South Korea.

INVENTORS

Dan Woodcock: Group leader in translational data science, Nuffield department of surgical sciences, University of Oxford. Leads the multimodal data analysis in the COMBATcancer project run through Oxford Cancer, co-leads the Oncology workstream of the Cartography project, and leads the Subtypes and Prognostic Signatures working group in the Pan Prostate Cancer Group.

David Wedge: Professor of Cancer Genomics and Data Science at the Manchester Cancer Research Centre, University of Manchester. Co-lead of the Evolution and Heterogeneity working group of the ICGC Pan-Cancer Analysis of Whole Genomes (PCAWG) project and is currently one of the leaders of the Pan Prostate Cancer Group.

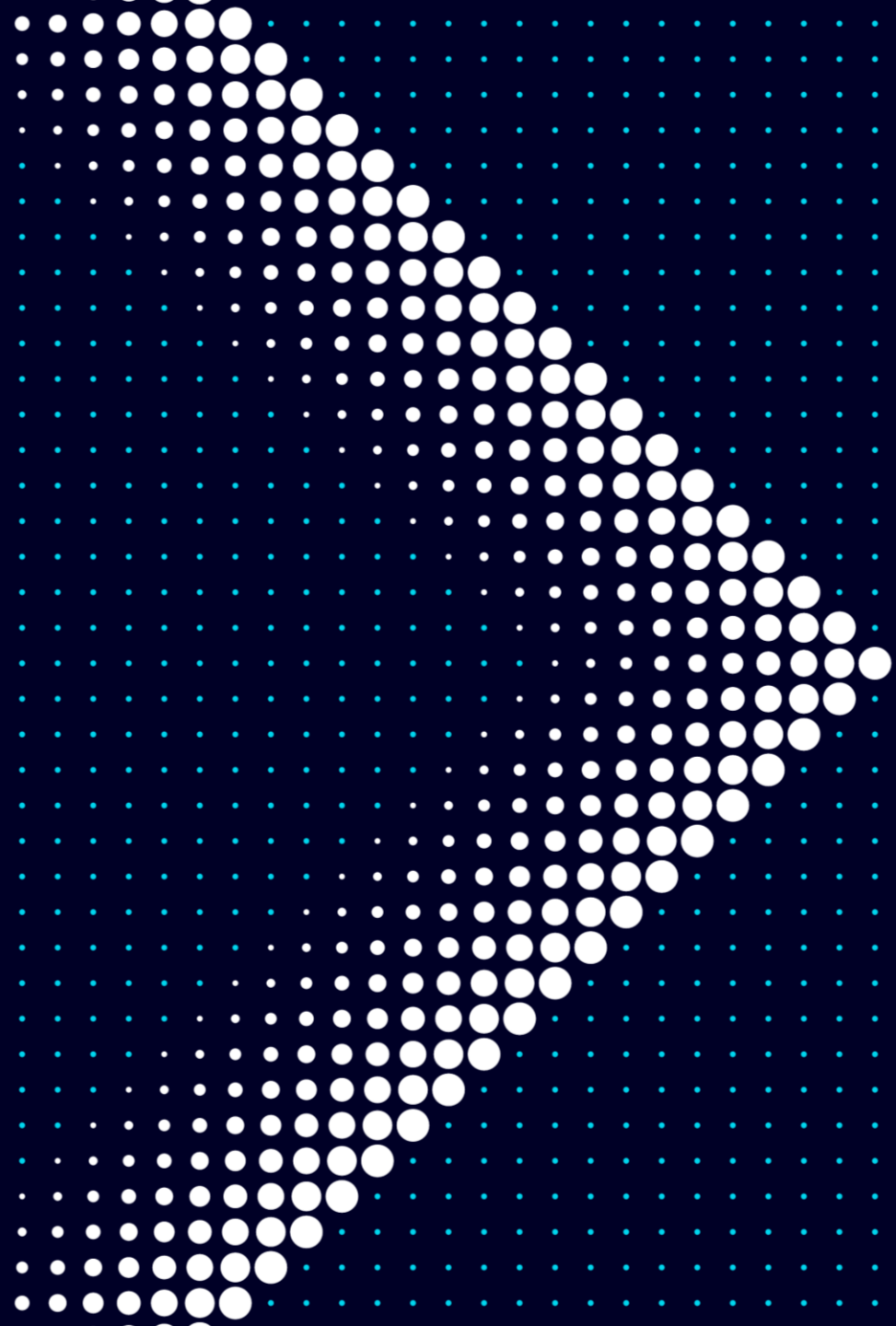
Colin Cooper: Professor of Cancer Genetics, Norwich Medical School Member, University of East Anglia. Chairman of the National Cancer Research Institute's South of England Prostate Cancer Research Collaborative Centre and his research interest include understanding the aetiology of human prostate cancer, and improving the treatment of patients with this disease.

FUTURE PLANS AND DEVELOPMENTS

- Optimise the gene-panel for evotype risk-stratification.
- Correlate evotypes to histological features in biopsy images using machine learning.

SEEKING

We are looking for industry partners for co-development or licensing to translate the technology into clinical settings.



CONTACTS

Ilaria Volpi Business Development
Associate Ilaria.Volpi@cancer.org.uk

Dristi Lalwani Business Development
Associate Dristi.Lalwani@cancer.org.uk