

Study discovers gene signature that predicts prostate cancer survival

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Researchers from Mount Sinai School of Medicine have identified a six-gene signature that can be used in a test to predict survival in men with aggressive prostate cancer, according to new research published in the October issue of *The Lancet Oncology*. This is the first study to demonstrate how prognostic markers may be useful in a clinical setting.

Using blood from 202 men with treatment-resistant [prostate cancer](#), researchers found six genes characteristic of treatment-resistant prostate cancer. Men with the six-gene signature were high-risk, with a survival time of 7.8 months, and men without it were low-risk, with a survival time of approximately 34.9 months. A replication study of 140 additional patients validated these findings. William K. Oh, MD, Chief of the Division of Hematology and [Medical Oncology](#) of The Tisch Cancer Institute at The Mount Sinai Medical Center, led the research team.

"There is an urgent need for [predictive models](#) that help assess how aggressive the disease is in prostate cancer patients, as survival can vary greatly," said Dr. Oh. "Our six-gene model, delivered in a simple blood test, will allow clinicians to better determine the course of action for their patients, determine clinical trial eligibility, and lead to more targeted studies in late-stage disease."

Until now, disease prognosis in advanced prostate cancer could only be determined through clinical predictors or, occasionally, [tumor biopsies](#) with only moderately predictive results. This study shows the efficacy of

the six-gene model blood test in determining length of survival.

"The genes noted in the model suggest possible changes in the immune system related to late-stage disease that warrant further study as a target for immune-based therapies," said Dr. Oh.

Dr. Oh's team is conducting additional studies exploring the feasibility of the six-gene signature in other types of prostate cancer, the stability of the signature during the course of a patient's illness, and the predictive ability of this signature in patients with prostate cancer treated with immune-based therapies.

Provided by The Mount Sinai Hospital

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