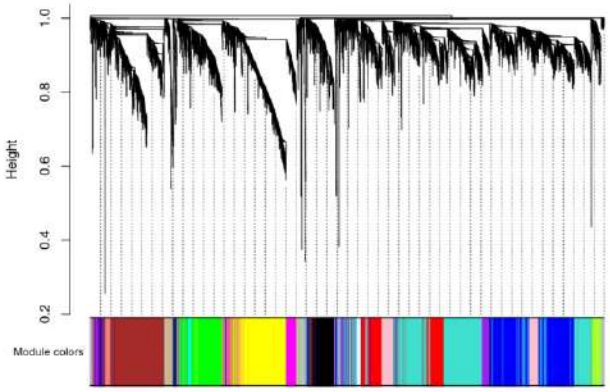
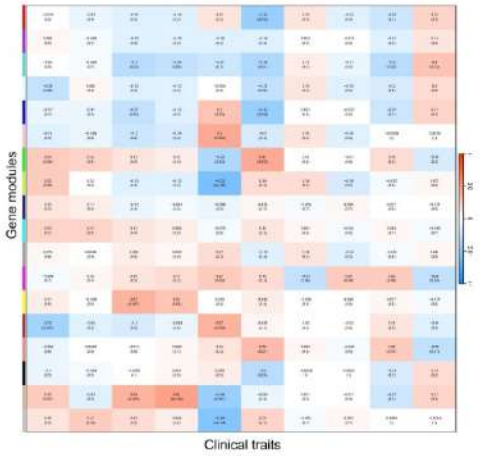
Biochip for Tailored Hormone Treatment in Prostate Cancer

Technology Overview

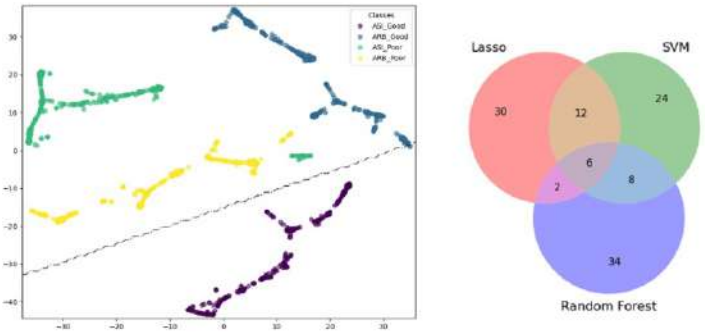
New and improved drugs have been developed for treating different stages of prostate cancer. These drugs can extend the time people with prostate cancer live, but over time, some patients develop resistance to them. The goal of this research is to identify gene signatures for good and poor prognosis through customized Affymetrix transcriptome chips in a fast and highly reproducible manner.





Identified hub genes from clinical traits correlated gene modules

Prostate cancer patients from different medical centers were studied. A customized Affymetrix transcriptome chip was used in the analysis of blood samples before, during, and after drug treatment. By examining the patterns of gene expression and using various models, key genes related to drug response were identified. With this information, an online tool was created to recommend the most effective drugs for individual patients based on their genetic profiles.



Supervised classification to identify most differential expressed genes between good and poor responders

Background

Innovative - there are currently no clinical guidelines for choosing second-generation hormone drugs.

Tailored - an evidence-based tool for drug recommendation using patients' transcriptomic profiles, which may find the most suitable drug and prolong effective treatment duration.

Opportunity

The market for companion diagnostic devices is rapidly growing. Our drug recommendation system can be used before either acetate abiraterone, enzalutamide, apalutamide and darolutamide administration.

Key Patents

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Seeking

Commercial, and Development Partner

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