Predictive marker for taxane responsiveness of cancer patients

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Technology description

Background

Taxanes are chemotherapeutic drugs that are extensively used for a range of cancers, such as breast, ovarian, prostrate, and lung cancer, among others.

Description

University of Alberta researchers have identified a predictive marker to screen patients that are being considered for taxane-based chemotherapy.
Elevated levels of this protein marker correlate with increased breast cancer patient survival after adjuvant-taxane treatment. In vitro experiments using siRNA to knock-down protein expression demonstrate that the marker is a critical effector molecule in the mechanism of action of taxane induced cytotoxicity.
Physicians will now be able to make more informed treatment decisions in regards to taxane usage based on an antibody-based assay to screen patient biopsy samples for the expression levels of the predictive marker. Further research is ongoing to validate this method utilizing samples from a large randomized controlled clinical trial.

Advantages

Enables physicians to identify cancer patients that are likely to benefit from taxane drug treatement.
Prevent taxane exposure and limit the serious side effects and high costs associated with taxane therapy in patients that would not likely respond to such treatment.
Compatible with standard clinical procedures already in place for E.R., P.R. and HER-2 evaluation.

Institution

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