Using functional biomarkers to predict and treat PDAC

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Video Byte

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Abstract

Pancreatic ductal adenocarcinoma (PDAC) is the fourth leading cause of cancer-related deaths worldwide, and its mortality continues to rise. Its aggressiveness, presentation at an advanced stage, and resistance to most treatments have made this cancer very difficult to treat. Therefore, identifying novel PDAC biomarkers for predicting survival and monitoring therapy response is critical. Most studies have searched for gene signature biomarkers for PDAC. But the complexity of this cancer has made finding these types of biomarkers difficult. A recent study analyzed the usefulness of using functional signatures as biomarkers for this disease. Using an analytical method called Functional Analysis of Individual Microarray Expression (FAIME), the researchers converted transcriptional information into molecular functional profiles. They identified a functional signature belonging to the drug metabolism-cytochrome P450 pathway that better predicted prognosis, drug response, and chemotherapeutic efficacy for PDAC. Although additional studies are needed, these findings provide a new functional biomarker that could help improve prognosis prediction and drug response monitoring for PDAC, and lead to more therapeutic options for patients suffering from PDAC.