



Team Progress Updates

Pancreatic Cancer Collective Research Team:

“Exploiting DNA-Repair Gene Mutations in Pancreatic Cancer New Therapies Challenge”



Building on recent large-scale sequencing efforts demonstrating deficiencies in DNA repair in pancreatic cancer, the team is evaluating DNA repair inhibitors in pancreatic cancer. While clinical trials of therapy using PARP inhibitors alone have shown modest activity in pancreatic cancer, the team aims to improve upon PARP inhibitor monotherapy by developing strategies that will combine DNA repair-targeted therapies and be effective in patients experiencing PARP inhibitor resistance.

To accomplish this goal, the researchers are first studying three classes of DNA repair-targeted therapies—CHK1, ATR, and PARP inhibitors—as single agents in organoid cultures of patient-derived pancreatic cancer tumors. They are then identifying the most promising combination of DNA repair-targeted therapies and performing drug testing using patient-derived mouse models of pancreatic cancer. Through the organoid and animal model drug sensitivity experiments, the molecular mechanisms of sensitivity and resistance will be analyzed. A goal of these mechanistic studies is to develop biomarkers that can be used in clinical trials to pinpoint the pancreatic cancer patient population most likely to benefit from these therapies.

This team is part of the Pancreatic Cancer Collective, an initiative of the Lustgarten Foundation for Pancreatic Cancer Research and Stand Up To Cancer.

This team started its work in November 2018; progress notes will be posted after its first review.

