Using a Tumor Ablation Device in Pancreatic Cancer Patients

In 2018, Cures Within Reach funded Drs. Rafael Davalos and Robert C.G. Martin at Virginia Tech University to repurpose irreversible electroporation (IRE), an approved procedure in tumor ablation, for treating pancreatic cancer and to activate the immune system to potentially help treatment response. IRE delivers short, intense electrical pulses that damage the cell membrane of targeted cells without damage to the surrounding tissue, therefore it is ideally suited to treat patients with tumors that cannot be removed via surgery. Dr. Davalos developed a unique technique for developing a personalized pre-treatment plan to target each patient’s tumor more effectively with IRE. This technique demonstrated reduced ablation time and risk of thermal effects during IRE procedures for locally advanced pancreatic cancer. In 2019, results were published showing that IRE also modulated the patients' immune response. These results indicate that IRE could potentially be combined effectively with other immunotherapy, improving patient outcomes in pancreatic cancer.

KEY FACTS
- CWR’s $50,000 funded a clinical trial using irreversible electroporation (IRE) to treat pancreatic cancer

IMPACT
- CWR’S contribution helped to leverage $2.3 million in follow-on funding from the NIH to study the same technology in liver cancer
- The team developed EView, an online training tool that helps train clinicians on IRE treatment planning