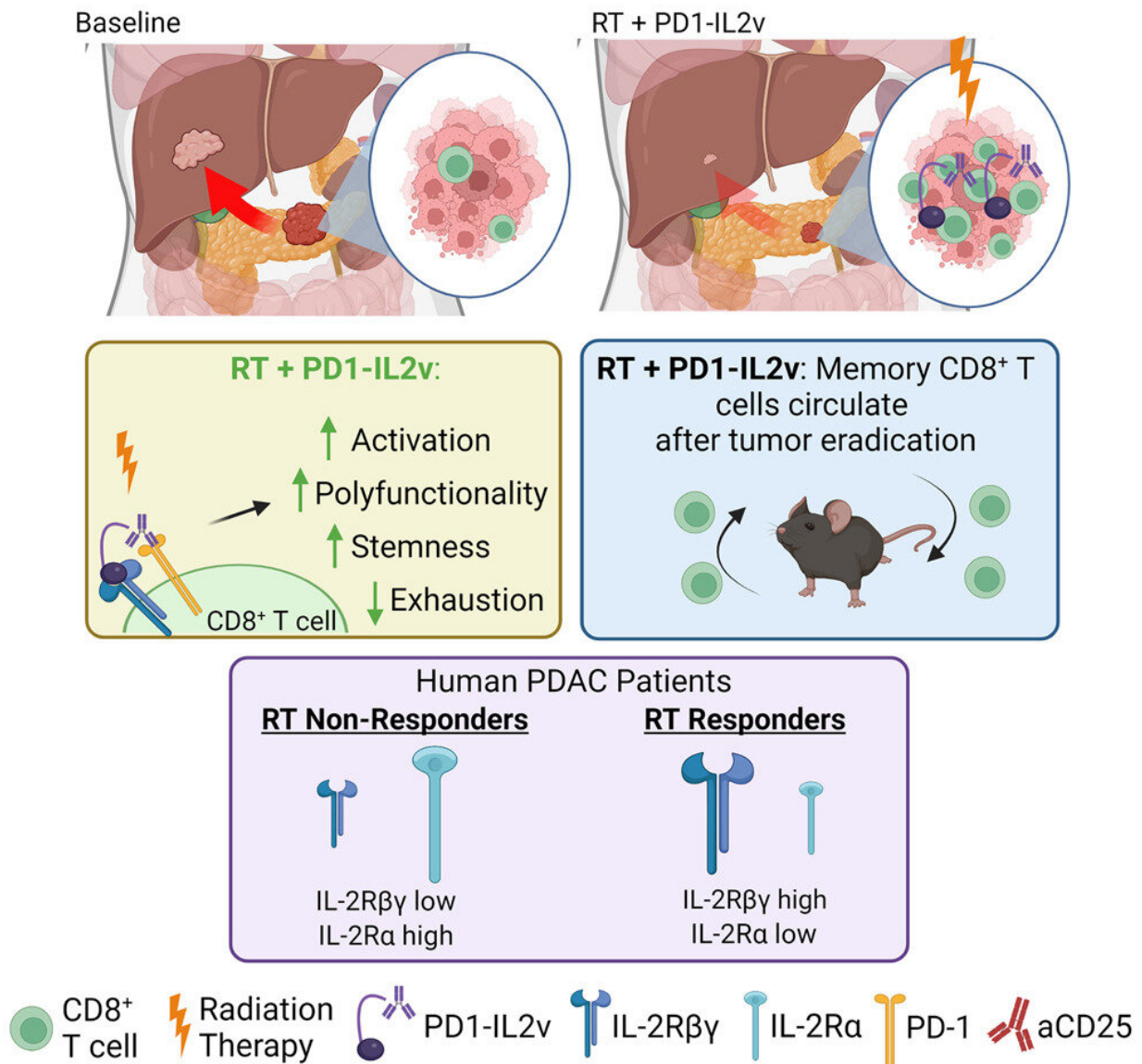


New pancreatic cancer research could boost survival rates

April 27 2023



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Graphical abstract. Credit: *Cancer Cell* (2023). DOI: 10.1016/j.ccell.2023.04.001

A unique treatment combining radiation and immunotherapy can eradicate pancreatic tumors while stopping the cancer from spreading, according to a new study by researchers at the University of Colorado Cancer Center.

The study, published today in the journal *Cancer Cell*, offers new hope to those with this often deadly disease.

"This is the first time we've seen the eradication of a pancreatic tumor that suggests the cancer cell has memory, meaning we can stop the disease from coming back," said lead author Sana Karam, MD, Ph.D., member of the CU Cancer Center at the University of Colorado Anschutz Medical Campus. "Ultimately, this could alter the way doctors treat pancreatic cancer patients in the near future."

They hope to conduct clinical trials using this therapy.

The research, which used animal models, focused on pancreatic ductal adenocarcinoma, which accounts for 90 percent of pancreatic cancer cases. Karam and her colleagues found that radiation and a new immunotherapy can induce a significant systemic memory [immune response](#) resulting in an anti-tumor effect achieving eradication, even after being rechallenged.

They hope this finding will improve [survival rates](#) for a disease that has not historically responded to immunotherapy.

According to Karam, combining the two therapies allows them to focus on eradicating 'bad' T-cells within the immune system.

"When a disease is metastatic, you want to recognize and attack the cell type everywhere, from the pancreas to the liver, blood and more," she said. "This approach does exactly that in our study."

The researchers used a novel variant antibody complex (aPD1-IL2v) that allowed for the expansion of tumor-antigen specific T-cells. This alone had a significant effect on local and distant tumor growth. It was further enhanced by adding [radiation therapy](#).

Similar immunotherapy research aimed at other cancers is being conducted in Europe. But this is the first time it's been combined with radiation therapy and focused on pancreatic cancer tumors.

"In just one radiation session, we saw a remarkable immune response that could change how we treat pancreatic cancer patients," Karam said. "I've never been more hopeful about the possibility of improving the survival rate for this disease."

More information: Miles Piper et al, Simultaneous targeting of PD-1 and IL-2R $\beta\gamma$ with radiation therapy inhibits pancreatic cancer growth and metastasis, *Cancer Cell* (2023). [DOI: 10.1016/j.ccell.2023.04.001](https://doi.org/10.1016/j.ccell.2023.04.001)

Provided by CU Anschutz Medical Campus

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