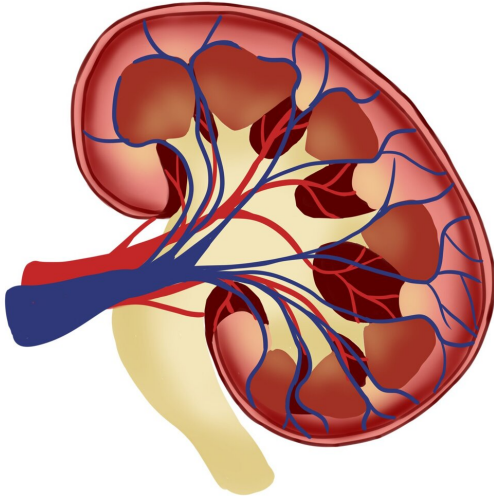


Novel treatment for rare form of kidney cancer uncovered

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Chromophobe renal cell carcinoma (ChRCC) is a rare form of kidney cancer for which there are currently no proven treatments for metastatic or unresectable disease.

In a study led by investigators from Brigham and Women's Hospital, researchers report the first evidence that ChRCC can be targeted with ferroptosis—a type of programmed [cell death](#) that occurs when large amounts of iron cause lipid peroxides to accumulate in the [cell membrane](#).

The team successfully induced ferroptosis in ChRCC cells via cysteine deprivation and found evidence that this strategy may be an effective approach for treating ChRCC.

"Targeted therapies are urgently needed to treat chromophobe RCC," said corresponding author Elizabeth P. Henske, MD, of the Division of Pulmonary and Critical Care Medicine at the Brigham. "Through our study, we've found strong

evidence that ChRCC can be therapeutically targeted by taking advantage of the cells' hypersensitivity to ferroptosis. This represents an important breakthrough in our understanding as we think about treatment for patients with this [rare disease](#)."

The research was published in *Proceedings of the National Academy of Sciences*.

More information: Elizabeth P. Henske et al, Hypersensitivity to ferroptosis in chromophobe RCC is mediated by a glutathione metabolic dependency and cystine import via solute carrier family 7 member 11, *Proceedings of the National Academy of Sciences* (2022). [DOI: 10.1073/pnas.2122840119](#).

Provided by Brigham and Women's Hospital

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