Video	Audio
[voiceover]	It started subtly — no sign anything was amiss, just some itching and rashes developing on both of Jay Elsten's legs. A trip to his primary care physician in 2012 led to an initial diagnosis of hepatitis, a prescription for antibiotics and a recommendation to call again if Jay were not feeling better in a few days.
Jay Elsten (1:37)	Well, in three days, I couldn't keep anything down. I'd lost 40 pounds in a week, and he said just go to the ER.
[voiceover]	This led to Jay's seeking help at Mayo Clinic in Rochester, Minnesota, where a biopsy revealed that Jay had a neuroendocrine tumor in his pancreas..
Dr. Thor (0:51)	Neuroendocrine tumors are really a collection of tumors that can arise anywhere essentially in the body but they behave very differently from one person to the next.
[voiceover]	The tumors' presentation in patients is so unique that some will experience diarrhea or pain from the tumors, while others will have no symptoms and the tumors are discovered during an imaging exam for something else.
Dr. Thor (2:49)	They are still a big enigma and for the most common ones, the small bowel neuroendocrine tumors, we really don't have a good understanding why people get them.
[voiceover]	Treatment options vary, as well, with surgery, chemotherapy and nuclear medicine therapy among the options. With his diagnosis, Jay had clarity from the beginning.
Jay Elsten (1:25)	I was here to fight it from the beginning and it's what I intend on doing.
Jay Elsten (8:37)	You know, I want to see my kids graduate. I want to walk my daughter down the aisle. You know, I intend on staying around for a long time.
[voiceover]	And it has been a battle. A multidisciplinary team — comprising medical oncology, gastroenterology, pulmonary medicine, surgery, radiology (especially Nuclear Medicine)and pathology — has supported Jay through each round.
[voiceover]	Jay's medical oncology team started him on chemotherapy, which shrank the cancer and gave him two years without issues. When the cancer had spread to his liver chemotherapy was not effective in bringing his neuroendocrine tumors in check and another option was needed. In January 2018, the right treatment was approved by the U.S. Food and Drug Administration for clinical use in treating gastroenteropancreatic neuroendocrine tumors: lutetium Lu 177 dotatate, a peptide receptor radionuclide therapy, or PRRT. The lutetium Lu 177 dotatate attaches itself and delivers radiation to the tumor cells.

Dr. Thor (6:32)	PRRT is a therapy using a radioactive compound that sticks to the neuroendocrine tumor cells. [W]e inject this into a vein that circulates around the body, and it sticks to the tumor cells that express the somatostatin receptors and then this radiation molecule sits right on the tumor cell and kills the tumors cells with radiation.
[voiceover]	The Division of Nuclear Medicine, part of the Department of Radiology, uses PET imaging to locate neuroendocrine tumors and determine whether a patient will respond to lutetium Lu 177 dotatate. Patients receive four doses, each eight weeks apart, with checkups about a month after each infusion. For Jay, the effects of this new treatment were almost immediate.
Jay Elsten (8:44)	Dr. Halfdanarson told me before I got the first treatment, he said, don't expect immediate results. It usually takes two rounds before we see anything. And it was just amazing.
Jay Elsten (8:44)	Within three or four days, the diarrhea stopped. It had shocked the tumor enough it quit producing that hormone and within a week I was back to normal and it was simply amazing.
Jay Elsten (6:18)	It's been a great experience up here. When I was in the hospital in Joplin with all this, there was a patient in there and one of the nurses asked me if I would go talk to him about Mayo I said I'd be happy to. You know, I'm happy to talk to anybody about Mayo. My family knows it. They probably get tired of hearing about it. But, you know, everything runs so much different here than it does at home and it's just an amazing place.