



PanCRS: Improving longer-term outcomes for patients with locally advanced pancreatic cancer

By Ryan Daugherty

Jimmy Brewer, 71, is a longtime resident of Dallas. He likes to think of himself as a hardworking and trusty individual who gets things done. He's worked as a plumber for many, many years and still to this day enjoys working when he can.

Around two years ago, Mr. Brewer began experiencing abnormal stomach pains. These pains lasted for about a year, but once the pain became unbearable he had to put his job to the side and figure out what was wrong. His local doctor told him that there was nothing to be concerned about. Of course, Mr. Brewer was not satisfied with that answer so he visited a few more doctors to get additional opinions. Their answers were the same - "everything was fine." While that reassurance was means for relief, it wasn't what Mr. Brewer wanted to hear.

"I kept telling them that I felt like I was dying and that I wasn't okay," he says. "I've had my body for over 70 years. Nobody knows how I feel but me and I was trying to say that, but no one would listen to me."

However, in January of 2018, Mr. Brewer finally got an answer. He received a phone call from a nurse who asked him if anyone had talked with him about the 5-centimeter-long tumor in his pancreas, a moment he describes as "great shock value." He recalls feeling like a zombie as information was relayed to him about pancreas cancer, all the different stages, what his options were, and what it all meant.

"It felt like my world had come to an end," he says.

Mr. Brewer's daughter, Emily, called around to find out where her father could get the best care. His wife, meanwhile, had been asking him to change doctors and get some new recommendations. He began asking around and almost every time the response was the same.

"Everyone came back with UT Southwestern," he says. "The doctor who was treating me told me he could get me in there and that's what I chose. I wanted the doctors who train the doctors; I love to surround myself with people that are smarter than me."

Upon arriving at UT Southwestern, Mr. Brewer met with Todd Aguilera, M.D., Ph.D., Assistant Professor of Radiation Oncology. Dr. Aguilera is a physician-scientist trained as a radiation oncologist with expertise in molecular engineering, molecular imaging, tumor microenvironment, and tumor immunology. He treats

patients with gastrointestinal cancer and is developing laboratory projects in pancreatic cancer. He's also the site principal investigator of a multi-institutional phase III clinical trial, PanCRS.

The trial investigates whether stereotactic ablative radiation therapy (SABR) improves longer-term outcomes for patients with locally advanced pancreatic cancer when added to the standard-of-care chemotherapy regimen, FOLFIRINOX. Open with multiple institutions, this trial aims to show the benefit of SABR when introduced early in the disease course based upon good results in earlier phase studies.

As he went over all the trial details with Mr. Brewer, Dr. Aguilera told him the process would be an aggressive one that would include three different types of chemotherapy regimens: oxaliplatin, irinotecan, and fluorouracil (5FU). According to the trial, recent clinical studies have shown that these combined forms of chemotherapy (FOLFIRINOX) are more effective than gemcitabine, another form of chemotherapy, as first-line treatment in patients with metastatic disease.

of chemotherapy to enhance his quality of life.

In March of 2018, Mr. Brewer's tumor had decreased modestly in size, but more importantly, had shown no signs of spreading. Pancreas tumors don't often shrink after treatment because of the high amount of scar tissue. That tissue usually turns into skeleton after effective treatment and can look the same. So while the size of the tumor can remain the same, the amount of active tumor could actually be much less with most of it being scar tissue and inflammation.

"We continue regular scans and by this measure we have no evidence that the disease is progressing," says Dr. Aguilera. "He initially had a good response to the radiation treatment; the tumor decreased in size a little bit and his tumor markers have gone down 10 times. At this stage he's doing well, but we need to continue to monitor because we know this regimen is still not sufficient to completely eradicate the tumor in many patients."

With clinical trial development and in Dr. Aguilera's lab, opportunities to safely increase the dose of radiation or combine it with novel drugs that will uniquely synergize with SABR are being studied. Two new radiation trials are offered to pancreatic cancer patients this year, including one that offers carbon ion therapy, which sends patients to Japan for treatment that is not available in North America. It's an exciting time to see how technologic innovations can make lasting impact for real people.

For Mr. Brewer, knowing a large part of the tumor remains, he looks at it with a "glass half full" mentality. The sizeable drop in his cancer markers alone has left him upbeat and confident. But the biggest reason for his satisfaction is Dr. Aguilera and the team of doctors and nurses treating him.

"I love how things have been going with Dr. Aguilera," he says. "He gives me hope, and hope is a huge thing not just with my cancer but any cancer. I'm so thankful for Dr. Aguilera; he's a shining star in my night of darkness."

Dr. Aguilera's view is a bit different.

"Patients like Mr. Brewer are why we at UT Southwestern do what we do," he says. "He is an inspirational veteran who has continued to give back by doing regular service projects in the Philippines. After we completed radiation,



Mr. Brewer and his daughter, Emily.

Mr. Brewer started chemotherapy in January of 2018 and had five treatments of radiation that April. He tolerated the three chemotherapies for just three rounds before he dropped one of them. In between the radiation treatments, he switched the chemotherapy combinations. This past May he was titrated down to just a single agent

he had a short break in therapy and went on his regularly scheduled trip. There is nothing more gratifying than being a part of enabling him to continue to be a light amongst his fellow veterans and working to make an impact in people's lives overseas."

Mr. Brewer continues to visit UT Southwestern for chemotherapy and occasional checkups. He also continues to tolerate the treatments well and his tumor markers remain at a reasonably low level.

In pancreatic cancer the tumor marker CA19-9 can be a good indication of the disease trajectory, but it is far from perfect as some people can have elevated levels for years without true progression of disease; other things can cause an elevation, and, for others, it may never be elevated.

While he has been nothing but satisfied with the results so far, his quality of life is the biggest deal to him right now. He continues to work and wants to continue working when he can. He knows he is in the right place and he wants other people to know that if they come to UT Southwestern they will get the best treatment possible and find what they are looking for.

"When I tell somebody you can take it to the bank, then you can take it to the bank," he says. "I'm a hard guy to please or to convince and I'm convinced that I've got the right people on this part of my journey. I can't explain it any other way than hope."

