

UNIVERSITY OF MARYLAND MEDICINE ROUNDS

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PANCREAS TRANSPLANT PROGRAM AIMS TO EXPAND THESE LIFE-CHANGING SURGERIES

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Less than a year after assuming the leadership of University of Maryland Medical Center's (UMMC) Pancreas Transplant Program — one of the busiest in the country — Joseph Scalea, M.D., has already begun to expand the number of these transformative surgeries through comprehensive, multidisciplinary coordination.

Launched in the early 1990s, the pancreas transplant program successfully performs between 15 and 25 pancreas transplants each year. UMMC is among the

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KEY POINTS:

- Pancreas Transplant Director Dr. Joseph Scalea hired in August 2016
- UMMC continues longstanding tradition of high-volume pancreas transplants
- Insulin-dependent, severe diabetics considered for pancreas transplant
- Operation allows patients to live a normal life after decades of complications





ASSISTANT PROFESSOR OF SURGERY, Joseph Scalea, M.D., focuses on pancreas transplantation as well as autologous and allogeneic islet cell transplantation.

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top 15 centers nationally in volume of pancreas transplants, which are often combined with kidney transplants as a result of organ damage stemming from severe diabetes.

Although it is a major surgery, pancreas transplantation often dramatically improves patients' lives, alleviating longstanding concerns about its extensive damage to their bodies and way of life, explains Dr. Scalea, who began his role as UMMC's director of pancreas and islet cell transplantation in August 2016 after completing a transplant fellowship at University of Wisconsin.

"A lot of pancreas transplant programs around the country are getting smaller. While our numbers have fluctuated in the past, it looks like we're on the upswing," says Dr. Scalea, also

an assistant professor of surgery at University of Maryland School of Medicine. "I anticipate us doing 25 to 40 pancreas transplants each year over the next few years. We definitely have the numbers to support this kind of sustained growth. We're a nationally recognized thought leader in pancreas transplantation, and the program is changing — in a good way."

SIGNIFICANT BENEFITS AFTER DECADES OF SUFFERING

Dr. Scalea credits Chairman of Surgery Stephen Bartlett, M.D., with helping to pioneer pancreas transplantation at UMMC, and the country, beginning more than 25 years ago. First performed in the United States about 50 years ago, few such transplants were done nationally until the mid-1980s, when surgical techniques improved along with the

immunosuppressive drugs vital for preventing organ rejection in transplant recipients. While some examples of living donor pancreas transplantation have been performed elsewhere, donor pancreases come from cadavers.

"Dr. Bartlett had a vision for how to treat the diabetic patient with renal failure," Dr. Scalea says. "Since then, pancreas transplantation has been an important part of our program and we are focused on making sure we stay at the top."

Although all pancreas transplants are performed in patients with diabetes — a condition at epidemic levels in the United States, with nearly 29 million affected — not all diabetic patients require a pancreas transplant. Only a "small minority" are candidates for a pancreas transplant, Dr. Scalea notes,



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- JOSEPH SCALEA, M.D.

and most of these patients have a severe form of type 1 or insulin-dependent diabetes.

Despite improving medical management, many diabetic patients have suffered for decades from the ravaging effects of their disease — especially kidney failure — which is why dual pancreas-kidney transplantation is performed at UMMC in the vast majority of cases. Other diabetic complications include neuropathy, retinopathy, gastroparesis, and severe glucose instability, when erratic blood sugar levels can cause tremors, seizures or even coma.

“We have plenty of juvenile diabetes cases in the country, so why aren’t we doing more pancreas transplants?” asks Dr. Bartlett, the Peter Angelos Distinguished Professor and executive vice president and surgeon-in-chief of the University of Maryland Medical System.

“The number of usable pancreases in donor organs is fairly limited. We’re still at a stage where we’re wasting more organs and not transplanting as many as we could. The whole nation could be doing more than 3,000 per year if we optimally used the donor supply, but that’s still three times more than we’re doing now.”

LIFE AFTER SURGERY

In a three- to five-hour operation — depending on whether a dual-organ transplant is being performed — surgeons leave the native pancreas in place. The transplanted pancreas

is then sewn in, typically into the right side of the abdomen. The donor organ typically begins working immediately, producing insulin as well as pancreatic juices that surgeons drain into the recipient’s intestines by sewing together donor and recipient intestines, Dr. Scalea explains.

Transplant patients typically remain hospitalized for five or six days afterward unless unforeseen issues arise. The most common risks of pancreas transplantation are infection and blood clots in the new organ, Drs. Scalea and Bartlett say. But, recovery proceeds smoothly for most, and eventually patients require only one or two follow-up visits each year for monitoring.

The biggest change, Dr. Scalea says, is that patients no longer require insulin to control their blood sugar — an element of their care that these patients have grown to obsess over. “The improvement in quality of life is quite remarkable,” comments Dr. Scalea.

“It’s a life-changing event,” he says. “A lot of patients say they continue to check blood sugars because they’re so used to doing it. When the surgery is all over, they almost don’t know what to do. The diabetes, as they’ve known it — is gone.

In the aftermath of a dual pancreas-kidney transplant, Dr. Bartlett says, patients often become emotional.

“In a five-hour operation, you’ve cured both disorders at once,” he says.

“Patients no longer need insulin or kidney dialysis, and it allows them to live a completely normal life. It’s amazing. When they wake up, they feel completely different.”

MULTIDISCIPLINARY EFFORT TO HELP MORE PATIENTS

Dr. Scalea hopes to continue increasing UMMC’s volume of pancreas transplantation by reaching out to endocrinologists and nephrologists — who are deeply involved in diabetes care — in a comprehensive, system-wide effort. His goal is for UMMC’s transplant division to be a partner not in “pancreas transplantation,” per se, but rather a partner in the care of patients with severe diabetes.

“While only a small percentage of those with diabetes actually need a pancreas transplant, our goal is to identify and provide this lifesaving service for those patients, many of whom are managed by [specialists] who may not know a lot about pancreas transplant or who’s a good candidate,” he says. “Under my leadership, I hope to build a multidisciplinary team for diabetes care.” Dr. Scalea comments that “Luckily, we have a great team in place already, inclusive of Dr. Beth Lamos and Dr. Kashif Munir, in the department of endocrinology. Further, it is my estimation that our team is only going to get even stronger over the course of the next several years.”

Dr. Scalea says he envisions UMMC’s Pancreas Transplant Program becoming “another tool in the endocrinology toolbox,” and yet, another way to help patients who have severe diabetes.

“The University of Maryland has been a bastion for pancreas transplantation for a very long time. I only hope to continue to build on that tradition of success,” he says. “I think we can help more people if we’re smart about it.” ✚