SATISH NADIG: The kidney is actually the most commonly transplanted organ. And now we're at the stage where our medications are quite good, although there are some issues with the medications, but we're running into the hurdle of quality organs. Our supply is disparate with our demand. And patients on the waiting list are growing and the supply is actually diminishing. So living donation and the living donor chain was developed in order to reduce that disparity a bit. And it's been revolutionary for the field.

SARA PARKER: The kidney chain is actually a domino effect that can be started with a good Samaritan donor or just a donor that is incompatible with their recipient. And it just dominoes through different centers across the country to transplant folks who are incompatible.

SATISH NADIG: The other thing is it allows-- we know now that organs don't have to come from relatives. They can come from spouses, they can come from church members, they can come from anyone in the community and have really good outcomes.

KRISTY HOKETT: It can be a chain. So what it is that since Tom and I aren't a match, at that moment, I had the decision to either just stop because I wanted to donate directly to Tom and I couldn't or continue on in the process. And what that means is that I would still be considered his donor but I would be donating my kidney to someone else. And then in turn, they would find someone to donate to him. So it's like a chain.

SARA PARKER: With the kidney chains, we're able to break the barrier of blood typing compatibility and tissue typing compatibility. Compatible meaning blood type compatibility or tissue typing compatibility. Blood typing, there's only four in the world so that's pretty easy to get past. O being the universal donor. But tissue typing is much more individualized, and it's based on your parents and who they are and how your genetics are passed down. So that is much more difficult to overcome-- tissue typing.

SATISH NADIG: So we have to organize timing between donor and recipient pair. And if it's an exchange, we have to organize the logistics around bringing a kidney in from somewhere out of the region into our center, et cetera. So the actual technical part of living donation, as far as a transplant, is not much different on the recipient side.

The donor operation has changed dramatically since it was first done, I guess, in 1954 where it was an open operation. In the mid 1990s, we started doing it as a minimally invasive approach, and there's various ways to do that. But the donor experience is much different now, with a much smaller incision and much shorter hospital stay.

MUSC has been involved in some of the largest kidney chains in the country. Our living donor and kidney transplant rate is really our flagship program in our organ transplant center. As I said, our kidney transplant outcomes are very good, and we've been able to maintain a standard of care for decades. And we do between 200 and 250 kidneys a year. Many of them are deceased donor kidneys, but we do about 30 to 50 living donors a year as well. Those organs tend to last longer and afford a better quality of life for the recipient as well.

SARA PARKER: It's a human thing. It brings us all down to a human level. It's all about, let's help as many people as possible.