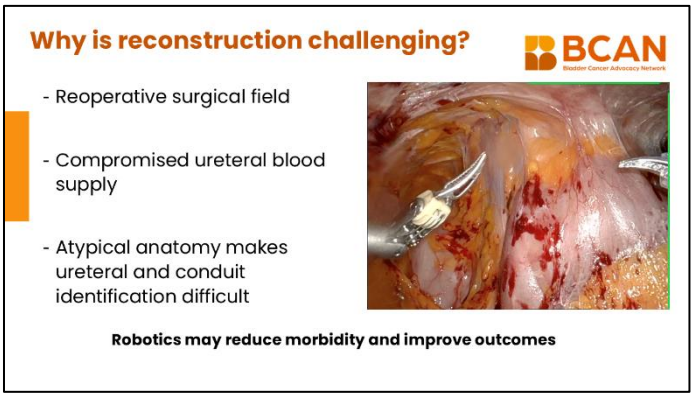
Dr. Ziho Lee:



And so for me, I do a lot of robotic surgery. I'm a staunch proponent of this. The reason is because it's very minimally invasive. I have patients that leave the hospital either the same day or a day after surgery. There's small little dime size holes. There will be pain after surgery because it is major surgery, but it's much more minimally invasive than the gold standard, which is to make a big open incision.

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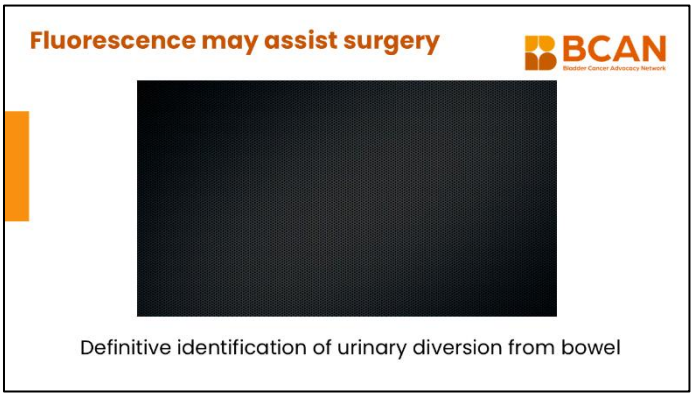

I use a lot ... I try to be at the cutting edge of all surgeries. I like to use a lot of technology. I've done a lot of work and research into using fluorescence during surgery. Why do I use fluorescence? Well, I use fluorescence because it helps me identify structures. I told you guys, anatomy is hard to find because I wasn't the original surgeon, so I have no idea where anything is and I need to find it. So fluorescence can help me find different things.

I thought it'd be fun just to show you guys some clips of videos from surgeries where patients gave me approval to show this. If you have this issue or know someone with this issue, you have a better idea of what's going on. But when I go in bellies, oftentimes there's a lot of scar tissue everywhere. The bowel is just stuck everywhere and I don't know ... Your urinary diversion, your conduit, neobladder, your Indiana pouch, it's made of bowel. And so I need to be able to differentiate the urinary bowel from your intestinal bowel.

This is a patient who had a neobladder, who has a stricture. And you can see here, I have no idea what is what. I need to figure it out. I put a little dye in the conduit and you see that green hue right there. I know right away everything else that's not green, I know that's intestinal segment. It's like cheating. It's the easy button. I push it. The fluorescence goes on. Green is where I need to go, so I just go straight for the green. And so this was a great technique that I helped develop.

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Lastly, I also told you I use fluorescence. I told you guys that the ureter is scarred because there's compromised blood supply. And so when I do ureter reconstruction, I inject fluorescent imaging in the veins. And what happens is that it's going to fluoresce green, where there's good blood supply and where it's not green, it's going to be bad blood supply. Oops, sorry. Oh, no. I don't think this video is working for some reason. I will have to skip over that, but I believe that we'll have some images of this later on.

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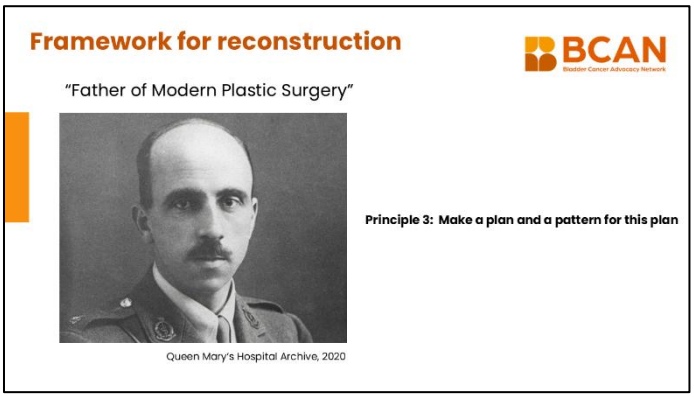

So when I talk about reconstruction, I'm a big history guy. I think in any industry, surgery included, a big part of why I've been very lucky to work on the cutting edge, develop new techniques and offer advanced surgeries because of the people before me. And so this is Sir Harold Gillies, he was known as the father of modern day plastic surgery. Why am I talking about plastic surgery when I'm a urologist? Well, a lot of what I do reconstruction is based in plastic surgery. And so he was a surgeon in World War I and World War II and really revolutionized surgery, especially plastic surgery.

He came up with a set of rules, which some refer to as the Bible of plastic surgery. These are rules where ... They have transcended time, where ... In reconstruction, essentially you can do a lot of creative new things as long as you stick to a certain set of rules. One of the rules that the surgeon came up with was principle three, is you make a plan and always have a pattern for this plan. So a lot of times when I go to surgery, I tell my patients, "I could do maybe four or five different surgeries. I have no idea which one I'm going to do, and I got to do whatever is going to be best for you during surgery." So I tell them about five different surgeries. I say, "Listen, I don't know exactly what I'm going to do, but it's going to be one of these options."

And the reason I do this is because I really try to tailor the surgery to the patient. I don't use a one size fits all. I try to do what's best for the patient. And I think what's really relevant here is ... I have a game plan. I have a roadmap that I follow, and I'm going to share with you guys my roadmap.

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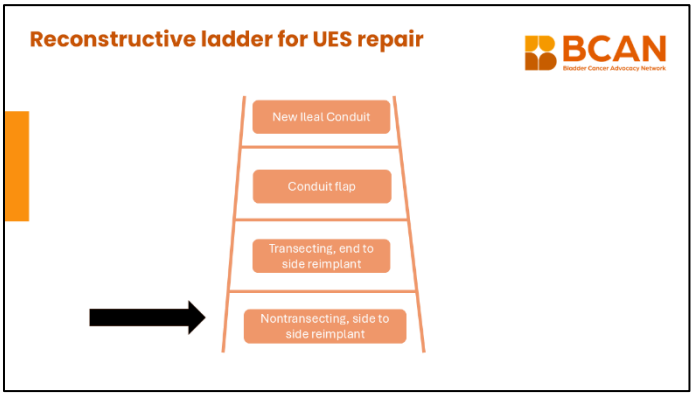

And so in reconstruction, we have something called ladders. Why? Well, I start with the easiest thing. So this thing down below, that's what I usually shoot for. If I can't do it, I go up a step on the ladder. If I can't do that, I go another step on the ladder. If I can't do that, I'm climbing the final step in the ladder.

And so I'm going to talk to you guys about some of the technical nuances and things that I do. It can show you some of the things that I do. The first option is this, what the heck is a non-transecting side to side re-implant?

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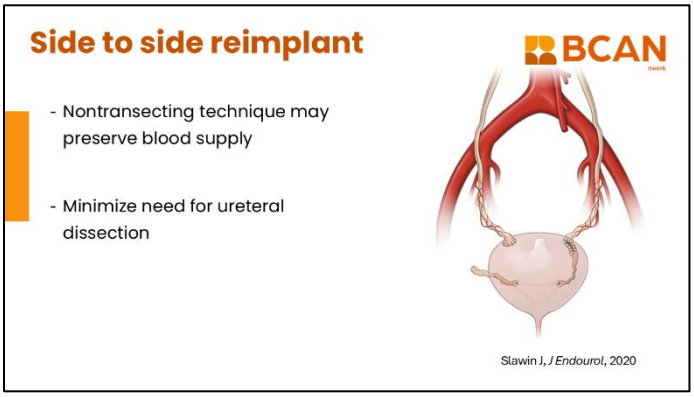

So I'm going to tell you guys what that is. So normally, normally when there's scar tissue, let's say you have a tube and there's scar tissue in the tube. The easiest way to fix that is you just cut out the scarred area and then you just put the two ends back together. That is probably the easiest thing to do.

However, what I explained to you guys was that the ureter is extremely fragile. I don't really want to dissect it a lot. I don't want to cut it a lot. And the blood supply ... The blood vessels go longitudinally. They're parallel to the longitudinal diameter. And so if you cut across the ureter, you can compromise the blood supply. So instead of doing the classic, what we've

all been taught, you just cut out the scarred ends and you put the good ends back together. What I actually do is if you look on the right side of this patient. I make a slit. So I make a slit in the ureter on the side. And then what I do is I connect the side of the ureter to the side of the bladder. That's why you call it a side to side re-implant. And this was a technique I helped popularize.

And so I'm keeping the original. So if you could see here, this is the ureter, this tan structure coming down. It plugs into this hole right here, and you can see the scar tissue right here. So the original hole is still there. And what I'm doing is I'm cutting above that scar tissue and I'm just swinging things over and connecting it. This really minimally disrupts the blood supply, leading to a more favorable outcome.

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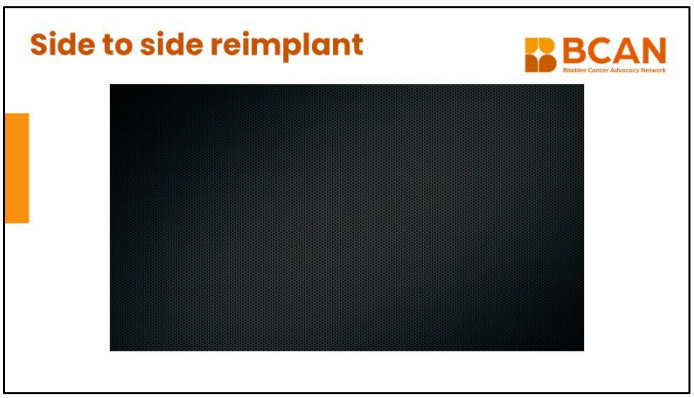

And so when I'm able to do this, I always do this. And I'm going to show this to you via video form, so that you guys get a better sense.

So this is a 68-year-old. This is the image here. This is the conduit. This is the scar. So you could see here, this is the scar tissue. This is a really nice ... I'm going to stop this right here and show you guys. So you could see this is the conduit here on the right side here, this big piece of bowel. And then you can see this is the ureter, this tube, and it's going down into this scarred or narrow portion, and you can see that narrowing really, really well.

And so what I'm going to do is I'm going to dissect out the conduit. You could see the amount of scar, but when I'm robotic, I have really good access to this area. I'm comfortable. I'm sitting down in a seat. I'm controlling the robot. And what I'm doing is I'm really dissecting everything really nice and clean. I really like to dissect everything off, just to have really good anatomy, and it makes the surgery very easy and very clear cut to me, and I don't ask questions. So when I'm done with your surgery, I can come out and say, "I did a great job and I know you're going to be good."

And so here you can see this narrowing. And so what I'm doing is I'm making a slit right above the area of narrowing and you're going to see this opening into the ureter right here. This is the tube and you can see it's bleeding. This is good. I want it to bleed because that means there's good blood supply. What I'm going to do is I'm going to make a hole into that conduit. And remember, the original hole is still there. The original connection is still there. What I'm doing is I'm just bringing that ileal conduit or that urinary diversion right to the ureter and I'm sewing this in place. I'm connecting the two ends back together. And what I'm doing is I'm really minimally disrupting it. I'm not cutting across the ureter. I'm making a slit into the ureter and doing a nice connection.

And this has worked out extremely nicely. So this is my go to. If I'm able to do this procedure, this technique, I'm going to do it 10 times out of 10 times because this is what I think, in my opinion, the best way to fix these. And this is a stent. This is a plastic tube. I like to place it. This allows for healing of the connection across this area. And what you can see here, you put the stent in, and then all I got to do is I got to sew that hole back together, and then we're all done. Very intricate suturing here, using very small needles. This is magnified 10 times. So the robot magnifies things about 10 times, but you can see it's pretty easy here, just to finish the reconstruction.