

Sawbones 186: Vivien Thomas

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Intro (Clint McElroy): Sawbones is a show about medical history, and nothing the hosts say should be taken as medical advice or opinion. It's for fun. Can't you just have fun for an hour and not try to diagnose your mystery boil? We think you've earned it. Just sit back, relax and enjoy a moment of distraction from that weird growth. You're worth it.

[theme music plays]

Justin: Hello everybody, and welcome to Sawbones: a marital tour of misguided medicine. I'm your cohost, Justin McElroy.

Sydnee: And I'm Sydnee McElroy.

Justin: Hi Syd.

Sydnee: Hi Justin. How are you this week?

Justin: I'm good. I'm doing very well and I'm excited to hear what you've cooked up for us.

Sydnee: Oh, so I should just, like, jump right into it? Just go?

Justin: Just jump right into it. I'm ready. No preamble.

Sydnee: Well, that's fine, because I actually was inspired to this episode while I was researching last week's episode.

Justin: That's right folks, it's another famous Sawbones combo.

Sydnee: Oh no.

Justin: C-c-c-combo.

Sydnee: Don't say that, because then they'll expect us to just keep going. Remember we did that for a while. How long did we do that?

Justin: We had, like, a six-episode chain.

Sydnee: Yeah.

Justin: Yeah.

Sydnee: I don't know that I'm ready for that.

Justin: Oh no, absolutely not.

Sydnee: I'm not gonna commit that far. But while I was— if you listened to our episode last week, it was about Tetralogy of Fallot and the, uh, kinda the development of the procedure that fixed that and what the history of that was.

Justin: It was a hole in the heart that was brought to our attention by a Jimmy Kimmel story, on his show.

Sydnee: Yes. It is much more than just a hole in the heart. I did a whole episode. You were my cohost. About it.

Justin: Hmm...

Sydnee: You... there were...

Justin: There's overflow from one chamber into another. That thing.

Sydnee: Yeah, okay. There you go. IHOP, remember IHOP?

Justin: IHOP, right.

Sydnee: Now you've got it.

Justin: I Heart... Oops. Porthole.

Sydnee: [laughs]

Justin: No, that's not right. I don't know the mnemonic, I'm sorry.

Sydnee: That's not, mm-mm, that's really wrong.

Justin: I really messed it up.

Sydnee: If there's any medical students listening, that is not what that stands for, please don't use that on your next exam.

Justin: Uh, Sydnee, why are we talking about Tetralogy of Fallot again?

Sydnee: Well, we're not gonna talk about Tetralogy of Fallot again, we're gonna talk about somebody that I only briefly mentioned in our last episode. When I was discussing the procedure that was developed to fix Tetralogy of Fallot, we talked about Alfred Blalock and we talked about Helen Taussig and I mentioned very briefly that Alfred Blalock's assistant was Vivien Thomas, but I didn't say much else about him because this needs to be a whole episode.

Justin: Alright.

Sydnee: So, thank you to Janet, who wrote an email suggesting this topic. I'm not gonna give you full credit, Janet, because I was already gonna do it. Thank you anyway.

Justin: Yeah, that was nice of you. We'll share it.

Sydnee: Yeah. I'll share it, I'll share the credit. So, Vivien Thomas was born on August 29th—

Justin: Vivien Thomas is not a woman, which I'm not sure we clarified that in the last episode.

Sydnee: No, well, I don't think I did. I don't think I've commented one way or another, because I knew... I didn't wanna spoil it, I didn't want spoilers.

Justin: Okay, no spoilers.

Sydnee: I knew this would be a whole great episode unto itself. But no, Vivien Thomas, I know we kind of traditionally think of Vivien more as the name of a female, but no, Vivien Thomas was male. Born on August 29th 1910 in New Iberia, Louisiana. Grandson of a slave. I only mention that because he goes on to do amazing things and came from humble beginnings.

He attended high school in Nashville and he intended on becoming a physician. That was his plan all along. He was fascinated with medicine and intended on going to— saving up, going to college and going to medical school and becoming a doctor. He saved up some money, kinda following in his dad's footsteps, working at Vanderbilt as a carpenter for a bit, trying to save up some money. He, um, also worked as an orderly in a hospital—

Justin: Which is one way into surgery. It's a less traditional way. Carpentry is a less traditional path into surgery, but if you think about it, cutting, cutting, it's the same thing.

Sydnee: Wood, human flesh...

Justin: Surgery is carpentry of the body. Body carpentry.

Sydnee: Well...

Justin: I'm starting to sound like a bad science fiction novel. "He's a body carpenter."

Sydnee: To be fair, orthopedics, I mean...

Justin: Yah. Right? Thank you. I dunno what that means, I'm sure it's hysterical, but I will ask that you move on at this point.

Sydnee: [laughs] So, uh, he also worked as an orderly for a while, he saved up his money and he enrolled in Tennessee agricultural and industrial college, intent on studying pre-med. However, he lost a lot of money after the crash of 1929.

Justin: Oh.

Sydnee: And this kind threw a wrench into his plans.

Justin: Yeah. Put a lot of plans on hold.

Sydnee: Yes, for a lot of people. And obviously, so did the resulting Great Depression that followed. And so, he had to pursue work and making money and that kinda thing instead. And just to kinda add in here, not all of the exact same time, but in the early 30s he also got married to Clara and had— would end up having two daughters, Olga Faye and Theodosia.

Justin: Apologies to everyone who is now singing "Dear Theodosia" to themselves.

Sydnee: [laughs]

Justin: In their cars.

Sydnee: They may have been specifically why I just really wanted to get his daughter's name in there. Theodosia. Maybe we have to think about that if we're gonna have another girl.

Justin: You think?

Sydnee: I dunno. Just throwing it out there.

Justin: We'll table it.

Sydnee: It's a pretty name. Anyway, so I think also adding to this need for a career was he now had a family to support.

Justin: You think there's gonna be a lot of Theodosias kicking around here in about ten years?

Sydnee: I think for sure.

Justin: Hey little girl, let me tell you about your parents. They loved the theatre.

Sydnee: [laughs]

Justin: Correct? Yes. Thank you. I'm Kreskin Junior, Kreskin's son, the next generation.

Sydnee: [laughs] Hey, there's another great name.

Justin: Kreskin. Now you're talking.

Sydnee: Anyway. [laughs] So, he landed— he was looking around for a job and through a friend he found out about a position as a surgical research assistant, like a technician that would work with a surgeon, named Dr. Alfred Blalock. And he found out about this job and he thought he would go kinda check it out.

Blalock, by the way, was a descendent of Jefferson Davis, kind of what you think of as like a very traditional southern aristocratic type gentleman. He was known to be very difficult to get along with. A lot of people had issues with him. He was straight to the point about things, he was very blunt, very plain-spoken and he needed an assistant. And he interviewed Thomas and he seemed to be bright and catch on really quickly, and he liked that he was also hard-working and straightforward

and got right to the point as well. And the two of them kinda hit it off from the very first meeting.

So, he hired him and on his first day of work he helped to operate on a dog. Now, we mentioned in the last episode that a lot of the procedures that they would end up doing on the human heart they practiced in dogs. You know, so Dr Blalock was already starting to work on some different procedures. Right now he was more working on shock, traumatic shock. What happened to the body if you went into shock, what the cause was and you know, thereby what we can do to treat it.

Justin: I'm staring you intently to try to keep myself from visualizing what they did to put dogs in shock, so just like, keep... stay with me here.

Sydnee: Okay, well I don't have any details.

Justin: Perfect.

Sydnee: I'm not gonna upset you with any details. Let me say that a lot of the work that was done— and so we'll mention— this won't be the only time in this episode that we'll mention that they practiced a lot of these procedures on dogs. And I think that while obviously it's not something that we want to dwell on and certainly we don't want to think about or visualize, clearly, I think it's important to mention that these animals made a huge sacrifice for the human race and saved many lives, and so honoring that sacrifice and recognizing their contribution, I don't think is necessarily a bad thing.

Justin: And we let the vast majority of their brethren just chill and poop on the floor and get free food, so like, we're doing well by most of them.

Sydnee: [pauses] Sure. You could make that case.

Justin: That's not good morality, though.

Sydnee: Yeah, that's not— that's not really—

Justin: I'm realizing now, that's a troubling slippery slope I've put us on.

Sydnee: [laughs] I'm trying to say that these dogs saved lives. Let's focus on that.

Justin: Yeah, let's stick with that. Yours was better, I shouldn't have tried to pile on. [laughs]

Sydnee: Uh, so the first day of work he helped operate on a dog and at the end of the day Blalock said, "Look, tomorrow morning, now that you see what I do here, tomorrow morning what I want you to do is come on in bright and early, prep another one for surgery, so go ahead, get another dog, like, get them under anesthesia and have them ready to go," tomorrow morning, second day on the job. Can you imagine that? It's you second day on the job and they're telling you, like... you don't know how to use anesthesia, you've never done it before. "Just figure it out and have it done tomorrow morning when I get here so that we can start doing surgery right away."

Justin: When I worked at Blockbuster, I didn't learn how to mop until three months in.

Sydnee: [laughs]

Justin: They only let me put tapes back.

Sydnee: Is mopping that hard?

Justin: I always feigned like I didn't know how to do it right so that I wouldn't have to.

Sydnee: [laughs]

Justin: I figured if I never learned— if no one ever taught me how to mop, then I would never have to do it.

Sydnee: And everybody just didn't know what to say when you said, "I don't know how to mop," like...

Justin: "I don't know how to mop. My mommy mops. Can I put some tapes away now?"

Sydnee: [laughs] By the end of the month, like I already mentioned, Vivien Thomas caught on very quickly, and by the end of the month he was starting the procedures by himself. So, he would come in, he was able to do— I mean, we're talking about a lot of, like, complex kinda mathematical equations and things to figure out the physiology and how to—

Justin: It's a fine line with anesthesiology.

Sydnee: Exactly. The dosing to put these dogs to sleep and then to actually start the surgical procedures by himself, and also to record all the results, which included, like, using very complex equipment to measure the amount of oxygen in blood and that kind of thing. And again, a lot of long hand equations went into those at the time. Now when I wanna know those things I just order a lab and keep clicking a button on the computer until numbers pop up.

Justin: Mm hmm.

Sydnee: So, he began to do these procedures and he was very skilled at them very quickly. He did, I thought it was an interesting little anecdote because he— by the way, just to kinda spoil ahead of time, Vivien Thomas did write an autobiography about his life and so a lot of this also comes from the autobiography, but he recorded that at one point he really felt like his relationship with Blalock took off after he messed something up, Thomas did, something that he was supposed to prepping.

He didn't do it exactly right and Blalock kind of lost it and showed, I think, some of that personality that he was already somewhat notorious for and he cursed and yelled and screamed and called him names. And Thomas basically just said, "Gimme my pay and I'm leaving. You're not gonna talk to me that way."

Justin: Nice.

Sydnee: That's not— I'm sorry. It's not worth it to me. You know, basically like, my dignity isn't worth any job. And Blalock basically just backed down immediately and apologized and said alright.

Justin: Nice!

Sydnee: And they got along really well after that.

Justin: I like that.

Sydnee: Um, now here's a crazy thing. So, he was doing all this as a surgical research assistant and he was listed and paid as a janitor.

Justin: Ugh.

Sydnee: Yeah. His official title was, uh, janitor there and he was paid accordingly. Um, and this is true throughout a lot of his early career. And he was still trying to support a family, too on this.

Justin: Yeah.

Sydnee: A lot of the initial work, as I kind of already mentioned, that they were doing focused on shock. So, they were worried about people who go into shock, usually because of some sort of extreme trauma. That's physical trauma, I don't mean emotional trauma. I mean like, they go into shock because they get into a horrible car accident and limb gets severed, something like that. And the prevailing theory was that there was some sort of toxin in the blood that was making all your organs shut down and making you so sick when shock occurred. And what Blalock believed was that it was probably more related to fluid loss.

Justin: Mm hmm. How would that work?

Sydnee: Blood loss and fluid loss from giant trauma.

Justin: Oh okay, from the trauma. Alright.

Sydnee: Yeah. And so, right now this sounds like a really obvious thing, but it's because we know it now.

Justin: Sure, everything's obvious in hindsight.

Sydnee: So, the research would take them really long hours in the lab, like, monitoring all these different experiments to see what would happen with like, fluid loss and trying to replete it and what kind of changes went on in the human body and trying to mimic what we would think of today as like, crush injuries, just completely smashing a bunch of blood vessels and seeing, you know, what happens to the tissue.

And in addition, Blalock and Thomas kinda developed this relationship where Blalock would just kind of sit and think and muse, "I wonder what would happen if this and this in the human body went wrong and we tried to do this to fix it." And when he would kind of come up with these off-the-wall thoughts, Vivien Thomas's job was to then put it into a dog. Was to make it happen.

Justin: "Do this to... do this to a dog. Hey, Viv? Do this to a dog for me."

Sydnee: [laughs] Mm hmm, yep, that was basically it. And so, and then he had to figure out how to replicate this condition and fix it. So, not just how to fix the problem, but how to first create the problem in a lab in a way that it could then be fixed. So, you know, all of the protocols and things that came out of these, largely were Thomas develop—were because Thomas developed them.

I mean, the ideas may have originated in some cases with Blalock kind of wondering them, but it was all up to Vivien Thomas to actually make it into real world solutions. This, all of this with hemorrhagic shock and traumatic shock, this work they did led to a huge breakthrough in research in that area and would be instrumental to saving a lot of lives in World War II.

Justin: Wow, oh yeah, for sure.

Sydnee: Yeah, because then we knew about sim— what we think of as very simplistic things now like giving people a bunch of IV fluids to support their blood pressure, so giving people plasma transfusions if they've lost a lot of blood, and that kinda stuff, so this was huge groundbreaking research that they were doing. Now, because of all this stuff that they were doing and publishing and talking about with shock, Blalock began to get some attention in the medical world.

Justin: Sure.

Sydnee: Because you gotta remember, a lot of this, for the most part, was just being published as Blalock's work.

Justin: Right, of course.

Sydnee: Yeah. I mean, Thomas was not given much, if any, for the most part, mention in these kinds of papers and things. So, Blalock was offered a position at Henry Ford hospital in Detroit as a result of all this and he said he would come, but that Vivien Thomas was part of the package deal. That they came as a team.

Justin: Me and Viv.

Sydnee: Because he was instrumental to his work. And they said no way, that's a dealbreaker, we don't... the only reason we would allow a black man to work in our hospital is as a janitor. And Blalock said, okay,

I'm not coming then. Either we come as a team or I don't come at all. And so, he passed that up.

They also, at this point, began practicing surgical procedures on the hearts of dogs as well. And you know, like we've already said, this was huge in what would come soon. This was very taboo, not to do procedures on dogs, but to do any kind of heart procedure. The idea that you could operate on the heart was unthinkable. The thought was that you would, just by cutting into the heart, by having to clamp vessels, that there's no way a patient could ever survive such a surgery, so why even bother trying? Even if you could fix the defect it wouldn't matter because you patient would die on the table, was the thought.

Justin: Okay.

Sydnee: So, this was huge. The thought that they were talking about doing surgery on hearts was like a major "I can't believe you'd even consider such a thing." Um, so this was a huge deal, nobody thought it was possible, they were gonna do it anyway, and again, they were getting more attention for these different things they were doing, so Blalock was offered another position, this time at Johns Hopkins.

And again, he told them the same deal, I'm only coming if I can bring Vivien Thomas with me, and Johns Hopkins took him up on it. So, he actually had to convince Thomas to move with him. He wasn't thrilled about it at first.

Justin: Why was that?

Sydnee: He just wasn't sure that it was the best thing for his family, that was his main concern. He was worried about making enough money there and it was much more expensive. When they actually, when they first got there, they didn't realize how much more expensive it was gonna be to live in Baltimore than in Nashville, and there was no way when they first got there that he gonna be able to pay just for, I mean, basic stuff. You know, rent and food and sending his kids to all this stuff.

And he basically said, listen, I'm sorry... Al. [laughs] I gotta go back. I'm going back to Nashville. I can't survive here, I can't take care of my family, I'm gonna have to get a different job. I can't work the job that you got me because it doesn't pay enough. And Blalock suggested actually why don't you let your wife work, too and then that'll work, and

he took great exception to that and said like, listen, that's not the deal. I can support my family. I'm capable of it. If I can't do it here, I'll move back to Nashville because I know I can do it there. And so, Blalock actually went and had some kind of meeting with officials at Hopkins and actually negotiated for a higher salary for Thomas, to get him to stay. Because he needed him.

Justin: Yeah, he was really important to him, it sounds like.

Sydnee: Yeah. It wasn't— I mean, it sounds like, "So he's doing him this favor," and I mean, yes, it was a nice thing to do, but it was also because he as absolutely necessary, and Blalock knew that, for him to do the work that he was doing.

Justin: Right.

Sydnee: He could not do it with Vivien Thomas, he had to have him there. And this was a big deal in another way. Baltimore was segregated in a way that they had not seen in Nashville.

Justin: Just look at the movie Hairspray.

Sydnee: Exactly.

Justin: Just like in Hairspray, Sydnee.

Sydnee: It's just like Hair— at this point, just stop the podcast and watch Hairspray and you'll already know the rest of the story. [laughs]

Justin: Just watch Hairspray, and you get it, basically. You basically get the gist.

Sydnee: So, to have him working in a position like he held there at Hopkins was completely unheard of. In Baltimore it stood out even more so than in Nashville, and it actually, the first time that he walked the halls wearing his lab coat it was just silence and people staring. Because they didn't know what to make of this, they didn't know who was this guy, who does he think he is, what in the world is he doing here? It garnered huge attention.

So, moving to Baltimore was a big deal for Vivien Thomas and his family. It was a big sacrifice he was willing to make, not just for Blalock, but I think for the work he was doing and he knew how important it was.

Justin: Is this about the time they start working on Tetralogy of Fallot stuff?

Sydnee: Well, that's exactly right Justin. But before I get into that, why don't we head to billing department?

Justin: Let's go.

[ad break]

Justin: So Syd, we're about to get to Tetralogy of Fallot again.

Sydnee: That's right. So at this point, Blalock and Thomas are starting to work at Hopkins and that's when Helen Taussig approaches them and says, "I've been waiting for you guys. I understand you know how to do some surgeries on some dogs. I don't need you to that, but—"

Justin: "Are you sure? Because we're great—"

Sydnee: "No... "

Justin: "Okay."

Sydnee: "I'm really hoping maybe you could do those in humans."

Justin: "Whoa, humans? That's like a big dog, huh?"

Sydnee: [laughs]

Justin: "It's like a really big dog."

Sydnee: And it's funny, because I've read accounts now of this exchange from both Helen Taussig and now, Vivien Thomas's perspective. And who knows who came up with the idea first, but from her perspective, she said, "Hey, you know that ductus arteriosus that babies have before they're born? Well, I think you could replicate that and it would fix Tetralogy of Fallot, and I think you need to make a shunt just like that and that would fix things," and from Thomas's perspective it was more like, basically she said, "Couldn't you just fix that by connecting some blood vessels in there somewhere?" and we came up with the idea of what to do. So, one way or another, between these three, between these three brains.

Justin: Yeah.

Sydnee: Smart things happened. They came up with a shunt procedure to fix Tetralogy of Fallot, that would allow blood to flow through the lungs—

Justin: Shunt's basically like a tube, right?

Sydnee: Yeah, a tube. Yeah. They construct a duct, if you remember.

Justin: Yes.

Sydnee: Construct a duct. So, and Blalock and Thomas, to be fair, had actually already created a similar procedure. Thomas had used it to simulate a heart condition in a dog intentionally and then fixed it. So, he knew how to construct it, because he had to do it in a dog to simulate a heart condition. Because he had to do that, right? He had to make the problem and then he had to fix it? So, he knew how to do this.

Justin: Cool.

Sydnee: So, Vivian Thomas was the one worked on those two— somewhere into 200, 300 dogs, trying to first induce a Tetralogy of Fallot sort of condition— he wasn't able to completely replicate that, two of the four defects he was able to, but he couldn't clearly replicate all four. But he created these situations and then fixed them and he was the one, he as the one to do all that. We mentioned in the last episode that it was practiced two or three hundred times. By Vivien Thomas.

Justin: Yeah.

Sydnee: He was the one doing this, not Blalock. Blalock was not the one practicing on dogs, all just Vivien Thomas. And by the way, the first dog that survived the procedure, who was actually like Thomas's pet for a while, was named Anna. And her picture was hung in the halls of Johns Hopkins.

Justin: That's nice.

Sydnee: Which is pretty cool.

Justin: I think that's pretty cool. Pretty cool dog.

Sydnee: Yeah.

Justin: I was hoping you would say Marmaduke, because that would explain so much.

Sydnee: [laughs] And that's the history of Marmaduke.

Justin: And that's why they don't throw that dog on the street, it's a hero.

Sydnee: [laughs] So, once Thomas had perfected the procedure in dogs, it was kind of up to Blalock to do it in humans, because at the time it would have been illegal for Thomas to do any surgery. He would not have been allowed to, certainly at the university level, and I can imagine there would have been state officials, government officials who would have gotten involved. So, they weren't going to be able to break that barrier, but Blalock could only do it if Thomas basically told him how, because throughout—

Justin: Because he was the one with all the experience doing it.

Sydnee: Exactly. Throughout all of those trials on dogs, Blalock had only ever participated once, and it was as Vivien Thomas's assistant. So, you know, they were pretty sure they were ready to do it, they actually had a patient, the first patient they tried it on, who had been there sick in the hospital for a while and they were worried wasn't gonna make it much longer, and that's when finally Blalock said, "Listen. We're gonna do surgery. We're gonna operate on a heart." Which was, again, a huge deal. "And we're gonna see if we can fix this." So, Thomas wasn't allowed to do the procedure, but Blalock got everything set up and actually, Thomas wasn't gonna even attend.

Justin: Really?

Sydnee: At first. He was like, "I'm afraid I'll make him too nervous, I'm just gonna wait outside the theatre and find out how it goes." And Blalock was like, "Whoa, whoa, whoa, no buddy."

Justin: "No, no, no. I don't waknow what I'm doing!"

Sydnee: "Here's a stool right behind me. You're gonna stand on this stool directly over my right-hand shoulder and you're gonna talk me through this whole thing."

Justin: Jeez...

Sydnee: Imagine this scene. Cause, I mean, this was a time where there were operating theatres and probably visiting surgeons watching the procedure. Imagine that scene, you've got Alfred Blalock, who is supposed to be this world-renowned surgeon, standing there at the operating table, scrubbed in. He's got his techs and his nurses and his anesthesiologist and everybody all surrounding, you know, to do the procedure.

And over his shoulder, not touching anything, not scrubbed in, not going to do anything, but standing directly over his shoulder leaning over into his field and telling him what to do is Vivien Thomas. And this would have been the first time, I'm certain, that most of these surgeons would ever have seen a black man in the OR.

Justin: Yeah.

Sydnee: And not only is here there, he is telling this world-renowned surgeon—

Justin: He's running the show, yeah.

Sydnee: I mean, his surgeon is looking back at him and saying, "Do those sutures look good, Vivien? Does this look right? Are you sure? Am I connecting this right?" and correcting him, "No, no, no, not that direction, Alfred. Go the other direction."

Justin: Wow.

Sydnee: So, it was amazing and we've already talked about that obviously the procedure was successful. It took them a while to perfect it, but it was successful, and the shunt is rightly known as the Blalock-Thomas-Taussig shunt. Maybe even Thomas-Blalock, you could probably flip those, technically.

Justin: Yeah, why not.

Sydnee: And Thomas actually even made the needles for the first procedure.

Justin: Really?

Sydnee: Got the silk from his own lab and made the needles. Because they had to make them little. So, after they did the procedure and they

did more procedures and they got tons of attention for it, as we've already mentioned, the medical community just went wild over this, Blalock was given more respect. But he wasn't really quick to share it with Thomas. As I already alluded to, a lot of the papers describing this technique and the results and even, like, photos of the surgical team, no mention of Vivien Thomas. No mention of all the work he did, no mention of the fact that he really developed the procedure.

Justin: That sucks.

Sydnee: Yeah. That he told him how to do it. Despite this, Thomas continued to do his work, and his work got much more demanding because there was this huge flood of patients at this point that showed up at Johns Hopkins with their sick children saying, "I understand you can fix this problem." At the time they would mostly call them "blue babies", was kinda like the common, the colloquial expression. So, people showing up all the time with blue babies saying, "Please help us, we don't know where else to go."

He was working 16-hour days doing all of this as well as doing all of these blood tests and labs and all of this other kind of work that he was expected to do in addition to, you know, telling Blalock how to do every one of these surgeries.

Justin: Right.

Sydnee: He would have to stay up all night monitoring experiments, and in all of his spare time was reading anatomy and physiology books because he didn't have that degree that he had always wanted, but he wanted all that information anyway. He never wanted that to hold him back. In this time, he actually began developing even more procedures on the heart, so specifically a lot of cardiac procedures. And as part of his job, he also began training more technicians. And it's actually really cool, he took this opportunity to train technicians to bring more black surgical assistants and technicians into the field.

Justin: Cool.

Sydnee: He went and sought out people to say, "You know what? I can teach you how to do this and you are capable of doing this. And, you know, this could be a really great thing." And so, he took that opportunity he had had and passed that on, which is really a beautiful thing that he

did. And then of course, he also taught the procedures to residents. Some of the world's most renowned cardiac surgeons trained under Vivien Thomas. Who, again, has only a high school education.

Justin: [laughs]

Sydnee: Like Denton Cooley, who would later go on to perform the first implantation of an artificial heart, trained under Vivien Thomas. He trained Hopkins's first black resident, Levi Watkins, and then assisted him in placing the first defibrillator.

Justin: Wow.

Sydnee: The first implanted defibrillator, done by Vivien Thomas and Levi Watkins. One cool story is the elevator operator at Hopkins, he went and sought him out and said, "Listen. I can teach you how to do this stuff. You can do this, and this is a better life for you and your family if you take the time to learn to do this stuff." So his name was Raymond Lee. He taught him to be a technician, he would go on to become a physician's assistant and be part of the team that would assist in the first double heart lung transplant, and a famous separation of conjoined twins that was done at Hopkins later on.

Justin: Wow.

Sydnee: Now, throughout all of this he was still paid very little, especially considering the caliber of work that he was doing. And he actually had to work part-time sometimes as a bartender, specifically at parties hosted by Alfred Blalock.

Justin: Really?

Sydnee: That was the only way he ever attended any of his affairs, was as a bartender. Serving his surgeon friends. The surgeons that he would train in the day, the residents that he would train how to do procedures all day long and teach, he'd have to go serve them drinks in the evening.

His salary was about 12 bucks a week, for reference. Um, eventually this was corrected. Blalock lobbied on his behalf to have his salary raised. They kind of created a tier in the salary ladder for people who were doing work that— they were surgical tech work but it was beyond that. So, it was the highest paid surgical tech position because they created it

specifically for him. Because they recognized that he was not making nearly as much as he should have been for what he was doing.

Justin: Yeah, no kidding.

Sydnee: His wife would later talk about him, Vivien Thomas's wife Clara, that he always considered going back to college. Like, throughout all this time, as he became more famous and helped train more people and more well-known and more well-respected, he kept toying with the idea of, "Should I go back to college and med school and get the degrees and do it?" But it just never happened, it was just never the right time.

At every turn, he made the decision to support his family instead, make sure that his kids got the degrees that he didn't get to get, and when he actually truly investigated it, he was looking at not finishing college and med school until he would turn 50. It would be the year of his 50th birthday, and he said— his wife said he just found it too discouraging and he decided not to go for it.

Justin: That makes sense.

Sydnee: In 1968 a lot of the surgeons he had trained, who were known as, by the way, the "Old Hands Club"...

Justin: Heh. [laughs]

Sydnee: [laughs] Sorry, I don't mean to throw shade. Just... sometimes us doctors really like ourselves, don't we?

Justin: [laughs]

Sydnee: So, the Old Hands Club commissioned a portrait of him in 1968 to be hung in Johns Hopkins, kind of across from Blalock's, which was a nice representation because he wrote about in his autobiography the years that they spent sitting across the lab bench from one another, looking at each other as they tried to figure out... as they both pondered how to solve different problems.

So, and in 1976 he was awarded an honorary doctorate by the school and was finally able to be called Dr. by all of the residents and students that were training under him already and thinking of him as a doctor, just finally he was able to get that title. He was added to faculty of the school of medicine as well at this point.

In 2005, I think this is really cool, Hopkins began dividing incoming medical students into four different colleges and they named each college after four of their famous grads. And the colleges are Taussig, Sabin, Nathans and Thomas.

Justin: Hmm.

Sydnee: That's one of the four colleges you can be in.

Justin: Yeah, that's cool. That's a nice tribute.

Sydnee: There's a movie based on his life, if you're interested, in addition to his autobiography, which is called *Pioneering Research in Surgical Shock and Cardiovascular Surgery*. [laughs]

Justin: [laughs]

Sydnee: Not the most— I wouldn't say that's the most intriguing title.

Justin: Not a lot of panache.

Sydnee: Don't let it fool you, it's an amazing story so it's worth a read, but there's also a movie called *Something the Lord Made*, which is based on his life.

Justin: Mos Def and Alan Rickman.

Sydnee: Yeah. You've seen it?

Justin: No, but I looked it up on IMDB.

Sydnee: Very good, Justin.

Justin: To sound smart. But then I got too honest.

Sydnee: Do you know why it's called that?

Justin: Um, no, I don't.

Sydnee: I think this is a cool story. I looked up the origin of that, that title, *Something the Lord Made*, and it's a reference to a comment that was made at one point by Blalock after Thomas had, um, he had actually sutured up a defect between two chambers of the heart and Blalock was looking over at the suture line. Because Thomas was amazing surgeon.

I don't know if I've— I don't know if I've underlined that enough. Despite the fact that he wasn't actually able to operate on humans, he was amazingly technically skilled. His hands were amazing. And when he did sutures, when he did these surgeries on dogs, I mean, the precision, the efficiency, not a movement was wasted. I mean, everything about it was beauty and perfection from a surgical standpoint.

And so, at one point he's doing these sutures and Blalock looks over and he's trying to find the line, the suture line that he has just put in. And he can't even see in the tissue, in the heart tissue, where the sutures have been placed. And he said, "Well, Thomas, this looks like something the Lord made." Meaning it looks, you know, just as good as the original. So, I thought that was really beautiful.

Justin: That is beautiful. A beautiful story, Syd. I mean—

Sydnee: There are tons of awards, scholarships, there's a medical arts academy named for him. He's had lots of recognition since then, but still not enough, because in the story, the Blalock-Taussig shunt is still called that sometimes. And it shouldn't be.

Justin: If you hear someone call it that in your daily conversations...

Sydnee: [laughs]

Justin: Make sure you correct them.

Sydnee: Yeah. Cause, I mean, if Vivien Thomas did that procedure, and in a different time and place he would have been the surgeon performing it on humans as well...

Justin: Well, Sydnee, thank you for filling me in on that. I'm glad we could expand on that story. Thank you for sharing it with me. I kinda wanna see the movie now.

Sydnee: I think we should watch the movie. I think it would be excellent. A wonderful story. Vivien Thomas. Don't forget him.

Justin: I wanna say thank you to The Taxpayers for letting us use their song "Medicines" as the intro and outro of our program. Hey, this is exciting: we're gonna be at the Philadelphia podcast festival and you could come and see us if you wanted to. Um, the... all you gotta do is go to bit.ly/SawbonesPhilly and there's a code, P-P-F-17 that you have to

enter during this presale period, which I think probably ends today if you're listening to this on Thursday.

Sydnee: Yes.

Justin: But I think after that you can just go to that link. That's bit.ly/SawbonesPhilly. It's gonna be at the Trocadero Theatre, Sunday July 16th, doors are at 1:30, the show's at 2 and tickets are around 24 bucks. So, uh, you should come out and see us. And another great Max Fun show The Flophose is gonna be performing after us at 5pm, so make sure you pick up tickets to their show as well. And you can find out more by going to the website for the Philadelphia Podcast Festival, which you can find on Google. By googling it.

Sydnee: [laughs]

Justin: Because I don't know that off the top of my head.

Sydnee: So come see us.

Justin: Come see us. Seats are still available for that and I hope you'll come on out. Uh, is there anything else, Syd?

Sydnee: I think that'll do it.

Justin: Well folks, that's gonna do it for us. Thank you so much and until next week, my name is Justin McElroy.

Sydnee: I'm Sydnee McElroy.

Justin: And as always, don't drill a hole in your head.

[theme music plays]

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