



How Neurosurgeon Dr. Analiz Rodriguez Made Her Own Way

Set on being a brain surgeon since childhood, and armed with “unwavering self-confidence” instilled in her by her mother, Analiz powered through college, medical school and a PhD program. Facing steep climbs and faith-testing challenges along the way. Now, the accomplished neurosurgeon and research scientist opens up about leading in the operating room, navigating bias as an Afro-Latina doctor, and relying on her faith to keep her steady.

Alicia Menendez:

The stakes of Dr. Analiz Rodriguez’s work are very, very high. As the Assistant Professor of Neurosurgery and Director of Neurosurgical Oncology at the University of Arkansas for Medical Sciences, Dr. Rodriguez specializes in the surgical treatment of brain tumors and runs an independent research lab. And so, I wondered, when what you do is a matter of life and death, how do you build trust? How do you stay focused? How do you lead? And what do you learn when your work brings you face to face every day with life’s biggest questions?

You know, I think parents everywhere who worry about their kids watching too much TV are gonna be happy to know that you were inspired to become a neurosurgeon by watching television. Can you take me back to that moment in the fourth grade?

Analiz Rodriguez:

So, I watched TV growing up, but it had to be balanced between cartoons and educational things, so I used to watch a lot of TLC or The Learning Channel. There was a program about a little girl who had epilepsy. They showed her journey. Eventually, she ended up requiring a massive brain surgery to stop her seizures, and then they showed after how she recovered, and she was able to interact, and be a normal child, and I just remember thinking that’s amazing. What type of doctor does that? I just remember that spark and telling my mom like, “What type of doctor is that? That’s what I’m gonna do.”

Menendez: And did your parents feed that spark?

Rodriguez: Yes. So, through various things, I always really liked math and science, so I would... In elementary school, I actually went to science camp during the summer, which sounds kind of strange, but there was a free course given at our community college, and it was actually for sixth graders, but my mom wrote them a letter saying I really love science and she would love to be in it, and so it was the summer after fourth grade I got to go to a community college campus and learn how to use a microscope. So, we did like an acid-base reaction, and then I always got science-oriented toys and books. As soon as I said, “This is what I’m gonna do,” I was definitely encouraged.

Menendez: You and I would have been fast friends when we were little, going to science camp in the middle of summer. Your path, at least on paper, seems very direct. You went to New College of Florida, majored in chemistry, then the National Institute of Health sponsored

Medical Scientist Training Program at Case Western Reserve University. You get your M.D. and Ph.D. there. You completed your neurosurgical residency at Wake Forest, your neurosurgical oncology fellowship at City of Hope National Medical Center. But I have to imagine that there were bumps along the way. What is the biggest bump in that journey?

Rodriguez: I will say, preface this, I'm a very goal-oriented person. If I get something in my mind, I become obsessed with it and almost obstinate that I will finish this goal. And sometimes that's a good thing, and maybe in some ways it's not a good thing, but I would say I was lucky enough that I knew what I wanted to do when I was a child, and it didn't change. I kind of came up with a plan pretty early on, so for example, I knew I wanted to do M.D. Ph.D. in high school. I know a lot of people don't even know-

Menendez: Wow.

Rodriguez: I know. They don't know what the M.D. Ph.D. program is. Early high school, I figured out how long it took to become a neurosurgeon. It's very long. It's the longest training out of any other type of doctor. And I, in my mind at that time, I was young, I was like, "By the time you finish, you're gonna be very old." So, I kind of did things to speed up the process, so I graduated from high school at 16. I graduated from college at 19. I got my M.D. Ph.D.. By the time I was 25 I had both degrees. So, I kind of have a very different perspective in terms of just being so fixated on a goal and that really has propelled me in life.

Menendez: Majority of your patients have malignant brain tumors. That means they have limited therapies. They'll likely die within two years of the time that you meet them. What does that then mean about how you approach your relationship with your patients?

Rodriguez: A surgeon's relationship with a patient is very unique, because typically you meet someone for about 30 minutes to at most one hour, and within that time frame you have to tell them that they need a brain surgery, review what that even means, describe it, and they have to trust you, so it actually takes a different level of people skills that I don't really think you encounter until you start working in that space. And then for people who have a really bad prognosis, I always try to tell my patients that it's about breaking up everything into steps, and surgery is the biggest and scariest step, and once you get through that you can do anything. So, I kind of try to be their cheerleader and frame it in that context.

Menendez: It is a tremendous responsibility. You, as a neurosurgeon, have the ability to repair functions, so that people sometimes can walk again, they can talk again, but just as it has the ability to give people those functions, it also has the ability to take that function away. How do you sit with that level of responsibility each day?

Rodriguez: I rely heavily on my faith. I actually... I don't know what someone would do without that. But I would say that I am human, and so sometimes when you have a poor outcome, it almost makes you think like, "Why am I in this field? Why would I choose to do this?" But in the end, the good outweighs the bad, so even though it is human nature, even in neurosurgery or just in life, to remember the bad things, and those things kind of stand out to you more, and maybe because of the hormones and other things that are released when you have a bad experience, but you just have to take the whole picture into account. And so, thankfully the good outweighs the bad, because otherwise this job... I don't think anyone could do it if that wasn't the case.

Menendez: You grew up Catholic. Has your relationship to your faith changed as a product of this work?

Rodriguez: Yes. For me, I grew up Catholic, very traditional Catholic, going to Mass every week. I still go to Mass every week. How it's changed is actually interesting. So, I would say as a young adult, I got upset at God for something not turning out my way in life. I'd decide, "I'm not gonna pray anymore, because it's pointless. There's no point in praying because it doesn't affect the outcome of your life." Which is ridiculous, but through my patients, I would say that my faith has actually grown a lot. A lot of people, when they're faced with cancer and the end of life, their spiritual hold and their connection to God is magnified. For me, I was like, "Wow, I was mad at God for something so silly, and you meet someone that's gonna die within six months." And you'll never, ever say, "Oh my God, I was mad at God for not giving me something I wanted? I have so much to be thankful for. How dare I do that?" When my patient has months and I see them struggling for just one more day on Earth.

Menendez: There's this book I read, it's called *That Good Night*, and it's by a doctor who does palliative care, and it really brings into focus the magnitude of what you are confronting each day, which is in part health and corporal, but is in large part also just so deeply emotional and deeply spiritual. You've said all neurosurgeons must be leaders in some form, as we are the captain of the ship in our operating rooms. Can you pull back the curtain and give us a sense of what that looks like?

Rodriguez: So, I would say that it applies to surgery in general that when you're in the operating room, it's a team sport. So, surgery is a team, so basically when you go into the operating room, the most important person obviously is the person that is undergoing the surgery, but they're asleep, and they're at least for the surgeries I do, in general, they're asleep. And so, you have to advocate for them. And then there's a surgical team, there's a nursing team, there's an anesthesia team. So, there's actually a lot of people in the room, and for example, if something goes wrong or starts going wrong, they kind of look towards the lead surgeon to kind of direct the team into getting out of that problem. So, I guess that's where a lot of the ship references come from.

So, if the ship is sinking, typically you look towards the lead surgeon, and also you... A lot of times, you have to improvise. No surgery is the same. No patient is the same. So, you can perform the same hundred surgeries, but each one will have slightly different variations, and you may have to improvise, and I think that's what you're trained to do, is to become the leader and to help make sure that the surgery is successful.

Menendez: In addition to your work with patients, you also run the independent research laboratory. Can you explain to me, what are the core questions that you are grappling with in your research?

Rodriguez: Typically, a person comes in with a certain type of tumor and we follow a process of how they're treated for that tumor with certain surgery, certain medicine, radiation. But what we're starting to realize is if you take a group of people, they're not all gonna respond to treatment the same way, and there's pretty significant groups of people who don't do as well as others, and why are their tumors not responding to the therapy? I'm interested in that, and how I try to understand that is one, is looking at the genetic fingerprint of the patient's tumor, so just the same way people send off their saliva to Ancestry.com, we send off tumors to get their fingerprint, and then two is actually using the tissue itself.

So, I am so grateful, a lot of our patients have decided to donate their tumors to the research lab, so we can actually grow mini tumors and do different tests on them.

Menendez: That's so cool.

Rodriguez: Yeah, it's amazing. Yeah.

Menendez: What do you tend to tell other Latinas who are torn between getting an M.D. and a Ph.D., or who feel a tug to practice and be with patients, but also feel a tug toward research?

Rodriguez: So, I would say you don't have to get an M.D. Ph.D. to do research and be a doctor. So, if you're a doctor who wants to do research, there are multiple avenues. Sometimes you can get a master's degree, sometimes you can just take some extra time off to do research. I would say trying to talk to people who have done it before, in terms of find someone at your school who balances both worlds, and kind of see how much research or what type of research you want to do. Because there are different types of research, so you may not want to do research that requires test tubes and things like that. You may want to do research that requires interviewing patients or using clinical data.

Menendez: You noted in another interview that I read that for a lot of white, non-Latina women entering male-dominated fields like medicine, it will often be the first time that they're identified as the other, but that's not your experience.

Rodriguez: I feel as a minority woman, you definitely know you're different at an early age. Especially if you start getting into the science space. I would say one other thing that stuck out to me is name, so my name is visibly Latina. I mean, anyone sees my name, they automatically start asking questions, like, "Do you speak English? Where are you from?" Just because my first and last name are not typically "American" names.

For example, in the fourth grade, we just moved from New Jersey to Florida, and a teacher pulled me out of class and had me take a test, and I remember coming home and being like, "Oh, this test was so easy. I aced this test." And then my mom started asking questions and asked the teacher, "Well, what was this for?" And the teacher was like, "Oh, I was testing her for English as a second language." And my mom's like, "Why? My child speaks English and if you look at her records from New Jersey, she got straight A's and was in gifted classes, so why did you decide to test my child and take her out of class for hours to test her?"

And the teacher told her it's because they looked at my name. They looked at the name, Analiz Rodriguez, and that's their criteria to test me for ESL. Did not look at my transcripts. Did not talk to my parents. And that's when I realized, wow, people discriminate against you for your name. I was actually taken out of that school because my mom was like, "I can't have you in a school that does that." I'm always very conscious of that. You learn these lessons as a child, whereas I think for a majority woman, they go through life with a very different experience, and it's only later, maybe when they enter neurosurgery, that they finally find themselves as being different, or the only one, or discriminated against. But as an Afro-Latina, that's happened since I was a child.

Obviously, if you look at me, so I know this is a podcast, but if people were to look at me, they would say, "Oh, well, you're obviously brown skinned." I'm Afro-Latina. It's obvious. I have curly hair. So, my features make me obviously look like I am not a typical doctor, per se, by some people's eyes. And so, for example, I have been mistaken for a transporter, a housekeeper, I've been asked for sheets. I've come into a room with a white coat on, a name tag, and I've been asked, "Can you change my sheets?" That has never occurred in my... I mean, I haven't encountered a majority woman telling me that they've been asked

for sheets, they've been asked to clean, they've been mistaken for people that are not on the medical team, so I feel like that's the difference, that you ask a woman of color her experience, she's gonna say, "I'm not even mistaken for someone on the clinical team."

So, I'm not offended when you call me a nurse, because at least you identify me as someone taking care of a patient. I think that's better than when I have been mistaken for transporting a patient. A patient I've operated on, I've been outside the room, dressed professionally, with the white coat, and someone saying, "Are you here to transport the patient?" And I was saying, "No, I'm here to talk to the patient I operated on."

Menendez: When someone treats you differently, are you in the habit of calling them out?

Rodriguez: Yes. And I do it in different ways. I would say now that I have definitely more power, and the position that I am, that I can. However, I understand that not every battle can be won. There's a tightrope that you will always walk and I think that's just intrinsic to being a woman, to being a minority, whichever group you want to say that experience stems from. I do think that I've always been taught to stand up for myself and I definitely have, and I think now, as you gain more power in your career, you can do it more often.

Menendez: Yeah. Puerto Rican-Dominican from Jersey. That's like if you're not standing up for yourself, I'm not sure who is, because like-

Rodriguez: Yeah.

Menendez: That Jerseyness, it teaches you to always stand up for yourself. Arkansas, where you are now, where you practice, is 15% Black, 7% Latino. Have you been able to create a community for yourself there?

Rodriguez: I have found, interestingly enough, I think a lot of my community outside of work, I think work intrinsically comes with its own set of people that you become friends with, because you become friends with your colleagues, and then I think the other place for me is church. There are a lot more Protestants than Catholics in Little Rock in general. However, the Catholic community is very strong, and so I've been really happy with meeting people through that.

Menendez: I have to tell you I was so moved. I didn't realize until I started doing the research for the interview that the lab is actually called The Rodriguez Lab. And it made me realize how infrequently we see surnames like ours in proximity to something like that, and so I felt enormous pride in seeing that. Do you still have that feeling when you like walk into the lab and it's The Rodriguez Lab, like when you see it on the website? Does it land for you that this is extraordinarily special and that you're doing something extraordinarily special?

Rodriguez: It doesn't really hit me on a day-to-day basis, but I will say sometimes I read things, so for example, I just read an article that came out about surgeon scientists, so surgeons like me who also do research, and they said that zero Black women, zero Latina women have ever obtained a certain level of grant, which is a type of research fund that you get from a government agency, and just seeing that graph really made me be like, "Oh my God, zero." And a lot more numbers are coming out, like recently they said of all the medical school faculty, less than 5% are Black or Latino. If you combine Blacks and you combine Latinos together, we don't even make up 5% of the medical school faculty. So, I was just like, "Oh my gosh. That's terrible."

When you aspire to go to medical school, but the people that are teaching you, less than 5% are gonna look like you, and that really... Now that the numbers are coming out, and I see it on paper, that's when it really hits me.

Menendez: You've said your mom gave you the gift of unwavering self-confidence. As the mother of two girls, I would love to know how she did that.

Rodriguez: Yes. That's a very good question. So, I would say that whenever I felt like I wasn't gonna make it, and those were times, like I know I have talked about the things I've achieved, and it sounds almost like a dream, but I definitely have had to work really, really hard, and I have thought that I would fail. I still think that. People will say, "You've accomplished so much in your life," and I'm like, "No, I still think I can still fail in some way." Every time I feel like that, my mom would always say, "But you're Analiz." Which is so crazy to me, but she would say, "You're Analiz and you can do anything." She's told me that since I was a very small child. And for some reason, that mantra really sticks, so when I get against the wall and I'm like, "I can't do it. I'm gonna fail. I'm not gonna be capable." I always think, "No, you can, because you're Analiz," or whatever your name is, if you just believe you have the strength inside, it's in there. You just gotta pull it out and you can do anything.

Menendez: I'm gonna use that on my girls tonight. My last question for you, your Twitter bio reads condemn no man and deem nothing impossible. How does that spirit show up in your life even beyond work?

Rodriguez: That actually is from a Jewish scholar saying, and I just really relate to it. I feel like a lot of problems we have in the world are because we condemn or judge each other. And I don't believe in that. I believe we should all appreciate life, the joy that we can bring to each other, this very short journey of life. People think about life as a long, long time. I don't think that we live for very long in the grand scheme of things. And then to deem nothing impossible, I guess for me, that's just my story. I talked about that on my social media account, how years ago I was in English as a second language when I was in kindergarten, and I didn't speak English, I'm a Black girl, I'm a Latina with a name that's not American. A lot of people have told me to my face when I was little, and I told them I want to be a neurosurgeon. They laughed. I mean, openly laughed at me. That's really who I am, that you can't... Don't count anything out in life.

Menendez: Your patients are so lucky to have you and we're so lucky to have this time. Dr. Rodriguez, thank you so much. This was such a joy.

Rodriguez: Yeah. You're welcome. Thank you.

Menendez: Thank you.

Menendez: Thank you for joining us. Latina to Latina is executive produced and owned by Juleyka Lantigua-Williams and me, Alicia Menendez. Paulina Velasco is our senior producer. Our lead producer is Cedric Wilson. Kojin Tashiro is our associate sound designer. Manuela Bedoya is our social media editor and ad ops lead. We love hearing from you when you email us at hola@latinatolatina.com, when you slide into our DMs on Instagram, when you tweet at us @LatinaToLatina. Remember to subscribe, follow us on RadioPublic, Apple Podcasts, Google Podcasts, wherever you're listening, and please, I know I ask this all the time, but do leave a review. It is one of the fastest, easiest ways to help us grow.

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