

Just Partially Tested Sexual Assault Kits

Introduction [00:00:05] Now, this is recording, RTI International Center for Forensic Science presents Just Science.

Voiceover [00:00:21] Welcome to Just Science, a podcast for justice professionals and anyone interested in learning more about forensic science, innovative technology, current research, and actionable strategies to improve the criminal justice system. In episode seven of our Research and Considerations for Sexual Assault Cases season, Just Science sat down with Dr. Rachel Lovell and Mary Weston to discuss resolving partially tested sexual assault kits. Partially tested sexual assault kits create a unique barrier when it comes to the investigation and prosecution of sexual assault cases. However, reopening these cases and conducting a comprehensive case review can yield positive results even years later. Mary Weston and Dr. Rachel Lovell led the charge when it came to resolving partially tested kits in Cuyahoga County, resulting in a series of new investigative and prosecutorial leads. Listen along as they discuss the challenges associated with partially tested kits, the importance of a comprehensive case review, and the value of building a good relationship with your forensic laboratory in this episode of Just Science. This season is funded by the National Institute of Justice's Forensic Technology Center of Excellence. Some content in this podcast may be considered sensitive, may evoke emotional responses, or may not be appropriate for younger audiences. Here's your host, Tyler Raible.

Tyler Raible [00:01:37] Hello and welcome to Just Science. I'm your host, Tyler Raible with the Forensic Technology Center of Excellence, a program of the National Institute of Justice. Today, our guests are Dr. Rachel Lovell, Research Assistant Professor at Case Western Reserve University, and Mary Weston, Assistant Prosecuting Attorney at the Cuyahoga County Prosecutor's Office and supervisor of the Cold Case Unit. Rachel, Mary, welcome back. It's great to see you again.

Mary Weston [00:01:58] It's good to see you, too, Tyler.

Rachel Lovell [00:01:59] Thanks for having us.

Tyler Raible [00:02:00] Absolutely. Happy to have you here. Today, we're going to talk about an interesting case that involves the testing of sexual assault evidence that was not originally tested for DNA. So this case also involves a partnership with your crime laboratory for DNA testing. So can you tell us a little bit about how you both work in partnership with the crime lab?

Mary Weston [00:02:17] Going back, you know, several years, we've been reviewing these rape kits in our community that had not been previously tested, and there were thousands of them in our jurisdiction. And as we went through them, we found that they fell in two different groups. There were rape kits that had never been tested at all, and there were also kits that had a lab number on them - we call it a BCI number, Bureau of Criminal Investigation is the lab in Ohio. So if we saw a BCI number on a kit early on in the project, we set those aside and we thought, oh, they've already been tested. We don't need to look at these. And a couple of years later, well, I don't know if it was a couple of years, but into our project a bit, we took a look at those and realized, hey, some of these weren't tested for DNA and in fact, some of these weren't tested at all. It just had- they just have a number on it because at some point they went to the lab. But there were times, early on cases where the lab would communicate with the police department. Let's say the police

department says, hey, we solved that one. We don't need you to test it anymore, and the lab would just send it back. Those things don't happen anymore, but they were happening, and we had to account for that. So we had a list of those cases. It was over eighteen hundred cases that had a lab number on it, but really needed a second look. And so I worked with lab personnel at the lab, and we just kind of went through them one by one. And like my system was to email them every day with like, can you look at these five cases today and say, is anything more possible to be done on this case or has it been tested to completion?

Tyler Raible [00:03:45] It definitely seems like a very involved process. Do you have an idea of roughly how long that took or is it still ongoing?

Mary Weston [00:03:52] No, we completed it, but it probably took me a year. It was one thousand eight hundred and sixty-seven cases. I went through them one by one. And that you can imagine there were some cases that had already been, they had been totally tested, and the case had even been prosecuted, and you could set those aside. There were some, unfortunately, that were beyond the statute of limitations so nothing could be done in those cases. And some of those got set aside. Thankfully, it wasn't that many of those, but there were a few. And then the rest, like a lot of cases, I would talk with the lab director at our lab. We would discuss them, and then there were some cases where the lab would look at them, and they'd say there was really nothing that could be done here. But there were a lot where the lab said, hey, let's take a second look at this. And they took a second look at some of those, and even then, sometimes it didn't solve the case. Sometimes there was still nothing suitable to go into CODIS, for instance, the DNA offender database or the evidence database. But there were some where we got good results - cases that had either never been tested before, even some cases where there had been testing before and no results had been produced through the first round of testing. We even got results looking at them again.

Tyler Raible [00:04:58] It definitely sounds like there was some traction there. And that actually kind of segues really well into the meat of today's conversation. As these DNA testing capabilities are continuing to advance, more cases are being solved with DNA than ever before. But there's a term that's kind of emerging in the forensic community that's a partially tested sexual assault kit, which refers to samples in a sexual assault kit that have been tested for the presence of biological fluid, but not DNA. So let's kind of unpack this a little bit. Do you have a case in mind where this might have been a situation at hand?

Mary Weston [00:05:26] Yeah, I have an example of a case that I reviewed as part of that same project. I came across a case where the rape occurred in 2000. The facts were that a woman, a thirty-three-year-old woman, was waiting at a bus stop in the city of Cleveland. She was on a neighborhood in the east side. It was 7:00 in the morning. She was on her way to work, and she was just waiting for the bus. And a man pulled up in a red car, and he sort of just at first just said, "How are you doing?" He said something kind of like a small talk kind of a situation. And the victim reported to the police that she just told this guy, hey, I'm just waiting for the bus, I'm on my way to work. And he immediately became aggressive and called her a b****. She turned her head away from him to ignore him, and she was like, looked down the street for the bus, and she reported when she looked back, he had a gun in her face, and he told her he was going to blow her head off and he ordered her into the car. He drove her about a mile down the street behind an apartment building, and he raped her. And she had told the police right there, it's in the police report that she said that this man had ejaculated as part of the rape onto her stomach. And this is important, right, when you're reading a police report because you're looking- that would

give you an indication of where you might find evidence later. So she was able to flee. The victim reported that when this guy who was trying to clean himself up, she was able to get out of the car and she ran and flagged down a city bus - we call it the RTA system in Cleveland. She flags down an RTA bus, she's screaming. And so police are called and she goes to a hospital and she gets a sexual assault kit. Now, that's in the year 2000. Now, I don't have an explanation for this, but her rape kit did not go down to the lab for 12 years. In 2012, it went to the BCI lab and they tested several samples in her kit for the presence of semen - right - using serology or sometimes we call it forensic biology. And they even tested those abdomen samples because our lab, they'll review the paperwork that's inside the rape kit that is in usually some portion of the medical documentation or the police report. And in this case, they had that police report where it said that the suspect had ejaculated on her abdomen. So they had that information and they tested swabs that had been collected from her abdomen while she was at the hospital. But that lab report, which is from 2012, says that no semen was identified on those swabs. So when I was reviewing this case, I saw that we had this 2012 lab report and it was just a biology lab report. And so I worked with our lab and had a conversation with the lab director and DNA director, and she said she would want to take another look at that. So at that point, DNA testing was done for the first time in 2017, I want to say. And those same abdomen swabs were subjected to differential extraction and produced a male DNA profile, a single male DNA profile, and it was suitable to go into CODIS, and it immediately hit to a serial rapist. Knowing who he was, we were able to say he fits the description that the woman had described, and he had a red car back then. So we were able to prosecute at that point based on this new testing that wouldn't have happened without sort of reviewing these cases.

Tyler Raible [00:08:40] I mean, this is a- this is a horrific case. And there are a few things that I want to kind of better understand, both on my end and for the audience. So first, this is a stranger abduction case, correct?

Mary Weston [00:08:50] Yeah, at gunpoint.

Tyler Raible [00:08:52] I mean, I can't even imagine what's- what's going through this woman's mind. It's incredible that she's able to escape. You mentioned that there was serology testing done. What's the difference between serology testing and DNA testing? Because they're not the same if one produced a hit and one didn't.

Mary Weston [00:09:06] Serology tests - usually it's a presumptive sort of a test, a chemical test, that is testing for the presence of biological fluids. And oftentimes it's the first step in a process before DNA to help DNA analysts determine where they're most likely to find DNA. If, you know, they test and they find biological fluids there - which could be saliva, sperm, any of these things - that is a good indicator of where they should be looking for DNA as well. But in this case, there was a negative result so they did not forward it for DNA in this particular case at that time.

Tyler Raible [00:09:40] Gotcha. Negative serology test, did not forward it to DNA. Was that typical at the time?

Mary Weston [00:09:45] Yeah, I mean, I think it's typical in a lot of places that you see labs, not so much anymore, but there was a time when they would do that kind of a test first because it's hard to subject every single area of every sample to DNA, right? So you might do- so it is more efficient and probably cheaper, right, to do a chemical test first on a sample and see if there is any reaction to that presumptive test and then focus your DNA

on those areas. I will say this, as our project went on as part of the BJA SAKI project where we were testing all of our old kits, a lot of our tests, a lot of our cases were subjected to DNA right from the get-go - we called it straight to DNA - and that is because as the kits get older and older, proteins in the evidence will break down. And so those kinds of cases are less likely to have a result in the presumptive test for fluids. So our lab decided at some point to go straight to DNA with our older cases because you couldn't rely on the bio results. They would just go straight to either trying to microscopically look for sperm because sperm is hardy and it lasts a long time, as opposed to certain other proteins that might break down and go right to differential extraction and look for male DNA. That explanation sort of explains, too, why in this case that I discussed, we got results because if you think about it, that man left his fluids on a sample in the year 2000, and it wasn't subjected to forensic biology for 12 years. So one possible explanation of why there were negative results at that time is that maybe the proteins had broken down. And so the biology result wasn't all that reliable. But then when the lab looked at it again in 2017, they could either look at it microscopically - I'm not sure if they did in this case - but they could look at it microscopically and look for sperm heads, or they could, they did subject it to differential extraction and get results.

Tyler Raible [00:11:45] So at this point, we have a sexual assault case where DNA testing has not been done. But the lab, it's not like it was ignored. There just wasn't any biological fluid detected. What happened next?

Mary Weston [00:11:56] What happened after the negative result in 2012? So nothing really happened. The case remained cold, right? We would call it unsolved between 2012, and 2016 is when I looked at it. I have notes in the file. In 2016, I had a conversation with our lab that time, and they approved resubmitting the evidence to the lab. So I arranged for that evidence to be resubmitted and we got results in 2017. I have a lab report here in front of me, and it hit to a serial offender and then had the results of the comparison to his known standard within that report. So I remember, you know, I was sitting in the office one day, and I got this lab report and it was like a case that was unsolved. And then we just decided to take a second look at it. So it was really thrilling to say, hey, not only did they - did the lab say OK, which is always very exciting. Yes. They said, OK, you can resubmit evidence. We resubmitted it, and it not only got a hit, it got a hit to a serial offender. It hit to a guy who had prior convictions for rape. And then we got a lab report where the lab communicated its confidence and its results, and they always use a stat. So the higher the number in the stat, the better, you know, the better your result is. And this was a one in one trillion result, so we are really confident this was the right guy. And so we indicted him and prosecuted him.

Tyler Raible [00:13:16] Yeah, one in one trillion is kind of hard to argue with. What was the final outcome of the case? He gets indicted, he gets prosecuted.

Mary Weston [00:13:22] Yeah, he ended up pleading guilty, actually. He forewent a trial, I suppose, and he pleaded guilty to rape and kidnapping with firearm specifications. So he pled guilty to exactly what he did, and he received a nineteen year sentence. So we were really happy with that result to be able to get justice for that victim. She became re-involved with the process prior to him being indicted. We were able to reach out to her and interview her when we got those results and bring her in and let her know that we knew who raped her. And it was very gratifying to be able to tell her he's going to be in prison for a long time, because I think that the biggest fear for these women that have their cases have gone cold for so long is not knowing who did it and where they might be. It could be at any place. I always use the example, like you could be standing in a coffee shop in line,

and is the person that attacked you in line with you? I imagine it's a very terrifying feeling for victims to not know who it is that did this to them. And so in this case, we were able to change the- put an ending to that story that was very positive for this particular victim.

Tyler Raible [00:14:28] It sounds to me that that having this relationship with the laboratory really supported your ability to have this case tested and solve this case. Was it a difficult conversation to go back to them and try and get them to retest?

Mary Weston [00:14:40] No. I mean, it was a process. I often laugh with Brenda Gerardi - she's the head of the DNA lab at BCI - and she is the person I'm talking about every time during this conversation when I've said that I talked to the lab, it's always Brenda. And she and I will laugh now because she'll say when I first started calling her like in 2016 and started asking her, we need- can you retest this? Can you retest that? It was sort of alarming to her to think, oh my gosh, are we going to be retesting thousands of cases? But we ended up talking every day and we established, I think, trust with each other. I knew that her goals were to solve cases, too, you know, and identify people that had done bad things to victims. I knew that that was her goal as well, and to do what she could. And I think it's all about establishing that kind of trust with the person you're working with, because I knew then when she would tell me, hey, there's nothing else we can do in this case, I trusted her. I knew that they were doing everything they could. It wasn't difficult. It just takes time. And I would say that I was invested in it, and I felt she was invested in it, too. And we're still- we still talk because there are still cases I always want to run past Brenda. In fact, I called her to ask her, like, can you remind me what the explanation is or why you get a negative bio result and a positive DNA result? And she reminded me of all the things we talked about over the years. And I think that it's really important for a prosecutor to have that kind of relationship with their lab to, first of all, understand the results, because you don't want to be asking the same questions every single time, right? That's not helpful for anybody. And to establish that trust so you can work together to work on these cases.

Tyler Raible [00:16:12] That has to be the difficult part is establishing that level of trust. It's hard to just show up outside a lab's door, knock twice, and immediately build rapport, right?

Mary Weston [00:16:21] I think what worked for us working with the BCI lab was being willing to learn so that next time I looked at a case, I understood like why this might not be the kind of case that will work for additional testing. Or why it might be, and either way to know the kind of questions I'm asking her, like to know what we're looking for. So I think that was the important thing was to listen and learn, and I tried to learn as much as I could.

Tyler Raible [00:16:49] Mary, Rachel - it sounds like this multidisciplinary approach to the case, your review combined with the collaborative relationship with the laboratory, is really what made this work. Do either of you have any insight to agencies who would like to improve their relationship with their laboratory? We already mentioned, you know, making sure that you sit and listen and learn. Is there anything else that you think would be essential to improving these relationships?

Mary Weston [00:17:09] My advice to agencies would be number one, to establish a relationship with somebody in that lab that you can reach out to, and you can kind of have on speed dial and listen to and talk back and forth about your goals. Prosecutors and police officers are always like, why won't they test this? We just want them to test everything - that's usually our goals. And the lab has goals, too, like they want to test in the

most efficient way possible. They want to get- they want to know that their testing is going to produce results that are reliable, and they have standards they have to abide by. So we both have goals. The other advice I would give to law enforcement agencies is to establish a working group that you could invite members of a lab to join. We have a working group here. We have prosecutors on it, investigators, we have victim advocates, and we have members from the lab on our working group. So it gives sort of a forum - we do it every other month - a forum for frank discussions, right? Frank discussions of here are the issues we have in our agencies; what are the issues that you're facing in your agencies? The more you understand the background of where everybody is coming from and what-that gets to their goals, I think, and you get a better, bigger picture of what everyone is dealing with. And I think you also have that, again, back to that level of trust, of understanding, like we're all kind of on a team here. We are trying to get things done and bring justice to victims. We each have a different step in that process.

Tyler Raible [00:18:43] Rachel, is there anything you'd like to add?

Rachel Lovell [00:18:45] Yeah, I would say as a researcher, Mary touched on several important components. Some of the components we've done research on in terms of their multidisciplinary team, and I know RTI has done a lot of work around really getting multidisciplinary teams to form, to be productive, to work through issues, to keep metrics and outcomes. And, you know, I think there's some really common themes that you will see in these multidisciplinary teams, which is that makes this successful. So, one is that an understanding going in that people in these different disciplines take very different perspectives and have different goals. And the purpose is their overarching goal is there, and they are all there because they want, in this case, they want to solve cases. They all want to get, you know, they want to get justice for victims. They want to hold perpetrators accountable, and researchers want to help provide support in that space. And so everyone kind of has their goal in this space. So a respect that people are there for a reason and they, with the assumption that everyone wants to do good in that space, but two, that they have different questions, and their discipline means that they are obligated to ask different questions and play different roles in this. So police officer isn't a prosecutor and isn't a lab person and isn't a victim advocate. So respecting each person's why they're there and what their role is in that, I think is really important, and you heard Mary say that. And I think the other really important thing, and some of the things that we've done research on in terms of Cuyahoga County's multidisciplinary team for the sexual assault kit cases, has to do with a lot of times it's the informality of some of these things that creates relationships and trust and collaborations. And so giving space and time for people to have a little bit of informality where you a) meet people in person. You establish those relationships, really thinking about the long-term perspective on this, because people will change jobs, they will move divisions, there will be turnover in job positions, but if the relationships and establishments are there, and I think some of the things I've learned the most about all of this is just kind of being a fly on the wall and listening to the conversations and listening to the interactions and listening and picking up, oh, that means this. And then they're doing this. And then I see how they're talking with this person. Like, a lot of that information is really there. And I think people don't perhaps give enough time and effort to really be able to establish these collaborative relationships. And I think because of that, they can be a void of not really making progress because you don't really aren't all going down that same sort of yellow brick road - like you all want to get to Oz, right, so you have to kind of figure out how to get there all together. I know the multidisciplinary team in Cuyahoga County has been very successful in that. And I know bringing in those important people from the beginning, and there's been lots of turnover in the process, but the team is still very active and moving along in that way. So I think when Mary comes, for example, and asks BCI to

test this, she's being respectful of their time and their perspective and their policies and practices. And they're also being respectful of hers and sort of saying, we understand she wants to solve this and she's not asking us to test eight thousand bits of evidence from this case. Right. We are trying to find the most probative. But I think ultimately, the thing is all of these folks want to fully leverage the forensic evidence. It's there. And so sometimes it's not just as easy as test everything, right - everything in a kit or all the evidence. You kind of have to be judicious about use of resources.

Tyler Raible [00:22:42] There are so many things about what both of you said that I just truly appreciate. I love the imagery of the multidisciplinary team truly working towards the same goal and having their own individual roles to play. I think that's powerful and, when done right, incredibly effective. But from a research perspective, what are your thoughts on how agencies can work together to ensure cases are completely tested for DNA?

Rachel Lovell [00:23:06] So I recently saw on Instagram, End Violence against Women International had like this sort of, it wasn't a meme, but it was just sort of like a heading that something like - one failed response can mean many victims in the future, right. So the law enforcement take the perspective - it's not just this one case, right? It's a part of a much bigger picture here. And so with the idea in mind is if we can do everything we can for this case, even for cold cases, then we can prevent future crimes, and especially what we're learning about the just the prolific nature of serial offenders and serial sexual offenders. So I think in this case, a) starting off with that perspective that it isn't just this case in isolation, but part of a much larger picture. You know, I remember sitting in those same multidisciplinary meetings when they were discussing these eighteen sixty-seven cases, which is what they were kind of referred to, and knowing that it would take quite a bit of time and effort for somebody to go through eighteen hundred and sixty-seven cases, go into great detail and the use of resources to be able to do this for cold cases. But I think Cuyahoga County then kept metrics and track of those cases and how long those cases took and how many cases were investigators being able to go through? What were the end results of those eighteen sixty-seven cases? And we've published some of those results in an article in the Journal of Forensic Science talking about those cases, as well as earlier ones in the Journal of Criminal Justice. So we published some articles kind of talking about, OK, well, we've done this. What are the metrics? How long does it take? You know, what were the outcomes of them? Not all of them return DNA hits, but that was expected because they- many of them were already submitted for testing at some earlier point. However, by just having someone review them and go through them, not only did Mary help get justice in this case, but here's this prolific serial offender who's now no longer free and able to continue to offend. So I think keeping metrics is really important as well as collaboration and data. So one of the things that Mary and I are talking about as part of a grant that I have that's not a SAKI grant, but it's actually an NIJ grant - we're doing textual analysis of about six thousand police reports, but we've turned the PDFs into text files. So now they're searchable. Like now you can search through any series or number of things that you could look for, which could really expedite the process. The turning over takes a little bit of work, but again, I think sometimes the conversion of PDF to text is a little cumbersome. But then once you do that, then in other words, like law enforcement often don't keep data in a way that makes it very easy. So let's say technology advances like with forensic genetic genealogy, and now there's new things that they could test. That means you have to have one person go through literally file after file after file to say what evidence is here? Was this tested? Was that tested? Whereas if you had it in a way that could be more easily searched and more easily identifiable, that would make the process much easier, as well as other things that you could search on. You can search on offending patterns or all kinds of different things once it's in that format, but I

think mostly it has to do with the political will to really go through and try to make sure you're fully leveraging as much of the forensic evidence as you can get.

Tyler Raible [00:26:47] Rachel, correct me if I'm wrong, but would this textual analysis be able to kind of lend itself towards helping to identify these types of cases in the future?

Rachel Lovell [00:26:56] I think so, yes. I mean, part of the NIJ project is we will have developed basic programs that will turn data that's publicly available, that will turn data into- these PDFs into text files. Our collaborators, who are computer scientists, developed and wrote the programs. And then you have to have someone kind of read over some of the text and fix because about three to five percent of that text doesn't quite convert correctly. I really do think that sort of combining different fields of like forensic science and the social sciences and advances and computers and technology in that machine learning sense is going to be able to identify things that humans just can't do because of the time and effort it takes to go through each individual file. And I think what we're learning is a lot of these unsolved homicides and sexual assaults might have evidence that could be tested. The way that data are kept now, it's really hard to see that. So in two years, someone would have to look at the cases all over again if there were some sort of new technology or other things that could be there. So I think that that's where I would like to see kind of things go going forward. But from a research perspective, really looking at data and how do we understand data, and what are the sharing mechanisms between the different law enforcement agencies to be able to share that information. So police had to provide information. Prosecutors had to, the lab had to kind of share and provide that information. So the sharing of the information and data, I think, are really important here, as well as keeping track of the metrics.

Tyler Raible [00:28:38] Yeah, that makes perfect sense. I mean, not every organization / jurisdiction is going to have somebody as awesome as Mary who can sit down and go through all of these cases and identify the important ones. So while this algorithmic approach is kind of underway, do you have any suggestions in the meantime? Because, you know, I mean, sitting down and analyzing eighteen hundred cases is time consumptive. So do either of you have suggestions for agencies in the now to ensure these cases are identified?

Mary Weston [00:29:04] Here in Cuyahoga County, we were incredibly lucky because we had BJA SAKI funding. And so my boss at the time was able to say, you know, Mary, you're going to spend part of your time doing this project. Part of my salary was being funded to look through this list. But I do think you kind of have to put somebody in charge of it. I mean, you could put a team in charge of it, and maybe they don't do it all day, every day - which I did not. I had cases in court, too. I was doing all kinds of other stuff. But to spend a little bit every day I did and try to chip through that list. And it will definitely be rewarding - from those eighteen hundred cases, we had over 60 indictments. Those are cases that never would have tested if we didn't review them one by one. So it's well worth it.

Rachel Lovell [00:29:50] Yeah. To piggyback off that. Yeah. I think again, keeping track of the metrics and being able to have that bigger picture and say, OK, look at the 60 indictments, proportionate to the amount of time and effort it takes to do that. I think it's also an agency's willingness to kind of look back at the cold cases and say it didn't mean that we did things wrong, it just means maybe let's take a fresh look at this with a different prosecutor, with a different, you know, 10, 20, 30 years later. Let's not necessarily assume that the same things that happened a day after the rape are the same situation that you

will see now. There could be more evidence, a survivor might be in a place where they would be more likely to participate than perhaps right after the sexual assault. And I think learning about this. So you heard Mary - she's a prosecutor, but she was talking very much like a forensic scientist, right? And that's because she's learned lots of stuff about forensic science and the DNA testing and all that sort of stuff. So she can definitely hold her own in this space. And I think really as sort of professional development for everyone in this space is to learn a lot more and kind of keep up with this. I know that there's- and I see a lot more trainings coming out about this, about what exactly is Y-STR, and what is serology and what is, you know, these different sorts of things, and what is forensic genetic genealogy and those sorts of things. I think, you know, as we all have a responsibility to kind of stay up to speed as the technology advances, to make sure that we're fully utilizing all the information to be able to solve these cases.

Tyler Raible [00:31:31] Absolutely. I mean, 60 indictments is incredible. Mary, I have one question that kind of came to mind as we- as we've been talking and I was trying to flesh it out, and Rachel really brought it to the forefront. You do have an incredible understanding of the whole DNA testing process. Do you feel that this cross training, your willingness to listen and learn, has that been beneficial in the courtroom?

Mary Weston [00:31:52] I think so. I think it helps any prosecutor to know the science that's involved in their cases. The biggest benefit you're going to see is when you have that testimony coming into a trial, you're going to know how to question that witness because you want your analyst to be able to explain things in a way that a jury understands, right? So it's good. I like the fact that I know what it was like before - I knew nothing about DNA. And so I can, I know where a jury is probably coming from, where you know a little bit about DNA. We all know a little bit about DNA. And- but it will help you craft your questions to your analysts in a way that will make sense to the jury. And the other big benefit you're going to get is you're going to know that your case has opportunities for more testing. There's a lot of times I look at a case and I'll see an opportunity for something additional that I wouldn't have noticed before. And it's all just because I've taken the time to listen and learn from the analysts at our lab and other prosecutors, too. I'm definitely not the only prosecutor that listens to lab personnel, and especially on this project, it's such a DNA focused project we're on. So we all sort of end up reading and rereading lab reports and thinking what more can be done here? And there's a lot of- sometimes there's frustration. Not everything is going to be in your lab report. There's a lot of information that's absent from your lab report that you've got to talk to your lab analyst to find out more about - what was done and what more could potentially be done to a) identify an offender or identify that offender's DNA in a place that makes- is more powerful to the jury. When I say that, I mean, it corroborates what witnesses are saying about the case - the witness, including your victim, right. So I'm always looking to make sure that we have looked for DNA where it's likely to be, where it's likely to be based on the narrative that you're getting from witnesses and victims in your cases.

Tyler Raible [00:33:49] There's so much I appreciate about this approach. We talk about multidisciplinary teams a lot in the context of resolving cases or moving things forward. But one thing that I think would be fascinating - and this is obviously a topic for a different, different episode - would be just like the impact that the multidisciplinary team has on the members of the team. So we are running out of our time together today. First, I'm going to ask - what's next for each of you? Is there anything coming up you're excited about?

Rachel Lovell [00:34:13] I think some of the things that working with the task force is to sort of see because they are really trying to fully utilize the forensic evidence, and I think

starting to see the benefits of that, I think as the research partner kind of assessing that process as well as still continuing to learn from these cases. So what can we know about, you know, for example, offending patterns? What do we know from geography and the geospatial patterns - the things like this. I think these cold cases can have just a wealth of information in them. And we are still really only beginning to tap a lot of that information. So that's kind of a general approach to kind of where we're going. Mary?

Mary Weston [00:35:05] I agree with Rachel. There's a lot of things to be excited about. I feel like you can never stop taking a second look at your cases, right. So we continue to take second looks at cases from our local police departments moving forward. Right now, we're looking at cases between 2012 and 2019 - already, even though they are newer cases - already, we are having some success. There was just a case. We just got results recently. It was- the sexual assault kit had been completely tested. There were no results there. But we took a second look and tested some pants, and pants we looked at for a reason because the woman had explained that her perpetrator wiped himself off on these pants. So that would make sense, right? It hadn't been tested. We tested them. They- we got a CODIS hit. So we are moving forward with that case. And that's just one of a few examples. We've had a few really good results. I got a result yesterday I was freaking out about - it was a stranger rape where they had tested the kit, but they had never tested a used condom that was found on the scene. And we got results yesterday that not only is the victim's DNA on that condom, which is good because it means it's not some unrelated condom from some other assault, but a single male profile on that condom that can go into CODIS. So we have breathed new life into that case. So every day there's something exciting. And then we are also doing some genealogy, which is new - again, we received some BJA SAKI funding that we were able to use to start a pilot project to look at twenty unsolved cases we had for genealogy. And we have two arrests - as in the last two weeks, we've made two arrests as a result of genealogy, so again, cases that, if you would ask me two years ago or is there anything else that can be done here, I would have said no. We have the gold standard here. We got a DNA profile into CODIS. We just don't have a solve. And we're trucking forward and using this new tool in our tool belt to solve cases too. It's really exciting.

Tyler Raible [00:36:56] It's definitely exciting - I mean, I can tell that your excitement is palpable. So that's phenomenal. Are there any final thoughts that you two would like to share with our listeners before we wrap up today?

Mary Weston [00:37:05] I just think it's very valuable to keep looking at these cases. If- it's a lot of work and it takes time. But if you take the time to look at these cases and go through them, it is so worth it because you will get results and it will produce leads. It will produce leads. If you're, if you have a staff that's willing to follow up on these leads, then utilize that staff. It will result in giving good ends of stories to these victims. And I think Rachel can speak to the value that is, you know, for communities - it's economically good for communities to look at these cases and solve them. And because it prevents future crimes, and Rachel's done the research on that. So it is valuable. It's a valuable effort.

Tyler Raible [00:37:49] I'd like to thank Rachel and Mary for sitting down with Just Science to discuss partially tested sexual assault kits. Thank you both so much for being here.

Mary Weston [00:37:55] Thank you, Tyler.

Rachel Lovell [00:37:56] Thanks, everyone.

Tyler Raible [00:37:57] And if you enjoyed today's conversation, be sure to like and follow Just Science on your podcast platform of choice. For more information on today's topic and resources in the forensic field, visit ForensicCOE.org. I'm Tyler Raible, and this has been another episode of Just Science.

Voiceover [00:38:15] Next week, Just Science sits down with Pattie Powers to discuss considerations for older victim cases. Opinions or points of views expressed in this podcast represent a consensus of the authors and do not necessarily represent the official position or policies of its funding.