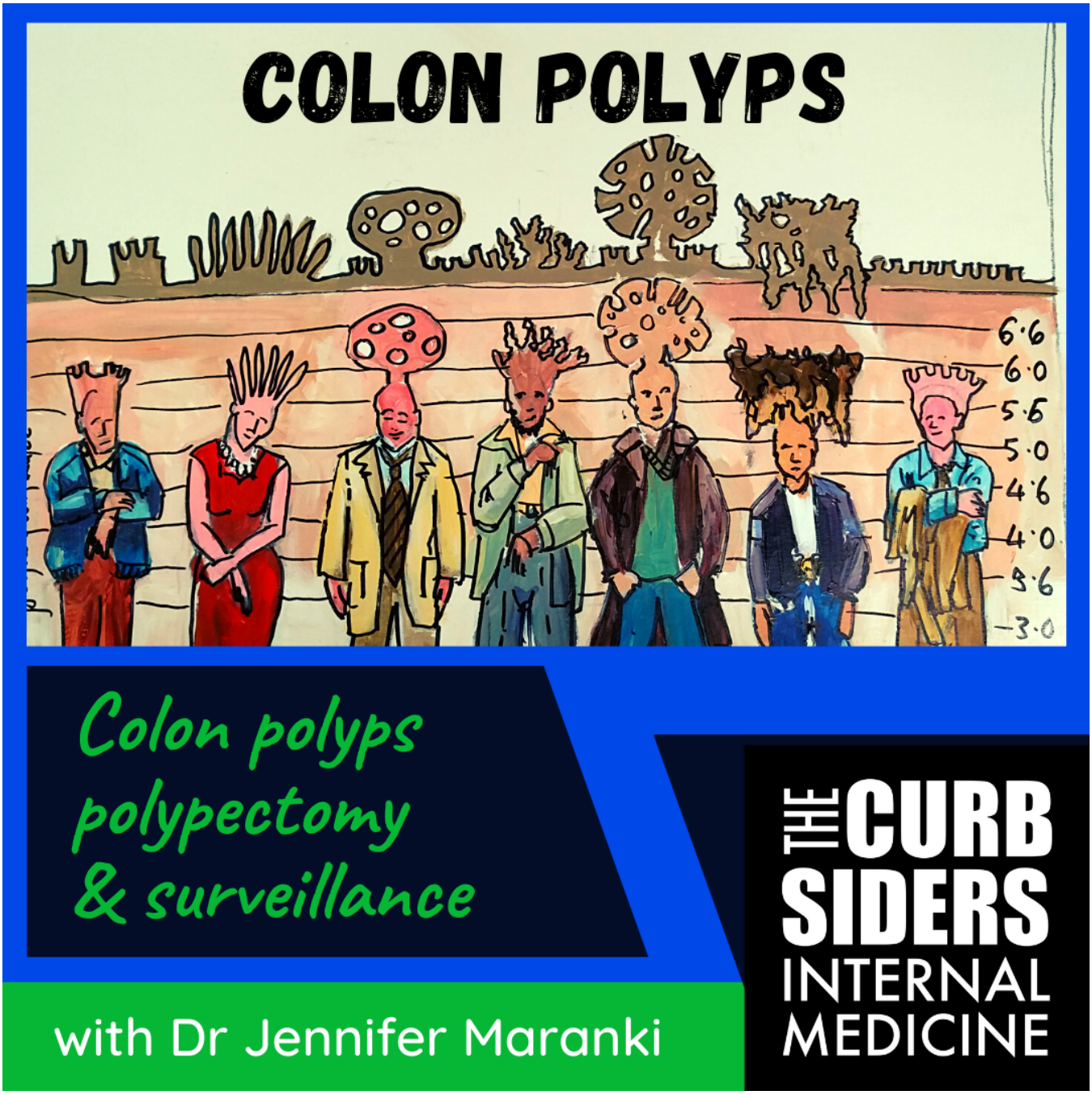
#353 Colon Polyps



[The Curbsiders Podcast theme]

Matthew: Welcome back to The Curbsiders. I'm Dr. Matthew Frank Watto, here with my great friend, Dr. Paul Nelson Williams. Paul, how was that?

Paul: [laughs] Really good, Matt. It felt natural. You get better every time.

Matthew: Yeah, for the audience, I've been in the basement drinking coffee for the past five hours, trying to psych myself up for this podcast episode.

Paul: [laughs]

Matthew: Tonight, we are talking about colon polyps with the great Dr. Jennifer Maranki, and we'll tell you all about her in a second. This was a really practical episode, Paul. I always am unsure when to follow up-- We also talked about a lot of other cool stuff. Bowel preps, what is a low residue diet? Things that were on my wish list for a long time here. Finally, I had cause to ask somebody about them.

Paul: Yeah. It turns out even defining the quality of the bowel prep actually has meaning, which was exciting to find out. So, yeah, I think really actionable stuff.

Matthew: Before you introduce our super cohost, Paul, would you please tell the audience, what is it that we do on The Curbsiders?

Paul: Sure, happy to. As per usual, we are *the* Internal Medicine Podcast. We use expert interviews to review clinical pearls and practice changing knowledge. As you alluded to, we are joined by super cohost and super producer, Dr. Elena Gibson, who put this episode together. Elena, how are you?

Elena: Great.

Paul: [laughs]

Elena: I'm super. [laughs]

Paul: Both great to hear. Why don't I let you tell us about who we talked to and what we talked about?

Elena: Yeah, sure. So, we had a great conversation with our guest, Dr. Jennifer Maranki. We talked all about the definitions of advanced adenomas, serrated polyposis, what to do whenever you have different results on an endoscopy report, how to make sense of what the next steps are. And Jennifer Maranki, she is a gastroenterologist and advanced endoscopist. She focuses on improving quality and access in endoscopy. She's the director of endoscopy at Penn State Hershey Medical Center, where she is currently collaborating with her colleagues in internal medicine and family medicine to develop colon cancer screening programs. So, very applicable to this episode. In her free time, she likes enjoying the outdoors in the sweetest place on earth, and she has recently become a golf nut.

Matthew: All right. And Paul, you'll be sad to know that I didn't have time to look up any colon puns before this one.

Paul: What?

Elena: [giggles]

Paul: Of all the episodes, you couldn't-- [crosstalk]

Matthew: Okay, Paul, fine.

Paul: [laughs]

Matthew: You forced me into it. So, Paul, I have some news. I had to have part of my colon removed.

Elena: For what?

Paul: Sorry to hear that, Matt.

Matthew: So, now, I have a semicolon. It's a punctuation joke, Paul.

Elena: [laughs]

Paul: For the listeners at home, Matt is looking off camera. So, he's reading this off a script.

Elena: [laughs]

Matthew: Paul, I also-- [crosstalk]

Paul: He did some research-- [crosstalk]

Matthew: Paul, I also just wanted to give a shoutout to my colon for doing me a solid.

[laughter]

Matthew: Thanks to *punstoppable.com* for those colon puns. A reminder that this and most episodes will be available for CME credit through VCU health at *curbsiders.vcuhealth.org.*

Jen, it's been great talking. I want to let the audience in on this. So, can you give them a one liner and tell them a hobby or interest that you have outside of medicine?

Dr. Jennifer: Sure. I am a gastroenterologist and advanced endoscopist, and I'm interested in quality in endoscopy. I have a special interest in colon cancer screening. I'm married with two kids, two daughters, and I love hanging out with the people that are most important to me. Of note, I recently became a golf nut. So, if you ever want to go golfing, give me a call.

Matthew: [laughs] Paul, are you a golfer?

Paul: I tried. Early on when I thought that I wanted to be wealthy when I grew up, I tried golfing. I could not have been worse at it. I never hit a straight drive ever. Even at the range, I was the one where you heard the consistent thwonk of the golf ball bouncing off the barrier next to me. So, I gave up on it. It made me too mad.

Matthew: Well, I'm sorry to hear that, Paul. I don't enjoy golfing either. I feel when you have a podcast, you can't golf as well. Your partners can only put up with so much. So, this is my hobby that takes--

[laughter]

Matthew: This is my hobby that takes a million hours.

Paul: Sure.

Elena: Fair enough.

Paul: Jen, my usual question is-- Here comes the neighbor with the garage door. Hold, please.

Dr. Jennifer: Classic.

Paul: Just be one moment.

Matthew: Can we give this guy a nickname yet?

Paul: No. I'm not even sure it's a guy to be honest. Blessedly, I don't actually see my neighbors very often, which is great.

Elena: You'll just drive in and out?

Paul: We'll let them close the garage door, then we'll continue. To resume, Jen, my usual question is tell me a piece of culture that you've enjoyed recently. It doesn't even have to be medically related, but it can be book, movie, whatever you like that you enjoyed, you think our audience would enjoy as well?

Dr. Jennifer: Okay. I have a couple of books. My all-time favorite fictional book is *All the Light We Cannot See* by Anthony Doerr. Recently, however, I'm planning a trip to Ireland. And so, I've gotten into the mysteries of Tana French and all of her stories are set in small Irish towns. And then, I do recognize that I'm about seven years late to this game, but I have recently become obsessed with *Hamilton* and listen to the Hamilton soundtrack every day.

Matthew: Might I recommend Weird Al's *Hamilton Polka*?

[laughter]

Matthew: Which, I am not saying this ironically, I think it's a masterpiece. So, check it out people.

Dr. Jennifer: Oh, okay, I'll check it out. It's high praise.

Matthew: It's high praise. Yeah, my boys were really into Weird Al with *Hamilton Polka*. That was their gateway to *Hamilton*, was *Hamilton polka*. And then I was like, "You know this is based on an actual play?", and then they got into the actual *Hamilton*. It's pretty funny.

Dr. Jennifer: Oh, it's awesome.

Matthew: All right, Elena, the floor is yours.

Elena: All right. So, my pick of the week today is a band, I'm going to try to pronounce the name right that it's Khruangbin. It's a trio out of, I think, Texas. And they have a recent album where they do some mashups with Leon Bridges too, that like psychedelic soul, very good.

Matthew: Paul, have you heard this?

Paul: Nope, not at all.

Matthew: [laughs]

Paul: My time has passed.

Elena: It's never too late.

Paul: [crosstalk] slowly towards stepdown. Yeah.

Matthew: Most of Paul's new music recommendations now come from Elena on air. I think that's--

Elena: [laughs]

Paul: No. That's 100% true. Elena is my Spotify.

[laughter]

Elena: You can find me.

Matthew: Yeah. I guess, one last question, Jen, for you before we get to the case. I wanted to know, did you have favorite advice or feedback or just a quality piece of advice or feedback that you wanted to share with the audience that maybe someone's given to you along the course of your career?

Dr. Jennifer: Yeah, sure. And this is actually a piece of advice that I'm very thankful for, and I have applied it. I heard it probably close to 20 years ago now, and it still applies. And I pass it on frequently at least every year or two some other trainees or people who are coming up. So, Dr. Darilyn Moyer, who was my program director at the time when I was a Temple internal medicine resident, mentioned to me that, "A career in medicine is a marathon, not a sprint." And I really think it continues to apply to my life. And it applies, I think, to all of us. Whether we're in academic medicine, or in private practice, or working for systems, I think there really is something to be said for slow and steady, because it helps keep you in the game.

Matthew: Yes, Darilyn, of course, very wise. Paul and I also lucky enough to know her and she has lots of quotes that I think of often I will say. But with that, let's get on to a case from Kashlak. So, Elena, do you want to start us off?

Elena: Happy to. So, our case today, we have a patient, Jeanette Simpson. She's 48 years old. She's coming to clinic really just there to follow up for her yearly diabetes management check. But since her last visit in the clinic, she did have a colonoscopy and she's asking you about that. It was for colorectal cancer screening, and it was notable for three polyps. So, what additional information about the polyps is needed to determine appropriate follow-up in her case?

Dr. Jennifer: This question kind of comes up frequently and it's very important that we look at the pathology of those polyps. We first separate them between neoplastic and non-neoplastic polyps. The type of polyps that are non-neoplastic that we most commonly see during colonoscopy are going to be hyperplastic. Those polyps are frequently found in the rectum and the sigmoid colon, and they don't substantially increase the risk of developing colon cancer, and they also require a different type of follow-up than adenomatous, precancerous, or neoplastic polyps do. Other types of non-neoplastic polyps are inflammatory polyps. We'll frequently see those in the setting of diverticular disease or chronic inflammation in the colon, as well as hamartomatous polyps. Now, hamartomatous polyps, if the patient has a syndrome, those can have malignant potential. On the other hand, neoplastic polyps,

which are the ones that we mainly think about when we're talking about having shorter intervals for colon cancer surveillance, are adenocarcinomas, things like tubular villous adenoma and then also sessile serrated polyps.

It's also important to find information on the size of the polyps. And this helps determine the surveillance interval. We see polyps anywhere in range from 2 mm, which is pretty much as small as you can see to several centimeters. So, it's important to note the size of those. And another important delineation is polyps that are less than 10 mm in size or those that are greater than 10 mm in size. Those are considered high-risk polyps and require closer follow-up.

Now, in terms of location where these polyps are located in the colon, it doesn't necessarily guide follow-up interval, but it may provide insight into whether there's a polyposis syndrome. Additionally, hyperplastic polyps often look like sessile serrated polyps under the microscope. Occasionally, you'll have a pretty sizable hyperplastic polyp in the right side of the colon, so say, the ascending colon, and I usually chalk those up to being sessile serrated polyps, because the hyperplastic polyps are less commonly found on the right side of the colon.

Matthew: I think now's a good time to just get it out of the way early. I don't understand what sessile serrated polyps are.

Paul: [laughs]

Matthew: I understand more now because I've done some reading about them before this. But it seems they're treated differently than just your regular tubular adenoma. Can you talk a little bit about what they are and why they're treated differently?

Dr. Jennifer: Sure. Sessile serrated polyps look very much like hyperplastic polyps, which are just flat or minimally raised little polyps. They have a very subtle endoscopic appearance. They're quite similar to the surrounding mucosa. Whereas adenomas will have a distinct pit pattern. They're often more red in color and you can see them more readily. The sessile serrated polyps are very subtle sometimes, which is another reason why the quality of the bowel prep is so important. They're more frequently located in the proximal colon. And under the microscope, they share a lot of the same characteristics as the hyperplastic polyps. They have a little bit more disorganization and serrated edges, which is the reason why they're called sessile serrated polyps.

Those are less likely to cause bleeding, but they're important to find because first of all, they're very easily missed and it's thought that having sessile serrated polyps increases the risk of developing colon cancer threefold compared to somebody having a normal colonoscopy. And so, they're very important to find. They're also very difficult to find. And so, our follow-up recommendations are actually a little bit more stringent when we find sessile serrated polyps than a standard tubular adenoma.

Matthew: Yeah. So, it's almost part of the reason for the shortened interval is just because you're just worried that if they make those type of polyps, it's more likely you might miss something-

Dr. Jennifer: They'll be missed.

Matthew: -because they're just harder to see.

Dr. Jennifer: That's right.

Matthew: Okay.

Elena: And so, is it a mix of an endoscopic and histologic diagnosis?

Dr. Jennifer: It is. In determining if it's a sessile serrated polyp or--?

Elena: Yeah.

Dr. Jennifer: No. Technically, the diagnosis of the polyp is going to be from the pathologist, from the histology. But I just sometimes am a little bit suspicious and sometimes, I've gone back and asked the pathologist, "Hey, can you look at this again? I found this on the right side of the colon." And then, more frequently than not, they may correct the read. And so, I've just gotten into the habit of being a little bit more suspicious for right-sided colon polyps that are of a certain size, typically greater than 10 mm or so.

Matthew: To recap for the audience, we are used to seeing hyperplastic polyps on a report and I'm usually like, "Okay, good. As long as they're smaller than 10 mm, it's not something I'm worried about." And then, you're saying that usually, when those are there as an endoscopist, you're like, "Okay, I found this in the rectum or sigmoid colon. I found this on the left side that's more consistent with a hyperplastic." But if you find something that looks like a hyperplastic on the right side, you might be more suspicious that it's a sessile serrated polyp, which does have more of a malignant potential and I guess, gets you keyed in like, "Okay, I got to think about this person. Maybe they're making this type of polyp," and really look out for it.

Dr. Jennifer: Correct.

Matthew: So, Elena, how do you want to tackle this? Because I know we have a lot to get to, a lot of different types of polyps and we laid out the groundwork here. So, what do you want to go next with this?

Elena: Actually, I was just thinking speaking of things that are hard to find, we could talk a little bit about the prep, and what the specifics of different types of prep, and then also the importance of a good bowel prep or adequate.

Dr. Jennifer: There are a variety of ways to achieve colon cleansing, which is really key in having a high-quality colonoscopy. And I just want to mention that in all of the guidelines for surveillance after polypectomy, we're all assuming a high-quality colonoscopy. If we don't have high-quality colonoscopy, then those guidelines do not apply. And I'll get into that in a little bit.

But when it comes to bowel preps, we know we have the tried-and-true GoLytely or NuLYTELY, which is a gallon of liquid. Our guidelines have shown and the data has shown that patients who do split-dose preps, which means that they take half of the prep, maybe 12 hours before the colonoscopy and then the other half of the prep started maybe six hours before when they're going to have their colonoscopy and finish drinking at least two hours prior to them being sedated, those end up having the best types of preps.

We also have a variety of newer preps that are very well tolerated, that are much lower in volume and they provide great preps. And so, my go to prep is typically Suprep, in part because that's the prep that I had when I had a colonoscopy and I had a great prep. But it's pretty easy to take. I think one of the things that happens with some of the low-volume preps is that patients will become a little bit nauseous. And the guidance for that is, don't stop. Just slow down your drinking. But a lot of them, you drink a cupful of whatever the prep is and then chase it with a bunch of water.

The key is really modifying your diet for a day or two prior to the colonoscopy and that means a low-residue diet. So, low fiber, not a lot of seeds and nuts, things that are easy to digest is what you want to do. And if you have a history of constipation or on medicines that can slow down your gut motility or diabetics frequently have a hard time getting an adequate bowel prep. So, they may sometimes use an extended prep, which sometimes can mean longer dietary restriction or two days of clear liquids instead of just the one or sometimes, even additional prep two days prior to the procedure.

So, every endoscopy center will have their own recommendations on what to do for extended preps for patients who are at higher risk for poor preps and a variety of preps that are available. A lot of it depends on what your insurance covers or what other comorbidities you have, and local availability. During COVID, we've actually had shortages of bowel preps. And so, we've had to come up with sometimes, alternatives that we don't normally go to.

Paul: Can you talk me through who's at risk for poor prep? You mentioned patients with diabetes. But I just feel there's nothing more demoralizing when you finally talk to the patient into the colonoscopy and you get the report back, suboptimal prep come back within a year, you're like, "Oh, I spent the past four years begging them and then we have to do it all over again."

Dr. Jennifer: Right.

Paul: So, who should I worry most about or should consider these longer preps?

Dr. Jennifer: Generally, patients who are diabetic, patients who are on narcotics. Sometimes, patients who are not very mobile tend to have issues with cleaning out appropriately, because they're just not moving and they have kind of colonic stasis in general. Patients who have a history of constipation at baseline are definitely ones that you are going to want to do an extended bowel prep on.

Matthew: I wanted to swing back on-- because we want to mention a couple names of preps. I think Suprep is one of the low-volume preps.

Dr. Jennifer: Sure.

Matthew: Moviprep is another one. I know locally, it depends on what institution app people might see different names of these, but there's a couple different low-volume preps.

Dr. Jennifer: Right.

Matthew: Can you mention--? You said there was a shortage of prep. So, people were using-- Have you told us before we started recording like PEG, polyethylene glycol and Gatorade. How does that one work?

Dr. Jennifer: Right. The brand name is MiraLAX, and Gatorade is a well-tolerated bowel prep, but it is just not FDA approved for bowel cleansing prior to colonoscopy. And so, it's safe. A lot of patients like taking it. It gives a reasonably good prep. It really came in handy when the other preps including Clenpiq and Sutab are not available.

Matthew: And then, the low residue. I was looking, University of Michigan has had a handout that they use, and it was just talking about the exact diet that we tell people to eat for healthy foods, like whole grains, and nuts, and seeds, and high fiber is exactly what these people don't want. They want sugar, refined carbohydrates, some meat and things-- well, well-cooked meat, it seems that stuff is okay for the low residue. But milk and dairy, they had to limit, and then the nuts, they had to limit the high fiber in the nuts and seeds and stuff. So, I thought that was interesting, Paul. You know I geek out on this stuff, because it's so practical to be able when patients like, "What the heck is a low fiber diet?" to be able to actually have some answer for them?"

Paul: Right. We mentioned before recording that your diet would be a nightmare for most endoscopists.

Matthew: Yeah.

[laughter]

Dr. Jennifer: Right. This is true. Because a lot of the foods that we encourage people to eat in general, so dried fruit, berries, seeds, nuts, lots of vegetables, even raw vegetables, whole grain breads, things like that, those are encouraged to have a healthy diet. And the foods that we'd like you to eat when you're preparing for your colonoscopy are low residue. So, not including those that I just mentioned, but rather white rice, refined grain products, like white breads, pastas. And then, you can have eggs, oil, margarine, butter, things like that are all good. And then, some soft-cooked vegetables that are very well cooked are appropriate for a low-residue diet.

Matthew: Well, I'm going to take you out-

Paul: I feel if it-- [crosstalk]

Matthew: -to one of those places where they cook with all the butter, and the guy's got the rice that he's flipping stuff to people. Yeah, that would be great-- [crosstalk]

Paul: It sounds like you can just write a prescription for the Waffle House.

Matthew: [laughs]

Paul: I'm just thinking you might actually be incentivizing carnivore patients to go through colonoscopy.

Dr. Jennifer: [laughs] Yeah.

Paul: It sounds fantastic.

Matthew: Yeah, Paul, this sounds like our road trip eating. [laughs]

Paul: [laughs]

Matthew: Okay. Well, for the audience, as we talked about here, low-residue diet. It's not the normal diet we'd recommend for our patients where they're eating healthy. And then, the low-volume preps, seem like they work and some patients seems to like them better. So, I guess, a lot of people are moving more that way. And you told us that the Suprep, if patients have a sulfa allergy, that might be an issue. So, that's just something for people to look out for?

Dr. Jennifer: Right. A sulfate allergy and gout are the key contraindications to that. And the same thing with the Sutab. And then, in some of the other ones, you have to look for arrhythmias or things like that, any cardiac issues. Sometimes, the low-volume ones are not suitable for those.

Matthew: Okay. And so, they would start this a day or two before. If they have any of these predisposing conditions where we're just worried that they're prone to constipation, then we would start this earlier. I think that's good. I think that's a lot of practical information the audience can give to their people before their prep. So, what's next, Elena?

Elena: All right. Let's say Janet had a very good prep. She drank all the Gatorade. And her gastroenterologists completed three snare polypectomies. The histology reports that there were three tubular adenomas. They were all less than 10 mm in size. And a repeat colonoscopy was recommended in three years. So now, getting to the guidelines for post-polyp surveillance, what would be recommended for follow-up in this case now based on the updated guidelines, and just what are some of those big changes, and how do you categorize them?

Dr. Jennifer: Sure.

Paul: Actually, I'm sorry. Before we get there, I just thought, would it be worth --? Elena, you mentioned this patient had good prep and Jen had alluded this earlier. Is this the time to talk about what that means? Because sometimes, I see on the reports the good versus adequate versus suboptimal. It always feels someone's just winging in their description of it, but I imagine there's some criteria that actually has some significance. Is it now the time to talk about that or should we save that for another time?

Elena: Let's do that. That sounds great.

Dr. Jennifer: We're looking for high-quality colonoscopy, and that means a number of things in addition to the quality of the bowel prep. That means the exam was completed to the cecum. Usually, in the colonoscopy report, it'll say how far the scope was advanced to. So, you're looking for cecum or terminal ileum in somebody who hasn't had surgery. And then, the adequacy of the bowel prep, at minimum, you want adequate. And what that is implying is that the bowel prep was adequate to detect polyps that are greater than 5 mm in size. There are a variety of scales and some colonoscopists will use the Boston bowel prep or other types of scales to indicate an adequate bowel prep. Good, excellent, adequate, those are all above the threshold for what we need. Fair, suboptimal, or poor are things that are red flags, which indicate that the bowel prep was not adequate to detect polyps. And therefore, our recommendations that may follow from polypectomy are not necessarily applicable.

And it's also important, colonoscopists are graded-- or at least, their surveillance on us about how good we are at finding adenomas. And most endoscopy centers will have their colonoscopists calculate an adenoma detection rate. And that means that in patients who are average risk, who have a good quality

bowel prep, we find adenomas in at least 30% in men and at least 20% in women on their first screening colonoscopy.

Matthew: Yeah. And I didn't realize, do you detect polyps? When you're trying to reach the cecum or the terminal ileum, is that when you're looking for polyps or is it when you're withdrawing the scope? Because I know they mentioned like, "You should take a really long time to withdraw the scope." I thought you just get there and then you just pull it out like a magician pulling a-- [crosstalk]

[laughter]

Paul: Like starting a lawn mower.

Dr. Jennifer: Yeah.

Matthew: Just starting a lawn mower. Yeah, like that.

Dr. Jennifer: Yeah. Actually, when we go in, I think it's best to try to insufflate as minimally as possible and get there as efficiently as possible. Because the kind of scope warms up as it's in the body and it becomes more difficult to navigate, sometimes the longer time you're taking to get to the cecum. I tend to keep an eye out in the corner of my eye for things on the way in, but the vast-- almost all of the looking I'm doing is on the way out. And I see you brought up a great point. We recommend at least absolute bare minimum of six-minute withdrawal time and that's in the setting of finding no polyps. So, we want to be able to withdraw over the course of at least six minutes and obviously, that time increases as we spend time removing polyps. It's actually another quality indicator in colonoscopy.

Matthew: As Paul suggested, starting a lawn mower is not-- Pull out like you're starting a lawn mower, that's not--[crosstalk]

Dr. Jennifer: It's definitely not.

Matthew: This episode is going great, Paul.

Paul: [laughs]

Matthew: We're really showing our maturities.

Paul: My major contribution to the episode was that metaphor. Yeah, we can--

Dr. Jennifer: And then, I just want to mention, as we're applying these guidelines, if you have these guidelines printed out, there's some language that's important to define. And so, an advanced adenoma, for example, is something that is either 10 mm in size or it could have advanced histology. So, that means tubular villous or villous, or it could have high-grade dysplasia. Those things qualify as an advanced adenoma.

Matthew: The USPSTF tells us, let's say, we're following when they tell us to screen people and they're talking about average risk patients. These guidelines seem like they also apply to average risk patients. Can you talk us a little bit about what makes someone a higher risk patient or how they become a higher risk patient, if they didn't start out as one?

Dr. Jennifer: Sure. Patients are average risk. The most common way that patients are average risk is that they have no family history of colon cancer. So, patients with a family history of colon cancer or advanced polyps in a first-degree relative, that qualifies as increased risk for colon cancer. Patients with inflammatory bowel disease are also considered at higher risk for colon cancer. Obviously, patients who have any kind of hereditary syndrome associated with an increased risk or if they personally have had colon polyps or colon cancer, they're going to be considered a higher-than-average risk.

Matthew: So, if somebody has a brother that had like 1 cm polyp with high-grade dysplasia, then we're considering that person now a higher-than-average risk.

Dr. Jennifer: High risk, yep.

Matthew: Yeah.

Dr. Jennifer: We would actually put that person in the same category as somebody who had a brother with colon cancer prior to the age of 60.

Matthew: Okay.

Elena: So, really, we should be talking-- It's interesting, because I feel I've never heard a patient tell me anything about their family members' polyps.

Dr. Jennifer: Right.

Elena: They might know they had polyps, but never that much information.

Dr. Jennifer: Right. But if they have that information, it's like a goldmine. It's sometimes challenging for us, because I'll ask these questions when I'm trying to categorize them to determine what their intervals should be, if they are higher risk or not. And they'll say some things that make me suspicious, but it's not completely accurate information. And so, I have to make a judgment call sometimes about how big was the polyp, and how many times did they have polyps, and did they have to have surgery for the polyp, and stuff like that.

Matthew: The advanced adenoma thing, that was something that I don't know that-- Paul, was at in your vocabulary before recently? Maybe we just weren't paying-- or I wasn't paying attention. It seems it's a newer concept.

Paul: Yes. It's language I've not heard used until probably the past couple of years. Yeah. So, I'm right there with you, for whatever that's worth.

Matthew: The advanced adenoma, you said certainly, if there's dysplasia, if it's greater than 10 mm or 1 cm, can you repeat what else makes it in advanced adenoma?

Dr. Jennifer: Right. Not just the presence of dysplasia, because adenomas by definition have some degree of dysplasia. Usually, low-grade dysplasia. Tubular villous, or villous histology, or high-grade dysplasia make it advanced.

Matthew: Okay.

Dr. Jennifer: Or if it's larger than 1 cm in size.

Matthew: Okay. So, what's next for our patient here, Elena? What are we going to give her on the--? Do we go through her pathology yet?

Elena: Yeah. She had an adequate prep and they detected three polyps that were less than 10 mm in size. On the path report, they were noted to be tubular adenomas. They were not considered advanced adenomas. And at that time, a repeat colonoscopy was recommended in three years. So, overall, I think it'd be helpful to think through her case. Now, with changes in the guidelines, when would recommended follow-up be? But then also, maybe the most common categories for follow-up or how you group these together could be helpful.

Dr. Jennifer: Right. For our patient, a three-year follow-up is not wrong. The taskforce now recommends a three- to five-year repeat colonoscopy for those with three to four adenomas that are all less than 10 mm in size. And they actually favor more of a five-year surveillance just based on some of the studies that they had included, recognizing that it was all based on low-quality evidence. Like I said, in the case of Janet, three years is not wrong, but five years is probably a bit favored.

I will tell you that I do not like having a range. And part of the reason I don't like having a range is because for our endoscopy note writing software, we can actually generate recalls from our center, if it's a finite amount of time. And so, I tend to favor one discrete number instead of a range. Because if there's a range, that won't generate a recall. Whereas three years, or five years, or four years will all generate a recall. A range will not generate a recall. And just so for our internal quality control, when we're getting back in touch with our patients, "Hey, you had a colonoscopy two and a half years ago. You're due to come back in three years. Let's start setting it up." That is another layer of quality that I like to have.

Matthew: Yeah. A lot of the times now, I'm getting the report, sometimes, at the same time as the gastroenterologist or sometimes, I'll get the report and it won't say exactly or the patient has left the previous doc and that doctor is no longer around that we can contact them. So, I have to decide if it's a three- or a five-year follow-up. Is there one thing that would push you to the shorter side of these ranges that they give rather than the longer side?

Dr. Jennifer: I think that if this person had a family history, because if they had a family history of colon cancer and that was in a first-degree relative less than age 60, if there were no polyps, that person would be in five years. And so now, we're finding three or more polyps in somebody with a couple of now higher risk things going on, I would tend to favor a shorter interval.

Matthew: Yeah. Because the ranges, they really vary. Some of the ranges are 5 to 10 years and it just depends. So, this person, if they had the just one to two adenomas and they're less than 10 mm, then it could have been 7 or even a full 10-year follow-up if they were average risk?

Dr. Jennifer: Right.

Matthew: And are you also similarly making it a 10-year rather than the 7-year?

Dr. Jennifer: I don't always feel comfortable doing that, honestly. I tend to make it seven years. Because colonoscopy is not perfect. We miss lesions all the time. And sometimes, the prep is not perfect. It's adequate, but it's not great. I just think I tend to favor a little bit of a shorter interval, although this is really not databased. I'm probably not saying anything that's data driven. Honestly, the data would actually suggest to be more liberal with letting them go to 10 years.

But interval colon cancers do happen. I think part of it is patient's expectations as well play into it. They're like, "Oh, I have polyps and you're going to treat me as if I didn't have any polyps and they were pre-cancerous?" And so, some of it is also patient comfort.

Elena: Does the size, say like 9 mm versus 4 mm, does that affect your range that you choose?

Dr. Jennifer: I think it would, because if they were all bigger, less than a centimeter, but 8 or 9 mm in size, that would also push me towards recommending three years rather than five.

Paul: I love that question, because I feel the 10 mm, it's such a nicely round number, it feels it's actually just something out of comfort rather than based on evidence.

Dr. Jennifer: [laughs]

Paul: I'm not saying it's not. I'm just saying 10 seems like a number I would pick if I was going to get pick a number and to remember or not. Something based on an average size.

Dr. Jennifer: But It's also very subjective. We don't have our ruler out during the colonoscopy. There are a couple of different visual cues that we use to measure the size of a polyp. But it's pretty subjective. And sometimes, it's not uncommon, I'll look at a polyp and be like, "Yeah, it's 6 millimeters." And then, part of me, I'll be like, "Oh, that's 8." And then, somebody else will say, "No, that's 4." [laughs] So, there is a level of subjectivity to it as well.

Matthew: We've talked a little bit here. There's figure 1 in the Task Force guidelines. It has a nice flow chart here that tells you the range of follow-up based on how many polyps they had, and the size of the polyps, and the type of the polyp. So, people definitely should bookmark that and have that around so that they can pick. We talked about the shorter follow-ups are going be for people who have more. The more you have, the shorter the follow-up. And then, if there's any of this villous or tubular villous or high-grade dysplasia, those are going to be the shorter polyps in general. We're just painting in broad strokes here. I don't think people are going to be memorizing these as we're talking on air.

Matthew: Part of what I thought was interesting now, because I remember, maybe this was just my misunderstanding of the previous guidelines that if someone had a single adenoma, they were five-year follow up for the rest of their life what that they're getting colonoscopies. And can you talk about now? They get their index colonoscopy. Let's say, this patient here, they had three polyps. We repeat the colonoscopy in five years and now, they have nothing. It's clean, there's no polyps. Does that person go back to the average-risk category and get a 10-year follow-up?

Dr. Jennifer: Right. If they had what's called low-risk adenoma, so one or two small ones, and then their follow-up colonoscopy, there was no polyps, they would go back to 10 years.

Matthew: Okay. People that have three adenomas, they wouldn't necessarily go to that 10-year? They would go to a--

Dr. Jennifer: They would go to five years.

Matthew: A five-year follow-up. Okay. Five-year follow-up. But if it's that person that has one or two, that first time, they can be blessed with a 10-year follow up for their third colonoscopy. That's good.

Dr. Jennifer: Yeah. And the idea of being permanently on the five-year plan, that is really only applicable if they have a family history of colon cancer and a first degree relative or an advanced adenoma and a first-degree relative prior to the age of 60.

Matthew: Mm-hmm. Paul, I think you had a question. Does this ever come up for you, Paul, where you get the colonoscopy, and then someone's like, "Yeah, I'm done with those things. I just want to do FIT testing from now on." You ever get those patients?

Paul: I do a lot, actually. Yeah.

Matthew: Yeah. I thought this was a question you wanted to delve into.

Paul: Yeah, it was. We talked about this before we start recording. I guess,yeah, how interchangeable are the tests and when might you go back to Fit-DNA testing? Because I do have patients who are like, "I don't want to go through that again." Every so often, I have these patients that they will have undergone the colonoscopy-- and I will make the point that most patients are like, "That was not nearly as bad as I thought it was going to be." But every so often, I have patients, it's really burdensome for them to take the day off, and get a ride home, and all that stuff. And they'll be like, "Can I go back to something else, or can we do other types of testing?"

I guess my question for you is, in what circumstances is it okay to deescalate is how I think about it, though maybe not right, to Fit-DNA testing and what are the circumstances where really that's probably not a great option?

Dr. Jennifer: This is a great question that comes up all the time, especially as we're dealing with our primary care providers. The Fit-DNA testing and FIT testing, those are all reasonable alternatives to colonoscopy for colon cancer screening. When we're talking about screening, those are patients that have never had colon polyps, have never had precancerous polyps, and are also considered average risk. Those tests don't really apply to patients who either have a prior history of colon polyps that are precancerous, so adenomas or sessile serrated lesions, or if they're considered high risk for one of the reasons that I had mentioned before.

Realistically, somebody could have a colonoscopy and then they're due again for another colonoscopy 10 years later, they want to have a Fit-DNA test, that's completely reasonable. Or if they want to have an annual FIT test, completely reasonable. However, for patients who have had adenomas or are considered high risk, we really don't recommend those tests. Now, some testing, I would argue, is better than no testing. So, this is somebody who is absolutely not going to have a colonoscopy. I think it's reasonable to use those tests as a compromise, but documenting what the rationale was for using that, because that's really not how the tests were designed.

Matthew: Yeah, because I was reading-- It seems there's a little bit. Let's say someone had one to two small adenomas on their first colonoscopy. The second colonoscopy had nothing. Can you go to a FIT test at that point? It seems probably that's a lower risk person, but if they had adenomas and they haven't had another colonoscopy yet, you're saying the FIT test is better than nothing, but you'd rather have another colonoscopy whenever they were due for follow-up rather than no colonoscopy.

Dr. Jennifer: Right.

Matthew: Yeah, it's tough. But in practice, we're constantly negotiating with people about what they will and won't do. I guess it's kind of like harm reduction, Paul. You're just like, "It's better than nothing."

Paul: Yeah. With a mind like this, the science behind this is not great, but maybe it's the spur to actually get the thing that needs to get done, is how I think about it. Sometimes, like you said, compromise is the exact right word.

Matthew: Jen, we're talking about patients maybe not wanting colonoscopy. I think part of that is fear, or they just don't want to do the bowel prep, or it's disruptive to their life. But there are some risks with colonoscopy. Can you talk a little bit about how common are complications and what complications might we talk to patients about if they're worried?

Dr. Jennifer: Sure. We always go through the risk of complications with the patient. They're always afraid that they're going to suffer some horrendous complication at the time when they're consenting. However, colonoscopy is generally a very well tolerated procedure. And even with polypectomy, we are pretty good at doing it. Most polypectomy bleeding is 1% to 2%. However, in patients who need a larger resection, so if they need a technique called endoscopic mucosal resection to get a larger, meaning greater than 2 m flat polyp, that risk can go as high as 5% to 10%. And the bleeding can be immediate or delayed. We generally remove polyps with a tool called a snare. That snare, we can either guillotine polyps off with this thin wire of the snare or we can attach that snare to electrocautery and use cautery to take off the polyps. We generally see delayed bleeding, which means up to three weeks after their colonoscopy actually. It happens more frequently when we use cautery or a hot snare.

Aside from bleeding, the next big risk is perforation. It's a low risk. But if it happens, it can potentially require a surgery to fix. And so, that is also quite low, but can be as high as 5% in cases of endoscopic mucosal resection or submucosal dissection.

Now, it's also important to note that these are not standard colonoscopy numbers. These are numbers that are associated with removing large polyps. In general, the risk of perforation for just polypectomy is much less than 1%.

And then, another thing that can happen in the setting of using electrocautery from taking off polyps is something called post-polypectomy syndrome. And that is due to a transmural burn to the bowel wall. And it actually causes a little bit of a focal peritonitis, but no evidence of a clear perforation. And patients will have some abdominal pain, they may have an elevated white count, they may mount a fever actually within a day or up to five days after having a polypectomy. We usually manage those conservatively. Sometimes, they require hospitalization, even get IV fluids and antibiotics, bowel rest. But frequently, patients can be managed outpatient wise with just some clear liquids and bowel rest.

Paul: And Jen, for the bleeding specifically, how is that defined? You may not know the answer to that, but is that bleeding sufficient to warrant a follow-up visit? Is this what they're actually calling bleeding? That's a higher number than I actually would have expected.

Dr. Jennifer: Yeah. The bleeding that we worry about is when somebody goes home and then they start having a lot of bowel movements and it's hematochezia, it's bright red blood. And blood is a cathartic. So, people will go to the bathroom more frequently. And if that's not calming down, then we have patients come to the ER to at least get their blood checked, give them some fluids, and monitor them.

And then, the next step is usually starting a bowel prep. And if the bleeding stops during the course of that bowel prep, we don't necessarily need to do another colonoscopy because most of them will stop on their own. Now, it's very common to see after a colonoscopy and polypectomy, especially if we're using cold snare, patients will have streaks of blood or even a tablespoonful or two of blood after their scope. And that's not really anything to worry about.

Matthew: Yeah. And we hold full anticoagulation like the DOACs, and warfarin, those things before colonoscopy. But aspirin or other antiplatelets, are you holding those specific amount, just things that come up? I'm not usually even talking to the patient about that, because I think the endoscopist is telling them directly.

Dr. Jennifer: Yeah. Our guidelines recommend continuing aspirin for everyone for colonoscopy with polypectomy, but we generally will hold Plavix and warfarin for a couple of days and the other DOACs, we'll hold those as well. And then, the resumption of those is based on what we did and how aggressive we were. So, if there were no polyps, they can start the same day. If there were a couple of small little polyps, they can maybe start the next day. But if we did endoscopic mucosal resection, we want them to hold it if they can for maybe three to five days.

Elena: That's helpful. I think one other thing we wanted to touch base on was, we learned about a lot of these polyposis syndromes in our training, don't as often see them. But what are some of the things on a colonoscopy report that should make us think about the potential of a polyposis syndrome or things we should be watching out for?

Dr. Jennifer: Sure. With the polyposis syndromes, we're talking about familial adenomatous polyposis or attenuated familial adenomatous polyposis or FAP. We're talking about serrated polyposis syndrome and then Peutz-Jeghers and familial juvenile polyposis. For FAP, those patients have a carpet of polyps throughout their colon. We'll see hundreds to thousands of adenomatous polyps and that is really associated with 100% lifetime risk of developing colon cancer. So, those patients are referred for genetic testing and then to the colorectal surgeons. There's also an entity called attenuated FAP. And that's when we see between 10 and 100 adenomatous polyps. And they're more frequently on the right side of the colon. But it's also associated with a substantially higher risk of developing colon cancer up to about 80%.

Some more subtle things are the serrated polyposis syndrome. And for those, you don't really need to have huge numbers of polyps. For example, you can have five serrated polyps that are more proximal to the rectum of which two of them are greater than 1 cm or larger. Other criteria for that are greater

than 20 of those serrated polyps or if you have serrated polyps and you have a family history of serrated polyposis syndrome. So, those are some of the things that we look for during the colonoscopy. And also, if somebody continues to have multiple colon polyps every time they get a colonoscopy, that would also cue me off a little bit.

Elena: And the serrated polyposis syndrome, that's total for any colonoscopy or within one colonoscopy?

Dr. Jennifer: It's generally within one colonoscopy. I'd actually have to look this up to see if it's a lifetime accumulation of five polyps.

Elena: Yeah.

Dr. Jennifer: I'd have to look that up, actually.

Elena: And the reason, I guess, the serrated polyposis syndrome, really all of them, would matter is because the surveillance and screening would change?

Dr. Jennifer: Right. Well, it's not so much that it matters for that patient, but it matters for that patient's family members.

Elena: Okay.

Dr. Jennifer: Right. And so, if they have polyposis syndrome, then their first-degree family members may also be at risk for that.

Elena: Oh, I see. Yeah. Because they would still be getting surveillance based on their polyp. Okay.

Dr. Jennifer: Right.

Matthew: I think we're pretty close to the end of this. We did ask you ahead of time about older adults, people in the 75 to 85 range, and it sounds you go mostly by what's their biological age, not their chronological age. So, if they're an 80-year-old who had polyps at 75 and they're due for a follow-up but they're doing great, they're driving, they're still as healthy as they were at 75, you might still do it. But it sounds like it depends on how healthy the patient is and what the situation is. Anything else that you talk to them about when people are getting sorts that 80 and above range where a lot of people want to stop?

Dr. Jennifer: Right. I actually put it in my note. Say, if these are the adenomatous polyps, we would recommend a repeat colonoscopy in three years' time, but only pursue that if this patient clinically is doing as well as they were at the time of this colonoscopy. So, please have a conversation with your primary care provider at that time. A lot of patients are risk averse and they like knowing that colon cancer is not going to get them. And then, others don't want anything to do with it. Others, even who are just aged 70 are like, "Oh, this is going to be the last colonoscopy ever."

But when we're taking polyps off each and every time, those are people who I continue surveillance on. For patients who have reached the age of 75 who have never had colon polyps, it's pretty unlikely that

they're going to develop colon polyps. And so, I can understand why they might want to stop screening and that's reasonable, but I still think it's worth a conversation.

Matthew: Okay, Jen, if you want to give the audience like maybe two or three things that you really want them to remember about what we talked about tonight? And again, thank you so much for your time. Thank your family for our time. I think the kids were beating down the door.

Dr. Jennifer: [laughs]

Matthew: So, we'd let you get back to them now.

Dr. Jennifer: Great. I hope that they haven't disrupted this podcast. But my main take home points for primary care providers or anybody listening to this podcast are really, please take the time to review your colonoscopy reports and pathology reports on your patients. Try to have a good relationship with your gastroenterologist or other providers who are doing these scopes. Keep in mind that the guidelines are always in process and recommendations change over time. And it's important to really be diligent with the guidelines, because sometimes, even the gastroenterologists are misappropriating follow-up recommendations.

Additionally, if your patient undergoes an alternative method for colon cancer screening, try to ensure that they're eligible for those types of tests. So, high-risk individuals and those with a history of precancerous polyps outside of what we talked about should probably undergo colonoscopy.

[music]

Paul: This has been another episode of The Curbsiders bringing you a little knowledge food for your brain hole.

Elena: Yummy.

Paul: Get your show notes at *thecurbsiders.com*. And while you're there, sign up for our mailing list to get our weekly show notes in your inbox. Plus twice each month, you'll get our new Curbsiders Digest recapping the latest practice-changing articles, guidelines, and news in internal medicine.

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The Curbsiders is produced and edited by the team at Pod Paste, Elizabeth Proto runs our social media, and Stuart Brigham composed our theme music. And with all that, Paul, until next time, I've been Dr. Matthew Frank Watto.

Elena: Elena Gibson here.

Paul: And as always, I remain Dr. Paul Nelson Williams. Thank you and goodbye.

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