

# A Word About Cervical Cancer

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**N** Narrator 00:01

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**D** Dr. Bill Evans 00:17

Welcome to the Cancer Assist Podcast with your host, Dr. Bill Evans. Today we're going to be talking with Dr. Costescu about cervical screening. But just before we start our conversation, I'd like to remind listeners that the cancer assist podcast is brought to you by the cancer assistance program based here in Hamilton Ontario. Cap on shall we affectionately call it provides a variety of free services to cancer patients including free rides, equipment, loans, nutritional and incontinence supplies, among other services. And the podcast is made possible by generous donations from individuals in the community who hope as I do that, by learning more about cancer, its causes treatment and the supports available in the community, it will make the challenge of dealing with cancer just a little easier. So I'm delighted to welcome Dr. Costas Gu to the program today. He's an associate professor in the Department of Obstetrics and Gynecology at McMaster University. It says you do family planning and you're a generalist, I think that means that you're involved in many aspects of gynecological care and obstetrical care for your patients. And I'm really, really glad to have you with us today. I know also, you have a role with Cancer Care Ontario, in the cervical screening program, provincially. So we want to touch on all those things. But a great place to start is maybe just a little bit about your background, maybe tell us a bit about yourself? Sure.

**D** Dr. Costescu 01:41

Yeah. You know, I think the first thing somebody asks, you know, a male gynecologist says, "Why do you do this? Right? And it could possibly stigmatize doing menopause and then think

why do you do this? Right? And it could possibly clinic you're doing perhaps and they think why, you know, why are you why are you here sitting on the other side of the chair. You know, all of the big role models in my life have been women, surrounded by powerful women, all my life, starting with my mom, and just always been passionate about women's health. You know, we all go into medicine to quote unquote, help people. But really, gender inequity has always been a passion of mine and realizing that, you know, focusing on women's health was a way to, you know, help write some other wrongs. And so from very early on, in medical school, I was really interested in it, you know, gynecology being sort of one of my first loves, it's, it's great surgery really impactful on quality of life. And then as I moved through, I realized I loved many other aspects of it, you know, if I'm going to be up in the middle of the night, delivering a baby 4000 and never gets old, you know, and they're long hours. And actually, cervical cancer screening and colposcopy, which will, you know, touch on what those things are later have have also become, you know, passions of mine, I often call this my second love, you know, just sexual health kind of being the first one. But, you know, we have a condition that's, you know, very common worldwide that we almost never see in Ontario, because we have a good screening program. And while the tests, you know, are uncomfortable, and for some patients, you know, invasive, you know, they really do reduce the risk of developing a cervical cancer, you know, which has a much more profound impact. And, you know, those brief encounters with patients, you know, are really positive ones, too. And you get to meet lots of people along the way. And so, yeah, I enjoy those things. Yeah, that's how I got here.

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Dr. Bill Evans 03:24

Interesting. The first thing you said you're surrounded by powerful women, influential women, and that was a driving force in you going in this direction? And you do a lot of family planning, I gather as well.

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Dr. Costescu 03:33

Yeah. Yeah. And, you know, my work isn't inherently political, I often say but at the same time, you know, it's, it's, it's the reality of, of the patients that we see, right, you know, helping patients to have a baby when they're ready and not have a baby when they're not ready is important. You know, cervical cancer, you know, is another good example of how that takes away people's reproductive agency or autonomy. You know, if you have a treatment that requires radiation, and you can't use your uterus, or, you know, hysterectomy and cervix cancer can affect, you know, younger patients of reproductive age, you know, we lose that from them, right. And so, you know, prevention has benefits, not just for, you know, their overall mortality, but there's significant quality of life issues, you know, and being able to maintain someone's reproduction and fertility if that's something they want to do later in life.

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Dr. Bill Evans 04:20

Now, in my reading, in preparation for this, I was actually surprised to find out that Cervical cancer is the fourth most common cancer in women worldwide, and fourth highest mortality rate among cancers and women. So we tend not to think of it as that common are important in this part of the world for the reasons that you just said. So we'll want to talk about the

screening program in the province. But before we get there, let's let's introduce our listeners to a little bit of anatomy, so that they can actually understand what Cervical cancer is where the cervix is and how you go about diagnosing a cancer.

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Dr. Costescu 04:56

Yeah, that's great. So yeah, a little bit of anatomy, one No one so so the uterus or the womb, we sometimes call it easy know where periods come from and where babies grow inside and the opening to that at the very top end of the vagina, this sort of the inside part is called the cervix. And so a lot of us kind of know the cervix, because it's, you know, that part of the Pap test, obviously, but also it's the thing that dilates when you when a baby comes out. And so those are the the two interactions, you know, folks have with the healthcare system, and we're worried about a cervix. We've known for many, many years now that that cervical cancers, you know, have precursor cells, little bits of them that give us hints that there can be the development of cancer, or that we could detect, you know, cancer cells, if we do certain tests, pap smear being the the main one. And so we know that cervical cancers themselves grow rather silently. So some cancers really scream at us and other parts of the female reproductive system, it's very obvious. So uterine cancers are cancers of the endometrium usually present with bleeding or other symptoms. But we know cervix is kind of more like ovarian in the sense that you may not really know you're having symptoms until there's an obvious cancer. And that's why we need to screen so that we can treat patients when they're asymptomatic before anything happens.

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Dr. Bill Evans 06:14

So just to create a bit of a visual picture, but like the cervix is kind of the mouth of the uterus, right? A little small thing in it, and most of the time, and that's, that's where intercourse, sperm would travel to go inside the womb. And, and so it's important to have that sort of visual picture of this sort of circular body at the end of the, of the uterus, because that's where the cancers we're trying to detect early are going to rise from, and the little passageway, the no cervical canal, they can arise in there, and it leads to two different types of cervical cancer, one more common than the other. So it's relatively rare in our jurisdiction, but there there are there sub sets of people who are getting cervical cancer because of lack of awareness or other barriers, cultural and what have you that are the people we should be trying to reach particularly at vodcast.

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Dr. Costescu 07:13

Yeah, that's a really good question. Maybe I'll start with the group where we tend to worry about actually isn't at that higher risk. You know, cervical cancer is sort of a problem of over screening. And under screening, patients want a lot of testing done when maybe they don't need it, which leads to other interventions that they don't need. But also, you know, the disease disproportion affects patients who are under are never screened, so they've not had a Pap test. So people often worry about family history, you know, I have a loved one who's had a cervix cancer or pre cancer do, I need to be worried and this is actually not a cancer that runs in families. So the reason that patients folks develop cervix cancer is infection with HPV. So this is a virus I'm sure we'll talk a little bit more in a second, but there are certain risk factors for it.

But really, what we know is it's more about whether you get screened or not. And so certain populations have a tendency to be under screened in the general population, we know that racialized individuals are less likely to access health care services, less likely to have a primary care provider, like a family doctor to do the paps. Some of them may have cervical screening as part of their immigration intake, but some of them will come to the country not having ever been screened. And so they may already be behind the eight ball. So newcomer populations, we tend to worry about a little bit too, because they may have, you know, sort of not been used to interactions with this type of health care system before and may not understand a test that's never been provided in their country of origin. We know indigenous folks also are more likely to be or less likely to be screened, more likely to be under screened. And that includes both on reserve as well as urban indigenous populations, again, due to historical, you know, distrust and colonial violence in the healthcare system. And the third group we tend to worry a lot about are queer and transgender individuals with a cervix as well. So we know lesbian and bisexual cisgender women are less likely to be screened, they're actually more likely to be found at a later stage and to report poor health outcomes on the cervical cancer treatment and recovery journey. Then, straight women and we know that transgender men have difficulty risk stratifying understanding their risk. And so although it's a small population, we know that they're also less likely to be screened. And so you know, we even reflect that in our language in Ontario, you know, that if you have a cervix and you've ever been sexually active, you need to be screened for that reason.

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Dr. Bill Evans 09:37

So the risk factors that increase one's concern, shall we say for cervical cancer? You mentioned the virus, the human papilloma virus. And there are other risk factors and I guess they kind of interrelate in a way don't they because the number of sexual partners increases your risk of being exposed to HPV which is the short form of use for human papilloma virus because it doesn't necessarily trip off the tongue easily. And even there, as I understand that there are subtypes of virus, it's not all of the human papilloma viruses, a whole bunch of different types, and they have numbers. And some certain numbers are replaced individuals at higher risk of it.

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Dr. Costescu 10:20

Yeah, absolutely. So, so HPV is a really interesting virus, and I wear another hat in my my other job as a sexual health specialist, right. And so I often say this to people, you know, if you would be a virus, like be a sexually transmitted infection, right? Everyone has sex, right? You hide out, nobody knows that you're there, and you pass it on to other people. And so this virus, this family has become very efficient at doing that, right. And people, you know, when they hear number of sexual partners, you know, they often and again, we have a habit of sort of misunderstanding our own health behavior risks, right. So if you have two sexual partners in your lifetime, you have about a 50% chance of having an exposure to HPV within your lifetime, in your 20s 24% of patients will acquire a new strain of HPV every year. And so these numbers are very high. And actually, you know, let's let's be honest with with listeners, right? If you look at, you know, Boomers, Gen xers and millennials, they would report that, you know, average number of lifetime sexual partners that would be normal for them would be anywhere from about eight to 12. So we're already talking about, you know, very high probability that you've seen HPV in your lifetime. And what I often say to patients is, you know, if you are not your partners only ever partner, and they're your only ever partner, you probably have had HPV,

right. And so, you know, it's nothing to worry about nothing to be ashamed of, you know, from public health perspective, when we sort of look at this from a big lens, you know, we can't really tell the public to have sex with fewer people, right, because you don't know who you're gonna meet till you meet the right person. That doesn't work. In terms of messaging. We know, actually, you know, abstinence only education actually promotes higher risk behavior, because people don't know how to protect themselves, right? We know that condoms may help a little bit, but in the long run, probably don't really reduce that lifetime exposure to HPV. We know smoking cessation can help, obviously, but we don't really know whether that translates to a reduction in the number of cervix cancers, right, because it's really about getting screened or not screened. And so, you know, smoking is a risk, but it may may reflect other sort of social risks that puts you in the way of not not having a family doctor or not getting not getting screened. So HPV is a sort of interesting family, right? Think of your own family, right? You've got cousins that are pretty boring and indolent, and you've got cousins who create a lot of conflict, right. And so those guys, those are the oncogenic strains we call them or the high risk HPV strains. So the way I think about this is, you know, we have different tests for different things. And I tend to use doughnuts a lot as an analogy. So So if we think of a jelly doughnut, if that jelly itself, you know, being you know, the cancer of a cervix, right, when we're doing a Pap test, all we're doing is taking the powdered sugar and looking for signs that that might be the case, right? So that tells us that their cell changes, we're already in the process of making this doughnut, this doughnut might become a, you know, a jelly doughnut. Sometimes they get clever, and you know, do Boston cream instead. And so it's really nothing to worry about, right. But every once in a while we make a jelly doughnut out of it. You know, HPV, what we can look for? And testing is really, you know, do we have some of the ingredients in there that you know, could become, you know, a jelly doughnut, right? So do we have pectin? Do we have, you know, gelatin do we have food dye or something doesn't mean every time we use these ingredients that you'll get, you know, the end result. But, you know, if you don't have that in your recipe, we know you can't make a jelly doughnut, you can't make cervix cancer. And so I do find the sillier the analogies, obviously, the more kind of works.

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Dr. Bill Evans 13:41

Listeners aren't going to be confused if they eat too many don't know exactly.

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Dr. Costescu 13:44

You know, yeah, I wouldn't be a good doctor. We said eat a jelly doughnut everyday. But, you know, I would certainly support you and understand if you did, but really, yeah, so when we're talking about this, you know, it's important to know, there's low restraints that really don't do anything. I mean, they can cause genital warts, for example, but you know, from a cancer risk, we're not worried. And then there are these other viruses that you may or may not clear on your own, but that still have the potential to to cause cancer. And so, you know, that that's really shifted dramatically our understanding of this disease, right, both in terms of understanding that service, cancer is in fact a sexually transmitted disease, but also understanding that, you know, there might be better tests and maybe other prevention strategies like vaccination, for example, that that might lower someone's lifetime risk of getting cervix cancer, you know, beyond beyond just screening.

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Dr. Bill Evans 14:34

I think many listeners might find it. Interesting, if not surprising that a virus causes cancer. I guess when I started in oncology, we were just sort of awakening to the idea that there were pathogens, that cause cancer wasn't just sort of sunlight, radiation, and the unknown, that there are a lot of viruses and this is a particular family of viruses that can come cause cancer, just like we have others and cause lymphoma and stomach cancer from certain bacteria, etc. So it's interesting how our knowledge is expanded on some of the pathogens that are, when I say pathogens, these are organisms that are in our environment that we get exposed to that can, can cause cancer. So that and the fact that there are specific subtypes, like they have that those numbers 1618 31 sounds odd that there have these numbers, but nonetheless, they're there. They're the principal, bad actors, the bad cousins that you're referencing there. And are they more prevalent? Or what's, you know, what's the proportion of all the infections that people would get with the various sexual partners? Yeah,

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Dr. Costescu 15:40

that's a good question. And and, you know, the studies are a little bit mixed on this, because some of the studies, basically, basically, these are what are called surveillance studies. So you know, lovely volunteers at the time of just getting a routine pap, you know, in a large population, it could be an entire clinic, or it could just be looking at, you know, a state with a an organized screening program, just looking at kind of what are the total numbers of these, you know, HPV results, we know that about, about four to 5% of patients probably have a higher risk of an oncogenic strain of HPV kind of right now that's going on. We know that most strains that actually patients get infected with our low risk strains will be subdivided out a little bit further, it works out to about kind of 5050, you know, where people have kind of low high restraints when they're in a screening program, but that already means that we've detected something that needs you know, further follow up like a low grade pap, or, you know, some local changes on the on the cervix. And so, it does vary a little bit that way. We know also just that the more exposures you have, the more likely it is that you are to acquire new strains, and so many, many patients actually will have more than one strain of HPV, if they have a larger number of sexual partners I've just over over many years. The other reality is that, you know, you and your partner can pass the same infection back and forth. And so you may become HPV negative again, but then then get reinfected and then and then have that. And I think probably just important to mention at this point, too, you know, we talked about infection, but but these are asymptomatic. So you know, you don't know you have it, there aren't really other symptoms you're going to have, this isn't something that you would knowingly transmit, you know, to another partner for low risk HPV, you know? Yeah, exactly. Yeah, you wouldn't do anything that that they're not like the bacterial infections like chlamydia, gonorrhea that really scream at you. The exception being genital warts, which again, are a low risk strain. So you know, having words wouldn't actually put you at risk of a cervix cancer, it just means you've been exposed to HPV. Technically, HPV is a skin virus, you know, it just happens to be covering genital skin and that's how it gets transmitted. But we can see other cancers, you know, on the skin, other genital skin cancers, like the the vulva vagina, the penis as well. And then we know also because of exposure, certain head neck cancers are also HPV related. And so, you know, like I said, it's a sneaky, sneaky cousin that that shows up at the family reunion.

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Dr. Bill Evans 18:01

Because then you didn't want. So maybe just a few words about how people might present with

cervical cancer and they will sort of die Yeah,

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Dr. Costescu 18:09

to this. Yeah. So So I definitely think that's important because you when we talked about the screening program, we're really talking about asymptomatic low risk individuals, not having any gynecologic complaints or anything like that. And the flip to that is that cervix cancer, you know, the symptoms and signs can mimic a lot of other gynecologic conditions. And so, the key is just to keep it on the radar. It's also you know, important to keep it on the radar of the primary care provider who's doing the exam, you know, in the gynecologist as as well. And so, the most common symptoms we see are irregular bleeding, because the lesion on the surface itself can can bleed. And it also is prone to what's called contact bleeding. So usually that bleeding can be made worse with intercourse or provocation of some sort. So people have irregular bleeding, but they notice that bleeding is worse, you know, after intimacy or something has been inserted into into the vagina. Pelvic pain also can be a finding of cervix cancer. And so, again, you know, for listeners who maybe have you know, fibroids or polyps or endometriosis, they might say, well, this kind of sounds like, you know, what I experienced all the time, right. And so, you know, part of the investigation of being worked out for these conditions is to make sure you're up to date with your screening, that doesn't mean patients with those gynecologic issues are more likely to to develop a cervix cancer.

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Dr. Bill Evans 19:23

So the whole thing about screening is to try and prevent a cancer and there aren't that many opportunities we have to prevent other than good public health measures. But terms of screening programs are rare. There's not many that actually prevent cancer. There's some that detect early that's been the main thrust today for breast cancer and and I was gonna say colorectal, but actually we can prevent some colorectal cancers by finding polyps and removing them. But here's one where we can actually detect at a time when it's not yet a cancer. and take action. So let me talk a bit about what is actually done in a screening test. Yeah,

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Dr. Costescu 20:07

perfect. That's, that's a great question. And I think, you know, some listeners and and sometimes in the public, you know, there is a lot of skepticism around the concept of screening, right. And a lot of people like to use the concept of a lead time bias as a as an excuse why screening doesn't really change outcomes, but in in comparative studies in studies where we introduce screening programs into populations and when we introduce organized screening programs, which has sort of these like high quality screening prompts, you know, we see very dramatic reduction in the in the incidence of cervix cancer. And you know, one of the key factors to success of a screening program is you have to have what's called a true precancerous lesion, something you know, you treat that's not cancer, that if you didn't treat would become cancer. And so we have that in cervical cancer. And so we're wouldn't say we're lucky because obviously, we don't wish that anyone but you know, we have the opportunity really to screen and to find, to find things. So, so that's really important for us. So in Ontario, currently, we have the the cervical screening test, we do what's called a Pap test, you know, colloquially, pap Nicolau, you know, first discovered this, although some other people did,

probably around the same time, but he's credited for the test is and the fancy name for us. We call this a cervical cytology. So an HPV infection will exist. And over many, many years, that infection will very slowly chip away at our immune system. And those cervical cells, if they're constantly exposed, will then develop what's called dysplasia of precancerous changes, some of which are low grade, and some of which are high grade, and it's these high grade ones that have the potential, you know, over many more years from there, and we're talking, you know, 10 to 20 years from that initial infection. So really, really important. Yeah.

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Dr. Bill Evans 21:45

So like, you know, cancer develops. Exactly, yeah, very long. Yes, yeah, infection to the early changes that you could see by scraping

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Dr. Costescu 21:54

the surface. Yeah. And even for those high grade changes, you know, we'd still probably takes, you know, two to five years for those even to become cancer. So we have led many opportunities over many screens to find patients where they're, they're showing signs of the development of what we call dysplasia, or precancerous changes. And so, you know, unfortunately, because we really need to get the cells themselves off of the cervix, we do do what's called a speculum exam. So, I know and listeners had, it knows exactly what this is, and probably some of the, you know, the men in the audience are probably not quite sure what you know what's involved. But basically, the doctor will, you know, briefly examine the outer parts of the genitals, and then insert a small instrument in, and there are different sizes. So it's important for patients, you know, if you find perhaps uncomfortable to, to talk to your clinician about, you know, using the right instrument for you and how to make the process a little bit easier. But what we have to do is visualize the cervix right at the back of the vagina. First thing we do is a visual inspection. So we just want to make sure we don't see any lumps, bumps, lesions, ulcers, or anything that could be worrisome. And then a Pap test is taken in and as a couple of different ways that we do that. But basically, a small little broom is used a little plastic broom, or in some places a small wooden spatula is used Calix like popsicle stick, and we're just basically taking just the little cells off of the top of the cervix, the nowadays, if you rub your your arm, you know really quickly in a little bit of skin cells fall off, that's all we're doing. With that. Now, those cells get sent off to a lab and somebody spins them and looks at them. And then we look for, for the changes that we see. If a doctor or the person doing the test sees something abnormal on the cervix, they may send you for further testing at that time. But most people will go on for further testing based on the results of that Pap test. And so in Ontario, that test is done every three years.

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Dr. Bill Evans 23:45

Okay, and when do you use acetic? Acid?

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Dr. Costescu 23:48

Yeah, that's a good question. Yeah. So so different countries use do different strategies, and so so vinegar acetic acid literally the kind of thing you can get to the grocery store, or you know



so vinegar, acetic acid, literally the kind of thing you can get to the grocery store, or you know, \$4 for a jug at Costco or whatever is actually been shown worldwide to be a really useful tool for us for detecting cervix cancers. So if the screening test is abnormal, then people go on to what's called a colposcopy, and that colposcopy sort of like a more involved look at the cervix. So we use special binoculars called a Cope scope. The Pap test itself takes a bit longer, you know, closer to sort of five minutes because we want a careful look. And then we actually apply vinegar to the cervix. And so what's interesting about these abnormal cells is that when the cells are infected, and they take on some of these cellular changes, they lose some of that coating on the cervix. And so the vinegar actually makes it dry up more, and it turns white for us. And so that acetic acid is helpful, and that helps the colposcopy as the doctor who's doing that sort of diagnostic test that second test to decide whether a biopsy is needed or that we're worried about what we're we're seeing on the cervix in other developing countries. And against some folks who might be coming from other countries, you know, JOIN US and Canada, you know, may have actually had an acetic acid inspection as part of their screening tests. So in some low and middle income countries, you know, you're in their 30s, you get one look and they put vinegar on and anything they see they just treat on the spot. Even that, you know, sort of low cost low technology. Treatments been shown to reduce cervix cancer in some countries. But here, we only do that if you need a diagnostic test. So if you go for colposcopy,

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Dr. Bill Evans 25:27

thank you for that clarification. And maybe we should take a brief pause. Now you feel like you've been drinking from a firehose, here, you've given us such a large amount of information to give our listeners a chance to kind of pause and hear a little bit about the cancer assistance program. We'll be right back to talk further about cervical screening.

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Narrator 25:45

We'd like to take a moment to thank our generous supporters, buton Family Fund and banker creative studio who helped make the cancer assist podcast possible. The cancer Assistance Program is as busy as ever providing essential support to patients and their families. We remain committed to providing free services for patients in our community, including transportation and equipment, loans, personal care and comfort items, parking and practical education. These services are made possible by the generosity of our donors through one time gifts, monthly donations, third party fundraising, corporate sponsorships, and volunteer opportunities. Visit [cancer.ces.ca](http://cancer.ces.ca) to see how you can make a difference in the lives of cancer patients and their families.

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Dr. Bill Evans 26:29

While we're back with Dr. constitute and talking about cervical screening, and we've had a lot of information. Now, let's just talk a little bit about what you do if you find these abnormal cells. And you've said some of them are just kind of mildly abnormal, and the other extreme, there will be chi highgrade there, clearly looking like they're bad actors, and they might go on to be a cancer, but they're not yet defined as a cancer because there's not evidence of invasion. So what do we do that because we're talking this is prevention? Yeah. And not, it is treatment. But for early state? Yeah,

D Dr. Costescu 27:03  
exactly. So

D Dr. Bill Evans 27:04  
what's the process? Yeah,

D Dr. Costescu 27:06  
that's, that's great. So first thing that most capacitors will do, if they see a lesion that they're worried about to do a biopsy, and you know, the B word, you know, obviously, it sounds really invasive. But these cells are very superficial, they don't really go very deep on the cervix. And so the biopsy we're taking is literally, you know, two millimeters, right smaller than a baby tooth. And whenever we do the biopsy, we will show patients and we're shocked at how little tissue we're taking. But because we only need, you know about a millimeter of the thickness of that cervix to see whether those cells are there or not. Sometimes if we see a cervix that looks really abnormal, or we're quite concerned. And sometimes if a patient were worried might not be able to have follow up. We live in, in university towns. So a good example might be someone who's here in our clinic that's going away, you know, on a placement or returning home for the summer. And you know, we know, we're just not going to get them back in the clinic, or for someone where we know it takes a lot of bravery for them to even get to the hospital for a lot of reasons. And we just know that they really don't want to come back, we will occasionally treat at the same time. And so if the treatments required that treatments called a loop excision, fancy name of it's called a loop excisional, electrical excisional procedure or a leap. And so when people say loop, leap all of these things in the UK, they call it a loop electrical incisional transformation zone. So they call it elites. They're all the same thing. So basically, it's using electricity to take a larger part of the cervix off. And so, you know, again, going back to the donut analogy, you know, we're now taking a bite out of we're trying to we're saying like, is this a donut or not? What flavors this donut what's going on inside. And so that's a short procedure that's done in the clinic setting, you're awake for it, we just put some freezing in the cervix, in most patients really do not find it very difficult at all, most patients are pleasantly surprised about how well it goes. For some patients, that can be a crampy procedure. Obviously, it's an uncomfortable procedure, because it's a prolonged exam. So you know, that speculum sits there for again, you know, five, sometimes up to 10 minutes, but what we're doing is we're taking about half to one centimeter of the end of the cervix right at the part closest to the opening of the vagina off. And with that we can look for whether there's invasion or not, whether there's a cancer, and we also cut out all the abnormal cells. And so, you know, these cells sort of spread, you know, neighbor to neighbor, right, they don't jump around very much. And so, if we've removed all of it, there's a very good chance in fact that the cells will not return afterwards. After that treatments done. Patients usually take the day off a little bit of limitation in terms of, you know, lifting we tend to recommend avoiding intercourse or straining for for a week or two, and then really back to life as normal and then we follow them with fault follow up. colposcopy is after that,

D Dr. Bill Evans 29:50

so it's fairly superficial. Is it ever necessary to cut a deeper kind of colon of tissue? Yeah,

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Dr. Costescu 29:56

so that's changing a lot and so some some some listeners have, you know might have had what's called a cone biopsy, or they might remember a time where they were put to sleep for the procedure used to be that for certain lesions, we would we would do a cone biopsy. And again, if someone's had a treatment before they're having a second treatment, we sometimes think it's safer to do that in the operating room. But most patients actually do pretty well if the margins are negative. So that means we sort of cut everything out that recurrence rates less than 5%. So less than 5% of patients will have a another dysplasia that needs treatment, if those margins are positive, that treatment rate does go up closer to 10 15%. So that's sort of a conceivable risk, right about one in seven, we'll need a second treatment at that time. Sometimes in a younger patient, even if the margins are positive, we might just watch the very closely to avoid a second treatment. You know, because we there are certain things we want to prevent, which sort of dovetails into, you know, what are the risks of the procedure. So cramping, discomfort, bleeding, obviously, are the big ones. The one that we worry about is preterm birth, actually. So as you can imagine, if the cervix is job is to keep a baby inside till we're ready to deliver, you're removing a small, exactly could have an issue. And so thankfully, you know, we're removing the outer part of the cervix, and it's that inner part of the cervix, the part that goes right up to the edge of the womb, that really helps sort of retain the baby, that's really where, you know, the cervix kind of does its job, you know, the dilation of the upper part of the cervix is more important than the lower part. Studies have basically shown us that if you have an abnormal pap smear, you're at a very slight elevated risk of preterm birth. And whether you have one loop excision treatment or don't have a loop excision, Jimmy, you probably have the same risk of preterm birth about eight to 10%. But we know that if you do a deeper excision, or if you do a second treatment, that that might increase the risk of preterm birth. And, you know, that's another reason why, you know, other preventative strategies like HPV vaccination, you know, may also actually help improve other outcomes like, you know, reducing preterm birth. And in fact, you know, one of the studies in Australia where they had HPV vaccines, you know, in the population for longer is actually suggesting that maybe there's a reduction in risk of preterm birth as well. So we're not just preventing cervical cancer, we're preventing the complications of the treatment and the prevention of it,

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Dr. Bill Evans 32:06

when he gets a vaccination in a moment. But before that, it seems to me the guidelines for when women should start having cervical screening and the frequency have been evolving a bit, and certainly different from when I trained, and maybe not to confuse people about what was the old way. Let's, let's

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Dr. Costescu 32:27

why, yeah, so I tend to think of it as sort of generational change, right. And part of it's our understanding of, of what's going on, you know, the very, very original, you know, pap nickel smear really was looking for cervical cancer cells. And it was only then they start to realize, oh, wait, these actually look for precancerous cells. And so, you know, that shift in the 1940s, and

50s, even towards understanding how that test was used, you know, this is, this is an old test, you know, it's been around for a long time. So, you know, for listeners in their 60s, you know, you probably had your first screening test, you know, at a very young age, possibly into your late teens, early 20s. At that time, screening was a little bit less organized, you pretty much always got a pap smear as soon as you were pregnant, regardless of age. And so you know, there were this was an opportunistic screen, you'd kind of screen whenever, whenever you could. So at that time, you know, that was sort of what people did, if you're in your, your 40s, like, like I am my generation, you know, you know, folks usually started getting screened around 21. But still, at that time, people might have been screened at a younger age, if they had a teen pregnancy, or if they were, you know, worried about kind of early, early sexual debut, we now really understand that our bodies are designed to fight these infections, right? And then, you know, at the risk of being ageist, the reality is, our young immune systems are just better at clearing these infections, right? Evolution kind of had a plan for all of this, which was, you know, we'll we'll kind of sort this stuff out now. And then as we get older, we were a little less good at fighting, fighting these infections and what we call persistent in infections. So So nowadays, we actually recommend that that patients delay their first cervical screening test to the age of 25. If they don't have any other medical issues that might put them at increased risk of being what's called the immunocompromised. So, you know, individuals living with HIV patients who maybe are on chemotherapy agents, for example, or have had treatment, where their immune systems are weakened. Those patients we recommend screening at 21. But we really don't recommend anyone being screened before then. We know that the very rare cervix cancers that happen in patients, you know, when they're in their tweens, teens and very early 20s, usually are not HPV related. They're the rare ones that don't get screened. And we will look at the general population, the risk of over treatment of loop excision and the number of patients you'd have to both diagnosed, screened and treat, you know, potential risk really doesn't affect the overall rate of cervix cancer. So it's very, very rare. before the age of 25

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Dr. Bill Evans 34:47

to start the recommend recommendation Now excuse me, is 25. Yeah, and then if it's a normal Pap test, so frequently, yeah,

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Dr. Costescu 34:57

every every three years Yeah, three years until the age of 16. So once you have your 70th birthday, if you've had normal screening in the last 10 years, then you're good to stop.

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Dr. Bill Evans 35:07

And if you have some mild degree of abnormality do do it more frequently. Yeah,

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Dr. Costescu 35:13

that's a good question. So there's a couple of different reasons you might be screened more often. And so, most abnormal pap smears actually are what are called low grade changes that the two fancy words we use are ascus or LCL. And basically, they just mean, you have two of

the three abnormal cell changes, or you have three of the three abnormal cell changes, that would suggest low grade infection, and those low grade ones as a sort of said before, could be a low risk, HPV strain are a higher risk. We don't know because we're not testing for it at this time routinely. We recommend that those patients get rescreened in one year, and about 40 to 50% of those patients actually will resolve on their own not needing any treatment, that's where we give the body a bit of time. If someone's had an HPV test done, they've paid for it or they they're in a system where perhaps it had been offered to them. And that test is positive. We do recommend at this point, screening on an annual basis. And then for patients that, you know, are quite significantly immunocompromised, they have a diagnosis of AIDS, for example, where there's an effect on their CD four counts, or they're taking, you know, very strong immune modulating drugs, we often those patients are screened every year as well.

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Dr. Bill Evans 36:18

Now, how is cervical screening organized in Ontario, because breast screening we know we have screening centers, we have a mechanism of alerting people to the need for colorectal screening by letters going up starting at age 50. With cervical screening has been done in family doctors offices or when people see their obstetrician gynecologist and it's always seemed in the past to be less organized to say and I know that you're getting leadership to the program and in Ontario, so how are we trying to make sure that we're getting everybody who shouldn't be in a screening program into it?

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Dr. Costescu 36:55

That's great. Yeah. So that the first iteration of the the Ontario cervical screening program or the SSP started in 2000, actually, and so it's it's been an iterative process. You know, we're mindful of the delicate nature of cervical cancer, or cervical cancer screening, talking about a cervix, you know, all of these things. And it's been a little bit slower to get towards, you know, a completely organized system, but we're definitely moving in that, in that direction. So many individuals will know that they often get a letter in the mail starting at 25, to invite them to participate in the screening program, and they do get a results letter similar to for breast results. They also get recall reminders when they're due for their next screen. And, and then also for people who kind of wonder, you know, how does the ministry know what's going on with my cervix? I think also important, remember, you know, this is aggregate data is database driven, it's based on on just kind of just knowing what's happening at the population level, no one's individually pulling up your medical record and writing you a personal letter, you know, they are their form letters, but you know, but it's done so that it's in an organized way, so that we're not missing people, you know, we are going to be moving in the next couple of years towards what's called HPV testing as the primary screening test. And with that, you know, as the test changes, there's some real opportunities to improve the way the data is collected, the database is where that information is shared, so that we're not missing, you know, perhaps that may be done in a in a hospital where they don't upload into the system, or where, you know, somebody for whatever reason is moving, and we don't have easy access to them. You know, the health care system is always at a bit at the behest of the privacy legislation, which is important, obviously, I mean, I don't need, you know, the minister, knowing what's going on with my individual health, although I'm sure she's a lovely person, I would care deeply, you know, but I think the issue is that, we also do know that not everyone opens their mail, and not everyone stays in the same place, you know, over time. So, you know, as privacy legislation

changes, and I think that's gonna accelerate with the pandemic, you know, hopefully, eventually, we move to a system where you know, all Ontarians can access their health care information, you know, more using mobile technologies, you know, and once we eventually get there, you know, we can use programs like the OCSF, to notify, you know, patients of that. So we kind of work within the system that we, that we have, but more to come in terms of kind of, you know, better accuracy of, you know, testing data, knowing that you've had your screen and knowing how to follow up with it soon.

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Dr. Bill Evans 39:17

And at a high level, how are we doing in Ontario? Are we doing a pretty good job of getting most people's screen?

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Dr. Costescu 39:24

We're doing as well as many other programs, but there's a lot of room for improvement. So, so globally, really no program can ever really achieve the sort of 85% threshold that we're looking for. And when we we talk globally about sort of eradication goals, this idea that can we actually make cervix cancer, rare disease and get rid of the darn thing? We kind of use this sort of 80-80-80 rule, which is if we vaccinate 80% of the population, we screen 80% of the population, and we treat 80% of those abnormal cells, we'll get there, right. So with the pandemic, obviously, you know, we're into year three of the pandemic. The cadence of this test is every three years, we know there's been a dropout rate. And so unfortunately right now, you know, we used to sit around two thirds of the population being up to date for cervical cancer screening, we're only at about 50% 85%, where we want to get the UK has skirted that number before but you know, even in highly organized screening programs, we know, we still miss about one in six, one and 7% of the population. Sometimes that's because they're not actually eligible, right? They maybe never have been sexually active, or they've had a hysterectomy or you know, and we just don't have that data to know kind of that they don't need the screening test. Sometimes it's because the test is done, you know, in a hospital lab, so the ministry doesn't see those results to know that it's been done. But we know that you know, most people are overdue for screening, a simple rule I have in my head is, you know, everyone remembers when the pandemic started everyone else where they were, you know, march 12 13th 2020, I was supposed to go to Disney, and that didn't happen. But you know, if you haven't had a Pap test since the pandemic started, you're due now. Right? And so just keep it simple, make an appointment, go get checked out.

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Dr. Bill Evans 41:04

Imagine one of the barriers, though, is just sort of the embarrassment of going and just consistent tested? I can't imagine many women look forward to No. Have heard of self testing. Is that even possible?

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Dr. Costescu 41:17

That's a That's a great question. And so So technology, you know, now with HPV does allow us to, you know, sample HPV in the same way we would sample, you know, for chlamydia

so, you know, sample HPV in the same way we would sample, you know, for chlamydia, gonorrhea, I mean, they're literally the same swabs that we use, even for COVID testing, right? They're just cute tips that can be put in any part of the body to look for certain viruses. The current test is cytology. And that's looking for cervical cells, there is some literature to show that a self collected sample is a little bit sort of inelegant, it's uncomfortable, because of the mission, the brush you have to use, it doesn't produce as good a result. And even for HPV, you know, when we get to that, that that test, you know, we're committed to looking at self sampling, you know, but a provider collected sample is still the best strategy. When we look at countries where self sampling is available. The Netherlands is a common example, I think people need to sort of understand how that system is built. So you know, a provider collected samples, so going to your doctor or midwife, nurse practitioner, you know, to get the test is the preferred option. And then if you have if you're overdue for screening, they mail you a kit. So, so even there, we recognize it's not the best option, but it's the it's the next best thing. And so, you know, I think it's important people, you know, know what's going on with their health, I think it's really important. You know, as we move towards the ability to order things online, you know, getting testing getting screened, that people really understand kind of, what is the test asking what is the test mean, and that the people who kind of facilitate those tests are ready to answer the questions you know about it. It's sort of exciting. I mean, I actually, you know, the harm reduction is that hard, you know, somebody really believes in autonomy, I think it's, it's wonderful people are taking charge of their bodies. But I think, you know, the first step in that is really to have that conversation with the provider, what can we do to make the procedure easier, safer, less embarrassing, you know, what can we do to help if if you're not sure about whether you know, you're eligible or want to have the test done? I think, I still think, you know, in my heart of hearts, as a physician, you know, the onus is on us, as healthcare providers to make the test, the most positive or at least negative experience possible, right. But, you know, we need to hear from patients, we need to know why they're not ready, why they're struggling. And we don't know a lot about that, you know, it's an area where we need to actually kind of raise the voice of the under screen and understand that better and listen,

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Dr. Bill Evans 43:34

certainly, there's a whole issue of health literacy. And, you know, going back to the basics of this podcast, you know, what's the cervix? Where is it and, and how it becomes infected by a particular virus that could go on to produce a cancer. And hopefully, the podcast is one of many ways that people can get information and become more aware. And perhaps that's the motivation to go in and get screened. Let's now just take a look at vaccination. This is a virus and you can vaccinate people for various viruses and then that's an even neater sounding preventive strategy. I'm not sure it's 100% effective, but tell me, when should people get vaccinated? Is it both boys and girls? Just is it effective? Yeah,

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Dr. Costescu 44:20

that's a great question. So the best time to get vaccinated for HPV is before your first HPV exposure, which is why we pick such a young age for people to be vaccinated. And so we we're currently vaccinating Ontario, you know, all kids, boys and girls at the age of 12 to 13 and grade seven. And it's two doses that they get dual zero, we call it so the dev dose you get today and then the next dose six months apart. It's been shown that young immune systems are really good at mounting a response to these vaccinations to these vaccines and that they have you know, at this point, we think lifelong protection that they don't need further boosters

later on in life. If you wait too long To 15, you know, just based on kind of what the literature would tell us and for anyone who's getting, you know, a vaccine now, maybe because they're being treated, or they just want to reduce their risk, you need to have a full three doses just because our immune systems as we get older just aren't quite as robust. we vaccinate boys and girls for a couple of reasons. we vaccinate boys and girls one, because we want that concept of herd immunity. So you want to vaccinate anybody. They vaccinate boys, you know, we do protect the unvaccinated girls if they are exposed to a vaccinated partner. And for people who aren't sure who they're going to be within relationships in the future, we still reduce those risks. And for boys, we reduce the risks of anal cancer, renal cancers and head neck cancers later on. But the effectiveness of the vaccine does drop off. So you know, once once people are getting vaccinated in their 20s and 30s. You know, we're now maybe only reducing that risk by about 60%. But we're reducing that risk in these young people by well over 90% of developing a high risk HPV infection. And so they're really, they're really good. They're really well tolerated. People always kind of think HPV is interesting, because it's a sexually transmitted infection vaccine, you know, and it's a vaccine for cancer. And, you know, this is all really new, but, you know, people actually forget it's hepatitis B vaccine also prevents the development of liver cancers. And Hepatitis B is also sexually transmitted, it can be transmitted other ways, you know, but again, you know, we generationally, you know, have we we know, as public health providers, you know, you vaccinate people before their exposures, however, those exposures happen. And so we want to do it at a young age, these vaccines are safe, well studied in many, many countries. And, you know, we're kind of in the middle of the pack in terms of, you know, when Ontario adopted HPV vaccination, we weren't the first we're not the guinea pigs by any means, you know, we're not the last, the others are catching up to us, which is good. But we can be reassured about that, right? That, you know, our kids aren't test subjects or anything like that.

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Dr. Bill Evans 46:50

Because certainly there are people in society are worried about vaccine and attributed to possible other illnesses to vaccination. So it's important to know that it is safe that there's not a connection to autism or whatever people are concerned about. So it's really important point. Wow, I think we've covered an awful lot of material here, that should be very helpful to people are listening. So I, I can't think of any more questions to ask you today. So I think we should close out today's podcasts. And maybe in the course of doing that just remind listeners that we've done a lot of podcasts through the cancer Assistance Program, and they're available on the website. So at cancer assist.ca. I think there's about 40 podcasts and they cover a wide variety of tumor types, types of treatment, supportive care services available here and in Hamilton. So if you're in the situation of being in the cancer journey, or you're supporting someone who is you may find something of help amongst those podcasts that we've done in the past. But I do want to thank our listeners today for tuning in and Dr. Acosta Schout for sharing his expertise and circle screen. It's been great having

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Dr. Costescu 47:58

my absolute pleasure, and thank you so much.

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Narrator 48:02



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