

# Sun Safety Tips from an Expert

Wed, Jul 26, 2023 12:51PM 40:43

## SPEAKERS

Dr. Elaine McWhirter, Dr. Bill Evans, Narrator

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- N** Narrator 00:02  
The Cancer Assist Show, hosted by Dr. Bill Evans and brought to you by the cancer assistance program help when you really need it.
- D** Dr. Bill Evans 00:10  
But welcome to the cancer research show. I'm Dr. Bill Evans and I'm welcoming to our podcast today. Dr. Elaine Dr. McWhirter. And Dr. McWhirter is an associate professor in the department of oncology at McMaster University and works at the Juravinski Hospital in Cancer Center. Welcome, Elaine. Good to see you. Nice to be here. So it's a lovely day in June and the sun is out and after COVID and people have been feeling cooped up and wanting to get out onto the beach or go to their cottage or just enjoy the sun's rays and a good time to talk about safe Sun practices, because we're exposing yourself to UV radiation can do a lot of damage to your skin. And the worst thing it can do, I guess, is get a cancer. And there are a number of different types of cancers that we're going to talk about. And we want to spend most of the time on melanoma. And we'll touch on some others too. But let's talk about the safe Sun practices first, and there are number of things you should do. What's your best advice now?
- D** Dr. Elaine McWhirter 01:07  
Well, awkward. I completely agree with you. Today is a good day to talk about sun safety. But I would argue any day is a good day to talk about sun safety. That it's one of the myths that when it's overcast or dull out, not to worry so much about your sunscreen, but actually the UV rays get through and it is still important to to wear sunscreen on date.
- D** Dr. Bill Evans 01:31  
Good point. And I guess we tend to think simplistically, that's when the sun is visible to us, we should protect ourselves. But it's anytime

**D** Dr. Elaine McWhirter 01:38

it is really, you know, in particular, from April to October, it's the high UV index days and in this part of the world. So then when you're out and it's cooler, sunny day, that's often when we start to see burns that are people who come into clinic in the spring, you don't think about it, you want to get in the garden, it's you're wearing a jacket, but the for all intents and purposes that UV index is heading into the moderate and high range. And it's it's there for many months. And you know, we don't want people to be Sun scared, we want you to be Sun safe, but just be practical. You're looking at a sunscreen with an SPF in the range of 50. I think the key thing is find a product you like you like the texture you like the scent, and you're going to use it, that's the most important thing. You also need to reapply it, it really only lasts two to three hours. Another option, though to to cover up some of the sun exposed areas would be investing in some UV protective clothing. And that's based on the weave of fabric. And like you can get that in hats and shirts, T shirts, pants, it's you know, really helpful. And then you can look at making sure you have for example, your hands covered or your feet and sandals. Don't forget those and your face. You also want to be wearing a wide brim hat time.

**D** Dr. Bill Evans 02:57

I'm glad if you like me, yes,

**D** Dr. Elaine McWhirter 02:59

I'd be happy to see you at least in a ball cap. But you missed the all important beers. So look at getting a wide brim hat, something that's got an SPF fabric built in as well, ideally for that

**D** Dr. Bill Evans 03:12

oh SPF for those who may not recognize that there's sun protection factor, right? That's right, you said 50. Right, not 15. But the FDA says 15. And above that you're you're recommending much higher levels, right?

**D** Dr. Elaine McWhirter 03:26

Yes, you know, some data in the past few years has suggested that 50 is better than a 30. You know, it's not a linear scale. So there's some some truth to that. So if if you look at an SPF 15, it blocks about 93% of the of the UV rays, and then an SPF 30 would be about 97 and SPF 5098. So it's it's not it's not that 50 is double of 25, for example, but we do know that the coverages is better as you go up. Be cautious within the water, you know, swimming or heavy perspiration with activity, you might get a little bit less duration and instead of that two to three hour range, you're maybe looking at 60 to 90 minutes. So much

**D** Dr. Bill Evans 04:13



Dr. Bill Evans 04:13

shorter. Yeah. And on the sunscreen labels. The FDA has something and I presume it applies in Canada. So broad spectrum, is that something people should look for when they're looking at products? For sunscreens?



Dr. Elaine McWhirter 04:26

Yes, it is. I think most of the products now really are but you want broad spectrum is telling you it's UVA and UVB. And I would say it's pretty standard now but if you happen to have some old sunscreen around it may not be and the truth is it's probably also expired. They don't last forever, especially if they've been sitting out in the sun



Dr. Bill Evans 04:47

or some people are more vulnerable to the UV radiation.



Dr. Elaine McWhirter 04:50

Yes, there are people who are clearly more vulnerable and it's based on on skin color and certainly if you are Caucasian and have have light hair or red hair light eyes, you're at a greater risk of burning. And we know that blistering burns, certainly as a child or a young adult, are a significant risk factor for melanoma.



Dr. Bill Evans 05:14

Now, if I were of another ethnicity, and I was brown skin or black skin, am I more protected or not? Because I have that additional melanin in my skin.



Dr. Elaine McWhirter 05:24

Yeah, I mean, it is a good point you certainly have some natural protection from from burning, which is the big issue with skin cancers. But there is still a recommendation with other skin color, other skin tones, darker skin tones to wear sunscreen for protection, and an important area for our patients who have black skin. In terms of surveillance, they're really wanting to be watching things like the palms of the hands and the soles of the feet, those are a lot more common. And those are obviously far less pigmented, and a higher area of risk.



Dr. Bill Evans 06:01

I didn't know that. Nothing I didn't really know much about in preparing for this podcast, and read up about sunglasses. And the importance of choosing your sunglasses wisely tune doesn't have as much to do with skin cancer, what we're really focusing on but nonetheless, that's we're talking about UV radiation, the importance of getting sunglasses that have UV protection.

**D** Dr. Elaine McWhirter 06:29

Yes, I agree, you should look for that little label that's on the sunglasses to make sure again, that there. There you have UV protection. You know, some of the data for for the ocular melanomas and sun isn't as strong, but we definitely know it's a risk factor. And then it's also a risk factor for cataracts and other you know, significant eye issues, so many reasons to wear sunglasses.

**D** Dr. Bill Evans 06:55

And it would be easy to think that if it's just a dark sunglass that I'm doing, I'm protecting my eyes, right? But dark tinted sunglasses that aren't specifically with UV protection are saving you from the UV so you can have those problems so so make sure you're looking for the right kind of sunglasses, maybe that's why they sell those cheap sunglasses on beaches or something you can get get them for a few bucks, and they have no UV protection or something. I don't know. But I was an interesting learning from just preparing. So we said we're going to talk about different different skin cancers. And

**D** Dr. Elaine McWhirter 07:35

also, yeah, I can No, I think there's a few other things to cover I would like to cover in

**D** Dr. Bill Evans 07:40

terms of Russia on

**D** Dr. Elaine McWhirter 07:44

you know, we talked about one of the myths being the being cloudy days or not so sunny. I think another important thing we focused on that April to October but it is important to still wear sunscreen in the winter. Again, sun exposed for your face, you have to remember that you get reflection from light surfaces like snow. And so there's even though the overhead UV index shining down is low, you get reflection off of the snow. And particularly if you are an outdoor sports person and, and skiing, you know the skiers are getting sunburned, not when burned, because then you add in the altitude plus the reflection of the of the snow. So very important to still remember your, your sunscreen in the winter, when you're boating in the summer, and boating in the summer. And that's another brings me to another excellent point. Water is a great surface for reflection. And so, you know, shade is better than nothing if that's your only option. But you have to remember the reflective suns, the reflective surfaces such as water, or light colors like white concrete, or a white sand beach. So even if you are in the shade, if you're getting those reflection, if you're getting that reflection up to where you're sitting, it's still possible to get burned. So can't can't avoid the sunscreen,

**D** Dr. Bill Evans 09:00

you're making me want to stay indoors. Not the umbrella,

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Dr. Elaine McWhirter 09:05

get a big umbrella. And you know if there's activities that you like to do for a period of your swimmer or golfer or any kind of outdoor activities in the summer can try and do things a bit earlier in the morning or later in the day.

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Dr. Bill Evans 09:17

Because that period of time from what 10 to two or something for

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Dr. Elaine McWhirter 09:21

Yeah, it's a big chunk of the day. And you know, we know people want to get outside or summers are short, it's important to get outside but just be Sun safe.

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Dr. Bill Evans 09:29

All right, there's the message. We've covered all the things we should cover. Good, good, good. All right, so then we're gonna move on to different types of skin cancer and skin cancer isn't one entity. So there are different types and maybe we could just briefly outline what they are.

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Dr. Elaine McWhirter 09:45

Yeah, so there's there are different types of skin cancer. So we've talked a bit about melanoma and that is the most serious skin cancer. That's the skin type of skin cancer that people just common, not the most common. No, it is the deadliest form of skin cancer. You know, we don't even have statistics on the most common types of skin cancer, which to be clear are the most common types of cancer period globally. And then you're looking at basal cell carcinomas and squamous cell carcinomas. And it is, it is much, much less likely to have those cancers spread or patients die from them. But unfortunately, a very small proportion of patients can die from, from those type of skin cancers, that would typically be more of a setting of of something that you've, you know, thought maybe it would go away, and it does keep getting bigger. And so always important if you have if you have something on your skin that's new, or changing, and we can talk a bit about that too, to get it assessed by your doctor,

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Dr. Bill Evans 10:53

and are all the skin cancers, all induced by UV radiation is that

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Dr. Elaine McWhirter 10:59

strong connection for all of those types of cancers? Yes,

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Dr. Bill Evans 11:02

say Sun segment is really important for all types of cancers,

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Dr. Elaine McWhirter 11:06

including the most common which, again, the vast vast majority will be cured just by getting them taken out.

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Dr. Bill Evans 11:13

And actually has a variety of ways of dealing with these the basal cells in the screams. I mean, I guess you can go and see your family doctor might cut it out or freeze it or, or I don't know their various things, correct it.

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Dr. Elaine McWhirter 11:27

Yeah. And again, depending on where they are in the and the size of them. Patients can be referred to dermatologists and in some cases, radiation can be used as well, again, depending on locations that are a bit more sensitive in terms of doing surgery, like maybe the ears or the nose or the face.

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Dr. Bill Evans 11:47

Sometimes they can be quite large if people have truly neglected them. And the surgery can be quite mutilating and they do occasionally metastasize. And I guess that's one area where there's been some change in management because, frankly, we didn't have very useful systemic therapies for metastatic squamous cell cancers of say the lip or something that I've seen in my practice in the past, but some new treatments in the immunotherapy

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Dr. Elaine McWhirter 12:13

area. Yes, there is. I mean, melanoma is the poster child really, for immunotherapy. Immunotherapy was developed in melanoma because it is a cancer that has, you know, traditionally never been responsive to chemotherapy or or numerous types of medications that have been tried. And what's really exciting is the, you know, mazing results that we're seeing with immunotherapy in melanoma have been translating into these other skin cancers, including the basal cell cancers and the squamous cell cancers. So in patients, like you mentioned, who maybe have very large cancers where it would really result in very significant

surgery and morbidity, again, parts of the face. Those can be too large for surgery, they can be too large for radiation and now we do have options in terms of immunotherapy for those as well.

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Dr. Bill Evans 13:09

We'll talk a little bit more about the mechanisms of immunotherapy when we talk about melanoma but it is fascinating how for melanoma immunotherapy is sort of spread out to virtually every kind of cancer we manage today. So it's, it's a fascinating story. So speaking about melanoma, maybe just the basics of how would someone be concerned? Or when should someone be concerned about a pigmented lesion on their on their body?

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Dr. Elaine McWhirter 13:40

It's a great question love to talk about this, because it's it's certainly something that patients can do themselves and then bring to the attention of the visit their physician if they're concerned, we call it the ABCD ease of skin assessment. And A stands for asymmetry. So if you were to draw a line down the middle of that mole and one half looks different from the other, that would be abnormal. B's for border. So a normal mole usually has a nice, smooth, rounded border. If you have something that looks ragged or jagged, that would be a concerning appearing more see is for color. If it doesn't have a nice one nice even color, that's typically something in a brownish range. That would be worrisome. So if it has multiple colors, which would include things like red or blue, or a mole, maybe that looks like it has a bite taken out of it. It's it's missing a chunk of color, whereas it used to have color all through it before. That would also be a concerning appearance to see or color. D is diameter and we're talking something that's about the size of a pencil eraser, there's something a mole that's larger than six millimeters is one that you should keep an eye on and ears for evolution or change over time. So it's it's getting bigger. It's getting the rag and borders or elevation. So a mole that maybe you've had that was flat, and now it's it's raising up should also be brought to the attention of your physician, one mole that you should always have assessed as a mole that starts to bleed. And, you know, certainly, some patients think maybe they have a blood blister. But if you have something bleeding on your arm that hasn't had trauma, like the thumb and the car door sort of thing, you really want to guess get a bleeding lesion assessed urgently.

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Dr. Bill Evans 15:30

So another reason to know your ABCs, D and E as well. So that's an excellent way of remembering the factor or the various changes that can happen to a mole or or pigmented lesion that should bring you to your physician. So you go and see your family doctor, presumably and what happens next.

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Dr. Elaine McWhirter 15:48

So again, depending on the size of it, and where it is, and their comfort level, they may do a biopsy for you then in there. And if it doesn't seem appropriate to them for biopsy, they could refer a patient to a dermatologist to arrange for biopsy.

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Dr. Bill Evans 16:06

biopsy is the beginning of a diagnosis isn't that you got to have a look down a microscope to make sure that it's malignant or not malignant, that's the only way to deal with it. Is there an issue about incisional biopsies versus excisional? That is taking it all out versus cutting into it.

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Dr. Elaine McWhirter 16:22

So one of the ideally the best is something called a punch biopsy, because you want to if you can incorporate the whole mole but also establish its depth. So one of the concerns if you just quote, shave it off the top to get a piece of it, is there could be some still in there, then you you've missed the opportunity to accurately establish the depth. And the depth is part of what drives the decision of what's the surgical margin. So how big of a circle or an ellipse does the surgeon make to fully make sure that they cut this out?

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Dr. Bill Evans 16:57

I gather in the past, when surgeons cut out melanomas, they wanted to make really sure that they were getting it all so they had five centimeters around I can't even imagine how big that would be how many and disfiguring that would be in many parts of the body. Times have changed through a series of clinical trials, emphasizing the importance of clinical trials, we've learned that it doesn't make a difference to do a big one versus a smaller one. So where are we at now in terms of the amount of excision that's necessary for one of these melanomas?

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Dr. Elaine McWhirter 17:31

Yeah, you're right. Fortunately, those sort of five centimeters are are not a standard anymore. Typically, it's in the range of one to two, two centimeters, again, depending on the depth of that biopsy. It's actually there's a clinical trial on right now for melanomas that would be of intermediate depth in sort of a one to one to four millimeter range as to whether one centimeter might be sufficient. We know that for deeper melanomas over four millimeters that's still looking at a two centimeter type of incision. And one of the reasons I think people wonder, why is this so big when they know what the spot on their skin look like? And melanoma grows in two ways it grows radially or it grows across the surface, but then it grows deep. And so really, you want to make sure that you catch any of the cells that are related to the melanoma in the hopes that it doesn't come back in the years down the road.

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Dr. Bill Evans 18:28

Now, like many cancers, these tumor cells can spread. And in the past, the concern was they spread to them lymph nodes, and so surgeons took out the lymph nodes in the hopes that we get all the cancer and the same sort of analogy with breast cancer in the past we did large surgeries and we dissected out all the nodes under the the arm, armpit and that that too, is changing with new technology. And I think part of the challenge too, with melanoma, if you



have a melanoma on your back, where would the cancer cells go? And what's the lymphatic pathway? Is it go to your armpit? Does it go to your groin? So now, with so called sentinel lymph node biopsies, you can nice find out where the first cells would probably go to maybe just explain to the audience what a sentinel lymph node biopsy would be?

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Dr. Elaine McWhirter 19:21

Yeah, it's very similar to what you said it is. So it's a combination of a dye and a radioactive substance that they can pick up in the alar. The surgeon can detect really looking for the first place that that part of the skin on that part of the body drains to the arm, it's going to go to the the underarm on the same arm, but we have multiple nodes. So this is really trying to assess what's the what's the first node and and taking that out. It's surgery and it has a very careful assessment protocol from the pathologist to look for even any microscopic, very tiny evidence of melanoma. Again, that tells us a bit of About the staging of the melanoma and the risk of it coming back. Oddly enough, you mentioned the back and that can be a trigger trickier area because the sentinel lymph node could map to the right underarm and the left groin. And both of those areas would be assessed by the surgeon and that would be sent off for pathology. One really big change for surgery probably right about five years ago now is prior to that if a patient had a positive sentinel node, they would go for what's called a completion lymph node dissection. So taking out a large number of lymph nodes in that same area, whether it's under the arm or in the groin, and a large trial was published called the MSL T to trial that randomized patients to having indeed that procedure, their sentinel node, if it was positive at a later date going and having the white the completion lymph node dissection, with the other group of patients being randomized to very close surveillance protocol where we do ultrasounds of the of the area where the sentinel node was every four months for a few years. And it was found that we could pick up recurrences with the ultrasounds then do the surgery at that time, with no detriment to patients survival from their melanoma. So I mean, that was really I don't think I've ever seen a paper published that's led to a clinical translation in practice so quickly. And the other big findings from that study was there was a huge decrease of course in lymphedema because so many people were having so many fewer people are having the completion lymph node dissection and as you front know, from when you're a clinician, there is still no cure for lymphedema. And and that's a that's a swelling in the affected arm or leg can be managed, you know, compression garments, lymphedema massage, but it has to be controlled really for life. And that has obviously a significant impact on quality of life.

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Dr. Bill Evans 22:00

You mentioned the quick uptake of this change in surgical practice. But another quick uptake has been the immunotherapy approach for metastatic melanoma. And that's a really exciting area. We're going to talk about that. After a brief break.

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Narrator 22:15

We'd like to take a moment to thank our generous supporters, the Hutton Family Fund and Becker creative studio, who make the cancer assist show possible. The COVID 19 pandemic has not stopped cancer. Instead, it has added to the isolation and challenges already faced by cancer patients and their families. The cancer assistance program remains committed to

providing free essential support to cancer patients in our community, whether it be transportation and equipment, loans, personal care and comfort items to parking, practical education. With no sustainable government funding, we need your help so we can continue to be there for those who depend on cat to stay safely at home. individual and corporate support of signature events, third party fundraising and financial gifts are greatly needed. Visit [cancerassist.ca](http://cancerassist.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 23:12

We're back with Dr. Elaine McWhirter talking about melanoma and really the dramatic change in treatment for individuals who have metastatic melanoma so metastatic meaning spread to other parts of the body. And through my career, most of my career, I've only had access to a drug called DTIC, which some people have referred to as a toxic placebo. It did have a very small response rate. And I guess I can say I see I saw occasional patient with some tiny benefit, but boy, it was a tough drug to take and didn't really help the quality of life of the individuals who were trying to help. But boy, that's changed dramatically. And as you were saying before the break the advent of understanding about immunotherapy for melanoma has led to really a sea change of approach to a whole vast number of malignancies. And I don't know maybe you'd like to talk a little bit about how that came about it or how it applies to melanoma.

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Dr. Elaine McWhirter 24:15

Yeah, immunotherapy has become a new pillar really of cancer treatment. You think that the three pillars that we had surgery, radiation therapy and chemotherapy and immunotherapy is really a category unto itself? It is not chemotherapy? You know, if you think about what the immune system's usually doing, it's out there it's looking for bacteria and viruses and if it encounters something, it ramps up, attacks the bacteria or virus treats the infection and then it winds itself back down. So what we're trying to do with immunotherapy is, overstimulate excite boost the immune system. So it is it is so active that it's actually recognizing Cancer cells as the aliens and attacking them. And in the case of melanoma, certainly, it's been incredibly effective. It's been known for decades that melanoma is a very what we would say immune mediated cancer and there had been numerous vaccine studies that were all close, they had the right idea, but they just didn't work. It's been incredibly rewarding to treat patients for with melanoma over the years and see that transition from drugs like DTIC, maybe a response rate of 7% and did not improve survival and was not helpful for quality of life to see that transition from chemotherapy to immunotherapy in melanoma has been absolutely incredible.

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Dr. Bill Evans 25:46

And this is a class of drugs we call checkpoint inhibitors. And when you were talking about the immune system are ramping up to fight a virus or a bacteria. It also has to ramp down there's got to be a regulator and, and so when tumors express some, some foreign proteins, which they will do, the immune system ramps up, that then gets shut down as well. Otherwise, it might overwhelm and perhaps tact normal parts of your body. So the tumors currently survive, I guess, because they figured out how to turn off the immune system. They're smart little fellas.

And we fit now figured out how to ramp it back up again by blocking that inhibitor that checkpoint inhibitor. So it's a fascinating understanding of the mechanisms. It's very dynamic. And so we have these, these drugs that work through the immune system. And there's have nice names like Pembrolizumab, Avelumab and nivolumab. And they're real tongue twisters don't want to say them too quickly, too often. And we also have an understanding of mutations that occur in in these malignancies. So some of those, there's a lot of mutations in melanoma, right. But some of them are what we call passenger mutations. They don't, we don't think they mean much. But then there are some that are actually driving the growth of the tumor. And again, we've figured out how to block those and maybe just talk a bit about those. Because they're important those mutations and the targeted agents we now have for them are part of the systemic therapy that we can use to treat melanoma.

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Dr. Elaine McWhirter 27:27

They are in melanoma in particular, it's something called a B RAF mutation. And we think of B RAF is a growth pathway that's present in cells. But the problem when you have this mutated form of the protein, it's like the switches stuck in the on position. And so usually this would tell cells to grow, and then they would stop growing. But if the switches in the on position, it is unregulated, ongoing cell growth. And these drugs I mean, you know, the work of pharmaceuticals behind drug development, very elegant design of a drug that can bind on specifically to the abnormal form of the protein and really flip the switch into the off position. As we know in patients that don't have a B RAF mutation, these these drugs don't work and 40 to 50% of patients with melanoma would have a mutation in this particular growth pathway. And again, we are seeing really an incredible results in terms of treatment for patients with BRAF mutations, I mean, they still also respond to immunotherapy, but it is another it is another tool in the toolbox in terms of treatment.

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Dr. Bill Evans 28:39

So creates a bit of a dilemma, does it not in the clinic and got, on the one hand, these targeted agents that work if they have a mutation? And then you also have these immunotherapy drugs? And how do you decide which to do first?

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Dr. Elaine McWhirter 28:55

Yeah, there's a number of factors that, that go into that there's certainly studies that have looked at retrospectively but looked at who are the patients that seem to have a long term response to to the B RAF inhibitor type of drugs because, in fact, most people will respond. It's a question of how long and we actually combine the B RAF inhibitors with a second drug. Again, a growth pathway has a number of steps. And it was found if you block not only that first step of the B RAF protein, but a second one called MEK, that the duration of the response landed was longer. And so the median numbers are about maybe 12 to 13 months in terms of the average how long the average patient would respond. But we know some patients might only have a response for a few months. And some patients will be responding for years and and you know, there are some factors in terms of how much tumor a patient has, how well they are. Some blood tests that we can do that that would suggested that that might be a patient who would have a long term response. So there are there are patient, patient features and always

again, patient preference. The B RAF inhibitor combinations are pills immunotherapies intravenous, so you know, these are conversations that we have with our patients. But there's there's certainly some features where we would suggest that we think for a longer term response to treatment that immunotherapy would be preferable.

**D** Dr. Bill Evans 30:29

So let's drill down just on how long or what proportion of patients have a long response and then the patient cured by immunotherapy.

**D** Dr. Elaine McWhirter 30:39

You know, it's, there's hesitation in in this fields as you can imagine to use the C word for cure. But the response to immunotherapy in the longer term data which we keep getting updates, which has really been very helpful, has been incredible. So we really, there's two main classes of immunotherapies in melanoma, I don't want to get too technical for group here that are the first group of drugs was the ipilimumab which are CTLA four inhibitors. And the second group of drugs are the PDL one inhibitors. And, you know, logical question. If one drug works well, and the other drug works, well, what happens if you can combine them. And so ASCO is the big international annual cancer cancer conference, it happens at the end of May. updated data now at seven and a half years is showing that just under 50% of patients who received the combination of these drugs are still alive. And well, it's seven and a half years after starting treatment,

**D** Dr. Bill Evans 31:44

with no evidence of disease. Well, with

**D** Dr. Elaine McWhirter 31:47

no evidence of recurrence, you know, it's an interesting thing with the immunotherapies. Sometimes where we knew there had been tumors, for example, in the lung or in the liver, have they shrunk down, but sometimes they don't entirely Go Go away. Some studies that have done biopsies of these sort of leftovers have shown that it's all immune cells, inflammatory cells with no active tumor. So as we follow these patients over time, these sort of leftover spots that we knew at one point were tumors, if they're not growing, and they're not multiplying, we don't we don't worry about them. It's, it's, you know, it's looking close to cure, I guess, when you're talking about seven and a half years out,

**D** Dr. Bill Evans 32:30

I would say so you're being very cautious. used to say if you have survived five years disease for you were probably cured. And we know that this isn't always the case. But it's extremely encouraging that there are these individuals who are living a long time with apparent disappearance of metastatic disease. As a consequence of the effectiveness in advanced

disease like that, then I gather immunotherapy is being applied at earlier stages of disease either post operative as a so called adjuvant therapy and additional therapy postoperatively or even before the surgery.

**D** Dr. Elaine McWhirter 33:09

It's been another huge, huge move forward for our patients with melanoma. The older treatments was maybe even when you were in the clinic was interferon and it was an incredibly toxic treatment. It was a one year program and, and unfortunately, not very effective. But it was all we had. And so in you know, in cancer in general, when you find treatments that are so effective in patients with metastatic or stage four disease, it's the the next logical question is what if we introduce these drugs after surgery? And you know, in that that purpose is especially for patients who had larger melanomas or melanomas that spread spread to the lymph nodes. Are there any theoretical leftover melanoma cells that we can use the most immunotherapy to take care of those. So in the years down the road, there's less likely chance of this cancer coming back. And indeed, that's what we found with with immunotherapy and as well with targeted therapy. So for patients with with melanoma, we, we have options to offer them to try and prevent the risk of their cancer coming back.

**D** Dr. Bill Evans 34:20

So using targeted therapy as adjuvant therapy and also immunotherapy.

**D** Dr. Elaine McWhirter 34:25

Yeah, one or the other. But yeah, they're both options. Are they

**D** Dr. Bill Evans 34:27

ever used in combination? Immunotherapy plus targeted therapy?

**D** Dr. Elaine McWhirter 34:31

Yeah, not in this setting, not in the post operative setting. It certainly has been studied in the post in the in the, in the setting of metastatic melanoma. And it's a case of despite having two very good treatments that three for the most part has not looked to be a lot better than two than one, so sorry, three, the two BRAF combination so targeted therapy plus immunotherapy has not the results have they'd been as good as we would have liked. You know, certainly we had those studies at the cancer center, we've had some patients who've done very well on the, on the trials. But that has not, has not hit primetime, I think we need to look a little bit closer at design. Of course, you know, we've made the story a little bit simplistic, there are a number of what we call checkpoints of the immune system that can that we can try and target. And some recent studies have looked at another another target something called LaGG. Three in combination with the PD one inhibitor, and that also is looking to be a very effective target. It's

pretty early days just been approved by the US FDA doesn't have approval here yet. But I we continue to study, we continue to look for, for treatments that are going to give our patients excellent quality of life and long lives.

**D** Dr. Bill Evans 35:56

Well, this is the importance of doing clinical trials and advancing knowledge progressively. One area that I'd be interested to hear about what its status is, is just vaccines for melanoma, because herpes simplex virus is attenuated has been used as a vaccine is going anywhere as an if any promise in it or not.

**D** Dr. Elaine McWhirter 36:17

Yeah, I mean, there's one in particular the T VEC. That has that has shown good results, if it is used in the States, there's some logistical aspects in terms of where you inject this. And really, the more effective use seems to be perhaps in combination with immunotherapy. And that's certainly been under investigation. So that's not really primetime here yet, certainly as a single agent. But that could be something down the road in combination with immunotherapy.

**D** Dr. Bill Evans 36:49

It just goes to show that there are various various ways to stimulate the immune system and a lot of activity in an area. I remember when we tried to stimulate the immune system back in the 70s. It was with inter plural BCG and things like that. So it seemed very primitive in comparison to the kinds of sophisticated interventions that are informed by basic science today. So there's been tremendous advances advances in the management of melanoma, I think it's really the one one of the biggest success stories in oncology, right? And what do you see in the future? What, how is this picture going to unfold? Because you're curious? Well, I guess I'm not supposed to say cure, but my goodness, people living disease free for seven and a half years. Sounds pretty good to very close to a cure, but you're certainly having very long survivals

**D** Dr. Elaine McWhirter 37:37

survivals. Again, it's it really is speaks to clinical trials, looking at different combinations. You know, we're going to see more improvements in survival with our adjuvant therapies, and perhaps again, some combinations or other drugs might move into the post operative setting. And as you touched on looking at using these treatments before surgery, is certainly you know, data that's that's come out so far looks very promising. And I do think that will be something that we see more of down the road is actually patients receiving either targeted therapy or immunotherapy before their surgery. It's even having some impacts on whether or not you know, patients need more lymph nodes out as well. So very exciting. Lots of

**D** Dr. Bill Evans 38:29

changes. So I guess I'll bring you back in about two or three years and you can update us again

changes. So I guess I'll bring you back in about two or three years and you can update us again and all the new and exciting things what what messages would you like to leave with our listeners about safe sun and about melanoma today?

D

Dr. Elaine McWhirter 38:45

I think I think messages is especially for patients or their families who are dealing with a melt with melanoma is certainly there's a lot of hope and optimism for for treatments that can help our patients and and clinical trials and we're deeply indebted to our patients who agree to participate on clinical trials to try and move treatments forward for for everybody. Again, with a disease that is preventable and you know, we can't go back in time and erase the the sun exposure of our of our youth. But moving forward, very important to stay Sun safe and certainly for those of you with with children, start them early and and prevent the burns and I think if we can, can really as a country, get a public that public health message out in terms of the importance and sun safety, instead of this being a cancer that worldwide has an ongoing increase in incidence we'll be able to try and turn that down and and eventually have fewer cases.

D

Dr. Bill Evans 39:50

Well, hopefully this podcast will do a little bit towards that and informing people about the safe some practices we talked about in the first podcast and and certainly Great to hear the hopeful messages about the advances in the treatment of advanced melanoma. It's really one of the great success stories and is continuing to evolve and I suspect over time, the results will simply get better and better. Dr. McCord, I really want to thank you for sharing your knowledge with us today on this podcast. I think the listeners will find it very interesting to listen to listen to, and hopefully they action what you said I would save some practice. I

D

Dr. Elaine McWhirter 40:25

hope so. Okay, thank you for having me.

N

Narrator 40:30

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