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00:00.000 --> 00:15.000 Support for Yale Cancer Answers comes from AstraZeneca, a biopharmaceutical business with a deep-rooted heritage in oncology and a commitment to developing cancer medicines for patients. Learn more information at [astrazeneca-us.com](http://astrazeneca-us.com).

00:15.000 --> 00:47.500 Welcome to Yale Cancer Answers with doctors Anees Chagpar and Steven Gore. Yale Cancer Answers features the latest information on cancer care by welcoming oncologists and specialists who are on the forefront of the battle to fight cancer. This week, it is a conversation about skin cancer with Dr. Kathleen Suozzi. Dr. Suozzi is an Assistant Professor of Dermatology in the Section of Cutaneous Oncology and Dermatologic Surgery at the Yale School of Medicine where Dr. Chagpar is a Professor of Surgery.

00:47.500 --> 01:03.800 <vChagpar>Why don't we start by talking a little bit about skin cancer. As a professor of dermatology, you must see this a lot. Tell us how frequent it is and what kinds of cancer you see and really how bad it is or not so bad.

01:03.800 --> 01:49.600 <vSuozzi>So, when we think about skin cancer, we can categorize it into 2 types. The first is the melanoma type of skin cancer and the second is the non-melanoma type of skin cancer. And when we are talking about frequency, the non-melanoma type of skin cancer is far in a way more common. There is over 5 million cases of non-melanoma skin cancer diagnosed in the US every year and that is actually rising. Of this type of skin cancer, there are 2 main types. The first is basal cell carcinoma which accounts for about 80% of the non-melanoma skin cancers that are diagnosed and the second most common type is squamous cell carcinoma.

01:49.600 --> 02:10.800 <vChagpar>And so, of those non-melanoma skin cancers, often times people will say, I went to the dermatologist, I had this little spot on my cheek and they cut it out and it was a little skin cancer, but it is nothing to worry about, is that right?

02:10.800 --> 03:01.300 <vSuozzi>So, basal cell carcinoma, which is the most common as I mentioned is typically not a skin cancer that is going to be really a threat to your overall health, the chances of basal cell skin cancer spreading inside the body are minuscule, but it can be locally destructive. I have seen cases of basal cell where it has eroded away the eyelid and invaded into the orbit of the eye, the eyeball. Basal cell skin cancers that have eaten away patients noses. These are obviously the extreme cases. So, because in our country, we are more aware and patients are screened more regularly, when basal cell is picked up at an early stage, it is usually a minor thing that requires some surgical procedure or some type of treatment to eradicate it and patients have very good results.

03:01.300 --> 03:04.800 <vChagpar> What about the other kind of non-melanoma skin cancer, squamous cell?

03:04.800 --> 04:01.300 <vSuozzi>So, squamous cell is less common than basal

cell, about a million cases a year diagnosed, and again in general, patients with squamous cell have good outcomes. Deaths from squamous cell carcinoma are about 15,000 a year, so when you think about the amount that are diagnosed to that death rate, that is pretty good, but in contrast to basal cells, squamous cell does have the ability to spread to lymph nodes or be locally aggressive, invade into other structures outside of the skin, in a way that basal cell really does not. And, there are certain populations that are more at risk for that type of progression, particularly patients who are for example immunosuppressed because of an organ transplant or because of other medications that they are taking for different conditions that suppress their immune system.

04:01.300 --> 04:09.300 <vChagpar> And outside of that whole non-melanoma skin cancer group, there is the whole category of melanomas.

04:09.300 --> 05:24.900 <vSuoizzi>Yes. Melanomas are less frequently diagnosed than the non-melanoma type, but the incidence is increasing. Partly, that is due to our increased ability to detect early stage melanomas, but the increase in incidence is real, and there are over 100,000 cases diagnosed every year. I think in 2019, they estimate that that number is going to be somewhere over 150,000, about half of those are the early stage melanomas, called in situ and the survival rate from these type of melanomas is extremely high, over 98%. But when we get to the invasive melanomas, that is where it can become more scary and where we see decreased survival rates. In invasive melanomas that are local, meaning that they have not gone to the lymph nodes, survival is still very good, greater than about 95%, but once it spreads to the lymph nodes or distant metastases, that survival rate drops to about 64% and 23% respectively. So, it is pretty precipitous.

05:24.900 --> 05:36.000 <vChagpar>And so, it sounds like for all of these, catching this early is really the key to ensuring longevity?

05:36.000 --> 05:43.300 <vSuoizzi>It is, and that is why regular skin cancer screens are really important in certain patient populations.

05:43.300 --> 05:51.100 <vChagpar> So, tell us more about that. Who should get screened, how should they get screened, how does that work?

05:51.100 --> 06:32.900 <vSuoizzi>So, interestingly, the US Preventative Task Force, that is the body that puts out recommendations for cancer screening, does not recommend any routine skin exams for the general population. And so, in a way, this might leave someone saying, okay well, do I really need to get a skin exam? But I think that that recommendation comes from the fact that there is susceptible patient populations and less susceptible patient populations. And sometimes, it might be hard to know which one you fit into. So, for example, any patient that has a family history of a skin cancer should have an annual skin check by a dermatologist.

06:32.900 --> 06:36.100 <vChagpar>Whether that skin cancer is non-melanoma or melanoma?

06:36.100 --> 07:57.500 <vSuoizzi>Yes. And so, when you think about that, we know that about 1 in 5 Americans are going to be diagnosed with a basal cell every year. So, that family history is going to be pretty strong in this country. In addition, if anyone has had a history of a precancer, the typical precancerous lesion that I am talking about is something called actinic keratosis, they should have a regular skin check by the dermatologist. Patients who have history of tanning bed use, they should have a regular skin check by a dermatologist. It becomes more questionable in patient subtypes, for example, African-American patients, Hispanic patients, patient populations that are not generally as at risk for these UV-driven skin cancers because they are protected a bit by their skin type. Their need for an annual skin check is more difficult to determine and typically I recommend talking to your primary care doctor, who can help triage your risk and refer you to a dermatologist if they think it is necessary or to just have a baseline screen with a dermatologist who then can take a detailed medical history, assess your risk and give you recommendations about what screening protocol would be right for you.

07:57.500 --> 08:12.400 <vChagpar>So, tell us a bit more about how exactly a skin check happens? You mentioned a couple of times that they should be done by your dermatologist and not necessarily just by your family physician. Tell us what exactly goes into a skin check.

08:12.400 --> 10:25.400 <vSuoizzi>So, I could walk you through what a skin check would look like if you came into the office. And for example, say this is your first time in the office. The first thing that would happen would be that we would take a detailed medical history and these would include some of the factors that I already mentioned to you about family history, personal history, what medications you are on. These are helping your dermatologist assess your underlying risk profile. And then, the dermatologist will likely ask you is there anything you are concerned about on your skin, and this is a really important part of the screening because we know that most melanomas are actually discovered by the patients, something that they realize. And so, if a patients says to me something is new or changing on their skin, I take that very seriously. And so, when we discuss the lesions you are concerned about, we will get some history about how long they have been present, if they have been treated before, what type of symptoms you are having and then based on that information, I will have an idea in my mind about what kinds of things we might be dealing with. And then, we will actually perform the skin check. And what that involves is, you will be asked to change into a gown and usually all of your clothing is removed because it is very important to have a complete exam. And the exam will begin usually head to toe. Everyone has heard of a different method, but the dermatologist will look through your scalp for example, look into your mouth and examine the inside of your mouth, the exam typically will include an exam of your genitalia and of your hands and feet and in between in your toes for real completeness. And, sometimes, the dermatologist will use different devices to help them in the exam. One of them is called the dermatoscope and this is essentially a hand-held device that has magnification

and polarized light and it helps to highlight certain features of different lesions on the skin that might inform the dermatologist whether this is something that needs a biopsy or it is okay.

10:25.400 --> 10:51.000 <vChagpar> You know, I think that that is so important that people understand the difference between, I have my husband or my wife look at my skin, they will let me know if there is any problem versus going to a dermatologist and actually having every centimeter from your scalp all the way to the bottom of your feet really examined to see whether there is anything concerning.

10:51.000 --> 11:44.500 <vSuoizzi>I agree. But I also think that home exams are very important because as a dermatologist, we are seeing your skin in one point in time, especially if this is the first exam that you are having and in terms of detecting skin cancer, particularly the melanoma type, evolution of lesions is very important and sometimes that is very hard to assess at a static moment in time. So, I do train patients how to look at their skin, how to completely examine themselves including with mirrors to see hard-to-reach places like the back or to have a spouse look at a patient's back, particularly in men because in men, most melanomas are diagnosed on the trunk, so on the back is the #1 location, and it is many times the spouse that would recognize that lesion. So, both are important.

11:44.500 --> 12:12.300 <vChagpar> And so, you mentioned other places that cancer can appear too, in the mouth, under the nails, tell us about what those would look like. I mean, I think that people may be able to say, well I have a spot on my forearm that looks like it is getting a little bit bigger over time, but how would they really recognize lesions in other places that they might not look.

12:12.300 --> 13:52.900 <vSuoizzi>Yeah. I think you mentioned nails, nail skin cancers can be perplexing even to the dermatologist. The melanoma type of skin cancer that appears under the nail, this can be a particularly deadly type of melanoma and it is the type of melanoma that is more often seen in darker skin type populations, like African-Americans and sometimes it is obvious, it can appear like a pigmented band under the nail, a brown streak that is widening over time and it can be obvious and the worrisome factor that we look out for is when that pigmented streak starts spreading onto the skin adjacent to the nail, this is called Hutchinson's sign and this is how we can distinguish benign pigmentation in the nails, which is actually pretty common in darker skin population to a more worrisome pigmented band, but sometimes melanoma has no pigment at all, including under the nail and can be very difficult to detect, and same thing for squamous cell skin cancers, which is another area where we do see these types of skin cancers. It is sometimes associated with the HPV virus, the virus that causes warts around the fingers and one of the signs that you will look for is a change in the nail shape, where instead of being flat, all of a sudden there is a new ridge or an abnormality in the nail plate, and this is usually caused by a lesion growing underneath disrupting that outgrowth of

the nail.

13:52.900 --> 14:06.500 <vChagpar>Interesting. We are going to learn more about how to detect skin cancers and also potentially how to prevent them right after we take a short break for a medical minute. Please stay tuned to learn more with my guest, Dr. Suozzi.

14:06.500 --> 14:19.200 Medical Minute Support for Yale Cancer Answers comes from AstraZeneca, working to eliminate cancer as a cause of death. Learn more at [astrazeneca-us.com](http://astrazeneca-us.com).

14:19.200 --> 15:09.900 This is a medical minute about pancreatic cancer, which represents about 3% of all cancers in the US and about 7% of cancer deaths. Clinical trials are currently being offered at federally designated comprehensive cancer centers for the treatment of advanced stage and metastatic pancreatic cancer using chemotherapy and other novel therapies. FOLFIRINOX, a combination of 5 different chemotherapies is the latest advance in the treatment of metastatic pancreatic cancer and research continues at centers around the world looking into targeted therapies and a recently discovered marker HENT1. This has been a medical minute brought to you as a public service by Yale Cancer Center. More information is available at [YaleCancerCenter.org](http://YaleCancerCenter.org). You are listening to Connecticut Public Radio.

15:09.900 --> 16:01.100 <vChagpar>Welcome back to Yale Cancer Answers. This is Dr. Anees Chagpar, and I am joined tonight by my guest Dr. Kathleen Suozzi. We are talking about skin cancer and how screening, particularly with a skin exam done by a dermatologist can be really helpful in finding cancer at its earliest stages. Now, Kathleen, right before the break, you mentioned something that a lot of people might not know, which is that, some of these skin cancers are not pigmented. So, we are all kind of taught to look for an asymmetrical spot that is dark or the borders are irregular and it might be expanding and it is over 6 mm, the ABCDs of melanoma. But, what about these non-pigmented ones, how do you pick those up?

16:01.100 --> 18:23.500 <vSuozzi> So, exactly, you mentioned the ABCDEs, which I think are so very important for the population to be aware of for the traditional pigmented type of melanoma, but for the subset of amelanotic melanoma or unpigmented melanoma, these can be very difficult even for a dermatologist to detect, so again those screening exams in the office are very important. But, there are some principles that apply to both the amelanotic type of skin cancers as well as the non-melanoma type of skin cancers that I think could be important to highlight. First of all, if you have any lesion on your skin that bleeds spontaneously, this is a sensitive sign that should be checked out by your dermatologist. So, now I am not even aware of the bleeding, but it is just a lesion that is constantly scabbed, this is something that should be evaluated and the amelanotic type of melanoma can present this way. The other thing is that if a lesion is painful, so if you touch it and it elicits a pain response, that should be evaluated sooner rather than later, and this is seen

with squamous cell type of skin cancers a lot and sometimes it could be a sign that skin cancer might be involving the nerve, which is a poor prognostic factor in the squamous cell type of skin cancers. So, again important to point out, but like you said, it can be very difficult and using tools like the dermatoscope to look for certain features like vessels that can appear in a certain pattern, the other tool that we will sometimes use is a Wood's lamp, this is a black light and it highlights pigmentation, both an increase in pigmentation or a decrease or absence of. And sometimes, melanomas because they are immunogenic, they elicit a response from the immune system. Sometimes, the immune system is triggered to attack that melanoma and instead of being a brown spot, it is actually a white or de-pigmented spot because the immune system has attacked it. And so, the Wood's lamp exam would help highlight both areas of increased pigmentation and decreased pigmentation.

18:23.500 --> 18:37.400 <vChagpar> So, I think the key message here is that, the importance of screening with a dermatologist. Now, you mentioned that these tests should be done on an annual basis. Starting at what age?

18:37.400 --> 19:21.400 <vSuoizzi> So, the annual basis again is not for everyone, some patients need more frequent screening, for example if you have had a melanoma, you are going to be screened 3-4 times a year in general and some patients will be screened less. So, like I mentioned having a baseline exam with a board certified dermatologist, that would be instructive in figuring out whether or not you do need to go once a year or maybe every 2 years or maybe not at all. For example, patients that are over 90 years old, the elderly population, they might not need a routine exam every year to detect non-melanoma skin cancers that are unlikely to impact their life expectancy.

19:21.400 --> 19:40.900 <vChagpar>How old should you be when you get that baseline exam though, is that something that we should be taking our kids to or is that something that we wait until we are in our 40s or 50s like other cancer screenings, tell us more about when should we really be thinking, I have got to add in yet another cancer screening into my tool kit?

19:40.900 --> 20:30.900 <vSuoizzi>Certainly I do not think children need to be going and even in your 20s is probably on the early side unless you have a history of tanning bed use. I routinely see patients in my practice in their 30s, even in their late 20s presenting with basal cell skin cancer and there is a very strong history of tanning bed use in that population, even 1-2 times greater than 5 certainly. So, again, if you have that history, maybe earlier, but the peak incidence of the non-melanoma type of skin cancer is sort of bimodal in the fifth and sixth decade and then again in the seventh or eighth decade. So, if you are having a baseline screening in your 30s, I think that would be generally appropriate for most patients.

20:30.900 --> 20:52.300 <vChagpar> And so, let us talk a little bit about some of those risk factors that you mentioned. Tanning was one. And you said even if you had tanning only once or twice but certainly if you have had it 5 times,

you are at increased risk. So, is there no dose of tanning that you think is safe?

20:52.300 --> 21:34.300 <vSuoizzi>Well, you are talking to me here who treats skin cancer every day, so no. I do not think there is any type of safe tanning. I do think we have to live our life and be outdoors and using appropriate protective measures is prudent and these are all things that we sort of know, but even though we know, we do not always do and I really think that fair skinned patients should wear sunscreen every single day, part of their routine on their face in particular and that should be at least 30 or above SPF, unless you are in the tropics or extreme areas of sun exposure.

21:34.300--> 21:35.500 <vChagpar> 30 or above in SPF.

21:35.500 --> 22:55.900 <vSuoizzi>In SPF, yes. And trying to limit prolonged activity in the sun in the peak hours, between 10 and 2. These are general common sense type of things that you can do to decrease your risk. But even one blistering sunburn as a child, increases your risk of skin cancer by 50%. So, we really need to start with good sun protection in our kids at an early age, and I think the generation now of children, they are more aware and there is more advocacy and even legislation that is allowing schools to apply sunscreen to kids which before was not allowed. So, I think that we are getting better, but it really has to start at an early age. Basal cell in particular is associated with intense intermittent sun exposure, like that type of sun exposure you get on holiday. Whereas, squamous cell is more cumulative UV exposure and that goes back to my recommendation of the daily application of sunscreen because even that walk to your car or walking the dog in the morning or gardening outside, these are activities that patients do not really see as being important doses of ultraviolet light, they do add up over time.

22:55.900 --> 23:15.900 <vChagpar>You know, I think many of us will wear a facial moisturizer that has got a built-in SPF, but do not routinely wear sunscreen just on a daily basis. Do you think that we ought to even if it is not like we are going to the beach but we are going to walk to work, it is still worth it to wear sunscreen on exposed skin?

23:15.900 --> 23:47.000 <vSuoizzi>I do, and you did mention though that moisturizers that contain SPF, if it is SPF30 or above, that would be sufficient. I think we get into trouble sometimes, patients tell me it is in their makeup and with make-up or not, evenly applying that over our whole face and ears so, I think a moisturizer is a fair option when you are not going to be at the beach or swimming and you need something more water resistant for example.

23:47.000 --> 23:55.000 <vChagpar> And so, you said every day, does that apply to even in the wintertime when there is not a whole lot of sun?

23:55.000 --> 24:48.900 <vSuoizzi>Yes. So, in the winter, it is true that the intensity of the ultraviolet exposure is less, but again, we are talking about cumulative exposure and that daily small exposure over the winter still counts. And I think people tend to be aware that they need sunscreen in the summer;

whereas in the winter, it is not top of mind and certain activities especially activities in the snow can really predispose you to sunburn because not only do you have the exposure from UV from above, but it can be reflected off the snow and cause exposure from below. And many of these snow activities are in high altitudes where the UV intensity is increased to begin with. So, skiing, snowboarding, these type of winter sports, it is really important to have SPF on.

24:48.900 --> 24:48.700 <vChagpar>But only on exposed skin?

24:48.700 --> 25:08.400 <vSuoizzi>Yeah. For example, we talk about the UV protective factor of clothing and a white T-shirt is only about SPF equivalent of 15, but of course if you are wearing a winter parka, those areas will be safe.

25:08.400 --> 25:31.600 <vChagpar> One of the things you mentioned was, you had a bit of a caveat in terms of fair-skinned people. So, for people who have a bit of pigment, people who are African-Americans or even Asian or Hispanic, are the recommendations in terms of the amount of SPF that they require or how frequently they need to apply sunscreen different?

25:31.600 --> 26:36.500 <vSuoizzi>Yes. In that, when you have more indigenous pigment, darker pigmentation to your skin, you are not going to be as prone to the negative effects of UV in terms of the mutations that the UV will cause on your skin, you are bit protected from that. However, the ageing effects of UV, particularly UVA is still profound even if you have darker skin. So, to prevent aging of the skin, photo aging, which as an aesthetic dermatologist I deal with as well, it is important to wear daily SPF. But, as I mentioned, the type of skin cancers that you see most commonly in the darker skin population, what is called the acral melanoma is the one that we mentioned that are on the hands and feet or under the nails, those are not as driven by UV as other types of melanoma. So, they might not necessarily be protected by sunscreen.

26:36.500--> 26:40.800 <vChagpar> So, is there anything that we can do to prevent those?

26:40.800 --> 26:54.000 <vSuoizzi>Prevention, may be hard to say, but by increasing detection and detecting them at earlier stages, that is where we are going to have the biggest impact on morbidity and mortality.

26:54.000 --> 27:23.200 <vChagpar>What about melanomas that occur in other places that are harder to detect, so people can get melanomas in their eyes, people can get melanomas in genitalia, for example, presumably, we cannot really use sunscreen in our eyes and our genitalia generally are not sun exposed, so how do we prevent those or is that a thing about early detection too?

27:23.200 --> 28:11.600 <vSuoizzi>Yeah. You mentioned ocular melanoma, which we did not get into and that is a very interesting and important subset and that is where your eye doctor is going to play an important role too in screening, that the dermatologist is not going to do as well in screening inside your eye, and we do think that UV does play a role in ocular melanomas and



wearing sunglasses for example that have UV protection can be important to help prevent that type of melanoma. But, the melanomas that you mentioned that arise in the genitalia, those are more analogous to the acral type that I mentioned before, in that the mutation profile is different and probably not UV driven in those areas, which makes sense given the location.

28:11.600 --> 28:27.700 <vChagpar> So, the things we can do -- we can certainly try to prevent the cancers that we can with sunscreen and avoiding tanning, what about other things? Do other things have an impact in terms of skin cancer like smoking or alcohol?

28:27.700 --> 28:50.400 <vSuoizzi>Smoking and squamous cell carcinoma, there is a strong correlation there. And so, smoking cessation is very important in patients that have a history of squamous cell carcinoma and we do talk to our patients about that when they are diagnosed. Alcohol, not as much to my knowledge as a risk factor, but smoking certainly.

28:50.400 --> 29:00.000 <vChagpar>And so, then there are the things we cannot do anything about, our family history which also increases our risk right?

29:00.000 --> 29:42.100 <vSuoizzi>Yes and there are known genetic syndromes that are associated with both the melanoma and the non-melanoma type of skin cancer and that is usually elucidated from a detailed family history and you might be sent to geneticist to help assess your risk, but even just a genetic history in your family without being tied to a specific gene that we can identify, yes of course we cannot necessarily do anything to change that but it does again modulate how often you are going to be screened and for the genetic syndromes associated with basal cell carcinoma there are some specific treatments that you might be considered for.

29:42.100 --> 30:10.500 Dr. Kathleen Suozzi is an Assistant Professor of Dermatology in the Section of Cutaneous Oncology and Dermatologic Surgery at the Yale School of Medicine. If you have questions, the address is canceranswers@yale.edu and past editions of the program are available in audio and written form at YaleCancerCenter.org. We hope you will join us next week to learn more about the fight against cancer here on Connecticut Public Radio.