

About Health TV with Jeanne Blake
Skin Cancer
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JEANNE BLAKE: Welcome to *About Health TV*. I'm Jeanne Blake. Skin cancer is the most common form of cancer in the United States. This year, one million Americans will learn they have the disease. On this edition of *About Health TV* we'll talk about skin cancer with Dr. Hensin Tsao from Massachusetts General Hospital, a dermatologist there, and we'll learn about progress being made in the laboratory against this disease. Dr. Tsao, thanks for coming in to talk about this subject. It seems that no matter how much we hear about skin cancer, many people continue to ignore the warnings.

DR. TSAO: I think it's always worked well to repeat the warnings. This year the incidence of melanoma, for instance, is still higher than the previous years. The number of cases continues to increase, and even though the mortality itself has been fairly stable, around 7,500 cases per year, I don't think we can tell which one is going to progress and become fatal. So it's important to try to staunch the number of cases in the beginning.

JEANNE BLAKE: You mentioned that, and you happen to be particularly an expert in melanoma ... you say that 7,500 people will die from skin cancer. Are those deaths from melanoma, and can one die from the less scary forms of skin cancer?

DR. TSAO: The 7,500 deaths are actually only due to melanoma.

JEANNE BLAKE: Okay.

DR. TSAO: There's some more other sort of fatal events, and most of them are due to squamous cell cancers of the skin. So there are a couple of types of skin cancer. The melanoma is the most lethal type. The most common type is what we call basal cell carcinoma, and those are rarely lethal. Squamous cell carcinoma is another type of skin cancer, and a certain percentage of those can be lethal if they spread, but it's not as common as melanoma in terms of its lethal potential.

JEANNE BLAKE: We've made a decision to go ahead and show pictures of each of them briefly. Some of them are a little offensive to the eye, but I've found over the many years that I've been a reporter and covered this subject, that invariably people have told me that when they thought they knew that they had it and it either made them more aware, brought it to the forefront of their mind, or it

penetrated their denial. One or the other. And that they got some help. What I would like to do is, as we briefly show what these three kinds of skin cancer look like, just please describe what they are and what their difference is. And let's start with the most dangerous, and that's melanoma.

DR. TSAO: Okay. So melanoma, typically the way you think about it is, it's a brown spot, its borders are somewhat irregular, its coloration could be variegated, so there may be areas of brown or black or blue or red, or there may be areas of white within sort of brown areas. Those are all possible in terms of ...

JEANNE BLAKE: And what's happening to create that appearance?

DR. TSAO: A couple of things. When brown sinks deeper into the skin, due to some physical effects call the Tindel effect, it turns blue. So as the cancer that is brown invades deeper, it turns blue itself, the immune system starts attacking it or new blood vessels grow into the tumor. Then it gives that sort of reddish appearance. If the immune system has been around long enough and it actually destroys or eradicates part of the tumor, a scar can form within it and that gives it sort of its whitish appearance. So you can really get multiple colors with multiple events happening in the cancer itself.

JEANNE BLAKE: Well, we did just have a brief look at it, and it's hard for me to imagine that someone could have that on their body and ignore it. But I'm sure that as a physician you've seen people, and maybe you could share with us an example of how someone was able to deny that.

DR. TSAO: Well, there's denial. If they've seen it and they assume that it's okay and under the urgings of other people still refuse to go in ... I think most people just don't see it because it's in a location where it can't be visualized. For instance, it could be on the back, and I have to say, probably men more so than women tend not to be very careful about their own bodies, so they tend not to look at their back or the backs of their legs. The melanoma can happen on the soles of the feet, for instance, and it's rare that people look down at the soles of their feet. It can happen in between toe webs. So I think beyond denial, there's a certain component that it's not in an area that's easily visualizable. And rarely it happens in the scalp, where there's no real way that anyone can sort of visualize.

JEANNE BLAKE: It rarely, you said, happens?

DR. TSAO: Rarely, but it can.

JEANNE BLAKE: All right. And on the squamous cell.

DR. TSAO: Yes. That's more of a direct sort of sun exposure, cumulative exposure skin cancer. Melanoma traditionally has been cited as a tumor that's related to intermittent sun exposure, so someone who may be indoors all year and goes out in the summertime and gets that blistering sunburn and sort of goes back in. Squamous cell cancer has really been linked to sort of long-term chronic sun exposure, and they happen in places of chronic sun exposure that you expect, such as the face and the neck and the back of the hands.

JEANNE BLAKE: I have a number of neighbors, actually, who spend the winter in Florida and the summer in the Northeast, and they have had ... I think it's squamous cell carcinoma.

DR. TSAO: Yes. It's much more common than melanoma, and it's much less fatal, so chances are you will know someone with it.

JEANNE BLAKE: But it can be deadly.

DR. TSAO: It can be. If you don't treat it, and it's there for a long time, it can spread into the lymph nodes and then eventually into internal organs like melanoma. Squamous cell cancer can also arise out of scars and burn scars. Those, for some reason, tend to spread more quickly than the ones induced from the sun.

JEANNE BLAKE: And finally, basal cell.

DR. TSAO: Basal cell is the most common cancer known. Now, because it is so common it's actually not tracked, so we don't actually know how many per year there are, so the estimates are that about one million of them happen per year. They are believed to be derived from the hair follicle, cells within the hair follicle. But the actual cell of origin for the basal cell is still not known right now, and it is related to chronic sun exposure.

JEANNE BLAKE: We've talked about the number of cases, you say, that continue to increase. But I think ... I'm not sure, but I think that I see parents being more careful about young children. Is that your sense, that parents are getting the message about making sure that their children have sunscreen on them when they go out?

DR. TSAO: I believe there's more sort of sun protection for kids now and also sort of more awareness of what's going on. So parents are looking at skin, looking for moles. We have younger children coming in for their moles to be examined, and I think pediatricians are probably looking at more moles to make sure they're okay. So I think the awareness is percolating down into the subsequent generation.

JEANNE BLAKE: Well, that's good, because, as you mentioned, there can be a cumulative effect.

DR. TSAO: Right.

JEANNE BLAKE: A cumulative effect that can result later in life in someone having a skin cancer.

DR. TSAO: And there's some thinking that early sun exposure, really intense early sun exposure, may be a critical trigger for skin cancer later in life.

JEANNE BLAKE: Some people are at greater risk, and some people do know who those people are, and we'll talk about that, but I just want to hear what one gentleman told me about his family's history.

DR. TSAO: Okay.

[VIDEO CLIP]

JEANNE BLAKE: You have a lot of sunscreen on, I see.

RESPONDENT: Yes.

JEANNE BLAKE: How come?

RESPONDENT: Because I'm very afraid of getting skin cancer. I've always been this cautious. Even though I have this deep-complected Italian skin, I still have to be careful, because I burn easily and the sun is very hot.

JEANNE BLAKE: Why are you so wise?

RESPONDENT: Because my family has had a history of cancer in it, so I was educated early.
[END CLIP]

JEANNE BLAKE: You know, it was interesting, because I was surprised when I interviewed this gentleman that he had a dark complexion and yet he had a family history, which of course perhaps his mother or father – one or the other – was very light-skinned. But I've always considered, because I have a dark complexion, that I'm at a lower risk as well. So I was a little bit confused. Even after years and years of reporting on skin cancer, I found myself confused about this.

DR. TSAO: I think you have to think about absolute risk. Is it a relative risk? It's true, someone who is very fair-skinned or who has red hair and is more susceptible to become burned would probably have a higher risk of skin cancer than someone who's darker. But certainly there's plenty of skin cancer in the Mediterranean basin area, and also it sort of depends on how much sun they've had.

JEANNE BLAKE: So if this man who you saw has a family history ... he was being careful about ... I think he was using a 30 sunscreen. What would you have said? If you have a family history, stay out of it completely? I mean, he was out in the sun by a pool, but making sure that he was covered with sunscreen.

DR. TSAO: I would say be careful, but don't be scared about it. And that's sort of the message I tell all of my patients, because I think some of them have exaggerated anxiety about the sun, which makes their life overall very complicated. What he's doing if he's using sunscreen, if he's being careful about avoiding sun during critical times, if he's wearing protective clothing, all of those things should contribute to reducing his skin cancer risk. I don't know if you necessarily need to be afraid of the sun.

JEANNE BLAKE: In preparation for this program I was looking at some websites, and there are a lot of websites that are dedicated to skin cancer, some of which we'll put on our website as links, but I found almost ridiculous ... and I hate to even say this, but they're selling clothing with sunscreen in it, and I mean, who really expects that people will go out on a hot summer day with a hat and long-sleeved shirt and long pants? I mean, how careful do we have to be to protect ourselves from the direct sun?

DR. TSAO: I would say during the noonday sun, where the sun is sort of directly above us and most intense, it probably makes sense to exercise some caution about being outdoors. If you are on a beach, that may be the time to get under some shading, get under an umbrella. Or there's actually very

light clothing now that serves very well to block the sun, and maybe time to throw on a shirt at the time. So between a combination of avoidance and a sort of sun block, blocking in the sense of clothing or shading, I think that will reduce a significant amount of the risk. Sunscreens obviously have been endorsed as a common sort of solar protectant, and I think it should be used adjunctively. I don't like to see people who put on a thick coat of sunscreen and stay out eight hours and think they're protected, because I really think we don't fully understand the mechanism of skin cancer coloration and the mechanism of just a sunburn. Traditionally, the burn has been a warning, has been an alarm clock for us to get indoors. But even if you were not burned, there's still the chance that the cells are undergoing damage so that later on they still may form cancer.

JEANNE BLAKE: Well, we've heard that a tan is a sign of skin damage. Or do I mean sun damage?

DR. TSAO: It's a response to potential injury. It's a way the body sort of shields itself and creates a shield against what it perceives of as incoming potential environmental toxin, in this case ultraviolet damage.

JEANNE BLAKE: I've told a lot of people, and I think now falsely from what I've learned, that if you use a 15 that does the same amount of good as a 30. The protection is the same. And I've now learned that that's not true, that 30 really is better than 15. Please help us understand that.

DR. TSAO: The number itself is a mathematical sort of ratio of how long you can stay out with the cream versus how long you can stay out without it.

JEANNE BLAKE: Help me understand. I put 15 all over my body. What does it mean in terms of my risk to the sun?

DR. TSAO: It means that you can stay out in theory maybe 15 hours under a certain dose of sun, whereas in the past you could only stay out one hour and then you would reach a certain amount of redness or burn.

JEANNE BLAKE: Okay, but how much protection does a 15 give us?

DR. TSAO: It blocks probably more than 90 percent of the rays.

JEANNE BLAKE: Okay.

DR. TSAO: So a 30 is not twice as protective as 15 in terms of percentage of the ultraviolet that is blocked. It's only a few percentage points, but a 30 is more protection than a 15. So I think the original message was that before these higher SPF sunscreens were available, that you used to strive to reach an SPF of 15. I usually recommend an SPF 30. Now they have SPFs of 50, and maybe 50+ in the future, and I'm not sure, I haven't seen the necessary studies or data that suggests that that's that much more protective.

JEANNE BLAKE: Or maybe it's for marketing.

DR. TSAO: It may be.

JEANNE BLAKE: Okay, well, I did talk with a woman who is careful to use SPF 30. So let's hear what she had to say.

[VIDEO CLIP]

RESPONDENT: As I get older and am more educated about the results of too much sun, I'm definitely concerned about skin cancer and I wear at least 30.

JEANNE BLAKE: Do you wish now as a teenager that you had taken better care of yourself?

RESPONDENT: I definitely do, because, you know, every time I look down at my skin I'm noticing different non-cancerous moles or sunspots and I know that's definitely a result of the way I treated my skin when I was younger.

JEANNE BLAKE: Do you go to the doctor to have any moles checked?

RESPONDENT: Definitely do. Every year I have them checked. Skin cancer is definitely something I'm very concerned about, and I have a few actually that I've had biopsied on my body.

JEANNE BLAKE: So why is that you don't avoid the sun altogether?

RESPONDENT: I'm addicted to the sun. It makes me feel good. I think everything in moderation. If you're protecting yourself with sunscreen, then it couldn't hurt to have a little sun.

[END CLIP]

JEANNE BLAKE: That woman was right on target until the last sentence.

DR. TSAO: I think one of the problems is defining what is moderation. It means different things for different people. For some, they may think two hours in the noonday sun is not very much at all and it's okay to be there. I would say it's probably more accurate to phrase it as, you don't have to completely be indoors but that a little bit of sun is not necessarily harmful or necessarily going to guarantee a skin cancer. What we recommend, typically, is if you enjoy outdoor activities, do it early in the day or do it late in the day, where the sun's a little lower and where the intensity of the sun is not as great. So I think you don't have to necessarily be locked indoors, but you should, again, be sun wise about it.

JEANNE BLAKE: Right. I mean, I think most people ... that may be why some people just ignore it because ... especially here in the Northeast. We've had such a terrible spring and such a long winter that people are going to be so happy to get outside, and that denial that we talked about earlier just kicks into overdrive and they go at the sun with abandon.

DR. TSAO: Yes, and also I think there have been studies that show people who use sunscreen stay out probably longer than they should. So in some ways they see it as a free ticket to be out as long as they need to be or want to be.

JEANNE BLAKE: I think that's true.

DR. TSAO: I think that's wrong, too.

JEANNE BLAKE: Okay, well, at the risk of boring the viewers, because the tips are everywhere. We see them. But I always like to go just a little bit deeper, so I've asked Dave to put the tips up at the bottom of the screen. Some of them we've talked about already.

DR. TSAO: Okay.

JEANNE BLAKE: So if we could just ... and we'll fly through some of those, because we want to get to some of the important information you have about new research, which, to me, is fascinating. But let's take Do not sunbathe. I mean really, honestly, do you go along with the Skin Cancer Foundation where they say just don't lie in the sun, just don't do it?

DR. TSAO: I do. I think it's great. I agree with that absolutely. I think that is unnecessary exposure.

JEANNE BLAKE: Okay. Avoid unnecessary sun between 10 a.m. and 4 p.m. That's a long stretch of the day. It used to be 10 to 2 and now it's 10 to 4. So avoid unnecessary, so you agree with that?

DR. TSAO: I agree with that. Unnecessary includes activities such as sunbathing, I think. I think if you want to do recreational activities, again, do it before those hours or after those hours, and I think it won't be as harmful.

JEANNE BLAKE: Or protect yourself well during those hours.

DR. TSAO: Right.

JEANNE BLAKE: Okay, we've covered the next one but we'll show it anyway. Use SPF 15 or higher. You've been very clear about that. Wear protective clothing. You've been clear about that. Avoid tanning devices. I know people that give themselves a special treat during the wintertime and they feel so much better and they find it relaxing to go to a tanning salon.

DR. TSAO: I think there is accumulating evidence now that tanning salons and tanning beds are associated with an increased risk for skin cancer. There have been several good studies recently that show that you can get anywhere from two to four-fold increased risk for certainly non-melanoma skin cancers with tanning beds. It used to be said that it's UVA or sort of safe types of ultraviolet light, but we really don't understand, again, the mechanism of how these radiative processes cause cancer, so I don't know that we can say it's absolutely safe.

JEANNE BLAKE: So even if someone has no family history, you think that a tanning salon is a potential risk for a skin cancer as serious as melanoma?

DR. TSAO: I think it is. I think they need to in some ways at least be more informative, take on some of the educational components, and really sort of try to bring more information to the clients using the tanning beds.

JEANNE BLAKE: I have to say that I have had occasion, rarely in my life – once or twice – to use a tanning bed, and it doesn't make sense to me to do that. It just feels wrong.

DR. TSAO: It is kind of odd that you're in an enclosed room trying to simulate something that sort of happens naturally. I think also now, with the development of newer topical agents that can simulate a tan, that those are better than they were 10 years ago where they tended to be orange, so that people will hopefully move away from using ultraviolet radiation to get a tan, to using really sort of these more artificial tanners.

JEANNE BLAKE: Because people do like the way that they look and feel when they have some color. Doctor, you mentioned that there is some interesting progress being made in research against skin cancer. Where do you find the greatest hope?

DR. TSAO: Well, I think there are several areas that are really sort of developing at a very rapid pace at this point in terms of research. I'm very excited about these, and I think these are areas you'll see, you know, evolve over the next couple of years. Traditionally, we've used what we can see to identify high-risk individuals, some of them you've mentioned. Fair skin, ask them how much sun they've had, do they have a lot of moles, do they have a lot of freckles. Unfortunately, that may not be accurate enough, because there's still a lot of individuals who have a lot of freckles and who get a decent amount of sun. So right now what we have to do is to encourage this fairly large population to undergo all the sort of sun-protective behaviors, which is fairly smart, but to also undergo surveillance, which can be very labor intensive for the healthcare group.

JEANNE BLAKE: You mean going to visit the doctor?

DR. TSAO: Absolutely. Going to visit the doctors, getting moles checked regularly. It's never a single visit, because it's over a lifetime, so a patient is typically with you for years and years and years. So there are some developments in identifying these individuals through genetic means. For instance, there are certainly inherited conditions that predispose individuals to develop melanoma. Now, it's not used in a sort of widespread level, because those patients are very, very rare. It's probably much less

than one percent of the general population, but individuals who carry mutations in certain genes may have anywhere from a 50 to 70 percent chance of developing melanoma.

JEANNE BLAKE: And you think that we'll be able to know who those individuals are within how ...

DR. TSAO: I think we'll know more genes that contribute, so eventually we may get a panel of so the genes that we're looking at that may define in a more accurate way the ones with likelihood to develop skin cancer or melanoma.

JEANNE BLAKE: But that confuses me a little bit, because as we know in breast cancer, if you have the gene, the specific gene for breast cancer, your likelihood of developing breast cancer is very high, but you can still develop breast cancer if you don't have the gene. So I'm wondering, will those people then who test and identify themselves as not being at higher risk continue to expose themselves to unhealthy sun rays?

DR. TSAO: That's a problem, the false sense of security if they undergo certain genetic tests and come back negative. That's why I think to have one or two genes doesn't quite make sense. You have to have a panel of things you're looking at in order to get a true sense of the risk.

JEANNE BLAKE: Okay, we've got time for one more exciting breakthrough that's on the horizon. And then we're going to have to say goodbye.

DR. TSAO: I think one of the most exciting areas now is looking at the tumor, looking at the pattern of gene expression in the tumor and trying to correlate that with outcome. Because if you can identify the high-risk individuals, then you may target certain prevention, and then if you can identify the really high-risk tumors that are going to metastasize, you might be able to intervene with some kind of active therapy.

JEANNE BLAKE: It's the same thing as with breast cancer. You can identify the most aggressive breast cancer tumors.

DR. TSAO: Absolutely. Absolutely. So I think what's happening in all sort of cancer genetics is that a similar sort of approach now is being adopted. And with melanoma, the pattern of genes that are expressed may tell you which ones have spread, may tell you which ones have spread where, and may

potentially offer insight into ways you can vaccinate or really tweak the immune system to try to help you treat the tumor that has spread.

JEANNE BLAKE: Okay. Terrific. And just on a final note, how often should someone see their dermatologist to have their body examined for a scary mole?

DR. TSAO: Well, if you think you have a mole that's changing or fits one of those typical pictures ...

JEANNE BLAKE: Go right away.

DR. TSAO: I would go right away.

JEANNE BLAKE: But how often just for a screening?

DR. TSAO: I would say if you don't have a family history, never had a skin cancer, and you don't have very many moles, even if you're fair-skinned, an annual check with your primary care doctor is probably appropriate.

JEANNE BLAKE: Okay.

DR. TSAO: If you have a lot of moles and you've had family history of melanoma, I would say once or twice a year is probably a good idea to see a dermatologist.

JEANNE BLAKE: Okay, well, good. I'm going in 10 days to see mine.

DR. TSAO: Good.

JEANNE BLAKE: I'm glad to be able to say that to you so I don't feel guilty about it. Doctor, thank you for sharing your expertise. I appreciate it.

DR. TSAO: Thank you for having me here.

JEANNE BLAKE: Hopefully it will raise awareness and some people will be more careful as we go into the summer.

DR. TSAO: I think they will.

JEANNE BLAKE: And we'd like to thank you for joining us on this edition of *About Health* TV. I'm Jeanne Blake. I'll see you next time.

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