Yale CANCER CENTER answers

WNPR Connecticut Public Radio

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Protecting Against Skin Cancer

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Welcome to Yale Cancer Center Answers with Dr. Ed Chu and Dr. Francine Foss, I am Bruce Barber. Dr. Chu is Deputy Director and Chief of Medical Oncology at Yale Cancer Center and Dr. Foss is a Professor of Medical Oncology and Dermatology specializing in the treatment of lymphomas. If you would like to join the conversation, you can contact the doctors directly. The address is canceranswers@yale.edu and the phone number is 1888-234-4YCC. This evening I will be sitting in for Ed and Francine and I am pleased to welcome Dr. David Leffell to the program. Dr. Leffell is the David Paige Smith Professor of Dermatology and Surgery and Deputy Dean for Clinical Affairs at Yale School of Medicine.

Barber In all your years of doing this, what is it that you have found is the best way to deliver the message as to how serious skin cancer is?

Leffell I think we have learned that scaring people doesn't work. When you are trying to communicate a public health message, if it's framed in a negative, we all shut down. It's important to try to discuss skin cancer and the causes of skin cancer, which are largely preventable, in a way that listeners can latch on to and do something about. I think we have been successful in communicating that most skin cancers are caused by ultraviolet radiation from the sun, and as a result I think most people know that sun protection is important. The elements of a sun protection program are probably not as obvious or easily understood. In addition, any step in preventative medicine that you are going to take involves effort, and if you are going to take that effort there has to be a sense that the payoff is there. For patient's that have had a lot of skin cancers, or for patient's that have had skin cancers at a young age, they get it. They don't want to see me, they don't want to see my nurses, they want to stay away from dermatologists and the best way to do that is to actively engage in a sun protection program. Another area that I think has been difficult to communicate is the types of skin cancers, because not all skin cancers are the same. There are really two basic categories, the first is melanoma and melanoma is a cancer of the pigment producing cells in the bottom layer of the top layer, or epidermis, of the skin. Melanoma is relatively well known to people because, unfortunately, in some cases it can be quite serious and the cancer, if not effectively treated, can metastasize, spread, and lead to death. However, it should be remembered that the majority of melanomas when diagnosed early are largely treatable and those are the cases you don't really hear about. Importantly, early diagnosis is your best defense against melanoma and we can talk about various points and key elements of diagnosis later on. The other category of skin cancers, which by far is the more common type of skin cancer, is non-melanoma skin cancer. Included in this category are two types of skin cancers that listeners may be familiar with, basal cell cancer and squamous cell cancer. Basal cell cancer occurs in about a 3:1 ratio compared to squamous cell cancer. Both of them are caused by ultraviolet radiation from the sun that causes mutations in the cells of the skin that lead to uncontrolled growth. Basal cell cancer occurs on sun exposed areas, primarily the face, backs of the hand, and the V of the chest in women, and the good news is that basal cell cancer does not spread in the blood stream by and large and is easily treated in a variety of methods. Squamous cell cancer is

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similarly a skin cancer that occurs on sun exposed areas and is easily treated with a variety of methods. However, a small percentage of squamous cell cancer can metastasize, in other words spread to other parts of the body and cause death in that fashion, but it's a very small percentage. It's interesting because when patients come in for a consultation and have a basal cell cancer, they say, 'That's a good one right doc? That's a good one to have?' Well of course none of them are great to have, but if you have to have a skin cancer, basal cell cancer and even squamous cell cancer, which for the most part are easily treated, are conditions that we can effectively manage. When you get a diagnosis of skin cancer, it becomes a jumping off point for your physician, your nurse, and others to start to educate you about sun protection.

Barber Full disclosure, I am a patient of yours, and I think in part it was from producing this show and having heard you speak about the dangers of skin cancer and the preventative measures that are possible that I became aware. Before we go into how you diagnose and treat skin cancer, let's back up just a second and go to the two things that I have heard you talk about at one point or another, and one of those things was powerful enough for me to go in and start getting my annual checkup every year, the full body. I have heard you talk a lot about protection, wearing the right kind of clothes and covering up, and that's probably very hard for you to get your patients to do as much as you would like to see, but that's obviously very important, and the second part are those annual screenings. Speak for a little bit about each one of those and their importance.

Leffell Science is a great thing, in fact when it comes to disease we know much-much more now then we ever did before, but we still don't know as much as we need to know, and that's speaking generally. When it comes to skin cancer, we not only understand what the environmental agent is that causes skin cancer, namely ultraviolet radiation from the sun, but we also understand some of the genetic steps that take place leading to the multiplication of these abnormal cells, and why is this important, I am actually in fact answering your question, though it seem like I am not. When we understand what causes a disease and when there are steps we can take to interfere with the cause of the disease, we are in a much stronger position to practice healthy habits. We are all eager to eat well and not be overweight and ensure that we exercise and do a whole range of things that science has shown can be beneficial at a population level, so when it comes to skin cancer you want a program of sun protection, you don't want to go crawl under a rock or hide in the basement, you want to enjoy life, you want to be active and that usually is best executed outdoors. So what's the strategy to prevent skin cancer while at the same time enjoying life? I think it is possible to pursue the following steps; number one, you want to avoid the sun during peak hours between ten and four, that doesn't mean live in a basement between 10 and 4, it means avoid the sun during those peak hours, stay in the shade and certainly don't actively schedule your kids' ball games at high noon, only shootouts should take place at high noon. In addition, you want to wear sun protective clothing; you want to wear a brimmed hat, not a baseball cap, as attractive as they may be, you want to wear a brimmed hat. This is a problem, golfers obviously, and tennis players,

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people that are in active sports and are concerned about how they look, at least for men, it's a challenge, but patients that have had skin cancer would rather wear a hat then see me and are able to put into action that aspect of sun protection. Remember, the majority of skin cancers are on the head and neck, so a brimmed hat that protects the ears as well is very important. There is now sun protective clothing you can wear that looks like normal clothing, it doesn't look like a prison uniform as they used to, and they have a tight weave that is chemically treated and they actually are UPF rated, meaning ultraviolet protective factor rated, so that you can get a sense of how much protection you are getting; and of course you want to use sunscreen. Sunscreen has evolved dramatically over the years. I am a consultant to Coppertone and work with their scientists on the development of sunscreen products and ways to make them more attractive to individuals because we know that using sunscreen is a nuisance. There are now continuous spray products that go on more easily and leave your hands un-sticky, but the bottom line is that there is a huge amount of benefit provided by sunscreen because regardless of the chemical reaction that takes place, it does prevent the damaging ultraviolet rays from injuring the skin.

Barber One of the best innovations in our time, I believe, is the spray-on sunscreen, and I say this as the father of four.

Leffell It is great when you have little children, you just line them up and spray them as they run out the door, but all kidding aside, I think that there will be newer technologies coming down the pike. People wonder if there will ever be a pill that you can take that will provide the type of protection and it's certainly theoretically possible. We can talk later about various innovations in terms of sun protection, but the reality is that avoiding the sun during peak hours, wearing sun protective clothing including a brimmed hat, and the regular use of sunscreen and reapplying it every couple of hours while you are active outdoors, are all key components of an important sun protection program.

Barber When I was a kid we didn't know as much, and I had blistering sunburns as a child and it reached a point where I said, you know, I should be concerned about that and that's when I decided to go in for the full body exam. Talk a little about the benefits of doing that regularly.

Leffell As I mentioned, melanoma, when diagnosed early, is most treatable. Similarly basal cell cancer and squamous cell cancer when diagnosed promptly are easily treated by a variety of means. The byword here is early, and the way you can maximize the chance of having an early diagnosis of skin cancer is to first know your own skin, and secondly, have regular full body skin exams by a dermatologist or someone else trained in skin lesions. The important point is that the skin exam should be thorough, it should involve looking through the scalp, for those fortunate enough to have hair, and otherwise a straightforward exam suffices. It should involve looking in every nook and cranny all the way down to the soles and between the toes. And why is this important? Well while

it is true that the majority of non-melanoma skin cancer occurs on sun exposed areas, melanoma can occur anywhere, it can occur in the groin, it can occur on the palm, it can occur behind the ear. Very often when I describe the strategy for an annual skin exam, usually to the spouse of a patient that is in the room, the spouse will say, "Well, I know I don't have anything, I don't need to go to a dermatologist,' and while it's great to be that confident, in reality, it's probably a more helpful strategy to have an annual full body skin exam. More importantly than that, since so many of the lesions that are diagnosed are actually identified first by the patient, I think you have to follow the rule of know your skin, so on a regular basis, whether it's every month or every couple of months, or quarterly, look over your skin and have your spouse or partner look over the areas that you cant see, because you are going to number one, identify things when they first change and the only way to know that you are identifying them as they change is to know what the baseline was.

We talk about the warning signs of melanoma the A, B, C, Ds, but in reality my consideration is that the most important factor is the patients own sense. People have a sixth sense about their own skin and invariably patients will come in and say, 'I just don't like this thing, there is something weird about it, and we teach our residents, our dermatologists in training, that when a patient is concerned about a lesion, even if it looks to us like nothing especially concerning, it needs to be biopsied. You need to have respect for the patient's own sense of their own body. Remember, a dermatologist only sees the patient for a few minutes at whatever intervals, whereas you, the patient, live with your skin everyday. At some point, you may get overly cautious, but then that's the job of the dermatologist to educate about what you should be concerned about and what is normal. I should mention, I have a book that I wrote in 2000 called *Total Skin*, which was really intended to be a home reference guide for skin that would hopefully be reliable, reputable, and comprehensive and I recently was able to post it on the web and it is there free of charge for any one that wants to go to totalskinmd.com. You can also reach it through the Yale site, but the point I am making is that there are full color plates there that can give an idea of what certain things look like, and while they are not intended to be comprehensive because everyone has different skin and things can look different, the same thing can look different in different people, but it at least gives you some sense of what to look for.

Barber That is terrific, and that's exactly what brought me to you the first time, I heard you talking about that exact same thing and I thought, well I feel something, and then I went in and it was nothing. So I think that's an important thing too.

Leffell Right.

Barber Let's talk some more about your book when we come back, and about if a diagnosis of cancer is made what steps are available to a patient at that point. We are speaking with Dr. David Leffell, the author of the aforementioned *Total Skin.* We are going to take a short break, we will be right back.

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Medical Minute *Breast cancer is the most common cancer in women. In Connecticut alone approximately 3000 women will be diagnosed with breast cancer this year and nearly 200,000 nationwide, but there is new hope for these women. In 2010, more women are learning to live with this disease than ever before. Women should schedule a baseline mammogram beginning at age 40 or earlier if they have risk factors associated with the disease. With screening, early detection and a healthier lifestyle breast cancer can be defeated. Clinical trials are currently underway at federally designated comprehensive cancer centers such as Yale Cancer Center to make innovative new treatments available to patients. A potential breakthrough in treating chemotherapy resistant breast cancer is now being studied at Yale combining BSI-101, a PARP inhibitor with the chemotherapy drug irinotecan. This has been a medical minute brought to you as a public service by Yale Cancer Center. More information is available at yalecancercenter.org. You are listening to the WNPR Health Forum on the Connecticut Public Broadcasting network.*

Barber Welcome back to Yale Cancer Center Answers. I am Bruce Barber, and I am very pleased to be joined today by Dr. David Leffell, David Paige Smith Professor of Dermatology and Surgery and Deputy Dean for Clinical Affairs at Yale School of Medicine. We are talking about skin cancer. Before the break we talked about the fact that you released your book online for free, *Total Skin*.

Leffell That's right. The book came out in 2000 and I decided that if I felt it was important enough to write in the first place, it was important enough to make more broadly available and it's now posted on the web and there is completely free access. I don't know if it can be downloaded into a Kindle, I haven't looked that far, but it's at totalskinmd.com and it's also accessible through the dermatology website at yale.edu.

Barber And it will help you get a handle on maybe what you are seeing on your body.

Leffell It will, the book covers many things other than skin cancer, but it's written in a way that's intended to be engaging and with a lot of extraneous information provided to lubricate the drier material that might otherwise turn people off.

Barber Let me ask this, you are obviously doing some pretty amazing stuff at Yale. There are always interesting things going on. Before we get into a more broad discussion of how you diagnose and treat skin cancer, is there any one thing right now that's got you really excited about what's going on in the field?

Leffell In 1996, Allen Bale, along with a group of us, discovered the skin cancer gene and since that time a lot of groups around the world have continued to tease apart the mechanics of the genetics of skin cancer and we are gearing up to do a research study into a molecule that we think may play a

role in inhibiting skin cancer. It's a phase 1 study, which involves a small number of people and is intended to look at the safety of the particular compound, but this is just an example of how far we have come. When I was in medical school in the very early 1980s, skin cancer was really not as common as it is now. When I was in residency 25 years ago, the treatments available were relatively straightforward and simple. Over the past 25 years, a surgical approach called the Mohs technique has really become the gold standard for many skin cancers. That's an office procedure where the skin cancer is removed by a dermatologist layer by layer and then reconstruction or plastic surgery is done if necessary, but it is still surgery. The Holy Grail here, since we understand the core genetic mechanisms, is to develop a treatment that you can use topically or orally that interferes with the mistake the body has made, or the mistake that ultraviolet radiation has induced, so that the skin can start behaving better. Having said that, over the past 10 to 15 years, there has been an innovative treatment developed that has been generally available for treating skin cancer. It's actually a topical medication that was originally approved for treating warts, genital warts in fact, and it is a chemical or a compound that stimulates the immune system of the skin to release compounds that are anticancer in nature. The compound, the medication, is called imiquimod, and its brand name is Aldara. Fortunately, a generic version has just been released and it's applied to the skin on a regular basis depending on the regimen recommended by your doctor. It stimulates an immune reaction. The skin does get red, inflamed, and irritated but that's a good sign that means that the compound, the medication, is working and in so doing it actually will destroy cancer cells. Now, it's not intended for every type of skin cancer but in properly selected cases we have been quite successful at avoiding surgery, which as I said earlier, is of course our ultimate goal.

Barber Let's walk through the procedure by which someone would discover they have skin cancer, and then how you would decide to treat that patient. I would imagine most people end up in your office having been referred by a primary care physician?

Leffell Actually, we at the dermatologic surgery program see patient's only by physician referral, and the majority of physicians that refer to us are dermatologists who have made a diagnosis of skin cancer in their patient's. The majority of the skin cancers are treated by the dermatologist using a variety of straightforward surgical means that are performed in the office with just local anesthetic. However, for certain specific cases, the Mohs technique, named after Frederic Mohs who developed it at the University of Wisconsin, is considered to be advantageous for the patient. There are other approaches to skin cancer, again depending on the type of the skin, its location, the health of the patient, a whole range of factors go into the decision making process. Radiation therapy is used in some cases for treating skin cancer. The important thing is to be guided by a dermatologist, by your primary care physician who increasingly are also diagnosing skin cancer, and to not assume when it comes to treatment that one size fits all. The patients that we see of

course have been referred for consultation because of the complexity or the challenge of the case, or for the Mohs procedure.

Barber The thing I hear a lot about in listening to this show when Ed and Francine are here is the multidisciplinary approach that's being used at Yale, talk about that a little bit.

Leffell For example, when we are treating a complex skin cancer of the scalp, we will remove it with the Mohs technique and then our plastic surgery colleagues may be involved in reconstructing the area, and then our radiation therapy colleagues may be involved in providing postoperative radiation therapy if the cancer is considered aggressive or extensive. In addition, the teamwork concept really starts at the level of the doctor interacting with the nurses, the residents, the fellows, and all of the people that come together to provide the highest quality, and most sophisticated care.

Barber What is your advice to someone who has just gotten this diagnosis? I mean you see this everyday, you are probably pretty comfortable with the range of treatment options, but it's got to be very difficult for somebody to hear the words 'skin cancer'.

Leffell It is, and I think that we as treating physicians don't take anything for granted and don't make any assumptions about what people know or don't know. What we assume is that it's a diagnosis that is very worrisome and in some cases extremely worrisome to people so we spend time discussing it. It's not uncommon to have the patient come in with a lesion on their arm and they will tell us that they are convinced it's skin cancer and the reason they know is because they went on the web and they have diagnosed it. I would recommend that you not use the web for diagnosis, use it to learn about things as we talked about earlier, but make sure of the source of your information. Having said that, aside from doing your own judicious reading, rely on and have confidence in your dermatologist or your primary care doctor. The type of skin cancer whether it's a basal cell cancer or squamous cell cancer, is important. If it is melanoma, it's a bit of a different story because there are other factors that go into the evaluation and treatment and at Yale, we have an interdisciplinary melanoma program, a tumor board, where cases are presented and recommendations are made about treatment. Remember that I said the majority of melanomas are diagnosed very early and are easily and readily treatable by simple surgical procedures, but there are criteria that one monitors in melanoma that can have implications for a different approach. For example, an evaluation of the lymph nodes, whether it is felt that the melanoma is advanced and it's necessary to consider enrollment in a clinical trial, all of these are factors that come into play and I think it's important to find a physician who is willing to sit down with you and talk to you about the diagnosis because there is, as I have conveyed in this conversation, such a wide range of seriousness or potential seriousness from basal cell cancer, all the way to melanoma.

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Barber In the minute or so that we have left, let's go back over the two key things we started off with, the annual skin exam, and just protection. My last question is at what age should somebody start doing those annual skin exams? Is it the kind of thing where if you haven't had one it's never to late to start, or is there a specific age that you think of?

Leffell That's a great opportunity to talk about the risk factors for skin cancer. People that have fair skin that burn easily, for example that have blonde, red, or strawberry hair and blue, gray, or green eyes, people that have had blistering sunburn at some point in the past, and people that have a family history of melanoma, all of these are individuals that are at increased risk for skin cancer in general. It's not a bad idea for people that fit that profile to have a full skin exam when they become adults. If there is a strong family history of melanoma, then the pediatrician will be guiding you about the proper evaluation of children. But in general, full body skin examinations should start when you are an adult and I think should be based on your family history and the extent to which those exams are helping educate you about what to look for.

Barber That is great, and these have been such great points that you have made. I am so appreciative of you taking the time and I hope somebody else is trigged in the way I was to go see their dermatologist and do a great job taking care of their skin. Dr. David Leffell is the David Paige Smith Professor of Dermatology and Surgery and Deputy Dean for Clinical Affairs at Yale School of Medicine.

If you have questions or would like to share your comments, visit yalecancercenter.org where you can also subscribe to our podcast and find written transcripts of past programs. I am Bruce Barber and you are listening to the WNPR Health Forum on the Connecticut Public Broadcasting Network.