Multidisciplinary Care of Melanoma (Skin Cancer)

No one knows your skin better than you do and you will be the first to notice any changes happening to it. Melanoma is one of the most common cancers in the US. Our Melanoma panel led by David Stanley is talking to Facial Plastic & Reconstructive Surgeon and Otolaryngologist Dr. Jeffrey Moyer of University of Michigan Health System, about the common risk factors, latest treatments available and the importance of plastic surgery in the treatment of melanoma. Join us to learn about the causes and early signs of a disease that affects the largest organ of your body.

Full Transcript:

Shweta Mishra – Good evening and welcome to CureTalks. I am Shweta Mishra, your host, joining you from India; and this evening on CureTalks' 115th episode, we are discussing multidisciplinary care of melanoma, most commonly called skin cancer. No one knows their skin better than you do, and you will be the first one to notice any changes occurring there. Melanoma is a type of cancer that develops from melanocytes that are the pigment…, pigment-containing cells in our body. Melanomas typically occur in the skin but may rarely occur in mouth, intestines, or eyes. According to the National Institute of Health, melanoma is amongst the most common US cancers with nearly one million people already living with the disease and more than 76,000 new cases and 10,000 deaths expected in 2016. So, it is imperative to be educated about the causes and early signs of the disease that affects the largest organ of our body.

Shweta Mishra – On this launch show on melanoma, we are having facial plastic and reconstructive surgeon and otolaryngologist, Dr. Jeffrey Moyer of University of Michigan Health System to talk about the common risk factors and the latest treatments available for melanoma. Dr. Moyer will also discuss the importance of plastic surgery in the treatment of melanoma with our melanoma panel led by David Stanley. Dr. Moyer earned his medical degree with highest honors in 1997 at the University of North Carolina-Chapel Hill. In 2003, he joined the University of Michigan's Cancer Center where he performs reconstructive surgery for head and neck cancer. His research focuses on immunological therapy of head and neck cancer. Dr. Moyer is board certified by the American Board of Otolaryngology and the American Board of Facial Plastic, and Reconstructive Surgery in addition to being an active member of The American Academy of Facial Plastic and Reconstructive Surgeon, The American Academy of Otolaryngology, Head, and Neck Surgery; The American College of Surgeons; The American Association for Cancer Research; and The American Head and Neck Society. I welcome you to the show, Dr. Moyer. Its a pleasure to have you talk to us today.

Dr. Jeffrey Moyer – Yeah. Thanks for having me.

Shweta Mishra – Great! My co-host for today's show… Yeah. My co-host for today's show is David L. Stanley. David is a Flint, Michigan-based writer, teacher, voice-over actor, and audiobook narrator. His book, Melanoma; It Started with a Freckle, was published in 2016 and was rated no. 1 as a new release in dermatology. More details on his book are available on his Facebook page at melanomabook. Stanley writes regularly for DadsRoundtable.com and speaks regularly on cancer advocacy issues. His freelance work has appeared in Bridge.com, JTA, Moment, ROAD, and Velo magazines; and his work on the Flint Water Crisis was featured on NPR's Here and Now. His voice-over work can be heard on Myvoiceovermasters.com.

Shweta Mishra – We also have with us on our panel Patient #1, T.J. Sharpe, from South Jersey. T.J. Sharpe is a stage IV melanoma patient who shares his journey through cancer in the Patient #1 blog on www.philly.com back in in August 2012 with melanoma tumors in multiple organs. Since then, he has had six surgeries and four immunotherapy treatments over two different clinical trials. His is a story about life with serious illness and mental and emotional hurdles a patient must clear. T.J. writes about challenges a cancer patient comes across while overcoming melanoma's long odds and deadly consequences. He also shares

the latest melanoma and cancer research breakthroughs and advocacy initiatives to help others detect or educate themselves on cancer.

Shweta Mishra – I welcome you to the show, David and T.J., and I extend a very warm welcome to all our listeners; and before we begin, I would like to remind that we will be discussing questions sent in via email at the end of the show. So, you can send your questions to priya@trialx.com; and if you want to ask a question live, please press 1 on your keypads and we will bring you live on air to ask them or you can also post your questions on CureTalks' website as you listen to the show. So, with this, I will hand it over to you, David. Please, the floor is yours.

David L. Stanley – Thank you very much, Shweta. T.J., thanks for joining us. Its good to hear from you.

T.J. – Pleasure to be here. Thank you.

David L. Stanley – Yeah and Dr. Moyer, appreciate you taking an hour out of your day to share some expertise and maybe some good news or two about what's going on right now in melanoma treatment.

Dr. Jeffrey Moyer – Thanks very much for having me.

David L. Stanley – The pleasure is all our's and by the way, just as a disclaimer here, Dr. Moyer is the surgeon who operated on me, although the relationship is professional. Its not like, you know, we are hanging out during trial times together or anything. So, I just want to put that out there right in the front; and I have been at Dr. Moyer's office on many occasions and one thing I noticed, Dr. Moyer, is you don't just do cancer surgery. You are also very involved in lot of cosmetic surgery and it really struck me when I was in the office for the first time, the difference in your patient load and I wonder if you could talk about that because I know you are really strong in cancer treatment areas, but the idea of working in cosmetic dermatology, cosmetic surgery is also really interesting, that juxtaposition.

Dr. Jeffrey Moyer – Yeah. I mean in many ways at least from the standpoint of surgery, these similarities are quite, you know, there are quite a lot of similarities and so when you are really trying to reconstruct someone after cancer surgery is a lot of the same principles that you follow even when you do any cosmetic surgery. I think that one of the most important things though that both of those practices really need to keep in mind though is that oncology is always the most important thing. That means making sure the tumor is completely removed and so one of the things I always teach our residents and fellows here is that oncology really trumps the cosmetics and so that…, making sure that cancer is fully removed and effectively removed is by far the most important thing.

David L. Stanley – Is that… The cancer surgery that you are involved in right now, is that…, is that forming a major portion of your practice these days?

Dr. Jeffrey Moyer – I would say probably about half my practice is aesthetic surgery and about the other half is reconstructive surgery. As you say, its kind of evenly mixed.

David L. Stanley – Okay and now, I had left a copy of my book with you and in it I wrote a lot about the psychological trauma because, you know, facial surgery is scary as all hell and it has the possibility for some disfigurement and the psychological impact on me was a lot stronger than any of the real medical impact because I was stage II and in relatively good shape from an oncological standpoint. How do you… and you are a pretty stand-up guy. You are always straightforward and, you know, I was really struck by that. How do you help your patients deal with all the psychological effects that come along with head and neck surgery for cancer?

Dr. Jeffrey Moyer – Well, I think you are really very apropo about pointing out what a lot of people face; and in many ways, the psychology of the diagnosis of the melanoma cancer is very, very powerful and…, and I think its all about patients though that they have had a melanoma diagnosis. I think many people feel that its

been a comeback and so that is really something that you really have to work with patients and I think its very, very difficult because, I mean, none of us have a crystal ball, right? I mean, you just have to be very, very supportive of patients; and one of the nice things that we have in 2016 is very, very effective treatments for people who wind up developing metastatic disease or disease that spreads outside of the original melanoma and out to other parts of the body and these have become very, very effective. So, I think making sure that people understand there are lots of treatments available and making sure that they are constantly following themselves for evidence of recurrence are all kind of that process.

David L. Stanley – Great! T.J., you had mentioned to me before the show that you are very curious about immunotherapies and I think this is something that…, that Dr. Moyer is working up to. Would you like to ask Dr. Moyer what you were talking about in terms of immunotherapy as the next wave of melanoma treatment?

T.J. – Sure, David. Thanks. There's a couple things. I have been on immunotherapies in both of my trials and certainly have embraced melanoma being at the forefront of kind of this new wave of treatment. A couple questions and the first one is, if…, if I were a patient, well, I am a patient, but if I were a newly diagnosed melanoma patient, how do I go about selecting the right immunotherapy or would even more…, a little more detail the right series or combinations of immunotherapies.

Jeffrey Moyer – That's an area that I have a great deal of expertise, in the sense that I am not a medical oncologist. I will tell you that at least for the listeners I think there is a real important distinction as we talk about melanoma. Without question, I call it the best treatment, where immunotherapy and other type of therapies come into use really for that patient population who has systemic disease for patients whose melanoma has spread outside of, say, you know, a spot on their arm or a spot on their face and so, its really the biggest advances have occurred in treating those types of patients, those patients with systemic disease. So, to really kind of answer your question about trying to decide about immunotherapy, it really circles back to really having a very good workup initially. So, it has to do with that first surgical treatment versus an effective surgical treatment and age of patient. That means there is evidence of disease to other parts of the body.

T.J. – Dr. Moyer, I am…, you are cutting in and out, so I hope I am not interrupting you. Can you hear me?

Dr. Jeffrey Moyer – Yeah, I can hear you well.

T.J. – Okay, good. Well, I am old enough because I am 58. I remember that media madness around interferon back in 1980, cover of Time magazine, cover of News Week magazine and I remember those first kind of misguided gene therapy test back in 1990 that actually had horrible patient outcomes, so really strong promise here but not such great results. Do you feel and while its clear you are pretty bullish on immunotherapy, what exactly, first of all, explain to our listeners, what immunotherapy is and then why are you bullish on immunotherapy?

Dr. Jeffrey Moyer – Well, you know, I guess I'll answer the question of why I think its getting so much attention is it really is the first thing that we have actually seen for the treatment of melanoma that really has moved the need on survival.

T.J. – Okay.

Dr. Jeffrey Moyer – So, when you are talking about, you know, distant metastatic melanoma when the survival were so poor that there are patients now, where melanoma diagnosis with distant disease is almost like a chronic disease. I have a number of patients in my practice that if they had had this diagnosis 15 years ago, they would not still be with us, but because of the advent of these newer immunotherapeutic regimens, that actually changed things dramatically and so immunotherapy is really a broad term that applies to a lot of different approaches to wetting up the immune system to fight off cancer. In fact, immunotherapy is a very, very old concept that has been around since the turn of the…, the actually 20th century, back in the early 1900s and its only been fairly recently where we have seen immunotherapy has really kind of found its own

place in oncological treatment and the newest immunotherapies are really acting as pathway where they are putting…, most of the therapy drugs are taking the brakes off of the immune system. There is always a constant play in the body between having too much immunity or too little immunity and all these medications are taking brakes off of the immune response so that they can be more effective at destroying cancer cells.

T.J. – Now, When I was doing research for my book, one of the things that couple different people in dermatology mentioned to me is that the melanoma is very, very good at camouflaging itself under normal circumstance, cancerous melanocytes from the body's own immune system. What are we doing differently that's finally allowing our body's immune system to take action against those?

Dr. Jeffrey Moyer – I don't think we really… I don't think there is a great answer to that question. You know, the concept of using immunotherapy as a treatment against tumors is obviously, in other tumors this therapy is being used against other solid-type tumors like lung cancer, colon cancer, but the results have been kind of mixed in those other cancers. So, it probably has something to do that's unique with melanoma. It has been a tumor that has been bit more responsive to immunotherapeutic regimens, even, as you pointed out, interferon. Interferon though very toxic treatment actually was effective in a small subgroup of patients. Unfortunately, we didn't really see those effects in other types of tumors when it was tried.

T.J. – Got it.

David L. Stanley – Yeah. Now, you had mentioned earlier when you were talking to T.J. about the importance of a really good workup in the staging process and so on. T.J., now when you were diagnosed the first time, did you have a sentinel node biopsy?

T.J. – The only biopsy I had on my lymph nodes was actually during the recession, so they did take the…, the lymph nodes out of my arm but not as a separate procedure.

David L. Stanley – Okay. I was again in doing some research, I found a paper by Dr. Tanis about the development of sentinel node biopsies and it seems, Dr. Moyer, that that has become a pretty useful diagnostic tool for that initial workup. Can you explain what exactly a sentinel node biopsy is and when its indicated and how your findings from that biopsy might affect what kind of surgical procedures your patients would have?

Dr. Jeffrey Moyer – Sure. Absolutely. So, really, it has to do with the concept that melanoma wants to spread and the likelihood of melanoma spreading to other parts of the body is a function of how big the melanoma is in the skin and we call that the Breslow depth. Another important diagnostic studies is that biopsy that tells us how deep that melanoma is, and we know from studies that had been done that the likelihood of melanoma spreading increases as the depth of that melanoma increases and we also know that at a certain point**,** there is not really significant risk of the melanoma spreading. So, there is a cutoff in terms of when we think about how likelihood it is for the melanoma to spread and so that cutoff that is, its not arbitrary, that has been looked at over large bits of data that **(AUDIO BREAK)** sampling someone's lymph nodes and to see whether or not there is evidence of melanoma in those lymph nodes. The controversy I think around sentinel node has to do with whether or not its really a prognostic test that is just used to determine whether or not there is a higher likelihood of people having distant disease and in some ways predicting survival or is it actually therapeutic treatment, meaning that if you do…, if you do remove the lymph nodes in a draining basin, like if you had in his axilla, whether or not that is actually beneficial rather than just prognostic and so that's where things are right now. I think that most **(AUDIO BREAK)** biopsy, if the node is positive followed by a subsequent **(AUDIO BREAK)** you better have the lymph nodes removed.

David L. Stanley – T.J., did you have…, did you have the lymph nodes removed in any of…, I mean, you had…, I mean we are going to give you a chance in a little bit to share little bit of your personal story and I know its pretty… You have a really significant surgical history, I am sad to say, but did you have any of your lymph nodes…? As you said, there was a biopsy as part of the procedure, did you have significant lymph nodes removed during any of those surgeries you went through?

T.J. – Yes. Yes and its actually on my first melanoma, the stage IV diagnosis was technically a re-diagnosis of melanoma 12 years prior. The first surgery, when I was 25, did remove the area around the mole that…, that tested positive for melanoma and they took all the lymph nodes out of my.., my one under arm where it likely would have spread if it were to metastasize. So, I had all those removed, they did it very quick, for the lack of a better term for it. They…, they…, they quickly tested it for metastases, there was none and in the followup test there was no metastases as well. So, I was staged at IB kind of after the surgery and kind of kept…, kept going on after that, thinking that I had removed it and as you'll…, as you'll hear in a few minutes that was still inside me 12 years later.

David L. Stanley – And that actually…, that kind of brings us back to a question I will have to ask Dr. Moyer as far as surgical choices. Dr. Moyer, when I had mine done and I think this was like 2006-2007, you…, you and the rest of the team had…, you had then decided right from the outset to do a square procedure, we…, and we'd heard a lot up until then about Mohs surgery and I…, I hear of message forwards and support groups and what not, there is lot of confusion between…, between the two and where they are indicated. Could you speak to that for a couple minutes, please?

Dr. Jeffrey Moyer – Sure. Its… I think the best way to think about it while talking and kind of painting in broad strokes is that…

David L. Stanley – Exactly what I want to hear.

Dr. Jeffrey Moyer – Yeah. So, Mohs surgery in most instances is really designed for patients with basal cell carcinoma, squamous cell carcinoma and very **(AUDIO BREAK)** using frozen sections to look at whether or not the cancer is all completely removed. **(AUDIO BREAK)** melanoma using permanent sections because its hard to look at melanoma under frozens.

David L. Stanley – Okay.

Dr. Jeffrey Moyer – There are certain types of melanomas where there are some dermatological surgeons doing Mohs surgery for certain types of melanomas. As a general rule, those people are doing permanent sections like without frozen sections, which is what Mohs is.

David L. Stanley – Right. One of the things I remember Dr. Matt Ludgate was…, was the fellow who was doing…, doing the biopsies for…, prior to my square procedure and it was usually a day or two after Dr. Ludgate did the biopsies before they could get results back because he stressed that there were certain kinds of cytological things that had to be done to those cells before you could get a really good melanoma diagnosis of whether it was pre…, precancerous…, precancerous cells. Does that…, does that ring true still today?

Dr. Jeffrey Moyer – It does and the type of melanoma that you had is, it typically arises in chronically sun-damaged skin and…

David L. Stanley – That was me. Yeah.

Dr. Jeffrey Moyer – …and what is different about these kind of…, type of melanomas that arise in the head, neck that are in chronically sun-damaged skin is very often there is subclinical extension and so that's where that square technique comes in to try to map out the margins. That's a bit different in other types of melanoma that are found on the trunk and extremities where a thoroughly standard margin is obtained, usually 1 to 2 cm depending upon where the location is. So, there isn't as much of the concern about the sub **(AUDIO BREAK)** melanoma is totally removed. So, that…, there is a little bit of a distinction between that and melanoma that happen in other parts of the body.

David L. Stanley – That…, that's really interesting to me because we are seeing this big spike in melanoma and we're seeing this big correlation between the skin cancer and a canning machines, but are we seeing a

similar kind of spike in…, in melanoma that is not related to over exposure to the sun?

Dr. Jeffrey Moyer – Yet I think that most people would agree that most melanomas associated with the sun exposure, you know I think trying to flush it all out is complicated because it requires large, you know, population to study, but I think most people would agree that its sun related and that it probably has to do a little bit more with acute sun injury, rather than chronicity, meaning that people who had a really bad sunburn tend to be probably at greater…, at the greatest risk, though there certainly is a component to chronic…, you know, chronic sun injury as well.

David L. Stanley – Okay. T.J., you had a couple questions that we had talked about in terms of detection. Would you like to transpose with Dr. Moyer right now?

T.J. – Yes. This is partially for my knowledge but also partially for the audience to kind of hear some of the things that I've heard before. The first is the frequency with which to go to the dermatologist and then following up to that in between visits, what do I get…, what could I do to keep myself…, to keep vigilant to look for things on my skin that will keep me aware of anything that might be a problem?

Dr. Jeffrey Moyer – Yes. Its a…, its an excellent question and…, and a lot of it depends upon, you know, what you tell one person could be different from what you would tell another person. For someone like yourself or anybody that had a history of melanoma, they are certainly at greater risk of developing another one and so having frequent skill checks is really, really important. Then, self-exams are critically important but also having someone else examine you in areas you can't really see because you can't really see the popping of your scalp, you can't see your back very easily, the back of your legs and so having those full body skin check is really important in addition…, in addition to doing your own skin checks and also feeling the lymph nodes near the area where you have the original melanoma diagnosis. I think frequency of checks with a practitioner, with a physician is always a bit…, a bit sketchy because you don't really know, but I think most people would say that are at higher risk to check every six months for a.., for a period of time and then how long you do every six months really depends on the patient.

David L. Stanley – Yeah. If I can jump in here, my local dermatologist is fellow Walt Barkey and Walt in the foreword, he wrote foreword to my book, and one of the things Walt insists upon or not insist…, really urges is that when you go in for your skin check with him, that you bring in your partner or a close friend and he will actually because there's such a shortage of front line dermatologists in most communities now, he will actually walk you and your partner through the exam and obviously it will not go into…, he is not going to teach them how to diagnose melanoma, but he is going to say, okay, this is…, you know, this is something that you don't need to be concerned about, you do need to be concerned about this and he will get…, he will get you involved in kind of partnership with you and your partner so that you don't have to be worry about constant access to a dermatologist, which in the large communities can be very difficult. Yeah. Here in Tennessee County in Michigan, we have five board-certified dermatologists for a population of a half a million people.

Dr. Jeffrey Moyer – Yeah, I think that's really, really a great thing to have people do. You teach…, I mean and a lot of these lesions are found by patients or patient's family members. So, you are absolutely right to actually have someone in that exam room kind of with you.

David L. Stanley – Did you hear about the swimmer just the other day who someone noticed an interesting-looking lesion on him and got in touch with him and said, you know, "That's a weird-looking thing on you. You better have a look at it." He has melanoma.

Dr. Jeffrey Moyer – You are right. Who was that?

David L. Stanley – It just…, it just broke like two to three days ago. I saw it on ESPN. Some…, some world class swimmer and I also had a… I have a friend who was at a barbecue and she was standing there and a guy walked up to her and said, "I don't really mean to be rude," he said, "but I am…, I am a derm resident

and you have something on the back of your knee that needs to be examined" and it turns out that she also had melanoma on the…, on the back of her leg.

Dr. Jeffrey Moyer – Interesting! Yeah, I just googled, just googled it, Mack Horton.

David L. Stanley – Yeah. That's him. Right. That's the name. Exactly!

Dr. Jeffrey Moyer – Australian Olympic medalist.

David L. Stanley – Yeah and in Australia, of course, they call it their national disease. When you move all of those fair-skinned British people 150 years ago with no melanin in their skin for protection down to Australia, wow, you are going to have a little bit of melanoma, I suspect, and other skin cancers as well. T.J., you had some questions about other kinds of prevention tips too. You might not know, Dr. Moyer is a runner and a triathlete. Could you speak to that, you and T.J., about prevention for people who are out there a lot in the…, in the sunshine?

T.J. – Sure. I would not call myself a triathlete, but I was able to do my first triathlon in the spring and living in South…, living in South Florida makes training interesting when you are, you know, dually competing for…, trying to get, you know, faster times and keep yourself safe in the sun during all those training…, training runs in springs especially. Other than that, I think everybody knows what's sunscreen. You know, the first question might be, you know, how…., really how often, how much and then following up with that, you know, one thing that I…, I don't say struggled with, but one thing that has been a constant adjustment for me is literally on those…, on those long sunny days where, like you mentioned earlier, its not so much the…, the constant sun exposure, but…, but one day when you are out there and you forget your sunscreen or you are not wearing a shirt or something, give us some…, some good preventative tips to keep that sunburn from getting…, from happening on a, you know, on a nice… for a spring day here.

Dr. Jeffrey Moyer – Yeah. That is a great question. You know, I struggle with the same issues myself because if you are out and in particular if you are racing, I mean, you know…, you know if you run a big… big race and, you know, sometimes, you know, you are worried about your time and just staying on the bike and just trying to finish it rather than making sure you slather yourself with sunscreen. I do think that there has been a concerted effort by a lot of the race organizers to really make sure that the…, there's…, these are…, you know, sun screen is readily available throughout the race course. I know when I did several of my Iron man's, you know, not only…, at stations, not only do you get water and…, and refuel with…, with food, but you get…, also you get sunscreen and so I think, a passive…, you know, passively recognizing that this is as important as food on these races I think is important. There are certainly clothing that you can wear that is sun blocking. You know, as a general law, you know, not the kind of pile-on for athletes, but I mean, you know, they were particularly bad about it because of the type of clothes we wear because you are kind of, you are swimming, then you are biking, then you are running and a lot of the clothes are not very protective of the sun, but I think if we…, in many ways we will be well served by making sure we are better protected certainly during training…, training rides because when you are out there for long, long periods of time, but as you pointed out, I mean these races you can get burned. So, you know, you can't really say don't race but sure enough, making sure that you make…, keep yourself slathered with sunscreen and making sure you keep yourself covered, there is not a lot to do, you know. There are some advantages to…, to, you know, racing in climates like Michigan where at least when you are racing, you know, riding in the fall, you would be more bundled up and you will have yourself covered, but if you are in a hot environment like South Florida, its difficult.

David L. Stanley – I remember years ago, I raced bicycles for a long time and for six or seven of those years, I was doing it essentially for a living. So, I was on a bike for, you know, 20 or so hours, maybe more, a week in training and lycra is not very sun protective. There is no sun protection factor in likelihood at all. We one year had jerseys that had a white bee in the middle of them and the rest of it was a pale orange and if you didn't wear a t-shirt under your jersey, you would come back with a sunburned V on your back where the sun had just seeped right through with a big wide V on your jersey and so you could tell everybody who

rode for Fuji because with our shirts off, we were pretty clearly labeled as Fuji riders. So, I…, I don't know if this is really a little bit out of your area of medical expertise, but what's your take on the sun protection factors that some clothing lines are putting out there for outdoors, you know, like fishermen and for cyclists and runners as well? Have you seen much data about their effectiveness?

Dr. Jeffrey Moyer – Yeah. Its a great…, you know, I have…, I have done a little bit of research on the SPF of various sunscreens and…, and…, and when you really look at what they promise is not really what they deliver. So, if I extrapolate what I know about kind of the standard sun protection, which is sunscreen to clothing, I would suspect that its probably pretty similar, but at some level I think any sunblock is good sunblock. I don't know, you know, when you read those labels and they say SPF X, Y, or Z, I don't know if you can really put much stock in that. There is no way to know.

David L. Stanley – Yeah. Consumer report says can't. You know, they…, they send that stuff out to several different labs and this was I think about a year or so ago. T.J., you were really up on that because so much of your readership of your…, of your blog kind of depends on that sort of information. I don't know if you can comment on that or not, but do you remember seeing that article about how wildly off base so many of those SPF numbers were?

T.J. – I did see that and that's the… That's part of the…, the reason my…, my question is in there is that, you know, relying on, you know, SPF 100 is, you know, promotes itself as…, as you know, as a…, as a much stronger thing than the SPF 30, really isn't that much better and isn't really, you know, your sole line of defense. I have seen the article and, you know, unfortunately I don't have the…, the science behind it other than to…, to…, to share with listeners and…, and especially friends and family here. There is…, its a…, its a multi-layer approach literally and figuratively that, you know, sunscreen is a good first step, but its not something you should rely on. Its certainly not the only thing that will prevent…, not the only thing you can do to prevent a sunburn. So, you know, I urge, you know my family or friends and people that I discuss this with is that, you know, there's going to be a couple of things, put on some sunscreen, wear a hat, wear the long sleeves shirts, stay out of the sun when its middle of the day, you know the kind of basics that I have heard throughout the last couple years, you know.

David L. Stanley – I…, I want to give a shout out here to a couple of organizations and I don't know if you have done any work with them, Dr. Moyer. One of them is Outrun the Sun. Its a melanoma awareness organization out of Indianapolis. They stage a 5 and a 10k every year, and I was down there for a book signing over the summer and they stage their event in the evening.

Dr. Jeffrey Moyer – That's great!

David L. Stanley – One of the big deal about…, about why they do it and they are also the folks who gave away, I don't know how many hundreds of gallons of sunscreen at the entry to the Indy 500, both the IndyCar race and the NASCAR race. Every gate had essentially unlimited free sunscreen for all of those folks who were going to be just baking inside that, you know, inside that race track for four, five, six hours or more on the course of a car race stay and there is also the New England Melanoma Foundation, I think I am getting the name a little wrong. They are providing free sunscreen at selected ski areas throughout New England and there is also a group in Colorado that's doing the same thing at select ski areas in Colorado as well where when we get to the bottom, you know, typically a ski area, there might be, you know, there are some Kleenexes there and trail maps. Well, now there is also going to be sunscreen because of, you know, 7,000 feet in the rocky mountains, that's a huge present danger. So, there is a lot of awareness out there finally about how to take.., how to frontline protection so to speak.

David L. Stanley – I want to ask.. Dr. Moyer, I want to ask you one more question and then I believe we have, looks like, six or eight questions that have been emailed in and, T.J., I want to make sure he has a chance to update his story and get your response to that too. Now, I have done a little bit of evolutionary biology. My academic background is in zoology and so we see this evidence that shows that cancer cells, just like every living thing, respond to selective pressures…, evolutionary pressures, just like penicillin during

World War II. Twenty years later, we see penicillin, methicillin resistance. So, if we assume for an instant that immunotherapy continues to evolve as a really effective treatment, two-part question. Do you think you as a surgeon, you have front line cases of surgery as we get better dealing with immunotherapy and the second question is, if indeed those melanocytes are under selective pressure to survive that immunotherapy, might we see the rise of a really even more devastating version of melanoma? That's kind of, you know, that's…, that's… you know, science fiction perhaps, but what do you think is going to happen with immunotherapy and surgery and your practice?

Dr. Jeffrey Moyer – Well, I think…, again I think probably it won't dramatically change essentially frontline treatment, which is surgery, because…

David L. Stanley – Okay.

Dr. Jeffrey Moyer – …you are really not going to be putting people on immunotherapy to prevent the development of melanoma. I mean we hadn't really gotten into…, we hadn't really got into it much in the discussion, but a lot of these immunotherapeutic medications have some significant side effects. They work wonders and they are great medications, but like any medication, there are some serious side effects. So, its real hard to see a situation and certainly in the near term where you would kind of prophylactically put somebody on an immunotherapeutic regimen to prevent the development of melanoma. So, really what you are still looking at is someone who develops melanoma and then being sure that you diagnose them very early, treat them effectively and then if they are at risk of developing metastasis or distant disease, then institute immunotherapy. So, I think that would probably be more a paradigm going forward than, you know, kind of supplanting surgery.

David L. Stanley – Okay and…, and the second part of that, like I said, sounds a little bit like science fiction in the development of superbugs, but we didn't necessarily see that coming with penicillin resistance either. Can you foresee an instance where we might have essentially a melanoma supercell that might result as…, because they had survived these repeated attacks of immunotherapy?

Dr. Jeffrey Moyer – You know, certainly there…, there is a concern in an individual, not as much in a population but in an individual that is being treated with an immunotherapeutic regimen or any type of small molecule therapy or even chemotherapy that you select out the most resistant cells and I think that is a concern with immunotherapy as well. So, you know, still we are in our infancy in really understanding how people respond to these various treatment regimens. I think the hope is that if you can combine these medications…, if you can combine different types of immunotherapy, combine different types of immunotherapy say with other kind of frontline medications treating melanoma such as BRAF inhibitors or something like that or maybe some other types of medications we don't really know about yet, that I think as you look at whole population, I don't worry about, you know, if you treat, you know, patients, you know, and one part of the country that is going to make melanoma different than another part of the country, but you always worry about that in individual patients.

David L. Stanley – Now, T.J., you had several courses of immunotherapy. Correct?

T.J. – That is correct.

David L. Stanley – And so, talk about that for a few minutes and what brought…, you know, what brought you to immunotherapy? What kind of side effects, if any, did you have and…, and I am really interested in the psychological effects that too because I have been through a lot of surgery and I was fortunate that it essentially worked the first time. You have an entirely different take on…, on melanoma. So, I am really curious about the psychological aspect of a patient who has been through surgery and then is told that they are going to need immunotherapy?

T.J. – When I was…, when I was first re-diagnosed, my…, my wife and I just had our second child and I was in the hospital four weeks there and the doctor who is not a melanoma specialist, is a general oncologist, did

not know much about clinical research, certainly hadn't been up to date with what's going on in the…, the immunotherapy world, two medical reports that is the best options for you, chemotherapy wise you are not eligible for this part of the therapy. So, you know, okay, good luck, you know, and he made a comment that, you know, he would be surprised if I was here in two years and that sort of set off my…, okay, that's…, that's not going to be acceptable. You know, my…, my…, my…, my son is a month old at this point and, you know, I had read enough and I know enough about clinical trials and about melanoma to…, to kind of give myself similar…, you know, the standard of care chemo had, you know, pretty dismal five-year survival rates and I was… Other than melanoma, I was relatively healthy. You know, I was a younger guy and, you know, had…, you know, had been keeping myself in…, in pretty decent shape, you know. Very little in my medical history suggested that I couldn't…, you know, I.., I could…, I could withstand a little bit to be able to hopefully get a reaction as we started looking into immunotherapy. So, we…, we looked…, we looked for different second opinions and we found…, we found one of the…, one of the world class melanoma researchers and he kind of gave me two options, you know. I said, what would you do if you were 37 and you had a young family and…, and you want to give yourself the best chance for a durable, long-term response and he kind of gave me a choice of one of the anti-PD-1 inhibitors or another one which is an immunotherapy with pill sort of shut in the middle to what's called tumor-infiltrating lymphocytes where tumor is, you know, taken out of you and then, you know, basically to find the best T cells that, you know, attack the melanoma and blow them up to about 60 billion and re-infuse, a very personalized medicine and really expensive personalized medicine that's, as far as we know, we are the first one to try these…, these two immunotherapies with, you know, sort of one, you know, better than the other. So, you know, my…, my response to that was, well, hey, that's great. No one's ever failed this before. So…

David L. Stanley – Well, exactly! You are Patient #1. That explains the broad title.

T.J. – Well, guys, I didn't know that…, that there is a little background behind that. I have my really younger brother to thank for…, for that one. Yeah, and that kind of, you know, my mindset and cancer patients have a real idea of emotions they attach to a diagnosis and, you know, I am very fortunate that I had a lot of support, family and friends. I had people that were able to help me do research that pointed me in the right direction and also had a background and really, you know, little bit some of the… might remember a picture, but, you know, I said give me the best chance for a good response and if that didn't work, then, you know, that wasn't going to be great, but I knew I had kind of…, kind of given myself…, put myself in the position to have a response that…, that might last and I was extremely fortunate, you know, had I come along, you know, as Dr. Moyer said, a little while ago, you know, 10 years or 15 years before, my options were…, were much more limited, even five years before.

David L. Stanley – So, I got into it knowing that my body, you know, even though I had been in the hospital for 16 days at first and then I had lost weight and lost strength, you know, I had that part of me that said, okay, this is going to give my body a chance to fight the cancer itself and…, you know, I failed that first trial. We continued to look at immunotherapy as options and, you know, the…, the anti-PD-1 drugs were sort of the plan B all along. We were able to find one here at the local cancer center right in Fort Lauderdale, much smaller one than the nationally recognized one that I was at earlier, but they had…, they had the drug and I will never forget the conversation I had with the pharmacist who had done most of the research at that point, you know, it was very early on. It was the…, the second trial for…, for this particular PD-1 that they'd…, they'd put out there and he just said, "No, we don't really know much about it, but I would do everything. If it were me, I would do everything possible to keep your new…, new system functioning at a high level because your immune system is what is ultimately going to be melanoma," and that sort of really stuck in my mind as, this is how…, this is how I need to adjust my lifestyle so that those little pieces inside me are able to do their thing as best they possibly can and, you know, that's interesting because when I was at again my…, my issue, I was stage II and this was 10 years ago. Dr. Moyer was real clear about this and so was Dr. Ludgate and Dr. Johnson who was the head of the…, who runs the clinic at Memory Service at, at the Multidisciplinary Melanoma Clinic, shameless plug for some very good people. A friend of mine just had melanoma surgery there last week, and he came home just raving about how terrific everybody was. His is on his forehead. He is afraid of looking little bit like a freak and we had to talk him down a couple of different times about that, but you are…, you are essentially, T.J., the perfect patient, would you…, would you agree with that, Dr. Moyer? He

is doing all the right stuff, correct?

Dr. Jeffrey Moyer – I would agree, I mean and, you know, and I think one of the things that T.J. really points out I think is critically important is his this idea about clinical trials. I think its really, really important that people who when they do get a diagnosis that they do investigate the options they have for clinical trials because there is the cutting edge treatments for the treatment of…, of…, of not only melanoma but all cancers and, I mean, really the…, one of the greatest advantages of going to a place that has a multidisciplinary approach is that you can avail yourself to all those different types of options and it may not be a clinical trial where you are at. There may be some place you need to go to, but at least you…, you know about them and make those options available to patients.

David L. Stanley – I have a couple questions that we have had emailed in since…, since we got you on the phone, Dr. Moyer. So, I am going to run these right past you. Somebody said, I have already had melanoma. What should I do to prevent a recurrence?

Dr. Jeffrey Moyer – Well, I think, you know, that by far, the most important thing is to be very, very cautious about sun exposure. I think there is some sense out there by people that they say, "Well, its my exposure that happened, you know, 20 years ago or 15 years ago. Its actually…, it is cumulative. So, its really important that you continue to take very, very good sun precautions and then as we have talked about earlier, I mean, you know, clearly surveillance is really, really important in those types of patients. Once you have a diagnosis, your chances of getting another one is rare and so its really, really important that you do your own self-exams as well as be sure that you go to a certified or an, you know, an experienced physician that looks at skin. I mean, that could be a dermatologist, that could be a family doctor who just does a lot of skin, but you want someone that's knowledgeable in those types of…, of screening and…, and, you know, probably 20 or 30 years ago, one of the key things that people talked about and they…, we still talk about is the ABCDE of melanoma and that's kind of a nice mnemonic for people to kind of think about when they have a mole if its something that you need to be worried out and the A stands for asymmetry, B stands for border that are irregular, C is color when its gets darker or it gets kind of variegated and kind of difference in color within a mole, when the diameter gets bigger, that's the D, and then its the changes. So, just a simple mnemonic can help people identify areas on their body that may be of concern and these are actually pretty good. They have actually stood the test of time, the ABCDEs of melanoma screening.

David L. Stanley – And to another shameless plug, I am certain that T.J., I haven't gone through all of his blog. I have read through a fair amount of this, getting ready to do the show. I am reasonably certain he has the photos of ABCDEF on his blog; if he doesn't, he probably will pretty soon and I also have that in…, in my book in one of the appendices as well. Do you…, do you have that on your…, on your blog right now? Is that still up there?

T.J. – You know what, it was…, it was an early post and I have been doing this now for almost three years and I…, I forget that, you know, when I write something that it needs to be reiterated. So, I.., I try to do it kind of every year approaching Memorial Day, you know, especially in the Philadelphia area, that's where the readers are concentrated, throw that up there and its…, its…, its the…, you know, its a reminder to get checked and its a reminder to check yourself out. So, usually I'll link to it and I don't know if it's on the blog or not as permanent, its up there, a couple different places.

David L. Stanley – All right and, Dr. Moyer, I have one here about scarring and that certainly is something that you can speak to with a lot of expertise. I…, I showed my surgical scar to a dermatologist at the Outrun the Sun 5K and his nurse. They were there to do the…, to do the run and they were dumbfounded at how minimal the scar was despite being nearly 8 inches long as it wrapped around the side of my head. So, what do you do to minimize scarring? You are really good at this, so here, take it away.

Dr. Jeffrey Moyer – I think, you know, a lot of it has to do with how large an area needs to be removed. There are a lot of things that are just kind of inherent to a given patient. I mean, frankly, some patients, their skin just does better with scarring and we have all seen types of patients where their scar has faded away

real nice. You may see…, have a friend or something and you'd be surprised that they haven't had anything done. Certainly, there are certain techniques that are really important to try to make sure that you can minimize scar. There are ways of clothing, ways of rotating tissue around and then its just really being meticulous with following patients until you get a result that you are happy with. It is not uncommon that we need to go back and do scar revision surgeries on patients. So, when you are really trying to close an area that's fairly large, there is a lot of tension on a wound and those cause poor scars and so you go back and do scar revision. You can do it in a way that you can camouflage scars. You can make scar just look better and there are all little tricks. There are ways, like you mentioned, you can do skin sanding, we call that dermabrasion that kind of helps scars blend in. So, its…, you know, you want someone that really is with you for a long haul. I mean, these are not just kind of a one and done type of thing, not only from the standpoint, if you… Certainly, if you are the type…, if you are the doctor that is following someone from the oncological standpoint, but if you are just the…, but you can stop the surgeon. I mean you really are following these patients to make sure that they heal the way that you would expect.

David L. Stanley – I've got…, we've got about 4-1/2 minutes left and I have got two more questions here and these are closely related. What can I do to reduce my risks of developing melanoma? I think we spoke to that actually about continuing to practice good sun hygiene. This one…, here we go. I have been diagnosed with skin cancer. Its a big issue for a lot of people that I talk to. What is the risk of my family members developing melanoma? In other words, is there a genetic component to this or is it primarily sun related?

Dr. Jeffrey Moyer – It… Yeah, there's certainly a genetic component, in the sense that you do see a track within families. Now how much of that is skin type, so there's no question that people who are more fair skinned, you know, blonde, blue eyed, red haired, you know, are…, are at greater risk and now how much of that is just because their…, their skin is just much more sensitive to sun damage and how much of this is just maybe the more inherently sensitive developing melanoma. Its kinda unclear, so trying to flush out how much of it is skin type, how much of it is genetic is difficult, but I think almost everyone agreed that it does track within families and so that if you do have a family member, a first-degree relative that has a skin cancer, whether that's basal cell, squamous cell, or melanoma, that they should be much more diligent about checking their skin and having sun precautions.

David L. Stanley – T.J., we are coming down to the wire here. We just have a couple minutes left. Anything you would like to share related to your blog, something like that we can…, one last question for Dr. Moyer?

Shweta Mishra – Oh, I think T.J. dropped out. He… Yeah. He just dropped out.

David L. Stanley – Oh, okay.

Shweta Mishra – So…

David L. Stanley – All right.

Shweta Mishra – Yeah. I…, I guess we're anyways reaching the end of the scheduled time. So, I think he…, he is not going to dial in again.

David L. Stanley – Okay.

Shweta Mishra – So, yeah. So, yeah, thank you so much, Dr. Moyer, for your time. Thank you so much for, you know, taking time out from your busy schedule to be with us today and educate us on such an important issue that is already affecting about one million Americans and, David, thank you so much for co-hosting the show with me so articulatively and brilliantly; and, T.J., if you are listening, thank you so much for your time and inspiring us and our audience with your story and your very insightful questions. It was a very informative discussion indeed, and I hope it will serve as a useful resource for many out there looking out for authentic information on melanoma; and, audience, I thank you for your support and we look forward to having you all join us for our next CureTalk on 31st October at 6 p.m. eastern time where we will be discussing post

transplant outcomes in high-risk multiple myeloma patients. For more information on this show and other upcoming shows, visit our website, www.curetalks.com; and I would love to hear your feedback about CureTalk on melanoma and I would welcome your suggestions on the topic that you feel should be covered here on this portal. Please email your suggestion on shweta@trialx.com. The link for today's show will be sent in via email to all the participants, and the transcript will be made available within few days; and before you go, please don't forget to check out the details of the America Walks study. America Walks is a mobile app-based research study which aims to determine walking behavior of individuals in the United States and the last date to enroll in this study is 31st October, 2016. For more details about this study, please visit trialx.com/americawalksstudy. So, until the next show, thank you everyone and bye, bye.