

Presented by:



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**Question 1: I have an early stage non-invasive bladder cancer getting treated with BCG. What are the risks of getting my hair professionally colored at a salon?**

**Dr. Stamatakis:** Yes. There have been studies that have looked at the personal use of hair dyes, and there is no known association for having low exposure to personal hair dyes and the development of bladder cancer or increasing your risk of developing bladder tumor recurrences in somebody who is already diagnosed, like this person asking the question. The reality is, it's an exposure issue. Getting these hair dyes at a very infrequent amount of time, like you would as someone who gets their hair dyed every so often, you're just not going to get that exposure to the carcinogens that you otherwise would get if you were a hairdresser and you're dealing with multiple clients throughout the day and high amounts of these hair dyes. In addition, the more modern hair dyes tend to have less of these known carcinogens, although frankly the companies aren't very forthcoming with what they often will put in these, so it's hard to really hold these companies accountable for that. The bottom line is that I think it is safe for people to continue to use hair dyes personally.

**Question 2: Can you just give a quick highlight about the urinalysis criteria for a UTI that should have antibiotic drug treatment?**

**Dr. Stamatakis:** That's a great question. When you get a urinalysis there are multiple data points that the provider will get, and a lot of them are beyond the scope of this discussion, but I'll talk about the ones that are important for a urinary tract infection. What we often will look at is something called leukocyte esterase, which is a compound that's produced by white blood cells. White blood cells are the cells of our immune system. If you have an infection within the urinary tract, your immune system will often mount a response, and you'll often see white blood cells within the urine and leukocyte esterase is a compound

that's easily testable by these urine dipsticks. If that's positive, then that means that there is some sort of inflammatory process within the urine that certainly heightens the provider's suspicion of having a urinary tract infection.

Even more specific is something called nitrites. Nitrites are a byproduct produced by some bacteria that are often within the urinary tract. Not all bacteria that cause urinary tract infections will produce nitrites, but if you have positive nitrites and you have positive leukocyte esterase, almost always that's going to be due to a urinary tract infection. One part of it is looking at the dipstick. That's where basically, and you may have seen your providers do this, where you urinate into a cup and they stick this little stick in and it gives you a reading of those particular factors. What should then happen is that the urine should be sent for microscopic analysis where a laboratory technician will actually look under the microscope and look at the quality of the urine. Do they see white blood cells? But do they actually see bacteria? The presence of bacteria certainly heightens your risk of having an underlying urinary tract infection.

**Stephanie:** Okay. That's a great answer, because I think when people get their cytology report from the doctor, it will be helpful for them to at least recognize maybe some of those terms that you used, because I think it's very confusing to be able to understand what exactly constitutes a real risk and a real infection in this case versus if they should go back and have a deeper look for something else that might be causing the same hematuria.

**Dr. Stamatakis:** Correct.

**Question 3: Many people that don't smoke talk about if smoking cessation is the only modifiable risk factor to reduce your risk of developing bladder cancer or recurrence of bladder cancer, is there anything a never smoker could do to reduce their risk?**

**Dr. Stamatakis:** That is a great question. I don't think there is an absolute answer for this. I think as a medical community we are certainly encouraging our patients to live healthy lives through exercise and eating a well-balanced diet, but there's nothing specific that I know of for bladder cancer that patients can do to prevent developing bladder cancer other than not really being in one of those occupations that we discussed. Obviously, if you're involved in industries that result in high exposure to certain chemicals or perhaps in industries where you have a high exposure to radiation, then obviously you're going to be at increased risk and perhaps you may have a choice whether you decide to work in that industry or not, so that would be something you could potentially modify. But in general, people often ask is there a supplement that I can take or is there something that I can avoid in my diet, and the true answer is that we don't know that. There's a lot of stuff out there on the internet, as well as in the mainstream media about all kinds of things in our diet that could potentially have links to cancer.

I recently watched something on Netflix talking about how eating meat-based diets as opposed to vegetarian-based diets certainly leads to higher increased rates of cancer. Well, again, a lot of this data has not really been flushed out yet for us to be able to make recommendations. What I encourage my patients to do is to exercise on a regular basis and to eat a well-balanced diet. I also try to encourage people not to eat processed foods as much as possible, but, again, there's no direct evidence to be able to support that it will improve your risk of developing bladder cancer.

**Question 4:** Is it true with bladder cancer, as you mentioned earlier, that blood in the urine can come and go and it might go away, but the cancer is still there. Would there be any particular reason why that would happen?

**Dr. Stamatakis:** Sure. It's absolutely true, and I recently had a patient that I'm taking care of currently who has approximately a 9 cm tumor in his bladder. This thing is about 4 inches in length. He never had any symptoms. No blood in the urine. He did have some very mild voiding symptoms over the past couple of months that really brought him to presentation, but never had blood in the urine. I think that I bring him up because there are patients that don't really fit the mold that the textbooks tell us. Also, there are patients who will have a single episode of bleeding and then the tumor never bleeds again. I think it could be due to a variety of things. Why do tumors bleed in the first place? Well, they're hyper vascular, meaning they have to have a blood supply, so there are factors that these tumors secrete that encourage increased blood vessels to develop in that area. Those blood vessels that are involved with tumors tend to be much weaker than the blood vessels that we were born with, so it doesn't take much for one of those little blood vessels to pop open, and the next thing you know you've got blood in your urine. But that doesn't always happen.

Or perhaps sometimes what we'll see is that patients will go on a long bike ride or have some sort of period of increased activity, and that's when they see blood in their urine, and then the patients will just attribute it to the fact that, oh, I was doing something strenuous and I must have done something that led to the bleeding in the urine. Which, perhaps, may have led to some increased disturbance with the tumor that led to the bleeding, but, again, that shouldn't encourage a patient from saying, well, we can just put it off. It was due to something else. I think that there's really no hard and fast rule, but I do think that these things can happen more frequently in patients who take blood thinners, but I've seen significant bleeding from tiny tumors and, again, like this patient that I've told you, I've also seen patients who've had very large bladder tumors that have never bled. You see the gamut. Again, unfortunately, patients don't often follow the rules that our textbooks guide us in.

**Stephanie:** This has been incredibly informative and has been a really wonderful program to really cover all of the different aspects. It reminds me of two of my favorite sayings, when you don't know, go to the pro, and when in doubt, check it out. When you have these concerns, when you have these warning signs, go to your healthcare provider and if it doesn't go away with the first round of antibiotics or there's no evidence that you do have an infection, go seek the care of a urologist and remind that to your friends and family. I know many of you have signed up and have said that you have bladder cancer, but, again, you can spread the word with people that don't have bladder cancer and help raise awareness.

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