

In some of the research, did you get a chance to look at any of the risk factors about the secondhand smoke?

Dr. Richard Matulewicz: I mean, that's a great question and I think that is actually critical because this happens all the time. We see people in the office, they're very upset to be told that tobacco may have played a role in all of this and they've never smoked, but they do report that they grew up in a household with heavy smokers, they currently live with heavy smokers. So I think that this is a most certainly a risk factor. The issue is that it's very difficult to kind of quantify and really nail down just how much secondhand smoke is really inhaled and how much is really exposed to certain people. So the difficulty in studying it has probably led to it being not as well appreciated. But I think just understanding that exposure to smoke, breathing this in will eventually get these carcinogens into the urine that it most certainly has a similar mechanism, a similar means of causing cancer.

And this is why I think it is so important to really have these public policies and these very important population level ways to address smoking because smoking does not only harm the smoker, it definitely does harm the folks around them, especially younger people in households that are smoking or in small confined spaces, airplanes, restaurants, all these things that we've actually made good strides on in preventing smoking from being more of a public health problem.

What about the whole issue about vaping in public spaces obviously, but what about somebody who does this at home? I have relatives that have quit smoking because they've switched to vaping. Not that that's the best thing to do, but they're vaping around their family members, including small children. So what about that impact?

Dr. Marc Bjurlin: Yeah. That's a spot on question that you asked, and the reason being is because we are actually studying exactly that forthcoming. We are looking at the urine of patients who vape, and then we're actually looking at the urine of people who get second hand exposure to the vape aerosols, because right now we don't know. We truly don't know what the exposure is going to be, and how much are those compounds that we described are processed and end up in the urine. But that is forthcoming grant funded work that we have looking at the levels of those different carcinogens in conventional

smokers versus e-cigarette users versus secondhand smokers versus never exposed smokers, and we'll have some idea of how much of that is actually transported into the bladder and what are those levels, but great question, and truly it's not yet known.

Can you talk a little bit about maybe how each attempt is an opportunity as well to kind of learn about something about your triggers, about ways that you were successful, even for a short period of time? What do you recommend saying to somebody who is attempting to quit and then feels a sense of failure if they don't succeed the first time?

Dr. Richard Matulewicz: I think that's another great point in that each quit opportunity is both an opportunity to quit, obviously, and also an opportunity to learn about what is really preventing the patient from quitting. And I think this is one of those things that you really need to get to the root of and why that behavioral therapy and counseling, and really being able to have the sounding board and being able to talk to someone. It really is an integral component of all of this because if it's that there are other issues at play that are really preventing you from quitting because of a social life or a certain job or something along those lines, obviously some of those issues are very difficult to control on the outside, but it's really about optimizing each attempt as much as possible with the things you can control.

And I think that's where some of the medications come into play also because, if you are in a situation that's totally unavoidable to trigger a craving, that's really where you need the gums or the sprays or something like that. And that's really where I think that really understanding that comes into play. The other thing too, is that it's very difficult to be introspective sometimes, especially with folks that are going through a lot with a cancer diagnosis or other health problems related to tobacco use, that's really why it's very helpful to have someone else to kind of help you reflect on what's going on, because people have a lot that they're dealing with. There's most certainly no shame in asking for help. And in fact, we encourage it and we really think it's an important part of getting over this hurdle and quitting smoking. So I think that that's why that is so important.

What are your thoughts or suggestions for those caregivers? Maybe they've been trying for years to get their loved one to quit. And now that they have a bladder cancer diagnosis, what is your recommendation for how they can support the quit efforts, knowing that it's not necessarily going be successful the first time?

Dr. Richard Matulewicz: I think mindset is a lot and I think understanding that this is part of your treatment will really help get everyone on board and get everyone on the same page. And as I mentioned, that really quitting smoking is probably the most effective way of treating your bladder cancer. There's no chemotherapy, there's no surgery, there's no radiation, there's no pill that will have the same effect on your longterm outcomes when it comes to your general health and your bladder cancer as quitting smoking. So understanding, and this is where I think the urologist comes into play as well, understanding that this is part of you're going to be the most palatable thing you're going to deal with.

But it's something that I think is essential to be integrated into how you proceed after your diagnosis. And I think really having that support system, having people around you kind of be on the same page and also trying to avoid smoking themselves. If you're in a two smoker household with your partner or your caregiver or your caretaker, it's really got to be a team effort because as all cancer treatment is, it's so important to have support and have that team around you. So I think that that's what I like to relate to people.

Have you seen anything about smokeless tobacco products like chewing tobacco? Have you seen anything that's related to bladder cancer?

Dr. Marc Bjurlin: So I can probably touch base on this a little bit. The data is pretty limited on whether there's a direct link between smokeless tobacco and the development of bladder cancer. One of the attendees mentioned, if there is a lower risk, could it be used as a tool for quitting? I think the take home message is that smokeless tobacco has a very strong link to oral cancer, pharyngeal cancer, esophageal cancer, gastric cancer, and pancreatic cancer. And as a result, I think you would probably just be swapping out one risk for another. So I wouldn't advocate as picking up smokeless tobacco as an avenue to quit conventional cigarette smoking, because it does have a number of risks involved.

