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Welcome to Yale Cancer Answers with your host Doctor Anees Chagpar. Yale Cancer Answers features the latest information on cancer care by welcoming oncologists and specialists who are on the forefront of the battle to fight cancer. This week it’s a conversation about head and neck cancers with Doctor Benjamin Judson.

Doctor Judson is a professor of surgery in Otolaryngology and the chief of the division of Otolaryngology at the Yale School of Medicine, where doctor Chagpar is a professor of surgical oncology.

I always think about head and neck cancers as this very large bucket of heterogeneous diseases. Can you talk a little bit about how you classify them, how you think about them?

Well your impression is actually on target. Head and neck cancers make up about four to five percent of cancers in the United States,
but when you really zone in on them, they are not common, but they’re not rare either. And then when you really begin to look more closely, they are made up of a lot of different cancers in the mouth throat area.

One of the phrases we use to describe it in the medical lingo is it’s between the dura and the pleura, so any cancer that’s not brain cancer, but it’s above the lung falls into that bucket of being a head and neck cancer.

Are there things that kind of make these similar? So when we think about risk factors for example of getting head neck cancers, granted that all of these cancers are a little bit different, do they share some of the same risk factors? Some of them do and some of them don’t. Some of the cancers we see in this area just don’t have strong risk factors, they are uncommon, but they they can happen out of the blue without any sort of exposure. That’s probably a minority of the cancers in this area. Historically, the biggest risk factor has been smoking,
and you know, with the decrease in smoking rates in the United States since World War Two we’re beginning to see some slight decrease in smoking related cancers. But the big sort of change or the big story in this area is the rise of cancers in the throat that are a result of infection with the human papilloma virus. I want to dig into HPV in a minute, but I want to talk about alcohol. Is alcohol a major risk factor for head and neck cancers, and if so, is there a quote safe amount of alcohol? It’s a great question and I’m saying a little because we don’t know some of this, but what we do know about the role of alcohol is that it has a synergistic role with tobacco so that if alcohol is a risk factor, if alcohol is a low risk factor for developing head neck cancer, smoking is a larger risk factor, but if someone smokes and drinks it isn’t an additive effect, it’s a multiplicative effect.
your risk is significantly higher.
So I guess the biggest role of alcohol is in people who smoke because it amplifies that risk of smoking.
I think that although we say that alcohol is a risk factor for developing a head neck cancer a low level of alcohol.
The risk of developing head neck cancer with that is quite low. OK, my next question.
At least a number of people that I can think of off the top of my head who are of South Asian descent, which is a racial and ethnic group that we rarely think about in this country.
We usually think about race in terms of African Americans, and we think about ethnicity in terms of Hispanic people, but if we think globally, are there particular racial and ethnic groups that are more at risk?
Head and neck cancer is significantly more common in the rest of the world, more common in the rest of the world, and that probably has to do with tobacco and alcohol.
and betel nut exposure, which are higher elsewhere, especially in Asia. The other thing that’s at play is that there is a particular type of head neck cancer called nasopharyngeal cancer that is much more prevalent in parts of Asia and it’s related to Epstein Barr virus infection and we see when individuals from that part of the world move to the United States, their risk of developing those cancers goes down significantly, but not to the same level, and so we’re sort of figuring out why that is. It is unclear exactly how the risk factors work, but we do see different types of head neck cancer more frequently in other parts of the world, like in Asia. And that brings me to this whole virus phenomenon, because now you’ve mentioned two viruses, both of which are risk factors for various head and neck cancers. One being HPV and one being Epstein Barr virus, and certainly right now, in the midst of a global pandemic, a lot of us have got viruses on the brain.
Talk a little bit about the differences between different viruses and how exactly these viruses cause cancer and what we can do about it. I think what we’re seeing the most in the United States by far is the rise in throat cancers caused by exposure to the human papilloma virus, and it’s been happening over the last 15 or 20 years, and it’s still an emerging story. We’re still learning more about what’s happening and how this works, but we certainly know a lot, and one of the key takeaways is that these are preventable cancers, and they’re preventable if an individual is vaccinated against the human papilloma virus when they were younger. It’s going to take 10 to 20 years for that to play out. Teens today are getting vaccinated many of them, but not probably as many as we’d like in the United States, and that’s going to prevent these cancers in those individuals 15-20-30 years down the road. When we think about HPV, I think that many of our listeners may
think about HPV and think about it being really primarily for women for cervical cancer being sexually transmitted. They don’t think about it as much or perhaps at all for people of both genders in throat cancer. Talk a little bit about that.

I mean, is this the same virus? Is it a different virus? Is it spread through sexual means or other means? And what do you say to the people who say, my child won’t engage in oral sex and therefore will not be at risk of HPV in their throat and therefore if not female, does not need to be vaccinated?

That is a question that people ask for sure and what we know is that human papilloma virus, the type of HPV that causes throat cancer is the same type that can cause cervical cancer in women. And in the throat it predominantly causes cancer in men and we don’t know why that’s the case. What we’ve learned is that the vast majority of Americans are exposed to this virus at some point. Estimates put it in the 80 to 90% range.
So almost all of us get exposed to the virus at some point.
Usually our bodies clear the virus. For some people, the virus hides out in the back of the throat. And it’s there, sort of evading our immune system for decades. And it’s that exposure of sitting there that is a risk factor for developing a cancer later on. There is some evidence that suggests that people who are more active, more sexually active are at higher risk for developing these cancers. But I think anyone just the vast majority, almost all Americans are exposed at some point, and so we do see these cancers in everyone. And so this opens the question of vaccination and as we sit here in 2020, the remarkable year that it has been, it really does bring to light the question of vaccination. And historically there have been people in this country who have been what have been called anti-vaxers who have concerns about autism due to vaccination and
perhaps there are more people who worry
about how vaccines actually get approved
in this country and whether they are safe.
Can you speak to that and really
allay our listeners fears?
Because right now people might have
all kinds of concerns with regards
to not just the Covid vaccine,
but vaccines in general.
I think with
HPV we have the benefit of this
not being a new vaccine.
Over 120 million doses have been
given in the United States and I
think it’s now over 300 million doses
across the world over the last decade.
and this is a safe vaccine.
It also is an effective vaccine.
It eliminates 90 to 100% of the infections and cancers
that this virus can cause down the road.
It’s safe and
it’s effective and you know,
in the past the rationale for
going the vaccine was sometimes
described as to avoid
genital warts or things like that,
and I think that there’s not as great a
perception or understanding that this
is really a cancer prevention vaccine,
and so there’s new survey
data and studies going on that really shows that if more people appreciate that this vaccine has the potential and the ability to prevent cancers, those people are more likely to have their children vaccinated, so I think that there is some work to do in this area to explain the benefits of the vaccine.

The other point that comes up is the fact that this cancer is not terribly common. As you said, it’s not terribly rare, but it’s not terribly common, and so I’m playing Devil’s advocate here for the benefit of our listeners, who may have similar concerns.

To really think about the risks of the vaccine versus the benefit in preventing a cancer that occurs in 4 to 5% of the population, can you speak to the data with regards to autism, which is something that Jenny McCarthy and other figures active in the anti vax movement have really promulgated. Is there any truth to that? I know certainly not with the HPV vaccine.
There’s really been no signs whatsoever over hundreds of millions of people that there is any association like that. The data that led to some of those claims has really been debunked as false data at this point for other vaccines. So I think that that’s not really up-to-date with where we are in terms of understanding the side effects. I think that given its safety and the fact that it’s been around for a long time and seems to almost completely eliminate cancer, whether it’s cervical cancer for girls, head and neck cancers for both genders, it reduces the risk. general towards for what that’s worth. Vaccine is really important. We’re going to take a short break for a medical minute, and when we return, we’ll talk more about treatment and diagnosis for head and neck cancers with my guest doctor Ben Judson. Support for Yale Cancer Answers comes from AstraZeneca, a biopharmaceutical business.
This is a medical minute about survivorship. Completing treatment for cancer is a very exciting milestone, but cancer and its treatment can be a life changing experience for cancer survivors. The return to normal activities and relationships can be difficult and some survivors face long term side effects resulting from their treatment, including heart problems, osteoporosis, fertility issues, and an increased risk of 2nd cancers. Resources are available to help keep cancer survivors well and focused on healthy living. More information is available at yalecancercenter.org.

You’re listening to Connecticut public radio. Welcome back to Yale Cancer Answers. This is doctor Anees Chagpar and I am joined tonight by my guest doctor Ben Judson. We’re talking about patients with head and neck cancer and right before the break we were talking about the fact that HPV is actually causing a lot of throat cancers that we see and this is entirely
preventable with the HPV vaccine now. We talked a little bit about risks and benefits and it seems to me that with millions and millions of doses being given over many years, we really do have the data that suggests that this vaccine is safe and effective. But I wanted to ask who should be vaccinated and when? Terrific question, so the guidelines now for males and females who are under the age of 26 to be vaccinated. Usually the recommendation is for the first dose to be given when someone is around 11 or 12 years old with one second dose. And the thought for that timing is that the vaccination then has time to work before they are potentially exposed, likely years down the road. The change in this area has been that the CDC broadened the recommendation to consider vaccination for anyone up to 45 years old. I think that that’s so important, but one of the issues that I always ask is,
many of our listeners who may be hearing this show, I'm 47, I'm 48, I'm 52. I'm outside that window, but I really want to get vaccinated because I'm not particularly keen on getting cancer. What do you do in that older population? We don't know for sure the benefit is overwhelming for those that are under 26 in terms of preventing cancers and the issues or side effects from treatment as well as the risk of death. So that is for sure. I think in that group that are 27 to 45, there is a suggestion that there's a real benefit there. That's where we have this sort of soft recommendation to consider vaccination in that age group and we just don't know beyond that whether the size of the benefit to getting vaccination and is the reason why we've kind of looked at those particular age ranges as being the age ranges where people are most likely to be sexually active.
So you would imagine that people who are in their 50s may have already come in contact with the virus and therefore vaccination may be less effective. That is absolutely right. The idea is to vaccinate people before they could possibly be exposed to the virus. That’s why it’s as young as the recommendations are for the initial vaccination and it’s less known as we get older and we’re more likely, as I mentioned, 80 to 90% of us have been exposed to the virus. The potential benefit of the vaccination later on is less understood or less known. I mean if you have people who have not been sexually active until their 50s, for example, maybe they were for religious reasons or other reasons really did not engage but wanted to be vaccinated before they started. Whether that’s something to consider. But it sounds like we’re not there yet in terms of the data, it sounds very reasonable, but we just don’t know yet based on the data.
Let’s suppose you weren’t vaccinated.

What are the signs and symptoms that you should look out for in terms of head and neck cancers?

And I mean we talked at the top of the show about this being a basket of really heterogeneous diseases right?

I would imagine that there are so many varied symptoms that could be signs of head and neck cancer.

I think that’s right.

In some ways, one of the pitfalls that we’ve seen is that with HPV related cancers these cancers are arising in younger otherwise very healthy individuals without real risk factors.

The vast majority of patients present with a painless neck mass, a physical lump in the neck that they can see and feel and they otherwise feel fine, and so there’s a little bit of a tendency to put that off like I feel fine and living my life and so they might not seek medical care early, but that is the
leading presentation of this cancer.
And so one of the recommendations is that someone who has a mass in the neck, even if you otherwise feel great and have no other symptoms, and if it’s there for more than four weeks, you should see your physician about it. See someone about it.

And what’s the age range that we typically see these cancers in? You mentioned if you’re an otherwise healthy young person, are young people really the ones getting this disease, or are they at lower risk and this is really something that people should worry about when they’re pushing into their 70s and 80s? I think that the smoking drinking related head neck cancers that we see happen most frequently in people who are in their 60s, somewhat later in life, having a longer time of exposure to the risky effects of tobacco and alcohol. With HPV we’re seeing these cancers younger and younger, and so the peak age of these cancers is
actually in their 40s and we see it at all ages we can see younger and older, but it definitely isn’t happening in younger patients, and I think that that’s so critical for people to really understand because, being in my 40s, I can tell you that you do kind of feel invincible, right? You’re healthy, you don’t really need to go to the doctor. Everything is good. And you certainly don’t think you’re gonna get cancer, but it can occur. That’s so true. And so often peoples in their 40s are busy with life. You know they’ve got jobs and whatever it is, and so their time for cancer, they don’t have time for this and they are less likely to go get it checked out ’cause they’re just too busy. What are the other other symptoms that people should look for? I mean a painless lump in the neck is certainly something that should be a red flag for people, even though it’s painless, and I think that’s the other thing is that people say if it’s not causing me pain, it can’t be bad,
but we know that with so many cancers that simply is not the case. That’s right, and one of the symptoms, potential symptoms, is a sore throat or pain or difficulty with swallowing. Obviously this happens to all of us as a result of an infection or tonsillitis or something like that, but if that persists for more than three to four weeks, that is another reason to seek medical attention. Similarly, hoarseness of voice again, usually not cancer. We all get that at one point or another, but if it persists for more than four weeks, that probably makes sense to seek medical attention for that as well. Yeah, it seems like that four week mark is really when people should start saying, you know, something that you get out of the blue if it’s been persistent, it’s really something that you need to look for. I had a friend who had a nosebleed, really young guy, 20-22 years old. I think you may have heard about him because I sent him to you who
presented with a nosebleed.
So simple things like that,
you think it’s a nosebleed but things like that can happen.
It goes back to what we were talking about before.
It’s the patients who are young and healthy and feel fine.
They’re more likely to blow off these things.
And most likely 99% of the time, it’s nothing.
But sometimes it’s something,
and so it is just a reminder, if something is not going away or not getting better,
it’s certainly worth having someone take a look.
And sometimes there’s some things that are really bad like what happened to my friend. so can you talk a little bit about the prognosis for head and neck cancers,
and I realized that again it’s a heterogeneous bucket of diseases,
but in general, how do people fair?
You mentioned it varies.
You know it varies on the type, the specific type and the stage at which they present. So all the more reason to come in and get it checked out and found earlier. Interestingly the prognosis with HPV related cancers is much better than with the other types of head neck cancers that we see. Like for example, the smoking drinking related cancer. So the vast majority of patients with HPV related cancers are cured. Cure rates are in the 70 to 90% range. There are certainly side effects from treatment and so our goal is really to maximize that cure, but also try to minimize the side effects of any treatment. And the prognosis can be varied. It can be very good. It can be not so good. Talk a little bit about treatments. Now, granted, treatments are going to vary based on whether this is found at an early stage or whether it is spread and metastatic. But on this show we frequently talk about...
personalized medicine about a multidisciplinary approach about all of the things that have evolved overtime that can improve treatment and patients outlooks. So how do you approach patients who have had neck cancer? Well, one part of this that I’m just passionate about is that it’s so apparent to me working in this field that how patients do depends on the team that surround them. And so you know, I’m a surgeon and that’s one potential treatment for a patient. Other treatments are chemotherapy or immunotherapy, or radiation. But it’s critical to have a nutritionist, a speech language pathologist, physical therapists, a social worker, all part of the team and really how people do depends on having that whole team around the patient to help get them through it and having the team is key and then as you said, just carefully tailoring treatments for each patient based on the specifics of what’s going on with them in their situation is just key. Talk a little bit about that.
I mean we talk on this show a lot about how there have been advances in various tumor types. So in some cancers you know they look at, panels of hundreds of genetic and genomic mutations, and have targeted therapies for each of these. In others it’s not quite so advanced in terms of tailoring therapies. The idea of course being that you know with a more targeted therapy you can potentially reduce some of the side effects of treatment.

So given what you had said earlier about the side effects of therapy, where are we in terms of personalized medicine in head and neck cancer? It’s so interesting and one of the areas where personalized medicine, really is common day-to-day in treating patients in this area is that patients with head and neck cancer are now being treated differently than the other cancers. We know that their responses and the prognosis is different and so now the treatments are different as well.
medicine there are constant advances. We’re doing transoral robotic surgery and now patients have the potential to get immunotherapy, potentially as part of their treatment, and so there’s more targeted radiation treatment, so it’s constantly evolving and we’re seeing an overall gradual improvement. Slow, but gradual improvement in prognosis, and I think it’s a result of all these little incremental steps and improvements.

Dr. Benjamin Judson is a professor of surgery in Otolaryngology, and the chief of the division of otolaryngology at the Yale School of Medicine. If you have questions, the address is canceranswers@yale.edu and past editions of the program are available in audio and written form at Yalecancercenter.org. We hope you’ll join us next week to learn more about the fight against cancer here on Connecticut public radio.