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 cancer with Doctor Aarti Bhatia. Doctor Bhatia is assistant professor of medicine and medical oncology at the Yale School of Medicine, where Doctor Chagpar is a professor of surgical oncology.

Aarti, maybe you can start off by telling us a little bit more about head neck cancers. It seems like there would be a lot of cancers in that bucket. It is actually a pretty wide bucket. You know if you think about it, the head and neck is a pretty concise structure, but diagnosis, treatment follows like the site of origin of the tumor within the head neck region. So broadly it encompasses a lot
of tumors which arise from the mucosa within the head and neck. But you know, they could arise in the mouth, so that would be oral cavity tumors. They could arise in the back of the throat, so that would be oropharyngeal tumors or tonsillar tumors. They could arise in our voice box, so that would be laryngeal tumors. The back of the nose is nasal pharyngeal tumors. You could also have salivary gland cancers,

You know there’s also a much larger proportion of tumors that arise outside of the United States, so for instance, Asia has a very large number of new head neck cancers that are diagnosed every year, but the reason they are lumped together is because they share a common Histology. So when we look at tumors under the microscope,
most tumors arising from the head and neck region tend to have what we call squamous Histology and based off that they are clubbed together as one entity. But they are different in terms of how they’re treated and we’re going to get into that in a second, but just take one step back, what is the etiology or the cause of these head neck cancers?

Why are they more common in Asia than they are for example, in the United States and what are some of the risk factors people should be watching for? So the common etiologies worldwide is, you know, tobacco exposure, alcohol exposure. In Asia there are a couple additional risk factors that increase the incidence of these cancers. So for instance, in Southeast Asia you know people tend to chew a lot of tobacco. They tend to chew betel nut and those natural substances can also increase their risk of acquiring head and neck cancers in countries like China. In Hong Kong, there is an incidence of nasal, pharyngeal cancers which are caused by the Epstein Barr virus or EBV virus. It’s almost endemic, endemic proportions in those countries,
a lot of head neck cancers tend to be nasopharyngeal. In the United States and in the Western world at large, we also see several head and neck cancers arising in association with the human Papilloma virus or the HPV virus. Most commonly, people associate that with cervical cancer in women, but there’s a rising incidence of HPV head and neck cancers in the Western world. And so when we think about risk factors for developing these cancers, and we often think about primary prevention, how can we reduce getting these risk factors and thereby reduce our risk of getting these cancers? It seems that the two that you’ve mentioned right off the top would be reduce your smoking or tobacco consumption, whether that’s chewing tobacco or smoking tobacco, and getting an HPV vaccine. Is that right? That is right, so you know, the HPV vaccine is something that still doesn’t have a lot of uptake in the Community, and it’s good to be aware that the sooner you get it in life, ideally in your preteen years before
You have a chance of being exposed to the virus and the infection, the much better protection that the virus offers you against multiple cancers. So for women it protects you against cervical cancer, head and neck cancer, anogenital cancers. And for men it protects you from the head and neck cancers and the anogenital cancers. So yes, and another thing to be aware of is that the FDA has recently increased the age limit to which you could actually be eligible to get the vaccine. So previously it used to be about 26 years. Now it’s up to 45 years so you know people who did not meet the initial cutoff for the vaccine are now eligible to get the vaccine. And so why do you think that there is so much hesitancy about getting the HPV vaccine? I mean, it seems that it would be a no brainer if it can reduce your risk of getting cancer. Certainly HPV vaccines have been around for awhile and right now during the covid epidemic we’ve seen some hesitancy with regards to vaccination for covid, based primarily off of the speed
and the rapidity with which those vaccines were developed. But the HPV vaccines have been around for a while, so why aren’t people getting vaccinated? Is it that this isn’t really something that’s been established in school programs? When kids get their usual measles, mumps, and rubella vaccine? Is it celebrity endorsement against vaccination? Why do you think that there is this hesitancy? I think it’s a combination of factors. One is the lack of awareness. A lot of people do not know about the Association with HPV. The second is that it’s not a part of the national immunization schedule, unlike the MMR vaccine, which then gets offered to all pediatric patients. But this one doesn’t, and the third is, I think, a cultural hesitancy. You know, HPV is a sexually acquired infection, and I think people worry that getting a vaccine against a sexually transmitted infection will in turn then promote promiscuity so I think a lot of people worry
about that reason as well. And so is that why it’s not part of the national vaccination schedule? I mean, it seems as though if the CDC and other public health officials recommend getting the HPV vaccine, and certainly cervical cancers, head, neck cancers, anogenital cancers are significant in terms of their public health consequences. Why isn’t it part of the national schedule? I think one because it’s been maybe within the last decade or so that we’ve started to see results from clinical trials establishing the efficacy of the vaccine against these cancers. And two, I think just a cultural uptake hasn’t been that much, but it would be great to see it become a part of the national immunization schedule so people have to opt out of getting the vaccine instead of opting in to get it. And so for the people who are listening to this show and are thinking, it seems as though this vaccine is safe. It’s highly efficacious as I understand it, can prevent over 90%, maybe even higher, of these cancers,
especially cervical cancer. But also other forms of cancer. Why wouldn’t I get it? How do they go about doing that? Is that something that they can get through their doctors offices? Is it covered by insurance? What are the other potential barriers that people can address? It should be fairly straightforward to get it so it is covered by insurance right from the preteen years. So age 9-10 until someone gets to the age of 45 years and it should be fairly straightforward to call your pediatrician or your primary care doctor, and you know, go in and get the shot. Most clinics offer the vaccine. And really it’s been efficacious and minimal side effects, right? Well, there are some side effects. Nothing like the covid vaccine. So you know right off the bat, that’s something a little bit better tolerated than the covid shot so if people could deal with the covid shot, they can definitely deal with the HPV vaccine, but there are minimal side effects. Most of them are short term, they dissipate within a day or two.
OK, great so aside from getting the HPV vaccine the other risk factors are really tobacco, which has gone down in this country, at least in terms of smoking. The other question that people may have is with regards to E cigarettes. We found that as people’s smoking in terms of smoking tobacco has gone down in the United States, E-cigarettes seem to have gone up. Does that increase your risk of head and neck cancers? There isn’t a lot of data that’s looked at that. Again, E cigarettes are a new phenomenon. It’s really only been within the past few years. It theoretically would have a lower risk than regular cigarettes and causing head and neck cancers, but I’m not sure that it totally eliminates the risk altogether. And then the other thing that people often put together is smoking and alcohol. What’s the impact of alcohol on head and neck cancers? Almost the same as smoking, so you know smoking.
when you inhale the smoke, it goes down all the way from your head and neck passages down to your lung passages and with alcohol, similarly it goes down your mouth, the back of your throat and then into the food pipe. So we do see a significant proportion of patients who’ve never smoked but have a significant alcohol history who then go on to develop head and neck cancers. So I would say the risk is about the same. It’s also cumulative, so the more the exposure to either substance or both substances, the higher your chance of developing a cancer. The next question that everybody is going to ask is, is there a safe limit? Is it okay to have 1 drink at dinner or is there a certain threshold at which people should really be cautious? Of course you want to avoid binge drinking, and there are these thresholds that are set by the CDC as well. The safest is to minimize though,
’cause I think everyone has a personal body threshold that’s different, we see some people who’ve smoked 100 pack years and do not get head and neck cancers, and then we see some people have smoked just ten years and then have a head and neck cancer that’s not virus associated, so is presumably smoking associated. So I think everyone just has a different threshold. Doing away with smoking altogether is healthy for everyone, and minimizing how much alcohol you drink is also the best thing you could do for yourself. And so when we move away from now primary prevention, we’ve kind of talked about the risk factors and things we can do to minimize that. The next thing that people often talk about is secondary prevention or screening. Now, unlike a lot of other cancers, we really have good screening tests, do we have good screening tests for head and neck cancer? So screening hasn’t shown to save lives for patients who go on to develop head neck cancer,
but in our own experience, the way head neck cancer is most commonly diagnosed is when someone notices a lesion, say in the oral cavity or in the back of the throat and is then referred serendipitously by somebody’s doctor or dentist who looks in their mouth. Yes, but I hear that you were about to say that you organize community screening programs that might be helpful, and I’d love to delve a little bit more into that. But first we need to take a medical minute, so please stay tuned to learn more about head and neck cancers with my guest doctor Aarti Bhatia. Support for Yale Cancer Answers comes from AstraZeneca, working to eliminate cancer as a cause of death. Learn more at astrazeneca-us.com. This is a medical minute about lung cancer. More than 85% of lung cancer diagnosis are related to smoking and quitting, even after decades of use can significantly reduce your risk of developing lung cancer. For lung cancer patients,
clinical trials are currently underway to test innovative new treatments. Advances are being made by utilizing targeted therapies and immunotherapies. The BATTLE II trial aims to learn if a drug or combination of drugs based on personal biomarkers can help to control non-small cell lung cancer. More information is available at yalecancercenter.org.
been shown to affect survival? 
Well, I think a large part of that is because patients present with symptoms pretty early on. 
I mean, if you have a bleeding ulcer in the mouth, you have sore throat, you have trouble swallowing or chewing, you notice a neck lump, most people aren’t going to sit on it for months or years. They’re going to go see a doctor and figure out what’s going on. So because of the location of these tumors and how early they present with symptoms, most people are diagnosed early on, and in early stages. The vast majority of our patients come in with curable cancers, so I think there isn’t much more that screening does. Screening picks up early cancers but then people come in with early cancers anyway, so for that reason it hasn’t been shown to improve survival. But we still think it’s helpful to engage in community wide screening efforts, especially in the high risk population. So in patients who have a significant smoking exposure, alcohol exposure,
multiple partners, it makes sense to have them engage with their dentist or oral surgeons, ENTs, to see if they have any lesions that can be intervened in an early course in the disease. I think that’s one of the beauties of head neck cancers is that because the lesions in the head and neck are such that it can be found earlier than, for example, other cancers that we’ve talked about on this show, which tend to be pretty silent and patients present quite late. So you mentioned a few of the symptoms that people should be looking out for, right? Bleeding, ulcer, nosebleeds, lump in the throat, losing your voice, hoarseness, cough. Are there other things that people should be looking out for? And seeing their doctor about? Sometimes you may even have oral lesions which tend not to bleed, but they’ve just been there for awhile. Some of those can be precancerous, some precancerous lesions will then
go on to transform into cancer, so even if it isn’t a very bothersome lesion, but just has been there around for awhile, you want to make sure you see someone about it and get it checked out. Yeah, and for many people, going to your doctor for a regular checkup once a year, or seeing your dentist once or twice a year is a really good thing to do because as you mentioned, it’s often on these visits that people can pick up on lesions that may not have been bothersome to you. They can then see it as suspicious and move on to the next step. So when you do go to your dentist or your doctor and they find something, what’s the next step in terms of making a diagnosis and moving on with treatment? So if the dentist finds something that’s suspicious, they will either refer you to an oral surgeon or an ENT, and both those kind of physicians can make a diagnosis with a biopsy, so we need to typically get some tissue out with a needle. Look at it under the microscope
and see what’s going on, and if that diagnosis is cancer, the next step is usually scans where we try to find out to what extent has this cancer spread. Is it involving adjacent structures? Is it involving some neck nodes? Is it a local tumor or has it spread and then from spread and then on you get involved with the rest of the oncology team so you meet a radiation oncologist. You made a medical oncologist, which is someone like me, and usually treatment will then be planned, involving a course of radiation or chemotherapy or surgery, or a combination of these so multidisciplinary management is key to treating and formulating a good treatment plan for head and neck cancer patients and in fact outcomes are tied to being treated at large volume centers, so you want to make sure you see someone who has many head neck cancer patients and has dealt with their treatment. Yeah, and when you talk about large volume centers,
I think part of that may have to do with the expertise of the clinicians themselves and the fact that they see these cancers day in and day out. But the other might be some of the things that they have at large volume centers that may not be ubiquitously available.

So talk to us a little bit about personalized medicine. We find that in so many cancers now, especially the large volume centers really are tailoring care in terms of the genomics of a particular cancer and using that information, that molecular information, to really tailor their therapy in terms of that multi modality care that you were talking about.

Can you talk more about that? Yes, absolutely. So you know that’s valid for patients who have more advanced disease or incurable disease at our center. And I’m sure at many other large volume centers with expertise, we do what we call molecular sequencing or profiling of tumors. So the biopsies are analyzed for their genes that are present in the tumor and we then determine is this gene something
that was inherited by the patient, or is it something that originated in the oral cavity or in the mucosa of the head neck and then went on to cause a tumor, and sometimes knowing what these genetic defects or mutations are in the tumor, help us identify drugs or targeted therapies, which then will specifically go and target or inhibit that aberrant protein or aberrant mutation so the cancer can come under better control. Some of these drugs are FDA approved in these settings and some of these drugs are available on clinical trials and clearly more clinical trials will be available at the larger volume centers where we have the patient still offer these studies too, but even for patients who have curable disease, like we mentioned, head and neck cancers tend to present most often in the curative stage, Therapeutic modalities like robotic surgeries, advanced radiation techniques are sometimes available only at the large volume centers and
along with improving your prognosis or outcomes for treating these cancers, it also helps minimize the side effects that you have and you have to then live with for the rest of your life as a result of undergoing cancer treatment. So there are many advantages to being seen at large volume centers. One of the things I think that you mentioned which many people might find curious is that when you talk about genomics, and tailored therapy, that’s mainly for people who present with advanced cancers. So is it the case that in more early stage cancers the systemic therapy or the chemotherapies tend to be uniform across patients? That’s probably true for head and neck cancers. That might change in the future though, so for instance, immunotherapy is currently approved only in the treatment of advanced cancers. But we now have many trials which are looking to move immunotherapy into the curative setting and see if we can improve cure chances for our
patients with locally advanced disease. So there are biomarkers which we use to predict which patients will respond to immunotherapy in the advanced setting and that might become standard of care for even patients who are in the locally advanced settings. So we’re using chemo and standard radiation for cure, but we’re maybe adding on a partner drug like an immunotherapy drug based on what trials show us in the next few years. There is a chance that we may not be using that for everyone but personalizing it for patients who have these positive biomarkers which then predicts for a better outcome with immunotherapy. In general, what is the prognosis for patients who present with early stage head neck cancers? So a large part of that depends on whether they are associated with HPV, so having the HPV virus associated cancer confers a much better prognosis and in the early stage, 80 to 90% of these patients can be cured five years out in patients who have HPV negative disease, that number is a little bit lower,
but if you compare with a lot of other cancer types it’s still pretty good. You know we are able to cure about on average 60% of HPV negative patients. Early stage with curative intent treatment. Of course, we’re always trying to do research and clinical trials to see if we can move that bar up and, you know, get a higher proportion of our patients cured. And that’s also the advantage of being seen at a larger centers that has these trials to maybe make treatment more aggressive. To intensify your treatment so we can move that bar up for our patients. That was going to be one of my questions, which is, for many patients, they hear about clinical trials and they think I have a fairly early stage cancer, prognosis is reasonably good, clinical trials always sound a little scary. Do I really want to be a Guinea pig in the early stage? So what do you say to patients who might be contemplating whether they really ought to be in a clinical trial? If they have potentially curative cancer or not?
One, it’s always good to remember that what is standard treatment today was a clinical trial some years ago, so we would have not gotten to the treatments that we are at today if we had not used some other patients in the past on clinical trials. The second thing is that we always try to carefully match and screen patients to the available trials that we have. So we’re always thinking about what benefit does it directly offer that patient. And even if there is a chance of some benefit, then that’s the ideal patient to be matched to a clinical trial. So of course, if we think that there is no possible benefit to someone, we’re not going to put them on a trial, so we’re carefully screening patients. It’s also a mutual decision, so it’s not something that’s going to be forced on anyone, but it’s worth at least hearing out your options and then making an informed choice. And I think it’s so important for
people to realize that on average patients who participate in clinical trials tend to do better than patients who don’t. Because we’re always testing what we think is tomorrow’s therapy, the next great therapy, how we can move that bar, as you said to standard of care today and so on. Average people tend to do better. The other question that I want to circle back to before the show closes is an important one, and that is, you mentioned that people who have HPV positive cancers tend to do better than people who have HPV negative cancers and I want you to kind of dispel a misconception that getting the vaccine does not increase your risk of getting the HPV negative cancer and HPV positive cancers actually tend to
occur earlier in life so where HPV negative cancers need a certain degree of tobacco and alcohol exposure for them to develop and usually occur in the 6th or 7th decade of life. HPV positive cancers can occur as early as the third, fourth, fifth decades of life and think about it. Now you have a highly curable cancer, but the treatment is just as aggressive as HPV negative cancers by the current standard of care, so you’re going to live out all these decades dealing with the side effects of it’s probably a nightmare to live through and something that stays with you for the rest of your life. The side effects can be pretty disabling for many, many years afterwards.

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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.