

Welcome to Yale Cancer Center Answers with your hosts doctors Anees Chagpar, Susan Higgins and Steven Gore. Dr. Chagpar is Associate Professor of Surgical Oncology and Director of the Breast Center at Smilow Cancer Hospital. Dr. Higgins is Professor of Therapeutic Radiology and of Obstetrics, Gynecology and Reproductive Sciences and Dr. Gore is Director of Hematological Malignancies at Smilow and an expert on myelodysplastic syndromes. Yale Cancer Center Answers features weekly conversations about the research, diagnosis and treatment of cancer and if you would like to join in, you can e-mail your questions and comments to canceranswers@yale.edu or you can leave a voicemail message at 888-234-4YCC. This week it is a conversation about screening for head and neck cancer with Dr. Clarence Sasaki and Dr. Adam Pearl. Dr. Sasaki is Charles W. Ohse Professor of Surgery at Yale School of Medicine and Dr. Pearl is Chief of Otolaryngology at Bridgeport Hospital. Here is Dr. Anees Chagpar.

Chagpar Dr. Sasaki, maybe we can start off by talking a little bit about head and neck cancer. It seems like it is a really broad term because there are a lot of structures in the head and neck, what exactly are we talking about?

Sasaki Lots of neck cancers are squamous cell in origin, so these cancers arise from the lining of the mouth and throat. We generally exclude thyroid cancers, although head and neck surgeons also take care of thyroid disease.

Chagpar How common are these, Dr. Pearl? Usually when we are thinking about common cancers, not that I am biased towards breast cancer, but we are thinking about breast and prostate and colon, it is not very common that people talk about head and neck cancers, how commonly do these occur?

Pearl That is right, people do not typically talk about head and neck cancer, but there are up to about 50,000 cases diagnosed a year.

Chagpar And Dr. Sasaki, are there particular demographics that head and neck cancers affect or particular risk factors?

Sasaki There are known risk factors across smoking and chronic alcohol users, well known risk factors. In the State of Connecticut, however, there are some risk factors that may not exist outside the State like asbestosis from workers at the shipyards, wood workers, for example, exposed to chronic sawdust and cutting oil among the brass workers in valley; these are all risk factors for some types of head and neck cancers.

Chagpar It sounds like there is not much you can do about any of those things except maybe quitting smoking and cutting down on alcohol use. Are there any other risk factors or anything that people can do to reduce their risks?

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Sasaki The other risk factor that we think about also is sun exposure.

Chagpar Really?

Sasaki You do not really think about it, but people get lip cancer and sun exposure is a big risk factor there.

Chagpar What about HPV, Dr. Sasaki, the one celebrity that I can think of in recent memory who has had head and neck cancer was Michael Douglas and I understand that his head and neck cancer was due to HPV, but most people do not equate HPV with head and neck cancer, they equate it with cervical cancer, can you talk a little bit about that?

Sasaki That is true, the first association of HPV and cancer in uterine and cervix was made in about 1984 by Dr. zur Hausen for which he won the Nobel Prize some years later but it has come to our knowledge that HPV can also cause cancers of the throat. There are about 100 types of HPV, most of them are harmless, but the HPV that is of high risk is HPV-16, 18, 31 and 32 and these cause cancers of the tonsils and base of tongue.

Chagpar And Dr. Pearl, we now recommend HPV vaccination both for girls and for boys, is that in part to reduce their risk of head and neck cancer and have we seen any decrease in the incidence rates now that kids are getting vaccinated or we hope that they are getting vaccinated?

Pearl Right, we hope that they are getting vaccinated. Vaccination is definitely to reduce the risk of head and neck cancer. I do not think we have had enough years go by to have data to say how much it has decreased but there is a definite association, so if you can prevent patients from spreading HPV virus, there should be a definite decrease in patients that will develop head and neck cancer related to this.

Chagpar Before we move on to talk about head and neck cancer in particular, one thing that I always think is important to talk about is the controversies with regards to vaccines and HPV vaccine in particular. Dr. Sasaki, can you clarify for us, is there an association between vaccines and autism and those kinds of things, because there are a lot of people out there who really believe that there is a connection, has that ever been proven?

Sasaki It has never been proven and I certainly from my own personal point of view do not believe it, I do not know if Dr. Pearl feels the same way or not.

Pearl My children were vaccinated and I feel that it is very important for them to be vaccinated. I have not seen definitive proof from my understanding that it is linked to autism, although people are very concerned.

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Chagpar I always think it is something that weighs on people's minds and whenever I think that people might be concerned about it, I always think that I am channeling our audience to ask our experts the questions that they would want to ask, so let us get back to head and neck cancer, we talked a little bit about risk factors; it sounds like people can get head and neck cancer just based

on where they worked and being out in the sun and smoking and drinking, but you can even get head and neck cancer presumably just from bad luck, but how does that present, Dr. Sasaki? What kind of thing should people be looking for to try to pick up head and neck cancers?

Sasaki I think patients who have a history of lifetime smoking or alcohol abuse should be aware that a persistent sore throat for 6 weeks or so, especially one that is associated with ear pain, likely represents the start of something bad in the throat like head and neck cancer, hoarseness that persists for greater than 3 weeks of course should be investigated by someone who can actually see the larynx and blood in the saliva and a lump in the neck are hallmarks of head and neck cancer.

Chagpar Certainly there are some things there that are concerning and I think that some of these are nonspecific, like if you were out at the basketball game for example you might have been cheering a little too loud and might get a sore throat and some ear pain as well, but things that people should really pay attention to and so if they have these symptoms Dr. Pearl, is their first stop to go and see somebody like you, an otolaryngologist, or is their first stop to see their family doctor, how does that work?

Pearl Some patients do not have a choice based on their insurance, they have to see their general practitioner before they get referred to a specialist but if you are presenting with symptoms that Dr. Sasaki just said, the recommendation is to make an appointment with your ENT doctor and get a full exam. The problem is with some of these oral cancers that we see, they do not have any presenting symptoms. You find them by evaluating the mouth and you see a growth that looks a little bit abnormal but the patient could be sometimes completely asymptomatic.

Chagpar Wait a minute, that just made me very concerned, so I could have a head and neck cancer and not know it, but how would I know to go and see you if I do not have any symptoms?

Pearl That is right, so over time, it may get larger or may become ulcerated and become painful, you may have blood in the saliva, and our hopes are to find these patients well before it becomes a larger cancer. We want to find it as small as possible, so seeing your doctor for routine exams hopefully to find it early, seeing your dentist twice a year for cleanings, they are very good about doing a complete oral exam at the same time.

Chagpar So somebody should be looking in your mouth and feeling your neck even if you have no symptoms to see if they see anything that might raise a red flag?

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Pearl That is right, but if you do have symptoms that you are concerned about, get in to see an ENT doctor, get a physical exam, not everything that we

just talked about as symptoms is definitive of cancer but if there is a concern, you want to find it when it is small, it makes it much easier to treat and cure.

Chagpar Dr. Sasaki, that kind of brings in this whole concept of screening. For breast cancer, it is really easy in the sense that we have really good screening tests, it is called a mammogram, you can be completely asymptomatic, we can find cancers when they are really tiny, sometimes even precancers and essentially take it out and hallelujah, it will never hurt you again, what about head and neck cancers? Are there good screening tests, should everybody asymptomatic at any age go and get whatever screening tests there might be available or is this something like lung cancer where the screening tests are more expensive and there is a high-risk population that you want to see?

Sasaki Yeah, there is no really good single screening test for head and neck cancer. There are no biomarkers, for example, that are readily available, and so the patients who are historically at risk are self-screened. They feel their necks, they check the throat, look at the saliva, and if they see anything alarming, then they seek help. I think we also ought to make physicians, family physicians and dentists aware that in patients who are at high risk, more attention should be paid to the mouth and throat, high risk patients being those who drink and smoke, for example, and there is a small population of patients with Fanconi's anemia who have a 500 to 700 fold increase of developing oral cancer and those patients need to be screened every six months or so.

Chagpar Screened with just a physical exam?

Sasaki A good physical exam, yes.

Chagpar So if somebody presents either because they have no symptoms but they have been lifelong smokers or drinkers or if they have symptoms, what exactly are you going to do in your office, Dr. Pearl, is that simply looking in their mouth and feeling their neck or is this now we are talking about fancy scopes, tests, and things like that?

Pearl We will take a step-by-step approach, first we talk to them, see what their concerns are, where they are directing our focus to, whether it is a change in their voice or is it just pain in their mouth, underneath their tongue. The next thing is to do a complete physical exam, look around their nose, look in their throat, look underneath the tongue, look for signs of nerve weakness, feel their neck and then make a determination. Sometimes we do what we call a nasopharyngoscopy using a very gentle flexible telescope with a light on the end to look around and patients come in sometimes very nervous that you are going to jam a scope in there and go all the way down their throat. It is actually pretty simple. We

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put a little spray in their nose, they decongest the nose and numb the nose and the telescope is very gentle, it goes to the back of the nose, it does not even

have to go down the throat. From the back of the nose, you can see the entire throat, you can see the back of the tongue, you can see the whole voice box structure, all the way down to the vocal cords and then into the upper part of the windpipe and you can see the upper part or the opening of the food pipe, the esophagus.

Chagpar Dr. Sasaki, if you do the scope testing, is this the kind of device through which you can do a biopsy or if you see something abnormal, how is it that a diagnosis is made?

Sasaki There are devices and flexible scopes that have a biopsy channel. I usually take my patients to the operating room for an examination under anesthesia because then I can really get a good look without having to put them through discomfort. I can then push the tissues around, get a sense of how deep the tumor might be and take a biopsy and almost instantaneously through the process of frozen sections, we can make a diagnosis.

Chagpar So right in the operating room, you know whether or not this is malignant?

Sasaki More often than not.

Chagpar And then what happens?

Sasaki Then we have to get into a discussion with patients and their families as to what the treatment might consist of, what the risks and goals are and then based on that decision, we embark on therapy.

Chagpar So the frozen section gives you the diagnosis right then and there, but the definitive treatment does not happen in that same setting?

Sasaki That is correct.

Chagpar And Dr. Pearl, let us suppose you found a oropharyngeal cancer, in our last 30 seconds before the break, is that often a bad prognosis?

Pearl Not always a bad prognosis, it is a diagnosis that needs to be treated and if left untreated will be the demise of course, but once we find it, we talk to the patient about the different options and it does not always mean major surgery, sometimes it could be treated with radiation, sometimes with surgery alone, a combination, chemotherapy is provided and many times if we can find it early enough, this is a cure.

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Chagpar We are going to talk more about all of those options right after we take a short break for a medical minute. Please stay tuned to learn more about head and neck cancers with my guest, Dr. Clarence Sasaki and Dr. Adam Pearl.

Medical Minute Smoking can be a very strong habit that involves the potent drug nicotine and there are many obstacles to face when quitting smoking but

smoking cessation is a very important lifestyle change especially for patients undergoing cancer treatment. Quitting smoking has been shown to positively impact response to treatments and to decrease the likelihood that patients will develop second malignancies. Smoking cessation programs are currently being offered at federally designated comprehensive cancer center such as Yale Cancer Center and at Smilow Cancer Hospital at Yale-New Haven. The smoking cessation service at Smilow operates on the principles of the US Public Health Service Clinical Practice guidelines. All treatment components are evidence based and therefore all patients are treated with FDA approved first line medications and smoking cessation counseling. This has been a medical minute brought to you as a public service by Yale Cancer Center and Smilow Cancer Hospital at Yale-New Haven. For more information, go to yalecancercenter.org. You are listening to WNPR, Connecticut's Public Media Source for news and ideas.

Chagpar Welcome back to Yale Cancer Center Answers. This is Dr. Anees Chagpar and I am joined tonight by my guests Dr. Sasaki and Dr. Pearl. We are talking about head and neck cancers and for those of you who were with us before the break, we started talking about the fact that there are 50,000 cases of head and neck cancer diagnosed, and oftentimes, these may be even asymptomatic and often times present with a little bit of ear pain or a neck mass, but sometimes these are things that you do not even recognize, so one of the things Dr. Pearl had said right before the break was that finding these early makes a big difference in terms of treatment and the statement was made about going to see your doctor or your dentist once a year or twice a year, having them do a physical, and what if people do not go to their doctor, is there any way that they can get screened, if they hear the show and they say, jeez, I do not have a doctor and I do not particularly like my dentist or maybe I do not have insurance, what do people do?

Pearl We hear that from patients, and unfortunately these are the patients that come to see us with large tumors that sometimes the treatment options are very limited for and their lifespan is significantly reduced. We are hoping to find patients when the tumors are small. Coming up in April, there are going to be 3 cancer screenings that patients can go to. They do not have to have insurance. They do not have to tell anybody, they can just show up. There is an 800 number that patients can call, it is 1888-700-6543 and they can call up, they can schedule an appointment, there are 3 dates, April 6th, April 12th and April 15th and respectively that is in Bridgeport, Waterbury and New Haven area, so we

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have spread out to cover patients in different areas and these are for patients that either think they have the risk factors that concern them or they are patients that just want to be treated. They do not have insurance and no one is asking them if they have insurance or not and there is free parking at the hospital

when they come, so it is a very simple process and if we can find something to help them, they will be referred to a physician that can help them treat their problem.

Chagpar Yeah because certainly Dr. Sasaki, from a treatment standpoint, finding this early makes a difference in terms of the treatments that you can provide, is that right?

Sasaki That is absolutely true, the smaller the tumor, the less morbidity associated with the treatment and better the outcome.

Chagpar So how many of these cancers are metastatic when you see them?

Sasaki In my practice, about 50%.

Chagpar Wow, Dr. Pearl that goes to your point of, find this early before it spreads all over your body and there are fewer treatment options.

Pearl Correct, a lot of the oral cancers are just small little growths, maybe a little discoloration but are asymptomatic until the lump in the neck starts and forms, that is where there is metastasis.

Chagpar Dr. Sasaki, maybe you can break it down for us, how do you go through the treatment algorithm figuring out how you are going to best treat these patients? Dr. Pearl, you talked a little bit about sometimes there is chemotherapy and sometimes there is radiation and sometimes there is surgery, I would imagine that all of that varies based on how the cancer presents, where it presents and potentially other factors, so how do you figure that out?

Sasaki I think there are some general rules involved, for small cancers, treatment usually includes surgery or radiation, both of which carry very good outcomes, assuming that the disease has not spread elsewhere. For medium size tumors, we offer surgery followed by postoperative radiation and for advanced cancers, we offer induction what is called induction chemotherapy, we shrink the tumor followed by chemoradiotherapy and use surgery as salvage for tumors that do not respond completely.

Chagpar And if cancer has spread, if it has metastasized, then I would assume that the only option is chemotherapy, is that right?

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Sasaki That is a major option for patients who have distant metastasis. There are many forms of therapy available or are becoming available and of course everybody has heard of immunotherapy and so that is an option that most medical centers are exploring.

Chagpar Are there clinical trials looking at immunotherapy in head and neck cancers and do we have any preliminary results that tell us that this is either promising or perhaps not as promising as we think?

Sasaki It looks promising, there is a trial here at Yale and the patient response is only 25% suggesting that it is not by itself curative but when combined with other standard forms of care, may reduce the morbidity from other treatments, like the side effects of radiation therapy or chemotherapy.

Chagpar So I would imagine that the other factor plays into what we are going to use has to do with the anatomy of the head and neck, I mean depending on where the cancers are does that play into whether you are going to use surgery or not? How does that work because when I think about head and neck anatomy what I remember from my first year of medical school is that there are a lot of really intricate vital structures in a very small space.

Sasaki Yeah, if the cancer is involving the vocal cord, for example, the goal is to get rid of the cancer but preserve the voice and you can do that with radiation therapy or if the cancer is found early, you can use laser resection, both of which carry first of all good prognosis and good chance of voice preservation. On the other hand, if tumors are much larger and do involve the vocal cords, our first choice is to use chemoradiotherapy because the results for tumor control are good, I mean not as good as if there are smaller cancers but in that event, the patients can preserve their voices and swallow function.

Chagpar So is laser therapy common? Is this something that you can get almost anywhere or is this something that is only available at larger academic centers?

Pearl For patients that we diagnose with cancers that require laser surgery, we will send them off to see Dr. Sasaki at Yale for further treatment.

Chagpar Okay.

Pearl We find it is mostly the major academic medical centers and when you have a large cancer the care that you get there with multispecialty at your fingertips really makes a big difference, going into a cancer center where you can have the oncologist, the radiation doctor, the surgeon, all conferencing together on a regular basis, it really improves outcomes.

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Chagpar It sounds like the whole multidisciplinary paradigm that we talk about in cancer really is important in head and neck cancers in particular. Dr. Sasaki, let us suppose that somebody did go to Dr. Pearl and got screened and found something early, can you give us a sense of what the prognosis is in early stage head and neck cancers, in late stage head and neck cancers and in between, I mean is this something that people are going to live forever with regardless, or die immediately regardless? I would anticipate that there is some grey area, can you give us a sense of prognosis with treatment?

Sasaki The overall 5 year survival for head and neck cancer is 50% and that figure really has not changed very much over the past 20 to 25 years. However,

small cancers can easily be treated either by surgery or by radiation therapy and overall, carry a prognosis of 5-year survival about 80-90%.

Chagpar Wow, that is pretty good.

Sasaki However, as tumors enlarge and become what we call stage IV cancers because they spread to lymph nodes in the neck that become fixed or extend or involve the bone or cartilage, then we are talking about 5-year survival as low as 10-15%.

Chagpar The point that keeps coming up is exactly what you pointed out, Dr. Pearl, which is that the difference in finding cancers at an early stage versus late stage is really dramatic in head and neck cancers.

Pearl That is right, it is critical. The patients that come in with hoarseness, as we said is one of the risk factors, because the vocal cords vibrate and any growth on the vocal cord changes the voice, those we tend to find earlier because the person comes in complaining of hoarseness and those are the ones that can come in with a stage I cancer and the cure rate and preservation of the voice, but cure rate in their cancer can be up in the range of 97-98% which is excellent but the lesions that form say in the back of the tongue, they do not present right away. They grow slowly or undiagnosed in that sense but they present when they spread to the neck and then the prognosis is significantly lower.

Chagpar Dr. Sasaki, now that Dr. Pearl mentioned tumors on the vocal cord and hoarseness, in terms of if you had a singer or somebody who is a politician or public speaker whatever, are they going to be able to preserve both the quality of their voice with surgery or is this kind of a career killer?

Sasaki Again it depends on the stage of the cancer, so if the cancer involves only the epithelium, the covering of the vocal cord, this can be easily treated by laser surgery preserving voice. If the tumor invades the muscle, then treatments with laser surgery will probably cause some degree of hoarseness which might occur even if you select radiation therapy and of course if the tumor involves deeper structures than just muscle, then you either go to chemoradiation or you go to total laryngectomy which means losing your voice completely.

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Chagpar Dr. Pearl, let us suppose you are a singer, public speaker, whatever, oftentimes you can get hoarse because maybe you had six rehearsals in one week, I mean is there some sort of red flag that you should be thinking, this is not my usual hoarseness, is there a difference in the quality of the hoarseness or a time period that people should really be concerned about?

Pearl We consider 3 weeks of hoarseness an indication to go see your doctor. If you lose your voice after a couple of days and you lose it for a few days and you have an explanation as you were saying, you are going to a concert, you are going to a sporting event and yelling, you have a reason why,

but even after a few days, that hoarseness should go away, there are patients that do scream and can have a little bleeding on the vocal cord that can cause hoarseness that can last months if not longer and those require surgery but that is not cancer, but it is the ones that persist that need to be evaluated to decide, is this something that could easily be treated with surgery or is it a surgically treated noncancerous process or is this cancer that needs a lot more treatment?

Chagpar Because it sure sounds like you need to be vigilant about getting that checked early because it can make the difference between the little laser and being able to preserve your career and a permanent laryngectomy, so after chemoradiation or surgery, what is the follow up? I mean is this something that people need to continue to be screened for, are there tests that they need to have done, CAT scans, PET scans, and so on, you mentioned that there were no biomarkers to kind of see whether the cancer has recurred Dr. Sasaki, so what is the follow up like?

Sasaki The standard follow up is 3-month interval checks for the first year, six months the second year, and then yearly for a total of 5 years and we do that because the incidence of what we call second primaries, that is cancer that has not been cured but can result in development of a new cancer within 5 years, is very high and the cancer approaches about 30%, so it behooves patients to continue follow up even though they may be completely cured or feel cured and are asymptomatic.

Chagpar And so do they follow up with their surgeon or with their primary care doctor, how does that happen?

Pearl Typically patients will need to follow up with the surgeon who did the surgery or possibly the ENT doctor who referred them to the surgeon depending on the convenience of where they live and we try to make it easier for them because they are getting regular follow up. This second primary is a big concern to us because whether they have the risk factors of tobacco or alcohol or HPV, those risk factors do not decide, well I am just going to go to the base of the tongue or going to go into the head and neck area, so there is no reason why it cannot affect the tongue, the vocal cord and the lining of the mouth or all 3 of them at the same time, so we really want to keep a close eye on them.

Dr. Adam Pearl is Chief of Otolaryngology of Bridgeport Hospital and Dr. Clarence Sasaki is Charles W. Ohse Professor of Surgery at Yale School of Medicine. We invite you to share your questions and comments, you can send them to canceranswers@yale.edu or you can leave a voicemail message at 888-234-4YCC and as an additional resource, archived programs are available in both audio and written form at yalecancercenter.org. I am Bruce Barber hoping you will join us again next Sunday evening at 6:00 for another edition of Yale Cancer Center Answers here on WNPR, Connecticut's Public Media Source for news and ideas.