Yale CANCER CENTER answers

WNPR Connecticut Public Radio

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Treatment of Head and Neck Cancer

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Yale Cancer Center Answers

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Welcome to Yale Cancer Center Answers with your hosts doctors Francine Foss and Anees Chagpar. Dr. Foss is a Professor of Medicine in the section of Medical Oncology at Yale Cancer Center and is an internationally recognized clinician and clinical researcher. Dr. Chagpar is Associate Professor of Surgical Oncology and she is a Director of the Breast Center at Smilow Cancer Hospital at Yale-New Haven. Yale Cancer Center Answers features weekly conversations about the most recent advances in the research diagnosis and treatment of cancer and if you would like to join the conversation, you can submit questions and comments to canceranswers@yale.edu or you can leave a voicemail message at 888-234-4YCC. This week you will hear a conversation about head and neck cancers with Dr. Hari Desphande. Dr. Desphande is Assistant Professor of Medical Oncology and of Surgery in Otolaryngology at Yale School of Medicine. Here is Dr. Anees Chagpar.

Chagpar Hari, we talk a lot about cancer on this program, but most of the cancers that people know about are breast cancer and colon cancers, you treat head and neck cancers. Tell us a little bit more about what that encompasses?

Desphande Actually it is a little bit of a misnomer because we call these cancers head and neck cancers but we actually do not talk about cancers of the brain or of the scalp or other areas like that. We are mainly talking about cancers of the throat and the mouth and what we in medicine call the upper aerodigestive tract, and the reason we lump them altogether is because they all tend to behave the same way. They are all the same type of cancer, squamous cell cancers, and they all tend to occur in a small area and then grow to a certain size. They can involve local lymph nodes in the neck, but they do not tend to spread to other parts of the body unlike some of the other cancers that you mentioned until very, very late on in that course.

Chagpar How do these present? With breast cancer we get a lump, with colon cancer we have some blood in the stool, it would seem to me that these cancers in the mouth may be a little bit harder to detect.

Desphande You are absolutely correct, and we have all experienced sore throats and a cough, and a hoarse voice and these are some of the symptoms that these cancers can cause. However, whereas an infection causing a sore throat will usually get better in a couple of weeks, if it does not get better in that time, especially in someone who has risk factors for having that cancer, then we would want to investigate it more.

Chagpar For people who are listening, who are thinking about cancer and taking care of their health, if you have a sore throat that does not get better after a couple of weeks, you should go see your doctor, what are other symptoms of mouth cancers and tongue cancers? Can you get cancers in those areas too?

Desphande Absolutely, and in fact the cancers in the base of the tongue, that is the back of the tongue, and in the tonsils are actually becoming more frequent, and we are beginning to see them now in people who have never smoked a single cigarette in their lives and that is because they are associated with viruses instead of with cigarettes, but these cancers can often present with a change in your voice, or they might present with difficulty swallowing, and sometimes they will show up as a lump in

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the neck and this is when one of the lymph nodes in the neck has become involved with the cancer and has started to enlarge to the point where you can actually feel it, either yourself or your physician will be able to feel it.

Chagpar A lot of symptoms that might fly under the radar, I have a bit of a sore throat and may have a little bit of a lump in my throat, maybe my voice changes a bit, but are these things your family physician will routinely check for on a physical exam? Or are these things that there are screening tests for like for breast cancer we go for mammograms, for cervical cancer we go for Pap smears. What do you do for head and neck cancers?

Desphande Right now we do not have a good screening test. We do not have the equivalent of a Pap smear, mammogram, or PSA test as for prostate cancer. What we have started to do since 2005 is run a head and neck screening day here at Yale and anyone can come on that day. Head and neck cancer awareness week this year is April 28, 2014 to April 26, 2014, and on April 25, 2014, probably at Smilow, although the venue has not been finalized yet, there will be a head and neck screening day. Last year over 300 people attended and were screened for evidence of head and neck cancer. All this involves is a physician or a nurse having a look in the mouth with a mirror, or special equipment, to make sure that they do not see any cancer there and this is after taking a very detailed history and finding out what symptoms they have, but unfortunately we do not have a great x-ray like a mammogram to help determine whether or not someone may have this cancer.

Chagpar So just by looking in the mouth, do you find cancer? How many of those 300 people did you pick cancers up with and/or what would you think would the average prevalence would be?

Desphande It is going to be pretty low in the normal population, so my message to the listening public is if you have these symptoms, the chances are you do not have cancer. But if they persist for a long time, it is worth seeing your physician. Out of those 300, I think probably much less than 10% would end up being diagnosed with cancer.

Chagpar Good to know. You talked a little bit about it and I would like to get back to the whole concept of risk factors. Are there things that people may be doing that increase their risk? Or things that they could do less of that would reduce their risk of getting these cancers?

Desphande This has changed over the past three or four decades, but still the main risk factors are smoking cigarettes and drinking alcohol and cigarette smoking is the main cause in head and neck cancer, alcohol seems to make this worse, but alcohol by itself does not appear to be a risk factor for head and neck cancer. Having said that, as I mentioned earlier, there are a couple of viruses that we now know cause cancers in the head and neck and one of these is the same virus that causes cervical cancer that is the human papillomavirus, and another virus is the Epstein-Barr virus (EBV), which can cause nasopharynx cancer. It can also cause a lot of other cancers and it has been associated with other diseases in people.

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Chagpar How do people get these viruses? I know with HPV and cervical cancers, a lot of people know that this is sexually transmitted. Is it the same phenomenon for oropharyngeal cancers and what about Epstein-Barr? Isn't that the virus that causes mono?

Desphande That is correct. It is the same virus that causes mono. In terms of causing nasopharynx cancer, it does appear that maybe there is an environmental factor as well because nasopharynx cancers are much more common in certain parts of the world such as parts of Africa and South East Asia. So, we do not really know what else you need to have in order to cause nasopharynx cancer but certainly the virus is very important. Human papillomavirus or HPV on the other hand is probably related to a change in sexual practices over the past four decades and that is why we are beginning to see an increase, whereas we did not see as much of it back in 1970, when these records were first started.

Chagpar Talking about HPV, one of the big things that has happened is vaccines against HPV. Do they have a role to play in head and neck cancers?

Desphande I think they will. I think it is too early to say, but certainly in cervical cancer it seems to be one of the best advances we have had in cancer treatment, or prevention, for a long time, and I think the knock on effect of vaccinating boys and young men and girls and young women against the HPV virus will be not only to reduce cervical cancers, but also to reduce the instance of oropharyngeal cancers as well.

Chagpar When you talked about the geographic variation in cancers, one of the things I had heard about was that particularly in India, there is a betel nut type thing that people eat that is made up of a leaf and some spicy candy, and the concept that that may be related to oropharyngeal cancer. Is that true?

Desphande Absolutely, it is any carcinogen that you chew basically, but that particular one is very common as you mentioned in parts of India and it stays in the mouth long enough that it probably can cause changes that eventually we will lead to cancer and those cancers tend to be in the oral cavity, which is the first part of the mouth that any carcinogen, whether it is cigarettes smoke or alcohol or the betel nuts, can get to and this includes the front of the tongue, the cheek, underneath the tongue which we call the floor of the mouth and these cancers are sometimes caused by those particular agents. A lot of people chew tobacco in this country and that is another risk factor for it as well. We used to see that these cancers in people who smoke pipes for some reason were more common in the mouth then further down in the aerodigestive tract. Those cancers I think are getting less especially as people do not smoke as much and the habits change with time as well, though we do still see some.

Chagpar Let's suppose you smoke and you have had a change in your voice or sore throat and you go to your doctor and your doctor looks inside your mouth and actually finds a lump, what is the next

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step? How do they make the diagnosis of whether that is just a lump in the back of your throat that might be nothing versus a cancer?

Desphande It depends which doctor the patient is seeing. If they are seeing a general practitioner usually the next step would be to refer them to a specialist, either an ear, nose and throat surgeon or, and we are lucky enough to have at Yale, head and neck cancer surgeons, and what they will do is they will have a look using a flexible laryngoscope, which is a flexible telescope that goes into the nose, or the mouth and can see very clearly what is going on and they can take a biopsy at that time and this can be done actually when the patient is in the office. Also, oftentimes these patients will have a lump in the neck, the lymph nodes may be enlarged, and so either a physician or a technician can put a very small needle into that lymph node and get a small sample to send off to the lab and that is often enough to make the diagnosis of squamous cell cancer and sometimes we will say in medicine, the more tissue you get, the better, but this is one case where we only want a small sample because the surgeons want to be very-very careful that they do not take too much out that might change the final operation they do. So they will often put a very skinny needle into a neck node, take a very small area right in the neck, and that gives them a choice later on whether they have to remove all the lymph nodes in the neck or whether we can just treat with radiation.

Chagpar And is that skinny needle biopsy enough to be absolutely sure that this is cancer?

Desphande I would say usually if it is squamous cell cancer, the pathologists are very confident that they can make the diagnosis. If it is a different kind of cancer, if this is a lymphoma for example, then it would not be enough tissue, but the pathologist can say at that point, this does not look like squamous cell carcinoma, I think we need more tissue.

Chagpar We are going to stop right there for a brief break for a medical minute. When we come back, we will talk more about squamous cell cancers of the head and neck as well as other cancers of the head and neck with our guest, Dr. Hari Desphande.

Medical Minute *This year over 200,000 Americans will be diagnosed with lung cancer and in Connecticut there will be over 2000 new cases. More than 85% of lung cancer diagnoses are related to smoking and quitting even after smoking for decades can significantly reduce your risk of developing lung cancer. Each day patients with lung cancer are surviving thanks to increased access to advanced therapies and specialized care. New treatment options and surgical techniques are giving lung cancer survivors more hope than they have ever had before. Clinical trials are currently underway at federally designated comprehensive cancer centers like the one at Yale to test innovative new treatments for lung cancer. An option for lung cancer patients in need of surgery at Yale Cancer*

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Center is a video assisted thorascopic surgery also known is a VATS procedure, which is a minimally invasive technique. This has been a medical minute and you can find more information at yalecancercenter.org. You are listening to the 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 today by my guest, Dr. Hari Desphande. We are talking about head and neck cancer, a fairly rare cancer when we think about it, and Hari you were telling us right before the break that the majority of these are squamous. What does that mean exactly?

Desphande This is the term we use for the appearance of the cancer cell when the pathologists look at it under the microscope so, whereas breast cancers might have a very characteristic appearance, squamous cells look very different from that. They are often a little bit flatter in terms of the appearance that the pathologist will see and they can look at the outside of the cell and see whether it is producing something called keratin and they will also do various markers on the cell, such as something called p63 which is just a protein that they look for on the outside of the cell and if it shows up it is more likely to be squamous cell than another kind of cancer.

Chagpar So the majority of these head and neck cancers are squamous cell cancers. How are they treated? Let's say they put that skinny needle down my throat, gosh, and they tell me that I have this squamous cell cancer, who would I go to see, would I go to see a medical oncologist or a surgeon or radiation doctor and what is the course of treatment, what can I expect?

Desphande Well firstly, before all the listeners get scared, the needle is usually put into the side of the neck. The telescope is put down into the throat and I know they cannot take a biopsy, but it is done in the much more humane way than sticking a needle down your throat.

Chagpar Thank goodness for that.

Desphande As far as the treatment goes, head and neck cancer is like most of the other cancers that we treat, it is very much a multidisciplinary approach that is involved and I know you treat breast cancers, but even more than say with breast cancer because we really rely on our colleagues in surgery and radiation to come up with the plan, and it often involves all three specialties working very-very closely together at all stages of the disease and so we have, as you do, a multidisciplinary tumor board meeting once a week where we all get together and go over any new cases, we look at the images from the scans they have had as well as the pathology and come out with a plan that all of us agree on and this can often include initial operations and then radiation afterwards or sometimes just radiation and chemotherapy, or any combination of all three.

Chagpar It seems like a really complicated way of thinking about it, how do you decide what is the best plan?

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Desphande It is very-very individualized, as those cancers of the larynx, which is the voice box, we can either treat with surgery or radiation or a combination of surgery and radiation or even adding chemotherapy if it is more advanced and we take the patient into account if they host a radio show, for example, they do not want to lose their voice so they do not want a big operation, this can remove the voice box, they may want to choose chemo and radiation instead whereas someone who does not have that in mind and just wants the quickest way of achieving the best response will choose surgery first. So, it is very-very individual.

Chagpar If that was the case and say it were me, and you are quite right, I would not want to lose my voice because I love doing this show and hope the listeners enjoy it as well, but I would not want to have a survival decrement simply to continue to have a good radio voice. Is surgery the same as chemotherapy and radiation or is one better than the other?

Desphande It depends on the stage of the cancer. For most cancers the stages are I, II, III or the early stage IVs and head and neck cancer is slightly different from some of the other cancers in that we have three stage IVs. So stage IV cancer in head and neck is not as bad a prognosis as it might be in some other cancers. In fact stage IVA cancers are still considered treatable and curable by surgery, radiation and chemotherapy but for larynx cancers, having looked for many decades at a lot of different studies, we know that adding chemo and radiation together is the equivalent to surgery in the majority of people with larynx cancers up to a certain stage.

Chagpar So you could do chemotherapy and radiation and still keep your voice and not have to go through surgery?

Desphande That is correct.

Chagpar That does not sound so bad. What are the side-effects of surgery and radiation?

Desphande I would say that the side-effects, unfortunately, for the treatment of head and neck cancer are quite severe and it is important that patients know this going into the treatments. The radiation for head and neck cancer is typically a 7-week course and we often add chemotherapy to that. At the beginning of the treatment most patients do not really have too many side effects. By the end though, they will often have redness and breakdown of the skin on the neck, they will have a lot of pain and difficulty swallowing and they will lose a lot of weight during this, they will lose their voice or at least have a change in their voice and those symptoms will continue for a couple of weeks after the end of radiation, but then they get better and a few months after the treatment most people are almost back to normal. They do lose their salivary gland function, in other words, normally we produce a lot of saliva during the day and we do not notice that our mouth gets dry. If you cut that down by half or a lot more which happens when you radiate salivary glands, then you have people who suffer from a dry mouth all the time. They have to carry a bottle of water with them but it is I think a small price to pay for getting rid of the cancer at the end of the day.

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Chagpar What about the side-effects of chemotherapy? Does your hair fall out and all of that?

Desphande There are general side effects of chemotherapy, typically when we give chemo and radiation together, which we often do for head and neck cancers, we do not see as much of those side effects, we are often only using one medicine at a time and we often use it once a week at a small dose. So we still do have people who have nausea or sometimes changes in taste because of the chemotherapy but generally I would say the side-effects of chemotherapy are much less than the side effects of the radiation. However, when we give the same chemotherapy for metastatic disease, when it spreads to different parts of the body, we will use it often in much higher doses and then you do begin to see the hair loss and the nausea that you mentioned.

Chagpar Suppose you have your cancer diagnosed and it is a fairly early stage, somewhere between I, II, III or even VIA as you say, and you have it treated with trimodality therapy. You have surgery, plus or minus radiation, plus chemotherapy. What is your prognosis?

Desphande It again depends on the stage. At stage I, cancer often has a very, very good prognosis, over 80% or 90%, in other words we're curing most of those patients. If those patients are smokers, however, then even if the cancer occurred in one spot, say in the larynx, we have to follow them very closely from that point onwards. The whole of the lining of the mouth and throat has suffered what we call a field defect. We see cancers popping out almost anywhere from the lips all the way down to the larynx. So an ENT surgeon has to periodically have a look down to make sure that there is not a new, what we call, a second primary cancer. The first cancer has a very good prognosis. For some of the later stages the prognosis does go down and it surrounds probably a 40% or 50% 5-year-survival with some of the stage IV cancers and there is one exception to that, and that is the HPV, or the human papilloma virus, cancers in people who have never smoked cigarettes. These people have a very, very good prognosis when treated with chemo and radiation and in fact, the prognosis is so good that at Yale and many other places we are trying to cut down on the treatment, we are even bringing surgery back in where we wouldn't normally have used it in the past to try and avoid having to give as much radiation or as much chemo and radiation.

Chagpar I get the fact that the lining of the mouth and the upper aerodigestive tract is all one field, and so if you get a cancer in one area, particularly if you are a smoker, that whole field has experienced that same toxin, but I thought chemotherapy went all over your body, wouldn't that help with that field effect?

Desphande That is a very good question and I get asked that question all the time and I think while chemotherapy does go all over the body it is not as good for head and neck cancer as it is say for breast cancer and I think that is one of the things that we are beginning to work on more and more. So we can give chemotherapy, but we are talking about 40% or 50% response rates and that is not good enough to treat cancer effectively in different parts of the body to cure that cancer and it does not appear to be good enough to prevent cancer. We do not have a tamoxifen or preventative treatment yet for head and neck cancer.

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Chagpar I guess the prevention is, do not smoke.

Desphande Absolutely.

Chagpar What happens if you smoked, you got a head and neck cancer, if you quit smoking, will you reduce your risk of a second primary?

Desphande Yes, in fact if you continue to smoke you double the risk of a second primary. So we are always very conscious about people who continue to smoke. We are lucky at Yale to have a very, very good smoking cessation program here and we will refer people to that to try and get them to stop smoking because it really does make a difference once they get rid of that first cancer.

Chagpar When you talk about smoking cessation, we talked a little bit about people who chew tobacco, if you were to chew Nicorette, the gum that has nicotine in it, does that increase your risk or is that better because you are quitting smoking?

Desphande That is a very good question and I have to admit, I do not know the answer to that question. My feeling is that it would not be as bad as continuing smoking and probably does not increase your risk as much as chewing other things like straight tobacco or betel nuts.

Chagpar We talked a little bit about the fact that chemotherapy for head and neck cancer does not have a perfect response rate, but one of the things that so many of our guests on the show talk about and I think is really beginning to become the Holy Grail of cancer therapies, is targeted therapy. Is there such a thing in head and neck cancer?

Desphande There is and we have a targeted therapy already available for head and neck cancer called cetuximab, it is an antibody against one of the proteins called EGFR which is over expressed. In other words, there are too many of them on squamous cell cancers as compared to normal body cells and when we combine that medicine with radiation the results are much better than if these patients just got radiation alone and also when we combine it with chemotherapy we can improve the survival on chemotherapy alone. Again, it is not a cure for the patients who have metastatic disease but it is certainly an advance from what we had before and that medicine is already FDA approved but there are other targeted therapies that are being looked at and I think one of the most exciting ones is a medication that we have had a lot of experience with at Yale, and it is targeting the immune system. I am sure some of your other guests have spoken about it on the show, that basically what we feel is that some cancers turn off the immune system by effecting cells called T-cells and if we can turn the immune system back on again by blocking whatever the cancer does to turn off the immune system, then we can allow the body's own immune system to get rid of that cancer, hopefully. One of those medicines is an antibody against a protein called PDL1.

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Dr. Hari Desphande is Assistant Professor of Medical Oncology and of Surgery and Otolaryngology at Yale School of Medicine. We invite you to share your questions and comments with the Doctors. You can send them to canceranswers@yale.edu or leave a voice mail message at 888-234-4YCC. Archived programs from 2006 through the present are available in both audio and written versions at yalecancercenter.org We would like to thank Yale Cancer Center for providing production support as part of connecting our communities. I am Bruce Barber hoping you will join us again next Sunday evening at 6 for another addition of Yale Cancer Center Answers here on WNPR Connecticut's Public Media Source for news and ideas.