

Support for Yale Cancer Answers is provided by AstraZeneca, working to pioneer targeted lung cancer treatments and advanced knowledge of diagnostic testing. More information at [astrazeneca-us.com](http://astrazeneca-us.com)

Welcome to Yale Cancer Answers with doctors, Anees Chagpar and Steven Gore. I am Bruce Barber. Yale Cancer Answers is our way of providing you with the most up-to-date information on cancer care by welcoming oncologists and specialists who are on the forefront of the battle to fight cancer. This week it is a conversation about nutrition for cancer patients with Heidi Larson and Amy Bragagnini. Both Heidi and Amy are registered dietitians at Smilow Cancer Hospital. Dr. Gore is a Professor of Internal Medicine and Hematology and Director of Hematologic Malignancies at Smilow.

Gore So, could you tell, either of you, sort of what is the role of a nutritionist in cancer care.

Bragagnini Okay, I will go ahead and take this one first. I think a dietitian role in cancer care is really just to help the patient optimize their nutrition, the patient and caregiver optimize their nutrition before, during and after treatment, to come up with ways to creatively eat in a way that can keep their energy levels up, that can help boost their immune system and just promote healing and well-being throughout the journey.

Gore So, do cancer patients really have to undergo major dietary changes for the most part?

Bragagnini They often do, Dr. Gore, and it depends on the circumstances, but frequently a patient might need to temporarily follow a special diet following surgery or if they are getting radiation, depending on the location of the radiation, they might need to adjust their diet such as lowering the fiber content or they might be limited in what they can swallow, so they might need to change the consistency of their diet as well.

Gore I can imagine, people with head and neck cancer or throat cancer or esophageal cancer, there could be major problems there post-op I would think.

Bragagnini They face huge challenges with swallowing. So, part of our role is to help them find foods that they can swallow properly, get enough calories and protein and find some enjoyment in the food that they are eating.

Gore I know. Some patients in those circumstances actually do need feeding tubes for a while sometimes right?

Bragagnini That's true. Sometimes, often after surgery, patients will see a speech pathologist and either get the go ahead to start eating and swallowing, but sometimes they will need a tube, a feeding tube, placed and they will not be able to eat for a period of time. So, especially around the holidays, that can present a lot of challenges and often lead to feelings of depression because you are not involved in the social interactions that you are used to.

00:03:15 into MP3: [https://ysm-websites-live-prod.azureedge.net/cancer/2017-yca-1224-podcast-larson\\_323853\\_5\\_v1.mp3](https://ysm-websites-live-prod.azureedge.net/cancer/2017-yca-1224-podcast-larson_323853_5_v1.mp3)

Gore Nutritionists, of course, I assume get involved with helping with the diet if they are being fed through tube, I mean it is your bailiwick, isn't it?

Bragagnini Yes, we often prescribe the formula, make recommendations to maintain hydration, and often the formula is premade for people, but sometimes we will even work with patients to create their own formula that they can make at home and administer themselves.

Gore Is that a cost saver or it does better?

Bragagnini Often people want to do it because they want to feel that life is more normal.

Gore They're cooking right? Interesting. And you continue to see the patient through their treatment.

Bragagnini Yeah, often we will see them through their treatment and in certain circumstances follow up with them for many weeks or months after as well.

Gore It is interesting as you shared about that, I recently cared for an elderly man with a new diagnosis of lymphoma that was arising in his thyroid gland and was precluding him from being able to swallow. And while he was not really sure that he wanted to do a lot of treatment, his real goal even if he was going to have a very limited lifetime was to be able to eat again. And so, he wanted to start treatment because all he wanted to do was eat; he wanted to be able to eat. And then if he died in a month that would be worth it for him, and I was very impressed with that really. I do not hear that a lot from people, maybe you guys do?

Bragagnini You know, I was just telling Heidi I have a patient right now saying exact thing. He derives so much pleasure and so much joy out of eating and that is definitely part of his motivating factor to continue with treatment and to try to be as compliant as possible throughout the devastating effects of the head and neck cancer treatment, to try to be diligent by following the dietitian's recommendations and taking in the amount of calories and the grams of protein that he needs to heal even though the side effects are really challenging and debilitating.

Gore Well, let's move away from kind of what I think sounds like one of the more extreme scenarios in the head and neck cancers, it is kind of its own world, and talk about sort of more conventional less obstructive kind of problems of whether it is people with breast cancer or lung cancer or leukemia or lymphoma who are just getting chemotherapy or radiation, do they face challenges with eating as well?

00:05:50 into MP3: [https://ysm-websites-live-prod.azureedge.net/cancer/2017-yca-1224-podcast-larson\\_323853\\_5\\_v1.mp3](https://ysm-websites-live-prod.azureedge.net/cancer/2017-yca-1224-podcast-larson_323853_5_v1.mp3)

Bragagnini Yes. Well, not all of them, but often times depending on the type of treatment that they are getting, some side effects can occur and that is kind of where the dietitian can come in and help the patient and the caregiver manage some of the side effects. So for example, one of the most common side effects I hear is low appetite, patients just saying that they are not very hungry or they might get fuller faster, so then we help them come up with creative ideas to increase say healthy, smoothie intake or ways to still get enough fruits and vegetables by sneaking them into maybe higher calorie dishes, just so they can maintain their weight through treatment. Another really tough side effect is taste changes during treatment.

Gore Yes. That is what I hear a lot about, can you tell us about that.

Bragagnini Yes. So, some of the taste changes that people experience are I hear often: #1 would be things taste like cardboard...

Gore Or metal I hear.

Bragagnini Metal is another one. Things are too sweet, things are too salty...

Gore Nothing tastes good.

Bragagnini Nothing tastes good. So, using tools that actually registered dietitian, Rebecca Katz, is a chef and she has produced several cookbooks that come up with creative ways to help manage each of the taste changes and she uses something called FASS. Do you want tell, say a little bit more about that Heidi?

Larson So, FASS is a method of cooking and it is an acronym for Fat Acid Sweet and Salt. So, if you use that combination in cooking, often you can find a flavor profile that you enjoy. So, for example, I'm always sending people out for Thai food or Chinese food, because that type of cooking uses those four components. Another thing, if something is tasting too metallic to somebody, we tell them to use a sweetener like maple syrup and something, or to use a little bit of salt.

Gore How does that help? Larson So, it covers up the metallic taste. If somebody is finding that things are too salty, sometimes it can mean that they are dehydrated. So, actually improving your hydration can help improve sensitivity to salt. If somebody is sensitive to sweet, we will often have them add something bitter, so somebody is having a milk shake and it is a little too sweet for them, adding a shot of espresso can make it taste better.

Gore Okay, I was going to say vinegar kombucha.

Larson Yes, that as well.

00:08:40 into MP3: [https://ysm-websites-live-prod.azureedge.net/cancer/2017-yca-1224-podcast-larson\\_323853\\_5\\_v1.mp3](https://ysm-websites-live-prod.azureedge.net/cancer/2017-yca-1224-podcast-larson_323853_5_v1.mp3)

Gore Kombucha is probably not appropriate for some of our patients because it has bacteria and stuff...

Bragagnini Even sometimes buttermilk, sorry to interrupt you...

Gore No please...I was going to go on how I raise kombucha...

Bragagnini I was interested, we can talk about that later.

Gore I got recipes.

Bragagnini But certainly, like Heidi was saying I think that buttermilk and avocado, you just kind of get creative with the way your patient is and then coming up with ideas for things that might actually tickle their fancy.

Gore You know, it is so interesting and I am wondering just from a scientific point of view we have been taught and I think I still believe there is so much taste is really smell, comes through smell, but do you know whether the treatment is affecting the patients smell as well or I mean is there any way that I can get them to inhale flavor, do you work with that at all or am I off-based totally?

Larson I think one of the issues that happens with smell is really a smell sensitivity, so people who have a tendency to have nausea tend to be very sensitive to smells and often we will provide advice based on that as well and we advise them to stay away from cooking smells and actually one of the best pieces of advice that I have received was from a patient who told me that she just bought peppermint oil, put a little bit on her wrists and whenever she smelled something that made her feel nausea, she would just sniff her wrist and it would take care of it. So, a lot of advice that we get is often produced by patients and solutions that they have found.

Gore And now on the holiday season, there is all these like candy canes which are peppermint right? So, keep our candy canes around folks. That is really interesting. What about appetite stimulants. Do you ever recommend medicines to stimulate appetite?

Bragagnini So, that is a great question. Obviously, there are a few medications that can help improve appetite. As our role as a dietitian is not necessarily to recommend the physician to do that; however, we can bring awareness if patients are struggling with appetite, we can be an integral part of the team to say, you know, this patient is losing weight, does not have an appetite, we have tried supplements, we have tried various things, maybe an appetite stimulant might be warranted at this time. I have lots of patients that are asking me about medical marijuana and lots of care providers as well, and so that is just a conversation that I validate and then I bring up to the care team to see what the next step is and if that is appropriate.

00:11:26 into MP3: [https://ysm-websites-live-prod.azureedge.net/cancer/2017-yca-1224-podcast-larson\\_323853\\_5\\_v1.mp3](https://ysm-websites-live-prod.azureedge.net/cancer/2017-yca-1224-podcast-larson_323853_5_v1.mp3)

Gore When there is an intervention, do you get follow-up from the patient about medical marijuana for example was prescribed and they went to their dispensary, and have you heard any results from say that or from some of the other medications we sometimes use, a female hormone, Megace, that is a suspension that I find to be often quite effective.

Bragagnini Yeah. In follow-up, I am very interested to see if it has made any improvement, and just anecdotally, certainly with medical marijuana, I probably have heard the most positive results as far as improving appetite. With Megace, in some patients eventually it works, but I always tell them to be patient.

Gore Yeah...it takes at least a week.

Bragagnini It takes some time and I know a lot of my older, especially female, a little bit on the stubborn side maybe patients will not give it that much time and they will take it for a few days and just say forget this, it is not working.

Gore And if they are older end of the baby boom generation, they want to get their munchies back from what they remember from a few years ago. Not that I have any experience with that...

Bragagnini I don't know what you are talking about.

Gore Yeah. You were talking about the various flavors and either hypersensitivity or decreased sensitivity to various flavors, and you know, one of the flavors that we are just learning about at least in the lay press, maybe you guys have known about for a long time as umami and that is like the mushroomy or rich MSG flavor I guess. Is that affected by chemo, is that a good thing, a bad thing or is it not really studied?

Larson So, I think the reason Chinese food or Thai food is so popular is because of the umami flavors that are in it.

Gore Oh, really. So, the richness is good?

Bragagnini Yeah. A lot of times, people think that they have to use less flavor when somebody is going through chemotherapy treatment, but often you have to use more flavor, more herbs, more spices because treatment can dull the taste buds. So, by using a little more spices or a little more sauces, it can waken up the taste buds so people can taste better.

Gore That's great. Well, you are not really making me hungry because I had a big breakfast and I am drinking cappuccino, but I would be hungry if I hadn't, but right now, we are going to take a short break for a medical minute. Please stay tuned to learn more information about nutritional support for cancer patients.

00:13:58 into MP3: [https://ysm-websites-live-prod.azureedge.net/cancer/2017-yca-1224-podcast-larson\\_323853\\_5\\_v1.mp3](https://ysm-websites-live-prod.azureedge.net/cancer/2017-yca-1224-podcast-larson_323853_5_v1.mp3)

Medical Minute Support for Yale Cancer Answers is provided by AstraZeneca, a science-led biopharmaceutical company dedicated to elevating conversations about biomarker testing to improve outcomes for advanced cancer patients. Learn more at [astrazeneca-us.com](http://astrazeneca-us.com). This is a medical minute about head and neck cancers. Although the percentage of oral and head and neck cancer patients in the United States is only about 5% of all diagnosed cancers, there are

challenging side effects associated with these types of cancer and their treatment. Clinical trials are currently underway to test innovative new treatments for head and neck cancers, in many cases less radical surgeries are able to preserve nerves, arteries and muscles in the neck, enabling patients to move, speak, breathe and eat normally after surgery. More information is available at Yale-CancerCenter.org. You are listening to WNPR, Connecticut's public media source for news and ideas.

Gore Welcome back to Yale Cancer Answers. This is Dr. Steven Gore. I am joined tonight by my guests Amy Bragagnini and Heidi Larson, who are registered dietitians at Smilow Cancer Hospital. We have been talking about ways of encouraging nutritious lifestyles and maintaining people's appetite and weight during cancer treatment. Guys, right before the break we were talking about this umami flavor and Heidi I think you were saying that is maybe why some of the Asian foods are so helpful because of this umami thing. I recently read a piece in maybe it was in New York Times or maybe came on Facebook feed or something about like these umami supplements that are made from I guess shiitaki mushroom powder and that apparently can be added to any food and it makes all foods better. Do you guys have any experience with that?

Bragagnini I personally have not heard of it. I guess I would be interested to read a little bit more about it. I am always a little hesitant when it comes to new great ways that are in a powder or supplement form as far as safety I guess and purity, but anything that might be beneficial, it is worth looking into.

Gore Yeah, I mean I was thinking of ordering some because it really made us all think it was the magic thing that makes every dish taste better because of the umami thing.

Bragagnini Well, it is interesting you say that, as Heidi was talking, I was thinking another thing that can happen during treatment is just an overall decrease in saliva. You know, the less saliva you have, the less kind of flavor impact you have. So, that is kind of part of it as well, you know like Heidi had mentioned adding sauces and maybe again this umami supplement turns out to be pretty golden, that is something that we can implement as well in a sauce form.

Gore Maybe we can do some control trials together tomorrow. I like to cook.

Larson Actually, I have not heard of this new umami pill, but there is a fruit called a magic fruit and I read an article about it in The New York Times a few years back and you can purchase it as a fresh fruit or you can purchase it, they extract it and have in a pill, but I had a patient who only liked sweet foods, and this magic berry makes everything taste sweet, so if you eat the berry for an hour or two, it will make a lemon taste sweet. So, I had...

00:17:32 into MP3: [https://ysm-websites-live-prod.azureedge.net/cancer/2017-yca-1224-podcast-larson\\_323853\\_5\\_v1.mp3](https://ysm-websites-live-prod.azureedge.net/cancer/2017-yca-1224-podcast-larson_323853_5_v1.mp3)

Gore Have you tried it?

Larson I have not personally tried it, but told her about it. She and her family tried it and had a little party with it.

Bragagnini I was going to say is it a hallucinogen or..?

Larson So it only effects your taste, you can buy it like at specialty shops in New York City or you can buy like the extract online.

Gore Interesting. I have never heard of that. This is not acai berry, is it one of those things?

Larson No.

Bragagnini Yes, I had to look it up. I was asked about it and I said the same thing. I was not even sure, there are so many words that are a little confusing...like assai – the magic. It is kind of like of magical, it is not.

Gore But it is not the magic?

Bragagnini No, but it is filled with antioxidants. It is considered pretty great and you can only get it from Brazil.

Gore So, again it is the holiday season and I think that depending on which culture you come from and what your family traditions are, everybody has got some special holiday food that means a lot, and you know, my family were Jewish, it would be potato latkes around Hanukkah or potato latkes anytime around the year because they are so bad for you. You know we had a bunch of German Au Pairs that were stolen, the German Christmas cake that was Christmas for them. And so, do you have experience with our cancer patients who they would really, maybe it is turkey or ham or rabbit if you are Italian or they have a feast of bunch of fishes and Italian thing around Christmas? As I recall, excuse me my Italian listeners if I have got that wrong, but I am pretty sure it is feast of fishes or 12 fishes or some number of fishes. I love fish. But you know, when fish is really like is what they love, but it is like the idea of eating fish right now is like ugh.... what do we do, what do we do for those people?

Bragagnini I think sometimes we want to help people enjoy the holidays as much as possible and certainly like we mentioned earlier, food is a very big part of that. The tricky part is if someone is in the crux of treatment and struggling with intermittent nausea or vomiting, eating favorite foods might not be a greatest idea, especially if you had a bad experience and unfortunately gotten sick off of your favorite food, I cannot even look at eggs to this day, long story; so, I feel...

Gore You?

00:20:00 into MP3: [https://ysm-websites-live-prod.azureedge.net/cancer/2017-yca-1224-podcast-larson\\_323853\\_5\\_v1.mp3](https://ysm-websites-live-prod.azureedge.net/cancer/2017-yca-1224-podcast-larson_323853_5_v1.mp3)

Bragagnini Yes, I have learned food aversion. So, I feel that when it comes to favorite foods around the holidays, again it is our job to kind of assess where the patient is, and if they are feeling relatively well, then we can help them maybe insert those foods maybe in a different way. So, for example, if going back to the

head and neck cancer patient example, if someone has difficulty swallowing and they just desperately wanted a piece of pumpkin pie, you can certainly make a pumpkin milkshake or make a healthy pumpkin smoothie and still get the flavor of the pumpkin maybe not the chewing part of it, but at least the flavor would be there, and same thing with eggnog. I think again a lot of times, patients just want to be around their families and they want to make it as normal as possible.

Gore And of course if they are having the smell aversion, that could be a real problem with all the delicious what we think of as delicious family smells no longer has that effect to make someone go into the other room.

Bragagnini You know, it can and certainly I have had many patients that just say that it pains them to be around their family and watch them eat. So, it is tricky and I feel for those people so much. And then, maybe finding then recommendations for making other holiday traditions that maybe do not revolve around food, certainly time with family, doing other things might be a good memory for them too.

Gore It is interesting what you said about the smell aversion. I am recalling, in my previous workplace at Johns Hopkins in Maryland, the food service changed their food delivery in a way that was much better for delivering food hot. It has to go from the main kitchen to wherever, it is a big campus like many big medical centers and it was so effective when you took the lid off that patients were hit by this blast of smell and the cancer patients just behaved as they would all throw up. It was awful. It was such a good idea because you always get the dissatisfaction that food comes cold and when it is food is coming like piping hot, but it was not right. So, what they took to doing was actually opening the food outside in the hallway, the delivery people, and allowed to get the air out or something.

Bragagnini I have had patients also get these little mini fans when it comes open...

Gore So, you have seen this as well?

Bragagnini Yeah, we had that same service back where I am from, in Michigan, and certainly it is nice for people that do not have a smell aversion, but certainly yes someone going through treatment that might be troublesome.

00:22:28 into MP3: [https://ysm-websites-live-prod.azureedge.net/cancer/2017-yc-1224-podcast-larson\\_323853\\_5\\_v1.mp3](https://ysm-websites-live-prod.azureedge.net/cancer/2017-yc-1224-podcast-larson_323853_5_v1.mp3)

Gore So, what do you tell people who are starting treatment. You mentioned you do not eat your favorite food. I recall a patient long time ago at Hopkins, it is a big crab culture. So, the patient was so excited that she had done so well with her first chemotherapy and went on to have crab cakes, her favorite food, not a good idea, she will never eat crab again. What should patients do if they do not know they are going to respond before starting treatment?



Larson You know, a lot of times, we have to tell patients that we have to wait and see how you do. We recommend that you follow all medicine schedules given to you by your doctor, so you prevent the nausea because sometimes if you wait too long, then the nausea will not go away.

Gore And people do not want to take pills, it so funny like I find that too as I say, please take your nausea pill before because ....and they say, I do not want take extra pills or why did you not take it, well I didn't want to take extra pills and I was not feeling nauseous.

Larson If we know somebody might have a sensitivity to nausea, we might concentrate in that and give them tips such as staying away from cooking smells. There is actually a research that shows that ginger can be helpful in controlling nausea in chemotherapy patients. So, in research they actually use powdered gingers, but anecdotally I do find that patients using it in the form of crystallized ginger or ginger tea and find it just as effective. Gore So, not taking the root and chopping it off.

Bragagnini I have a recipe I give to patients and I have them make like a ginger syrup or you buy a section of ginger at the grocery store, chop it up, you simmer it, and then add some honey and lemon and then you can keep it in refrigerator for about 10 days and just ladle it little into some hot water for some tea or some soda water for homemade ginger ale.

Gore Interesting. What tips do you have for those of us who fortunately are not undergoing cancer treatment and who try to maintain a pretty lifestyle more or less, I have not been so successful about that lately, but I am trying to re-up my plan let us say, really earnestly and I just know I am a nosher and the hospital is going to have all sorts of foods around, like starting today with Halloween yesterday or we were recording this a couple of months ago that is why, it is not really Christmas, but just I realized I introduced a whole, another confusing thing. So, we are recording this after Halloween, so there were candies, but I know that after Halloween, the foods are just going to start coming and after Thanksgiving, there is going to be food everywhere. How do we, what recommendations can we do about and then all the parties, of course, you do not want to be rude and not eat the cheese cake. What is the guy to do, help me people.

00:25:37 into MP3: [https://ysm-websites-live-prod.azureedge.net/cancer/2017-yca-1224-podcast-larson\\_323853\\_5\\_v1.mp3](https://ysm-websites-live-prod.azureedge.net/cancer/2017-yca-1224-podcast-larson_323853_5_v1.mp3)

Bragagnini I am just trying to be polite here, can I have the whole entire cheese cake please... I think your question is good. Going into the holidays with a plan is the very most important thing I think because it is the balance between enjoying the holiday is really enjoying time with family and parties and being festive but also improving your health, watching your waistline and not ending up January 1st 20 pounds heavier. So, going into it with a plan and that might be, you know day by day or it might be week by week. I encourage people to kind of look at their week ahead and do the best they can to prepare themselves

for what it is to come if they are having 3 parties in the week, then certainly preparing healthy breakfast and lunch may be in advance to get them ready for it and they can be maybe indulge a little bit the parties and not be rude to the host.

Gore But not skip lunch and breakfast, because I know I am going to the party tonight and I want to eat that cheese cake, so I should just starve myself all day is not a good idea?

Bragagnini No, I do not think so at all. In fact, I feel that having a healthy lunch, maybe a smaller one than may be normal but making sure it is healthy fat, a little bit of protein so that will stay with you. One of the biggest things that actually I read and actually works is when you are at a party, try not to eat standing up. I know it sounds kind of crazy because everyone has a little play, but I feel that when you have a drink in one hand and a plate in another, you drink down and you will nibble a little bit and you will not really taste the food and you do not really get the effect. So, if you are in a conversation then just saying let us go sit down for a little while and finish this one plate of food and then when you are done, you are done and not going back for second. So, I think standing and eating is one of the biggest things over the holidays if you can try to be diligent it is something you can practice and you can save yourself lots of calories that way too.

Gore The only thing I have been reading lately has been sort of mindfulness in eating and do you guys have any experience with that in terms of slowing yourself down and enjoying bites as I tend to snort my food, my wife thinks it is terrible and she is probably right.

Larson I think Amy's example perfectly fits that bill of mindful eating. So, as we go through the holidays, a lot of us are busier, we have more plans, we are preparing buying gifts for people, so we are a lot busier and eating on the run, so again I think it is just remembering not to eat on the run, sitting down, having a meal with family and not doing other things -- get off of your phone, turn off the TV and really be conscious of the meal that you are eating.

Heidi Larson and Amy Bragagnini are Registered Dietitians at Smilow Cancer Hospital. If you have questions, the address is [canceranswers@yale.edu](mailto:canceranswers@yale.edu) and past editions of the program are available in audio and written form at [YaleCancerCenter.org](http://YaleCancerCenter.org). I am Bruce Barber reminding you to tune in each week to learn more about the fight against cancer. You are on WNPR, Connecticut's public media source for news and ideas.