

Yale CANCER
CENTER
answers

WNPR Connecticut Public Radio



Hosts

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Surgical Oncology

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**Oncology Pharmacists in
Cancer Care**

**Guest Experts:
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Yale Cancer Center Answers

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Welcome to Yale Cancer Center Answers with doctors Francine Foss and Anees Chagpar. Dr. Foss is a Professor of Medical Oncology and Dermatology, specializing in the treatment of lymphomas. Dr. Chagpar is Associate Professor of Surgical Oncology and Director of the Breast Center at Smilow Cancer Hospital at Yale-New Haven. If you would like to join the conversation, you can contact the doctors directly. The address is canceranswers@yale.edu and the phone number is 1-888-234-4YCC. This week, doctor Chagpar welcomes Sarah Perrault and Scott Soefje. Sarah is Clinical Specialist for Hematology Bone Marrow and Scott is Associate Director of Oncology Pharmacy Services at Yale School of Medicine. Here is Anees Chagpar.

Chagpar Why don't we start off by having you both tell me a little bit about yourselves and what you do? Scott, why don't you start this off?

Soefje I am the Associate Director in charge of the Oncology Pharmacy Services and my job is to direct pharmacy care for cancer patients throughout the Smilow network. We provide services both in Smilow Cancer Hospital and in the Smilow Care Centers that are located throughout Connecticut. My job is to guide the services, help develop services, and basically put our pharmacists in the position to be successful to help our patients get better therapy.

Chagpar And Sarah, what about you?

Perrault I currently am the Clinical Pharmacist for both Hematology and Bone Marrow Transplant. I work primarily both in inpatient and outpatient, so I round with the teams daily and look at patients' profiles and also work up their chemo. With the outpatient side, I counsel patients and also work their chemo up and make sure everything is delivered on time.

Chagpar One of the questions that I think a lot of people will have is, when we think about a pharmacist, we think about our local drug store and it is a guy behind a counter who counts out the number of drugs and puts them in the bottle. Is that essentially what a pharmacist does or is an oncologic pharmacist different in some way?

Soefje They are different. A lot of people do not even know there are pharmacists in the hospital, unless we are the ones that are causing the chemo to be delayed sometimes. Our job is to look at the drug therapy to make sure it is the best, the optimal therapy for that cancer patient. Pharmacy has been evolving other the last two decades and we are moving more from focusing on getting the drugs out the door to the clinic to be administered to more being in the clinic, being on the team and helping review therapy, helping review the cancer care to make sure we receive the best outcomes for patients.

Chagpar Sarah, you talked a little bit in your intro about how you are actually on rounds with the team, is that common place?

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- Perrault Currently we have it both on the oncology side and our hematology side, pharmacists that round with the team, this is actually something that is done worldwide for every single place that has inpatient pharmacy.
- Chagpar That is really cool to know that there is somebody from pharmacy with your doctor helping manage the drugs. Scott, you are not the person who prescribes the drug, but you are there to provide advice on side effects and interactions. Can you tell us a little more about that?
- Soefje Yeah, you should consider us as consultants. We work side by side with the physicians. We look at the therapy that they have recommended and review it to see if there is any drug interaction. We look beyond just the cancer drugs. We look at other medications that the patient is taking. Just because our patient has cancer, their diabetes does not go away, and their high blood pressure does not go away, and more and more with the complexity of the chemotherapy there are now side effects, drug interactions, that we can help manage across the entire continuum and we are also there to help answer drug information questions. If there is a question about a specific side effect or a question about a rare side effect, a lot of times we can be the ones to go to the cancer literature and see what it says and how we can treat it and then take that recommendation back to the physician for their consideration.
- Chagpar Sarah, a lot of times cancer drugs also cause side effects and I would hope that you are partnering with the physician to give some guidance as to how we might best overcome these side effects.
- Perrault Correct, when I look at patients, specifically if they are having certain side effects, I always want to make sure that we are looking at the same kind of drug metabolism, and that we are not overlooking something. I like to think of myself as the last check when I am both working up chemotherapy and then as the patient progresses through each day of therapy that I am always overseeing and that we are not missing anything, and if something does arise, I know the background of the patient so I can offer suggestions or get data behind what might make it better.
- Chagpar So if they were taking one drug to prevent them from getting nauseated, and that was not working, you would be able to say, let's try this concoction, or that concoction.
- Perrault Correct, and also a lot of drugs that we give have side effects so then ultimately you have to treat those side effects, for example, if they are nauseous we give them anti-nausea medication and they get constipated so then we have to figure out something for constipation. It is kind of like a snowball, but it is something that we are trained to look at, so it is something we are always monitoring for.
- Chagpar Scott, is this now becoming more and more the trend, that pharmacy is no longer just the guy behind the counter, but really in the front line?

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- Soefje Absolutely, and we believe that the trend will continue. There are states that allow collaborative practice at the same level as an advanced practice nurse or a physician's assistant; in fact Connecticut has collaborative practice agreements. So in the future we will have pharmacists that establish certain collaborative practices with their physicians and the pharmacist may have prescribing privileges to the point where we can authorize a refill or we can adjust that medication because we know the patient has something in their profile that needs it to be adjusted, some drug interaction or their kidney function might require the drug to be dose adjusted. We can do those kinds of things under the collaborative practice agreements. The focus is moving more from the products to the cognitive services that the pharmacist is providing, and we want to be part of counseling. We want to be the ones that are out there providing information, and answering questions that the patient may have. With the number of patients we see on a daily basis, there is just not enough time to spend 45 minutes to 50 minutes with everybody, if each profession spends 10 minutes or 15 minutes, we can help get that information across to the patient.
- Chagpar And it sounds like, Sarah, as oncology is progressing a lot of it may end up becoming more and more outpatient based, so it is not always inpatient and I understand that you spend a bit of time on both sides.
- Perrault I like to spend time on both sides because then you get to see the whole picture. Not every patient is going to be able to get chemo outpatient, but when you are outpatient it is a different feel, you get to know the people a little bit more personally. They are not as sick, but we also have to figure out a way to give both quality of care of what we give for pharmacists inpatient, but also to outpatient. The collaborative practice work is something I have done in the past and that works really well because it takes a lot of relief off of the doctors who do not want to do every day management like warfarin or hypertension, so it is stuff that I am comfortable taking care of and helping them out along with talking with patients and making sure everything is okay with their chemotherapy.
- Chagpar I was about to say that, and it is so important because people may be taking aspirin and warfarin and all kinds of other medications for their hypertension or whatever, or their atrial fibrillation, and that has a big impact on the cancer drugs that they are getting on the outpatient side as well.
- Perrault It can, and it is something that when we work-up chemotherapy we actually take into our thought process, is there going to be a drug interaction? Is there going to be a side effect that affects something that they have as a baseline medical issue? So it is always something that when we look at patients we have in the back of our mind.
- Chagpar Scott, one thing that every patient is always asked when they go to their doctor's office is what medications are they on, but does that list need to be comprehensive? I think a lot of people will

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say, I am not on any medication but they may be taking a vitamin or they may be taking other things over-the-counter. Is it important for people to tell their doctors or their pharmacist about what they are taking that may not be prescribed?

Soefje Absolutely, we want to know everything, even the over-the-counter medications you take every once in a while like ibuprofen for muscle aches, we want to know that, we want to know the herbal medications. We want to know the complimentary medications, any nutritional supplements that you are taking. What we are looking for is, are there potential interactions, are there potential problems with taking any of these medications? The interesting thing with oncology at this point in time is the side effect profiles and the drug interactions are starting to change, and they are starting to become more complex. We are seeing more drugs that have side effects that are cardiovascular in nature. There are some drugs in investigational trials that affect insulin levels that affect other hormonal therapies, hormonal levels, and so we want to look at all of the drugs someone is taking and make sure we know what is on their med list. In the clinic we call it medical reconciliation and so pharmacists are beginning to move into the clinic and are more involved in the medical side, we have the patient bring everything in and look at it and make sure it is accurate.

Chagpar How important is it, Sarah, for people to be honest about whether or not they are taking their drugs because I think that a lot of times we prescribe things and people may or may not be taking them but they do not want to upset you, so they tell a little white lie. Is that okay?

Soefje It is not okay, I want to force that patients be openly honest. I know they might feel guilty if they miss a dose or did not get their refill taken care of or that they do not have money to get their medications, but ultimately we are not here to judge, it helps us be able to understand if your blood pressure is elevated and you have not taken your medication, we know there is a reason behind it. We won't have to go fishing for something, or if you decided to take yourself off medications, it is good to know upfront and it is not a blame game here, we are here to help you and also be able to give you the best care or so please do not think that we are going to yell at you if you do not tell the truth about your medications.

Chagpar Scott, one of the things that Sarah just mentioned that I want to pick up on is that sometimes people may not have the funds to pay for medications, and I think that is a problem when we are in the fiscal climate that we are in. Is there help for these people?

Soefje Yes there is. A patient should never be afraid to ask about financial help. There are foundations that help people. One of the programs we have started here at Smilow is a program called the Medication Assistance Program. There are also assistance programs within the drug companies and so our philosophy is that the patient should not go without their medication. We should do everything in our power to help with insurance claims and if insurance is denying it, sometimes it is just us making sure we get the right information to insurance companies and we have actually

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started collecting things like coupons that help pay for co-pays and in some cases we can actually get the drug free of charge for the patient and so the patient should never be afraid to ask, just ask us and we will do whatever we can to help.

Chagpar Awesome, it is great to hear that. We are going to take a break for a medical minute but please stay tuned to learn more information about pharmacy and its role in cancer care with our guests Sarah Perrault and Scott Soefje.

*Medical
Minute*

It is estimated that nearly 200,000 men in the U.S. will be diagnosed with prostate cancer this year and one in six American men will develop prostate cancer in the course of his lifetime. Major advances in the detection and treatment of prostate cancer have dramatically decreased the number of men who die from the disease. Screening for prostate cancer can be performed quickly and easily in a physician's office using two simple tests, a physical exam and a blood test. With screening, early detection and a healthy lifestyle, prostate cancer can be defeated. Clinical trials are currently underway at federally designated comprehensive cancer centers like the one at Yale to test innovative new treatments for prostate cancer. The da Vinci Robotic Surgical System is as an option available for patients at Yale that uses three dimensional imaging to enable the surgeon to perform a prostatectomy without the need for a large incision. This has been a medical minute and more information is available at yalecancercenter.org. You are listening to the WNPR Health Forum on the Connecticut Public Broadcasting Network.

Chagpar Welcome back to Yale Cancer Center Answers. This is Dr. Anees Chagpar and I am joined today by my guests, Sarah Perrault and Scott Soefje. We are discussing the role of pharmacy in cancer care and so far in the show I have learned a ton of information about how pharmacy is really an integral part of the cancer team. Sarah, I was hoping that you would be able to tell us what pharmacy does in practical terms to make cancer care safer. I mean there is all this talk about quality and safety, but how does a cancer patient know that from the moment the doctor decides to prescribe a drug that they are getting the right drug at the right dose at the right time? Can you tell us a little bit about how that works and what the role of pharmacy is in that process?

Perrault When a doctor writes a prescription or a chemotherapy order it first goes to two nurses that look at it and verify that it is correct and then it will come to me and I do a full work-up of if the patient has been talked to about chemotherapy and that they know what they are getting upfront with the doctor. We also look to see that it has been put in properly by the correct people and that it is not some person that should not be writing chemotherapy or is not trained to. I also look at what the patient is getting, what their disease state is, is the treatment matching what the disease state is, is there data behind what regimen we are giving and is that appropriate for the patient. I also look at all their labs, what the drugs side effects are, do we have anything that might need to be monitored? With certain drugs we need echoes or cardiac monitoring or they need certain labs to

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look at. Ultimately, I take everything into account, I make sure their weight and height is correct and that someone did not miss-measure them and then ultimately calculate all the doses based on that, and that is the first step. After that it then goes upstairs and starts the making process of how chemotherapy goes through the different steps and ultimately another pharmacist checks the same result and makes sure that it is appropriately made and that the drugs are all correctly lined up and that no drug was given inappropriately at all, and then we send it downstairs and then there is also another check of the drug going to the right patient by barcoding. So it is a long process but ultimately, hopefully it does not fail us.

Chagpar I want to get back to all of the checks and balances because getting chemotherapy is a really scary process, almost as scary as cancer itself, and so when a doctor writes the orders for chemotherapy and you are checking to see whether this is the right drug for the disease state, a lot of what has been said is that there is a lot of lab work and other tests that go on and you had mentioned that dosing may need to be moved up or down. Tell us it seems to me that there is a tight linkage between the pharmacy and the laboratories. Can you talk about that?

Soefje There is, and one of the nice things with our technology is that our pharmacists have the ability to see the patient's most recent lab results, plus lab results that go back in some cases years, and so we can follow trends, we can follow patterns and then we have various criteria with each one of our chemotherapy agents that we look at, what lab is most associated with that chemotherapy? For instance, some of the chemotherapies, the patient's kidney function has to be at a certain level to safely receive the drug and others require their liver function to be at a certain level. So our pharmacists are looking at those lab tests to make sure that the chemotherapy can be safely administered. What is really nice about it is at Smilow we have a great team, so if our pharmacists find something, they will then contact the physician and say, this patient's kidney function has deteriorated over the last week and it is a discussion at that point in time. The physician may know that, may have seen that, may have discussed that with the patient and taken that risk when compared to the benefit of getting the chemotherapy and that decision is being made. We are that final check just to make sure nothing has slipped through the cracks. There have been errors in the past with chemotherapy that have been catastrophic and that is what we are trying to prevent from ever happening at our institution.

Chagpar So after we have decided that, yes this is the right drug for the disease state and the labs are appropriate and the patient's body mass is right, Sarah do you want to talk about how that dosing happens or why it is important for people who may be listening that their doctor's office actually weighs and measures them and you can't say, I am this height and weight and kind of cheat. Why are height and weight so important, particularly when it comes to chemotherapy drugs?

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- Perrault Well with chemotherapy it is not one standard dose. It is usually based on your weight or a certain type of calculation that we do. So we have to consider both your height and also your correct weight, and unfortunately in the United States overweight people have to be looked at a little bit differently, and also people that are on the thinner side we have to say, are we giving too much drug that they might get more side effects, or are we not giving enough drug based on people's weight? So we really have to make sure everyone is telling the truth and that is why every single time you come into chemotherapy we reweigh you and also retake your height just to be on the safe side, and also so that errors do not occur that someone by chance puts in the wrong weight so we always have some type of double check.
- Chagpar Scott, the next step in that whole process was getting the chemotherapy made, does that happens on-site?
- Soefje Yes, we have pharmacy technicians, which is another part of the pharmacy team. They do the mixing, they are also highly trained technicians, very specialized in what they do and the interesting thing about chemotherapy is that it can also be toxic to the person who is mixing it so we take very special precautions that they have to wear gowns. Our chemotherapy is mixed in a room that is at the same cleanliness level as an OR operating suite. We have certain air flow requirements, certain pressure requirements, humidity requirements, temperature requirements that we are constantly measuring. At Smilow, we use a lot of very cool technology, and that is just the only way to say it, it is cool stuff, because we take pictures of the preparation steps all the way through the preparation. The technician takes a picture of the vial of chemotherapy that they pull out, it also has a Barcode Scan to make sure that it matches with the order. We take a picture of the amount of chemotherapy they are going to be adding to the IV bag, and all of that is saved and then the pharmacist reviews that before it actually goes out the door. Our technicians also have a set of checks they go through. They are trained to notice when doses are not the usual and they have complete authority to question if something makes sense. So again, it is another safety check for us. Our goal in the preparation is to make sure that the chemotherapy is made as safe as possible and that we never make a mistake with the drug going out the door.
- Chagpar It sounds like there are so many checks and balances and one of the things that I want to pick up on Sarah, that Scott mentioned, was people feeling like they have the authority to question the doctor. Because in the old days the doctor was God and if the doctor said so, it was the doctor's orders and you dare not question it. How has that changed and how has that made the practice of oncology safer?
- Perrault I think it has changed from 'I' reasoning to now more of team reasoning. So it is not just me if I ever have a question, it is also the nurses, and the patients themselves. I think it is a cooperative network now that makes medicine safer. If someone is asking a question and they are getting a

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response back of, it is my way or nothing at all, you kind of shut that door, but with our open communication I think we do what is best for the patient and sometimes we might catch something that they might have missed, or they might have put something in that they did not mean to and they were looking for another regimen that they could not find. I think the way healthcare is moving is with this team approach. I think it is much safer for the patient.

Chagpar It is interesting because the patient may not realize that they too are an integral part of the team and so that last check of, is this the right drug, going to the right patient, and patients who have been through this know that you are asked 17 times, what your name is and why you are here, that they also have the right to ask about what drugs they are getting and their side effects. Scott, can you talk about the interaction that pharmacists and also the team as a whole have with the patient in terms of the patient being able to speak up?

Soefje Absolutely yes, that is an integral part of this whole process. There is actually data out there that shows that when patients know what they are getting, they do better and if they know when to call when they have a side effect, particularly an urgent side effect, that they do better. There are some side effects that can wait till the next time you see the physician, just make sure you tell the physician. So what we want our patients to know is at Smilow if you ever have a drug question, you should be free to ask that question, and if the nurse is available, she can answer that question, if you want to talk to the pharmacist, we will send the pharmacist to that patient. Our goal long term is to ultimately have a pharmacist see every patient that is getting chemotherapy in our facility. We have dramatically increased our staffing levels over the last couple of years. We are still in a hiring phase, and by the end of the year we should be at a staffing level where we are going to get very close to having most of our patients see a pharmacist sometime during their therapy. So my message is, if you have question, ask, ask for the pharmacist, they will come and sit down and talk to you. They will take the time to answer your questions.

Chagpar Sarah, that gets to the point of when patients are starting chemotherapy, a lot of them have heard about or have thought about this idea of, I am going to lose my hair, I am going to be vomiting every day. Can you tell us a little bit about who talks to the patient about those side effects? What are the common side effects that cancer patients may think about? Is there something that they can do about these side effects?

Perrault I would like to be able to talk to everyone. Unfortunately, I do not have the time to do that right now, but a lot of it is either done through the pharmacy or through nursing. They are very well trained to go through the first cycle of chemotherapy and go through all the questions. Many

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people are worried about losing their hair, that is a big one, and unfortunately that is something that will just happen. But I think the other big one is nausea and vomiting. How they are going to feel during the chemo. Most people think you get chemo and you go home and you are going to be sick and that is it. But you could be sick three days later, or you might feel fine the first day but day 3 it starts to hit you. So I think proper education is important, and we send you home with anti-nausea pills for a reason. So if you are nauseous you do need to take it, along with if you do have diarrhea, than this is what you need to take. So I think it is ultimately education on what your side effects for that particular regimen that you are getting will be, because every regimen is going to be different and then what you can find either at your pharmacy, or what prescriptions we are going to be giving you that you need to start.

Chagpar Great advice in terms of knowing what you are taking, knowing the side effects and knowing that oftentimes there is something that can be done about those side effects and to talk to your pharmacist about that. Scott, the next issue that I think comes up a lot is what if you are on a clinical trial. Should you be scared, is this human experimentation or are the same kinds of quality and safety checks still in place?

Soefje The same quality and safety checks are in place and in fact sometimes with the clinical trials there is even an additional level because we have a research trained nurse and there are very clear criteria outlined in the research studies that say when you can get chemo, and when you cannot and so the safety checks are all there. Clinical researches are an important component to ultimately finding cures for cancers. We would not be where we are today with some of the treatments we have without clinical research. We need patients who are brave enough, who are cooperative enough and who are willing to enter a clinical research trial so that we can make that next step.

Scott Soefje is an Associate Director of Oncology Pharmacy Services and Sarah Perrault is a Clinical Specialist for Hematology Bone Marrow at Yale School of Medicine. If you have questions or would like to add your comments, visit yalecancercenter.org where you can also get the podcast and find written transcripts of past programs. You are listening to the WNPR Health Forum on the Connecticut Public Broadcasting Network.