

Program Title:

Managing Side Effects of Ovarian Cancer Treatment

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Guest Speaker: Nancy Hacker, RN, BSN, OCN of Memorial Sloan Kettering Cancer Center Sleepy Hollow. Ms. Hacker is an oncology nurse whose areas of focus include the education of patients undergoing treatments for breast cancer and gynecological cancer. Her strengths include direct symptom management in relation to the side effects from chemotherapy, hormonal therapy, and radiation therapy.

Summary: The treatment of ovarian cancer with chemotherapies, targeted therapies, hormonal therapy and radiation therapies aim to eradicate cancer cells. Unfortunately while doing their work they can also cause side-effects. This program discusses frequently asked questions such as: What are the common side effects? How can the symptoms of side-effects, such as neuropathy and extreme fatigue, be managed in order to maintain quality of life during treatment and beyond? Is there need to be concerned with heart health as a result of treatments?

Nancy Hacker:

I appreciate you being here this evening. So, I'm going to move to the next slide. This lecture is designed for general information. Individual management of your side effects and so forth really should be discussed with your healthcare team. What I'm going to look at tonight and what I'm going to go over tonight, my objective, is for you guys and you lovely ladies, actually, to gain some valuable information of cancer treatment side effects, the strategies to prevent and manage common side effects and to improve your partnership and communication with your healthcare team. And I can't say that enough. That is so important. You are so much part of your healthcare team and you really should have a good strategy of how you develop your plan. And this is what you really -- I hope you get and gain from this evening.

So, understanding your treatment and your side effects. Cancer treatments are unique for every individual. Different treatments and different drugs cause different side effects, and you need to know your individual treatment plans. I can't say that enough. I can't tell you how many times I ask my patients what chemotherapies are they getting and they have no idea, and I'll say, was it like gin and tonic? They'll laugh, but it is so imperative that you know the names of the drugs that you are taking, because of you are empowered and understand your side effects, you are ahead of the game. And you need to remember that side effects are specific to your treatment and how your body handles the chemotherapy and its response.

So, I want to jump in first with what's on the latest research. Right now there are some different things that they are looking at. They are looking at screening. There is a screening method that has estimated a woman's risk for ovarian cancer by using her age and the results of a yearly CA-125. Many of you are familiar with that. That's the cancer antigen. It's a blood test that holds promise in detecting early stage ovarian cancer. CA-125 is a substance that is called a tumor marker that is found in high levels in women with ovarian cancers. In September 2012, our government put out a statement basically saying to the general population that with no symptoms, screening for ovarian cancer is not helpful and actually may lead to harm. But in counteracting that, the medical societies came out saying that, no, when there is high risk for ovarian cancer due to family history. Many of you, I'm sure, understand the term BRCA, B-R-C-A. This mutation carries -- those who carry this are recommended to have screening CA-125 blood tests as well as transvaginal ultrasounds for screening. And that has been held true and upheld by most insurance companies. That's just for screening itself.

Okay. Other areas of research. They are looking at risk reduction. They are looking at the use of vitamin A and vitamin D as drugs that help to stop inflammation. They know inflammation increases the CA-125 antigen or irritates so that the CA-125 can actually increase. And they also look at the use of Cox-2 inhibitors, which are very high-dose anti-inflammatories that are nonsteroidal, which may reduce a woman's chance for developing ovarian cancer. These are all studies that are out for those who have family history, so it might prove very beneficial.

We are looking at preventive surgeries. These are studies that are out. There are current clinical trials looking at surgeries to remove the fallopian tubes as well as ovaries before a disease starts in people with high risk and family histories as well. Prophylactic surgery is how it will be called, as a way of reducing a woman's risk for ovarian cancer. But now we're going to look at what is really out there right now for women who are going through ovarian cancer.

Targeted therapies. This is real important. Targeted therapies. These are treatments that target the cancer's specific gene, protein or tissue environment that contributes to cancer growth and survival. One drug that is being used right now is called Avastin. It's a brand name; bevacizumab is its generic name, as well as olaparib. As you see, it was in clinical trials, so that was the generic of the clinical trials, has some documented specific and clinical activity alone or in combination with other drugs. Many new targeted treatments are now in clinical trials. Increasingly, doctors are learning about each patient's individual tumor biology through direct molecular testing. This information may be useful in matching patients with a clinical trial for specific therapy.

One area that I didn't put up here, olaparib, as well as a few other drugs that are out in clinical trials right now, these are called PARP inhibitors, P-A-R-P, PARP inhibitors. And what they are is, they're specific -- they were originally used only for those who carry the BRCA mutation, and basically what they were looking at was to block enzymes that refuse to repair cells. Our bodies naturally repairs itself. It's a beautiful thing. But what these PARP inhibitors do is block a specific enzyme that is put out to help repair once the cancer cell has been damaged to repair DNA. And it's been proven to pretty much do very well at blocking this replication. And what they're doing is they're looking at these new PARP inhibitors that are out, that once chemotherapy -- they use them pretty much a lot of the times with other chemotherapies. Because once the chemotherapy damaged the DNA, or the cell cycle of the actual cancer cell, the PARP inhibitor then can completely cut off the supply of what is necessary for it to regenerate itself. There is a lot of hope on this drug for ovarian. Originally it was only used for those who had the BRCA1 or BRCA2 mutation. They are even in clinical trials right now for those who don't even carry the BRCA1 or BRCA2.

So, there are quite a few PARP inhibitors on the horizon for those have been through treatment already and those who have reoccurred, and right now that's where they're standing. They are not frontline treatments; they are for those who have reoccurred. But there is a lot more on the horizon that they are looking at for those who are first line, but right now it's mainly for those who have reoccurred. I'm going to go to this next slide here.

Also, immunology, biological therapies. These are naturally designed to boost the body's natural defense to fight cancer. It uses materials either from the body or in a laboratory to bolster target and restore immune system function. Researchers are examining whether immunotherapy drugs, such as interferon, may boost the immune system's ability to kill cancer cells. And cancer vaccines are another type of immunotherapy that are currently being tested.

We are also looking at hormonal therapies. For quite some time it has been used offline because estrogen is rampant throughout our productive system, our reproductive system, and they have used -- many doctors have used offline for many years, tamoxifen as well as aromatase inhibitors, like exemestane, or Aromasin, and so forth to help block estrogen. But now they are actually putting it its

practice and doing research on this to see if this can put patients into remission or decrease the incidence of advancing their metastatic disease.

We are also looking at gene therapy. One promising area of research is discovering how damaged genes in ovarian cancer cells can be corrected and replaced. This is amazing research out right now. Researchers are studying the use of specially designed viruses that carry normal genes into the core of the cancer cell and they replace the defective genes with the functional ones. And that is the hope of -- that eventually the body recognizes the cancer cell as being foreign because there is some kind of imbalance in our bodies when it doesn't, and it allows it to mutate and then hopefully destroy it naturally.

And then there are supportive care trials that are out. Clinical trials are underway to find out better ways of reducing symptoms and side effects of current ovarian cancer treatments, because they can cause quite a few side effects, in order to improve a woman's comfort and quality of life.

All right. Treatment overview. Ovarian cancers are [treated] with one or more combined treatments, most commonly, there is surgery and chemotherapy. Options and recommendations depends on several factors including the type and stage of cancer, possible side effects, the patient's preference and overall health, the personal considerations, such as the woman's age and if she is planning on having children.

All right. Surgery. This is usually the main treatment for ovarian cancer, or the first treatment that usually happens. A gynecological oncologist is a doctor that specializes in gynecological cancer, surgery and chemotherapy. In order to have a proper diagnosis, surgery is often needed to complete the extent of disease. The goal is to provide accurate stage, because up to 30% of women with apparently early stage disease, unfortunately after they have imaging testing and they actually do surgery, they realize that there was spread to other organs. So, having surgery to confirm is the best way to help develop a plan for action.

There are several surgeries that are options. One is the salpingo or oophorectomy. Those of us typically who hear of that is the removal of the ovaries, oophorectomy. The surgery involves removal of ovaries and fallopian tubes. Hysterectomies, this surgery focuses on the removing a woman's uterus and, if necessary, the surrounding tissue. If only part of it is removed, it's a partial hysterectomy. A total hysterectomy also involves the cervix. You can have a hysterectomy as well as an oophorectomy, bilateral oophorectomy or a partial, one-sided oophorectomy.

With no dissection, the surgery may be -- the surgeon may remove lymph node in the pelvic or the para-aortic areas. Unfortunately, our uterus does not have a cap on it, so if there is any suspected areas, they will when they look at the lymph nodes, that are behind the uterus in the groin area, and then up into the abdomen, if necessary. The omentectomy, this is a surgery that removes the tissue that covers the stomach and the large intestine. It is a very thin, thin lining.

And then there is cytoreductive/debulking surgeries. This is for women with later stage ovarian cancer. The goal is to remove as much of a tumor as safely possible. It is felt with such a procedure it can reduce a person's symptoms and can help increase effectiveness of the treatment, such as chemotherapy.

Surgery can cause some short -- when we're looking at side effects, surgery can cause some short-term pain. Short term is relative. It sometimes can last for many months. For several days after the operation and sometimes longer the patient may have difficulty emptying her bladder, urinating and having bowel movements. Throughout my [career] I have patients for many years afterwards, after big surgeries or even sometimes smaller surgeries have issues with bowels that last for a long time. And speak with your healthcare team about what side effects to expect. And always keep open and talk to them about those side effects, because your bowels can be sluggish. You can be prone to having urinary tract infections. And it's really important that you always keep your healthcare team involved, because early intervention is real important, and surgery side effects continue.

If both ovaries are removed a woman can no longer bear children, and when this happens it also eliminates the body's source of sex hormones, or estrogen, resulting in premature menopause many times. And soon afterwards you hear complaints of hot flashes, vaginal dryness, mood swings, irritability, and also trouble sleeping. So, these are all things that you really need to talk to the team about, because if there are things that we can do to help decrease them, we most certainly will.

So then we're looking at chemotherapy as the other actual treatment that is used frontline and also for maintenance therapies. Chemotherapy is used to -- it's a drug that is used to kill cancer cells usually by stopping the cancer cell's ability to grow and divide. Systemic chemotherapy, meaning going throughout the whole body -- that's what chemotherapy does, it goes into our veins -- is given by a gynecological oncologist or a medical oncologist. A chemotherapy regimen, which is a schedule, usually consists of a specific number of cycles over a set period of time, a patient may receive one drug at a time or a combination of different drugs at the same time.

For ovarian cancer, chemotherapy depends on the goal of the treatment. Neoadjuvant chemotherapy, which is before surgery, is to reduce the size of the tumor before surgery. Neo is before. This type of chemotherapy is usually given for three to four cycles before considering surgery. The thought is to shrink down those tumors to get as much as you can possibly get out. Adjuvant chemotherapy is to destroy cancer cells after surgery.

Maintenance chemotherapy. This is to slow a tumor's growth and/or reduce the risk of its reoccurrence. Many times you'll get frontline chemotherapy and you might be put on something, like I mentioned before, Avastin. Avastin is out there. Something that would keep you in a remission is the goal and keep the tumors from reoccurring. Reoccurrence chemotherapy, unfortunately, if there is a reoccurrence, is to treat that cancer when it comes back, and it's typically either different from the original chemotherapy regimen or maybe a single agent versus a combination of the two that you might have had before. And palliative chemotherapy is to reduce the side effects from the disease and improve the patient's comfort and quality of life. There are all different types.

Chemotherapy continued. There is different ways to deliver chemotherapy. Although chemotherapy can be delivered orally, okay, most drugs for ovarian cancer are given intravenously, IV, or intraperitoneally. Many of you women might have experienced this, where the frontline treatment is to get a port put into the peritoneal cavity, our bellies, and it is accessed with a needle and you get IV chemotherapy as well as intraperitoneal chemotherapy. So, IP chemotherapy is when a catheter is placed in the abdomen and deliver chemo directly to the pelvic area. An IV is delivered via peripheral or central vein to perfuse throughout the entire body.

Several clinical trials have shown significant benefits combining IV, intravenous, as well as IP, intraperitoneal, chemotherapy for patients with later stage ovarian cancer, as well as also frontline. Side effects of chemotherapy depends on the individual and the type and dose used. These side effects can include, but are not limited to fatigue -- big one; risk of infection, especially when you have a port put into the abdomen; nausea and vomiting; hair loss; loss of appetite and diarrhea. But also there is [mooding] and other things involved if you're getting intraperitoneal.

In addition to possible side effects of chemotherapy including difficulty with cognitive issues. Many of you women, if you've been treated for a while, or even in the beginning you're like why can't I remember, I can't concentrate. I can't remember what I was just saying or reading. It's true. It's something called chemo brain, and there's a lot of things out for it right now, including clinical trials to help decrease the incidence of that. Because quality of life is to have yourself as functional as you were prior to all of these treatments. And it's real important for us in the healthcare field as well that you get that back.

Getting back to this, like I said, such issues with attention and memory, neuropathy, a big one. This is a disorder where nerves are damaged causing numbness and pain in the fingers, in the toes. Sometimes patients feel issues with their legs, they feel like there are pins and needles throughout the legs. And then rarely certain drugs may cause hearing losses. The platinum drugs that are the mainstay in ovarian, cisplatin and carboplatin, that both can cause hearing loss. So, if you have ringing in your ears or feel like you're stuffy, or your ears are stuffy, or you feel like you have a sinus infection that won't go away and you can't hear out of one ear or so forth, please let your healthcare team know, because they should get you to have a hearing test and followed up.

Others may cause kidney damage. Carboplatin and cisplatin can cause some issue with kidney and bladder, so you need to make yourself stay extra hydrated. You will see that I wrote here, they're giving extra fluid IV to protect the kidneys. In reoccurrence of chemotherapy, one chemo option can also cause weakness to the heart muscle. This is like thermo-doxorubicin. It is something that your doctors would want to follow an ejection fraction. They would get an echocardiogram or they would just get a measurement of your ejection fraction. There are a few different ways of getting that. One is called a MUGA, M-U-G-A. It is something to measure that, and they should monitor that often -- not often, but usually every three to four months, to make sure that that level is not going down.

Now, radiation. Radiation therapy is pretty uncommon with ovarian cancer first line, but it can be used to treat recurrent ovarian cancer, especially if there is recurrence to a small area and that there is pain involved, be it in bone or in a particular area in the abdomen. Mainly if it's in bone it's something very commonly used then. Radiation therapy is used. Uses high energy x-rays or electron beams, actually, to kill cancer cells. When radiation is given using implants, it's the seed implants, an internal radiation, or another term is called brachytherapy. Internal radiation is given either by delivering a small amount of radioactive material directly to the tumor, done in surgery, or by injecting radioactive liquid directly into the abdomen via an IP radiation, intraperitoneal radiation therapy. It's not something that is commonly used in my area at Memorial Sloan Kettering, but I have done some research and it is used in clinical trials out there right now, but it's for later stage disease.

Also, just a little bit more about radiation. External beam radiation therapy is radiation given from a machine outside of the body. It's a typical radiation. Radiation therapy regimen usually consist of a specific number of treatments given over a set period of time. The side effects of radiation, because you think it's hitting the abdomen, what would that mainly be? You can have fatigue, it is usually delayed. Skin reactions, because radiation has to go through the skin in order to get into the area where they're treating. You can get like a mild skin reaction or one could equate it to a sunburn. Upset stomach and loose bowel movements, all of these things can be completely helped with medications and different changes in diet, and it is something you really need to stay involved with your healthcare team with. And they usually dissipate about two weeks maximum, usually two weeks after you finish treatment.

Cancer and getting care for symptoms and side effects. Cancer and its treatment often cause side effects, like we said. In addition to treatment to slow and stop or eliminate cancer, an important part of cancer care is relieving a person's symptoms and their side effects. This approach is called palliative. Palliative is to control pain, side effects, or supportive care is another name for it. And this includes supporting a patient with her physical, emotional and social needs. Palliative care can help a person at any stage of illness. So, this is something that can be done in the beginning, carried through to however long you need it. People often receive treatment for their cancer treatment to ease side effects at the same time. In fact, patients who receive both are often -- have less severe symptoms, better quality of life and report that they are more satisfied with their treatment.

Palliative treatments vary widely and often include medications, nutritional changes, relaxation techniques and other therapies. Other therapies can include -- which I hear accolades about acupuncture. Acupuncture is something that I have personal experience with many patients getting great relief from their neuropathies, increasing number of patients using it for fatigue-related issues, as well as nausea.

There is water therapy that is out there for patients. There is wonderful, wonderful integrative medicine, community programs that are out there. The best is to speak with your doctors. I know I have given Robin and Support Connection a list of approved integrative healthcare practitioners, basically acupuncture and some other good programs that are in the New York area.

But get involved with your doctors. Ask the questions, because having these great support systems is something that you need. It is something that you need to have a yin to the yang. You can't always just have treatment. These treatments that are going down and that your symptoms are getting worse and your side effects are getting worse, you need to have something that feeds your soul, help balance your immune system. Nutrition is imperative. And learning about relaxation and how you can fight your own buildup of adrenaline by being in that stress response and how you can release that is incredibly important, ladies. I can't say that enough.

So, with recurrent ovarian cancer, this is -- a remission is when cancer cannot be detected in the body; there are no symptoms. You will hear this many times, NED, or no evidence of disease. Remissions can be temporary or we hope sometimes permanent. And we always hope permanent, but they can be temporary. This uncertainty leads to many survivors feeling worried or anxious about their cancer, worried that it's going to come back. You're waiting for the shoe to drop. It's important to talk with your healthcare team about the possibilities of your cancer reoccurring, understanding the risk of reoccurrence, and the treatment options may help you feel more prepared if it does return so that you understand what the next step is. Being in the driver's seat, that's what you are, ladies. You drive the bus. We give great directions. That's why we are all part of the team. So, it is imperative that you understand where you're going.

When and if this occurs, a cycle of testing unfortunately starts again to learn as much as possible about the reoccurrence. After testing is done, your doctor will discuss the treatment options with you. This may include new chemotherapy regimens, like I said before, even surgery or radiation at that time. The symptoms of recurrent ovarian cancer are similar to those experienced from when you were first diagnosed. The four common symptoms that are mainly out there, but, you know, all of these treatments, sometimes it takes a little bit longer to rebound when you have to go at it again. Especially if you're doing intraperitoneal, like I discussed before, you can have that bloating, pelvic or abdominal pain, difficulty eating, because you're going to feel sometimes that you're full, and urinary symptoms, urgency or frequency. All important things to tell your doctor, because you want to make sure that you don't have a urinary tract infection. However, other symptoms may include, along with the other four, these things like indigestion, especially intraperitoneal. It can irritate the whole peritoneal lining. So, you're looking at things like indigestion, gas, diarrhea or constipation. You think how do I flip-flop, but you can. Unexplained weight loss or gain, especially in the abdominal area, and abnormal bleeding from the vagina, pain during intercourse, fatigue and lower back pain. Doesn't sound great, but let me tell you, these things, if we can control them and help them, we will, and I've seen it be done and people feel better and get back to a sense of normality.

In addition to monitoring your symptoms, ladies, doctors are also, hopefully, going to be looking at the CA-125 level in your blood. It's very rare. I've dealt with many, many patients over the years, but it's very rare that we have a patient with an ovarian cancer that is nonresponsive to CA-125. Usually we can track their CA-125 and we can see if there is something going on, if we start to see something starting to creep up which we thought warrant more testing. So, like I said before, ladies, the CA-125 is a cancer antigen that is found in higher levels. It is found on the cancer cell itself, but it's also in our bodies. Antigens, our bodies are filled with antigens, so it's in our bodies naturally. For those of us who don't have ovarian cancer, if I had a blood test right now, I would have a level between 0 and 35. And that's normal, because we're exposed to carcinogens at all times that could cause ovarian cancer that would spark our body to increase its level to fight it. So, they are monitoring that, and if they're seeing it go up, up, up, up, they are knowing something is happening and something is being introduced to our body or in our body that is

making that go up. Most, like you see here, 95% of women will have a rise in CA-125 show recurrence. So, most ovarian patients do have a response to CA-125.

Ovarian cancer can spread to other parts of the body, and this is called metastatic disease. There are new treatments for ovarian cancers including, like we were talking before, about experimental combinations of chemotherapies with biologics, like I said before, using Avastin. That is pretty much a mainstay now, using Avastin with carbo and Taxol. There are a few different treatments that I've seen out there used and also Avastin for maintenance alone. Then there is also immunotherapies that they are using, which are designed to boost the body's natural defenses to fight cancer. Since the benefits of these options remain unproven, there are trials a little more, their risks must be carefully weighed against possible improvements in symptoms and survival. Supportive care will also be important to help relieve symptoms and side effects.

Now, getting into the actual symptoms themselves. Number one across-the-board is fatigue. The number one across-the-board with cancer patients but with ovarian treatment it is extremely -- something that I hear reiterated over and over again. You think of things of how you can help yourself. Conserving your energy. Well, you say, well, how am I supposed to do that when I have four kids and a job and a dog and a husband? Well, you have to do this. You have to start to say I've got to put myself first. I've got to ask others to help, because we've driven the bus for so long, we need to have others to come in and help us out a little bit here.

Keep lists of tasks that you can give to friends, because you always know they're on the phone saying, "What can I do for you?" They bring over every type of lasagna, everything to feed you. You might need that, but you might need someone to pick up the laundry, pick up the kids from school. Start to put those tasks somewhere that you can give to friends and family. They can't fix you but they want to help.

Choose activities that are most important to you. Identify the time of day when you have the most energy. Write it down. Write these things down so that you understand, you know what, I'm going to get most of my work done from 2:00 to 4:00, whatever. You've got to take time for yourself as well, ladies, and if you can, I know half of you are laughing at me right now saying a short nap, but you've got to do something, meditation, something, that is for you during the day. And if you can, sleep well. Sleep at least eight hours a day. You see that there are studies out just for natural health across-the-board, minimum of eight hours is necessary.

Try to eat as nutritious as possible. Make a food diary if you're feeling that you can't eat certain foods. Get involved with your doctors and the nutritionists in your practice or in the community and really try to promote that. Because of good internal nutrition (inaudible) is going to have more strength. Drink fluids. I can't say this enough. If you could drink eight to ten 8-ounce glasses of water a day, juice is okay, iced tea is okay, but if you can get that water in you, it's one of the best things you can do. And you follow a moderate exercise plan. Get out and move, try to do yoga, Pilates, anything. You've got to feed your soul. You've got to get some energy in there and have a good balance. And try meditation, like I said before. Guided imagery. For some of us it's prayer, but you need something to decrease that adrenaline buildup, that you're in that fight or flight mode. Because if you stay in that stress mode, it is proven it will decrease your immune system and you need that to stay up.

There are many possible causes of fatigue. Some medications cause fatigue directly, okay? Chemotherapies do. Some immune boosters cause achiness. There are many different things can cause problems. Others can cause low blood counts that can cause fatigue. Hemoglobin in our body, which carries red blood cells, that's protein. Your doctors track that all the time. These things are real and can come from the chemotherapies that you're getting. If you feel fatigued in a way that prevents you from completing what you do normally or that you're dragging, talk to your doctor. You're going to hear me say that over and over again. Like I said, you're part of your team, you've got to talk to your team.

So, we're looking also at infection. You can have bleeding, anemia. Like, my goodness, what's happening? But these are all happening from the chemotherapy, accepting the way our body makes its immune system. Your bone marrow, okay? Our bone marrow in our adult bodies is in the back of our hips, the iliac crest, right there at the top of our hips, as well as in the chest plate, right between our breasts and right on our chest. And in that bone marrow we make white blood cells. White blood cells fight infection. We make red blood cells. These carry oxygen and nutrients. You've heard the term hemoglobin. Hemoglobin is the human red blood cells that carries oxygen. Hematocrit, the protein in red blood cells that carries iron, nutrients, so forth. They are imperative to keep our energy up.

Platelets, these I like to call them the spacklers of the body. They control bleeding. They run around, they're all the time hit with all these carcinogens. We say, oh, free radicals, we're getting attacked with free radicals all the time. Well, platelets, and those free radicals and carcinogens, and if we bump against something or we're just -- this cell cycle starts to break down. These cells themselves start to get bruised, and platelets run around and, like spacklers, they are over there spackling the holes and the bruises. They are imperative and so important in our body, and if they get too low we have an increased incidence of bleeding and you have to really monitor that. Your doctor's team, and when you're going in for chemotherapy, they are looking at those three things all the time. If they're too low, especially the white count and the platelets, you will not [receive] your treatment. And that is something to become savvy about. Some chemotherapies affect the bone marrow and its ability to produce these cells. Like I said, a CBC, a complete blood count is the lab test that checks this on a regular basis to determine if you have enough of these cells.

Now, white blood cells fight infection in the body. Chemotherapy can destroy these white blood cells, but chemotherapy on a whole go after rapidly-producing cells. In our body, what are our rapidly-producing cells? The white blood cells, the red blood cells, platelets, our hair, our nails, and basically our digestive tract, from our mouth all the way to our anus. So, all the way through the stomach, the GI tract, all of these are rapidly producing cells. Plain chemotherapy doesn't know the difference between the cancer cells and these cells, so they do affect them.

You'll hear the term neutropenia. It's a decrease in the number of white blood cells, okay, or neutrophils. They are mainly looking at these neutrophils. I like to call those neutrophils (inaudible). They get there first. It's important when you get infections. They're always looking at those because there are many different kinds of white blood cells, but those neutrophils are the most important. They fight bacterial infections. Neutropenia can lead to delays or dose reductions, so we try to avoid that. And neutropenia is a significant risk factor for infection, and infection can be life-threatening, so we don't want that to happen. And neutropenia, okay, can occur anywhere from 7 to 14 days after each treatment, but can last much longer in some cases, depending on the chemotherapy that was given.

So, your doctor may order, some of you know filgrastim or pegfilgrastim. The brand names of those are Neupogen or Neulasta, that are given to help your body spark those neutrophils to be made, so that we decrease the incidence or the time frame that your blood cells drop low that you're at high chance for infection. Let me tell you, ladies, before I was working, I think before [Neulasta] and Neupogen was out, and the incidents of people being in the hospital and treatment delays was significantly higher than there is now. It's an amazing drug.

And you want to try to avoid infection. The most important thing that you do is just practice hand hygiene. Hand hygiene is the most important thing. Wash your hands often. If you have neutropenia, you want to look at things like taking your temperature, if you know that your white blood cell count is low. Because you might not have that response all the time of how your body feels very, very yucky when you get a fever because you don't have the white blood cells that start that cascade of events when a fever starts. You don't get all those cytokine, achy things. The cytokines in our body get sparked when we naturally have a healthy immune system. You don't always know that you have a temperature, so it's good to check it.

And you would always want to call your doc if your temperature is over 100.4. If your neutropenia, if your counts are very low, you want to avoid crowds and people who are sick. I always say to my patients, listen, if everybody wants to come over and visit, it doesn't matter; if you have a cold, do me a favor, stay home. Why say that when I'm healthy? I don't want anybody over at my house when you're sick, and you really don't feel bad to say that. Tell them, say, I'll see you when you feel better. And then when you have little kids around you and people around you, make it a game for them to wash their hands. Everybody's got to wash their hands, real important. And keep your skin clean and moisturized. We should do that anyway, but if your counts are low, really make sure that you nicely moisturize it so that you're not going to cut your skin and cause an infection. And keeping your mouth clean, good oral hygiene is important. Like you see here, avoid cuts. Try not to cut yourself, clean it out if you do. Don't just put it to the side and say I'll take care of it tomorrow, because you have a pretty high incidence of getting infection there.

If you have low counts, you want to avoid cat litter boxes and animal waste because of the bacteria that is there. And ask your doctor before receiving vaccines. Just make sure that it's available, that it's okay for you to do it. Some vaccines are live vaccines and they don't want you to have them. A flu shot on the whole is something that almost all doctors would want you to have. If your counts were low you would want to avoid fresh fruits and vegetables. Make sure that if you are going to have fresh fruits and vegetables, wash them real, real well. And you want to avoid sushi, raw meat, chicken, eggs and seafood. That is if your counts are really low, okay? That's not all the time; that's if your counts are very low. But practice smart eating. You definitely don't want to be eating sushi while undergoing chemotherapy. We say that across-the-board. But fruits and vegetables, just make sure that everything is really, really very clean, okay?

And be alert of the signs and symptoms of infection. Fever greater than 100.4, or if you have the type that runs 96.0 and you're starting to see yourself creep up, pay attention. Redness, rashes or swelling, headaches or stiff neck, a lot of people get stiff neck and then all of a sudden something will happen and they'll have a fever. A sore throat, cough or shortness of breath, chest pain, burning or difficulty when urinating, diarrhea or pain with bowel movements. Always let us know. You'll see that theme constantly over again, because we can intervene quick as nurses. That's something that always resonates and it just -- it doesn't make me mad or irk me, it makes me sad. Because if a patient feels comfortable enough to tell me what's going on, you are never bothering us. We'd rather know, because if we can get you to feel better quicker, that's our goal, that's the ticket, and that's what we're here for.

Now, like we were talking about anemia before, anemia is when your counts are low for your red blood cells, and it can occur when the body does not make enough red blood cells to carry oxygen, and can occur, like I said, 7 to 14 days after each treatment. But it can recur for months. You could be done with treatment and remain anemic for a very long time. So, it's important to talk to us about it. It can cause terrible fatigue, shortness of breath, pale skin, rapid heartbeat, chest pain, dizziness. Doesn't always have to have all of those components, but it's something that you definitely want to discuss.

If you have anemia, changing your diet, eating great leafy greens, adding some iron to your diet. Speaking to your doctor about checking your iron levels, because -- or your B-12 levels. It's best to have that done by blood work. Some people say just take a shot, because if you're not B-12 deficient and you're getting the shot, it's not going to help you. They really should do the blood work to see if you are deficient, then they can support you with iron or B-12 and so forth. You want to eat iron-rich food like lean meats, chicken, fish, dried fruits, like raisins and apricots, beans, lentils, dark greens, good spinach, good kale sautéed with some garlic in oil, delish. So good for you, anyway, both for your anemia as well as your immune system.

And if you are feeling really weak, do purposeful movements. You stand up slowly, just don't get up and run. I know we're still like, why, I want to be as normal as possible. But, you know, you've got to put

yourself first. Just like they say on the airplanes and it's taken a long time for me to get that is that you must put on your oxygen to yourself before you help someone else. So, put yourself first. You have to start to listen to the cues that your body is telling you. Choose your activities that will help you save energy. Like I said, take iron if you need to. In anemia, sometimes it's treated with transfusion, but we would love to avoid them if possible and have your body regenerate, but sometimes it's warranted.

And platelets are the cells that control bleeding. They help the body form clots. If chemotherapy lowers the number of platelets in your body, it's called thrombocytopenia and it can cause bruising or tiny little red dots that is called purpura. You can see them a lot of times along you bra line or your ankle or your wrist. If you ever see anything like that, immediately tell you doctor. That's a sign of very low platelets. And you also could get nosebleeds or gum -- bleeding along the gum line. This side effect is less common than the red blood cells, but it does happen, and it can happen 10 to 14 days, many days after treatment. It is something that often delays treatment if your platelets are too low. And always let your healthcare know if you are experiencing any signs of thrombocytopenia, all right?

And check with your healthcare team about medications -- aspirin, okay? Advil, ibuprofen, naproxen, vitamin E, saw palmetto, ginseng, ginkgo biloba. Many of these herbal medications increase your chance of bleeding. So, if you are taking an herbal supplement because you want it to help your immune system, run it by your doctor first. Many people don't realize herbal medications or herbal supplements are what I just said before -- they are medications and they can interact sometimes with your chemotherapies and change the way that your body clots or change the way your body fights the cancer. Please, speak to you doctor.

Essiac tea is a big one that is out there that a lot of people drink. It is something that is very dangerous if it's taken incorrectly, and most of the time is not warranted or -- not to say that, it's the wrong word -- it is something that we highly recommend not to use during chemotherapy. So, please, if you're doing any supplements, discuss it with your doctor first. If your platelet count is low, you want to use a soft toothbrush. You don't want to use a razor; you want to use an electric razor. Blow you nose real gently. Use saline in the nostrils if you're finding that you're very dry before you blow your nose. You don't want to cause anything to bleed, because it might be hard for you to stop bleeding.

You don't want to participate in any contact sports, because I know you're all running out there playing, in the New York area, what, snow football or skiing. You don't want to use tampons or suppositories or rectal thermometers or enemas if your counts are very low. You want to avoid constipation because you don't want to bear down because you can rupture the vessels in the rectum and also cause an increase in intracranial pressure. You don't want to do that, so you might want to use stool softeners at that time or increase, like maybe taking some prune juice if you want to do it naturally, or eat some dried prunes. When your platelet count is very low, platelet transfusion might be necessary, or delay, like I said before, a treatment break until your counts come back might be necessary.

Now, looking at pain. Getting chemotherapy itself typically is not painful, but, however, chemotherapy or medications given to prevent low blood counts can cause aches between treatments. Some hormone therapies can cause achy joints. Tell your doctor or nurse if you have pain. Your doctor can adjust your medications and change it as necessary. But talk with your doc and see if there's things like ibuprofen that you can take or pain medication.

Be specific. Where is your pain? Describe it. Many times they'll say 0 to 10. Write these things down. If you can do that, that's probably one of the best things that you can do. And keep a record of your pain in a journal, if you can. I know I'm running a little bit behind here, so I'm just going to try to go through some because I really want to take your questions. And rarely chemotherapy can cause an allergic reaction, so we can give you medications for that. If you're getting carboplatin, always pay attention to your hands. So, there are some good questions that are coming up that people are typing in and I'm going to go over those.

Hair loss. Chemotherapy, carboplatin, (inaudible), many of them not usually that much, can cause you to lose your hair. It will grow back when you're done, but definitely using scarves, getting involved with the Look Good Feel Better program in your community, wigs and so forth, are very good. There are studies out there on cold cap therapy, definitely something to discuss with your doctor to see if it is something they are going into, that they're looking into or doing any research with. I'm going to skip through some things here, ladies.

Nausea and vomiting, very important. You're going to want to eat starchy feeds, you're going to want to eat smaller, frequent meals. This is true. I mean, chemotherapy affects the way -- affects certain areas that cause nausea in the brain, okay? It can cause nausea by, like I said before, the rapidly producing cells, attacks things in the mouth, the throat, the stomach and the intestines. It is real, the nausea, and we've got to be reactive. Many of you women have used something called Emend, or aprepitant, ondansetron, Zofran, these are all medications that can help with nausea, but also have their own set of side effects, like constipation. So, it's real important that you discuss with your healthcare team, okay? You want to avoid foods that are spicy, fried, greasy, things like that. You want a blander diet. Definitely getting involved with nutrition is important. I want to get through these slides because I totally want to listen and speak to everyone as much as possible.

Before chemotherapy, during and after, practice relaxation strategies. Our stress level affects our nausea. I can't say that enough. If you can get control of your anxiety and you stress level, you will do better with nausea, I can tell you that. Diarrhea can happen with many of the treatments. If that happens, you want to follow something called the BRAT diet. It's all in these slides. You need to use things like Lomotil, Imodium. You need to drink plenty of fluid, and you need to be good to your skin. So, these are important things there.

Call your doctor if you're having diarrhea more than 24 hours, and you want to avoid, like I said, same thing with the nausea -- you want to avoid spicy foods, definitely milk products. You want to avoid alcohol, and you want to eat smaller, frequent meals.

So, basically, this is me getting in a little bit more for it, to stay active. You want to avoid fiber, you want to deal with BRAT diet, which is like bananas, rice, applesauce, toast, white bread. Think of things that are sponges, that are going to soak up fluid. And you need to let your doctors know what's going on.

Mouth sores can happen with certain chemotherapies. Very important to get those under control right away. You want to rinse your mouth out, okay? If you're getting chemotherapy across-the-board, you have taste changes and pH changes in your mouth. Rinsing your mouth out, taking like a 15-ounce bottle of water, using a teaspoon of baking soda or a teaspoon of salt, gargling with that in the morning and after meals can help keep the pH really neutral, as well as clean, and that's real important. If you are developing mouth sores, let your doctor know right away.

Let's see here, tell your doctor, eat soft foods, avoid hard, crunchy foods, ice chips and popsicles can definitely help. And you really want to keep the mouth moist, and you don't want to have things like sugar-free candies because they tend to burn. Something to avoid. You can have changes in taste and smell. You can have the lovely metallic taste in your mouth, little tips that my patients have said is sometimes if you don't have mouth sores and you just have taste changes, sucking on lemon candies before you eat can cut that metallic taste. Using plastic utensils is another good tip that many patients have had really great success with, but also discussing nutrition.

Neuropathies can happen. You have to protect your feet. This is neuropathies, tingling in your fingers and goes. Real important. So, these things can happen with the carbo, cisplatin as well as Taxol, Taxotere, docetaxel or paclitaxel are the other names. Real important that you tell your doctor if you're having trouble picking up a pen, buttoning your shirt. It's real important. You can have skin and nail

changes as well with these. I'm just going to speak about these and not just read these direct, because these slides will be available.

Skin, eye and nail changes. Taxotere, as well as Taxol, can cause you to have dry eye. You can have runny eyes, runny nose, feeling like you have a sinus infection all the time; important for you to talk to the doctors about. Hormonal therapies can cause skin changes as well. The taxanes can cause problems with your nails as well as your skin, making them dry and cracking. Using colloidal oatmeal baths is very important to help moisturize your skin as well as keep yourself nicely moisturized. Radiation therapy itself, like I talked about before, can cause like a mild to moderate sunburn, so it's important for you to have a nice, in-depth conversation with your team on how you can avoid these side effects.

Nail changes, I just talked about. Some chemotherapies definitely cause nail issues. Using things like a Sally Hansen Nail Nutrition, Bert's Bees lemon cuticle cream on your toes and your nails. Very good at helping to keep nutrients and keeping them very well moisturized, decrease a lot of or postpone a lot of the incidents of any fungal infections in the nail. You might need dermatology appointments as well, but always let them know. It's not something to push aside.

Now, I talked about the cardiac issues before. Your doctor, always, before you start any drug that could cause cardiac issues, should have a baseline and monitor you throughout the entire period and even afterwards. You're looking for things like shortness of breath, trouble walking up stairs and then you go up and it's normal. Some patients actually (inaudible), but I find that to be very rare.

Okay, cognitive changes. I talked about this before, ladies. Chemo brain is real. Chemo brain is very real, so you want to organize yourself. Write things down. Bring a journal with you. Have a planner. Do the things. Try not to multitask. Good luck with that, but try. Do things one at a time. Your stress is also going to feed into the chemo brain as well. If you get it -- I pray you don't, but we can't predict who might have these problems. But for many patients that report that they have it, it does sometimes resolve over time, but sometimes it lingers. So, these things, normal age, fatigue, stress, like I said before, can add to it. And they are doing more studies on it right now.

Okay, lymphedema. If you have lymph nodes removed from your leg in the periaortic area, you could have increased incidence of swelling. If you have any swelling like that, because tissue -- ladies, you can read this. I want to get through it so I could get to your questions; sorry I fell behind here -- because lymph nodes don't grow back. I think of them like lily pads. They don't grow back. Think of a frog hopping along and you take away some lily pads. If you have a kind of stress or damage, or you fall, or sometimes even just the way that we sit, because it's along the groin, you are causing fluid that typically would travel through the lymph system to leak outside into regular tissue and that can cause lymphedema and sometimes it's irreversible. So, it's really important your leg your doctor know if you're finding there is any swelling in your legs.

Let's see here. What can cause it? Conditions that damage the lymphatic system -- radiation therapy, infection, surgery, severe injury to the surgery site, tumor growth itself sometimes. A tumor can be growing and pressing and causing lymph drainage to be (inaudible), and weight gain after surgery. So, it's important just to keep talking.

Emotional health. This is a journey that you control mainly one thing. This is a journey for all of us. It is not the circumstance that is the issue, because you can't control the circumstance; it is how you react. This distress can be detrimental to you, or you could turn it around and find empowerment. You've got to speak up if it is becoming something that is enveloping you, the stress of all this, because you know in your normal life that if you don't have control of you, you lose control of everything. So, take care of yourself. Write things down. Talk to friends. Get help. Practice meditation. Continue with the support groups. Take control of it. Read through these things. Communicate with your healthcare team.

Bringing a friend or family member is real important. Cancer doesn't define you, you do. It's incredibly important that you take care of you.

Conclusion. Every person experiences the side effects, but they are unique. They are unique to each and every one of you. Sharing and talking to each other about how you manage them is real important. Gaining knowledge and being empowered helps you participate in your fight for recovery. Effective communication with the healthcare team is critical to side effects management, and really, find some balance. And I wish you many happy days, and realize that the next chapter is blank, and it's what you want it to be. And I pray and I hope that you don't define yourself as a cancer victim, but you are a woman, you're a mom, you're a sister, you're a friend, you're a person, and this does not define you. Don't let it do that. But I'll open up to any questions. So sorry I ran behind. I have plenty of time to answer questions, if we can still keep having question-and-answers.

Unidentified

Participant: I have a question. Can you hear me?

Nancy Hacker: Yes.

Unidentified

Participant: Okay. How does the physician decide which chemo drugs to administer?

Nancy Hacker: Okay. Can I ask another question so I can get a little more information there? Are you being treated right now?

Unidentified

Participant: No, I had carboplatin and Taxol, and I understand they are sort of the gold standard. But I just wondered, because I hear names of other drugs that people have and you say, hmm, I wonder how they decide?

Nancy Hacker: Okay. Well, that's a good question. Typically what they're looking at is what stage you are, number one. Like, if you had any disease outside of the ovary or if it's moved to certain places. They look at the particular pathology of the ovarian cancer, because not all ovarian cancer is the same. Some can be an adenocarcinoma, you might have heard that. Some can be papillary serous. There are different types of particulars that come out in our pathology, and they will use that, along with -- did you do BRCA testing, gene testing?

Unidentified

Participant: Did I? Yes, and it was negative.

Nancy Hacker: It was negative. So, they'll go, typically, depending, there are different lines, and carbo/Taxol by all means is perfectly fine first line, but they are looking at a few different components. They are looking at the pathology, they're looking at what stage you are. They're looking at your overall health, if you have any other comorbidities, as we would say, or diseases, like diabetes or heart disease. There are a few factors that come into play when they're making judgments on what first line treatment they would give you. Does that help?

Unidentified

Participant: Okay. Yeah. I just was curious.

Nancy Hacker: Okay. But did you ever ask your doctor?

Unidentified

Participant: It all happened so fast. It's a long story and I don't want to take up time.

Nancy Hacker: No, no worries.

Unidentified

Participant: They started with that and it worked like a charm, so then we kept it. I said I'm not moving from that. Look what it did, it brought the CA-125 right there to normal, one, two treatments. I mean, I had to finish the cycle of treatment, but it was all fast how it brought it down, so I was very, very fortunate. So, we really never discussed alternates.

Nancy Hacker: Well, that is a very typical course for first line, and that's a great thing when you have a response like that. And the goal, hopefully, is very low and you're not on treatment right now, right?

Unidentified

Participant: No, I'm not.

Nancy Hacker: Okay, then you're in like what we would consider remission, right? And that's good.

Unidentified

Participant: Yes, yes.

Nancy Hacker: And so you'll go and get your bloodwork done and you'll go to the doctor periodically, and you'll also do CAT scan or PET scan. Were you doing that?

Unidentified

Participant: No, he didn't want to. He didn't feel it was warranted, the PET scan.

Nancy Hacker: Now, everybody is different. There are some patients that need that PET scan or CAT scan, others that don't. It really -- that is a very unique treatment plan for ovarian, because there's a lot of different ways that things present. So, you were very responsive to the CA-125 and they'll track that, and I pray you stay in remission for multiple moons.

Unidentified

Participant: Well, thank you.

Nancy Hacker: Okay. At what age should screening start due to family history and how often or with what frequency should the screening be done? That's a really very good question, but the problem is I can't say that in particular. I can't give an exact age, because I know right now with screening studies that are out they are looking at children and family members that are of childbearing age. So, they're looking, I believe, at people right now in their twenties, but they haven't confirmed anything just yet. So, I think it's a real good question to ask a medical oncologist as well as a gynecologist. And if your gynecologist doesn't know, stay with the medical oncologist or gynecological oncologist. They might be able to give you a little bit more information, especially if you're BRCA-positive, and that your children, you really want them to be followed up.

So, I see here the second question, she said at what age should Cox-2 inhibitors be administered? I see here before, this is research right now, that they're looking at Cox-2 inhibitors. I believe it should be -- I don't know the actual dose, because I know that, well, of what the schedules would be. Great question.

Speak with your doctors. Speak with them about these studies. The more you are empowered and the more you get you doctors to help you do the homework and get involved, the better. You said I think here that your daughter is 26 and expecting her first child. Might not be the best thing for a Cox-2 inhibitor at this time, because that can cause bleeding. That is something that's an anti-inflammatory. It's in the same -- not in the same family, but it's related to ibuprofen, so those she would have to discuss

with her gynecologist. I hope I answered that, but get to you medical oncologist and bring these -- write your questions down and have them give you answers and help you find -- or help you find the answers.

And then Theresa wrote, have you heard of anyone having neuropathy changes with eyes? I experienced more eye strain-type symptoms after treatment for recurrent Taxol/carbo. Absolutely, absolutely. Eye problems can manifest in very, very subtle ways, very subtle ways. The eye strain sometimes is indicative of your eyes being dry. That also -- people go, well, I have overproduction, I see my eyes keep tearing, how is it dry? Well, it's because the ducts that put out the fluid in the eye are being affected by the taxane, and then the eye can get very dry, you can start to get pain, you can get visual changes. It's really important that you tell the medical oncologist and they get you with an eye doctor that specializes in understanding taxanes, taxane eye changes. Real important.

Unidentified

Participant:

And now on Doxil, I had a recurrence after six months, and it was in my liver, and they put me on Gemzar and carboplatin. And after I did that they did another CT scan and two of the lesions are gone, but the two lesions that remain were the largest, so the doctor has now put me on Doxil. And I am having the strangest side effects and sometimes it upsets me. The inside of my hands have turned black.

Nancy Hacker:

Okay.

Unidentified

Participant:

My tongue is black, and then there are areas in my mouth that are black as well. The neuropathy never left from Taxol in the beginning.

Nancy Hacker:

So, can I just ask, are you Afro-American?

Unidentified

Participant:

Yes, I am.

Nancy Hacker:

Okay, all right. What you are experiencing is what's called hand-foot syndrome, okay? Do your hands hurt?

Unidentified

Participant:

Sometimes they do, and if they get really dry they will begin to try to peel.

Nancy Hacker:

Okay. So, you need to -- are you moisturizing?

Unidentified

Participant:

Yes, ma'am, I'm using shea butter. I'm using Udder Butter. I'm using coconut oil. It's a wonder I don't slide off myself.

Nancy Hacker:

Yeah, see, the thing, unfortunately, Doxil itself can cause some changes in our skin, and it also can change -- so you were on what prior? What chemotherapy were you on prior?

Unidentified

Participant:

Gemzar and carboplatin.

Nancy Hacker:

Okay. So, the platinumums can affect the pigment in the tongue, but also the Doxil is mainly doing this to your hands and your tongue, and it's affecting -- -- you've really got to be careful with your hands and your --

Unidentified

Participant:

At Christmas I had mouth sores. I couldn't eat, I couldn't open my mouth.

Nancy Hacker: Oh, my gosh.

Unidentified Participant: I got a mouth wash and that helped and that cleared up. And now my hands started. My nails got brittle again and broke off. It's funny, I did lose my hair but now my hair is coming back. But it's just a lot to deal with sometimes, especially when you look at -- and I work with the public.

Nancy Hacker: Oh, boy. Oh, boy. That's a lot. But you know, with the nails, with the nails, using something, because the thing is, you could get something like fungal infection in the nail. Using like a warm -- do you remember, like Madge soaks in the Palmolive, the old commercial?

Unidentified Participant: Right, right.

Nancy Hacker: Yeah, using like a bowl of warm water, nothing too deep, nicely warm water with white vinegar. Use white vinegar to soak your hands and your feet, your nails, okay? And you do that for a good 10 minutes or so a night. Pat them dry and on the nail bed go pick up tea tree oil.

Unidentified Participant: Okay.

Nancy Hacker: Okay, and if you can get a nail brush, that is very, very good. It helps protect against fungal infections in the nails and helps them to grow back. And like I mentioned before, like nutrition.

Unidentified Participant: He had me take the nail polish off because I was wearing teal nail polish because --

Nancy Hacker: No, you should not be wearing nail polish.

Unidentified Participant: And so I did take that off, because he wanted to know if my nails were turning black. And some of them are at the base.

Nancy Hacker: Yeah. That's where, like, the tea tree oil will help protect it. The tea tree oil is not going to coat your nail like a nail polish, it's going to be more into the nail bed. And then you could use something like either a water-based nail nutrition. You can get them online, you can order them from Amazon. Sally Hansen makes one. Get a water-based one that you can rub into your nails and your toenails, and it will help them grow back better, okay?

Unidentified Participant: Okay.

Nancy Hacker: All right. And sometimes you need to see a dermatologist with what can happen with Doxil with your skin.

Unidentified Participant: Oh, it's a mess.

Nancy Hacker: If you're not getting better, ask your doctor to refer you to a dermatologist that specializes in hand-foot syndrome. It's real. It's a real thing and it's from the Doxil, okay?

Unidentified

Participant: Yes. My skin has broken out in eczema and I have a cream that I have to put on that.

Nancy Hacker: Oh, my goodness, okay.

Unidentified

Participant: If anybody will have the side effects it will be me.

Nancy Hacker: Well, I wish you well.

Unidentified

Participant: Now, will my hands turn back normal again or will they just stay like this?

Nancy Hacker: Well, they can get better, they absolutely can get better. So, I've seen them get better. I mean, will they get back to 100%? I don't know, because you've had some other treatments that can cause that, but you should something turn around. You just started Doxil, right?

Unidentified

Participant: I'm sorry?

Nancy Hacker: How many cycles of Doxil have you gotten?

Unidentified

Participant: Today was my fourth treatment.

Nancy Hacker: Okay. So, you might see in the next few treatments that you plateau and that it starts to get better.

Unidentified

Participant: Oh, okay. Well, he's not going to do the CT scan now because he said that my tumor markers have started to go back down.

Nancy Hacker: Yay, good.

Unidentified

Participant: I was, like, well, that was some good news, because, you know, you walk around and worry.

Nancy Hacker: You do. You do worry, but stay the course for a little while. Stay the course.

Unidentified

Participant: Well, he told me that I need to be patient. Dr. Kohler told me I need to be patient, he said, because Doxil is a very good medicine, he said, but the unfortunate thing is that it works very slow.

Nancy Hacker: It does. It does. So, that's why they have patients take care of those side effects, okay, because you don't want to have that via treatment break, because if your hands and feet get really bad, he will break you, he'll lower the dose of the Doxil or give you treatment breaks.

Unidentified

Participant: Okay, I will do that. Thank you so much. I've enjoyed the talk.

Nancy Hacker: Okay. (Inaudible) recurrence with starting Gemzar with carboplatin for maintenance. I'm told side effects can potentially be stomach rash and lung issues. Not really. Are you familiar with any other Gemzar side effects and management suggestions? Okay. Gemzar itself, the number one side effect of Gemzar is fatigue, tiredness. That's a big deal. That's a real big deal. I do find on occasion Gemzar can cause you to

have some diarrhea, some bit of upset stomach. Carboplatin itself is more of something that will cause nausea, so they will give you anti-nausea medication hopefully the day of treatment and for a few days afterwards, and give you medication for nausea at home. Gemzar is incredibly fatiguing, so that's the real big thing. Also, both of them can cause your platelets to go down, so remember I said the word thrombocytopenia? Those are things you've got to look for, signs and symptoms of bleeding.

I have never had anybody with lung issues with Gemzar or carboplatin. Neither one of them truly cause any kind of (inaudible) per se, or pneumonia type issues, but they can also have you hold onto -- Gemzar can have you hold onto some fluid. So, it's important if you're finding that you are, like all of a sudden weirdly short of breath, that they would look to see if there is any kind of fluid in the lung. That might be the only thing that would give you lung issues, but that's incredibly rare. So, hopefully I answered that question for you fully.

Nancy Hacker: Taxane neuropathy has continued for seven months, since her last chemo. Is there a chance of it still getting better? Carol, the answer is yes, there is still a chance. Are you on the line? Question: Are you on any medications for neuropathy?

Unidentified Participant: I am taking gabapentin to allow me to sleep.

Nancy Hacker: Okay. Only at night you're taking gabapentin?

Unidentified Participant: Correct.

Nancy Hacker: Okay. What's the dose that you're taking?

Unidentified Participant: 200 mg.

Nancy Hacker: Okay. Does it really make you sleepy?

Unidentified Participant: Yes.

Nancy Hacker: Okay. Are you taking any vitamin B supplements?

Unidentified Participant: I'm just taking a multivitamin.

Nancy Hacker: Okay. Speak to your doctor about taking vitamin B-6, 50 mg, as well as alpha-lipoic acid. It is something if your doctor is okay with it, even if you have a neurologist, they can also talk to you about the use of alpha-lipoic acid. Usually, typically, they do about 600 mg a day. It's proven very effective with diabetic neuropathies and they're doing research on it now with Taxane-induced neuropathies. So, it's something that may work. It's not going to hurt you. It will not hurt you, but you must, it is imperative, you clear it with your doctor before you start any regimen or vitamins, okay?

Unidentified Participant: Sure. And, I'm sorry, the B-6 was 50 mg?

Nancy Hacker: Yes, 50 mg. You don't want to do 100 mg, because it sometimes can have a paradoxical effect, meaning it can actually exacerbate it versus helping it. So, you look for the 50 mg. But you talk to them first, okay?

Unidentified

Participant: Yes, thank you.

Nancy Hacker:

And, for anybody who is having neuropathies out there, they are actually doing studies in cold therapy. Some people have heard about cold cap therapy to help decrease the incidence of losing your hair. They are actually doing cold therapy, they're doing studies on using ice packs during the treatment therapies, okay? During the treatment therapy, if you can tolerate them, having ice packs on your hands and nails and feet can actually decrease the incidence of nail changes. As well as they're studying also, hoping that it can also decrease what the taxanes do to the peripheral system, the tiny little capillaries of the fingers and the toes, hopefully decrease the incidence of the neuropathies. It would be interesting if you reach out and see if there are studies being done (inaudible) or so forth that might be using them and hopefully we'll see some new things coming down the horizon in the next few months, actually, with that cold therapy. Okay?

And then Marlene says, is there anything that could be done to relieve radiation damage to the intestines?

Unidentified

Participant: I'm asking a question on behalf of someone else. There has been a lot of scarring and shrinkage, so it's really impacted, as you spoke earlier, other digestive issues resulting in severe weight loss and really just an incredible dietary management issue.

Nancy Hacker:

Wow, okay. How old is the person?

Unidentified

Participant: Early fifties.

Nancy Hacker:

Early fifties, okay. And so the intestines have scarring?

Unidentified

Participant: Yes, a section, not the entire. There's a section, but it's enough that it's created a significant issue with digestion and absorption and pain.

Nancy Hacker:

Have they been referred to a GI specialist?

Unidentified

Participant: I believe so.

Nancy Hacker:

Okay. Imperative that they do, because the scarring, once scarring occurs, if scarring occurs, it typically needs surgery to alleviate that. I highly suggest that that be done, okay?

Unidentified

Participant: When you say a GI specialist, would it need to be someone who has experience working specifically with the results of radiation treatment?

Nancy Hacker:

Well, it's a pretty smart thing. Can I ask what part of the country are you in?

Unidentified

Participant: We've met, I'm in New York, and so is the woman that I'm calling on behalf of.

Nancy Hacker:

So, if we've met, I would recommend that it is done with a specialty group, absolutely. Coming from Sloan Kettering, we have a full GI group. Not everybody has that. But it's important. It's important. I mean, there are people who are in the community that understand radiation side effects that you do --

whoever they meet with, do an interview with them first. Find out what they do. Find out if they have experience with this, because this is scar tissue that needs to be removed and/or maybe a part of the intestine needs to be removed to help with digestion. If there is availability to be involved in one of the major institutes in New York City that might even have more highly specialized treatment plans with this or experience with this, I would recommend that.

Unidentified

Participant: Okay.

Nancy Hacker: Okay?

Unidentified

Participant: Okay, thank you.

Nancy Hacker: Sure. You're welcome.

Robin Perlmutter: Well, thank you, Nancy. You've been wonderful.

Nancy Hacker: You're welcome.

Robin Perlmutter: And just such a wealth of knowledge and so thorough, and we really appreciate having you this evening.

Nancy Hacker: You're welcome.

Robin Perlmutter: Really, you're terrific. And I want to thank all of you ladies for staying up late on a Wednesday night.

Nancy Hacker: Thursday, Thursday.

Robin Perlmutter: Oh, Thursday night. See, that's even better. Tomorrow is Friday, hooray. No, but seriously, guys, really, thank you for getting online and learning as much as you can, and we will certainly have this presentation available for you on our website in a couple of weeks so you can review your notes again. We welcome you back for further webinars and just stay posted, and have a great evening and get home safe.