INTRODUCTION

DR. RUGO

A generation ago, people rarely talked about cancer. Today, remarkable advances in treatment are allowing cancer patients to enjoy longer, more fulfilling lives.

My name is Dr. Hope Rugo, and I’m an oncologist at the UCSF Helen Diller Family Comprehensive Cancer Center. I’m here to help you learn how to manage your life during chemotherapy treatment. I’ll start by telling you about the UCSF Helen Diller Family Cancer Center and your health care team.

I’ll introduce you to Cancer Center Physicians, Nurse Practitioners, and Nurses who are directly involved in educating patients prior to beginning treatment, and who will monitor your progress throughout the course of treatment.

They will answer some of the most frequently asked questions about cancer and chemotherapy treatment and will tell you about 7 strategies you can use to help manage your care.

And most important: you’ll learn that chemotherapy is only one part of the process of managing your own health and well-being.

Whether you receive all your treatments at the UCSF Helen Diller Family Comprehensive Cancer Center or receive some treatments at a center closer to your own home, the information in this program will be a good introduction to what your physician and nurses will also be explaining to you.

There is a lot of information presented in this video program. You don’t need to absorb it all in one viewing. We suggest you view it with a family member or friend who can help you identify issues specific to your situation. You can also view and print this material in a PowerPoint presentation that’s included in your information package.

The UCSF Helen Diller Family Comprehensive Cancer Center has been designated by the National Cancer Institute as a “Comprehensive Cancer Center,” the highest-ranking designation offered. Our outstanding care, exceptional research, and innovative support programs have made the UCSF Comprehensive Cancer Center a model for similar programs around the country.

YOUR RESPONSIBILITIES AS A PATIENT

JANET SABATINO, RN

As a Nurse, I help patients through the treatment process with education, advice, and care coordination support. In this first visit, I'll discuss a number of the same subjects that are introduced in this video – in more detail – to educate patients on their Chemotherapy Treatment Plan. In your visit, we’ll cover:

- Your role and responsibilities as a Patient undergoing treatment and how to adapt and manage the intrusion into your life that cancer treatment may cause.
- How your treatments and follow-up visits will be scheduled along with any required diagnostic procedures and lab work
- An in-depth discussion of the drugs your Provider has ordered
- Side effects and symptoms of the disease you can anticipate, and how to deal with them
- And how to prepare for your treatment visits to the Infusion Center
Let me introduce you to some overall strategies that will help guide you through the course of your care.

1. **Understand Your Situation.** Including your diagnosis, treatment plan, goal of treatment, and potential problems that may arise from your treatment plan. Use a folder or binder with tabs and pockets to collect this information.

2. **Organize Your Information.** Organize your medical and insurance information so you are able to track what is happening to you, and if needed, can direct others when you need help. This includes:
   - Lab and imaging reports
   - Chemo drug and side effects handouts,
   - Authorizations received, and Benefits booklets.

3. **Identify Your Personal Support Team**
   - Try to identify and work collaboratively with one personal advocate, who will know everything and can be with you at most of your physician visits and treatments.
   - Several family members, friends, or neighbors, who are available to help when you just can’t get it all done.
   - Ask to speak with a social worker if you need additional support.

**Determine Who Will be your Durable Power of Attorney for Healthcare:**

Have you ever thought about who will make decisions if you are too ill? This can and does happen if you have a series of side effects that are life threatening.

If you are too ill, someone must be able to give permission for continued treatment based on your wishes.

The Advanced Health Directive establishes both who is designated and what your wishes are for continued treatment.

You may be asked if you have completed this process during registration. Brochures about advanced directives can be found in the waiting area of each floor.

To have a discussion about Advanced Health Directives ask your Practice Nurse or Social Worker.

4. **Create a Directory.** Your directory should list contact information for your personal team and medical team, including pharmacy and insurance representatives. Include current phone numbers and addresses, so you can find this information easily.

5. **Daily Self-Assessment.** Work out a daily routine, take an inventory of how you feel and note changes in stamina, food and fluid intake, temperature, new or changing aches or pains.

6. **Journal Your Status.** Keep notes as your treatments progress. You may have multiple problems arise, and you will need to advise your physician or nurse about what is happening and when it began.

7. **Speak up and Ask Questions.** If you do not understand the information you have been given or if this information does not match what you believe should occur:
   - Please call your Healthcare Provider’s Practice and get the answers or advice you need.
   - If you are at a Clinic or Infusion Center visit and you have questions, make sure to let the Medical Assistant know you have questions, problems, or issues, so the nurse or physician will be alerted to your need.

**DEFINITION OF CANCER**

DR. RUGO
The American Cancer Society provides a definition of cancer: “Cancer is a group of diseases characterized by uncontrolled growth and spread of abnormal cells. If the spread is not controlled, it can result in death. What kind of cells and where they are in your body determines the type of cancer that is growing and what treatments are available.”

As the definition states, cells in the body begin to grow in an abnormal fashion. Normally, most of the cells in your body replace themselves on a routine basis as old cells begin to fail. This replication of cells continues throughout your entire life, millions of cells being replaced to combat the wear and tear on the body.

As with any system, mistakes can occur and occasionally your body makes an error in this replication, and the cell produced will not work properly. Normally, your body’s defenses will remove these problem cells without difficulty.

However, if this replication of abnormal cells grows rapidly unchecked by the body’s defenses, then a tumor will grow. At first, the number of cells is microscopic and may not cause any recognizable problems. It takes billions of cells before they can be seen by the naked eye or with imaging. Depending on the location, as the tumor grows it can begin to push other tissue or organs out of the way causing problems that become symptoms, such as pain, shortness of breath, fatigue, and others.

Some cancers cause symptoms very early in their growth. This allows for early detection when the tumor is still small or contained. In addition, some tumors can be found by routine screening exams, which often results in better treatment outcomes. Other cancers are more problematic because the symptoms are not detectable until the tumor has done significant damage and treatment outcomes are less predictable.

Cancers are named based on where they originate, such as in organs like the Lung, Breast, and Prostate; while other cancers, such as leukemia, lymphoma and multiple myeloma, affect blood and other tissues in your body.

Your Healthcare Providers will be discussing the details of your cancer diagnosis and what to expect to help set your treatment goals.

HOW IS CANCER TREATED

DR. RUGO

Five Categories of Treatment

There are five general categories of Cancer treatment. Many of you may have already been treated with some of these before coming to UCSF.

1. Surgery: removes or causes the destruction of the tumor(s). This can be done before or after chemotherapy depending on the cancer type and location.
2. Chemotherapy: destroys the tumor cells through drug therapy.
3. Radiation Therapy: treatment with high-energy rays to destroy the cancer cells.
4. Combination Therapy: destroys the tumor cells using a combination of these treatments. When chemotherapy is done in conjunction with surgery and/or radiation therapy, it can be done before, with, or after these treatments, depending on the cancer type and location.
5. Blood and Marrow Transplantation: Donor bone marrow replaces the patient’s marrow that is diseased or has been wiped out by treatment, such as high dose chemotherapy or radiation.

Our Focus is Chemotherapy

Chemotherapy is the use of chemical compounds, biological agents, and medications:
1. That kill cancer cells outright
2. Interrupt the cancer cell’s ability to reproduce and
3. Stimulate the body’s own immune response to attack the cancer cells.

Chemotherapy can also cause problems with normal cells, resulting in a variety of side effects we will discuss later. The choice of which chemotherapy agents are best for your specific cancer diagnosis is a decision your Oncologist Provider will make based on a number of factors including:

- The type & location of the cancer
- Your health status (in other words, other conditions) and
- The latest clinical findings on the drugs and agents available.

DR. CHEN

I’m Dr. Lee-May Chen. I am a gynecologic oncologist here at the UCSF Helen Diller Family Comprehensive Cancer Center.

You have had a number of diagnostic tests and/or procedures already. Your Oncologist here at the Cancer Center will review any tests you may have had, such as x-rays, imaging films, pathology and surgical reports to assess your current clinical situation. Together, you and your Oncologist will create a Treatment Plan.

We are going to answer some of the most frequently asked questions, so when you begin meeting with your Healthcare Provider team you have the necessary basic knowledge to be able to focus on your specific needs as the Plan is refined. Unlike in the majority of community hospitals and clinics where the oncologists are generalists who treat many different types of cancers, the Healthcare Providers and Practice Nurses at the UCSF Helen Diller Family Comprehensive Cancer Center specialize in specific types of cancers.

You have been referred to the Physician who best fits your needs based on your current diagnosis.

1. We encourage all patients to maintain an active relationship with their primary care physicians.
2. Your oncologist will be in communication with your primary care physician to keep him or her aware of your treatment course.
3. Your primary care physician will need to manage your other conditions, such as Diabetes, Heart disease, or Kidney problems during your cancer treatment.

In the next section of this video, these are the questions we will answer:
1. How is Cancer Treated?
2. What are the Goals of Treatment?
3. How Do You Know Treatment is Working?
4. What Side Effects Might be Expected?

Goals of Chemotherapy Treatment
The Goals of your treatment are dependent on a number of factors:

- The type and location of your cancer
- The Stage of the cancer’s growth: early stage is easier to treat--advance stage, more difficult to treat
- Whether the cancer has already spread to another location. That spread is called metastasis
- Your underlying health status: Age, other diseases being treated, and your performance status (a measure of how strong you are or how the cancer may be impacting your life)...
Establishing treatment expectations is an individual process between you and your Healthcare Providers. Generally, treatment goals fall within three categories.

- **Cure**: Elimination of the cancer without recurrence.
- **Control**: Keeping the cancer in a state of remission or prevention of its spread are goals when a cure is not possible.
- **Palliation**: Palliation seeks to treat your symptoms, for example, keeping you pain free, comfortable, and independent when a cure or control of cancer growth is not possible.

**HOW DO YOU KNOW THE TREATMENT IS WORKING**

**DR. CHEN**

You will have a variety of: lab tests and types of imaging repeated at intervals determined by the type of cancer and the chemotherapy that you receive. These repeated tests and images are compared with the previous tests and images to determine what effect the treatment has had on the cancer. If the effect is good, your tumor is shrinking, and you tolerate the treatment, then the treatment continues until your next evaluation.

If the effect on your cancer is not adequate or the treatments are too hard on you, then your Healthcare Provider will be discussing how to alter your treatments to achieve your Goal. This may be a change in chemotherapy drug, a lowering of the dose of the current chemotherapy drug, the addition of another drug, or even the addition of another type of treatment, such as Radiation Therapy.

It is extremely important that you make all your treatment appointments and that you get all the follow-up tests and images your Healthcare Provider orders. Please talk to your Practice Nurse or Healthcare Provider before you cancel any treatment appointments.

**HOW IS CHEMOTHERAPY GIVEN?**

**DR. MELISKO**

My name is Dr. Michelle Melisko. I'm a Medical Oncologist, and I'm here to answer another frequently asked question. Chemotherapy can be administered in several different ways, depending on the type of cancer:

- **Intravenous.**
  - This means into a vein either by a small temporary intravenous catheter, or a more permanent central line which can be either a PORT or PICC line. Intravenous drugs can be given through a small catheter inserted into a vein in the arm for short-term use.
  - Alternatively, chemotherapy may be given through a device inserted into a large vein, such as a PORT or PICC line. Both of these require minor surgical procedures for placement.
  - A PORT is placed in the chest area under the skin and provides a location for long-term access using a special needle inserted into the center of the port. This will be done when you arrive for your treatment.
  - A PICC line is an IV that is placed in the arm and can be left in place for a longer period of time and provides similar access; however, the patient must manage the PICC line at home by cleaning the entry site and changing the dressings. The PICC line requires daily maintenance.
  - Your Provider will help you decide which type of intravenous access is right for you.
    - **TYPES OF INTRAVENOUS TREATMENT ADMINISTRATION**
      - Depending on the drugs or agent being administered, the Chemotherapy is given either as:
A single push of medication from a syringe
- A drip from a bag of medication over time (1-8 hours)
- or by continuous infusion through a pump worn by the Patient over several days
- If you are receiving several different chemotherapy agents, you may experience all three types of administration during your treatment visit.

- In addition to intravenous administration, other ways that chemotherapy can be delivered are by installation or by oral medication. Installation means that the drug is given directly to the tumor either by a pump or by flushing through a catheter.
- Installation
  - During the process of Installation: A pump with a reservoir of medication is attached to a line that is placed into the body, and the chemotherapy is delivered directly to the tumor. The Pump delivers a measured dose over several days and is refilled as needed.
- Drugs can also be given into a confined area, such as the urinary bladder or abdomen (which we call intraperitoneal therapy). The medication is then left for a period of time (hours or days) so the tumor is bathed by the chemotherapy agent or medication.
- Oral
  - Some chemotherapy agents are now available in pill form. While this is easier for you to take, it may also cause side effects or interfere with other medications you may be taking. You will need to be monitored as with any other chemotherapy agent...
- Once the chemotherapy agent has been chosen and the method for administering the treatment is determined, you will begin the process of preparing for Chemotherapy treatment. Your Healthcare Provider and Practice Nurse will review how the specific drugs you receive will be delivered, and what you are likely to encounter throughout your treatment.

PREPARING FOR CHEMOTHERAPY - INTRO TO PRE CHEMOTHERAPY EVALUATIONS

DR. RUGO

Prior to beginning a Chemotherapy medication or agent, a Pre-Chemotherapy Evaluation is completed by your Healthcare Provider, an Order is written specifying the details of the treatment you will receive, and an appointment is scheduled in one of the Infusion Centers.

DR. RYAN

Prior to each treatment, blood tests, and a review of any symptoms you might have are completed to help us decide if you should receive the planned treatment. You will also be asked to report any symptoms you have had since your last treatment. These can include:
- Fever, diarrhea, constipation, bleeding,
- Uncontrolled nausea, vomiting, loss of appetite, mouth sores, weight loss or gain,
- Changes in mental alertness,
- Tingling in hands and feet and
- Any other symptoms you have noticed.

Usually the blood tests will include: Red and white blood cell counts, platelets, electrolytes, such as Sodium and Potassium, as well as Liver and Kidney function tests.

Where are Chemotherapy Treatments Given?
The Helen Diller Family Comprehensive Cancer Center currently provides adult outpatient chemotherapy treatment in two locations.

One is the Ida Friend Infusion Center located on the 15th floor of the Cancer Center at Mt. Zion Hospital. Another location is the Transfusion Center at the Parnassus Campus of the UCSF Medical Center. In some cases, chemotherapy is given on an inpatient basis. In all cases, your chemotherapy will be given by nurses specially trained to perform these treatments.

Since both the Infusion and Transfusion Centers provide similar services, for simplicity, we will refer to them both as the Infusion Centers.

Our Hematology Practices at the Parnassus Campus also use Chemotherapy to treat a variety of blood related cancers. This includes Blood or Bone Marrow Transplants. To more fully explain the differences in how Chemotherapy is used, and your role as a patient receiving treatment, we have asked Dr. Lloyd Damon to discuss the Blood and Marrow Transplant program.

DR. DAMON

I'm Dr. Lloyd Damon. I'm a hematologist and the medical director of the UCSF adult hematology and blood and marrow transplant program.

Hematology is the treatment of blood disorders of many types including cancers of the blood such as: Leukemia, Lymphoma, and Multiple Myeloma.

Chemotherapy is a part of the treatment plan for blood related cancers.

Chemotherapy is used in two different ways depending on the disease being treated.

Chemotherapy is an important as part of the treatment plans of these cancers. Chemotherapy is used in two different ways depending on the disease being treated.

First: The traditional use of chemotherapy as described by my colleagues at the Helen Diller Family Comprehensive Cancer Center; one or more chemotherapy drugs are often given intravenously in treatment cycles. Patients being treated at the Hematology Practice receive their treatments at the Parnassus Infusion Center. Both Infusion Centers operate with the same high quality nursing staff, appointment scheduling, and treatment authorization processes. Your Hematologist, Hematology Practice Nurse, and Hematology Infusion Nurse will provide education on the drugs being used, their side effects, and how to report any problems between treatments. Most patients receiving chemotherapy for blood cancers will need to be supported with transfusions of red blood cells and platelets.

Second: Blood and Marrow Transplants also use chemotherapy; however, the role of chemotherapy is very different. One of the side effects of many chemotherapy drugs is the suppression of the bone marrow and the resulting loss of red and white blood cell production, causing anemia and susceptibility to infection, as well as loss of platelet production. This may result in a risk of bleeding.

High doses of chemotherapy are used in BMT. These high doses destroy one's bone marrow, the site of blood production; however, the transplanted cells will reseed the marrow space and begin growing new blood cells. This process takes time – at least 2 weeks – and is confirmed with blood tests.
Some patients receive total body irradiation in addition to chemotherapy as part of a blood or marrow transplant. This radiation therapy is intended to destroy remaining cancer cells.

Safely administering High Dose Chemotherapy (with or without TBI) requires that this procedure be done as an inpatient. The admission is long, often 4 to 6 weeks.

High Dose Chemotherapy is administered first. Precautions are taken to minimize the side effects and monitor your clinical status as the chemotherapy drugs are delivered. The actual transplant procedure is similar to a blood transfusion. It is done 1-3 days after your last chemotherapy dose, and is given through the vein. The transplant takes about an hour and is done in your inpatient room.

The new cells travel through the blood stream to the empty bone marrow space and rebuild the bone marrow. During this time when you have essentially no immune system, you will need antibiotics and other medications to prevent infections from bacteria, fungi, and viruses.

You will feel the effects of the chemotherapy or radiation about a week after the Blood or Marrow Transplant. When the blood counts are low, you feel like you have the flu and may not want to do much. This will last for about two weeks and will decrease as your blood counts improve.

All patients undergoing a blood or marrow transplant are required to have an identified person who can assist them after they are discharged from the hospital. We call this person the "caregiver." In order to be approved for transplant, each patient must identify a person or persons who can fulfill the responsibilities of the caregiver.

After your blood counts have recovered, you will be ready for discharge from the hospital. Just before discharge, you will receive detailed education about what to expect when you first go home.

My goal is to provide you with the best understanding of the high dose chemotherapy given during a Blood or Marrow Transplant. My colleagues and I want to maximize your safety and comfort during the procedure, and to facilitate your recovery.

INTRODUCTION TO INFUSION CENTER

The Infusion Centers are open Monday – Friday during regular business hours. Extended weekday hours and weekend service are generally available at one of the two campuses. Speak to your Healthcare Provider's Practice Assistant or the Infusion Center Scheduler to make the necessary appointments. The Infusion Centers primarily use treatment chairs with some beds available for very long or complex treatments (some take up to 8 hours to complete). Chemotherapy appointments can be as short as 30 minutes for a simple injection or up to 8 hours for some infusions. Non-chemotherapy appointments are sometimes required for you to receive other medications, blood transfusions, to have your blood drawn through a PORT or to receive IV fluids that are required to offset the side effects of the chemotherapy.

APPOINTMENTS AND WAIT TIMES

DR. RUGO

You must have an appointment scheduled and an order for treatment from your Healthcare Provider to receive services at the Infusion Centers. The Infusion Center staff strives to see all patients in a timely fashion. Delays can occur when patients experience medical problems during treatment and additional medical care needs to be given. When those problems arise, we try to work with the other patients who are waiting to keep them informed of how long of a delay to expect.
If you cannot make your appointment at the scheduled time, please call to discuss scheduling options. If it is possible to reschedule you on the same day, we will. If it is not possible to do so, we will reschedule your appointment.

**OVERVIEW OF A TREATMENT SESSION**

**DR. RUGO**

The Infusion Nurse will escort you to your assigned chair (or bed). Your vital signs including your blood pressure, pulse, respirations, temperature, and weight will be taken for your nurse to review prior to the treatment. The nurse will then ask you a number of questions. The questions she asks will depend on whether this is your first treatment or a return visit in a course of treatments.

Your Healthcare Provider will have written specific orders regarding what chemotherapy medication you are to receive and some parameters (lab results, changes in vital signs, or specific symptoms that will tell the nurse if the prescribed treatment should be given. It is not uncommon for a treatment to be postponed because your body needs more time to recover; if that occurs your Healthcare Provider will be notified.

Once the Infusion Nurse has confirmed that it is safe for your treatment to proceed, the chemotherapy will be administered as ordered.

Patient safety is one of our primary concerns. When you visit the Infusion Center for your chemotherapy treatments, we will take a number of steps to ensure we are treating the correct patient with the correct drugs.

The staff in the Infusion Center will confirm your identity with two identifiers: your full name (regardless of how often you come and even if the staff know you) and your date of birth. Your vital signs will be taken, and then you are taken to your treatment chair.

**JANET SABATINO, RN**

Your Provider and Practice Nurse will give you pertinent information about your specific medication during your consultation, and the Infusion Nurse will review that information with you at your treatment visit.

In order to ensure your safety when receiving treatment in the Infusion Center, we always have two nurses check that the drug and dose being administered is what your physician’s order states and what the pharmacy prepared.

**MIKE BULJAN, NP**

At the first visit, I’ll start by confirming that this is the first time you’ve been to our infusion center. I’ll ask if you have brought anyone with you while you’re having treatment. If you need additional help, our Social Workers can discuss the resources that are available.

Then I’ll review your vital signs and do a quick assessment. I check to make sure your lab values are within the parameters set by your Provider. I’ll review the medications that you will be receiving during your treatment, as well as how to manage potential side effects. I’ll verify that you have brought your prescriptions for anti-nausea medications, and answer any questions you may have.

**DR. RUGO**
At the end of your treatment session, the nurse may again review your vital signs and give you discharge instructions about symptoms or side effects that you may experience, how to manage these symptoms and how to notify your Healthcare Provider if there are problems.

You may bring someone (one person only) with you during your treatment in most cases. Space is limited, so please minimize the number of personal belongings you bring. Children under 12 years old are not allowed in the infusion center. Cell Phones are not permitted; however, you may bring your laptop computer. We provide free wireless access. Please bring your own earphones for television viewing. The Cancer Center is fragrance-free for the comfort of all—please refrain from wearing any scented products, such as perfume, on the day of your appointment.

Required Authorizations from your insurance company for Services or treatment will be obtained by your Healthcare Provider’s Practice Assistant. You will be kept informed of any issues that arise regarding treatment authorizations.

Before you start your treatment, your Healthcare Provider and Practice Nurse will provide one-on-one education and printed information regarding the specific Chemotherapy medications you will be receiving. On the day of your infusion, the Infusion Nurse will provide an overview of the medication being administered and answer your questions. Printouts describing potential side effects are available for you to take home.

Dealing with the potential side effects from Chemotherapy requires understanding what to expect so that you can take the proper actions. There’s a difference between symptoms and side effects. Some days, you may not feel well, and the discomfort could be from the cancer, or a side effect of the chemotherapy.

**DR. VENOOK**

We use the word "symptoms" generally to refer to problems caused by the disease itself. "Side effects" refers to the specific reaction by your body to a drug, agent, or substance used to treat disease. This can be confusing because sometimes the symptoms of the disease and the side effects of the drug can be the same. Anemia can be caused by disease, but it could also be caused by the chemotherapy agent suppressing the bone marrow that replaces red blood cells.

Regardless of the cause, both symptoms and side effects need to be assessed and treated. This will be done at each of your Clinic or Infusion Center visits. You will learn how to recognize which problems require immediate action and what can wait.

**DR. RUGO**

Specific information about your treatment drugs will be given to you by your Healthcare Provider and nursing staff. Following treatment, different drugs have specific timeframes during which you can expect to experience side effects. In addition, these side effects can occur immediately after the first treatment, or it may take several treatments before the side effects begin.

**DR. RYAN**

On average, 7-10 days but sometimes as long as 20 days after each treatment, some patients will experience low blood counts called “the nadir” as a result of the effects of the chemotherapy. Some patients might need to be hospitalized because of the severity of the side effects. Others will need additional medications and fluids in the Infusion Center; while four many can manage at home with rest and medication support.

Following the nadir, your body will begin to recover. If your side effects are too severe, your Physician may need to:
(1) Discuss using an alternate or lower dose treatment or
(2) Allow you to rest for a longer time between treatments.

DR. VENOOK

Side effects are identified by a variety of symptoms that you might experience or by the changes in blood test results that we will monitor. These symptoms may occur alone, making diagnosis and treatment simple, or they can come in multiple combinations that change as you progress through your treatment plan.

Identifying and reporting your symptoms allows your physicians and nurses to assess the problem and offer changes in the regimen or strategies to manage the symptoms until treatment is complete.

It’s very important to know the difference between serious symptoms, which must be treated quickly, and experiences of discomfort that are normal when undergoing chemotherapy, and that are not as serious or potentially life threatening.

DR. RYAN

Serious conditions requiring immediate intervention include:
- **Bleeding:** Increased bruising or bleeding needs to be evaluated immediately because chemotherapy drugs can disrupt the ability of your blood to coagulate (or clot). Unseen or hidden bleeding that can cause anemia is found by monitoring blood test results.
- **Fever:** Can be caused by an infection or low white blood cell count, a condition call neutropenia. Only your physician can determine the cause and treat accordingly.
- **Nausea, Vomiting, or Diarrhea:** If you experience these symptoms for prolonged periods, you will receive treatment, including adequate replacement fluids.

DR. VENOOK

There are several other symptoms that you may or may not encounter that you need to be aware of that we will monitor at your follow-up visits. These are side effects that can be a chronic problem during the course of chemotherapy, and which we can treat in a variety of ways that don’t require major interventions or hospitalization.

DR. RYAN

Anemia: Anemia is monitored by a blood test. You might require a blood transfusion if the red blood cell count is very low and is not responsive to other medication. Anemia can be caused by the failure to produce enough red blood cells or the loss of red blood cells through bleeding.

Pain: Whether caused by the cancer or the chemotherapy, pain needs to be treated. There are many ways to alleviate this symptom effectively. How severe is the pain? Rate your pain, keep a journal, and take all prescribed pain medication. Pain contributes to fatigue, weight loss, and feelings of depression.

Fatigue: Stay active and involved, but manage your choices of what you can do each day.

Weight Loss: Weight loss can be difficult to control, especially if you have a group of symptoms such as Nausea, Vomiting, Mouth Sores, Diarrhea, and Fever. Our nutritionist can offer dietary help in addition to the medications used to control the other symptoms. Some patients can also experience weight gain from certain treatments. Consult your Practice Nurse or Healthcare Provider for more information.
Constipation: Constipation is usually a side effect of medications and/or low fluid and food intake. A decrease in activity can also contribute. Stool softeners and increasing fiber in your diet can help. Laxatives are often necessary if the other options aren't effective. Make sure to drink plenty of fluids during treatment.

Hair Loss: The loss of hair is temporary, and after you complete the chemotherapy treatments, your hair will grow back. While there is no significant physical discomfort associated with hair loss, coping with the change in your personal image needs to addressed. Take the time to research options at the Cancer Resource Center and our Gift Shop. Some patients find cutting their hair short or even shaving the head, lessens the impact of this common symptom.

Lymphedema: Swelling of the arms or legs can develop after some surgeries or radiation therapy. You will be taught prevention strategies and referred for treatment should this condition develop. Treatment may include daily pressure dressing wraps or garments, as well as elevation, helping gravity to move the fluid back into the system.

Sexuality and Fertility Issues: It is not unusual for patients to experience lowered sexual interest or decreased sex drive while undergoing chemotherapy treatment. Additionally, if you are of childbearing age, your ability to have a child may be affected by your treatment. Please be sure to bring up any concerns or questions you may have with your Provider. In addition, a fertility expert is available on request to provide you with more detailed information about your possible options for fertility preservation.

Depression: Is a very frequent response to both the cancer diagnosis and the challenges of treatment. Recognizing that depression is a real side effect of the disease and its treatment and that there are effective ways to deal with this problem is important.

Your Healthcare Providers will give you detailed information about what you can expect based on your treatment plan, along with guidance about how to report problems.

DR. SHUMAY

Depression can be a real problem when you're undergoing chemotherapy.

The first thing to remember is that feeling sad or depressed is a normal response to serious illness. However, if those feelings continue over time, seeing our Social Worker, Psychologist, or Psychiatrist can be helpful. In addition to feeling sad, you may also experience feelings of anxiety, loss, and anger.

There are a number of things you can do including taking prescribed medications to help give you back feelings of well-being. Treating depression will also improve your ability to continue your cancer treatment effectively.

Let your Practice Nurse or your doctor know if you’re having concerns about depression.

There are several things you can do to feel better. Include these in your daily routine:

- Pay attention to sleep: make sure that you're sleeping 8 or 9 hours a night. Lack of sleep and the resulting fatigue can cause significant problems physically and emotionally.
- Stay mobile and move: change your environment throughout the day.
- Spend time in different areas of your home including being outside in natural light and fresh air.
- Keep a structure in your day: Develop a routine that has you participating in different activities. Find something else to focus on besides your chemotherapy treatment; something fun, sports, pets, art, or anything that boosts your mood.
- And most important, use your social network to get the emotional uplifts you need.
Let friends and family know what you need, they will be happy to help.

CHEMOTHERAPY EDUCATION

DR. RUGO

Now that we have covered the major issues in dealing with the challenges of Chemotherapy, we'll learn more about how patients go through the treatment process.

Patients finalize their treatment plans with an Oncologist, and then meet with a Practice Nurse for the First Chemotherapy Education.

Depending on your Provider, these two appointments may be done at the same time or at two separate appointments, and the education is sometimes done by a nurse practitioner or your physician.

DR. RYAN

In these meetings, we cover the proposed treatment plan for our patients and discuss the drugs to be used. When they start chemo, we need to see how well they tolerate the medication. If there are problems, we will make appropriate alterations in the drugs or the length of the rest periods between treatments.

After the meeting with an Oncologist, the Practice Nurse gives the patient more details about treatment. The Oncologist will see the patients again to review the patient's symptoms after the first treatment.

DR. RUGO

Remember, sessions with your Healthcare Provider’s Practice Nurse may be scheduled at a separate visit.

YOUR RESPONSIBILITIES AS A PATIENT

Scheduling Your Infusion Visits

MIKE BULJAN, NP

I’m Mike Buljan, a nurse at UCSF. I’ll give my patients contact information for their doctor’s Practice Assistant. The Practice Assistant makes the first Infusion Center appointment for the patient, and patients make all subsequent Infusion Center appointments with the Infusion Center scheduler prior to leaving at the end of each treatment. All treatment plans tend to be a little different. Patients undergo varying treatment schedules in the Infusion Center, and those visits may be as simple as an injection or as long as four or more hours.

Blood work prior to each treatment should be done on the day of treatment here at UCSF. Labs can be done the day prior, at a lab near where patients live. In that case, we will need to know the Lab name and phone number so we can get the lab test results in time for treatment. Patients are given a Lab slip defining what tests need to be done.

We schedule follow-up visits after the first treatment, then routinely if there are no problems.

DR. RUGO

Patients receive different chemotherapy drugs, so it's best for your Provider and Practice Nurse to give you that information directly. You will have a general discussion of the drugs and learn how they work individually or in
combination. You will also receive written material about the drugs for future reference. Keep this information with your other medical information in your binder.

DEALING WITH SIDE EFFECTS

MIKE BULJAN, NP
Chemotherapy causes several side effects. Patients need to be prepared for:
- Nausea and possible vomiting
- Severe flu-like symptoms, body aches and pains, including a mild fever below 101 degrees
- Fatigue
- Hair Loss is possible in the future

JANET SABATINO, RN
You will likely receive pre-treatment medications while in the Infusion Center that help to prevent possible nausea or vomiting, and sometimes an antihistamine medication to reduce the potential for an allergic reaction.

You may also receive prescriptions to manage potential side effects that you may experience after you go home. We recommend having prescriptions filled before the first day of treatment, so they're ready if they're needed. Be sure to have a working thermometer at home to monitor temperature for fever after your treatment.

MIKE BULJAN, NP
Notify your Provider of any changes in your medicines, over-the-counter medication, and herbal or vitamin supplements you are taking. Patients should be sure to have a working thermometer at home to monitor temperature for fever after treatment.

We advise taking medications if you have even mild nausea. Don't wait until you're sick, because the medication will be harder to keep down. When the nausea fades, start with bland simple meals such as soup, crackers, toast.

The more treatment cycles are completed, the greater the potential for other side effects that can cause problems with red or white blood cells and/or platelets. These side effects may require reducing the dose or frequency of treatment, and may also require additional medications. The side effects that involve blood cells will be monitored by the blood tests done prior to each treatment.

CALLING TO REPORT A PROBLEM

DR. RUGO

Although not all practices use the same call system, when you call, you will need to be ready to provide the Practice with the necessary information for them to best respond to your concerns.

Examples of information you need to provide are:
- Your full name and date of birth
- The name of your Healthcare Provider
- The date of your last treatment
- The reason for your call
- And the best number to reach you.
If you are calling to report symptoms, you will want to include when they began, the severity of the symptoms, and anything you may have tried to treat them.

Let’s see how this works. Ms. Lopez awoke in the early morning with fever and chills. Chemotherapy was given 4 days ago, and it was the Patient’s fifth treatment. As instructed, the Patient took her temperature and it was 101.9 degrees farenheit. As instructed by the Practice and Infusion Nurses, she placed a call to the Practice.

This is Ms. Lopez. My date of birth is May 5th, 1975. I see Dr. Chen. My last treatment was Friday and today I woke up with fever of 101.9 and chills. I tried to lower my temperature by taking Tylenol two hours ago, but my temperature is still 101.7. I can be reached at 415-555-7022. Please call me back.

The Practice Nurse reviews the patient's message, recent clinical history, and the Healthcare Provider’s Orders to have a clear understanding of the Patient’s status. The Practice Nurse will then call the Patient to help address the patient’s concerns.

Ms. Lopez, this is Mike. I received your message and understand you have a fever, and it has been one week since your chemotherapy.

Yes, I woke up early this morning with chills and a fever. My temp then was 101.9. I took some Tylenol, but my temperature is still almost the same. Let’s see – that was about four hours ago. I didn’t call until eight because I was hoping the Tylenol would work.

Given that you have a central line in place and have had chemo treatment cycles, we need to thoroughly assess you for a possible infection. Dr. A may want you to receive IV antibiotics after blood cultures. How long will it take you to get to the Infusion Center?

It takes about an hour. My husband is working from home today, so he can bring me. Should we leave now?

No, I need to confirm with Dr. Chen this is what we need to do and check with the Infusion Center for a time that is available. I will call you back in about 30 minutes. Are you having any other problems, pain at your line site, cough, or diarrhea?
AAKRITI SHARMA

No. Other than the fatigue and nausea just after treatment. I felt OK yesterday, but I woke up like this.

MIKE BULJAN, NP

I will let you go and call you back in about 30 minutes.

JANET SABATINO, RN

The Practice Nurse confers with the Doctor and confirms that blood cultures and Labs will be drawn. An antibiotic will be administered in the Infusion Center.

The Practice nurse obtains the necessary written Orders and calls the Infusion Center to discuss the emergent add-on visit for this patient. If there is a delay in arranging the infusion center visit or treatment the Practice Nurse will call and check in with the patient and let the patient know what is going on.

MIKE BULJAN, NP

Ms. Lopez, I have an appointment for you at the Infusion Center for 1:30 PM. It’s a little after 10:00 now, so you have time to get here. Go directly to the Infusion Center and check in. The Infusion Nurse will do the blood draws necessary and then administer the IV antibiotic. I need the name of your Pharmacy and the phone number in case we need to call in prescriptions.

AAKRITI SHARMA

OK, 1:30 is fine. I use the Berkeley pharmacy and their number is 510-432-1200. Thanks for setting up my appointment.

MIKE BULJAN, NP

Glad you called promptly so we can get this cleared up. Call again any time. Thanks.

COMPREHENSIVE CANCER CENTER RESOURCES

DR. RUGO

Managing chemotherapy is a team effort, and includes your personal support team, as well as your clinical team. At the Cancer Center, your Clinical Team includes some or all of the following team members:

Attending Physicians, Consulting Physicians, and Nurse Practitioners manage your care from diagnosis through treatment. These practitioners are also referred to as Healthcare Providers.

Practice Nurses provide procedure support, education and care management advice.

Infusion Nurses administer chemotherapy and if ordered by your physician will administer antibiotics, blood transfusions, or hydration (fluids) to support you therapy.
Pharmacists review your medications for possible interactions and prepare chemotherapy in the Infusion and Transfusion Center.

Clinical Research Coordinators (CRC) provides information on clinical research protocols recommended by your physician, and assist with data collection during the protocol.

Medical Assistants assist you and your Healthcare Provider and Nurse during your clinic or Infusion Center visit.

Practice Assistants schedule your visits and coordinate any insurance authorization needs.

Front Office Staff greet you and assist you with checking you in for your visit.

Nutritionists assess your nutritional needs, weight loss, and dietary management.

Social Workers assist with financial and service applications in addition to providing emotional support.

Psychologist and Psychiatrists who are part of our Psycho-Oncology Services are available to help you deal with the stresses and depression associated with cancer and its treatment.

Chaplains and Spiritual Care: Dealing with illness and uncertainty can be an extremely challenging time. Many people find that talking with a chaplain can help during this period. Chaplains representing many faiths are available around-the-clock to be a caring presence, offer spiritual and emotional support, and listen with openness and understanding. Patients, families, and staff are encouraged to call a chaplain when experiencing feelings of fear, anger, loneliness, helplessness, anxiety, grief or loss, or when they just need someone to talk to. Chaplains are also available for times of celebration, prayer, and rituals. Meditation Rooms are available at both the Mt. Zion and Parnassus Campus on the first floor. To contact a Chaplain call 415-353-1941.

In addition to your healthcare team, we have a variety of services to assist you.

The Ida & Joseph Friend Cancer Resource Center, located on the first floor of the Mt. Zion Campus, is part of the UCSF Helen Diller Family Comprehensive Cancer Center and supports wellness and healing by providing patients, families and others with information about cancer treatments, emotional support, and community resources. The center maintains a library of books and other media; provides access to the Web and health databases; and offers personalized research assistance. The Cancer Resource Center hosts activities including support groups, exercise classes, and workshops such as the Peer Support Program that connects new patients with cancer survivors who have had a similar diagnosis or treatment experience. Hours are 9 a.m. to 5 p.m., Monday to Friday. To contact the Cancer Resource Center call 415-885-3693, visit the website, or e-mail CancerResourceCenter@ucsfmedctr.org.

Art for Recovery, located on the first floor of the Mt. Zion Campus, is dedicated to enabling patients and caregivers to express what they are feeling through their own creativity as part of a healing process. Family members, partners, and friends of patients may participate, as well as create their own art relating to a loved one’s illness. The art created by our cancer patients is exhibited throughout the Cancer Center. Hours are 9 a.m. to 5 p.m., Monday to Friday. To find out more about Art for Recovery, call 415-885-7221 or visit the office at Mt. Zion. You can also view the scheduled activities on the website. http://cancer.ucsf.edu/afr.

Osher Center for Integrative Medicine, located across the street from the Mt. Zion Cancer Center offers both Patient Education & Treatment services including Complementary and Integrative care that combine the best of alternative therapies such as acupuncture, massage, meditation, herbs and nutrition with conventional medicine to promote good
health and treat illness. Specific programs for cancer patients & their caregivers are available in addition to Traditional Chinese Medicine.

If you participate in complementary therapies, it is important to talk with your doctor or nurse about your interest and how this can be integrated into your care. If you have an interest in exploring complementary therapies, an Integrative Medicine Consultation at the Osher Center can help you find the best therapies for your personal situation.

UCSF Patient Health Library is located on the first floor of the Mt Zion campus within the H.M. Fishbon Memorial Library. This library has medical books and journals, health newsletters, and more, plus access to Internet resources. More importantly, a professional medical librarian is available to help you research your health information questions. Hours are 9 a.m. to 5 p.m., Monday to Friday; to contact the library call 415-885-7285, stop by the library, or send an email to patientlibrary@ucsfmedctr.org.

The self-care management strategies we’ve discussed in this video will help you to evaluate how you are doing and to take appropriate action. If you have already adopted these strategies, you are well on your way to being in control of your own healing process.

Let’s review the seven steps in managing the complexities of chemotherapy treatment.

1. Understand Your Situation: Understanding your diagnosis, treatment plan, goal of treatment and potential problems will help you to feel more confident. Your Healthcare Provider and their Nursing staff will help you to understand the particular issues you will be facing.
2. Organize Medical and Insurance Information: Use your binder and carry it with you to your visits. This will help you track your treatment, response to treatment, and insurance coverage.
3. Identify Your Personal Support Team: Choose a personal advocate to help you from your family or friends and work on completing your Advance Directives.
4. Create a Directory a list of your personal and medical team members with contact information.
5. Daily Self-Assessment: This is particularly important during your Chemotherapy treatments, and helps us to know how you are doing.
6. Journal Your Status: This helps you or your advocate to deal with questions or problems.
7. Speak up and Ask Questions. Asking questions is an important way to communicate your needs. It’s also the best way for us to help you understand the goals of your treatment.

CONCLUSION

DR. RUGO

We are now at the end of this education program. You have had an opportunity to get a brief look at the services and staff here at the UCSF Helen Diller Family Comprehensive Cancer Center.

We encourage you to share your questions and concerns with your Providers.

Thank you for choosing UCSF.