

Managing and Understanding Your Cancer Treatment

Presented by:
Stanford Oncology Nurses
and the Stanford Cancer Supportive Care Program

What is Cancer?

Cancer is the abnormal growth of otherwise normal cells.

Cancer can start almost anywhere in the body, it's not just one disease.

Cancer cells:

- ignore signals that normally tell cells to stop dividing
- continue dividing and become more and more abnormal
- can accumulate and form a **mass** or **tumor**
- can sometimes spread to other parts of the body



What is Chemotherapy?

Chemotherapy is a category of drugs used to kill cancer cells.

Works by interfering with the cancer cell's ability to grow or reproduce.

Slows or stops the reproduction of rapidly dividing cancer cells



What is the goal of chemotherapy?

The goal of chemotherapy is to stop or slow the growth of cancer cells.

Chemotherapy is considered a systemic therapy, as opposed to surgery or radiation therapy. Once chemotherapy is in your blood stream, it goes everywhere your blood goes.

Chemotherapy can work throughout the whole body by killing cancer cells that may have metastasized or spread to parts of the body far away from the primary (original) tumor.

How will my doctor know what drugs are right for me?

There are more than 100 cancer drugs.

Your oncologist has access to the latest research to guide him/her in deciding which treatment is best for you

Your doctor will choose the drugs, doses, frequency and duration of your treatment.

The drugs that are best for you will depend on your type of cancer, how big it is, if it has spread, how it affects your normal body functions and your overall health.

A single chemotherapy drug may be used to treat your cancer, or multiple drugs may be used in combination.

Multiple drugs with different actions can sometimes work together to kill more cancer cells.

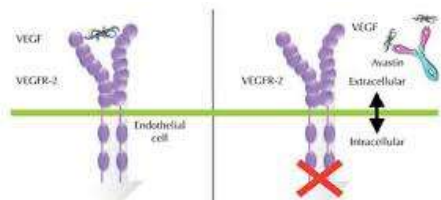
You and your doctor will make the final decision about which drug or combination of drugs you will get.

Targeted or Biotherapies

Targeted cancer therapies are drugs that block the growth and spread of cancer by interfering with specific molecules

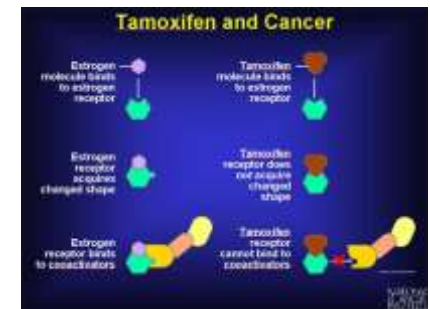
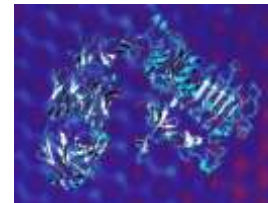
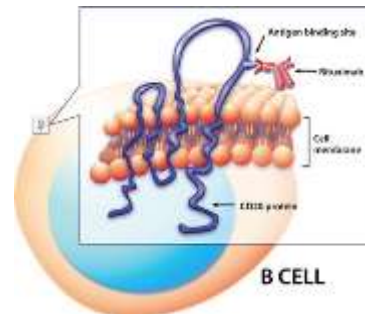
Some examples are:

- **Bevacizumab (Avastin)** which limits the growth of blood supply to tumors
- **Rituximab (Rituxan)** which marks some lymphoma cells for destruction
- **Trastuzumab (Herceptin)** which attacks a target on some breast and other cancer cells
- **Tamoxifen (hormone therapy)** which blocks estrogen in breast cancer



ANGIOGENESIS
Angiogenesis is mediated primarily through the interaction between VEGF and VEGFR-2

ANGIOGENESIS
Avastin inhibits VEGF extracellularly and therefore, may inhibit angiogenesis without disrupting targets outside the VEGF pathway



Immunotherapy

Immunotherapy refers to drugs that restore or strengthen the body's own immune system's natural ability to fight cancer.



Some examples are:

Nivolumab (Opdivo) and Pembrolizumab (Keytruda)

These drugs work by taking the brakes off the immune system so it can kill certain types of cancer cells

How is chemotherapy given?

Most chemotherapy goes directly into a vein through an IV (intravenous) infusion, one drug at a time

Some of the new targeted therapies come in pill form

Chemotherapy is usually given multiple times over weeks or months in what is known as a **course of treatment**. A course of treatment is made up of a series of treatment periods, called **cycles**. The total length of time you will be receiving treatment varies depending on your specific type of cancer.



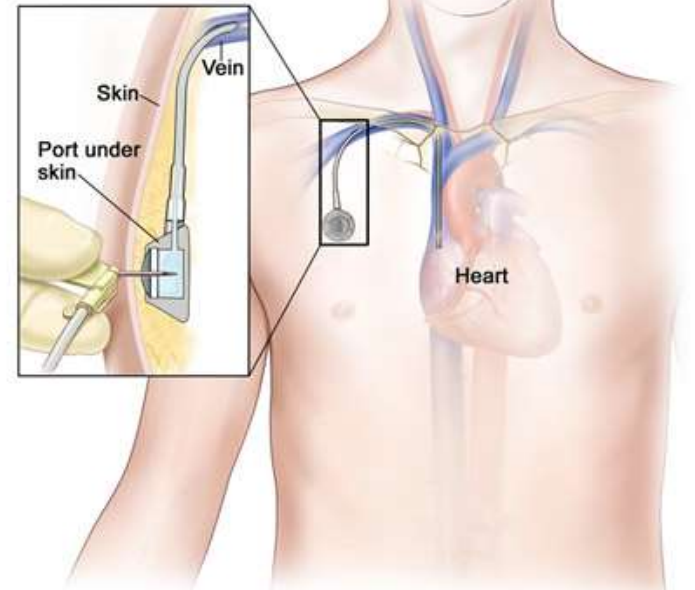
Vascular Access Devices

Some people have challenging veins or get anxious about needles.

Implanted ports and ***PICCs*** are great options in these cases.



Central Venous Internal Line:
Port



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How Will I Know If My Chemotherapy Is Working?

- You will usually have blood tests and see your doctor before each cycle of treatment.
- During these visits, your doctor will ask you how you feel, do a physical exam, and answer any questions or concerns you or your family have.
- You may have MRI, CT, or PET scans at regular intervals.



Severity of side effects has nothing to do with how well chemotherapy is fighting your cancer.

Are others at risk of exposure to chemotherapy by being around me?

It takes about 48 hours for your body to break down and/or get rid of most chemotherapy drugs. During this time, a small amount of chemotherapy comes out in your urine, stool, vomit and other bodily fluids.

1. After using the toilet, close the lid and flush twice. Men should sit when urinating to avoid splashing.
2. Wash your hands well with soap and water.
3. If you vomit into a basin, carefully empty it into the toilet without splashing and flush twice.
4. Use condoms during sexual activity.
5. Use gloves when handling trash or laundry that has come in contact with bodily fluids.

Hugging and kissing is safe, even with children
It's OK to share a bathroom with others

These precautions are only necessary during the first 48 hours after most recent dose of chemotherapy

Oral cancer drugs

Take the medicine with a full glass of water.

Try to take the medicine at the same time(s) each day.

Go over these questions with your health care team so you know exactly how to take your medicine:

1. When should I start taking my medicine?
2. How many times a day should I take this medicine?
3. For how many days should I take this medicine?
4. Can I take this medicine with food?
5. Can I break, chew, or crush the medicine, or should I swallow it whole?
6. Can I continue taking my other medicines, including prescription, over-the-counter or herbal supplements?

Even if you start to feel better, keep taking your medicine exactly as prescribed.



If you can't take your cancer pills for any reason notify your doctor right away

Handling Oral Cancer Drugs

Keep these drugs away from children, pets, and items that other people may touch, such as counters, dishes, or food.

You should wash your hands with soap and water after handling.

Caregivers should wear protective gloves whenever handling the medicine.

Do NOT throw unused medicine in the garbage or down the toilet.

Properly dispose of unused medicine by taking it to a local collection site. Ask your pharmacist or call your local fire or police station to find collection sites near you.



Why does chemotherapy cause side effects?

- ▶ Depending on the drug, the side effects can vary greatly. Some people may feel no side effects.
- ▶ Chemotherapy kills rapidly dividing cancer cells. Some side effects result from the effects the chemotherapy has on NORMAL rapidly dividing cells as it kills the cancer cells.
- ▶ These healthy cells include hair follicles, bone marrow, gastrointestinal tract, skin, and reproductive tissue.

Fatigue the sense of tiredness or exhaustion that gets in the way of normal functioning

Caused by:

- ▶ Chemotherapy drugs
- ▶ Anemia
- ▶ Dehydration/Malnutrition
- ▶ Emotional stress/sleep pattern changes
- ▶ Pain and pain medication

Be aware, fatigue may be cumulative and may continue for awhile after treatment is complete

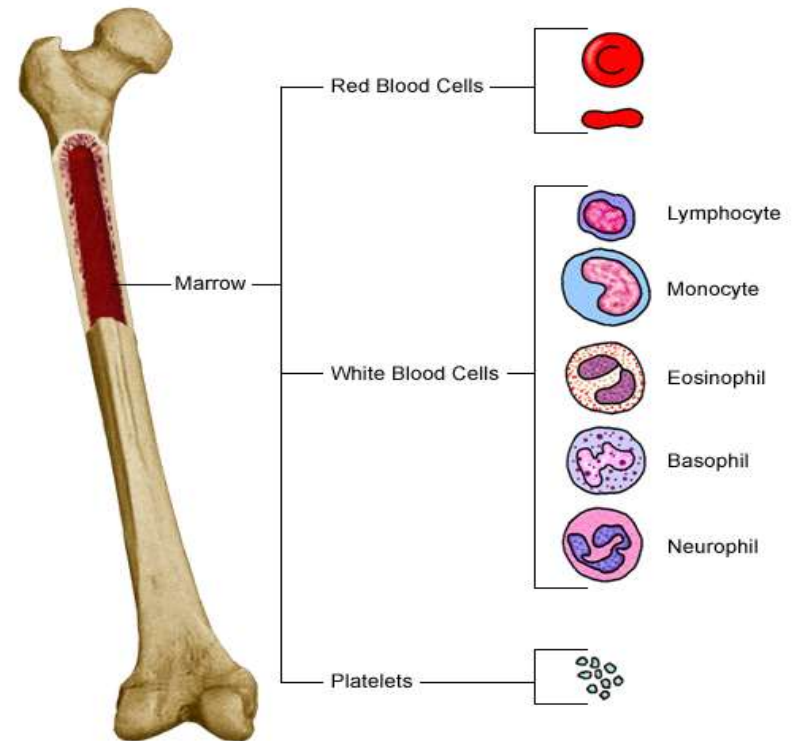


Treatment:

- ▶ Exercise (consider our free exercise consultation)
- ▶ Good nutrition/hydration
- ▶ Relaxation activities (yoga/meditation/massage)
- ▶ Red blood cell transfusions

Chemotherapy Effects on Bone Marrow

- ▶ Normal bone marrow rapidly produces blood cells
- ▶ Chemotherapy drugs slow down the functioning of the bone marrow so blood counts are reduced.



	Normal function	If count too low
Red cell	Carry oxygen and nutrients, give energy	Tired, short of breath, dizzy
platelet	Help blood to clot, prevent bleeding	Bruising, risk of bleeding
White cell	Fight infection	Risk of getting sick

Neutropenia = Low Neutrophil Count

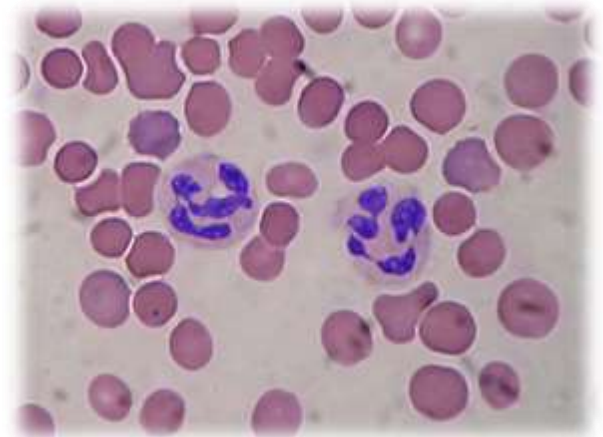
Neutrophils (a type of white blood cell) are your infection fighters

ANC = absolute neutrophil count

A low “ANC” results in lowered immunity and may:

- ▶ delay your next treatment
- ▶ require additional medications (antibiotics)
- ▶ lead to hospitalization if necessary

Where will I get my blood tests drawn?



Infection: an invasion of an organism that can cause health problems

Symptoms:

- ▶ **Fever or temperature greater than 100.4F or 38C**
- ▶ Sore throat, cough, shortness of breath, chest pain, chills
- ▶ Urinary changes - pain or burning with urination
- ▶ Swelling in any area, especially if accompanied by pain or heat or redness

If you have a fever, call your doctor

at (408)426-4900 (CCSB) or (650)498-6000(CCPA)

Call anytime, day or night

- ▶ Make sure you have a working thermometer
- ▶ Do not take Tylenol or ibuprofen to mask your fever



Avoiding Infection

- ▶ WASH YOUR HANDS OFTEN!
 - Before meals
 - After using the bathroom
 - Also those close to you
- ▶ Clean cuts with soap and water and apply antiseptic
- ▶ Stay away from people who are obviously sick
- ▶ Try to keep your hands away from your face
- ▶ Wear gloves when gardening or performing housework
- ▶ Maintain good personal and oral hygiene
- ▶ Have someone else clean up after pets
- ▶ Use antibacterial wipes
- ▶ Avoid raw eggs, sushi
- ▶ Avoid manicures and pedicures
- ▶ Use of masks
- ▶ White blood cell boosters (neulasta/neupogen)
- ▶ Flu vaccine



Hair Loss is caused by chemotherapy drugs slowing the growth of rapidly dividing hair follicle cells.

- ▶ One of the most distressing side effects
- ▶ Not all chemotherapies cause hair loss
- ▶ Usually occurs within 2 to 3 weeks of first chemotherapy
- ▶ Pick out wig, scarves, and hats before hair loss
- ▶ Contact Cancer Supportive Care Program for Wig Resources
- ▶ Effect on other body hair varies
- ▶ Hair starts growing back about one month after treatment is stopped
- ▶ Color and texture of new hair may be different
- ▶ Ice caps reduce hair loss by decreasing blood flow to the scalp.



Nausea is the unpleasant feeling that you're about to vomit

Caused by chemotherapy drug's influence on the stomach and brain, anxiety, and stress. Different chemotherapies cause varying degrees of nausea. Nausea may start during the first 24 hrs. and can last 2-3 days or more after treatment.

Prevention is Key

You will be given anti-nausea medication by your nurse on your treatment day and several prescriptions to take at home. Bring these with you on your first day of treatment so your nurse can give you instructions.

Other treatments that may be helpful include:

- Small frequent meals
- Staying well hydrated
- Ginger tea
- Guided imagery
- Relaxation activities (yoga, music, meditation)
- Hypnosis
- Accupuncture/accupressure



Mouth Sores

- ▶ Caused by the action of chemotherapy on rapidly dividing cells that line the GI tract
- ▶ Symptoms may include redness, dryness or burning canker-like mouth sores

Prevention and Treatment include:

- Gentle teeth brushing with soft toothbrush
- Salt water rinsing four times a day (1/4 tsp in one cup water)
- Drinking plenty of fluids
- Pain medication if necessary
- Do not use teeth whitening products or alcohol mouthwash
- Gentle flossing
- If possible get a routine dental cleaning before starting chemotherapy. Avoid dental cleanings and procedures during chemotherapy treatment.

Call your doctor if mouth sores develop.

Constipation: decreased passage of stool, causing bloating, hard infrequent bowel movements and abdominal pain.

Caused by:

- ▶ Certain chemotherapy drugs
- ▶ Anti-nausea medication (ondansetron/zofran)
- ▶ Pain medication
- ▶ Dehydration
- ▶ Reduced activity

Treatment:

- ▶ High fiber foods (prunes, bran cereals, vegetables)
- ▶ Adequate hydration (1/2-1 gallon a day)
- ▶ Exercise, 20-30 minutes/day
- ▶ Stool softeners (i.e. Colace or generic version Docusate)
- ▶ Laxatives (Senna, Milk of Magnesia, Dulcolax, Miralax, “Smoothie Move Tea”)



**Call your doctor
if you've had no
bowel
movement for 3
days.**

Diarrhea: passage of frequent loose or watery bowel movements

Caused by:

- ▶ Certain chemotherapy drugs
- ▶ Antibiotics
- ▶ Anxiety, stress
- ▶ Infection



Call your doctor if you have 5 or more liquid stools in 24 hours.

Treatment:

- ▶ Anti-diarrhea medications (Loperamide “Imodium”)
- ▶ Adequate hydration (1/2 to 1 gallon)
- ▶ Soft foods low in fiber
- ▶ Avoid greasy, spicy foods, caffeine, raw fruits and vegetables

Peripheral Neuropathy: numb, tingling or burning feeling in hands or feet

- ▶ Damage to peripheral nerves caused by some chemotherapy drugs
- ▶ Worse in first few days after each treatment
- ▶ May increase with multiple treatments
- ▶ Most symptoms resolve over time
- ▶ May be permanent but tolerable

Treatment:

- ▶ Medications
- ▶ Avoid extreme temperature changes
- ▶ Relaxation techniques (guided imagery)
- ▶ Acupuncture



Tell your doctor if you experience these symptoms.

Nutrition

- ▶ Appetite changes
- ▶ Taste and smell alterations
- ▶ Dry mouth
- ▶ Weight gain or loss



- Maintain well balanced meals
- Drink 8-10 glasses of fluid per day (2 liters, 1/2 gallon)
- Avoid excessive caffeine (no more than 2 per day)
- Ask your doctor about drinking alcohol

Ask your doctor for a referral to a dietician.

Sexuality

It's normal while receiving cancer treatment that the way you define yourself and your sexuality may be challenged due to hair loss, weight gain or loss, anxiety, fatigue or hormonal changes.

Give yourself permission to talk about sexual issues with your partner and health care staff.

- ▶ It's OK to have sex while on chemotherapy
- ▶ Sometimes people have lowered sexual desire during chemotherapy
- ▶ Women may experience vaginal dryness or pain during intercourse
- ▶ Communication with your partner is vital
- ▶ You can also self-refer to the Womens Cancer and Sexual Health Clinic– Call 650-498-5566

Reproductive alterations

- Temporary or permanent loss of periods
- Temporary or permanent sterility
- Onset of menopausal symptoms
- Use birth control methods to avoid pregnancy during chemotherapy



Sexuality

Resources:

www.fertilehope.org

Non-profit helps cancer patients at risk for infertility

www.cancer.org

American Cancer Society publication:

Sexuality for the Women with Cancer

Sexuality for the Men with Cancer

“Chemo Brain”

▶ Symptoms:

- Memory loss/forgetfulness
- Word-finding difficulty
- Decreased attention ability
- Mental “fog”
- Symptoms can be subtle

▶ Causes:

- Stress, depression, anxiety
- Fatigue
- Medications (chemo and non-chemo)
- Hormonal changes

▶ Treatment:

- Keep a planner
- Make an ongoing list of questions for your doctor
- Exercise your brain
- Maintain good nutrition
- Track your memory problems
- Get plenty of sleep



Emotional Impact

It is **normal** to feel some emotional distress when dealing with a cancer diagnosis and going through chemotherapy treatments.

- ▶ Please expect to feel some stress or anxiety
- ▶ It can feel like a roller coaster of emotions, be gentle with yourself as you go through the various stages

Coping strategies:

- ▶ Schedule moments of joy for yourself
- ▶ Resist the urge to isolate, keep life as normal as possible
- ▶ Exercise when possible
- ▶ Journal your thoughts and feelings
- ▶ Set goals and rewards for yourself

When to Seek Professional Help

- ▶ If you cannot get out of bed because of depression, or you have trouble coming to your doctor's appointments because you are anxious, you may want to consider getting some professional help
- ▶ Social workers are available by referral from your oncologist and may come introduce themselves to you while you are receiving treatment
- ▶ Medications may be helpful. Do not judge yourself for using them.

Preparing Family and Friends

- ▶ This is a family disease, it will affect both you and your family. Sometimes stress levels in caregivers are just as high, if not higher than patients’.
- ▶ Allow people to help you. This can be a difficult thing to do. Give people specific tasks (i.e. doing laundry, cooking, picking up kids). Your friends and family want to help you, but they don’t know how.
- ▶ Personalized patient websites (www.caringbridge.org, www.carepages.com) are useful tools to update all the people you care about in your life on your timetable, without having to call each person individually



Cancer Supportive Care Program

The Stanford Cancer Supportive Care Program provides free supportive programs to cancer patients, their families and friends as they experience all the phases of their treatment and survivorship. Our programs are FREE and open to all current and former cancer patients, from Stanford and beyond. Please call to connect with an RN for a one on one consultation and connection to our programs.

This week's online offerings include:

- ▶ Personalized Exercise Consultations
- ▶ Mindfulness Meditation
- ▶ Yoga
- ▶ Tai Chi
- ▶ Pilates
- ▶ Exercise for Health
- ▶ Support Groups

Please call our supportive care nurses for more information:

CCSB: 669-233-2807

CCPA: 650-725-9456

ValleyCare Pleasanton: 925-337-9118

www.stanfordhealthcare.org/cancersupportivecare

Identifying Resource and Support Programs

- ▶ Contact local and national cancer organizations
 - American Cancer Society
 - National Cancer Institute
- ▶ Stanford Health Library
 - South Bay Cancer Center, 3rd floor
 - Cancer Center Palo Alto, 1st floor
- ▶ Stanford Survivorship Program
- ▶ Stanford Caregivers Center, located in 500P
- ▶ Stanford ValleyCare Pleasanton Resource Center, 2nd floor
- ▶ Internet (caution) use reliable sites

Stanford Cancer Center Infusion Areas



Palo Alto



Redwood City



South Bay (San Jose)

Infusion Treatment Center Tour (South Bay)

- ▶ There are two types of treatment "stations" in the South Bay Infusion Treatment Center: comfortable chairs in large bright sunny areas; and "Level I" where labs are draw, IV started, injections are given.



- ▶ Labs are drawn in the Level I for patients with PICC lines, Mediports or those who will be returning for chemotherapy later the same day.

Infusion Treatment Area Tour (Palo Alto)

- ▶ There are two types of treatment "stations" in the ITA: comfortable chairs in large bright sunny areas; and private rooms with beds.



- ▶ Lab draws are drawn in the ITA for patients with PICCs, Mediports or those who will be returning for chemo later the same day. 900 Blake Wilbur Dr. patients have their labs drawn there.

Infusion Treatment Area Tour (Redwood Outpatient Center)

- ▶ There are two types of treatment "stations" in the ITA: comfortable chairs in large bright sunny areas; and private rooms with beds.



- Labs are drawn in the Level I for patients with PICC lines, Mediports or those who will be returning for chemotherapy later the same day.

Infusion Treatment Center Tour

- ▶ After checking in at the front desk, there will be a short wait while a nurse double checks your orders and test results.
- ▶ You might be asked to have your weight and height checked prior to the MD appointment and than again in the Treatment Area. The double check is to ensure accuracy for your safety.
- ▶ Once the medical assistant seats you in the treatment area your nurse will greet you, administer premedication and assess your IV. Approximately 30 minutes later your chemotherapy will be ready and your treatment can begin.
- ▶ Treatment time varies from 1-8 hours depending on your type of treatment. Please arrange to have someone drive you home after your first treatment.
- ▶ Visitors restrictions in place.
- ▶ Please be respectful of the “quiet zone” in treatment rooms. Silence cell phones and keep conversations quiet.
- ▶ Please eat normally the day of treatment. You may want to bring lunch or a snack with you. We can offer you juice and crackers throughout your visit and have a nourishment station for your convenience.

Infusion Treatment Area Tour - Continued

- ▶ Our individual patient TVs include normal programming and foreign language stations. Wireless headphones are available.
- ▶ Wireless internet access is available
- ▶ Wear comfortable clothing including a light sweater or jacket. The rooms are often on the cool side. Warm blankets will be offered to you for your comfort.
- ▶ Please use your MyHealth online account to keep track of appointment dates and times.
- ▶ ITC schedulers are located in the Infusion Center and Consult room # 1
- ▶ Bathrooms in the treatment area are for patients only