



Stanford Hospital & Clinics

Managing and Understanding Your Chemotherapy

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Stanford Cancer Supportive Care Program

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What is Cancer?

Cancer is an abnormal growth of normal cells

Normal cells

- Have set growth cycle
- Contact inhibition
- Stay at home

Cancer cells

- Grow uncontrollably
- Invade neighboring spaces
- Can travel or metastasize



Treatments for Cancer

- Surgery
- Radiation Therapy
- Biotherapy Therapy
- Hormonal Therapy
- Chemotherapy



Biotherapy / Targeted Therapy

- This type of treatment is designed to attack cancer cells without damaging the normal cells in the body.
- Refers to a category of drugs that work in different ways to enhance the body's immune system to recognize and fight cancer cells.
 - May work by targeting specific molecules found only on tumor cells.
 - May work by blocking specific pathways to prevent tumor growth and spread.



Biotherapy / Targeted Therapy

If your cancer is a specific and distinct type, these may be part of your treatment.

- Examples include:
 - Herceptin (trastuzumab)
 - Rituxan (rituximab)
 - Avastin (bevacizumab)
 - Erbitux (cetuximab)
- Since these drugs target specific cells, they cause less toxicity.
- Side effects are different from general chemotherapy.



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Hormonal Therapy

- When cancer forms in breast or prostate tissue, its growth and spread may be enhanced by the body's own hormones.
- Hormonal therapy suppresses tumor growth by blocking the body's own hormones.



What is Chemotherapy?

- Refers to a category of drugs used to kill cancer cells.
- Works by interfering with the cancer cell's ability to grow or reproduce.
- Hinders the reproduction of **rapidly** dividing cancer cells.



How is chemo given?

- Orally
- Injection
- Intravenous infusion
 - Timed
 - Continuous via pump



Some people have difficult veins or get very anxious about IV sticks so you may be told about special venous access devices.



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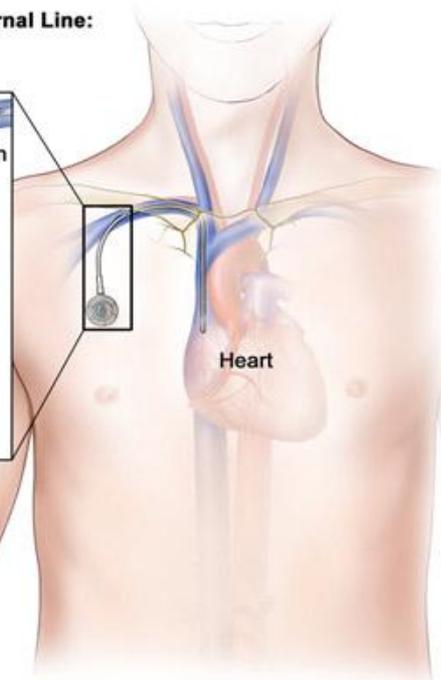
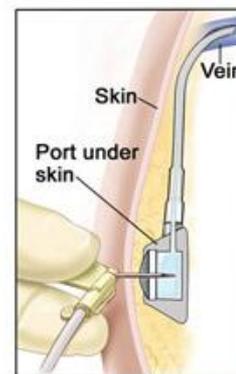


Vascular Access Devices

May be recommended for patients who have difficulty with multiple IV starts or blood draws. Mediports are surgically implanted in the upper chest while PICC lines are inserted into a major vein in the arm and require weekly dressing changes. Numbing cream is available to minimize pain.



Central Venous Internal Line:
Port





Why does chemotherapy cause side effects?

- Chemotherapy kills rapidly dividing cancer cells. Some side effects result from the effects the chemo 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.
- Most common side effects include fatigue, low blood cell counts, nausea, hair loss, mouth sores, peripheral neuropathy, changes in bowel function, sexual and reproduction function, “chemo brain” and depression or stress.



Fatigue

Tiredness that varies in intensity throughout the course of treatment

Caused by:

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



Treatment:

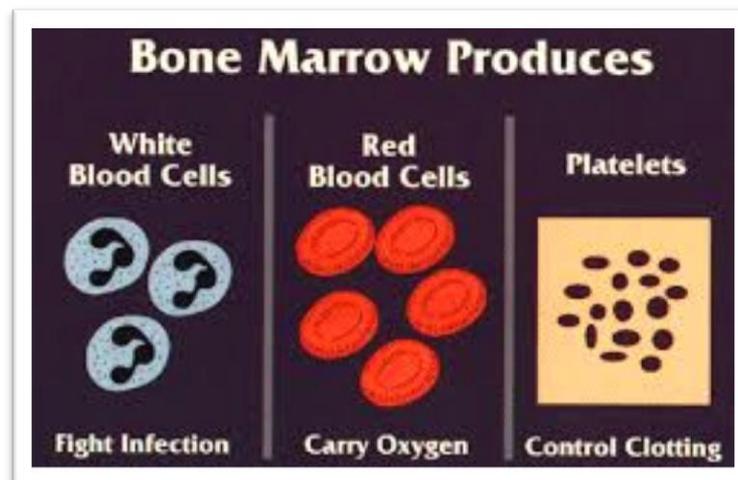
- Exercise
- Good nutrition/hydration
- Relaxation activities (yoga/meditation/massage)
- Red blood cell transfusions

Be aware, fatigue may be cumulative.



Chemo Effects on Bone Marrow

- Chemotherapy drugs slow down production of blood cells in bone marrow
- Low **red cell** count causes anemia
- Low **platelet** count increases risk of bleeding problems
- Low **white cell** count increases risk of infection





Neutropenia and Infection

Low white blood cell count (specifically neutrophils) results in lowered immunity and can lead to serious infections.

Infections can lead to:

- Feeling ill
- Need for additional medications
- Delays in treatment
- Hospitalization



Symptoms of Infection

- **Fevers and chills and/or Temperature > 100.4F or 38C**
- Sore throat, cough, shortness of breath, chest pain
- 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 (650) 498-6000, select #5**

- Make sure you have a thermometer
- Do not take Tylenol to mask your fever



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Avoiding Infection

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





Nausea

Caused by chemotherapy drug's influence on the brain, anxiety, and stress. Different chemotherapy drugs cause varying degrees of nausea. Some chemotherapy does not cause any nausea.

Treatment:

- Anti-nausea medicines - Prevention is key
- Small frequent meals
- Staying well hydrated
- Ginger
- Guided imagery
- Relaxation activities such as yoga/meditation/music
- Acupuncture, acupressure

Call your doctor if nausea worsens.



Hair Loss

Caused by chemotherapy drugs slowing the growth of rapidly dividing hair follicle cells.

- Not all chemotherapies cause hair loss
- Usually occurs within 1 to 3 weeks of initiation of treatment
- Pick out wig, scarves, and hats before hair loss
- Hair starts growing back about one month after treatment is stopped
- Color and texture of new hair may be different
- Affect on other body hair varies
- Visit the Wig Bank at the Stanford Cancer Center



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Mouth Sores

- Caused by the action of chemotherapy on rapidly dividing cells that line the GI tract
- Symptoms may include redness, dryness, burning canker-like mouth sores or white patches/coating in the mouth
- Treatment includes:
 - 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 control measures
 - Do not use teeth whitening products or tartar control toothpaste
 - Gentle flossing
 - If possible get a routine dental cleaning before starting chemo. Avoid dental cleanings and procedures during chemo treatment.

Call your doctor if mouth sores develop.



Peripheral Neuropathy

- Damage to peripheral nerves caused by some chemo drugs
- Numbness tingling burning sensation
- Usually in hands and/or feet
- May increase with multiple treatments
- Most symptoms resolve over time

- Treatment
 - Medications
 - Physical exercise
 - Acupuncture

Tell your doctor if you experience these symptoms.



Constipation

Caused by:

- certain chemo drugs
- anti-nausea medication (zofran)
- pain medication
- dehydration
- reduced activity

Treatment:

- high fiber foods (prunes, bran cereals, vegetables)
- adequate hydration
- physical activity
- stool softeners (i.e. colace or generic version docusate)
- laxatives (sennacot, milk of magnesia, ducolax, miralax)



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



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Diarrhea

Caused by:

- Certain chemo drugs
- Antibiotics
- Infection
- Anxiety, stress

Treatment:

- Anti-diarrhea medications (loperamide “Imodium”)
- Adequate hydration
- Soft foods low in fiber
- Avoid greasy, spicy foods, caffeine

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



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Nutrition

- Appetite changes
- Taste and smell alterations
- Weight gain or loss
 - Maintain well balanced, high protein diet
 - Drink 8-10 glasses of fluid per day (2 liters, one gallon)
 - Avoid excessive caffeine (no more than 2 per day) , alcohol, high dose dietary supplements
 - Review your herbal or dietary supplements with your doctor



Ask your doctor for a referral to a dietician.

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Sexuality

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

- It's OK to have sex while on chemo if you're feeling up to it
- Sometimes people have lowered sexual desire during chemo
- Women may experience vaginal dryness or pain during intercourse

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

<http://www.fertilehope.org/>

Non-profit helps cancer patients at risk for infertility



Cognitive Changes or “Chemo Brain”

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



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Emotional Impact

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

Coping strategies:

- Talk to friends and family
- Join a support group
- Exercise when possible
- Journal your thoughts and feelings
- Use imagery and relaxation exercises
- Use art, humor, and music
- Set goals and rewards for yourself



When to Seek Professional Help

- If symptoms of anxiety, sadness, depression persist or interfere with daily routines, tell your health care provider how you feel.
- You may be referred to a professional who treats emotional distress, i.e. licensed clinical social worker, psychologist or psychiatrist.
- Oncology social workers are available in the Infusion Treatment Area to talk with you and your family members.
- Medications may be helpful.



Preparing Family and Friends

- Many studies have shown that distress levels in spouses/caregivers were as high as those in patients.
- Involve your family in discussions with medical staff.
- Allow people to help you.
- Consider utilizing a personalized patient website. (www.caringbridge.org, www.carepages.com)



Cancer Supportive Care Program

We provide free supportive activities 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 Hospital and beyond.

The Cancer Supportive Care Program provides:

- Personal assistance with coordinating your care
- Classes and workshops on various topics
- Support groups
- Exercise and fitness opportunities
- Chair massage
- Monthly wig bank
- See 2014 Calendar for complete listings, dates, times

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Director of the Cancer Supportive Care Program
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Identifying Resource and Support Programs

- Stanford Cancer Supportive Care Program
- Contact local and national cancer organizations (American Cancer Society, National Cancer Institute)
- Stanford Health Library (Cancer Center, Hoover Pavilion)
- Stanford Survivorship Program
- Internet (caution) use reliable sites



People who have the best experience

- **Are active participants in their care**
- Keep an ongoing question list
- Get reliable information
- Seek support from a variety of resources



Infusion Treatment Area Tour

- There are different types of treatment "stations" in the ITA: a fast track room for simple injections, comfortable chairs in large bright sunny areas and private rooms with beds.
- Lab draws are done in the ITA for patients with PICCs, Mediports or those who will be returning for chemo later the same day. Women's Cancer Center patients have their labs drawn there.
- After checking in at the front desk, there will be a short wait while a nurse double checks your orders and test results. Once the nursing assistant seats you in the treatment area your nurse will greet you, administer premedication and assess your IV. Approximately 30 minutes later your chemo 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.





ITA Tour (continued)

- Visitors over the age of 12 are welcome. We request only one visitor per patient at a time due to privacy and space limitations.
- 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 patient kitchen with a refrigerator and microwave for your convenience.
- Our individual patient TVs include normal programming and foreign language stations.
- Wireless internet access is available (ask for the pass code on arrival).
- 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.
- There are schedulers on duty in the ITA to confirm or schedule future appointments.