MEDICAL RESOURCE GUIDE











Medical Resource Guide

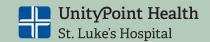
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Every cancer is different. Our goal is to give you individualized care specific to your needs. Some of the information in this book may be more relevant than others to your specific needs.







Working Together

Your health care team consists of many people. It may include a surgeon, radiation oncologist, medical oncologist, care coordinator, dietitian, social worker, cancer exercise specialist - and most importantly you.

Choosing to actively participate in your care along with your health care team includes taking steps to gain information, seek support and learn how to improve your quality of life. Treatment for cancer can be very hard on your body and on your spirit. It's important to focus on actions you can take to assure your physical and emotional health is the best it can be. Monitoring your side effects, nutrition, activity level and the need for emotional support are all actions that have proven to help cancer survivors improve their quality of life.

It is important to communicate your questions and **greatest worries or concerns** with your entire team throughout your treatment. Whatever the need, we want to be available in all areas to help you achieve the best possible outcome.

Physicians' Clinic of Iowa - PCI Hematology and Oncology

202 10th Street SE, Ste. 165 Cedar Rapids, IA 52403 Office Phone: (319) 297-2900

Nassif Community Cancer Center

202 10th Street SE, Ste. 285 Cedar Rapids, IA 52403 Phone (319) 558-4876

St. Luke's Nassif Radiation Center

202 10th Street SE, Ste. 195 Cedar Rapids, IA 52403 Office Phone: (319) 861-6944

Your Collaborative Team

You don't have to face cancer alone. Our collaborative approach to cancer care ensures the Community Cancer Center brings together top area specialists to treat a wide array of cancers, with coordinated care that is focused on you.

Hematology & Oncology













Surgical Specialists





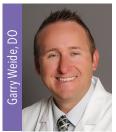




Advanced Melanoma & Skin Cancer Clinic







John Vander Zee, MD

Radiation Oncology











Your Collaborative Team

Surviviorship Clinic



Oncology Social Workers





Care Coordinators







Clinical Research





Cancer Exercise Specialist



Oncology Dietitians





(319) 558-4876

Genetic Specialists









Diagnosis & Treatment

Genetics and Risk Assessment Clinic

As part of your treatment plan, your oncologist or surgeon may request that you meet with a Genetics Nurse Practitioner. Some cancers have a risk of developing because of a hereditary syndrome. Genetic testing helps to determine not only if your current cancer was caused by a hereditary syndrome, but also helps determine if you are at risk of developing any additional cancers. In some cases, genetic testing may also help determine treatment options.

Our Genetic Nurse Practitioners will teach you about your risk of having a hereditary cancer, and how that risk may then affect the rest of your family.

Genetic Counseling and Testing:

Initial Appointment: you meet with a nurse practitioner to complete a thorough family history. Assessment of hereditary syndromes and possible test results are discussed at length.

Genetic Test: if you choose to move forward with genetic testing, a simple blood test is performed.

Results: results are given either over the phone or in person.

Follow-up: whatever the test results may be, you will be given recommendations and guidelines to follow for you and your family to help lower the risk of any further cancer diagnosis.



If you are interested in learning more about genetic counseling and testing, please ask your health care provider or call (319) 558-4876.

Diagnosis & Treatment

Clinical Trials

As part of the diagnosis and treatment planning process, all patients are screened for eligibility to participate in clinical trials. The goal of clinical trials is to provide patients with the most current treatment options available using a trial designed to answer specific questions about a new drug, therapy, vaccine or new way of using an existing treatment. Participation in a clinical trial is always voluntary.

Clinical trials can be focused on improving the quality of life for cancer patients by decreasing treatment related side effects, offering a new treatment drug, or learning the benefits of one drug over another.

Clinical trials are categorized into one of four types:

Phase I - This is a study open to a fairly small group of people, usually less than 30 people and focuses on identifying a safe dose range and determining side effects.

Phase II - Focuses on evaluating the effectiveness of a particular drug or vaccine with a defined diagnosis and open to up to 100 patients.

Phase III - This phase further evaluates drugs or vaccines that have shown effectiveness in phase I and II studies. These trials are open to more people, usually from 100 to thousands.

Phase IV - This type of clinical trial evaluates long term safety and effectiveness of drugs or vaccines already on the market. These trials are open to large numbers of patients, from several hundred to several thousand.

The Nassif Community Cancer Center, Physicians' Clinic of Iowa – Hematology & Oncology and St. Luke's Albert G. & Helen Nassif Radiation Center have access to federally-funded trials through the National Cancer Institute (NCI), as well as trials through industry or pharmaceutical companies that have an oncology specific focus.

If you would like to learn more about clinical trial options available to you, please speak to a member of your health care team.

Survivorship

Survivorship is a distinct phase of each cancer patient's treatment. Designed around your unique needs, the Survivorship Clinic is focused on coordinating your follow-up care, recognizing and managing treatment side effects and the overall wellness of cancer survivors.

The Survivorship Clinic focuses on:

- Coordination working closely with your specialists and primary care providers to assure a team approach for your health care
- Education support and services for dealing with the side effects of cancer and its treatment as well as assessing psychosocial needs of the patient and family
- Prevention promoting healthy living behaviors through nutrition, exercise and overall wellness
- Surveillance medical follow-up related to cancer, including screening for early detection of a new or recurrent cancer
- Intervention symptom management and education for long-term and late side effects

Summary of Treatment & Follow-up Surveillance Plan includes:

- A treatment summary of your diagnosis, treatments, side effects and potential late side effects
- Cancer screening tests, personalized based on your diagnosis
- Healthy living and wellness evaluation and recommendations
- Resources and support services available for you

Coordination of care is an important part of Survivorship. You, your surgeon, your radiation oncologist, medical oncologist and your primary care physician will all receive copies of your personalized Summary of Treatment and Follow-up Surveillance Plan.

We look forward to seeing you at your upcoming appointment.

Treatment Side Effects

Chemotherapy works by attacking cancer cells that are rapidly growing and dividing. The most common side effects are a result from our normal cells being affected from chemotherapy. The good cells affected by chemotherapy will grow back and hopefully the cancer cells will be stopped.

Emergency Side Effects

- Fever greater than 100.5 F
- New rash (more than 50 percent of the body) with or without itching
- Nausea, vomiting, diarrhea or constipation that does not respond to over-the-counter medications
- Unexpected bleeding, such as blood in your urine, phlegm, vomit or black/bloody stools
- Uncontrolled or severe pain
- New or worsening cough, chest pain or shortness of breath that affects your activities of daily living
- New/persistent headache, especially with weakness, dizziness or vision changes

Call PCI Hematology & Oncology at (319) 297-2900

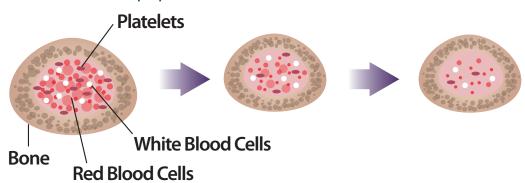
Someone is available to help 24 hours a day, 7 days a week, weekends and holidays.

For non-emergent needs related to chemotherapy or immunotherapy, use the PCI portal to contact your care team.

Go to pcofiowa.com and click "My Portal" in the main menu at the upper right. Click "Enroll Now" and follow the steps to set up your account. Once you have registered, download the app and use the practice code "JIJCBD" for convenient access to your health record.

Need help enrolling in the patient portal? Call (319) 247-3010.

Bone Marrow Suppression



White blood cells help you fight infection.

- Cancer treatments can lower your white blood cell count.
- 7-14 days after your treatment, your white blood cell count will be at its lowest.
- At that time, you are at an increased risk of developing infections.
- Avoid people who are ill.
- Signs of infection are shaking chills or a temperature of greater than 100.5 F.

Platelets help your blood clot and prevent bleeding.

- Platelets can decrease after cancer treatments.
- You may bruise and bleed easier if your platelet count is low.
- 7-14 days after treatment, your platelet count may also drop.
- You may notice small, pinpoint spots on your body, called petechiae.

Red blood cells, and more specifically - hemoglobin, carry oxygen to your tissues.

Red blood cells decrease more slowly than the platelets or white cells, resulting in anemia.

- Symptoms of anemia are tiredness, shortness of breath with exercise, a fast heartbeat and possibly feeling light-headed or dizzy.
- A blood transfusion could be possible if your Hgb is too low.

Bone marrow suppression is not a side effect that you can prevent or control on your own.

Nausea and Vomiting

Nausea and vomiting are side effects from some treatments. Newer anti-nausea medications have made it easier to control nausea and prevent vomiting. We will plan your nausea prevention medications based on your specific treatment and risk factors for nausea.

You will receive IV nausea prevention medications prior to your treatment, if it is a treatment that is known to possibly cause nausea. We will also often prescribe medications for you to use at home. It is important to stay ahead of your nausea by preventing and treating it early - before it keeps you from eating or drinking. Things that you can do at home to help prevent and treat nausea and prevent vomiting include:

Food and Fluids

- Drink fluids throughout the day like water and juices. If you are vomiting or have diarrhea, it is important to replace the fluids lost to avoid getting dehydrated.
- Eat frequent, small amounts of food throughout the day.
- Eat before you get too hungry.
- Eat dry foods such as dry cereal, toast, or crackers.
- Avoid heavy, high fat and greasy meals right before treatment - but do eat before you come for treatment.

The dietitians are available to see patients if you are struggling with what to eat during treatment.

Surroundings

- Avoid strong odors.
- Try to not lay flat for at least two hours after eating. Rest by sitting up or reclining with your head elevated.

- Fresh air and loose clothing may be helpful after eating.
- Relax and try to keep your mind off the treatment.
 Distract yourself with music, videos, movies or a book.

Other ways to minimize chemotherapy nausea

- If you are vomiting, stop eating.
 Once you stop vomiting, start back on food slowly. Start with small amounts of clear liquids, such as broth, juice soda, sports drinks, or water. Then, advance to light, mild foods like jello, bananas, rice, or toast.
- Constipation can cause nausea, be sure to drink fluids and take medications as needed to keep your bowels moving.
- Avoid caffeine and smoking.
- Suck on hard candy, popsicles. or ice during treatment.

Medications

Some commonly prescribed nausea medications are listed below, please follow the directions on your bottle for use.

- Zofran (ondansetron)
- Compazine (prochlorperazine)
- Zyprexa (olanzapine)
- Less frequently, but sometimes Ativan (lorazepam)
- Sometimes, a steroid called Decadron (dexamethasone) is prescribed to assist with delayed nausea with certain chemo regimens.

Other over-the-counter medications may be recommended as well, such as:

- Heartburn stomach acid medications such as Tums or Pepcid (famotidine)
- Proton-Pump Inhibitors (PPI's) for stomach acid such as Prilosec (omeprazole), Nexium (esomeprazole) or Protonix (pantoprazole)

If you have nausea that keeps you from eating, drinking or if you have uncontrolled vomiting, please call PCI Hematology & Oncology at (319) 297-2900.

Diarrhea

Many factors can cause or contribute to diarrhea while you are receiving treatment. True diarrhea is liquid, water-like stools that occur significantly more often than your normal bowel movements. Diarrhea can lead to dehydration, electrolyte inbalances, and kidney issues.

Things that will help improve or resolve diarrhea include:

- Use Imodium (Loperamide), an over-the-counter diarrhea medication. Take **two tablets** initially and **then one** after each loose stool.
- Do not take more than 8 tablets of Immodium in 24 hours.
- Drink plenty of fluids, ideally at room temperature: water, broths, sports or vitamin drinks.
- Eat foods rich in potassium such as potatoes, bananas and oranges.
- Eat LOW fiber foods such as rice, canned or cooked fruits, mashed potatoes, baked potatoes with no skin or skinless chicken or turkey.

What to avoid if you have diarrhea

- Caffeine
- Spicy, fatty or greasy foods
- Fruit juice

If you have diarrhea that does not respond to Imodium, please call PCI Hematology & Oncology at (319) 297-2900.

Notes:			

Constipation

Constipation is when you have fewer and harder stools than normal that are difficult to pass or you can't completely pass.

Many things may cause constipation:

- Change in diet or fluid intake
- Change or decrease in activity
- Pain medications
- Cancer treatments

Things you can do to help relieve constipation:

- Add fiber to your diet try oatmeal or bran cereal daily
- Exercise as tolerated
- Increase fluid intake (8 12 cups of non-caffeinated fluid per day)

Over-the-Counter Laxatives

- Miralax–1 scoop (17 grams) in water or your morning drink. This can be used up to twice daily as needed.
- Senna S-laxative plus stool softener.

If constipation is still a problem, call PCI Hematology & Oncology at (319) 297-2900.



The oncology dietitians at the Nassif Community Cancer Center can also help with concerns related to nausea and vomiting, diarrhea or constipation. Call (319) 558-4876 to schedule an appointment.

Notes:		

Mouth sores

Some treatments can cause swelling, pain and tissue breakdown (ulcers or open sores) in the mucous lining and surrounding tissue of the mouth, lips and esophagus. This is called "mucositis." At times, these sores can make it difficult to talk, eat, drink and swallow.

Certain treatments are more likely to cause mucositis than others. Sometimes we can prevent or decrease the severity of mouth sores if you suck on something cold during treatment. This does not apply to all treatments or all types of mucositis. Your nurses will let you know if this cold treatment is helpful for your type of treatment, and if so, will provide you something cold during the infusion (ice chips, popsicles).

There are things you can do at home to help prevent, decrease severity of, and provide pain relief for mucositis. If you are struggling to talk, eat, drink or swallow and your symptoms are not getting better by following the recommendations below, please call us for further instructions and care.

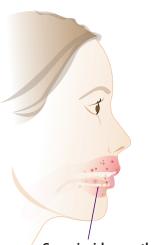
Oral Care

- Keep your mouth and teeth clean.
- Brush your teeth at least twice a day with a soft toothbrush.
- Use "sensitive" mouth products, which usually have a less harsh taste/flavor and don't contain alcohol.
- Clean dentures each day. Do not wear dentures for long periods of time if they do not fit.
- In most cases, we want you to continue your regular dental cleanings twice a year. If you are due for a dental cleaning during treatment, discuss this with your healthcare provider.
- Avoid using alcohol-based mouth products as they are drying and can cause more pain and irritation.

- on your lips look for products without glycerin or petroleum jelly. (You can Google many options that are readily available at your local store.)
 - If you have
 mucositis, avoid
 spicy (i.e. hot sauces), acidic (i.e. grapefruit,
 tomatoes, oranges), very hot (i.e. coffee) or rough
 foods (i.e. chips, nuts),
 as these can cause more irritation.
- Stay hydrated, drink plenty of water.

Mouth Rinse Mixture

- Rinsing/gargling with a baking soda salt water mixture 3-4 times a day can help prevent and decrease the severity and duration of mouth sores
- Mix one teaspoon baking soda and one teaspoon salt in one 8 oz. cup of warm water, shake/mix until dissolved.
- Swish this in your mouth and gargle with it for up to one minute then spit it out.
- You can keep this in a covered container at room temperature for 24 hours - then throw it out and make a new batch each day.



Skin, Eye, Nose and Nail Changes

Many patients experience dry skin, eyes and nose. Finger and toe nails can become brittle and develop lines, split or separate from the skin under the nail. Most people are more sensitive to the sun when they are receiving treatment.

The type of chemotherapy or treatment you receive will determine the extent of these side effects. In general, regardless of treatment, we recommend the following:

Skin

- Avoid long, hot showers that will dry your skin.
- Remain hydrated with a good fluid intake.
- Use hypoallergenic, dye-free, alcohol-free and perfume-free products on your skin and hair.
- Apply hydrating, dry-skin formula moisturizer twice a day.
- Use a 30 SPF sun block when outside.
- Wear hats and protective clothing to avoid sun burns.
- Wear gloves when cleaning, working in the yard and washing dishes.

Nail

- Keep your fingernails and toenails clean and trimmed.
- AVOID any artificial nails, gels or wraps.
- Avoid tight fitting shoes that may irritate toenails.
- If you develop nail lifting or drainage with odor, contact your care team.

Eyes and Nose

- Hair loss can include nose hairs, eye lashes and eye brows. These will grow back.
- Nose hair loss can make the nose run and treatments can dry out the lining of the nose.
 Use saline nasal spray if your nose is dry.
- When your eyes are dry, they may actually be "watery" because your body is making tears to try to make the eye ball moist.
- Use over-the-counter moisturizing eye drops for dry eyes - i.e systane eye drops.

HELEN G. NASSIF COMMUNITY CANCER CENTER

Oncology Skin Care Classes

Our skin, hair and nails make up the largest organ in the human body. It can be drastically affected by both chemotherapy and radiation. The Nassif Community Cancer Center works with a licensed esthetician – oncology-trained, to periodically offer free educational group classes on oncology skin care. For more information, call (319) 558-4876.

Hair Loss



Our hair cells grow faster than any other cell in our body!

Many cancer treatments can cause hair thinning or loss. Hair loss does not just occur to the hair on your head; eyelashes, eye brows, body hair and even nose hairs can be lost.

If you are receiving a drug that causes hair loss, it usually occurs about 2 weeks after your first treatment. Some people have an itching or tender sensation to their scalp around the time the hair falls out. Your hair will start to re-grow about a month after treatment is complete. Your hair may initially come back a different color or texture.

The Nassif Community Cancer Center has several programs and resources to support you during and after treatment.

- Speak with a member of your care team to obtain a voucher to purchase a wig from one of our Strands of Strength partner salons.
- Schedule an appointment with our oncology trained licensed esthetician to learn more about caring for your skin, hair and nails. Individual and group sessions are available.

Wigs and Hair Accessories

Strands of Strength provides cancer patients in financial need with a quality hair piece to help mask the difficult side effect of hair loss during cancer treatment. Ask your provider or anyone on your care team for a voucher. Strands of Strength wigs are available at these locations:

HRC Hair Studio

245 Classic Car Ct SW Cedar Rapids, IA 52404 (319) 366-7464

hrciowa.com

- Wigs available in store
- Cut and color individualized to your style
- Appointments preferred

Jeffrey Scott Salon

3136 Mt Vernon Rd SE, Suite B Cedar Rapids, IA 52403 (319) 363-3391

- Wigs available on site
- Cut and color individualized to your style
- Appointments preferred
- Turbans available
- Lash/brow product to prevent hair loss

Skin Deep Salon & Spa

2771 Oakdale Boulevard, Suite 8 Coralville, IA 52241 (319) 626-3227

skin deeps alon and spa.com

- Wigs available on site
- Skin Deep also offers oncology skin care

Call ahead to schedule an appointment with any of these official Strands of Strength partner salons.

My Care

Fatigue

Fatigue, or feeling tired, is probably one of the most frustrating side effects for patients. Fatigue often builds up during your treatment. Staying active is the best way to fight fatigue.

Strategies to cope with fatigue include:

- Space out activities and rest between activities.
- Exercise/Staying Active (i.e. go about your normal day) evidence supports physical exercise equal to 30 minutes of walking a day, really does help reduce fatigue.
- Assure a restful sleep by:
 - Managing pain
 - Limiting stress
 - Maintaining good fluid intake
 - Acupuncture
 - Treating depression/mood changes
 - Taking medications for insomnia
 - Evaluating reasons for poor sleep or fatigue such as anemia or sleep apnea
- Discuss supplements with your provider.



Our cancer exercise specialist at the Nassif Community Cancer Center is available to meet with you at any time before, during, or after your treatment. They can assess your needs, taking into consideration your treatment plan, lifestyle, and capabilities. They will work with you to develop individualized goals and an exercise plan to help you fight fatigue and stay healthy during your treatment.

A variety of exercise classes are available to help you fight fatigue. Please call (319) 558-4876 to schedule an appointment or visit **communitycancercenter.org** to view class schedules and sign-up for our monthly newsletter.

Notes:	

Peripheral Neuropathy

Some types of chemotherapy can cause damage to nerves in the extremities, especially the hands and feet. This is called peripheral neuropathy. Changes in sensation that are signs of peripheral neuropathy include:

- Numbness, tingling, burning, itching or "pins and needles" feeling
- Decreased feeling of hot or cold
- Feeling more sensitive to hot or cold, often a feeling of extreme cold
- Sensation of something "balled up" in the shoe / under the foot
- Not able to feel pain from cuts or sores
- Pain with touching or rubbing
- Dropping things, difficulty with fine motors (i.e. buttoning)
- Tripping easily, feeling of off balance
- Weak, aching or cramping muscles

Pain
Numbness
Tingling
Burning
Itching
Weakness
Pins and needles

Cramping

Peripheral neuropathy is more common in people with other medical conditions such as diabetes or peripheral vascular disease. Peripheral neuropathy from chemo tends to be cumulative, meaning the more chemo you get, the more these symptoms occur.

There are things that can help, such as:

- Minimize extremes of cold, heat and friction
- Protect your hands and feet from injury by wearing shoes and gloves
- Pay attention to good nail and skin care
- Be careful to avoid falls and remove trip hazards such as throw rugs and wet floors/showers
- Consider use of a cane or walker for balance
- Consider physical therapy balance exercises
- Stay active to keep muscles working

Do not take any herbs, vitamins or supplements without asking your oncology provider. Some of these may interfere with the way your chemo works, potentially decreasing the effectiveness of your chemo or increasing absorption and increasing risk of side effects.

Narcotic pain medications do not usually help with nerve pain. However, there are several nerve pain medications that may help. Acupuncture can also be helpful for nerve pain.

Please let your oncology provider know if you are experiencing symptoms of peripheral neuropathy. Together, you can discuss the treatment option that is best for your peripheral neuropathy symptoms.

Notes:			



Acupuncture and exercise can have a positive effect on peripheral neuropathy. To schedule an appointment, call (319) 558-4876.

Cognitive Changes

Up to 75 percent of persons with cancer experience cognitive changes during treatment. Within one year of treatment, many people find that cognitive changes have gotten much better. However, 15 to 35 percent will have continued issues for months or years.

Symptoms you may experience include:

- Memory problems
- Trouble paying attention
- Trouble finding the right word
- Trouble learning new things
- Trouble multitasking
- Slowed thinking speed

Managing Cognitive Changes

It is very important to talk to your healthcare provider if you're having trouble with your memory or notice any other changes in your thinking or abilities. They can help address some of the factors that can cause cognitive problems. For example, they can review your medications and labs. they can also consider how depression, anxiety and or sleep issues may be impacting your ability to think clearly.

Ways you can manage cognitive difficulties:

Make lists. Carry a notepad or your smart phone and write down the things you need to do. For example, keep lists of things to buy, errands to run, phone calls to return, and questions to ask at your appointments. Cross items off as you finish them.

Set an alarm on your smart phone or tablet for when you need to take your medications.

Organize your environment. Keep things in familiar places so you'll remember where you put them. For example, always store your car keys in the same place.

Repeat information out loud. Auditory (hearing) cues give your memory an extra boost.

Use word play, such as rhyming, to help you remember things.

Keep your mind active. Do crossword puzzles and word games or go to a lecture on a subject that interests you.

Tell your loved ones what you're going through. They may be able to help and encourage you.

Sexuality and Sexual Health

Research shows half of all cancer patients will experience sexual side effects from treatment. Side effects may impact your physical and emotional well-being. An overall loss of desire is the most common sexual change for both men and women. A common side effect for men is erectile dysfunction. Women often note vaginal dryness and pain with sexual activity. Other side effects (such as fatigue, nausea, vomiting, diarrhea, hair loss, weight changes, scars, and smell or skin sensitivities) may all impact your sexuality.

Birth Control/Partner Protection: It is extremely important that you do not get pregnant or get anyone else pregnant while you are receiving treatment for your cancer.

- Abstain or use a barrier protection, such as condoms or dental dams (for oral sex), since chemotherapy chemicals can be found in semen or vaginal fluid for up to 72 hours
- If you develop neutropenia (low white blood cells) or thrombocytopenia (low platelets) then sexual contact should be avoided due to the risk of possible infection or bleeding
- External beam radiation does not make you radioactive or endanger your partner
- Sexual activity is not safe while receiving implanted radioactive seeds, such as brachytherapy. Talk to your provider to verify the length of time specific to your treatment.

Future Fertility

 Ask your provider how your treatment may impact your ability to have children in the future and what options are available for you to consider. Fertility preservation must take place BEFORE TREATMENT begins.



There is Help

Sexual health is a sensitive topic. Discuss sexual side effects with your health care providers the same as you would any other side effect. Resources are available to help you and your partner. Nassif Community Cancer Center care coordinators and social workers are available to meet with you to help address sexuality, intimacy and body image concerns and connect you with the right resources.

Understanding Immunotherapy Side Effects

Immunotherapy is a new way to treat cancer and for some patients these drugs may be a part of a cancer treatment plan. These medications help your immune system fight cancer.

There are several types of immunotherapies used to treat cancer, including checkpoint inhibitors, monoclonal antibodies, immune system modulators, treatment vaccines and T-cell transfer therapy. These all work differently and can come in different forms, such as a pill, injection, topical (i.e., cream) or intravenous (IV) treatment.

Checkpoint inhibitors work by blocking normal immune system checkpoints, to allow the body's own immune cells to respond more strongly to cancer. Some of these drugs include: Keytruda, Yervoy, Opdivo, Tecentriq and Imfinzi

Monoclonal antibodies are immune system proteins created in the lab to bind to specific targets or proteins on the cancer cells to make the cancer cells more likely to be seen and destroyed by the immune system. Some of these drugs include: Rituxan, Gazyva, Herceptin, Perjeta

Immune system modulators enhance the body's immune response against cancer cells. Some of these drugs include: Neulasta, Erythropoietin, Revlimid, Pomalyst, BCG, Interferon

Treatment vaccines boost your own immune system's response to cancer. Treatment vaccines are very different from vaccines to help prevent disease. Some of these drugs include: Provenge

T-cell transfer therapy boosts the natural ability of the immune system to fight cancer using immune cells taken directly from a patient's tumor cells. These cells are then changed in a lab to better attack your cancer cells and then re-infused into the patient's body. Some of these drugs include: CAR T-Cell therapies

Immunotherapy works different than chemotherapy and these drugs can cause different side effects. The side effects can occur right away or even after you finish therapy. Occasionally (in about 40 percent of patients) these medicines can cause your immune system to attack normal cells, tissue and organs. Serious side effects are rare, only occurring in about five percent of patients.

Immunotherapy side effects are treated differently than other chemo side effects. It is important that you notify any healthcare providers if you are experiencing side effects and make sure that they know you are on immunotherapy.

Understanding Immunotherapy Side Effects

Brain

Rarely swelling, fever, confusion, changes in mood, neck stiffness, seizures and sensitivity to light.

Hormone glands (thyroid, adrenal, pituitary, adrenal, pancreas):

Headache, tiredness, weight loss/ gain, rapid heartbeat, sweating, hair loss, constipation, dizziness.

Lungs (pneumonitis):

New or worsening cough and shortness of breath.

Kidney

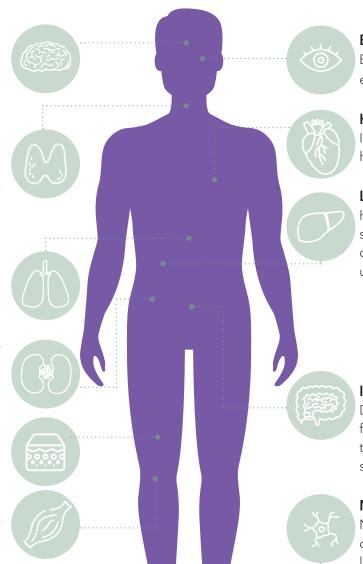
Decrease in amount of urine, blood in the urine.

Skin

Rashes, itching, sores, blistering, ulcers

Joints / Muscles

Severe or persistent muscle or joint pain or weakness.



Eyes

Blurry or double vision or eye pain or redness.

Heart

Inflammation of the heart muscle.

Liver

hepatitis, yellowing of eyes or skin, nausea or vomiting, pain on right side of abdomen, dark urine, bleeding, bruising easy.

Intestinal

Diarrhea or bowel movement frequency, blood or dark, tarry or sticky stools, severe stomach pain.

Nerve

Numbness or tingling in hands or feet; unusual weakness in legs, arms, or face.

Home Safety

Chemo and other cancer treatments are usually excreted from the body within 72 hours of treatment in urine, stool/feces, vaginal secretions and/or semen. These chemicals are not usually found in saliva, sweat or tears. It is important to keep yourself, those around you and our environment as safe as possible from treatment medications and their bi-products.

During the 72 hours after chemotherapy treatment:

- In most situations, you may use the same toilet, septic tank and/or sewer that you usually use along with your household members.
- If you have a low-flow toilet (i.e. in a camper) you should close the lid and flush twice.
- If the toilet seat gets urine or stool on it, then clean the surface before other people use the toilet.
- If clothing becomes soiled with body fluids, then wash those clothes separate from others.
- Anyone assisting with bathroom cares (besides the patient) should wear gloves to clean up / dispose of waste. Also, if handling a bedpan, disposable pads or diapers.
- Always wash hands with soap and water after using the toilet or touching body fluids.
- Pregnant women should avoid touching anything that may be soiled with body fluids from the patient.

Oral Chemotherapy and Other Oral Cancer Treatments

Many treatments are available in oral (pill/capsule/liquid) forms. There will be specific instructions given to you about your oral treatment and home safety. In general, many of the same guidelines above apply with medications you have at home.

- Keep your oral chemo/cancer medications away from children
- Store your medication as instructed
- Do not put oral chemo/cancer medications in pill boxes with other pills
- Take your medications exactly as instructed

Home IV chemotherapy

Only a couple of our chemotherapy treatments are sent home in an IV pump "to go." If you have an IV chemotherapy at home, you will receive special education on how to take care of the pump, what to do if the pump "beeps" or if the tubing becomes disconnected (these things rarely happen). In general, it is important to avoid contact of any chemotherapy with your bare skin or mucous membranes such as eyes, nose or mouth.

If you have an IV chemo spill at home:

- Wash any skin that has been exposed to chemo with soap and water.
- Linens or clothing that are soiled with chemotherapy or body fluids with chemo waste should be washed separately from other linens and clothing.
- If you do not have a washer, place the soiled linens in a plastic bag until they can be washed.
- Wash hands with soap and water after touching linens or clothing that may be soiled with body fluids

If you have oral chemotherapy or cancer medications that you are no longer taking and needs to be discarded, please bring it to the office and we will dispose of it for you.

Summary

You are NOT going to get ALL the side effects listed, but you will likely get some. No two people have the same side effects. Your side effects are...uniquely yours.

Our goal is to help you maintain as active of a lifestyle as possible during treatment. In addition, most of the side effects will get better and usually completely resolve once you finish treatment.

Remember the following emergency side effects and do not hesitate to call, day or night, if you experience these as they are potentially life-threatening.

Emergency Side Effects

- Fever greater than 100.5 F
- New rash (more than 50 percent of the body) with or without itching
- Nausea, vomiting, diarrhea or constipation that does not respond to overthe-counter medications
- Unexpected bleeding, such as blood in your urine, phlegm, vomit or black/bloody stools
- Uncontrolled or severe pain
- New or worsening cough, chest pain or shortness of breath that affects your activities of daily living
- New/persistent headache, especially with weakness, dizziness or vision changes

Call Physicians' Clinic of Iowa - Hematology & Oncology at (319) 297-2900 for an emergency, 24 hours a day, 7-days a week, weekends and holidays.

Long-Term and Late Effects from Cancer and Treatment

This is a general list of long-term and late effects. Long-term effects are those that start during treatment and continue after treatment ends. Late effects are those symptoms that start after treatment has ended.

Everyone is unique and will not experience all of these effects, or may experience effects not listed here. Please discuss any new or persistent symptoms or concerns with your provider or anyone on the team. We will make sure the appropriate resources or referrals are provided to you.

Surgery Effects

- Body image concerns
- Numbness or tingling in surgical area
- Pain
- Altered range of motion or weakness
- Lymphedema or swelling in arm(s) or leg(s)
- Neuropathy (burning or pins and needles sensations)

Radiation Therapy Effects

- Fatique
- Skin sensitivity/tenderness or pain in area of radiation
- Lymphedema or swelling in arm(s) or leg(s)
- Numbness or tingling in area of radiation
- Skin discoloration
- Telangiectasia or spider-veins appearance
- Weakness or change in range of motion of extremity in area of radiation

Chemotherapy Effects

- Cognitive impairment (fuzzy thinking or forgetfulness)
- Fatique
- Unexpected or unplanned weight gain or loss
- Neuropathy (burning or pins and needles sensation)
- Hair loss/skin changes
- Osteoporosis/osteopenia (decrease of bone density found on DEXA scan)
- Cardiac dysfunction (decreased pumping action of the heart)

General Psychological Effects

- Depression
- Distress multifactorial unpleasant experience of psychological, social, and/or spiritual nature
- Worry, anxiety
- Fear of recurrence
- Fear of pain
- End-of-life concerns; death and dying
- Changes in sexual function and/or desire
- Challenges with body image and/or self-image
- Relationship and other social role difficulties
- Return-to-work concerns
- Financial challenges

PCI MEDICAL CAMPUS

202 and 275 10th Street SE, Cedar Rapids | General Info: (319) 247-3010



HELPFUL PHONE NUMBERS AND LINKS

General Information about PCI

(319) 247-3010 | Open M-F, 7 am - 5 pm | *pcofiowa.com*

Valet Parkin

Open M-F, 7:30 am - 5 pm | Medical Pavilion 1 | Valet parking is free & open to anyone

Medical Records

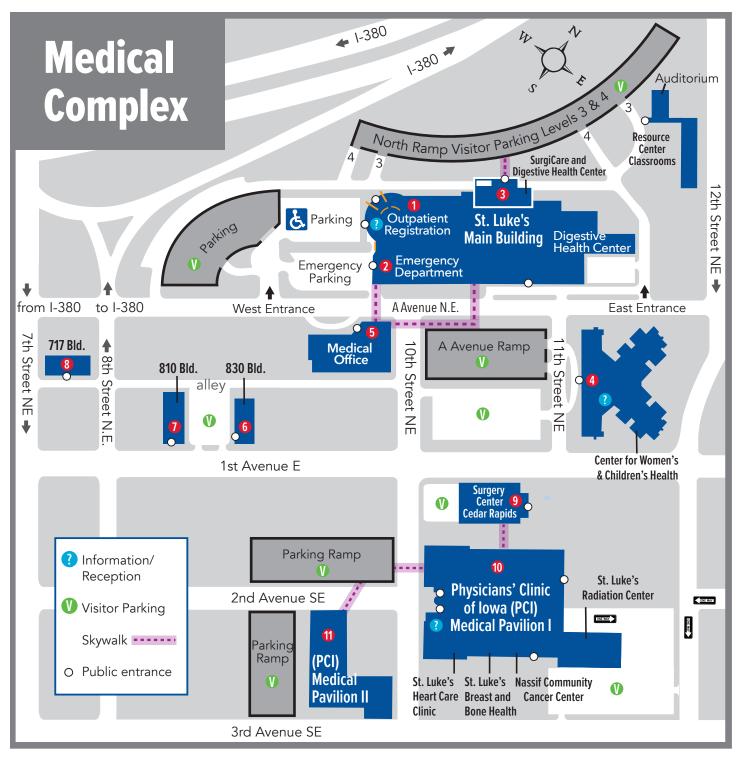
(319) 398-1596 | M-F, 8 am - 2 pm | Medical Pavilion 1, 1st Floor pcofiowa.com/for-patients/medical-records/

Patient Billing Questions

(319) 398-1583 | pcofiowa.com/for-patients/financial-assistance/pay-my-bill/

PCI Patient Portal

(319) 247-3010 | Sign up for the patient portal by providing your email address at check-in. *pcofiowa.com/portal*



- West Entrance/Outpatient Registration (Register here for Lab, X-ray, PET/CT Imaging)
- 2 Emergency/Trauma Entrance
- 3 SurgiCare and Digestive Health Center Entrance (Enter here for scheduled in-hospital surgery procedures)
- 4 Birth Care, NICU, Pediatrics

- UnityPoint Clinic Maternal Fetal Medicine, Multi-Specialty, Pediatrics
 - St. Luke's Dental Health Center
- 6 Therapy Plus, Work Well Clinic
- Chemical Dependency, Partial Hospitalization
 - HR, St. Luke's Foundation
- 8 MedLabs, LifeLine

- Surgery Center Cedar Rapids (Outpatient surgery procedures. Enter from lower level parking lot)
- 10 St. Luke's Breast and Bone Health
 - St. Luke's Heart Care Clinic
 - Nassif Community Cancer Center
 - St. Luke's Radiation Center
- PCI Medical Pavilion II

Notes:	 	

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MEDICAL RESOURCE GUIDE

