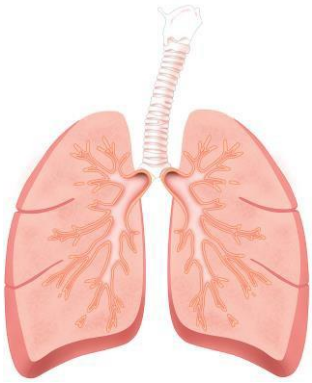
Information for patients and families

Juravinski Cancer Centre
HAMILTON HEALTH SCIENCES

Understanding Lung Cancer



Information for individuals with lung cancer and their families

Your Primary Team at the JCC

- Medical Oncologist _____
- Radiation Oncologist _____
- Surgical Oncologist _____
- Oncology Nurse _____

Other Oncology Specialist _____

Call centre hours for phone messages: Monday to Friday

8:30 AM to 4:30 PM -- 905-387-9495, ext. 63123

After hours symptom management support

Weekends/Holidays 24hrs, Evenings 4:30 PM to 8:30 AM -- 1-877-681-3057

Coming to the Juravinski Cancer Centre (JCC)

Your patient experience here at the JCC is very important to us. All individuals with lung cancer, regardless of the cause, will receive compassionate care. As health care providers, we are here to provide you with the best possible treatment, care and support.

During working hours (8:30 AM to 4:30 PM)

If you become very short of breath or develop severe chest pain, call 911 or go directly to the Emergency Department.

If you have an urgent problem as listed below and need to speak with your doctor, call the JCC by 4:30 PM. Please have your chart number ready. Urgent problems are any changes in your condition, such as:

- fever of 38.0^{o}C (100.^{0}F) or higher
- bleeding
- difficulty breathing
- chills
- severe vomiting
- pain

If you have an urgent cancer-related problem, please call your JCC health care team as early in the day as possible. This will facilitate access to appropriate resources, such as our Rapid Evaluation and Symptom Support Unit (RESSCU) and any tests that may be needed. We make every effort to keep our patients out of the Emergency Department for issues that are not emergencies.

Urgent problem after 4:30 PM or on weekends/holidays

Call CAREchart at Home, our after-hours symptom management phone service at 1-877-681-3057 to speak to a cancer nurse.

Appointments

All appointments are made through the clinic clerks. Please call 905-387-9495 ext. 63123 for appointment related questions. They will direct your call to the responsible clinic clerk.

Your Symptoms Matter

When you come for each clinic appointment, your health care team will ask you to complete a symptom assessment. This assessment is a very important way for you to let your team know how you are doing, and it will be reviewed at each visit. Please discuss your symptoms with your health care team so they can better understand how you are feeling. There are tablets available for you to use in each JCC clinic or you can complete your symptom screening at home at https://isaac.cancercare.on.ca. To complete the assessment on your mobile device, hold your phone's camera over the QR code.

QR Code

To our patients and their families:

Welcome to the Juravinski Cancer Centre.

This handbook is a guide to find information about what to expect when you come to the Juravinski Cancer Centre (JCC) for your cancer care. We hope it answers many of your questions. You can also visit our website: www.hamiltonhealthsciences.ca.

Our Regional Cancer Program oversees the quality and delivery of cancer care for the areas of Brant, Burlington, Haldimand, Hamilton, Niagara and Norfolk. Our cancer specialists work together with your family doctor to provide high quality, evidence-based treatment and compassionate care.

The Regional Cancer Program includes cancer services at:

- Brant Community Healthcare
- Joseph Brant Hospital
- Juravinski Hospital and Cancer Centre
- Walker Family Cancer Centre and Niagara Health

Together we will provide you with information and support, so that you can make informed decisions and take active part in your care. Please feel free to talk with us about your health and any concerns that you may have. We welcome your questions at any time.

Your Health Care Team

Table of Contents

Section One

What is lung cancer?

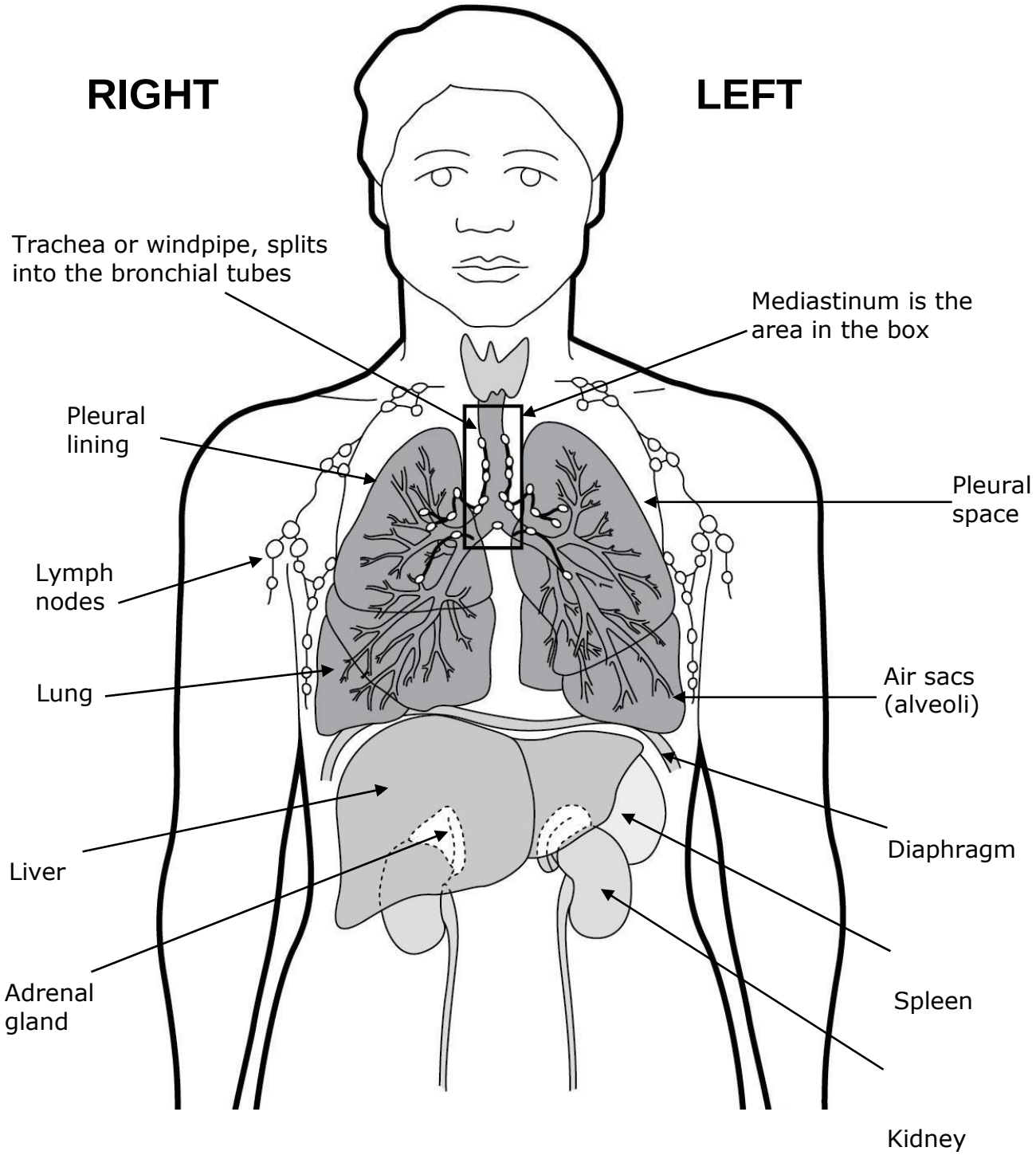
Lung cancer is the uncontrolled growth of abnormal cells that starts in one or both lungs. The abnormal cells do not develop into healthy lung tissue and do not carry out the functions of normal lung cells. Having less healthy lung tissue makes the lungs work more, which makes it harder for you to breathe.

How do the lungs work?

The lungs are part of the respiratory system. As you breathe in, air is carried into your lungs through a series of airways starting with the trachea (windpipe). The trachea splits into 2 main airways called bronchial tubes: one bronchus goes to the right lung and one bronchus goes to the left lung.

The two bronchial tubes continue to branch into smaller airways until the air reaches tiny air sacs called alveoli. There are millions of these air sacs in each of your lungs. The air sacs release oxygen into the blood that moves throughout your body. The blood trades the oxygen for carbon dioxide, which you then breathe out.

Lungs and related structures



Symptoms that may be related to lung cancer

Having lung cancer may cause many types of symptoms. When lung cancer first starts, you may not notice any symptoms or changes in how you feel. As the cancer grows, common symptoms that you may have include:

- a cough that does not go away
- a change in the type of cough
- chest pain with coughing
- coughing up blood
- trouble breathing
- a hoarse voice
- chest infections that do not go away
- feeling tired all the time
- an unexplained weight loss – you notice that your clothes are baggy
- no appetite – you do not feel like eating
- an unexplained pain in other parts of the body

Lung cancer is often found after a growing tumour causes problems. A symptom may result from the cancer spreading to other parts of the body. For example, if the cancer spreads to the bone, you may have bone pain.

What are the main causes of lung cancer?

- Most people who get lung cancer smoke or use tobacco products.
- Exposure to second-hand smoke. People who do not smoke can develop lung cancer from tobacco smoke in the air.
- Exposure to harmful substances such as asbestos or radon in the environment places people at greater risk for lung cancer. This exposure can be in the home or workplace.
- Sometimes, we do not know why someone gets lung cancer.

What are the tests that may be needed to confirm that I have lung cancer?

You may need a:

A. Chest x-ray

B. CT or CAT scan (computer axial tomography) **–** uses x-rays and computers to create pictures of inside the body in more detail to see if there is a growth or suspicious area that needs more attention. A contrast dye may be injected into a vein in your arm to help make the images clear.

C. MRI (magnetic resonance imaging) – uses a magnetic field to create images of inside the body.

D. PET (positron emission tomography) – uses a low-dose radioactive sugar that is injected into the body and helps to light up cancer cells. A PET scan, along with a CT or CAT scan, can often inform the doctor if the cancer has spread.

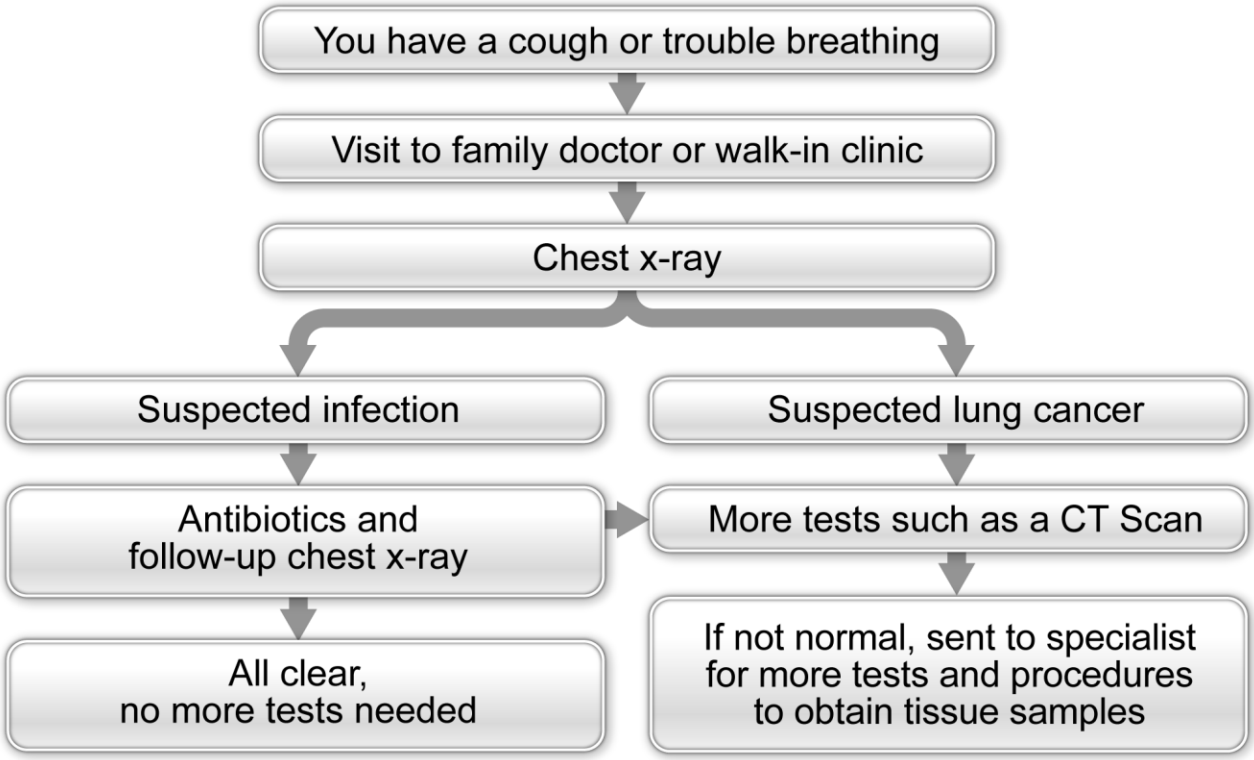
E. Bone scan – uses a low-dose of radiation that is injected into the body that looks at the bones to detect if cancer has spread to the bones. Bone scans are mainly used in patients who do not require a PET scan.

What is a biopsy?

The purpose of a biopsy is to obtain tissue samples that are checked for cancer under a microscope. An example would be if you had a bronchoscopy, your doctor took samples of tissues to be checked for cancer. This is a type of biopsy. Other types of biopsies include:

- **Needle biopsy** – uses a needle to remove a small amount of fluid or cells from the tumour or lymph nodes. Sometimes, a needle biopsy is done by guiding a needle under CT scan or ultrasound scan to the area of concern. You may be given medications (sedative) to help you relax. The area where the needle is inserted is “numbed or frozen” with a local anesthetic.
- **Bronchoscopy** – a doctor puts a thin tube with a small camera on the end down your airway and into your lungs. This lets the doctor see and take samples of tissues. The samples are sent to the lab to check for cancer.
- **EBUS (endobronchial ultrasound)** – uses sound waves to guide the doctor to take samples of tissues from the lymph nodes found in the mediastinum area of your chest. The mediastinum is in the middle of your chest behind the breastbone (see picture on page 2). The EBUS is done with a bronchoscopy or upper endoscopy. You are given medication (sedative) during this procedure.
- **Mediastinoscopy** – is when a small incision (cut) is made near the breastbone so the doctor can examine the lymph nodes along the windpipe behind your breast bone for cancer or other disease.
- **Thoracoscopy is a type of surgical procedure.** The doctor makes a small incision (cut) through the chest wall and uses a camera to check structures inside the chest for cancer and take tissue samples. You are put to sleep with an anesthetic for this procedure.

Pathway if lung cancer is suspected



There are different types of lung cancer. You may know someone with lung cancer, but his or her cancer and treatment may be different from yours.

Is lung cancer curable?

This is a difficult question to answer and depends on the type, location and extent of your cancer. These qualities also factor in to determining the stage of cancer, which we will discuss more in Section 2 of this booklet. Sometimes treatments can cure the cancer; other times there is no cure. If there is no cure, treatment may still prolong life, help decrease symptoms from cancer and improve how you feel. Your doctor will discuss your concerns and answer your questions as best as he or she can.

Treatments may be used to shrink the tumour or slow down the growth of the tumour, which may relieve the symptoms that the cancer is causing. What this means is that we may be able to shrink the tumours in your lungs or other areas, but the cancer may never completely go away. This is when you may hear the phrase that your cancer is in remission.

Remission is a time when the cancer is under control and there are no signs and symptoms of the cancer. Even if there are no signs and symptoms of cancer, the cancer may start to grow again.

Your treatment plan depends on:

- The type of lung cancer you have and if it has spread to other parts of your body.
- Your age and general health.
- Your personal preference (what you think is best for you).
- Side effects from the treatments.

You and your health care team will work out a treatment plan that is best for you. Your doctor will do tests (such as chest x-ray, CT scan, etc.) throughout treatment to see your response to treatment. Your health care team will review your symptom assessment and do blood work to determine how well you are tolerating the treatment. Together with you, they will determine if changing or stopping treatment is required.

Section Two

What are the types of lung cancer?

There are 2 main types of lung cancer. Their names come from how the cells look when seen through a microscope. They are based on the kind of cells that make up the tumour, and not the actual size of the tumour.

- **Small cell lung cancer** usually starts in the larger breathing tubes, grows quickly and often spreads to other parts of the body. It is less common (10-15% of new lung cancer diagnoses).

- **Non-small cell lung cancer** is the most common. It generally grows more slowly than small cell lung cancer.

The 3 main cell types of non-small cell lung cancer:

- **Squamous carcinoma** – This type generally begins in the lining of the airway in the larger breathing tubes. It tends to spread less quickly than other forms of lung cancer.

- **Adenocarcinoma** – This type begins near the outside surface of the lung. It can vary in both size and how fast it grows. Adenocarcinoma is the most common type of cancer in never smokers. It can be tested for mutations that can help guide your doctor in your treatment.

- **Large cell carcinoma** – This type may occur in any part of the lung. However, it usually starts in the smaller breathing tubes.

Other chest cancers that are less common:

- **Carcinoid tumours** – This type of cancer is slow-growing and usually starts in the lung airways.

- **Mesothelioma** – This type of cancer starts in the mesothelial cells, which are on the surface of the lining of the lung, heart or abdomen (belly). This cancer tends to be related to asbestos exposure.

- **Thymoma –** This type of tumour forms in the thymus gland. The gland sits behind the breastbone in your chest. Not all thymomas are cancer.

How does lung cancer spread?

The medical term used when cancer spreads from where it started to another part of the body is called metastasis (me-TAS-te-sis).

Cancer cells move away from the original tumour and spread to other parts of the body. The cancer spreads through the blood, lymph nodes and lymph vessels. Cancer can spread wherever your blood or lymph flows.

This means lung cancer cells have taken up home in other body tissues, not to be confused with a second type of cancer. For example, if lung cancer spread to your bone it does not mean that you have bone cancer; it means that you have a metastasis to the bone of lung cancer cells.

What does “the stage” of lung cancer mean?

Once we know that you have lung cancer, we then need to know if it is just in one lung or if it has spread to the other lung or other parts of your body.

The stage of cancer tells us the extent of the cancer in your body.

Knowing the stage helps us plan your treatment.

Stages of small cell lung cancer

There are two main stages of small cell lung cancer.

- **Limited stage**: Cancer cells are found only in one lung and pleural space.
- **Extensive stage**: The cancer is in the other lung and/or other parts of the body like the brain, bone, liver and adrenal glands.

Stages of non-small cell lung cancer

It can be hard to know exactly the stage of the lung cancer. Sometimes the stages overlap or blend together. Your doctor will review with you where the cancer is and its stage. Stages of cancer are determined by a system called TNM:

Tumour: the size and location of where the cancer started

Node: lymph node (filters in the body into which cancer can spread)

Metastasis: where the cancer has spread (usually through the bloodstream)

Stages of non-small cell lung cancer

Stage 0

If cancer cells are in the lung or bronchus but the cells have not formed an actual tumour. This is also called carcinoma in situ.

Stage 1A

- Tumour is up to 3 cm. No lymph node involvement.
  No metastasis.

Stage 1B

- Tumour is between 3 and 4 cm. No lymph node involvement.
  No metastasis.

Stage 2A

- Tumour is between 4 and 5 cm. No lymph node involvement.
  No metastasis.

Stage 2B

- Tumour is up to 5 cm. Local lymph nodes are involved.
  No metastasis.
- Tumour is between 5 and 7cm. No lymph node involvement.
  No metastasis.
- Tumour has spread into nearby structures (chest wall, lining around the heart) OR multiple tumours are seen in the same lobe of the lung. No lymph node involvement. No metastasis.

Stage 3A

- Tumour is up to 5 cm. Regional lymph nodes are involved. No metastasis.
- Tumour is between 5 and 7cm. Local lymph nodes are involved. No metastasis.
- Tumour spreads into nearby structures (chest wall, lining around the heart) OR multiple tumours are seen in the same lobe of the lung. Local lymph nodes are involved. No metastasis.
- Tumour is larger than 7 cm. Local lymph nodes may or may not be involved. No metastasis.
- Tumour spreads into nearby structures (diaphragm, mediastinum, heart, major blood vessels, windpipe, food pipe, spine bones) OR multiple tumours are seen in a different lobe of the lung but on the same side of the lung. Local lymph nodes may or may not be involved. No metastasis.

Stage 3B

- Tumour is up to 5 cm. Regional lymph nodes on the side opposite the tumour or above the collarbone are involved. No metastasis.
- Tumour is between 5 and 7 cm. Regional lymph nodes are involved. No metastasis.
- Tumour spreads into nearby structures (chest wall, lining around the heart) OR multiple tumours are seen in the same lobe of the lung. Regional lymph nodes are involved. No metastasis.
- Tumour is larger than 7 cm. Regional lymph nodes are involved. No metastasis.
- Tumour spreads into nearby structures (diaphragm, mediastinum, heart, major blood vessels, windpipe, food pipe, spine bones) OR multiple tumours are seen in a different lobe of the lung but on the same side of the lung. Regional lymph nodes are involved. No metastasis.

Stage 3C

- Tumour is between 5 and 7 cm. Regional lymph nodes on the side opposite the tumour or above the collarbone are involved.
  No metastasis.
- Tumour spreads into nearby structures (chest wall, lining around the heart) OR multiple tumours are seen in the same lobe of the lung. Regional lymph nodes on the side opposite the tumour or above the collarbone are involved. No metastasis.
- Tumour is larger than 7 cm. Regional lymph nodes on the side opposite the tumour or above the collarbone are involved. No metastasis.
- Tumour spreads into nearby structures (diaphragm, mediastinum, heart, major blood vessels, windpipe, food pipe, spine bones) OR multiple tumours are seen in a different lobe of the lung but on the same side of the lung. Regional lymph nodes on the side opposite the tumour or above the collarbone are involved. No metastasis.

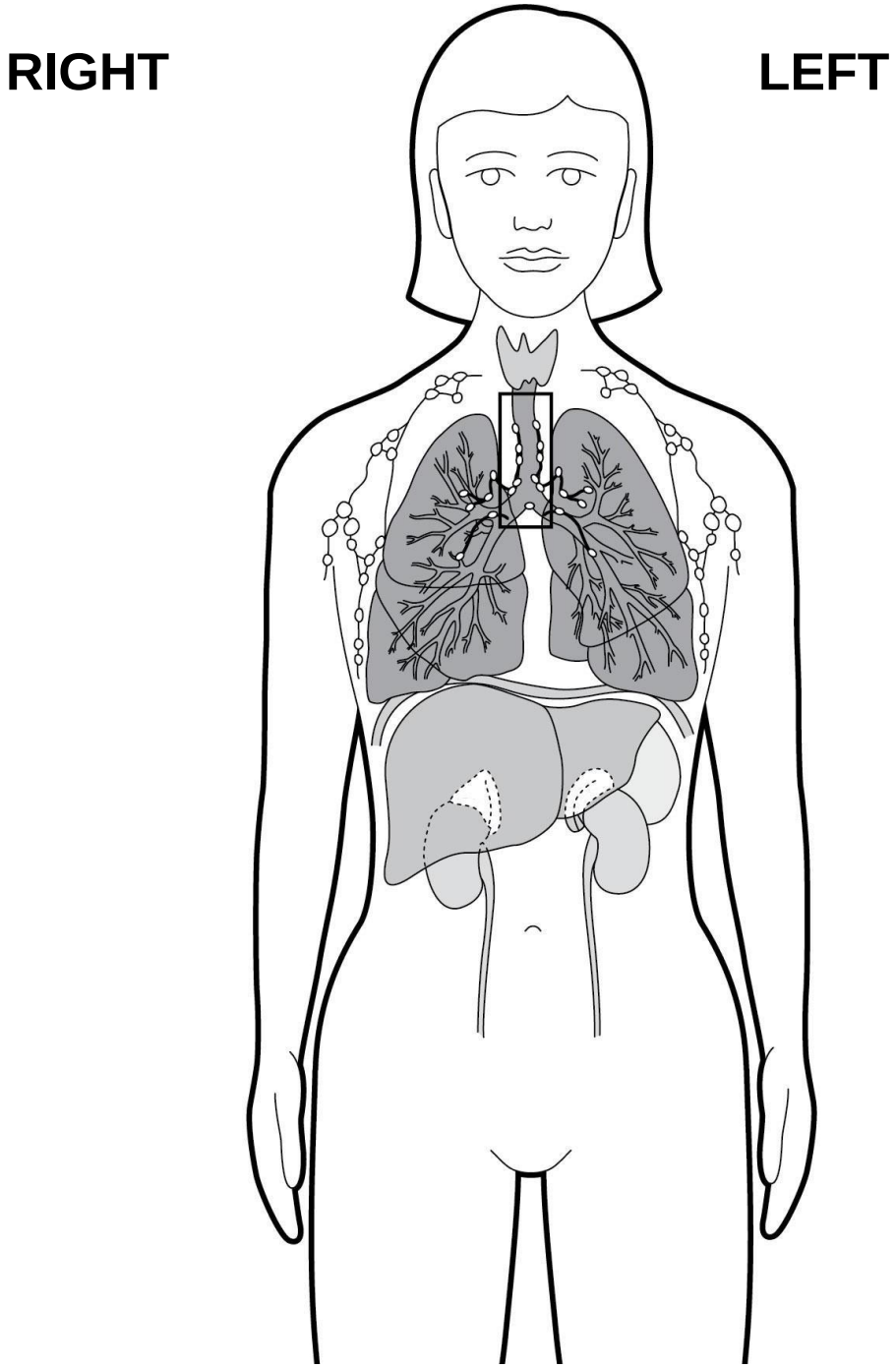
Stage 4A

- Metastasis to the opposite side of the lung OR cancer cells in the fluid around the heart (pericardial effusion) or around the lung (pleural effusion) OR tumours to the lining of the lung or heart OR a single metastasis outside of the lungs.

Stage 4B

- Metastases to one or more organs outside the lungs (such as the liver, bones, adrenal glands, brain).

Stage of lung cancer



Section Three

Treatment options depend on the type and the stage of cancer.

There are 3 major treatments that may be used by itself, together in combination or one-after-another (sequentially):

- **Surgery** – removes the tumour or area with cancer.
- **Systemic therapy** – uses drugs that destroy or damage cancer cells. It can include chemotherapy, targeted therapy, or immunotherapy. While on systemic therapy, you will need regular blood tests to make sure it is safe to continue. It is possible that your systemic therapy may be put on hold due to the results of your blood tests.
- **Radiation therapy** – uses high-energy radiation rays or particles that damage or destroy cancer cells.

Surgery

Surgery involves an incision (cut) to your chest. Sometimes surgery can be done with a smaller incision using Video Assisted Thoracoscopic Surgery (VATS). The type of surgery used depends on where the lung tumour or cancer is located:

- **Segmental or wedge resection –** only a part of one lobe of the lung is removed, not the whole lobe.
- **Lobectomy** – a lobe of the lung is removed, not the whole lung. The right lung has 3 lobes and the left lung has 2 lobes.
- **Pneumonectomy** – the entire lung is removed.
- **Video Assisted Thoracoscopic Surgery (VATS**) – is a type of surgery done by placing instruments and cameras through small holes in the chest wall, rather than having a larger incision.

Some tumours cannot be removed by surgery. You may hear the term inoperable. This means that due to either the location and/or size of the tumour, or for medical reasons, surgery cannot be done.

Systemic Therapy

Systemic therapy consists of chemotherapy, targeted therapy, and immunotherapy. They can be used in combination with one another or in combination with radiation or surgery. Below you will find a description of systemic therapy.

1. Chemotherapy

Chemotherapy uses drugs to attack and destroy cancer cells or to prevent their growth. A single dose of chemotherapy only attacks some of the cancer cells. Most chemotherapy is given over a period of one to three days, on a schedule in what is called cycles. Each type of chemotherapy has its own schedule and may include one dose or several doses in a cycle.

In special, very selective cases, chemotherapy is used to try to shrink the cancer so that surgery is possible. This treatment is called neoadjuvant therapy. This can only be done if the cancer is in just one area of the lung.

How often and how long you will need chemotherapy depends on:

- the drugs being used
- how well you tolerate the drugs
- how the cancer responds to the drugs

Most chemotherapy for lung cancer is given through a vein. This is called intravenous (IV) chemotherapy, although some types of chemotherapy are given in pills.

Chemotherapy suite. Chemotherapy is given in a clinic called the Chemotherapy Suite, which is on the 2nd floor of the cancer centre. The exact schedule for your chemotherapy treatment will depend on the type and stage of lung cancer you have.

Chemotherapy teaching. Before starting chemotherapy, you will receive teaching on chemotherapy. Teaching is done by nurses and pharmacists.

Blood tests. While on chemotherapy, you will need regular blood tests to make sure it is safe to continue. This could be as often as once a week. It is possible that your chemotherapy may be delayed or adjusted due to the results of your blood tests.

Chemotherapy drugs not only damage the cancer cells but they can also damage normal cells, which can cause side effects such as hair loss, nausea, and risk of infection.

2. Immunotherapy

Immunotherapy is the use of medicines to trigger a person's own immune system to recognize and destroy cancer cells more effectively. Cancer cells sometimes use "check-points" to avoid being attacked by the immune system. Newer drugs (checkpoint inhibitors) hold a lot of promise as cancer treatments. Immunotherapy can be used to treat some forms of lung cancer and mesothelioma.

Immunotherapy can be given alone or in combination with chemotherapy. Immunotherapy may be recommended after surgery or after chemotherapy and radiation.

Your physician may test your cancer cells for the presence of one of the checkpoints, PD-L1, to determine how likely you are to benefit from immunotherapy. Examples of immunotherapy medicines for lung cancer include atezolizumab, cemiplimab, durvalumab, ipilimumab, nivolumab and pembrolizumab.

3. Targeted therapies

Targeted therapies are drugs (often pills) that have improved the treatment of non-small cell lung cancer – mainly adenocarcinomas. These drugs are different from chemotherapy in that they can target or block the growth or spread of cancer cells without damaging normal cells. Special testing is done on the cancer cells before starting targeted therapies. A new biopsy is sometimes needed for this testing. Only patients who have a “target” identified are treated with these therapies.

There are many types of targeted therapies used for patients with non-small cell lung cancer:

- Epidermal Growth Factor Receptor (EGFR) Inhibitors such as afatinib, dacomitinib, erlotinib, gefitinib and osimertinib
- Anaplastic Lymphoma Kinase (ALK) Translocation Inhibitors: alectinib, brigatinib, crizotinib, ceritinib, and lorlatinib
- ROS1 translocation inhibitors such as crizotinib and lorlatinib
- BRAF mutation inhibitors such as dabrafenib and trametinib
- TRK translocation inhibitors such as larotrectinib and entrectinib
- RET translocation inhibitors such as pralsetinib and selpercatinib
- K-ras mutation inhibitors such as sotorasib

Your physician may be able to assess your cancer cells for other targetable mutations in the future and repeat testing may be recommended.

Radiation therapy

There are different types of radiation therapy that can be used in the treatment of lung cancer. Radiation treatment depends on the stage of your cancer, as well as the size and location of the lung tumour.

Radiation targets a specific body area. Radiation is a local treatment and only works where it is aimed. Radiation treatment does not make you radioactive.

Radiation takes careful planning. Before treatment starts, you may go to CT simulation where the doctors can plan the treatment before it is given.

External beam radiation therapy

External beam radiation therapy

is directed from outside of the body. This is the most used type of radiation. It is typically given in small daily doses called fractions. A single dose or fraction lasts about

10 to 15 minutes. The number of fractions can vary and can be given over

3 to 6 weeks. Your health care team will discuss the length of your treatment with you.

Respiratory motion

When you breathe, your lungs increase and decrease in size. A tumour in the lung will move along with that breathing motion. During the planning of your radiation, your doctor will commonly use a special CT scan called a 4-Dimensional CT (4DCT) to judge the amount of movement that is taking place when you breathe. Sometimes, the movement is so great that your doctor will decide to use other techniques to manage your breathing.

These techniques include devices to compress your stomach in order to limit

breathing motion, inserting gold markers inside the tumour in order to follow it during treatment, or using respiratory gating, which controls the radiation beam to only ‘turn on’ when the tumour is in the right spot.

Stereotactic radiation therapy

Stereotactic radiation therapy uses specialized techniques to help focus radiation therapy to treat small, isolated tumours using a machine outside the body. The radiation is given in larger daily doses, which are typically 4 to 8 treatments, and each treatment lasts about 30 to 60 minutes.

The decision to use stereotactic radiation therapy is based on the size of the tumour and its location.

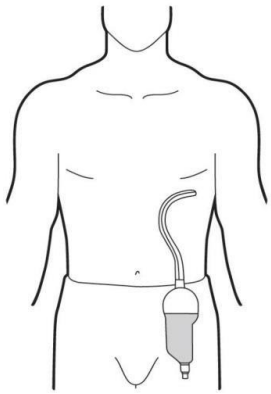
Brachytherapy

Brachytherapy is a type of radiation therapy where a small tube (catheter) is placed down your airway during a bronchoscopy. A radiation source is placed inside the body near the tumour. The radiation is produced by a tiny radioactive 'seed' placed in your body through that catheter. Brachytherapy is used most often when airways are blocked by cancer.

Special procedures

Sometimes lung cancer can cause a build-up of fluid around the lung, called a pleural effusion. Your doctor may discuss with you a procedure to drain and prevent the fluid from coming back.

- **Pigtail and Pleurex catheters** are small tubes that are inserted into the chest to drain fluid from the lung. The tube drains the fluid into a bag or bottle. If you need a catheter, your doctor will discuss with you which tube will work best and how long you will need it. This procedure can be done as an outpatient.

Pigtail catheters are placed by a doctor called an Interventional Radiologist in the Diagnostic Imaging Department. Pleurex catheters are placed by respirologists or thoracic surgeons in clinic.	

- **Pleurodesis** is a procedure where fluid around the lung is drained and then chemicals are placed inside the chest area to help the lung stick to the chest wall and prevent the fluid from coming back. The tube is removed after the lungs re-expand. This procedure generally requires a stay at the hospital for several days.

Your health care team may refer you to a specialized clinic that will assess your case and help determine the best treatment for you.

Laser treatment

Laser treatment uses an intense narrow beam of laser light to kill cancer cells. It is only used for very small tumours or to shrink a tumour that is blocking the trachea or main bronchus (see page 2).

Radiofrequency Ablation (RFA)

Your physician may refer you for radiofrequency ablation (RFA) if you have a localized small sized lung cancer that is not suitable for surgery or radiation. RFA uses radiofrequency waves sent through a specialized needle, which is inserted with the use of image guidance by interventional radiologists into the tumour. RFA creates heat to destroy the cancer cells from within the tumour. RFA is a single session treatment done under sedation and local anesthetic.

Section Four

Treatment options

Treatment for small cell lung cancer

The 3 main forms of treatment:

- Chemotherapy alone
- Chemotherapy and immunotherapy given together
- Chemotherapy and radiation therapy given together

Limited stage – Chemotherapy, generally with radiation to the chest is often recommended. It is usually followed by preventive radiation to the brain to reduce the risk of the lung cancer spreading there.

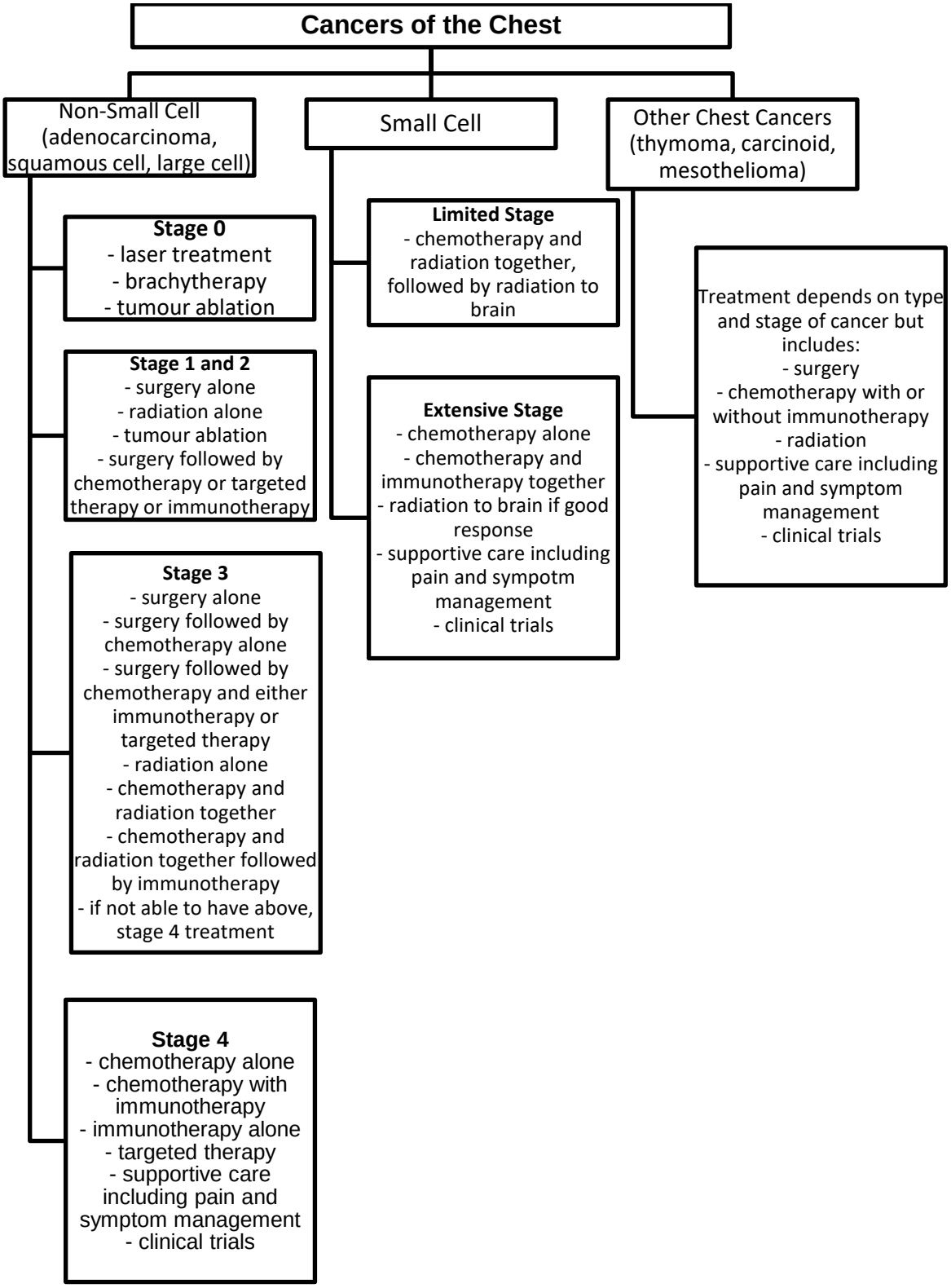
Extensive stage – Chemotherapy alone or chemotherapy in combination with immunotherapy is recommended. Sometimes preventive radiation is given to the brain and/or chest. Radiation may be used to relieve symptoms caused by the cancer in other parts of the body.

Treatment for non-small cell lung cancer

Treatment depends on the stage and generally includes one or more of the following:

- surgery
- systemic therapy; chemotherapy, targeted therapy or immunotherapy
- radiation therapy

Options for Treatment



Section Five

Common questions patients ask

What about alternative or complementary therapies?

You may have heard about other therapies that could be used to treat cancer. These may include herbal remedies, acupuncture, dietary supplements and massage therapy. While some may be helpful for comfort and treating side effects, some can be harmful. At present, there is not a lot of supportive data for alternative and complementary therapies. Please discuss any alternative or complementary therapy that you are on or considering with your oncologist.

I am worried about the side effects from the different types of treatment. What are they?

We can understand that you are worried about side effects. Please keep in mind that there are medications and many ways to limit many of the discomforts related to cancer treatments. When your oncologist talks about your treatment options with you, the side effects related to that treatment will be discussed. Information will also be provided to you throughout your cancer treatment.

If you are having a difficult time with side effects between appointments, please call us.

Can I exercise while on treatment?

Exercise during and after cancer treatment has benefits. Exercise may help you get stronger, improve your function and quality of life, and manage side effects.

We recommend that you include exercise into your daily activities. It is important to exercise safely. To learn how to exercise safely contact a physiotherapist or a community exercise program for people with cancer such as CanWell (YMCA) in Hamilton. Please ask your health care team for more information.

Is nutrition important?

Good nutrition can help give you strength and energy before, during and after treatment. This will allow you to obtain the full benefits of your cancer therapy. Eating well may also help your body build new tissues, cope with the stresses of therapy, prevent weight loss and enable you to feel stronger. In addition to good nutrition, it is important that you remain well hydrated. Aim to drink 2000mL (or 8 cups) of fluids (juice or water) per day. Alcohol and caffeinated beverages can be dehydrating, it is important to limit these beverages while on treatment in order to stay well hydrated.

A Registered Dietitian (RD) can provide nutrition counseling and answer your questions on diet and nutrition through your treatment and recovery.

At the Juravinski Cancer Centre, you can reach a registered dietitian by speaking with your health care team or calling Supportive Care Services at 905-387-9495, ext. 64315.

If I smoke, should I quit?

We recommend that you quit but realize this is difficult. There are health benefits to you from quitting. Quitting smoking can:

- make your cancer treatments work better
- reduce your side effects
- improve your healing and overall health

Talk with your JCC health care team, family doctor or pharmacist about quitting and discuss what medications may help you quit. Visit the JCC retail pharmacy, which may have no-cost tobacco cessation medications.

For support or help to stay smoke-free:

- talk with a member of your health care team
  We can refer you to a smoking cessation program
- call Telehealth Ontario at 1-866-797-0000
- visit the Smoker's Helpline www.smokershelpline.ca

Am I getting the best care?

The JCC operates on the philosophy that combines high quality, evidence-based treatment, compassionate care, education and research. Our lung cancer specialists, in partnership with McMaster University, are international leaders in this field. We encourage you to ask questions about your treatment options, including clinical trials.

What is Multidisciplinary Case Conference (MCC)?

Your physician may recommend that your case be discussed at the weekly lung cancer case conference (MCC). This group includes surgeons, radiation oncologists, medical oncologists, pathologists, radiologists, interventional radiologists and nurses from across our region (Brant, Burlington, Haldimand, Hamilton, Niagara, Norfolk). Complex cases are discussed and the entire group makes recommendations for the best treatment plan.

What about new research?

We are always investigating new treatments for lung cancer.
These treatments undergo testing in the form of clinical trials.

Lung cancer clinical trials provide us with new ways to treat lung cancer by testing the usefulness of new drugs, new approaches to radiation therapy, surgery, or new combinations of treatments. At any time during your care, ask your doctor or nurse about clinical trials for you. For more information, please visit http://cancertrialshamilton.ca/

Section Six

Supportive Care

Living with cancer

When you have cancer, you may feel you have lost control of your body and your life. You may find that you deal with cancer and treatment better if you regain control. To regain control, we encourage you to keep your health care providers aware of how you are coping with treatment and related side effects.

You may notice that you want to do different activities or have different reasons for living. You, along with your friends and family need to respect these changes. Your emotions may swing from hope to despair.

At any time during your illness, supportive care is available to help you and your family understand the difficult feelings, worries and emotions you may have such as:

- anxiety, fear or sadness
- concerns about money and finances
- spiritual needs
- relationships and sexuality
- how to talk to young children or other family members about cancer and its treatment
- the need for independence, yet want and need for support
- the need to support others
- what will happen in the future

How to contact Supportive Care Services

Supportive Care Services can be used at any time throughout your illness and cancer experience.

If you would like to see:

- an indigenous patient navigator
- a psycho-spiritual practitioner (chaplain)
- a member of our Psychosocial Oncology Team
- a registered dietitian
- a social worker
- a child life specialist
- a member of our Pain and Symptom Management Team

Please ask your health care team for a referral or refer yourself by calling 905-387-9495, ext. 64315, Monday to Friday, 8:30 AM to 4:30 PM.

Pain and symptom management

At the JCC, our Pain and Symptom Management Team can help you manage your pain, shortness of breath and other symptoms related to cancer and/or its treatment. Our team can help you at any time during your illness. To find out more about how the Pain and Symptom Management Team can help, ask your cancer care team.

Psychosocial oncology

At the JCC, our psychosocial oncology team can help you manage your mental health and well-being related to your diagnosis of cancer, your prognosis, or your treatment. Our team can help you at any time during your illness. To find out more about how the Psychosocial Oncology Team can help, ask your cancer care team.

Child life specialist

At the JCC, we recognize that having a conversation about cancer with children or young family can be challenging. We offer support to the children of our patients with cancer to help them cope with their family members' illness. To find out more about how the Child Life Specialist Team can help, ask your cancer care team.

End of life care

Your care team may recommend having a serious illness conversation to help explore your goals and wishes during your cancer journey. When there is no cure, and your condition will not improve, it is important to think about what is important to you at this time in your life. You may want to ask us about what to expect over the next few months. You may have concerns about other medical problems that could arise.

While difficult, making your goals or wishes known helps us provide the care that you and your family need.

Options can include supportive palliative care at home, or admission to a hospice in your area such as St. Peter's, Bob Kemp Hospice, Emmanuel House – all in Hamilton, Steadman House – Brantford, Carpenter House – Burlington, and McNally House – Grimsby.

Medical assistance in dying can also be considered. Medical assistance in dying is a doctor or nurse practitioner administering a substance to a legally eligible person, at their request, that causes their death. Teams that can facilitate medical assistance in dying are available in the community or in the regional hospitals.

Home & Community Care

During treatment you may need extra care and support at home. We encourage you to use the home care services that are available in your community. The Hamilton Niagara Haldimand Brant Local Health Integrated Network (HNHB LHIN) provides nursing and other health care services. Many of the services provided by HNHB LHIN are funded by OHIP. Please discuss your needs with us or you can contact an HNHB LHIN co-coordinator.

Website: http://www.hnhblhin.on.ca/
Select "Contact Us" to find a HNHB LHIN near you.

Section Seven

Resources and websites

The Patient and Family Resource Centre

The Patient and Family Resource Centre (PFRC) is a lending library and information hub located in the JCC, just to the left as you enter the main doors. Founded with support from the Canadian Cancer Society and Wellwood, the PFRC provides information and support programs for people with cancer.

To support you along your cancer journey we provide resources about diagnosis, treatment, nutrition, exercise, mental wellbeing, relaxation, caregiving, community resources, survivorship and life after cancer.

QR Code

Phone: 905-387-9495, ext. 65109
Email: jccpfrcentre@hhsc.ca
Website: https://www.hamiltonhealthsciences.ca/areas-of-care/cancer-care/patient-family-resource-centre/

Wellwood (Hamilton only)

Wellwood is a community service that provides information and support programs to people with cancer and their families, caregivers and health care providers.

Some of the services include:

- peer support programs/services
- creative expression programs
- information navigation services
- moving and coping programs

Wellwood has two locations, both of which offer free programs. For more details please visit the Wellwood website www.wellwood.ca

Canadian Cancer Society: www.cancer.ca
A Canadian resource for information on cancer. The lung section of this website discusses the different types of lung cancers, grading, staging, and resources to answer frequently asked questions.

Cancer Care Ontario: www.cancercare.on.ca
CCO provides valuable information on cancer and symptom management. This website has information on prevention, diagnosis and screening. PDF versions of symptom management and other resources are available.

Juravinski Cancer Centre Clinical Trials Department:
www.cancertrialshamilton.ca Launched in 2016, this website gives information on upcoming clinical trials at the healthcare centre, what to expect from them, how to join one, and explains the importance of clinical trials. A list of upcoming clinical trials is offered based on disease site.

Lung Cancer Canada: https://www.lungcancercanada.ca/
There are many great resources on this site including education and awareness information, peer support services, interactive media (webcasts) a newsletter and a handbook called "A Patient's Guide to Lung Cancer".

Ontario Institute for Cancer Research:
https://www.ontario.canadiancancertrials.ca/. This website will help you locate available clinical trials across Ontario.

Wellspring: https://wellspring.ca/
Wellspring is a network of community-based centres that offer programs providing support, coping skills, and education to cancer patients and their families.

American Lung Association: https://www.lung.org/
The American Lung Association is the leading organization working to improve lung health and preventing lung disease, through research, education and advocacy. This website provides information on lung cancers and other lung diseases, smoking and offers a live chat to answer any questions one might have on the topic.

Notes and Questions

Notes and Questions

Juravinski Cancer Centre
HAMILTON HEALTH SCIENCES

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Hamilton, Ontario L8V 5C2
905-387-9495

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