

NEW

# VIGILANTES

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VCHEI Science Club Magazine

May 2023

01

2023

*How does cancer occur in human body?  
How should we avoid getting cancer?*

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**Our Highlighted Section:  
Cancer Treatment**

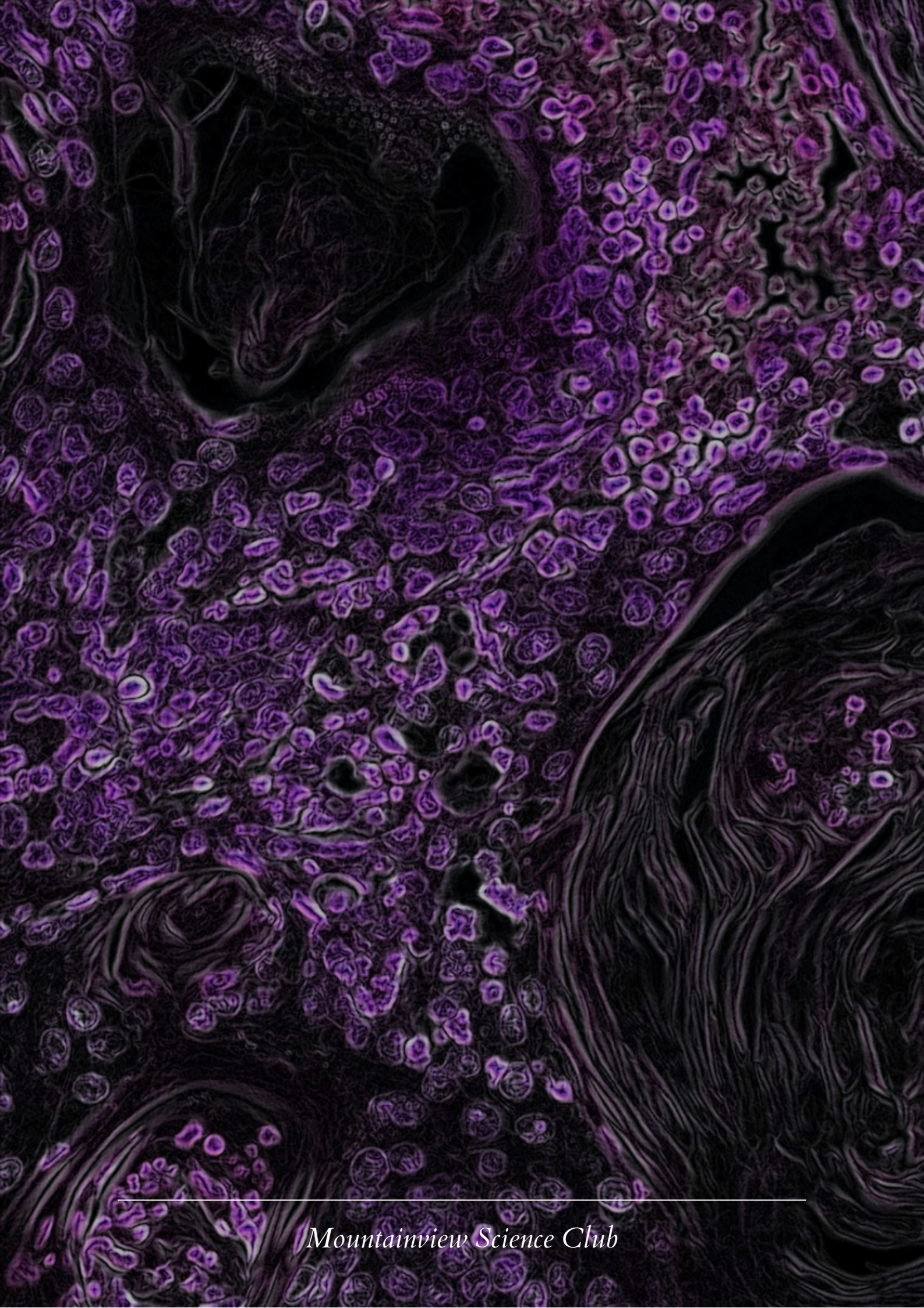
Cancer treatment options, decision making process and advice

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**The Stories from  
Mountainview Community**

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*Mountainview International School*



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*Mountainview Science Club*

# VIGILANTES

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Deciding on cancer treatment is not always easy, it depends on the case, which is very unique. Here are some reminders when making decision for cancer treatment.



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Vigilance of Contemporary  
Health & Environmental Issues  
Science Club

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# VCHEI

## Science Club



VCHEI Science Club was initiated in February 2022 by **Ju Young Oh**, whose at the time was a Junior Student in Mountainview Christian School. She initiated the Club to accommodate students with interest in science to study and discuss about current issues/problems through the science's perspective. The club's goal is to gain knowledge through researching issues that are happening around the world. The first time it was opened, 6 students joined the Club to discuss about COVID-19. Last semester is the second time VCHEI Science Club is open for MCS students, and Cancer is the topic that is being studied and discussed. **Around 23 students who joined the science club last semester had done literature studies to learn more about cancer in hope to share awareness about the disease in Mountainview community.**

### ***Publication Team***

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To showcase activities that the science club has done each semester, VCHEI Science Club makes publications that is organized by our Publication Team. To show our work on cancer research, our club had post posters at school, compile our research papers into a book and made this magazine. This magazine not only gives information about the latest cancer researches but also give an oppurtunity for members in our community to share about their cancer stories themselves in hope to give support, inspire, and give awareness about cancer in our community. The name **Vigilantes** is latin for **awareness** which resonates with the vigilant aspect of the club.

# VCHEI

## SCIENCE CLUB

### COMMITTEE INTRODUCTION



**Ju Young Oh**  
Leader



**Hui Min Mak**  
Co-Leader



**Cris Lee**  
Secretary



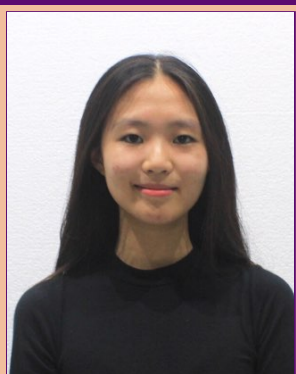
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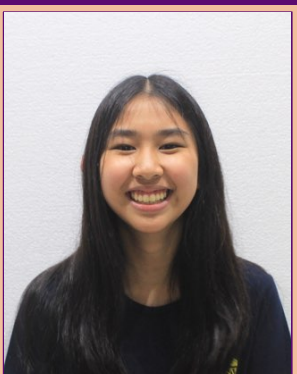
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# VCHEI

## SCIENCE CLUB

### MEMBER INTRODUCTION



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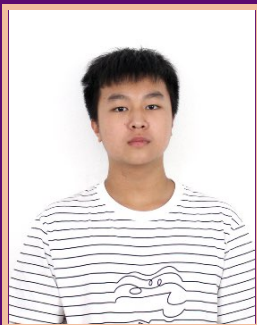
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Esther Peck



Jayden Nugroho



Se Young Oh



Alex T. Salim

# Cancer

could be a bad news for many. It is commonly seen as a deadly disease which could easily rip the hope out of a patients and their families. According to WHO, it is the leading cause of death worldwide, accounting for nearly 10 million deaths in 2020 with the most common being breast, lung, colon-rectum, and prostate cancers. To be diagnosed with cancer is different than any other other disease. In many cases, the disease itself is known to have a major impact on a person's quality of life. What exactly is cancer and why it could be so detrimental?

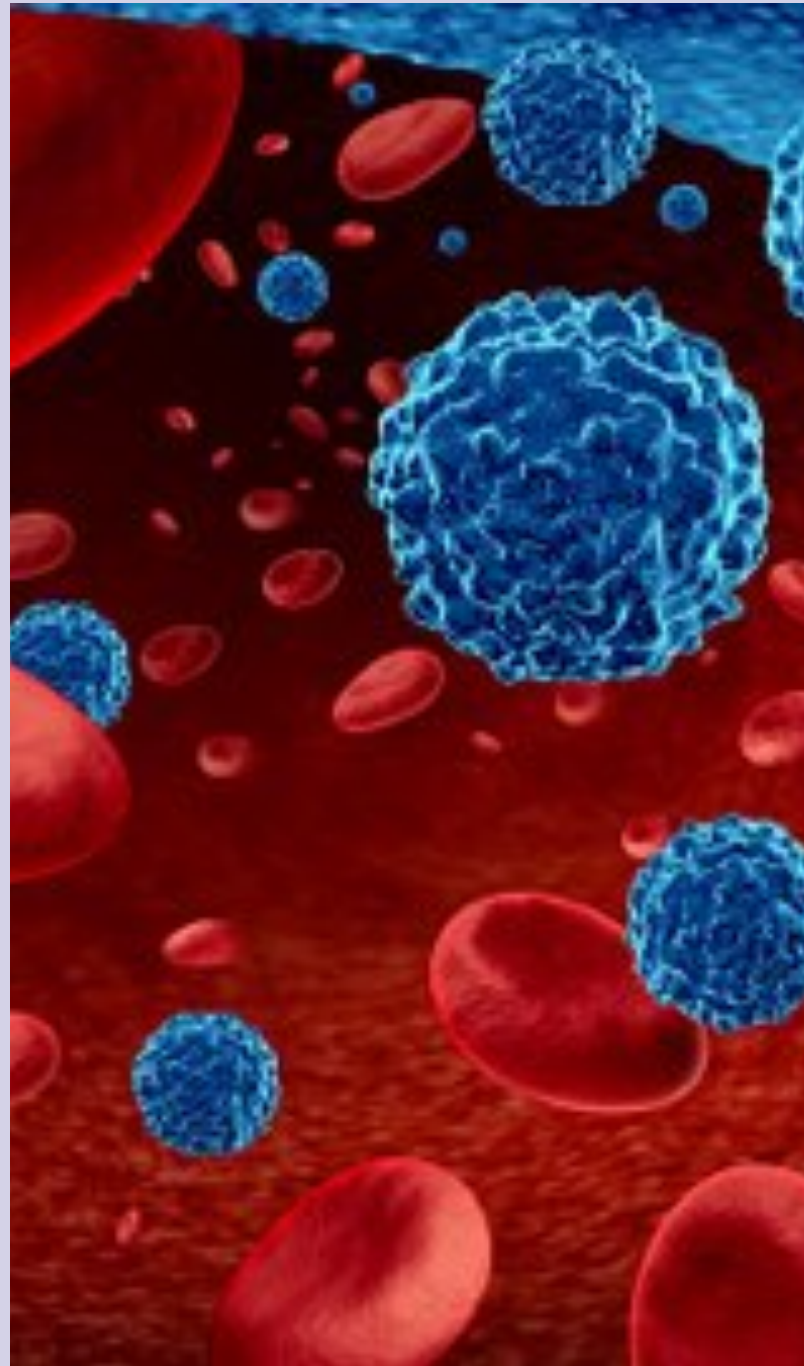
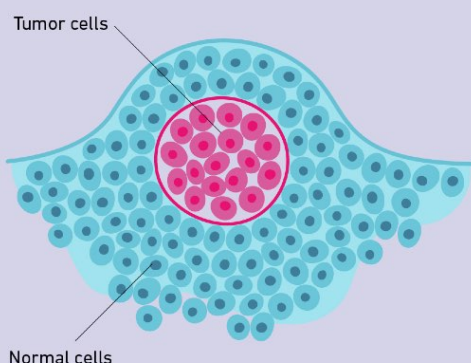
## What is Cancer?

**Cancer** involves an uncontrollable growth of some cells in the body that spreads to other parts of the body. In normal conditions, cells in our body would grow and multiply as needed. They would also stop growing and die when they are old/damaged and be replaced with new cells. When this orderly process breaks down, abnormal/damaged cells grow and multiply when they shouldn't, forming a mass of tissue. This masses of tissues could cause discomfort and pain, disturb our normal body function, make us feel chronic fatigue, reduce our appetite, and make us weak.

## Is Cancer the same as Tumor?

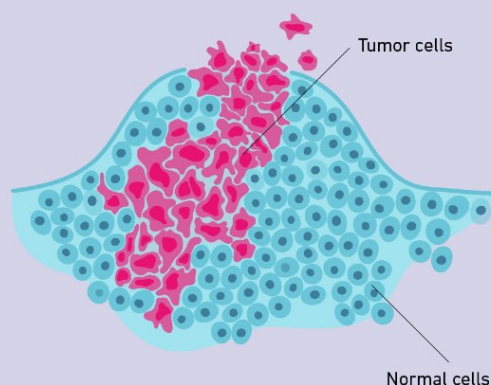
The uncontrollable growth of cells usually lead to the formation of a lump of cell/tissue called **tumor**. Tumor could be benign or malignant (cancerous). **Benign tumors** do not spread or invade nearby tissues and when removed, usually don't grow back. However, it might still grow large and cause serious symptoms or be life threatening, such as benign brain tumor.

### Benign tumor



**Cancer (malignant tumors)** spread into, or invade nearby tissues and can travel to distant places in the body to form new tumors (a process called metastasis). Many cancers forms solid tumors, but cancers of the blood, like leukemias, generally do not.

### Malignant tumor



# Did you know?

## Cancer is caused by genetic changes



The basic cause of cancer is changes in our genes. Genes in our body directly control the way our cells function. As we grow old, we are exposed to a lot of substance that may harm our genetic integrity. Our ability to maintain genetic integrity also degrades as we grow old. Changes of genes that especially control how the cell grows and divides is what leads to cancer. Advances in science allow scientists to study about these genes. It is known that there are 2 main genes that play a role in the development of cancer: **oncogenes** and **tumor suppressor genes (TSG)**.

## ONCOGENES

**Oncogenes** are genes that when activated can contribute to the development of cancer. In healthy people there are genes that are called *proto-oncogenes*. *Proto-oncogenes* are involved in normal and stable cell growth and division. They are positive growth regulators which make cells grow when needed. Mutation/changes in *proto-oncogenes* leads it to become an oncogene, which encodes proteins that not only promote cell multiplication but also prevent natural cell death.

**Activation of oncogenes** could happen through mutation, gene duplication, or rearrangement of the chromosome.

### Examples

- **K-ras** point mutation in carcinomas
- **erbB-2** gene duplication in breast and ovarian cancer
- **c-myc** rearrangement in Burkitt lymphoma

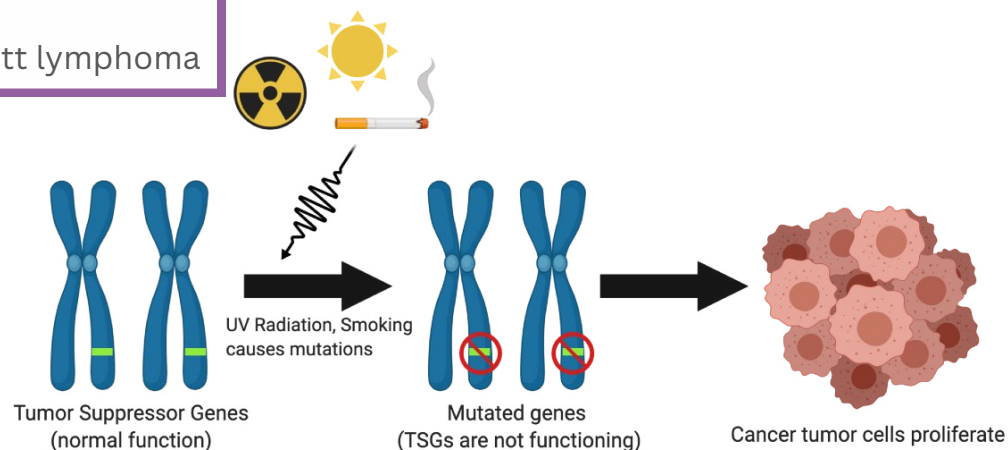
## TSG

**Tumor Suppressor Genes (TSG)** refer to the genes whose loss of function results in the development of cancer. Tumor suppressor genes are usually negative regulators for cell growth. They restrain abnormal cell growth and division, as well as stimulate cell deaths to keep our cells balanced and keep us away from cancer.

There are 2 main ways **TSG** could lose its function: genetic changes and interferences in the gene expression.

### Examples

- **p53** in many cancer types
- **BCR1&2** in breast and ovarian cancer
- **APC** in colon/rectum carcinoma
- **PTEN** in various cancers



# Controlling cancer risk factors

## CARCINOGENS

When it comes to cancer and what causes it, we often hear the term "**carcinogens**". **Carcinogens** are things that promotes genetic changes in our body that leads to cancer. Interaction between our genes with **carcinogens** may cause genetic changes that couldn't be eliminated by our body's natural ability and the result is the uncontrollable growth cell or what we call cancer. Carcinogens could be **physical, chemical, or biological**.



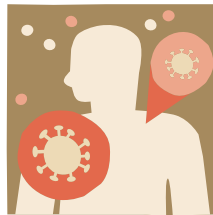
### Physical carcinogens

UV light from the sun,  
radiation in industry/healthcare



### Chemical carcinogens

asbestos, tobacco, alcohol,  
arsenic in water  
aflatoxin in food.



### Biological carcinogens

infections from certain virus  
(HIV, hepatitis B & C virus,  
Eipstein-Barr virus)  
bacteria (helicobacter pylori)  
or parasites.



### Aging is an unavoidable cancer risk factor

As we grow older, it is believed that accumulation of carcinogens/damages during our life time is getting bigger and our body's ability to self repair damages is weakened. This is why we see more incidence of cancer in old people.

## Behavioural risk factors

According to WHO, one-third of deaths from cancer are due to tobacco use, high body mass index, alcohol consumption, low fruit and vegetable intake, and lack of physical inactivity. It turns out that our behaviours might also increase our risk of getting cancer.



### Here are some behavioural advices to reduce cancer risk:



1. **Do not smoke/use tobacco** (try to have zero exposure of tobacco as possible, even avoid inhaling the smoke from a smoker)
2. **Maintain a healthy body weight** (Try to have at least a Body Mass Index/BMI of 2.1)
3. **Eat a variation of fruit and vegetable** (try to consume as much as 600g/day)
4. **Regularly do physical activities** (in a week at least try to have 2,5 hours of moderate intensity activity/equivalent. This might include brisk walking, water aerobics, bike riding, dancing, tennis, mowing the lawn, hiking and rollerblading)
5. **Avoid/reduce alcohol consumption** (try to have zero exposure of alcohol as possible)

Besides controlling our behaviour, we can also avoid other risk factors by getting ourself vaccinated and avoiding/reducing our exposure of UV light, radiation and pollution.

# TREATING CANCER



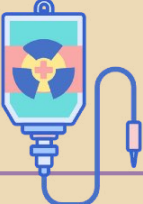


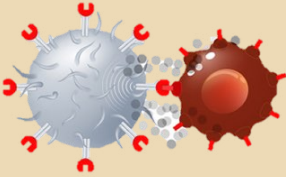
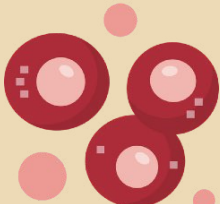


When you have **visible signs/symptoms** such as *skin changes, unusual lump/mole/wart, hoarseness, weight loss, fatigue, fever, appetite loss, persistent pain, or a sore that doesn't go away*, then you might be suspected to cancer. These signs/symptoms is not always related to cancer, but in the case of cancer, these symptoms may occur because the increased pressure caused by cancer growth; the cancer cells is taking up our body's energy supply; or our immune system is responding to cancer. Some **screening** may also detect there is cancer in our body without us showing any signs/symptoms. Once cancer is suspected, **diagnostic** tools are used to uncover cancer type, stage and grade which will help doctors decide treatments for the cancer. **Cancer type** is usually determined by the location it first started/found and the type of tissue it involves. **Cancer grade** is determined by how abnormal the cells look and how fast it is growing, while **cancer stage** is determined by their size, invasion to surrounding tissue and spreadness to lymph nodes/other organs (metastasis).

Once cancer is identified, the appropriate **treatment** can be decided. There are two main categories of cancer treatment: **curative treatment and palliative care**. The main aim for cancer treatment is achieving cure (curative treatment) through methods such as surgery, radiotherapy, chemotherapy or the combination of them. However, when the cancer has advanced and becomes beyond curable, palliative care is given to prolong the patient's life or relieve their suffering with symptoms, giving cancer patients a better quality of live. Due to its complexity, cancer treatment often requires a team of multidisciplinary medical professional. In other hand, more than one doctor may be involved in advising and performing the treatments for cancer.



# 7 Major Cancer Treatments

	<p><b>Surgeries</b> remove cancerous cells/tissues from the body, either completely to achieve cure, or partially to reduce the size of the tumor and release pain or symptoms caused by the tumor.</p>
	<p><b>Radiation therapy</b> uses the application of ionizing radiation like x-rays, gamma rays, or other radioactive particles to kill cancer by damaging the cancer cells DNA. There is a dose limit to radiation therapy, and the same area can't be treated more than once.</p>
	<p><b>Chemotherapy</b> kills cancer cells through the use of cytotoxic drugs and also slows the growth of the cells. However, these drugs could damage both cancerous and healthy cells.</p>
	<p><b>Hormone therapy</b> targets cancers that use hormones to grow like prostate and breast cancer. Through the use of drugs it can block hormone production or interfere with how the hormone behaves in the body and mostly used together with other cancer treatment.</p>
	<p><b>Targeted therapy</b> uses drugs to control the protein involved in cancer activities: cell growth, cell division, and cancer spreading. Small molecule drugs usually target proteins inside the cancer cells. while monoclonal antibodies targets protein on the surface of cancer cells.</p>
	<p><b>Immunotherapy</b> is used to help improve the immune system to act against cancer cells by counteracting changes in the cancer cells that made them difficult to detect by our own immune system.</p>
	<p><b>Bone marrow/stem cell transplant</b> restores bone marrow that is damaged by treatments/cancer cells. Healthy bone marrow is injected through the bloodstream to replace the damage cells in the bone marrow.</p>



## Surgery is the earliest method used for cancer treatment

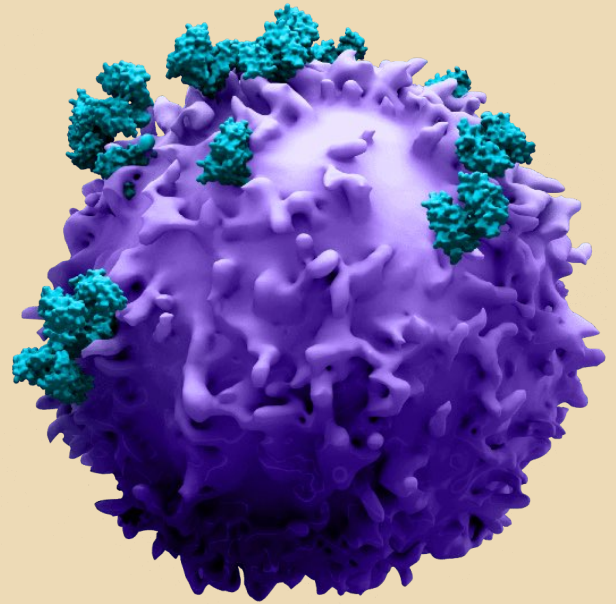
Thousands of years ago, surgery for cancer was much more complicated and dangerous. With the advancement of science and technology, surgery has been developed to be more and more effective and safer over the time. Until today, surgery is still considered as a crucial method in cancer treatment around the world. Surgery itself is effective to cure early stages of cancer. In advanced cancer, surgery might still help in relieving pain of massive tumor even though it may not cure the cancer when used alone.

*The risk of surgery, factors affecting its success rate, and other roles of surgery in cancer treatment could be found in our book! (mtview.id)*

# Developing the treatment for cancer

All treatment for cancer has their own side effects. Physicians would always need to weight the benefit & side effects of cancer treatment while considering the type/advancement of cancer and the patient's condition. This evaluation might be done in a team of doctors and needs to be communicated clearly to the patient and their family before undertaking the treatment.

With the advances of science, cancer treatment is continuously being develop to bring more hope for curing cancer and lessen the detrimental effects of already known cancer treatment. For example, some chemotherapy is known to also help strengthen our immune system in fighting against cancer. Instead of using the optimal dose for chemotherapy, the dose is modified to kill cancer cells in a way that it will induce our immune response to cancer. This is called **chemo-immunotherapy**. Instead of relying only on toxic drugs from chemotherapy, it enhances our own immune system to fight cancer.



Besides approaches to our own immune system, approaches to **genetic** changes in cancer has also been studied to make treatment more effective. These newly developed methods however, might still need more clinical trials and still lacks on scientific evidence. **Physicians must give rationale about the pro and cons of these newly develop methods to patients that are considering to take them.**



# Complementary and Alternative Medicine

Complementary and alternative medicine (CAM) is the term for treatment methods that are not part of the standard medical care.

## Why CAM?

In some cases, people would turn to alternative medicine because

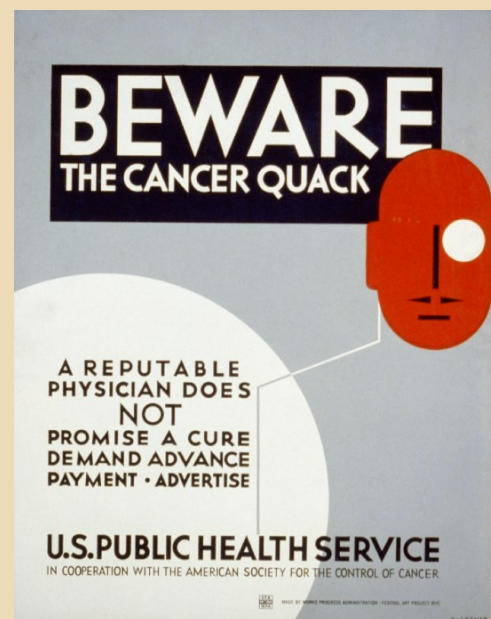
- their body doesn't respond to standard medicine
- side effects are too severe
- all of the possible standard methods has been used but no significant improvement is shown.

## What does CAM look like?

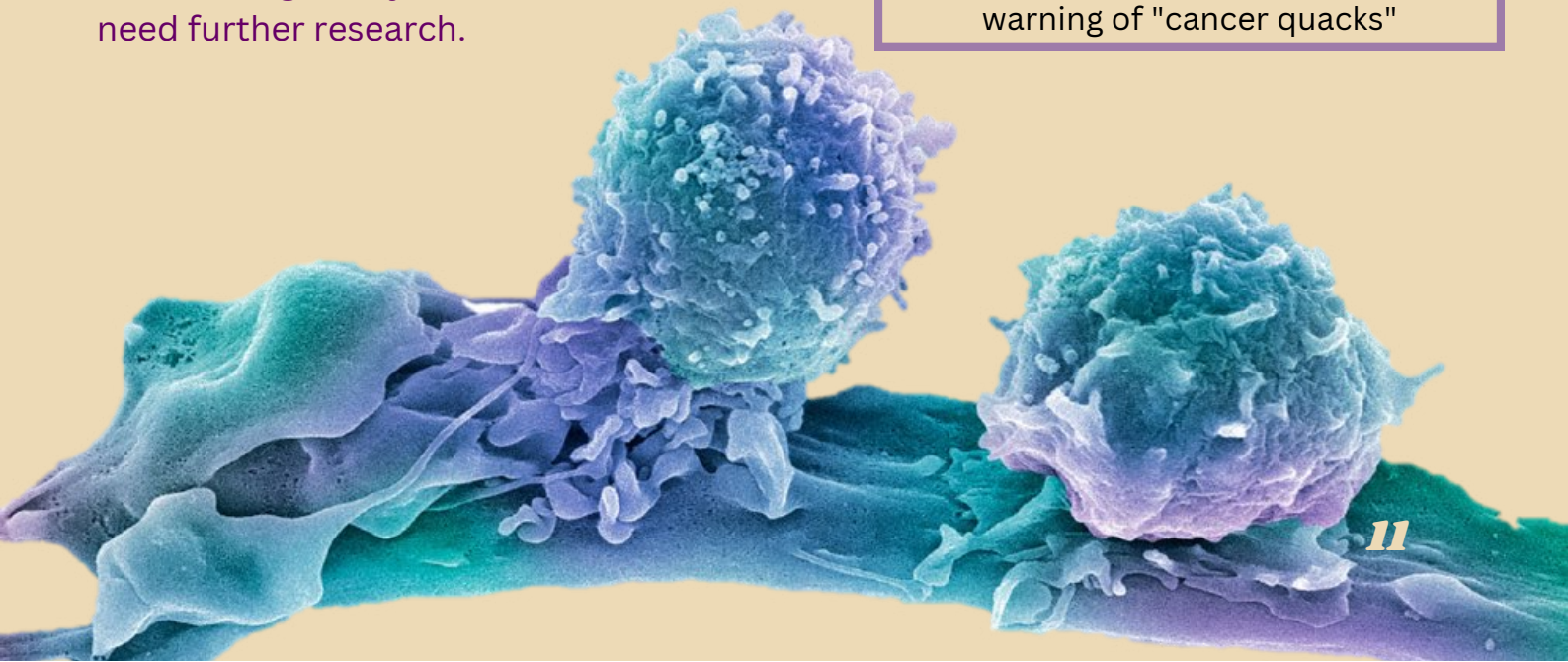
CAM practices may include meditation, yoga, tai-chi (mind-body therapy); vitamin, supplements, special diets (biological); massages and reflexology (body-based); energy healing; Ayurvedic, & acupuncture. Some therapies like yoga, acupuncture and meditation have been evaluated carefully and proven to be generally safe and effective. However, there are others that do not work, may be harmful, or could interact negatively with medicines and still need further research.

## REMEMBER:

- Natural does not mean safe
- Consult with your doctor if you are going to use CAM even if you feel it is safe
- A physician/your doctor should not promise cure, but again must give objective rationale about what is known or not known about the method.



1930s public information poster warning of "cancer quacks"



# MAKING DECISION FOR CANCER TREATMENT



Deciding on the treatment that is appropriate for a cancer is not an easy task. Every case in every person is always different and even people with the same cancer type might have different methods of treatment. It involves a lot of information, considerations, and mentality to decide on a cancer treatment.

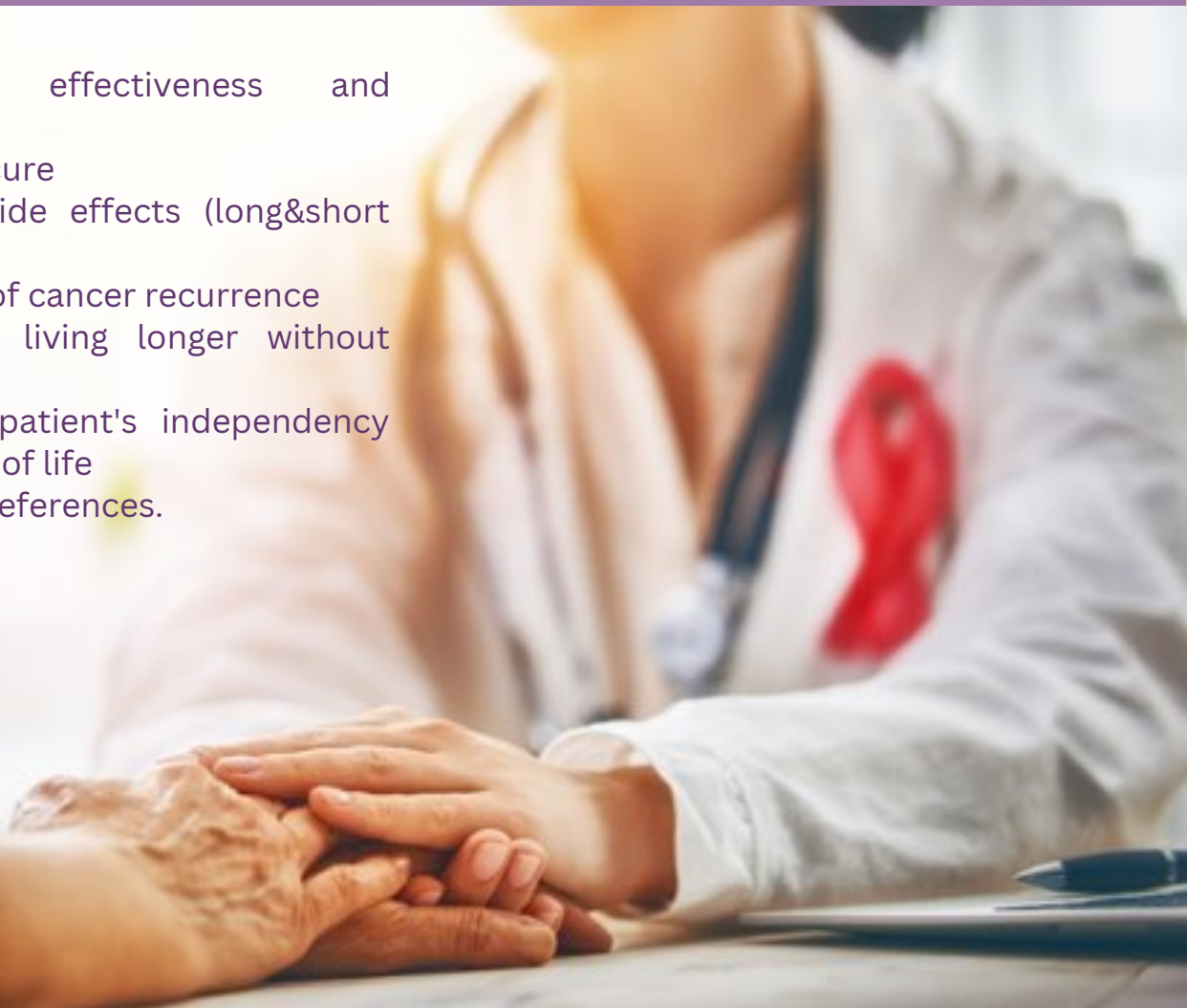
There are important factors that are considered when it comes to treatment decision.

## Cancer and Patients factors:

- Cancer type
- Cancer stage and grade
- More specific information of the cancer that is gain by additional test (biomarker test and hormone receptor test)
- Patient's age and performance status
- Patient's comorbidity
- Patient's health and conditions
- Presence of symptoms

## Other factors:

- Treatment effectiveness and toxicity
- Chance of cure
- Potential side effects (long&short term)
- Likelihood of cancer recurrence
- Chance of living longer without treatment
- Effect on patient's independency and quality of life
- Patient's preferences.



# Our advice on decision making



Before you start the decision making process, here are some things we would like to remind you that has also been advised in a couple of websites focusing on cancer:

- **Take your time**, ask the doctor how long you need to make the decision. But don't take too long as it can worry & exhaust you.
- You can always speak up and **ask your doctor** about questions that needs to be addressed.
- It's okay **asking for 2nd opinion**. Most doctors understand how important this is when making a major decision.
- If you feel uncomfortable, **you can always change your mind** and that's okay.
- **Keep the focus on yourself**. Don't let yourself be pressured into making a decision.
- **You don't have to be involved** in the decision process.
- In advanced cancer, **you may choose not to be treated** and make the best of the time you have left.
- **Accept help** and talk with the people you trust.



Once you are ready and comfortable to be involved in the decision:

1. **Decide how much info** about the treatment you want to know.
2. **Decide who will lead** the decision (patient/doctor/ both).
3. **Have realistic expectations** based on the estimates from your doctor.
4. **Set treatment goals:** cure or comfort (palliative).
5. **Research and learn** about each treatment.
6. **Make sure you are on the same page with your doctor** about the treatment process and expected outcome before the treatment starts.



# PHYSIOTHERAPY IN ONCOLOGY

**Physiotherapy** is a supportive treatment used to improve locomotion systems in patients with physical defects because of varying causes like injuries and side effects from medical treatments, including cancer. As a rehabilitation therapy, it mainly helps patients regain bodily function that has been impaired by cancer and cancer treatment. Many cancer patients also struggle with mental health conditions due to the pain of having cancer, fatigue of going through treatments, or lack of social interaction. Physiotherapy has shown to also improve mental health in cancer patients.



## Lymphedema & Lymphatic Drainage Message

Lymphedema is swelling that is caused by accumulation of lymph fluid. Lymph fluid could accumulate when cancer is backing lymph vessel or lymphatic system is damaged by surgery/radiotherapy and leaks out lymph fluid to surrounding tissue. Physiotherapist would usually massage area where swelling occurs to distribute fluids, reducing swelling and inflammation.

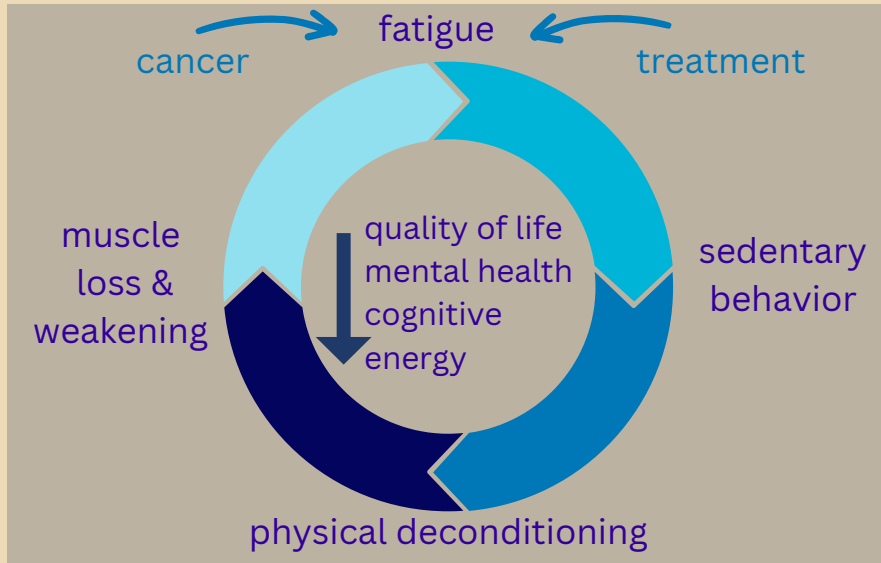
## Limited Range of Motion (ROM) and PNF Exercise

Treatments like surgery, chemotherapy and radiotherapy may damage nerve and muscle cells directly, causes wounds, or make patients weak which all could limit body movement/ROM. Proprioceptive neuromuscular facilitation (PNF) exercise are stretching exercises to help patient gain back muscle elasticity and flexibility.

## Chronic Pain and Transcutaneous Electrical Nerve Stimulation

Cancer that pressures parts such as bones and nerves or side effects of treatments like chemotherapy and radiotherapy could cause chronic pain. Transcutaneous electrical nerve stimulation (TENS) is a physiotherapy practice used in oncology to reduce pain. In this therapy, electrical signals are sent to the electrodes attached to the skin that interrupts signals of pain in the body.

# IMPORTANCE OF EXERCISE



**"Cancer related fatigue"** is a persistent, continuous fatigue accompanied by weakness and exhaustion which isn't curable only by rest or sleep. Many cancer patients feel this kind of fatigue because of the side effects from cancer and its treatment. It is known to be very detrimental because it could worsen as cancer advances, making the battle more difficult for patients.

Exercises and physiotherapy is **important** to regain strength, movement, quality of life, and daily living independence. It also regulates the hormone better and give patients chances to interact socially which help improve their mental health.

**Stretching** (PNF exercises) not only help in flexibility and posture but also increase oxygen flow to the muscle. Balance exercises like **standing** help patient to regain daily functioning and mobility, preventing them from falling. **Walking** is a simple aerobic exercise that help increase heart ratio and reduce tiredness. When a patient is strong enough, **resistance training** also help maintain and strengthen muscles that has deteriorated due to cancer treatments.

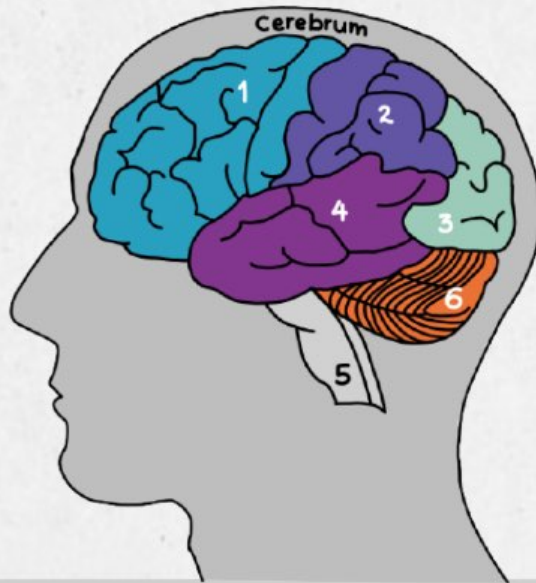


## Important note in exercising for cancer patients and survivors:

- **Be Slow and Cautious.** Remember that too much stress doesn't help with recovery. Also, beware of any further injuries/infections
- **See your doctor regularly.** Make sure to keep them updated on your progress and listen to their advice.
- **Stay hydrated and eat nutritious food.** A healthy diet is essential for your body to recover

# BRAIN TUMOUR

## Sign & Symptoms



Abnormal growth of cell in the brain could be cancerous or not. But even non-cancerous brain tumor could affect the brain especially when it grow big in size. Since the brain is the centre of control for most of our body functioning, having tumour in the brain may affects how the body functions too.

Symptoms, survival rates, and even the success rate for treatments of brain tumour may differ depending to the location, size, and grade of the tumour.

## Anatomy of the Brain

### FRONTAL LOBE

1

Helps with concentration, thinking, problem solving, and judgment; muscle strength, emotions, and behavior

### TEMPORAL LOBE

4

Helps with concentration, thinking, problem-solving, and judgment; muscle strength, emotions, and behavior

### PARIETAL LOBE

2

Processes sensory information (like temperature), helps with understanding language, and controls feelings

### BRAINSTEM

5

Controls heart rate, breathing, swallowing, movement, blood pressure, digestion, and the function of the 5 senses

### OCCIPITAL LOBE

3

Responsible for controlling sight and processing information from the eye

### CEREBELLUM

6

Controls our speech, balance, and coordination of movement of the body

## Common Symptoms



**Headaches** are the results of intracranial pressure (pressure inside the skull) due to the tumor's growth. It may start off as mild but increases as the tumor is growing and followed by nausea, vomiting, and visual impairment.



**Neurocognitive dysfunction** is associated with tumors in the frontal lobe of the brain since this part controls the majority of cognitive processes. It may also happen when a tumor is found in multiple parts of the brain that give input to the frontal lobe. Neurocognitive dysfunction influences memory, mental awarenesses (causing depression), thought processes, social functionings, and more, reducing quality of life and affects treatment processes.



Generally, **seizures** may happen as a result of abnormal depolarization across the brain due to the tumor. Tumors in the frontal, temporal, and parietal lobe are more associated with seizures than tumors in the occipital lobe, cerebellum, or brainstem. Surprisingly, seizures also happen more in lower-grade tumors than higher-grade tumors. Seizure might be **generalized** which cause unresponsiveness and unconsciousness followed by confusion, or even a blank out. It could also be **focal** involving uncontrolled movements or sensory discomfort in parts of the body.



**Focal weakness (neurological deficit)** is the result of tumorous growth or edema pressuring the brain parenchyma or cranial nerves. The signs usually correlate to the location of brain tumor including body paralysis, sensory loss, language disorder (dysphasia), coordination disorder (dyspraxia), poor muscle control (ataxia), sight loss, dizziness, and balance problems.

# CHILDHOOD CANCER



Even though older people are more risked to have cancer, WHO estimated that each year, 400,000 children and adolescent below 20 years old had already develop cancer, with the most common types being leukemia, brain cancer, lymphoma and solid tumor like neuroblastoma. And even though some childhood tumor might be benign, it may still cause serious problems and complications.

## Survival rates

For many childhood cancer, age is the biggest factor when it come to survival rates, where younger children usually has higher survival rates. Survival rates also depend on the accessibility of cancer treatment and services, where a place with more comprehensive services may have a better chance in curing childhood cancer. However, sometimes benign tumors in children like heart tumors are not treated immediately. Instead, doctors may opt to see how it progress before starting treatments.

## Acute lymphoblastic leukemia (ALL)

ALL is one of the most common cancer in children which happens when bone marrow makes too many immature white blood cells (lymphoblast). It decreases other blood components like red blood and platelets, causing symptoms such as anemia, bleeding/bruising, fever, bone/joint pain, fatigue, and swollen lymph nodes.

## Childhood Heart Cancer

Childhood heart cancer is a really rare cancer that may be caused developmental genes errors. Symptoms include breathing problems, chest pain, abnormal heart beat, and coughing.

Beating cancer is a great challenge.  
If you know someone who is currently fighting against it,  
don't forget to reach out and show your Love and Support for them.

# CANCER STORIES

"When things seem overwhelmingly bad for my mom, I surrender myself to trust in His promises, then I witnessed Him keeping His promises and always taking care of my mom, no matter what that may look like."

"Faithful"

daughter of a  
Non-Hodgkin Lymphoma  
Fighter

\*Faithful is not the real name

"A joyful heart is  
good medicine, but  
a crushed spirit  
dries up the  
bones."

Proverbs 17:22

Pay attention to your health, do medical check ups  
regularly, and maintain a healthy lifestyle.  
Don't forget to take care of each other.

- Charity

## Non-Hodgkin Lymphoma Fighter

It all started when there was a part of her body that was hurting. When the family went to the hospital, they did a biopsy and found out that she had cancer. It was not good news for the family, a shocking and very sad thing to hear. Eventually, IV Chemotherapy was done as part of the treatment every once in 3 weeks. But chemotherapy at that time was a complicated procedure, with side effects that made her weak and in pain, so it was not easy. The daughter, "Charity", who took care of her is now a student's mother in Mountainview. After being alongside her mom through cancer treatments as a daughter, "Charity" suggests how important it is to pay attention to our health. Do medical checkups regularly and have a healthy lifestyle. Many cancers are known to be avoided with a change in our daily behavior/in the way we are living. We should also have compassion and care for one another, take care and remind each other about their health.

A positive mind and spirit are very important, if you  
believe and think that you will be healed, you are healed

- Optimus

## Pancreatic Cancer Fighter

In 2017, the family found out he had cancer through USG for a general checkup. Again, it was sad but also very shocking since he had never experienced any serious sickness before. In that year, he was able to strongly do 16 rounds of chemotherapy very well. However, having cancer at the age of 70, made him unable to take surgery, even though it is required. In early 2019, he started to have gastric symptoms that initiate doctors to take a test which shown that his cancer had eventually grown and spread to his lung. Still, with bravery and determination, he fought his battle and has done 14 rounds of chemotherapy since then. The treatment wasn't easy on him, he was in pain, but kept a positive mind and spirit and with the support of his family, he was able to continue his battle, conquering all the pain. He fought with courage and finished his battle on November 15th, 2019. He fought through the very end and that is what he will be rewarded for.

\*Charity and Optimus is not the real name

"you were bought at a price. Therefore honor God with your bodies."

1 Corinthians 6:20

*\*Impacta is not the real name*

**Smoking does not only ruin your health, but also give negative impact to the people around you.**

- *Impacta*

### **Lung Cancer Fighter**

One of our alumnus' grandfather had passed away due to lung cancer from smoking. He really like to remind us not to smoke, as it not only ruins our health but also brings negative impacts on the people around us. Smoking may harm the people around us, and having cancer due to smoking will greatly affect the people who love us.

**I agreed to be in peace and harmony with my (sick) body, soul, emotion, and God who knows the best for everything.**

- *Prawoto, Restu*

### **Breast Cancer Survivor**

Ibu Restu is a housewife and missionary in Salatiga. She is a mother of two, and both her children went to Mountainview. Sometimes she would find lumps under her armpits and under her jaws that would come and go away. But one day she found a hard lump on the upper part of her left breast that doesn't go away. Her husband quickly took her to a hospital in South Korea and searched for information about breast cancer. At the time, many people around her also prayed and cared for her, giving different advice and suggestions. But when she finally found out about the cancer, she couldn't feel and understand anything as if her mind and body were disconnected. While everybody was worrying, she felt empty-minded. As she was trying to make sense of the cancer and what is happening to her, her brother advised that she needs to "be at piece". A simple but strong advice that help her a lot during those times. During cancer treatment, she went through surgery and chemo. There were time after her first surgery, where she got trapped in a crisis of not even being able pray. It was hard to keep her faith and believe in God. Everything felt so empty: her soul, her physical presence, her emotions, and her mind. The people who prayed for her at that time were really important for her, as she wasn't able to do it by herself. But after a while, thankfully she was able to be faithful again, and continued to read the Bible and books to fill her time.

In Ibu Restu's experience, being obedient and cooperative was really helpful for medical treatment. Positive thinking and always being thankful were also important. The supportive people who always pray and showing a lot of love for her and her family also help her to keep a positive mind. She always tries to keep herself informed about things that could help her during her treatment like exercising and eating healthy food before her treatment.

"Dropping the habit is very well possible. Just make up your mind today and seek help. Be rest assured, you are not alone. Life is more beautiful than to blow it all on smoke. You can save your life today."

*Mrs. Clarence Ejike*

Ex-Smoker

testimonials from an ex-smoker at [emabalthospitals.com](http://emabalthospitals.com)

"Not only so, but we also glory in our sufferings, because we know that suffering produces perseverance; perseverance, character; and character, hope. And hope does not put us to shame, because God's love has been poured out into our hearts through the Holy Spirit, who has been given to us."

Roman 5:3-5



# CANCER STORIES

*"I am who I am right now because of that (cancer) experience. God has taught me that throughout the most difficult time. He is always around, watching me and protecting me. I have met many nice doctors, people, and patient—who supported me at Mt Elizabeth and we still keep in touch until now. God has shown me my real true friends, and how my family loved me so much. I feel so grateful to have experience God's miracle through my life"*



*"Grace"*

Non-Hodgkin Lymphoma  
Fighter

## Non-Hodgkin Lymphoma Survivor

"Grace" found out she had cancer during Christmas time in 2005. Her firstborn has only been 9 months old at that time. For Grace, finding out she had cancer was a surreal experience especially when she kept hearing the word "cancer" every time. "Even though it is the same thing, telling me that she had her B cell blood affected and needed a series of chemo and radiation sounds easier to accept than telling me I had cancer". Strangely enough, she did not cry nor felt sad at all. Her concern was whether or not she can still work in Jakarta during the treatment. On the contrary, the people around her were more devastated.

Grace was only 29 at the time. Looking back, she doesn't know where she got the strength to go through her disease. She just knows she needs to go through it and stop thinking about her job. She went to Singapore for her treatment, and her family, cousins, and friends came to visit her as soon as they heard about her condition. There is a moment she remembered, the day before her chemo started, she would go to the salon to shave her hair and when she was asked by the hairdresser why she shaved her hair, she said that her hair is falling out and she hopes by shaving, her hair will grow thicker. Her hairdresser would try to stop her from shaving her hair and offered her some hair tonic, but she politely declined.

Her first chemotherapy session was a memorable one. Her ex-colleagues from Singapore came to visit her during that time. She was at her lowest weakness at the point she had a blurry episode. At that moment, she saw her late grandmother, who had passed away 5 years earlier, coming to her and putting a blanket for her. That instantly gives a surge of strength and faith to beat cancer. During her treatments, her husband and daughter stayed with her in Singapore. They give her strength and they are the reason she never loses her faith to get better.

During her treatment, she realized that God gave her a miracle for being able to be in a 100% full positive mood. She was able to go to church every Saturday and Sunday. She was able to eat well, sleep well, and even had time to shop too. It was a huge miracle to not spend a single day mourning about her situation.

Through her experience, God had taught her that throughout the most difficult time, He is always around, watching over her and protecting her. She met many wonderful doctors, people, and patients who supported her at Mt. Elizabeth, the Hospital she went for treatment, which she still keeps in touch with until now. God has shown her how her family loved her so much and the true friends that kept being by her side. She was grateful to witness God's miracle and work in her life through her cancer experience. Her children are now students in Mountainview.

**\*Grace is not the real name**



*"Heal me, O Lord,  
and I shall be  
healed; save me,  
and I shall be saved,  
for you are my  
praise."*

*Jeremiah 17:19*



***God is the Great Physician. What started with cancer  
ended with the welcoming of a new life.***

***God works in unexpected ways.***

*-Drummond, Elijah Yusuf*

### **Uncle Ben's Story Kidney Cancer Fighter**

My Aunt and Uncle used to live in China as international workers there. They lived in the capital city of China known as Beijing. There the air is very polluted, and if you stay long enough you will eventually get sick. This was more than the case with Uncle Ben. When he was in his late thirties, he was diagnosed with kidney cancer. This meant he and my Aunt Crissy would have to leave China and get medical attention in the States.

When they got there his diagnoses was confirmed. Uncle Ben had to undergo chemotherapy which meant a whole new load of complications for him and my Aunt. It meant that Aunt Crissy couldn't even be near him without wearing a protective suit, it also caused him to lose all his hair. And on top of all that, it meant that they couldn't have kids due to the chemotherapy.

My Uncle and Aunt were pretty hard off at this point. Now I want you to understand this was a life and death situation. My uncle was fighting for his life, and my Aunt was right there beside him through the whole thing. Earlier on after my Uncle had gotten his first dose of chemotherapy, he went to a prayer team and they prayed for him. After that he had a test to see how much of the cancer was still in his body; and what do you know, the test showed that 90% if not 100% of the cancer was gone from his body.

From the looks of things, it was very possible that all the cancer was gone, but the medical equipment was not precise enough to confirm this. In the end since Uncle Ben had already begun his treatment, the safest thing to do was to finish it. This was very trying for him and Aunt Crissy. But by God's grace he persevered and kicked his cancer in the butt! Even after he got over his cancer, his immune system was still very weak. It would be another 5 years before he would be back to normal.

Now you remember, one of the side effects of his treatment was that he and my Aunt couldn't have kids. But as the Bible reminds us: God is the Great Physician. They now have a 2-year-old daughter, Tirzah, my only cousin on my mom's side. What started with cancer ended with the welcoming of a new life. God works in unexpected ways.



# Stories outside Mountainview community

## Right Colon Cancer Survivor

Di bulan September 2020 hingga Februari 2021, Pak Jeremia mulai sering merasakan kontraksi di sisi kanan perutnya. Ia pun sempat khawatir, namun ia segera mengubah kekhawatirannya dan berserah penuh pada kuasa Allah. Meskipun ia sering merasa tidak nyaman, Pak Jeremia memutuskan untuk selalu bersukacita dalam melewati penyakitnya. Setelah operasi pengangkatan kanker dilakukan, ia berada dalam kondisi terbatas, dimana ia harus mengurangi kegiatan olahraga dan mengurangi mengangkat beban. Dalam kondisi ini, ia pun tetap menjalani proses demi proses yang harus dilalui dengan ikhlas.

Pak Jeremia ingin mengingatkan kepada kita: "apapun yang kita alami, cobalah untuk menikmatinya, karena di kondisi itu pun berkat Tuhan tetap ada bagi kita".

*"Trust in God  
and accept  
your condition  
because God's  
grace is always  
available in  
every plan He  
has prepared  
for us."*

**SAKKE, JERMIA**

*Right Colon Cancer  
Survivor*

## Bone Marrow and Pancreatic Cancer Fighter

Awalnya, Ibunda dari Ibu Dewi mengetahui ada kanker ketika melakukan medical check-up untuk menjalankan operasi lutut di tahun 2021. Berita itu tentu saja mengejutkan bagi Ibunda, keluarga dan orang-orang terdekatnya. Namun, dengan semangat dan dukungan orang-orang terdekat, ia akhirnya mampu menerima kondisinya.

Tahun 2022 lalu, Ibunda dari Ibu Dewi sekali lagi harus melakukan sebuah operasi, kali ini untuk mengambil batu empedunya. Dan sekali lagi ia mendapatkan kabar bahwa telah ditemukan kanker di pankreasnya. Ditambah lagi, dokter memvonisnya hanya bisa bertahan hidup 3 tahun lagi tanpa kemo atau 5 tahun dengan kemo. Hanya ada 25% kemungkinan kanker akan hilang dengan kemo dan kanker pun masih dapat kembali lagi itu.

Dalam kondisi ini, sebagai anak, Ibu Dewi meyakinkan Ibunya bahwa Tuhan yang punya kuasa atas hidupnya, oleh karena itu, ia harus berharap penuh kepada Tuhan supaya kuat melalui penyakitnya. Dengan pengharapan pada Tuhan, ia pun lebih semangat menghadapi semua kemo yang harus dijadwalkan. Menurut Ibu Dewi, "tidak mudah melihat kondisi mama menjalani kankernya". Namun Ibu Dewi berpesan bahwa kita harus memberi semangat pada pasien kanker, supaya mereka bisa lebih ringan hati dan semangat dalam menjalani penyakitnya di dalam Tuhan.

*"We convinced our  
mother that God has  
power over our life,  
so we have to have  
hope in Him and He  
will give us strength  
to go through it all."*

**ANGGRAENI, DEWI**

*daughter of a  
Bone Marrow and  
Pancreatic Cancer Fighter*



