

Cancer & Severe Persistent Mental Illness: a Syndemic That Matters to All of Us

Dr. Oyedeji Ayonrinde FRCPsych, MBA

Professor, Department of Psychiatry, Queen's University

Division Chair, Community Mental Health, Providence Care

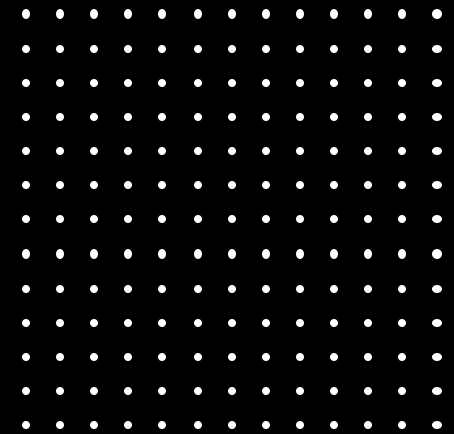
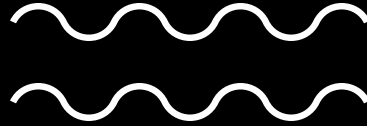
The Sarah Ann Campbell Memorial Lecture

Sarah CAMPBELL Obituary

CAMPBELL, Sarah Ann - Passed away peacefully on June 8, 2013. Bravely survived schizophrenia and Multiple Sclerosis but lost her battle with cancer. Born to Maureen Kushnir and Robert Campbell October 27, 1967, Toronto. Survived by companion Robert; two children, Jessica and Randy and their adoptive mother, Susan; sisters Anna and Alexina.

Died: 45 years 7months

Today: 58 years, 1 month



Presenter Disclosure

Faculty: **Oyedeji Ayonrinde**

Relationships with financial sponsors:

Grants Research Support: **Nil**

Speakers Bureau Honoraria: **Sarah Ann Campbell Memorial Lecture**

Consulting Fees: **nil**

Patents: **nil**

Other: **Providence Care, Kingston Health Sciences Centre, Queen's University**

Objectives





- To understand and explain the syndemic of cancer and severe persistent mental illness
- Provide an overview of the major challenges in cancer care for persons with severe and persistent mental illness

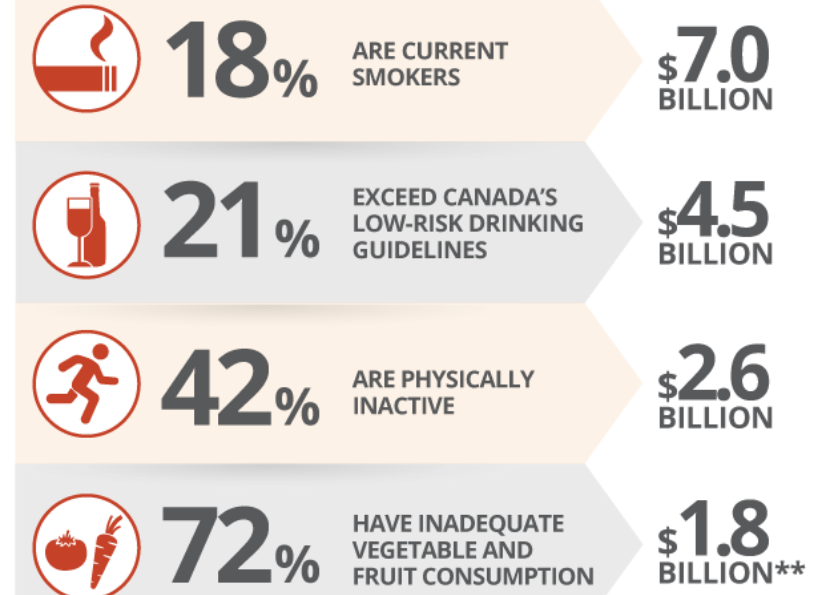
OVER **7 in 10** deaths
in 2015 were due
to a chronic disease



 **242,054**
HOSPITALIZATIONS

in 2016 were due to cardiovascular
diseases, diabetes, chronic lower
respiratory diseases and cancer

-  **2.3x** more deaths
from diabetes
-  **2.1x** more deaths from chronic
lower respiratory diseases
-  **1.6x** more deaths from
cardiovascular diseases
-  **1.5x** more deaths
from cancer



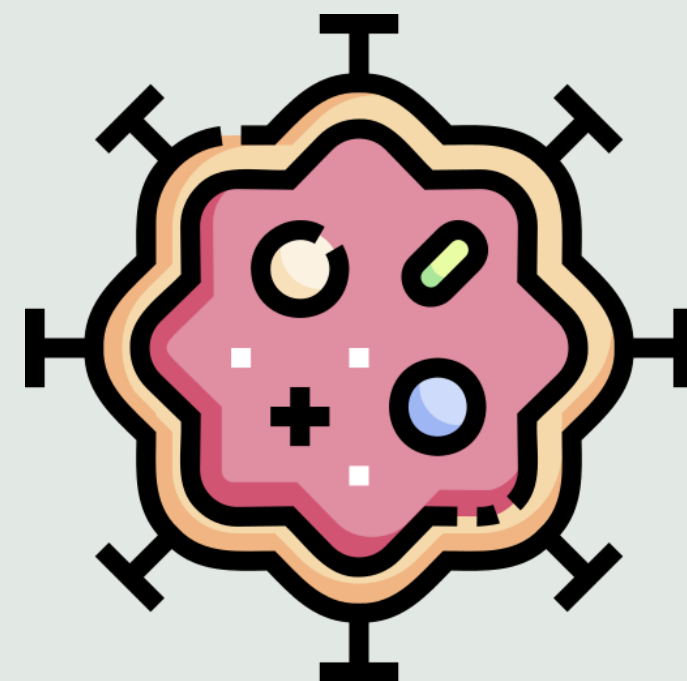
<https://www.ccohealth.ca/en/what-we-do/general-health/chronic-disease-prevention/strategy2020>

Severe Mental Illness

- Schizophrenia
- Bipolar Disorder
- Schizoaffective Disorder
- Traumatic Brain Injury

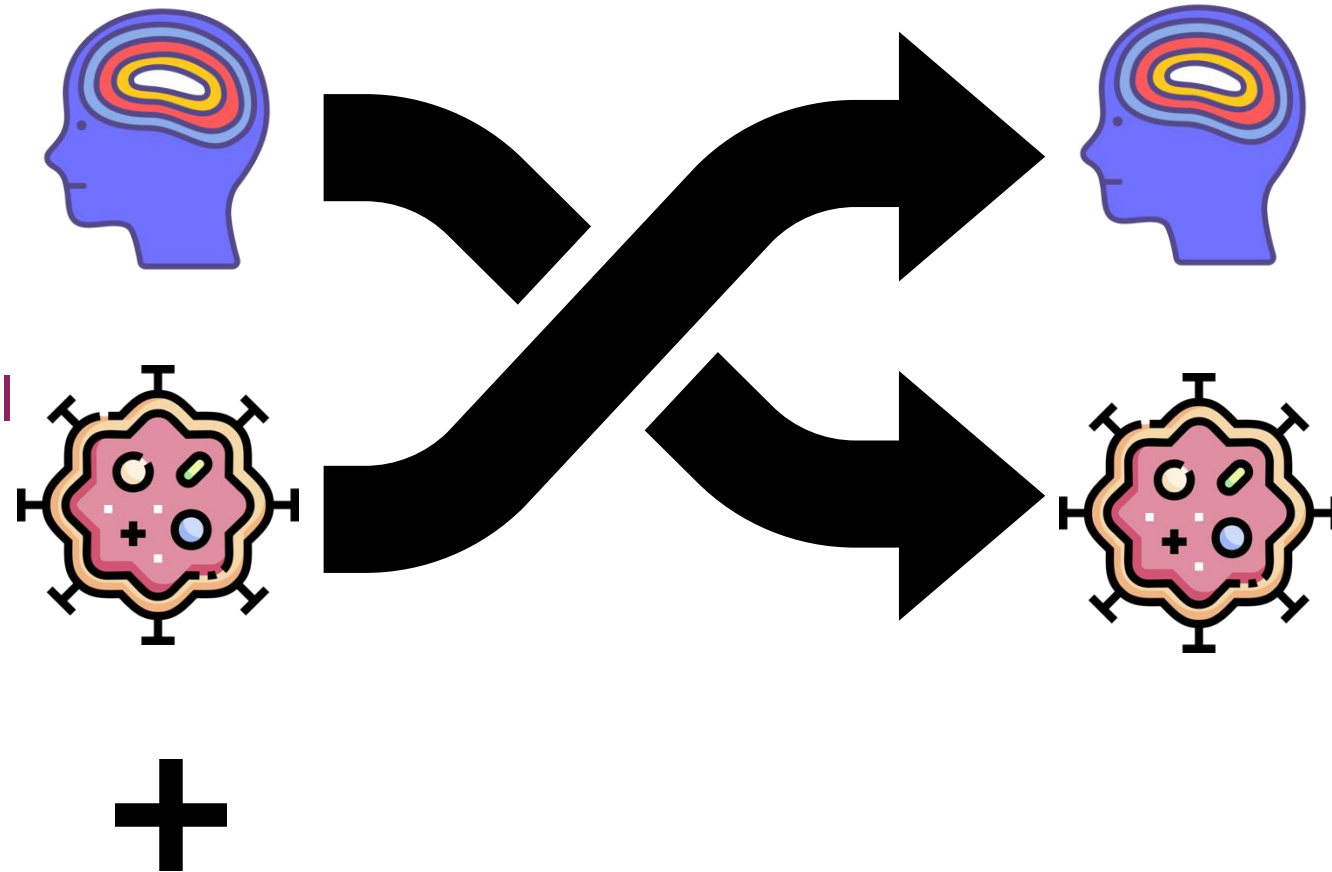


Cancer(s)



Syndemics

synergistic epidemic involving the clustering of two or more diseases within a population; the biological, social & psychological interaction of the diseases and the large-scale social forces that precipitate disease clustering in first place

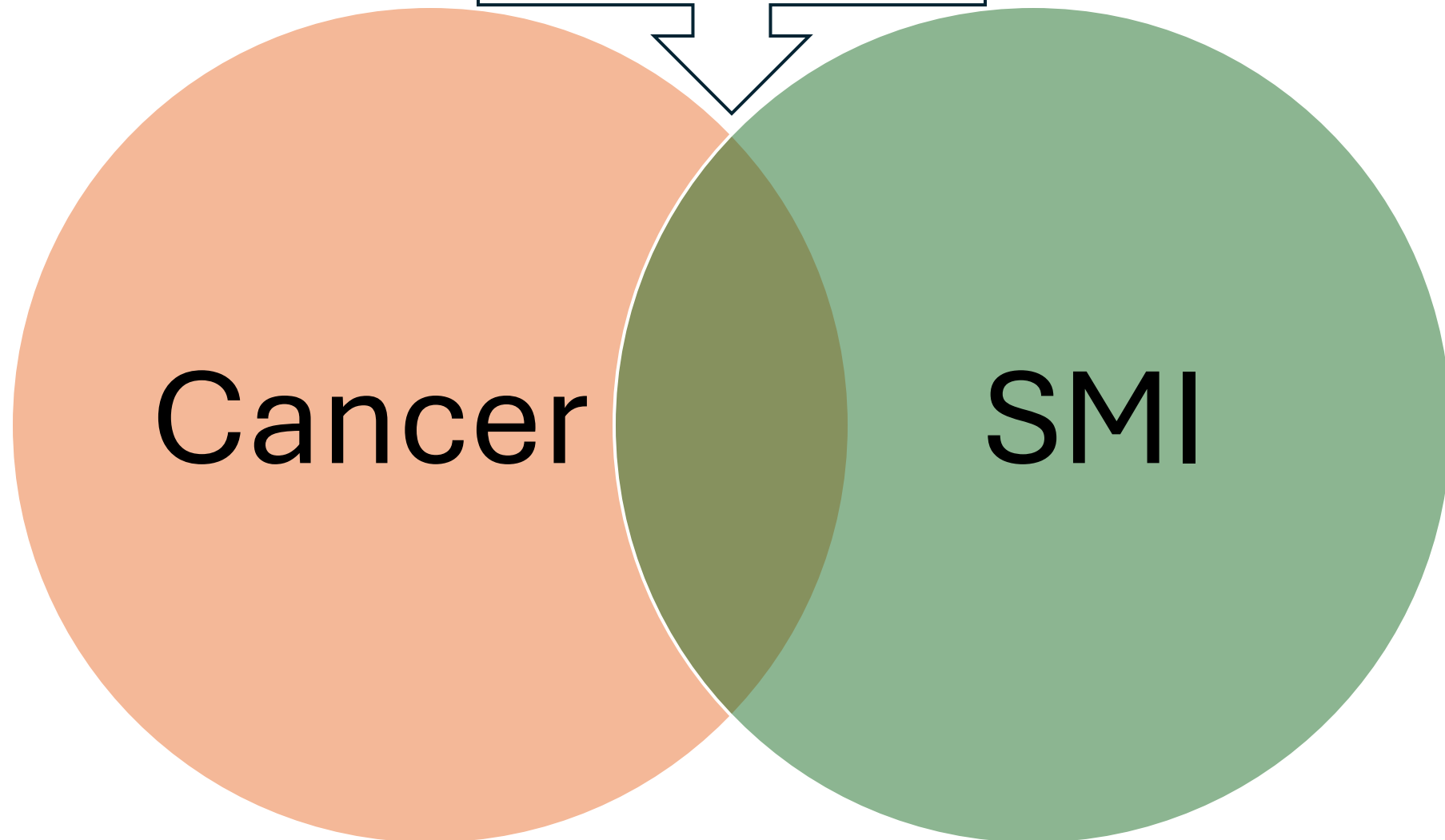




Syndemic Criteria

1. Two (or more) diseases or health conditions cluster within a specific population
2. Contextual and social factors create the conditions in which two (or more) diseases or health conditions cluster
3. The clustering of diseases results in adverse disease interaction, either biological or social or behavioural, increasing the health burden of affected populations.

SYNDEMICS





THE LANCET

"For multiple reasons—human rights reasons, public health reasons, reasons of health equity—the protection of vulnerable people from syndemic suffering is both an urgent need and a fundamental matter of social justice."

THE LANCET

The Syndemic Lexicon

Syndemic vulnerability

- Integration of epidemiological and experiential levels of analysis of multiple, overlapping social and health problems that increase morbidity and mortality as a result of syndemic clustering of social and health conditions within a certain context.

THE LANCET

"For multiple reasons—human rights reasons, public health reasons, reasons of health equity—the protection of vulnerable people from syndemic suffering is both an urgent need and a fundamental matter of social justice."

THE LANCET
COMMISSION ON SYNDemics
2019

Syndemic interaction

- The co-occurrence of social and health conditions, including social–psychological, social–biological, and psychological–biological interactions, which worsen the condition of the person or population afflicted.



THE LANCET

The Lancet is a peer-reviewed medical journal that publishes research, clinical practice, and public health. It is one of the most influential medical journals in the world.

Syndemogenesis

- The processes, pathways, and stages of syndemics development involving a disease–social context and disease–disease interactions.

Syndemic risk factor

- Social, political, economic, and environmental factors that increase the risk for clustering of two or more diseases.

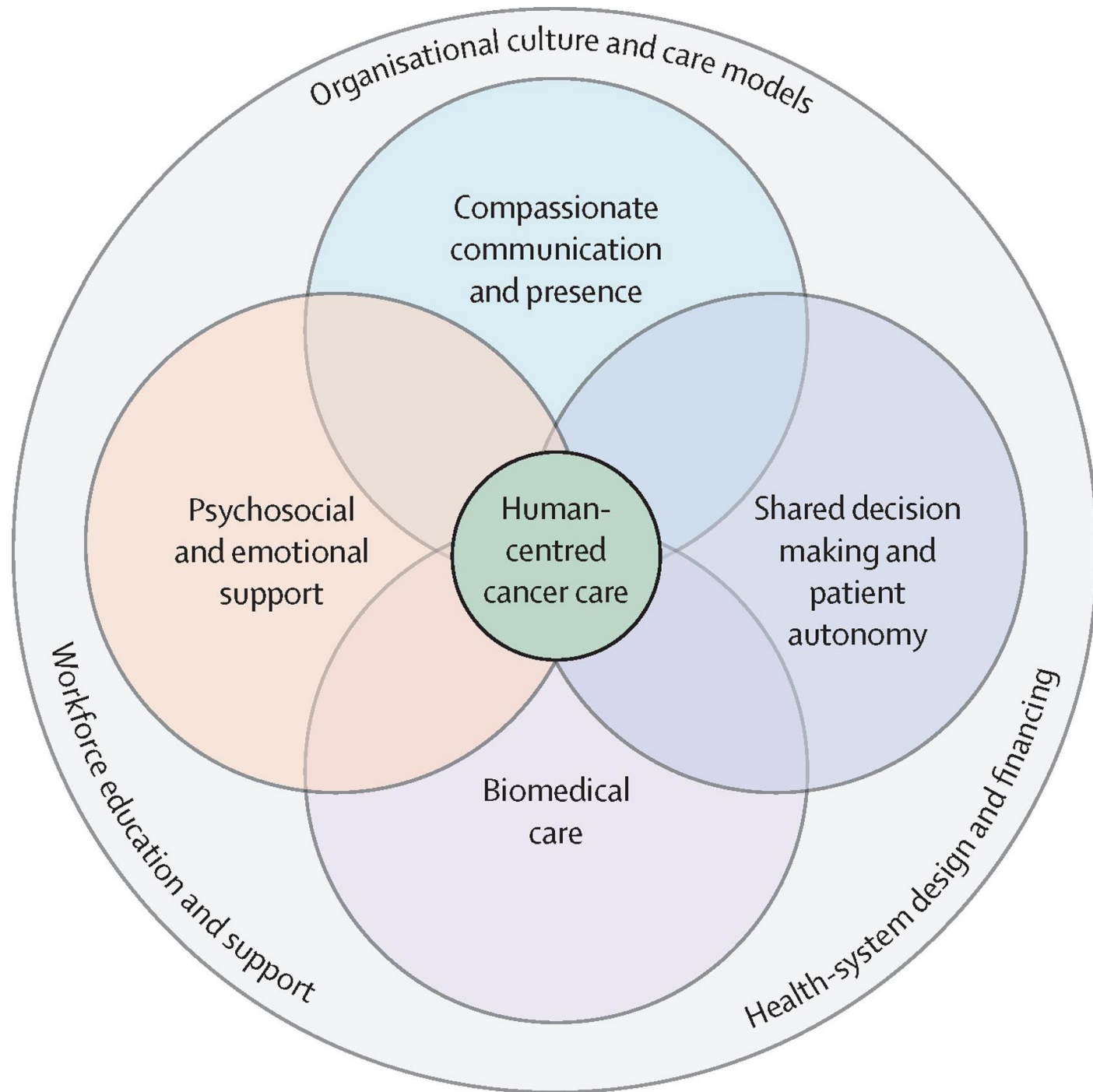


Identification and description of a syndemics involves:

- A clear account of the diseases and health conditions
- Examination of the pathways or mechanisms of disease–disease interaction
- A clear description of the socioenvironmental conditions and how they are experienced by human minds and bodies as adversity
- Examination of the pathways of effect from socioenvironmental conditions to biological or psychological states
- Evidence of greater health burden because of interaction
- **Syndemics tend to reduce treatment efficacies and increase treatment costs**

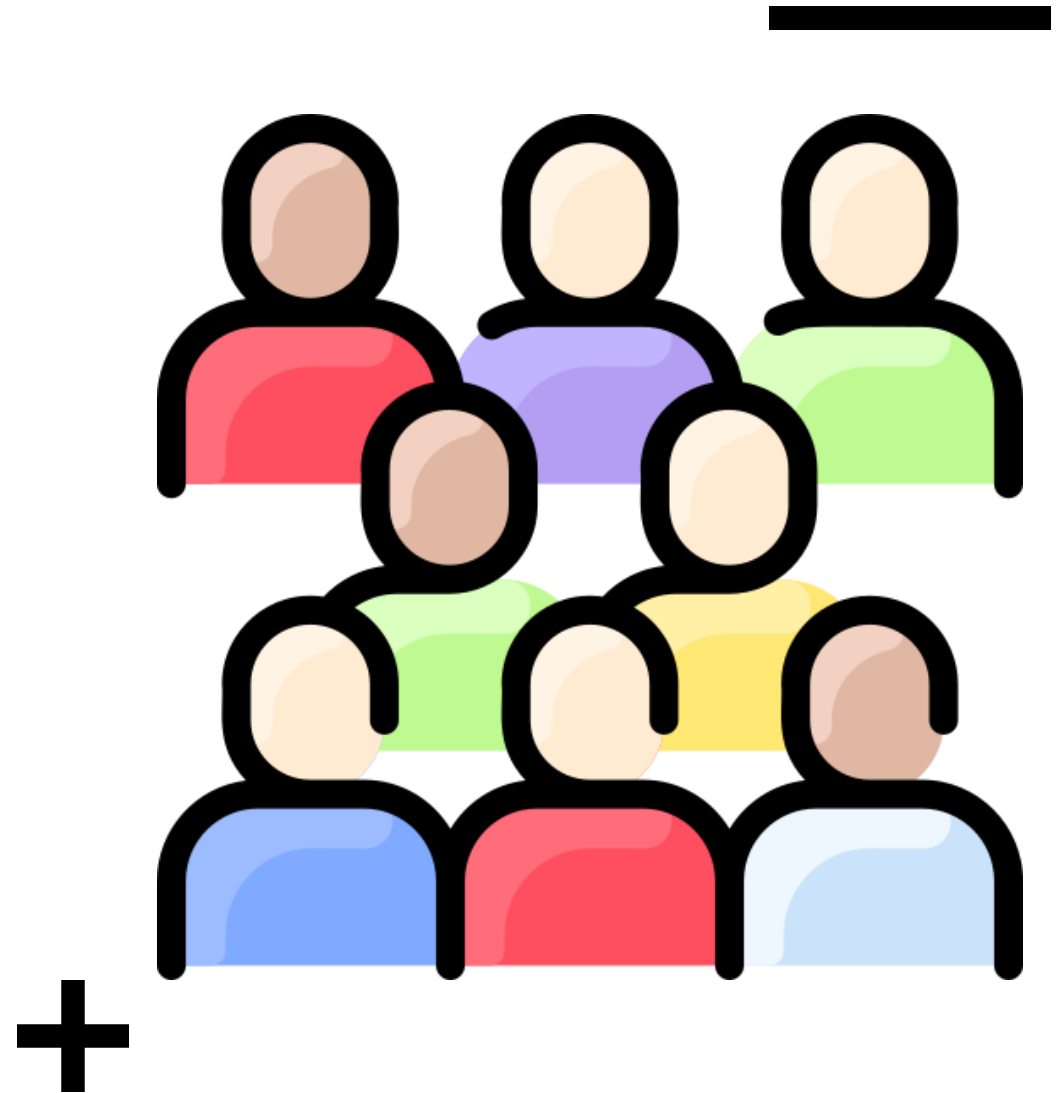
The Patient





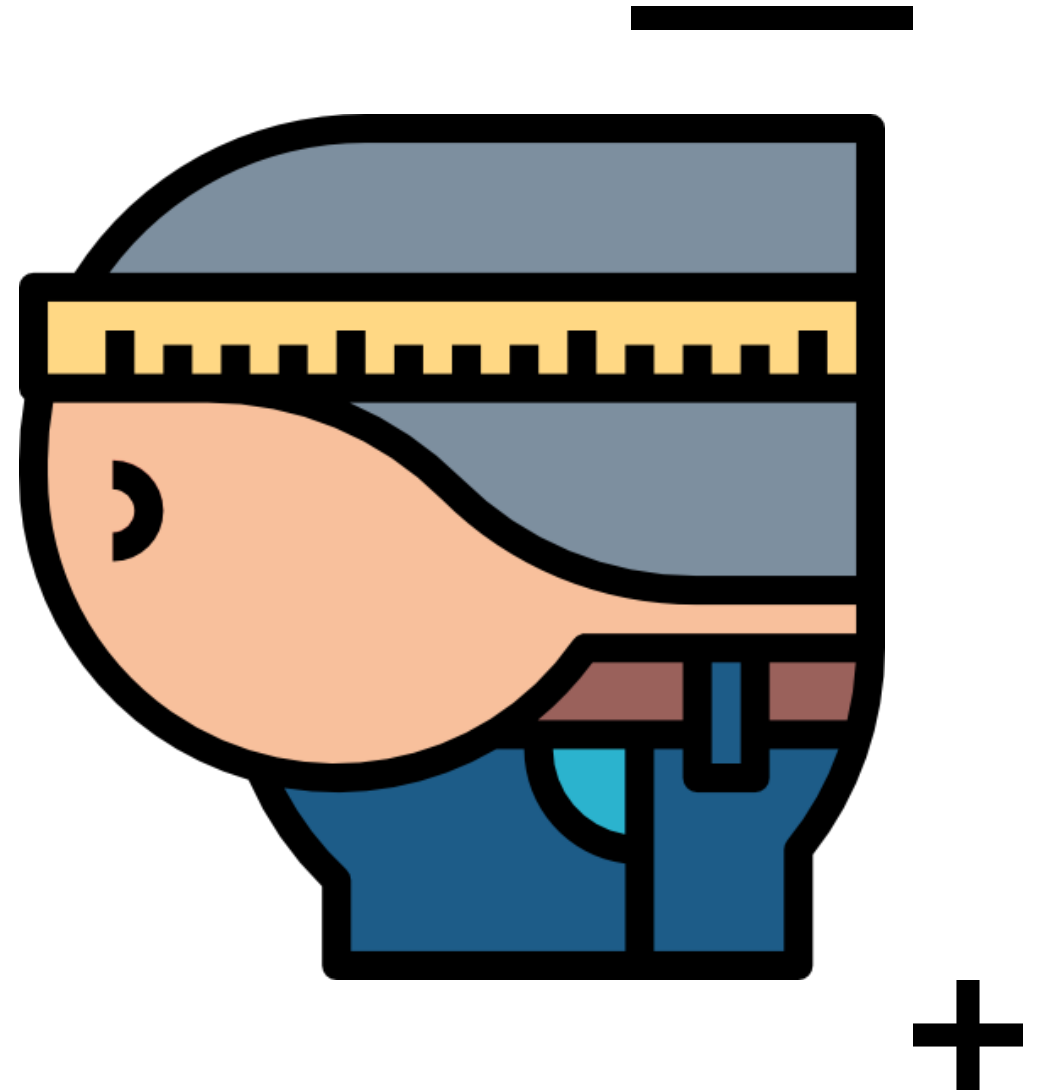
- Rodin, G et al.
- **The Human Crisis in Cancer:** A Lancet Oncology Commission.
- The lancet oncology November 2025..

Equity seeking
Equity **deserving**
Equity **denied**



SMI – Higher rates

- Smoking
- COPD
- Obesity
- Type II Diabetes
- Heart Disease
- Metabolic syndrome
- Substance use
- 20 years shorter life expectancy



Homelessness



+



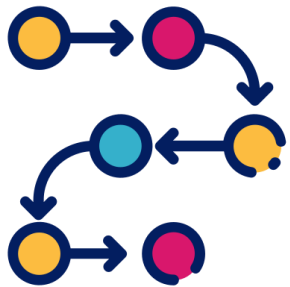
—

Substance Misuse

+



The journey



Prevention



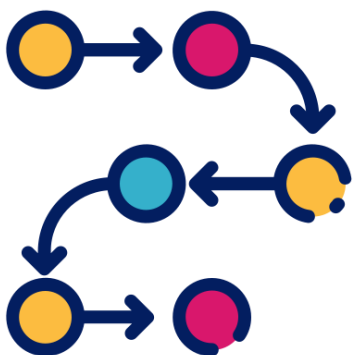
Screening



Diagnosis



Treatment
























Recovery/
Survivorship



End-of-Life Care

Pathway Map Legend

Colour Guide		Shape Guide		Line Guide	
	Primary Care		Intervention		Required
	Palliative Care		Decision or assessment point		Possible
	Pathology		Patient (disease) characteristics		
	Organized Diagnostic Assessment		Consultation with specialist		
	Surgery		Exit pathway		
	Radiation Oncology	 or 	Off page reference		
	Medical Oncology		Referral		
	Radiology				
	Multidisciplinary Cancer Conference (MCC)				
	Genetics				
	Psychosocial Oncology (PSO)				



Assertive Community Treatment Team



Nurse

Occupational therapy

Social worker

Concurrent disorders worker

Psychologist

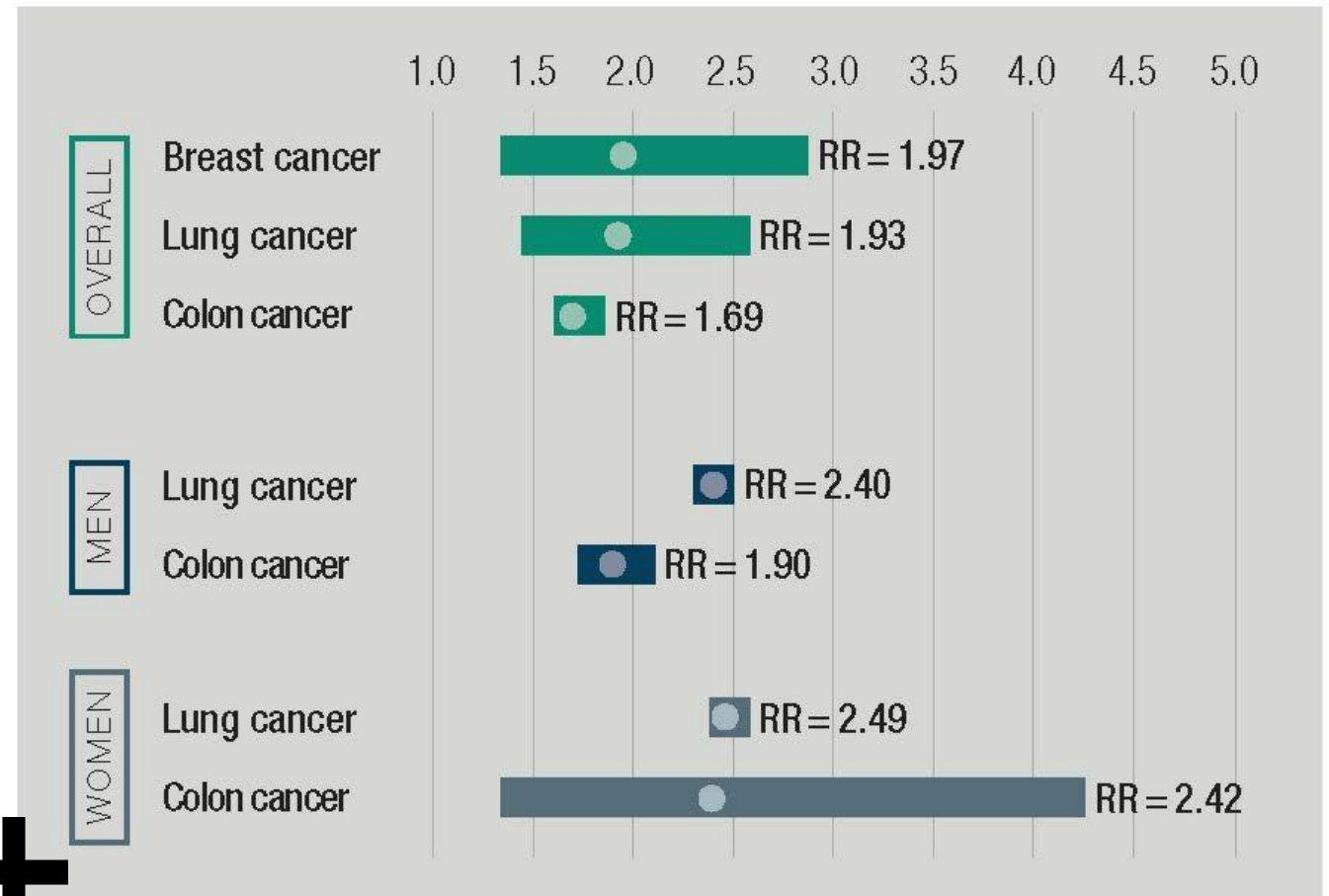
Case Managers

Admin staff

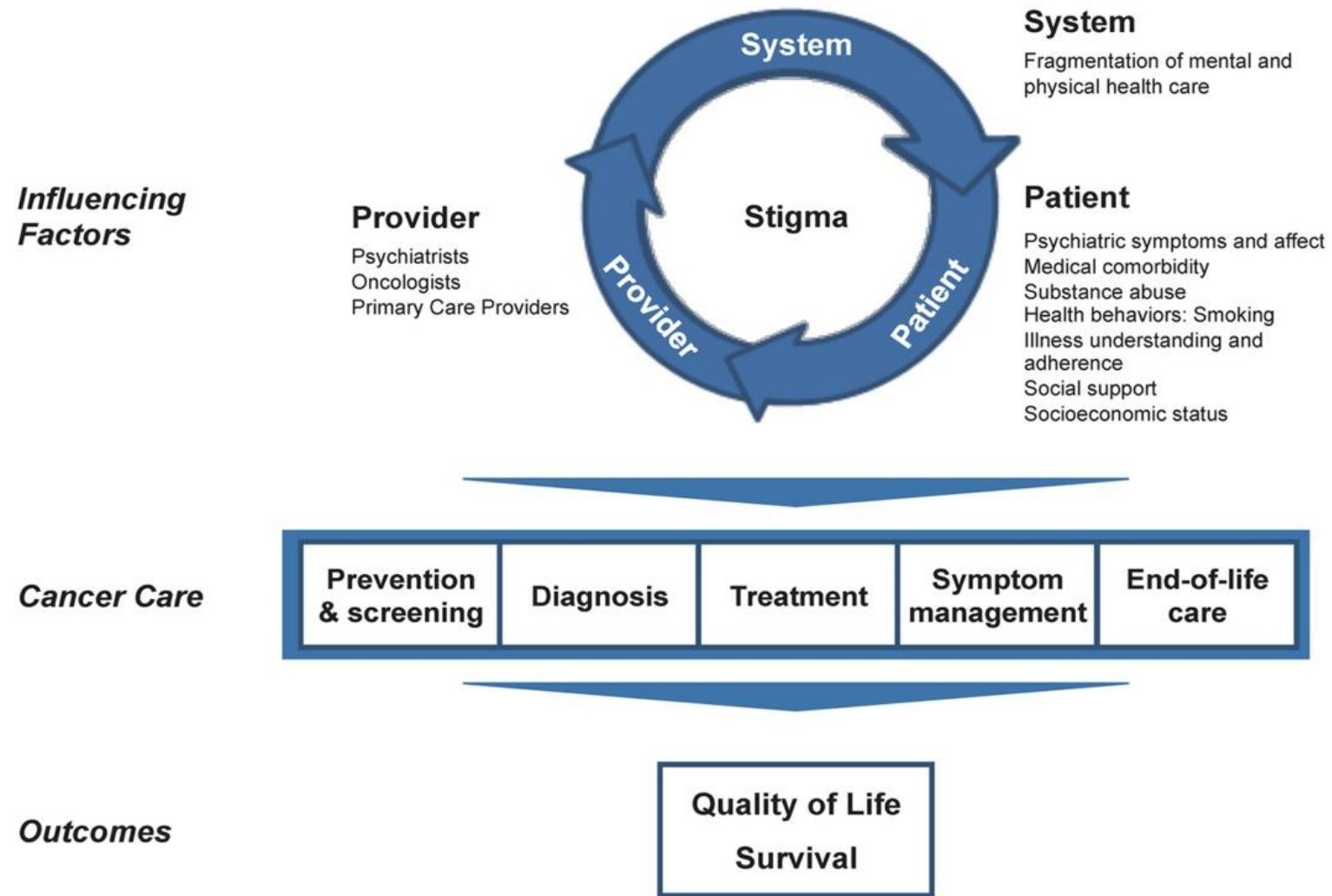
Psychiatrist

Mortality Risk

Figure. Mortality risk in patients with schizophrenia compared with the general population



Source: Liwei Ni, Jian Wu, Yuming Long, et al. Mortality of site-specific cancer in patients with schizophrenia: a systematic review and meta-analysis. *BMC Psychiatry*. 2019 Oct 28;19(1):323.



Cancer Prevention

- Targeting smoking
- Cognitive symptoms
- Positive symptoms (delusions & hallucinations)
- Negative symptoms (amotivation)
- Appointment scheduling

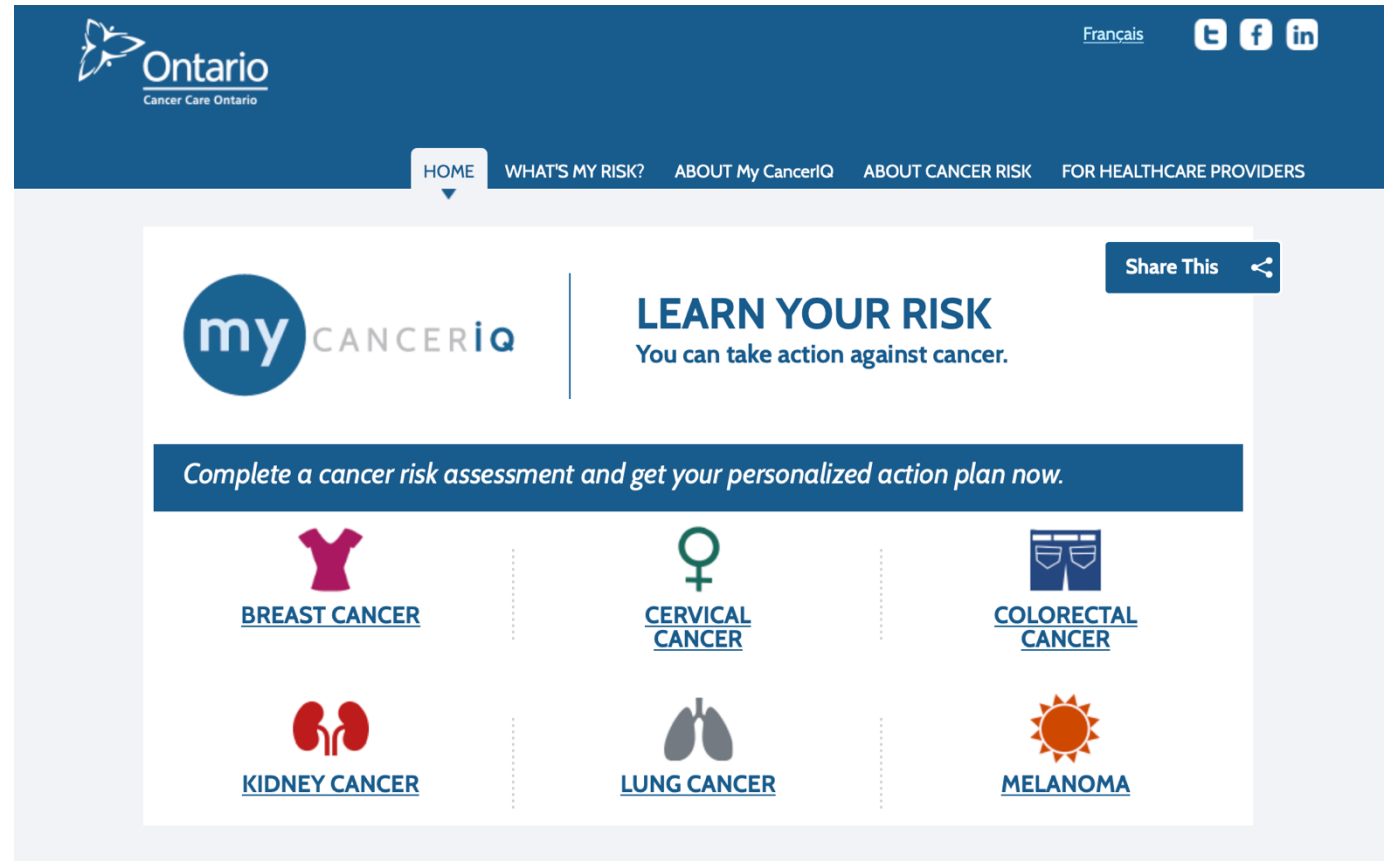
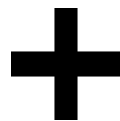


Stigma

- Blame for health and lifestyle
- Fear of “violence”
- Self-stigma
- Diagnostic overshadowing
- Assumptions about decision making capability



Digital Divide



Case studies

Colorectal cancer



Cervical cancer



Breast cancer



Lung cancer

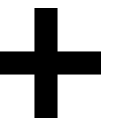
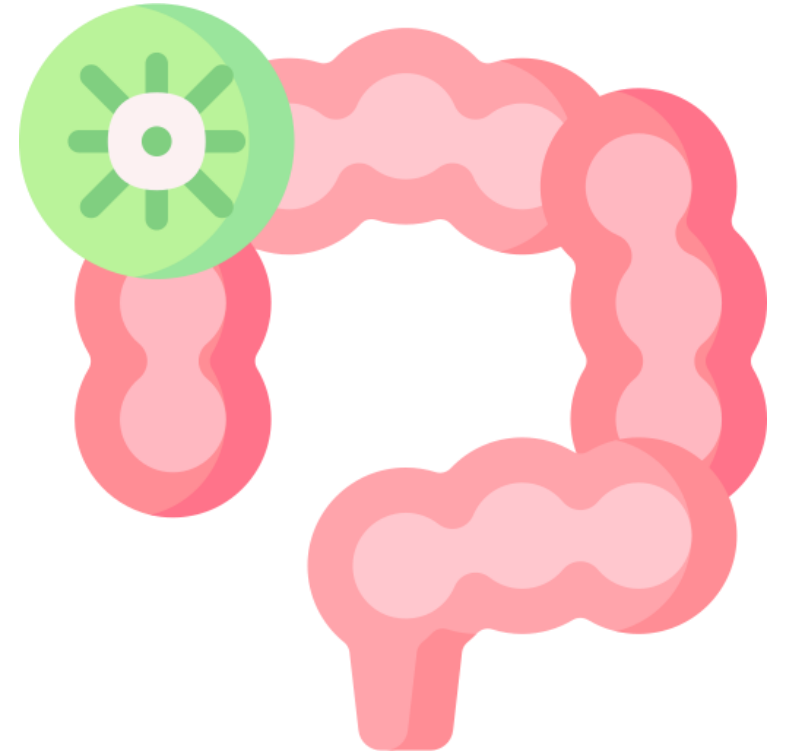


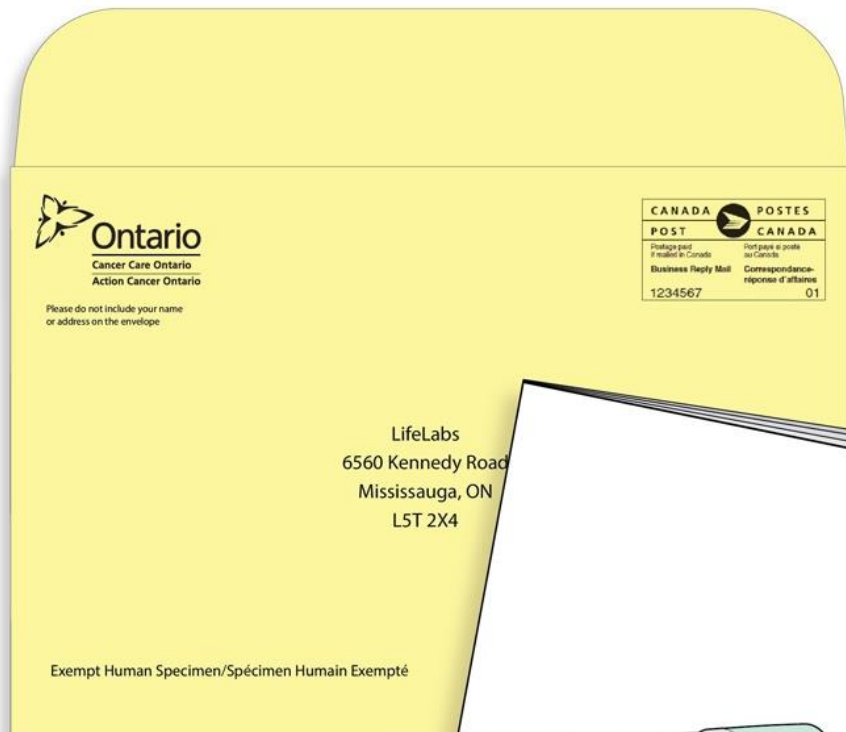
Prostate cancer



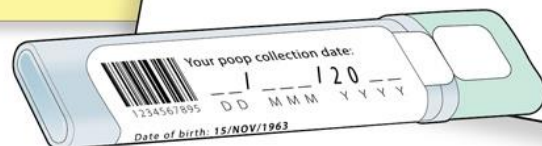
Colorectal Cancer

- “My ex punched me in the tummy six times.....I new it was going to damage my insides”
- “I knew they were trying to poison me...I couldn’t stop pooping”
- “I did very well....I only had one doughnut that morning”





LifeLabs
6560 Kennedy Road
Mississauga, ON
L5T 2X4



FIT Instructions

This FIT package includes:

1. Check

2. Write

3. Pee and Flush

4. Prepare

5. Poop

6. Collect

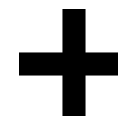
7. Flush

8. Drop off or Mail

Need this information in an accessible format?
1-855-460-2647 | TTY (416) 217-1815 | publicaffairs@cancercare.on.ca

Funding provided by the Ontario Ministry of Health and Long-Term Care
Awarded by Cancer Care Ontario with permission from the ONCOGENOMICS CENTRE FOR HEALTH RESEARCH
(NHI grant number: ONO CA 18040) and the UOHR Health Services Policy & Economics (HSPES) Research Program

Ontario
Cancer Care Ontario



Flexible Sigmoidoscopy/ Colonoscopy

- During the test, a doctor or registered nurse endoscopist uses a small, **flexible tube with a tiny camera on the end to look inside the rectum and sigmoid colon.**
- A colonoscopy is a test that allows a doctor to **look at the entire colon using a long, flexible tube with a tiny camera on the end.** During a colonoscopy, the doctor can also take biopsies (samples of tissue) or remove polyps that can become cancer over time (called pre-cancerous polyps).



Bowel Preparation Selection Decision Guide for Colonoscopy in Adults

Note: Assess the patient's concomitant medications to determine if there are any contraindications to oral bowel preparation. Once the bowel preparation product is selected, refer to its product monograph to determine if there are other relevant medication modifications or contraindications.

HYDRATION:

All patients must maintain adequate hydration throughout bowel preparation (e.g., 4L of clear liquids per day; minimum of 250ml of clear liquids per waking hour).

PATIENTS WITHOUT ANY CONTRAINDICATIONS OR COMORBIDITIES

SCENARIO 1: In patients with no known relevant contraindications or comorbidities, consider using one of the following bowel preparation products:



1. Split-dose 2L PEG + bisacodyl
2. Split-dose PSMC + bisacodyl
3. Split-dose 4L PEG ± bisacodyl

PEG: polyethylene glycol

PSMC: magnesium citrate, sodium picosulfate, citric acid and magnesium hydroxide

PATIENTS WITH CONTRAINDICATIONS

SCENARIO 2: In patients known to have one or more of the following possible contraindications for oral bowel preparation:

- Ileus
- Gastric retention
- Intestinal perforation
- GI obstruction
- Possibly severe colitis



Carefully consider the benefits and risks before proceeding with the procedure.

If there is concern that there may be a partial obstruction, consider using:

- Small-volume, oral solutions supplemented by IV hydration
- Slow oral trickle or nasogastric preparation delivered over longer periods rather than rapid administration of large-volume solutions

PATIENTS WITH COMORBIDITIES

SCENARIO 3: In patients known to have one or more of the comorbidities and conditions listed below:

- Significant cardiovascular disease (myocardial infarction, angina, hypertension)
- Impaired renal function
- Decompensated liver disease/ascites
- History of poor bowel preparation
- History of constipation including patients on narcotics (including methadone)
- Electrolyte imbalance (diuretic)



1. Split-dose 4L PEG ± bisacodyl

Risk of inadequate preparation (e.g., patients with prior inadequate preparation, history of constipation, use of opioids or other constipating medications, prior colon resection, diabetes mellitus, or spinal injury): Small volume preparation is not recommended. Consider using additional bowel purgatives.

SCENARIO 4: In patients known to have one or more of the comorbidities and conditions listed below:

- Diabetes mellitus
- Spinal cord injury
- GI disease (e.g., active inflammation, underlying IBD)
- History of stroke
- Elderly or weakened condition
- Pregnant/breast feeding
- Cognitive impairment (e.g., dementia)
- Swallowing impairment (e.g., Parkinson's disease)
- Post-bariatric surgery



1. Split-dose 4L PEG ± bisacodyl
2. Split-dose 2L PEG + bisacodyl

Diabetes mellitus: Consider scheduling the examination in the morning and advising that the patient resume hypoglycemic drugs or insulin as soon as eating is resumed.

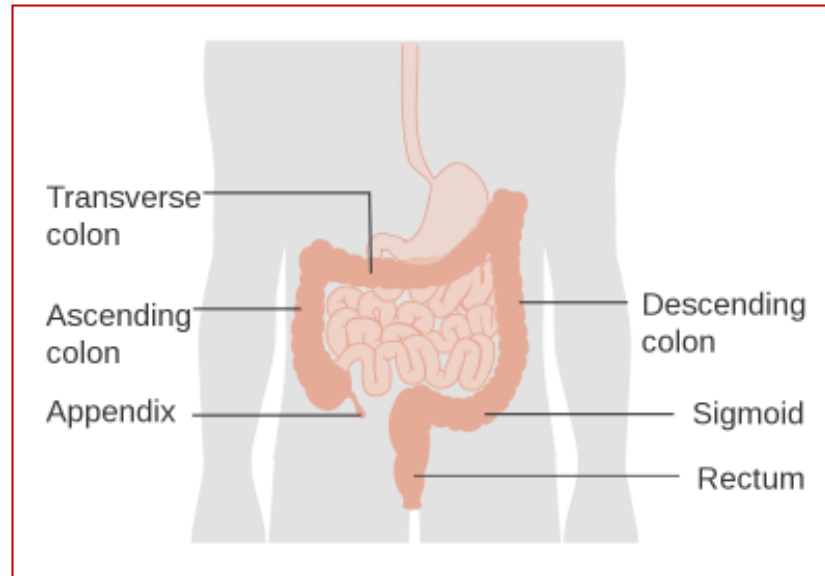
Impaired swallowing function: (e.g., stroke, dementia and Parkinson's disease): Oral PEG may be contraindicated due to its large volume. Consider using a nasogastric preparation.

Post bariatric surgery: Consider using low-volume preparations or extended delivery for high-volume preparations.

Refer to Table 1 for Additional Bowel Preparation Guidance

Disclaimer: We encourage you to use and benefit from these documents. However, please be aware that this document has been prepared for informational purposes only. The recommendations included in this document are not intended to take the place of the professional skill and judgment of health care providers.

Get **FIT** in March



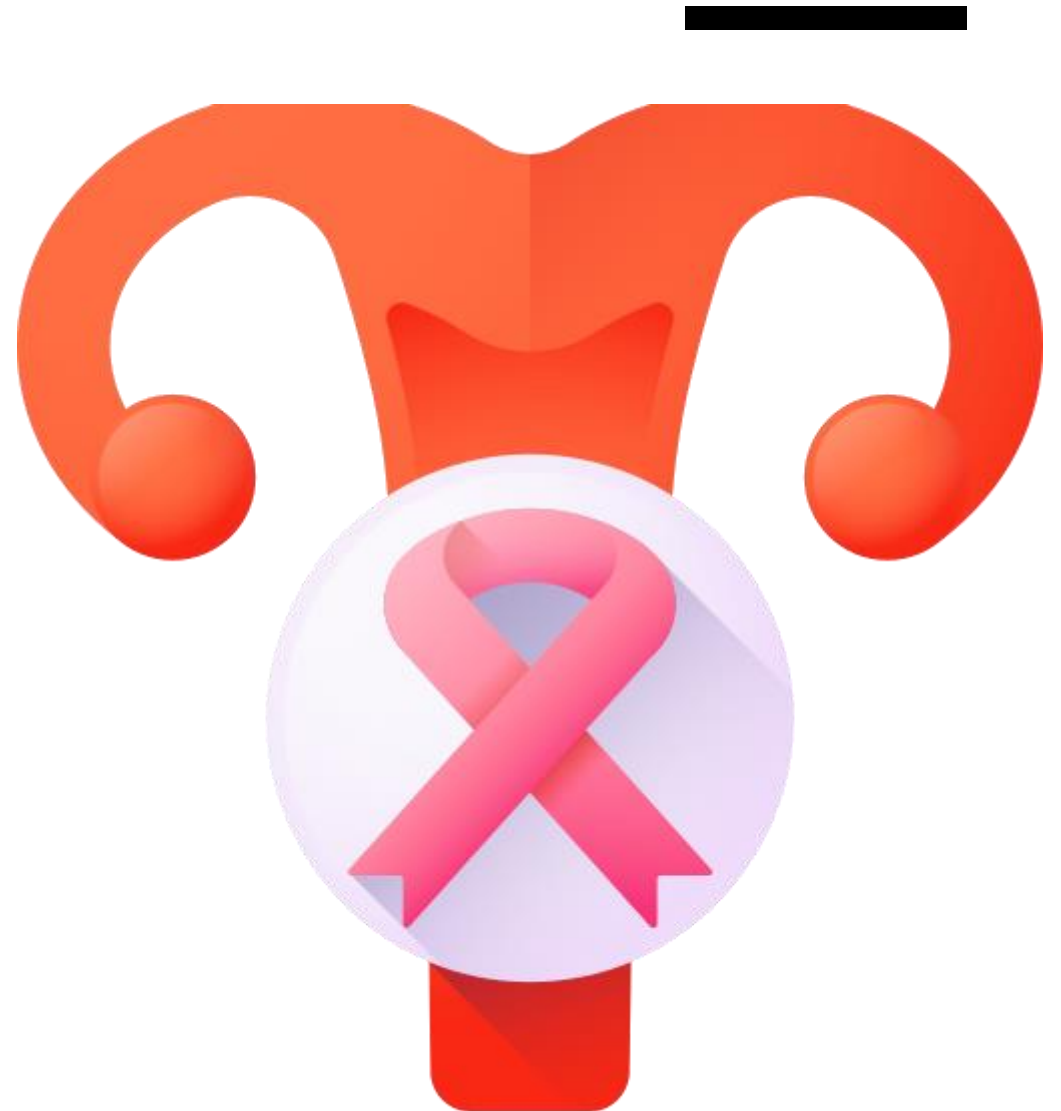
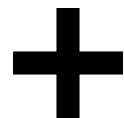
Fecal Immunochemical Test (**FIT**)
for
Colorectal Cancer Screening



More information on eligibility and **FIT** kits to follow

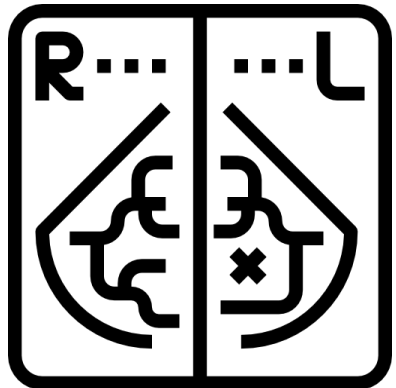
Cervical Cancer

- “My neighbour has sex with me when I am asleep and stains my underwear”
- “I don’t have sex so I don’t need screening”
- “The doctors tried to put something inside me to make me pregnant”
- Living with trauma

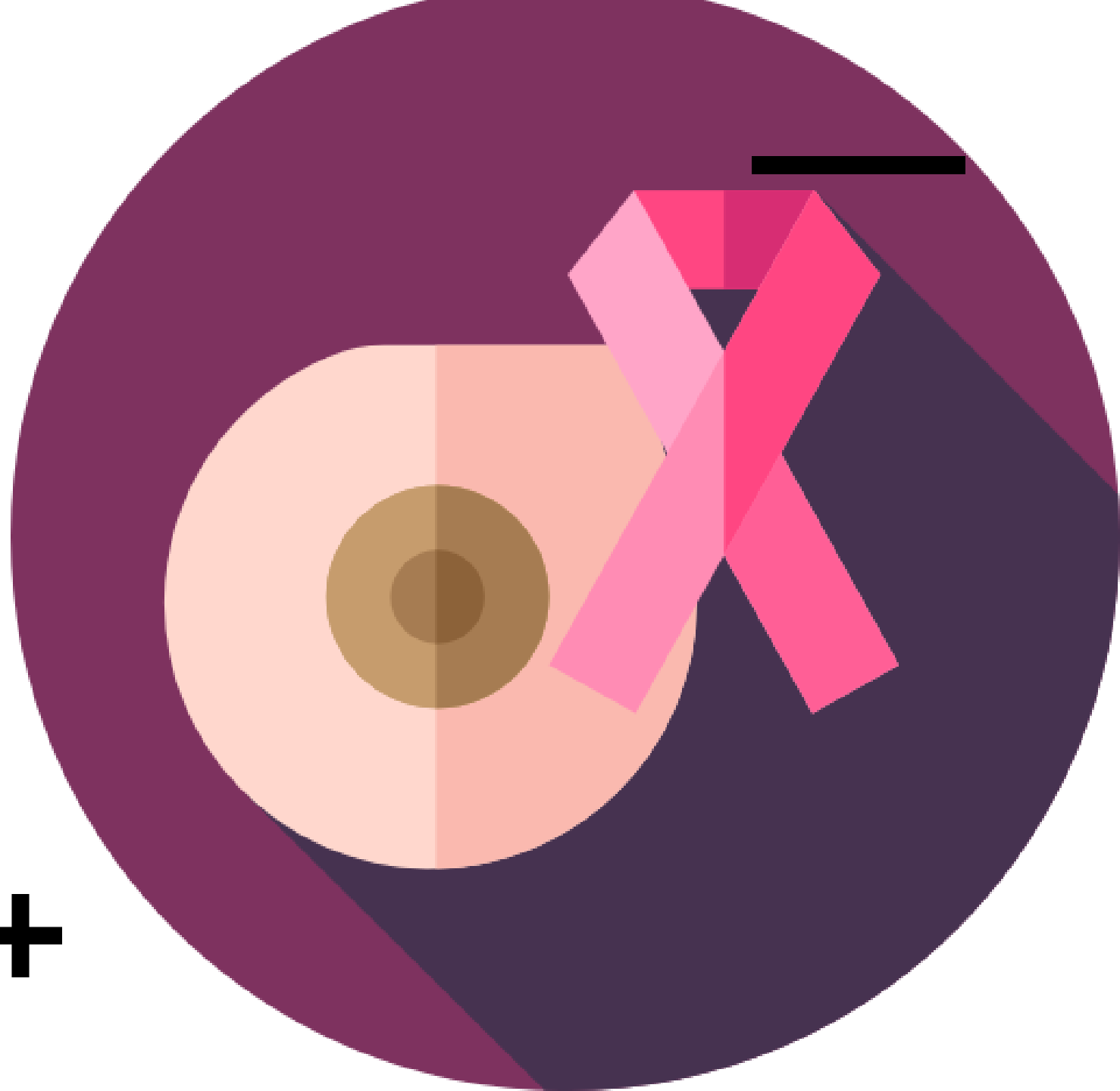


Breast Cancer

- Breast examination
- “Suspicious breast mass/
lesion”

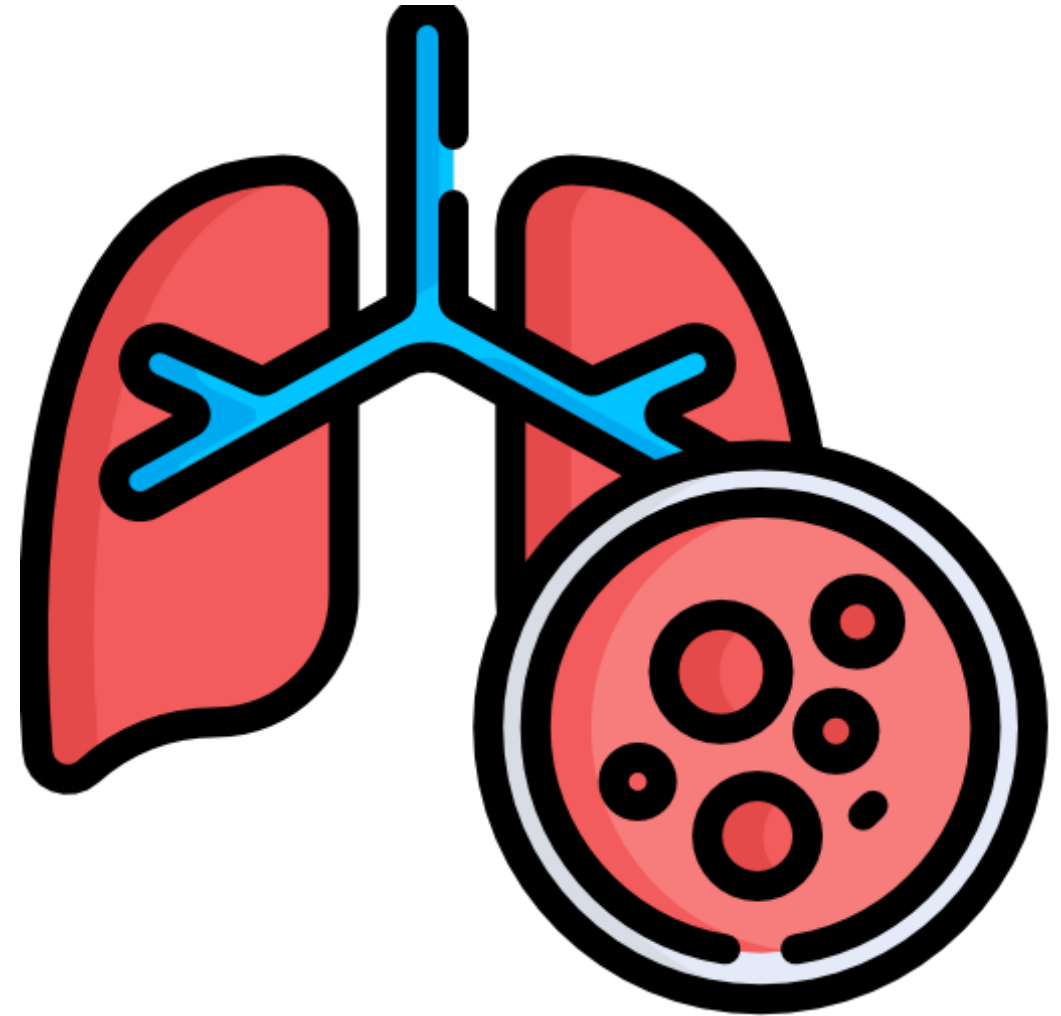
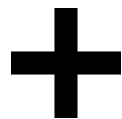


+



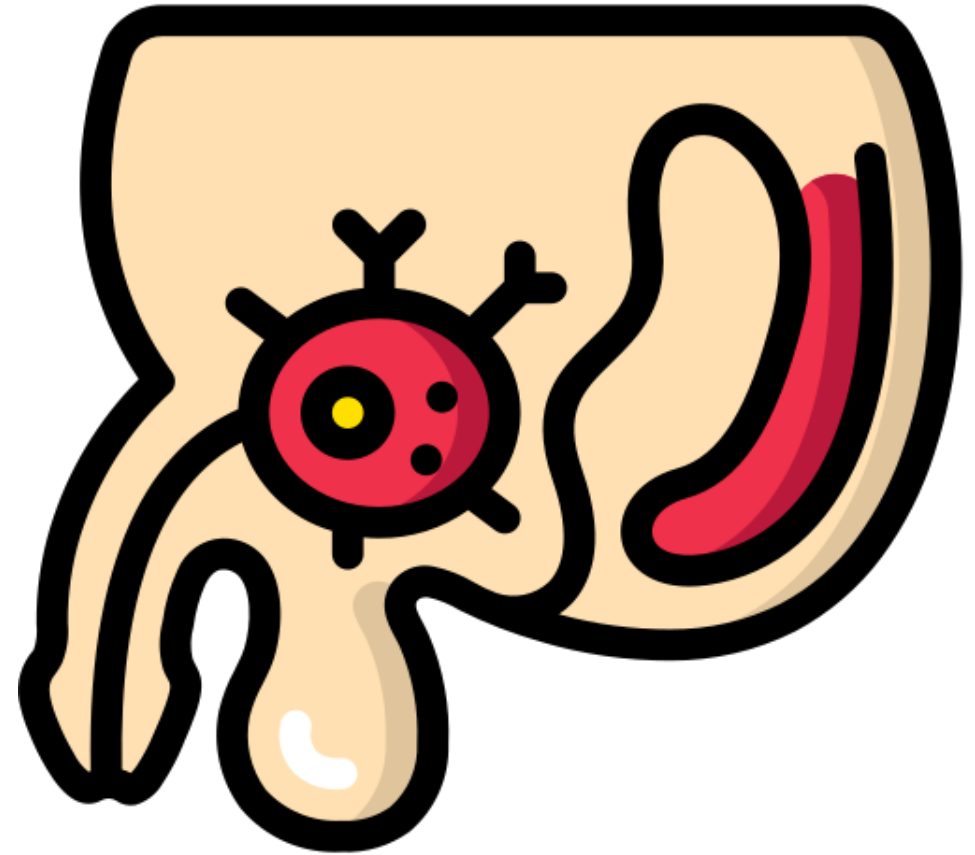
Lung Cancer

- “Smoking stops my lungs from getting infections....”
- Smoking cessation
- Cough
- COPD
- Weight loss

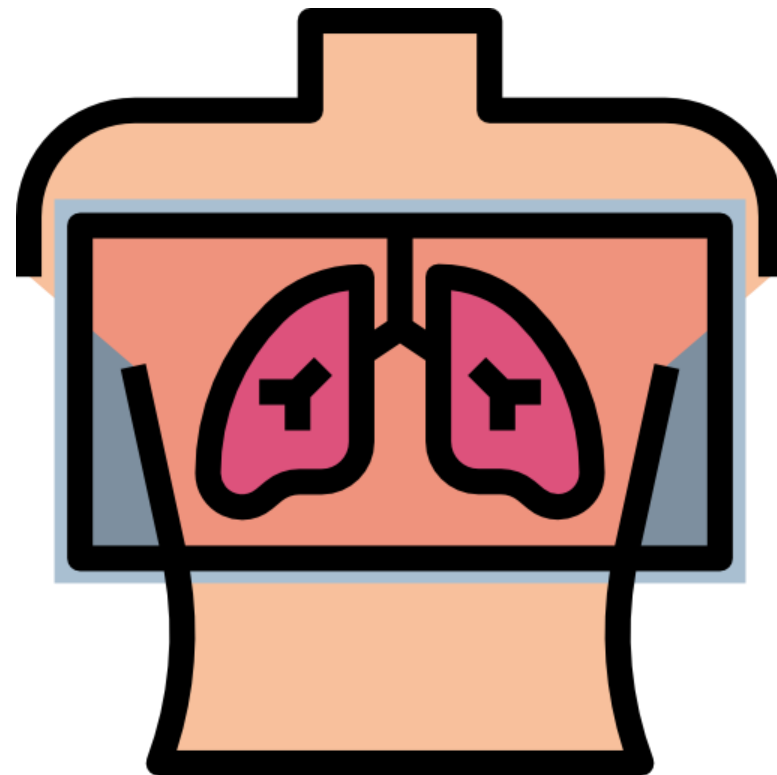
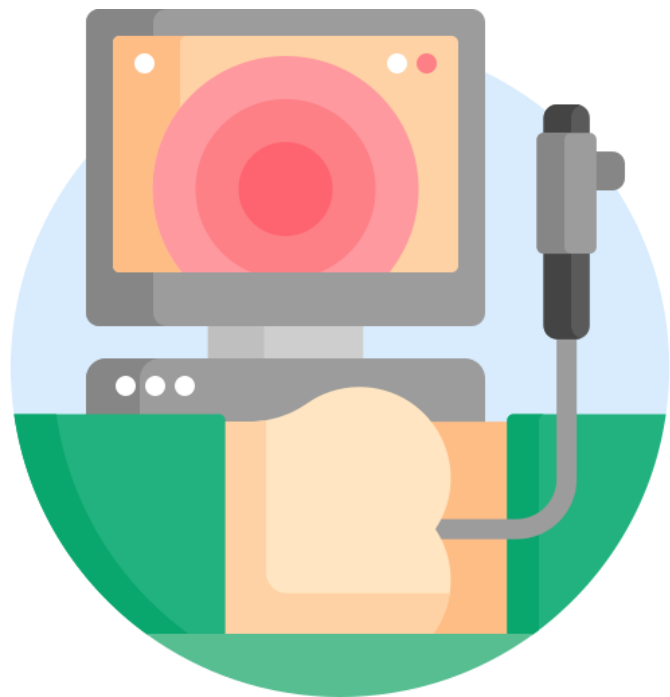


Prostate Cancer

- “No way I was going to let anyone put a finger in my bum....pervert!!!”
- Digital rectal examination (DRE)
- Lower urinary tract symptoms



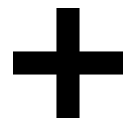
—

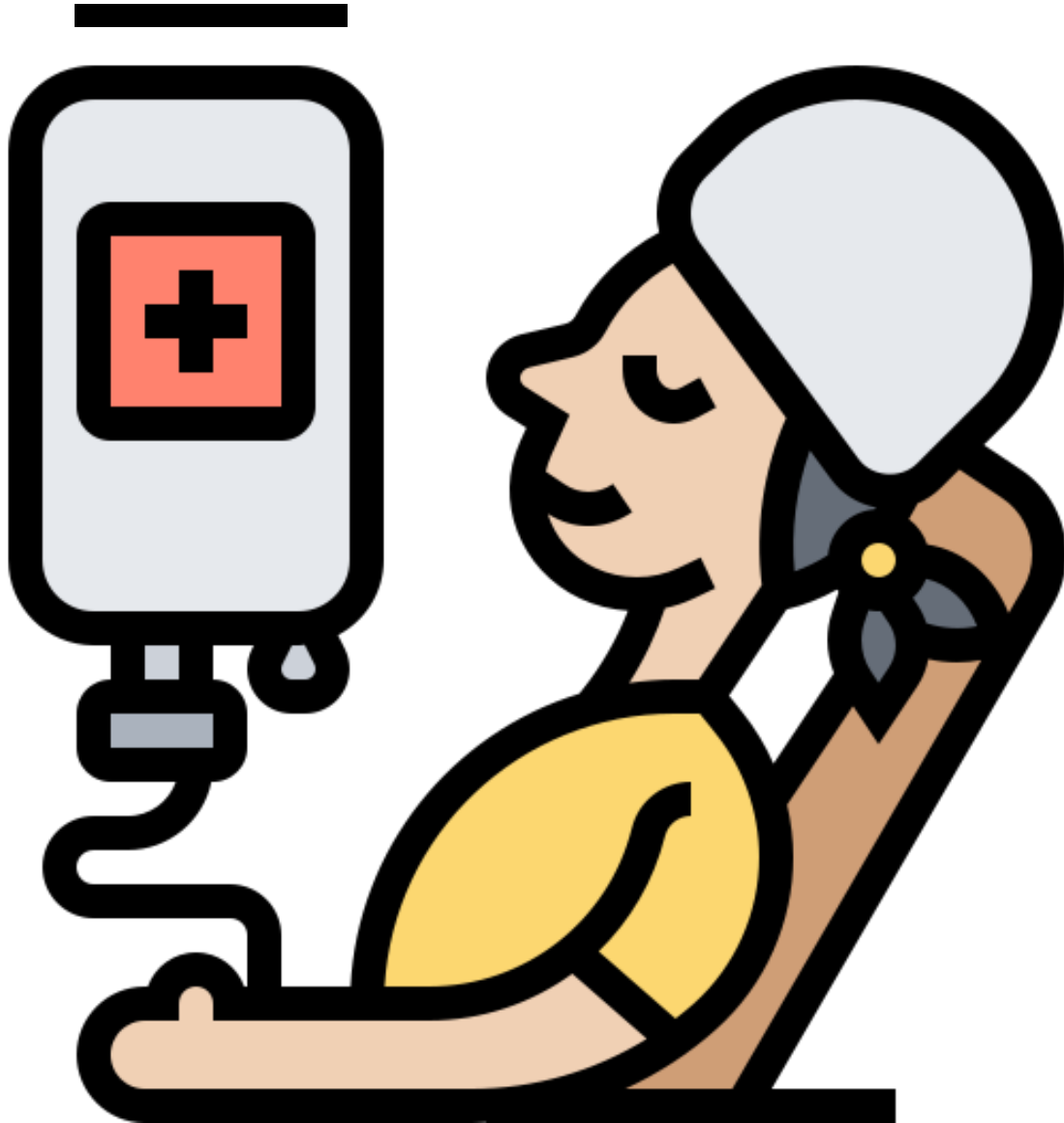


+

Pharmacotherapies

- Side effects
- Synergies
- Cessation
- *Clozapine





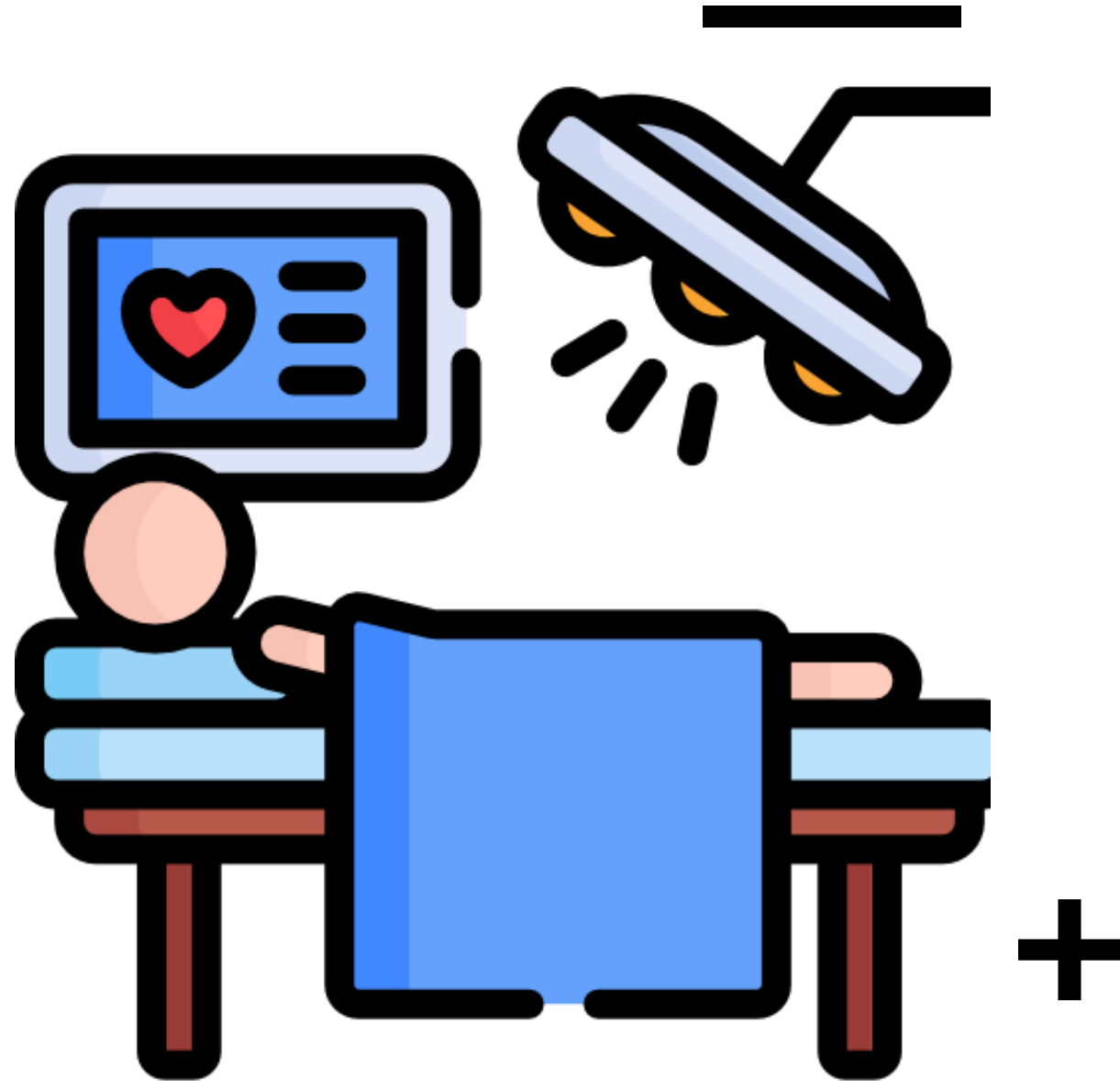
Treatment

- Duration
- Frequency
- Pump
- Follow up

+

Surgery

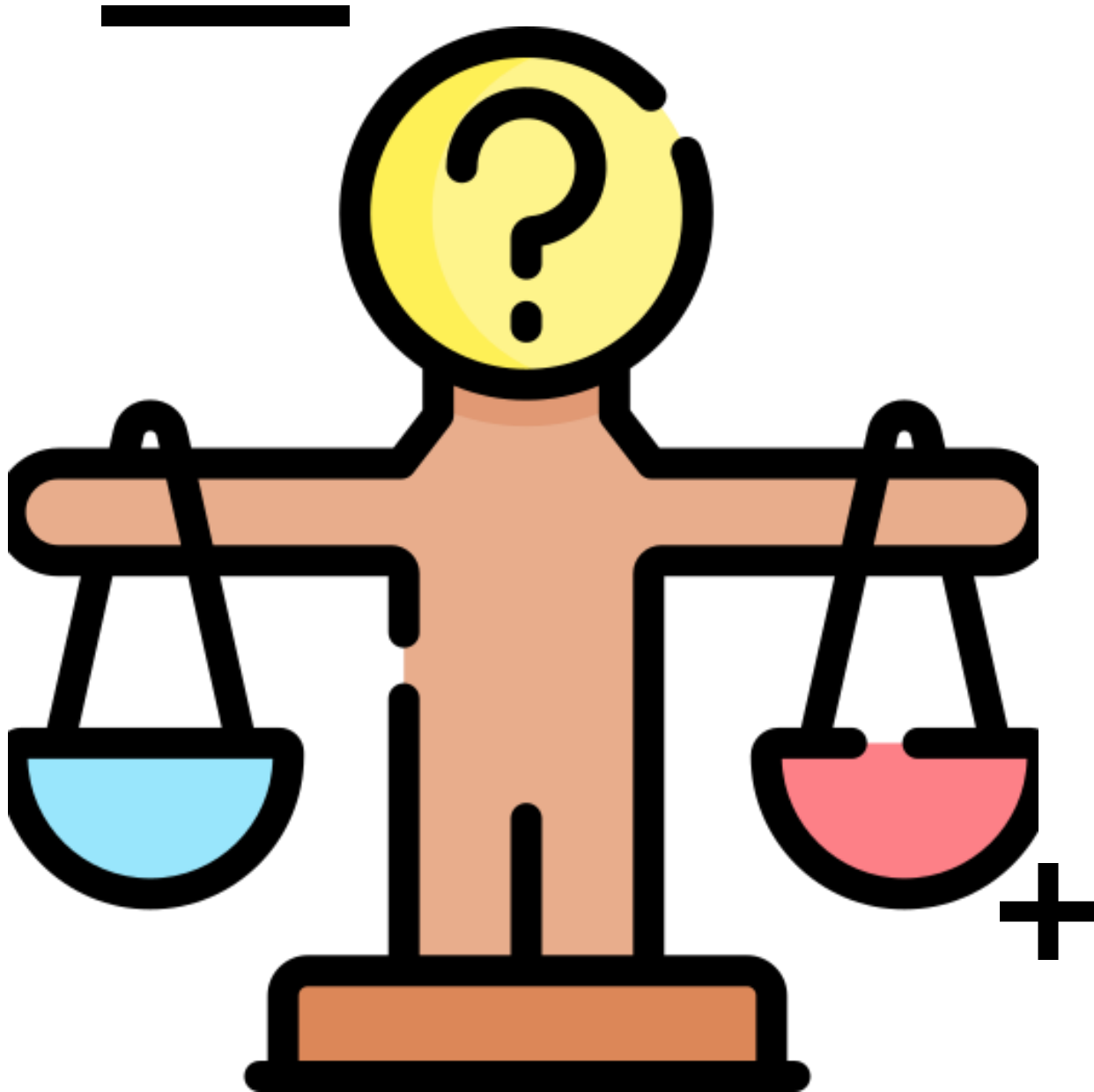
- Preparation
- Consent
- Post-op rehabilitation



Side Effects

- Chemotherapy
- Antipsychotics
- Tolerability
- Hair loss
- Neuropathies

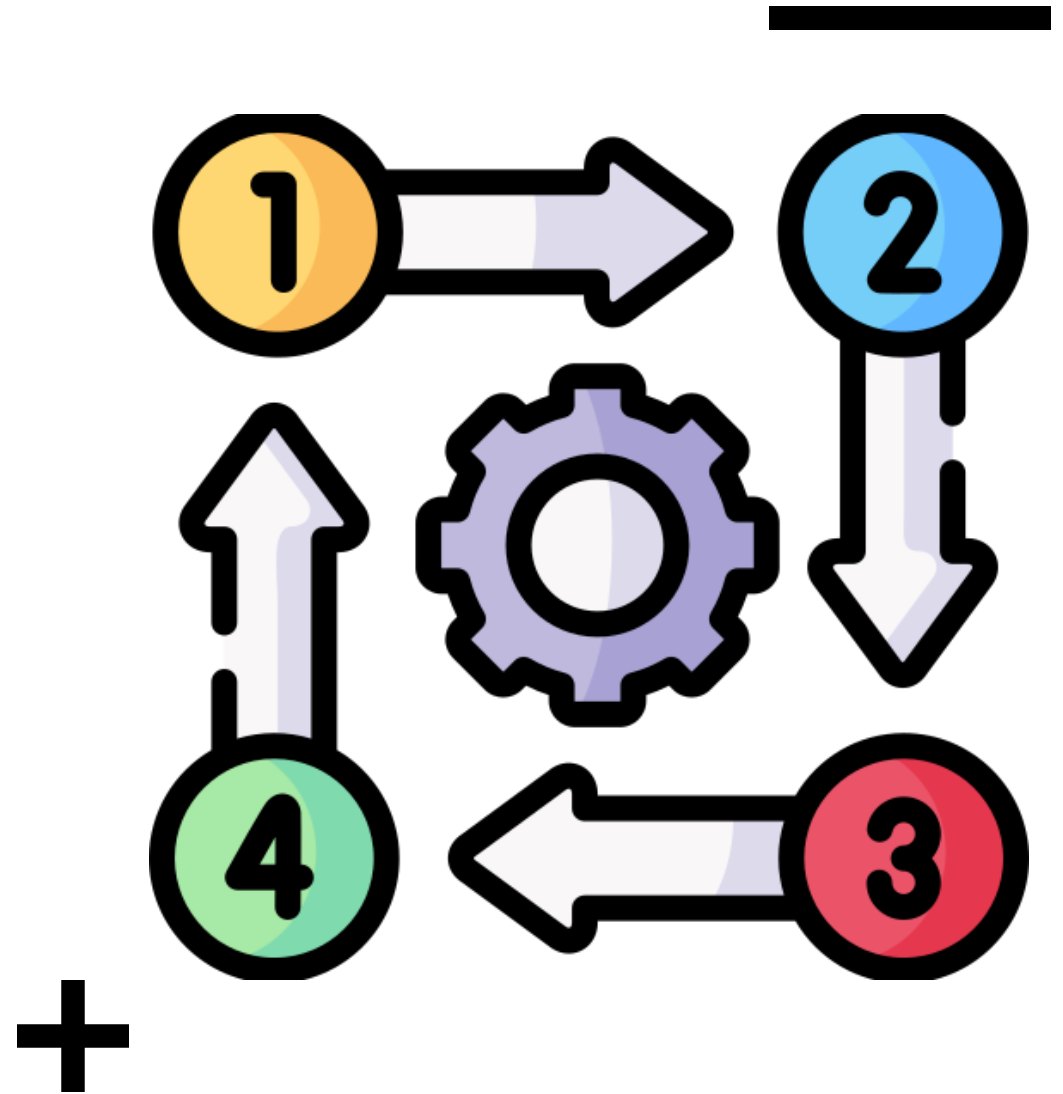




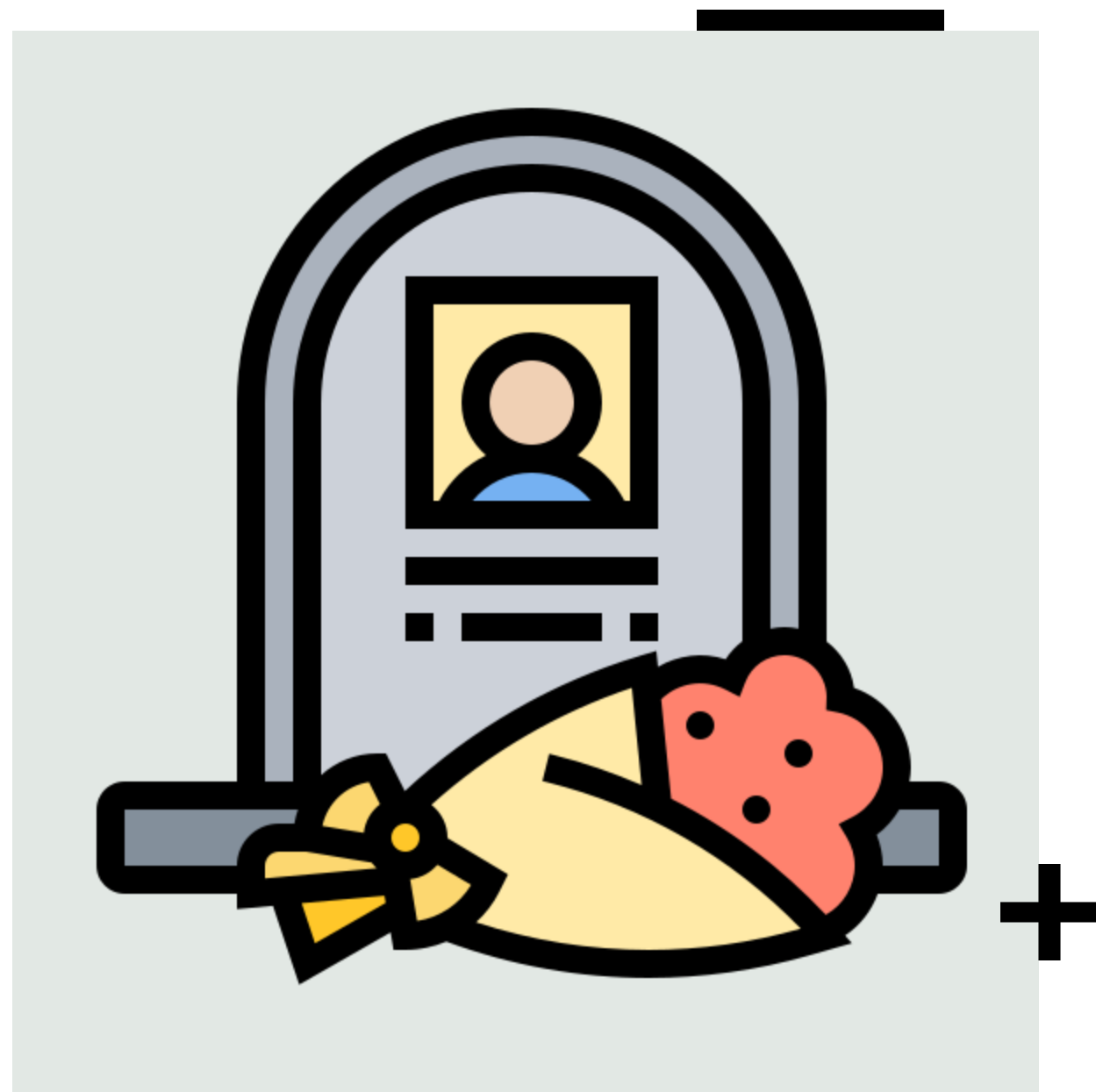
Ethical Issues

- Consent
- Refusal of screening
- Refusal of procedures
- Refusal of surgery
- Refusal of treatment
- Palliative options

Recovery /
Remission



End of Life



CaSMIP – Cancer & Severe Mental Illness Project

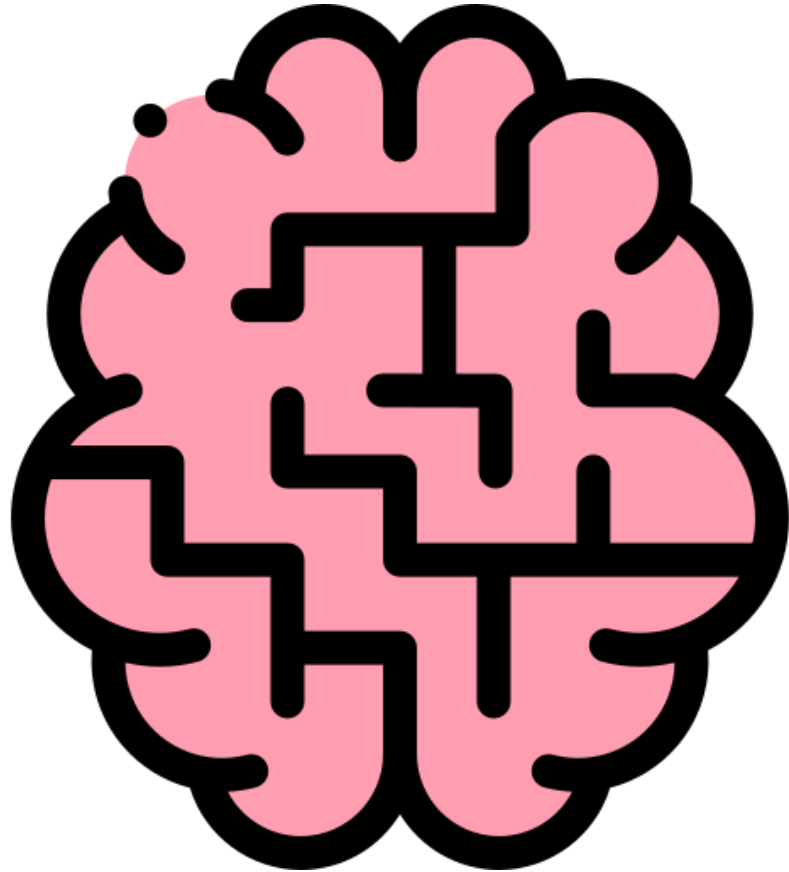
- A critical systems approach
- An intersectoral interdisciplinary systems thinking paradigm, whereby problem solvers aim to intervene in order to improve problematical social situations
-join us!



Health
Information and
Literacy

+





+

Problem Solving –
personalized
collaborative care

Community Engaged Interventions





CITY OF KINGSTON

Proclamation

Colorectal Cancer Awareness Month

March 2025

Whereas most colorectal cancers start as polyps inside the colon or the rectum and grow slowly, thus making it one of the few cancers that can be prevented with timely screening and early diagnosis. When caught early, up to 9 out of 10 people can be cured; and

Whereas colorectal cancer is the 4th most diagnosed cancer in Canada, and is the 2nd leading cause of death from cancer in men and 3rd in women; and

Whereas on average 69 Canadians will be diagnosed with colorectal cancer and 26 Canadians will die from colorectal cancer every day; and

Whereas 1 in 16 Canadian men and 1 in 18 Canadian women will develop colorectal cancer during their lifetime and 1 in 38 and 1 in 43 will die from it, respectively; and

Whereas vulnerable individuals including the unhoused or those living with severe mental illness are less likely to screen, get diagnosed later and have worse colorectal cancer outcomes; and

Whereas March is Colorectal Cancer Awareness Month, a month dedicated to raising awareness, encouraging screening, and supporting those living with colorectal cancer and their loved ones; and

Whereas observing Colorectal Cancer Awareness Month during the month of March provides a special opportunity to raise awareness and provide education on the importance of early detection and screening of colorectal cancer.

Therefore, I, Mayor Bryan Paterson, on behalf of Kingston City Council, hereby proclaim the month of March as "Colorectal Cancer Awareness Month" in the City of Kingston.

Dated at Kingston this 19th day of February, 2025



Bryan Paterson
Mayor

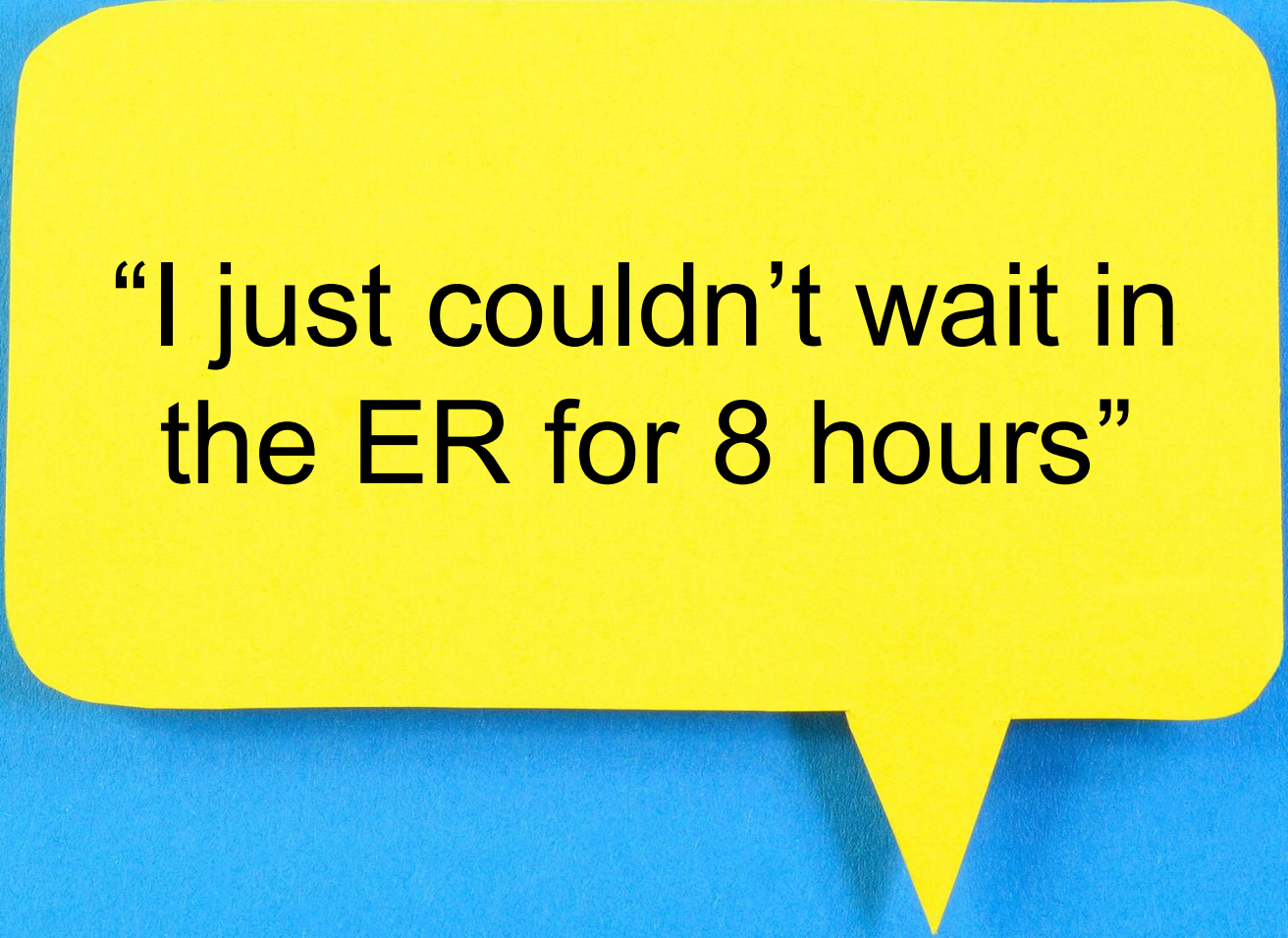




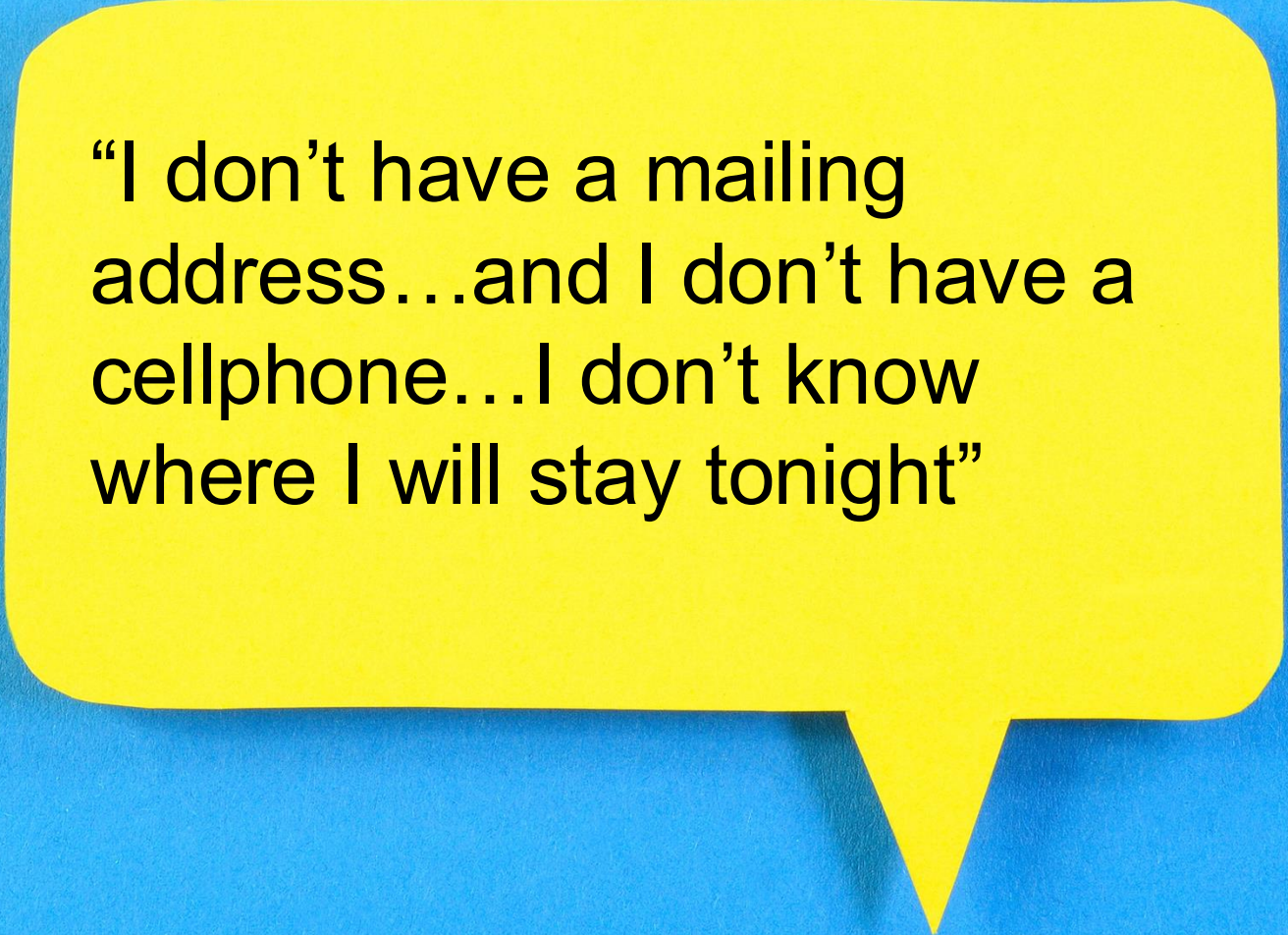


Funding Services Research

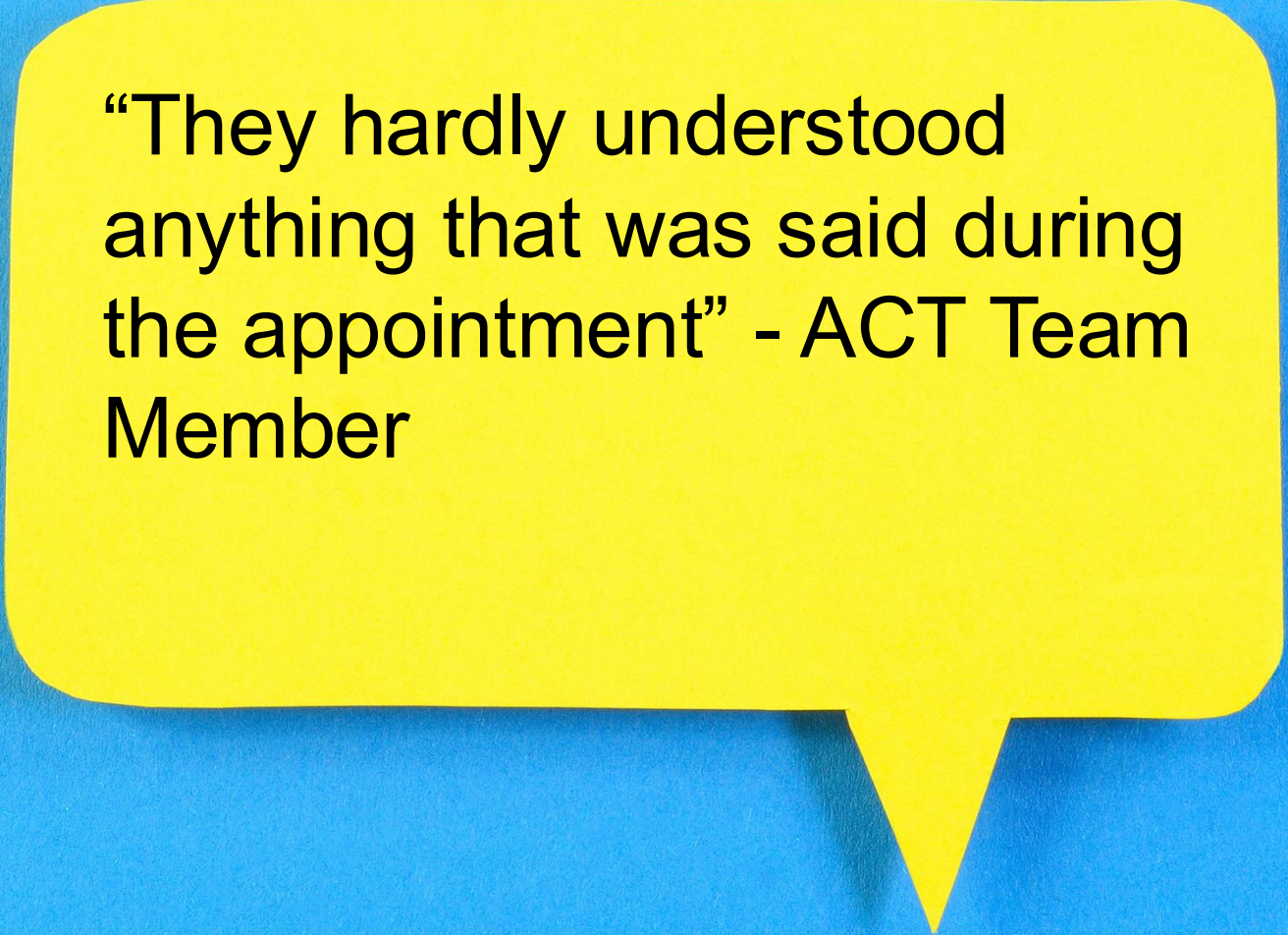




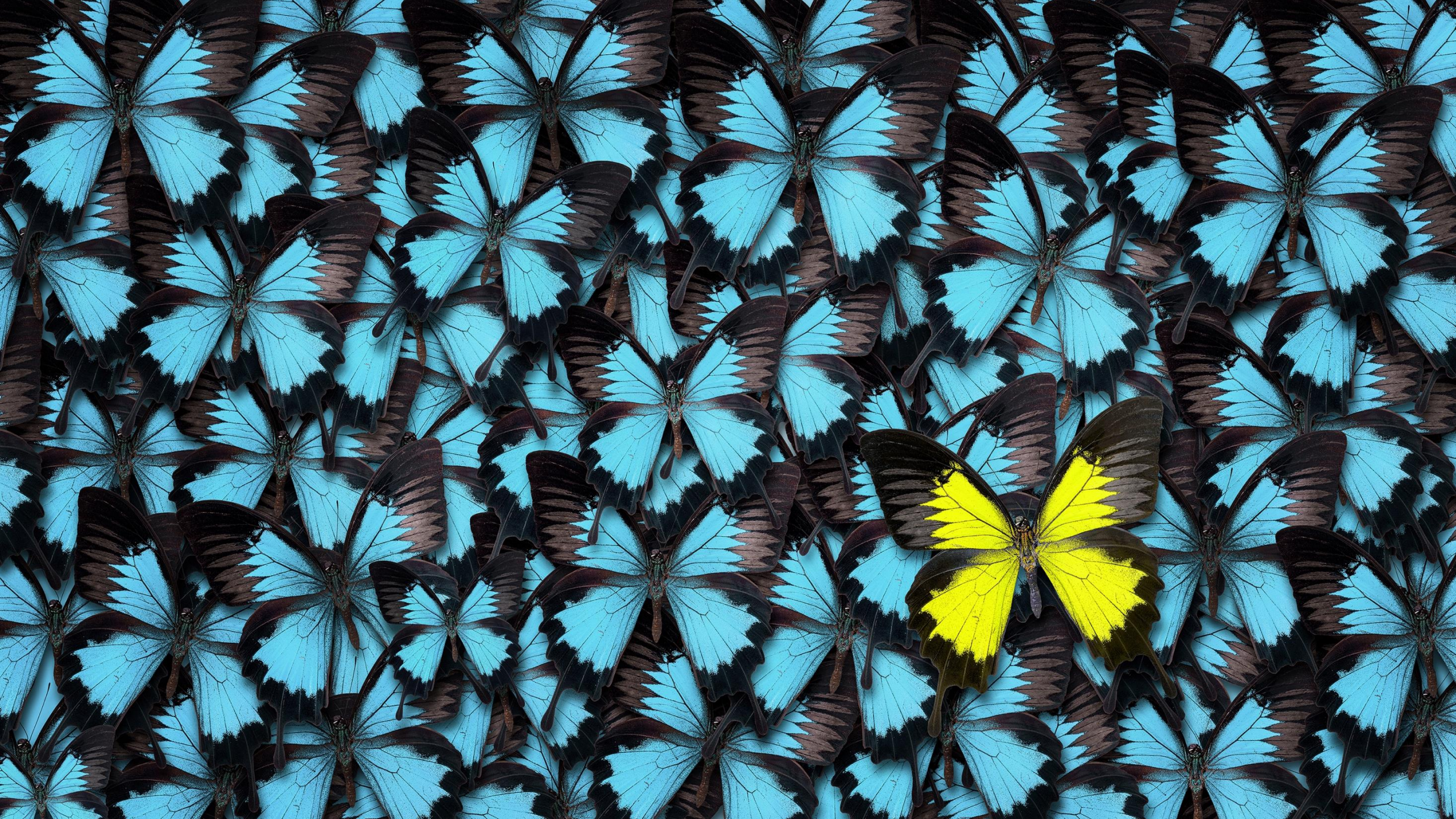
“I just couldn’t wait in
the ER for 8 hours”

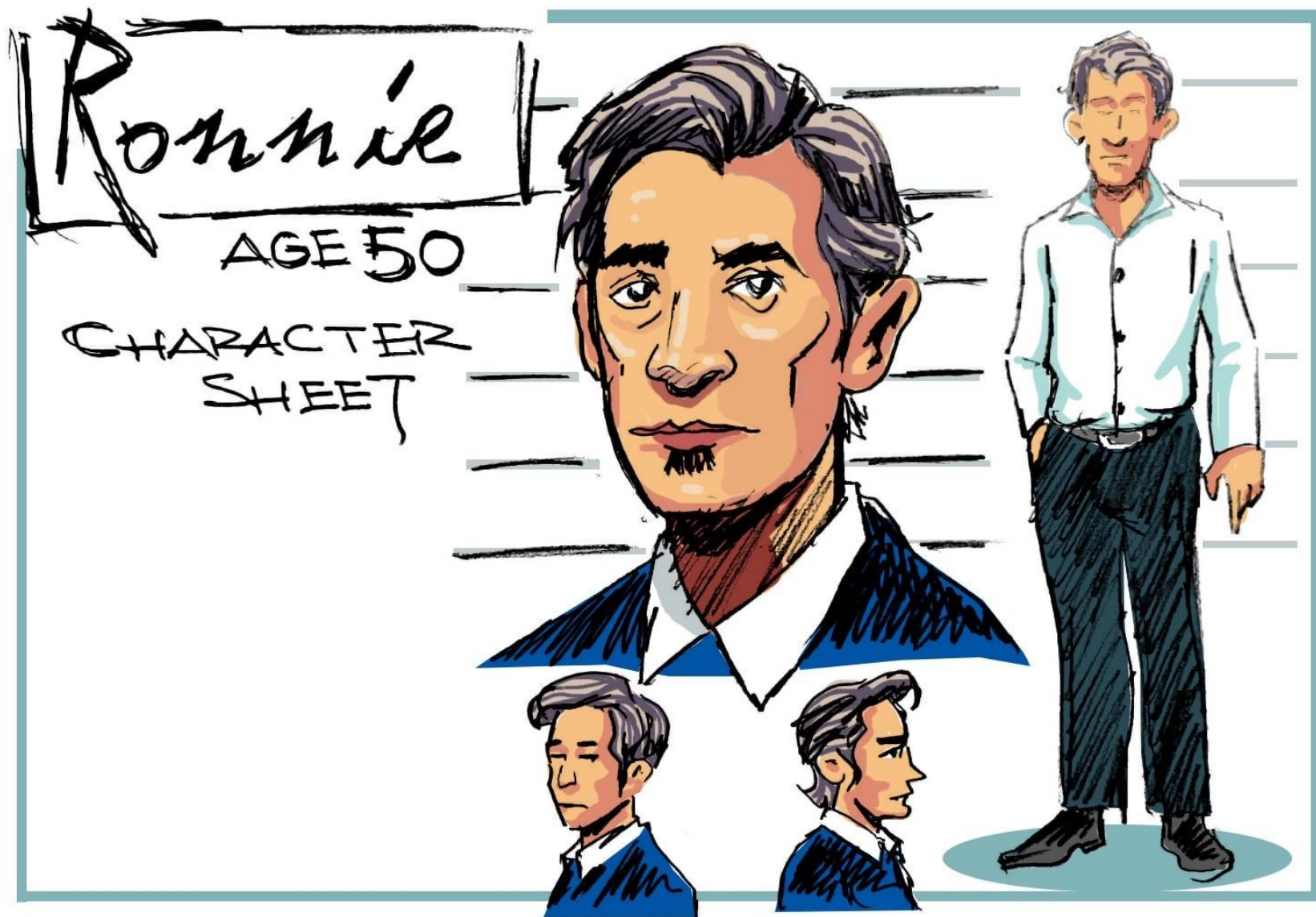


“I don’t have a mailing
address...and I don’t have a
cellphone...I don’t know
where I will stay tonight”



“They hardly understood anything that was said during the appointment” - ACT Team Member





Don't Leave Me
Behind: Navigating
Cancer & Psychosis

Ronnie's Story







“Team FIT” - 2025

- Hailey Boyer
- Nerys Carroll
- Sophia Gill

Getting “Fit for FIT” Checklist: For Healthcare Providers

The Fecal Immunochemical Test is an at-home screening device to help with early identification of pre-cancerous polyps or cancer



Scan for Cancer Care
Ontario FIT Instructions

1. Screening History & Eligibility

- Does the client meet screening criteria (e.g., aged 50-to-74)?
- Does the client have a personal or family history of colorectal cancer?
- Has the client completed a FIT or other colorectal screening test(s)?
 - If yes, note **date** and **result**: _____

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

2. Mailing & Access

- Does the client have a fixed **address** to receive the kit?
- Does the client have access to a **toilet** for sample collection?

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

3. Medical Considerations

- Does the client have any **bleeding conditions** (e.g., hemorrhoids, menstruation, recent dental procedure)?
- Does the client use any **medications** or have any **conditions** that could affect test accuracy (e.g., anticoagulant medications, irritable bowel disease (IBD))?
- Does the client experience any side effects from **psychiatric medications**?
- Does the client have any **cognitive impairment(s)**?

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

4. Mental & Physical Status

- Does the client experience any visual, attention, or **dexterity difficulties**?
- Does the client require additional support to complete the test (e.g., staff assistance, language interpreter)?
- Is the client experiencing any symptoms that may significantly interfere with focus or coordination (e.g., **hallucinations, delusions, paranoia, mood difficulties, tremors, extrapyramidal symptoms (EPS)**)?

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

5. Instructions & Understanding

If the client is unable to follow instructions or complete the FIT independently ...

- Has a healthcare provider explained steps for **collecting and sealing** the completed sample?
- Was the client reminded **not to collect** from a sample that has been contaminated with toilet water or urine?
- Has the client and healthcare provider reviewed the labelling of the collection tube (name, date of birth (DOB), collection date)?
- Does the client know **how and where** to return/mail the completed kit (within 48-hours of sample collection)?

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

6. Follow-Up

- Does the client understand **next steps** (e.g., receiving results, follow-up for a positive test)?

<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------

If the answer is “No” for any of the questions in **Sections 2, 5 and/or 6**, please provide direct assistance.



Getting "Fit for FIT" Checklist

The Fecal Immunochemical Test is an at-home screening device to help detect early signs of colon cancer



Scan to see Cancer
Care Ontario FIT
Instructions

Please use this checklist as you complete your kit.
Check off each item once it's done.

1. Before You Start



Make sure you
have your
glasses on, if
needed!

- ☐ I have **read and understood** the instructions that came in my FIT kit
- ☐ My FIT kit is not expired (check the date on the collection tube)
- ☐ I have not had my period or a dental procedure in last three days, and have no active bleeding or haemorrhoids
- ☐ I have a clean, private toilet to use for this test

2. Collecting the Sample



Make sure you
have access to a
toilet to complete
the test!

- ☐ I **labelled** my collection tube with my **full name, date of birth, and date of collection**
- ☐ I know how to **collect the stool (poop) sample** using the kit
- ☐ I made sure the stool **did not touch toilet water or urine (pee)**

3. Storing & Returning the Kit



Return your kit
within 48-hours!

- ☐ I have **stored the sample** as instructed (for example, in the fridge if needed)
- ☐ I know **how and where** to return or mail the kit (e.g., LifeLabs or mailbox)
- ☐ I will **return or mail** the completed test **within 48-hours** of collecting the sample

5. After the Test

- ☐ My healthcare provider explained **what will happen next** and how I will **get my results**

Helpful Tip: If you are unsure about any steps, **ask your nurse, doctor, or support person** before collecting your sample. They can help you go through it.



Please use this checklist as you complete your kit.
Check off each item once it's done.

1. Before You Start



Make sure you
have your
glasses on, if
needed!

- ☐ I have read and understood the instructions that came in my FIT kit
- ☐ My FIT kit is not expired (check the date on the collection tube)
- ☐ I have not had my period or a dental procedure in last three days, and have no active bleeding or haemorrhoids
- ☐ I have a clean, private toilet to use for this test

2. Collecting the Sample



Make sure you
have access to a
toilet to complete
the test!

- ☐ I labelled my collection tube with my full name, date of birth, and date of collection
- ☐ I know how to collect the stool (poop) sample using the kit
- ☐ I made sure the stool did not touch toilet water or urine (pee)

3. Storing & Returning the Kit



Return your kit
within 48-hours!

- ☐ I have stored the sample as instructed (for example, in the fridge if needed)
- ☐ I know how and where to return or mail the kit (e.g., LifeLabs or mailbox)
- ☐ I will return or mail the completed test within 48-hours of collecting the sample

5. After the Test

- ☐ My healthcare provider explained what will happen next and how I will get my results

Helpful Tip: If you are unsure about any steps, ask your nurse, doctor, or support person before collecting your sample. They can help you go through it.



FIT Instructions

1. Check

- ☒ Date of birth
 - ☒ Your name
- Is this your information? If not, call LifeLabs at 1-833-676-6766

3. Pee and Flush

4. Prepare

6. Collect

7. Flush



With consent

WIPE OUT
COLORECTAL



With consent of
companion
housemate

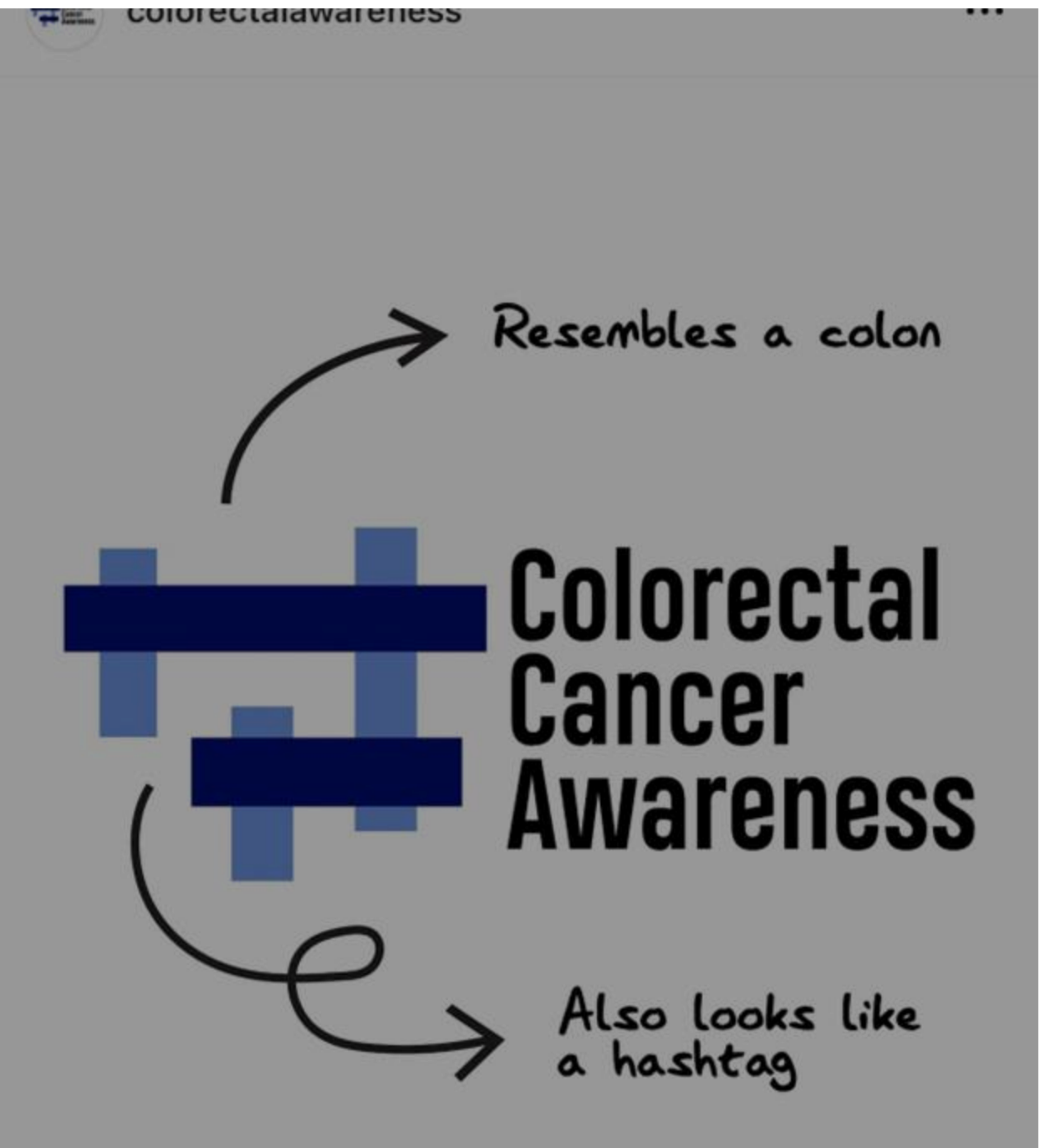


x 1080

With cancer awareness inserts

The Blue Nail Challenge!

Kiana, Daniel, Joao, Lorenzo, Brian,
Salam, Teni, Amin

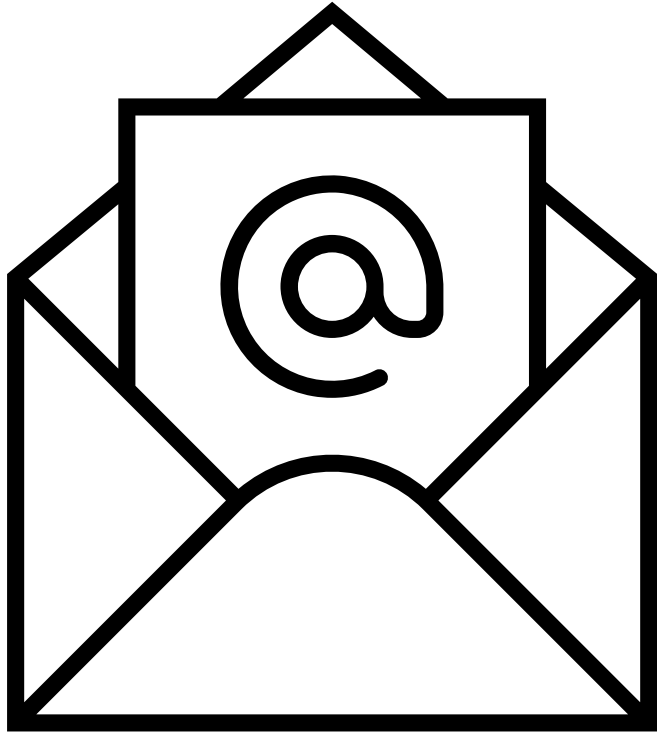




Acknowledgements

- Clients, families and care givers
- Research Assistants – Sara Mohamed
- Dr. Alex Ruhr – Psychiatrist
- Sara Mohamed &
- Dr. Jenna Nensi
- Dr. Aquila Akingbade
- Dr. Jennifer Flemming - Gastroenterologist
- Dr. Jeremy Butler - Ethicist
- Prof. Scott Berry – Oncologist/ Ethicist
- Christine Khiyaza – Smoking Cessation Coordinator
- Dr. Alyson Mahar – Epidemiologist
- Dr. Koya Ayonrinde - Gastroenterologist
- Kristy Mikolich – Concurrent Disorder Specialist
- ACT Team staff & management
- Integrated Care Hub – Homelessness
- Tayo Fatunla - Cartoonist
- **CaSMIP** collaborators
- Global Cancer and Severe Mental Illness Consortium





Thank you!

- All those involved in cancer care and mental health support
- Join a network or community of practice

oa@queensu.ca



Thank you!

Let's leave no one behind

