

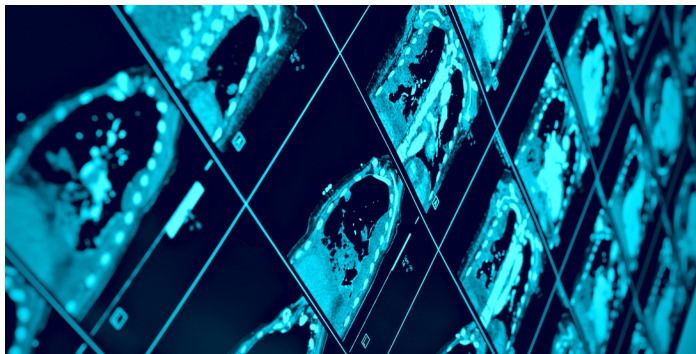
# Information on CT scans

## What is a CT scan?

A computerized tomography (CT or CAT) scan is a series of x-ray images that provides your doctor with a detailed look at your bones, organs, blood vessels and soft tissues.

## Your doctor may order a CT scan to:

- Diagnose injuries to organs and bones
- Discover locations of tumors, clots or infections
- Monitor conditions like lung or heart disease



## How many CT scans are done in Canada/Newfoundland and Labrador?

In 2015, over 2.4 million CT scans were performed in Canada (That's about 147 scans per 1,000 people)

- There were 57,800 scans in Newfoundland and Labrador
  - Approximately 219 scans per 1,000 people
- The next highest CT scanning rate was in Quebec, where they did 201 scans per 1,000<sup>1</sup>

There are 16 CT scanners in NL

- 3.0 units per 100,000 people
- This is **twice the rate in Canada of 1.5/100,000**

## Are there any risks?

There can be a lot of radiation in a single CT scan

- A chest X-Ray will expose you about 0.1 mSv
- A **single chest CT scan** exposes you to 7.0 mSv<sup>2</sup> of radiation
  - That's **70 times as much** radiation!

The average Canadian will receive 1.8 mSv of naturally-occurring radiation per year

- In St. John's, you'll receive 1.6 mSv<sup>3</sup>
- A chest CT Scan can contain over 4 years' worth of radiation!

Unnecessary exposure to radiation can increase your chance of developing cancer

- A 20 year study in Australia looked at the records of almost 11 million adolescents and children<sup>4</sup>
- The 680,000 patients who had a CT scan had a **24% higher chance of developing cancer** than the other patients who were studied
- This meant one new cancer for every 1,800 scans
  - One new brain cancer for every 4,000 scans
  - One new leukemia for every 18,000 scans

## What can I do?

Talk to your doctor about the advantages and risks of CT scanning. Decide together if it's the best testing option for you.

Choose Wisely.

<sup>1</sup> Canadian Medical Imaging Inventory, 2015. CADTH. Published March 2016. ([https://www.cadth.ca/sites/default/files/pdf/canadian\\_medical\\_imaging\\_inventory\\_2015\\_e.pdf](https://www.cadth.ca/sites/default/files/pdf/canadian_medical_imaging_inventory_2015_e.pdf), retrieved January 6 2018)

<sup>2</sup> Radiation Does in X-Ray and CT Exams. Radiological Society of North America, Inc. Reviewed February 18 2017. (<https://www.radiologyinfo.org/en/pdf/safety-xray.pdf>, retrieved January 6 2018)

<sup>3</sup> Natural Background Radiation. Canadian Nuclear Safety Commission. Published January 2013. ([http://nuclearsafety.gc.ca/eng/pdfs/Fact\\_Sheets/Fact-Sheet-Background-Radiation-eng.pdf](http://nuclearsafety.gc.ca/eng/pdfs/Fact_Sheets/Fact-Sheet-Background-Radiation-eng.pdf), retrieved January 6 2018)

<sup>4</sup> "Cancer risk in 680 000 people exposed to computed tomography scans in childhood or adolescence: data linkage study of 11 million Australians." Mathews, et al. BMJ 2013; 346:f2360.