

Study poised to put N.B., Horizon on map as “world leader” in breath-based diagnostics



From left: Oncology patient and study participant Bernadette Clement, oncologist Dr. Tony Reiman, and oncology RN and study coordinator Donna Fairweather, are photographed surrounding Picomole’s breath-based diagnostic tool.

Horizon staff and physicians have partnered with Picomole Inc., an innovative medical technology company based in Moncton, to conduct a feasibility study to establish a link between lung cancer and the presence of certain chemicals in breath.

Initial evidence showing cancer can potentially be determined through breath was first observed in a study in California with trained dogs. The dogs in the study could detect cancer with over 90 per cent accuracy, using their adept sense of smell to detect the presence or absence of chemicals in a person’s breath.

This is what Picomole’s technology intends to replicate.

Horizon oncologists Dr. Tony Reiman, who works out of Horizon’s Saint John Regional Hospital, and Dr. Mahmoud Abdelsalam at Horizon’s The Moncton Hospital, are leading the study, which will take breath samples from 100 lung cancer patients and 100 people who don’t have cancer.

They will use the breath data from participants to attempt to show Picomole’s ground-breaking technology can detect the presence of cancer at rates comparable to or better than trained dogs.



Chemicals from participants’ breath are captured in small metal tubes and sent to Picomole for analyzing.

will put New Brunswick on the map as a world leader in this field.”

It also supports proactive patient care: if health care teams are aware of a patient’s potential diagnosis of lung cancer, they can treat it sooner.

The study’s first breath samples were taken in September 2017 and the study is expected to be completed in December 2018. Bernadette Clement said she signed up to participate because she’d do “anything” to help lung cancer patients like herself. A successful outcome of this study opens the door for future studies of other cancers and diseases and sets New Brunswick to be the world leader in breath-based diagnostics.

Picomole develops patented and patent-pending technologies for breath analytics into the standard of care for non-invasive clinical diagnostics and personalized medicine.

If you would like more information on participating in this study, please contact study coordinator Donna Fairweather at 506-648-7852 or Donna.Fairweather@HorizonNB.ca.



Picomole’s breath-based diagnostic tool is photographed in a clinic room in Horizon’s Saint John Regional Hospital’s oncology department.