

## **Arctic hamlet discovers cancer cause**

By GABRIEL ZARATE, SRJ Reporter

The people of Aklavik, a hamlet near Inuvik, have recently discovered the cause of the community's high incidence of cancer. A bacterial infection has been linked to stomach cancer, which has been frequent in Aklavik for 25 years.

The tests revealed an abnormally high incidence of a bacterium called *Helicobacter pylori*, or *H. pylori*. It is a spiral-shaped germ that can grow in a human stomach. It has a controversial history among medical researchers, but was classified as a carcinogen, or cancer-causing agent, in 1994 by the International Agency for Research on Cancer.

The Aklavik Health Centre, with the backing of the Hamlet Council and the Indian Band pushed for years for a baseline health study to look for possible root causes of the cancer.

In early February 2008 a team of about 25-30 doctors, nurses and technicians went to Aklavik and tested almost half the population. Fifty-five per cent of those tested were positive for the bacteria.

Aklavik Mayor Knute Hansen was surprised when he was told he tested positive for *H. pylori* infection. He said he thought the cancer rates had something to do with the decommissioned Cold War military sites in the area.

But Hansen said the presence of the bacteria in Aklavik had been known for some time. Even though it was a suspected carcinogen no-one made the link between the bug and the cancer until now.

Andre Corriveau, chief medical officer of the NWT Department of Health and Social Services, explained that although the cancer rate in Aklavik had been high given the size of the community, the actual number was not large enough to immediately set off alarm bells, only four cases of stomach cancer between 1995 and 2005. A community the size of Aklavik should not have had more than two cases over that period. In addition, cancer rates have actually been in decline in the NWT for years now, as smoking rates go down and people eat less smoked food. Smoked food and smoking tobacco are both confirmed causative agents of stomach cancer.

"The real heroes are the people of Aklavik. They waited, they turned up. And they're going to reap the

benefits. This could lower their rate of cancer," said Dr. John Morse, who initiated the study. Morse, of Stanton Territorial Hospital in Yellowknife, has been visiting Aklavik for years and was aware of the community's higher-than-expected cancer rate. In cooperation with the community of Aklavik a team was assembled and funding secured for a million-dollar study to look into the cancer's root cause. It took ten years to put the whole thing together. Most of the cash (\$800,000) came from Olympus Canada, a manufacturer of medical equipment. In exchange, the doctors and nurses field-tested Olympus equipment during the research. The test involved a gastroscopy – an Olympus camera-tube up the nose and down to the stomach to see what's down there. Morse said the testing went very well, with only five patients out of two hundred needing sedation for the procedure. The rest needed only a nasal spray of anaesthetic to numb the nose. The patients filled out a questionnaire about the test once they were done; 85 per cent of patients answered they would not be afraid of having it done again.

Hansen said he was impressed, calling it "assembly-line testing," with four or five examination rooms in operation to process the approximately 250 examinees. The population of Aklavik is between 700 and 800 according to Hansen, so a significant part of the community was tested.

Morse said the next step was to take the samples his team collected and test them in labs. They would determine the pathology of the bug: whether there is more than one strain, how likely it is to cause cancer, the intensity of the infection and most importantly, what antibiotics are most effective against it.

A treatment program for those with H. pylori infections might start as early as June. And three months later there would be follow-up testing to see how effective it was.