



Gamzook'aamin aakoziiwin

FIGHTING CANCER TOGETHER

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*facts about
the partnership*

The SON – Bruce Power Medical Isotopes Partnership

- 1** SON and Bruce Power finalized the New Isotope Marketing and Collaboration Agreement represented by the partnership name, Gamzook'aamin aakoziwin in 2019.
- 2** The name “Gamzook'aamin aakoziwin” translates to “We are Teaming up to Fight the Sickness” and was developed in consultation with Neyaashiinigmiing knowledge holder and language speaker Polly Keeshig-Tobias.
- 3** The artwork for Gamzook'aamin Aakoziwin was developed by Emily Kewageshig, an artist and member of Saugeen Ojibway Nation, and represents all people working together towards healing.
- 4** The isotope that Bruce Power is producing is called lutetium-177 or lu-177 and it is used for both diagnosis and treatment of specialized brain, prostate and breast cancers.
- 5** Each of the SON Communities will earn an equal annual return from lu-177 sales, to support community development and well-being initiatives.

Did You Know?

Lu-177 is not the first medical isotope produced at Bruce Power. The Bruce B reactors have been producing medical cobalt-60 (used for sterilization of medical equipment) for over 30 years. Currently, Bruce Power's cobalt-60 sterilizes 40% of the world's single-use medical devices.



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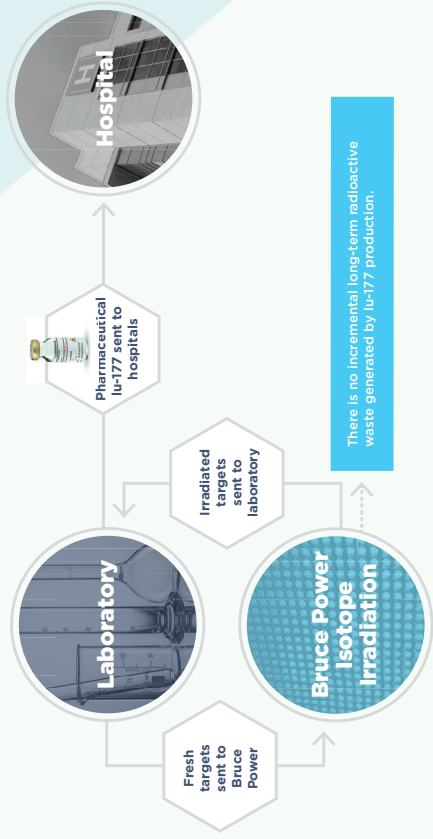
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*facts about
lutetium-177*

Medical Isotope Lutetium-177

- 1** The Isotope Production System (IPS) installed in Bruce Power's Unit 7 is currently producing lutetium-177.
- 2** Lu-177 is a medical isotope produced by irradiating a different stable element called ytterbium-176 in the IPS for 2 weeks until the composition of the element changes, creating lu-177.
- 3** Lu-177 is used in targeted radionuclide therapy to diagnose (image) and treat neuroendocrine tumours, prostate and breast cancer.
- 4** Lu-177 delivers a radioactive dose to the cancer cells while leaving the body's healthy cells unaffected.
- 5** Lu-177 is in high demand and low supply since the decommissioning of the National Research Universal reactor (NRU) in 2018, which produced the bulk of Canada's lu-177. The IPS installed at Bruce Power is capable of producing large volumes of lu-177, due to the constant operations of the reactor.

Lutetium-177 Production Process



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*facts about
lutetium-177
production*

Lutetium-177 Production at Bruce Power

- 1** Bruce Power installed a revolutionary “Isotope Production System” (IPS) in Unit 7 and began production and distribution of lutetium-177 (lu-177) in 2022.
- 2** The IPS is designed to produce lu-177 while simultaneously generating electricity. Bruce Power has partnered with Isogen (a Kinectrics and Framatome company) to lead system implementation, and with ITM to process and distribute medical-grade lu-177.
- 3** The IPS at Bruce Power is a game-changer for lu-177 production, providing a reliable supply of isotopes, improving local and global access to these cancer fighting tools.
- 4** The production of Lu-177 does not create a new source of nuclear waste. All materials are either used for treatment of cancer patients or are recycled and used to produce more lu-177.
- 5** The IPS does not change the existing footprint of Bruce Power’s operations, and does not result in any new environmental impacts or changes.