



# TOP 5

*things you  
should know*

## The SON – Bruce Power Medical Isotopes Partnership

- 1** SON and Bruce Power finalized our New Isotope Marketing and Collaboration Agreement represented by our partnership name, Gamzook'aamin aakoziwin in May 2021.
- 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 Saugeen artist, Emily Kewageshig and represents all people working together towards healing.
- 4** The New Isotope that Bruce Power will be producing is called Lutetium-177 or Lu-177 and it is used for both diagnosis and treatment of neuroendocrine tumors, prostate and breast cancer.
- 5** Each of the SON Communities will earn an equal annual return from Lu-177 sales, to support Community development and well-being initiatives.



# Gamzook'aamin aakoziwin

## FIGHTING CANCER TOGETHER

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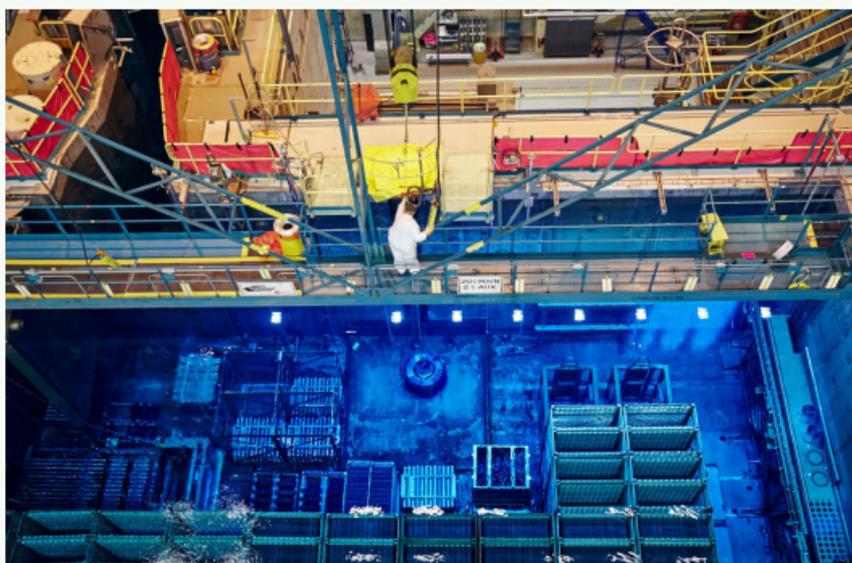
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## Medical Isotope Lutetium-177

- 1** Lu-177 will be produced using a first of its kind “Isotope Production System” or IPS that attaches to the existing CANDU reactors at Bruce Power.
- 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 tumors, 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.

## 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 medical sterilization) for over 30 years and currently Bruce Power's Cobalt-60 sterilizes 40% of the world's single use medical devices.



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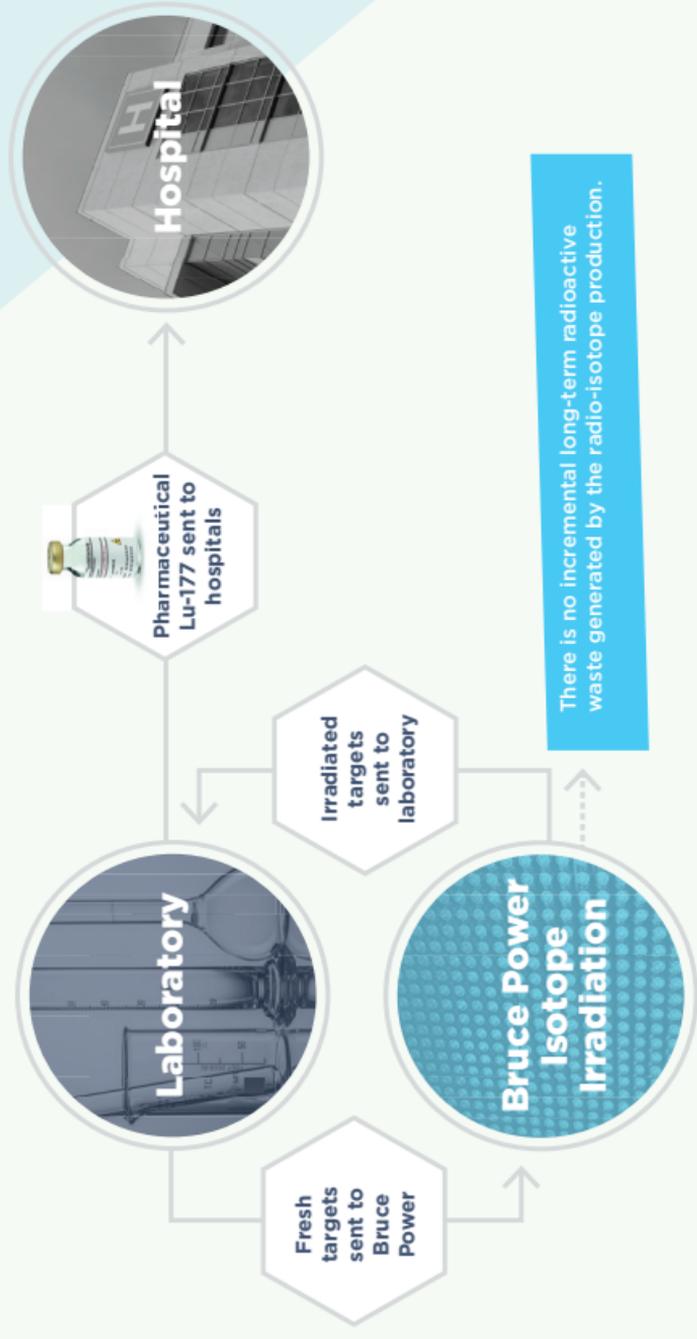
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## Lutetium-177 Production at Bruce Power

- 1** Bruce Power is installing a first of its kind “Isotope Production System” (IPS) that attaches to the existing CANDU reactors and is planning to begin production and distribution of Lutetium-177 (Lu-177) in early 2022.
- 2** Bruce Power will use the reactors as they generate electricity to create Lu-177 and will work with its partner Isogen (Framatome and Kinectrics) on system implementation and with its partner ITM on production and distribution of Lu-177.
- 3** The production of Lu-177 at Bruce Power will create unmatched capacity to provide a reliable supply that will improve local and global access to these cancer fighting tools.
- 4** The production of Lu-177 does not create a new source nuclear waste. All materials are either used for treatment of patients or are recycled and used to produce more Lu-177.
- 5** The IPS for Lu-177 does not change the existing footprint of Bruce Power’s operations, and will not result in any new environmental impacts or changes.

# Lutetium-177 Production Process



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