

# The fight against cancer intensified thanks to SCK CEN and the IRE

Nuclear medicine partners move up a gear:  
from research and development to large-scale production of lutetium-177

**SCK CEN, the Belgian Nuclear Research Centre, and the National Institute for Radioelements (IRE) are going to start the large-scale production of lutetium-177. This decision, validated today by the signature of the two partners, opens up opportunities for cancer patients. Among other things, this radioisotope is very promising for the treatment of prostate cancer. This type of cancer is responsible for 90,000 deaths each year in Europe.**

SCK CEN, the Belgian Nuclear Research Centre, and the National Institute for Radioelements (IRE) have been a key duo in the fight against cancer for many years. Their production has helped diagnose millions of cancers, cardiovascular diseases and other illnesses around the world. In 2020, the two partners made a promise, endorsed by their signature, to further increase their contribution. *"Radioisotopes can make a difference not only in medical imaging, but also in targeted therapies. As global players in radioisotope production, we must keep this dynamic in mind and enable the further development of emerging therapeutic radioisotopes"*, said Erich Kollegger, the CEO of IRE, at the signing. The big day has arrived for lutetium-177 - a promising radioisotope for the treatment of prostate cancer, among other things.

*"Over the past two years, we have conducted extensive research and development to perfect our innovative method for producing pure lutetium-177. We are now ready to convert our own research into a full-scale production line. We are thus expanding the offer and giving many cancer patients access to targeted treatment and thus to life-saving care"*, says Eric van Walle, the Director-General of SCK CEN. The need for lutetium-177 is expected to grow exponentially: from 16,000 patients in 2020 to 138,000 patients in 2026.

## **An experienced business partner**

The National Institute for Radioelements (IRE) plays a major role in the efficient supply of radioisotopes to the patient. The IRE has more than twenty years of experience in the rapid worldwide distribution of radioisotopes, with some 2,500 consignments per year. *"In this particular case, we are merging our complementary knowledge, expertise and experience. In doing so, we can use their full potential in order to benefit the patient. That's what makes this cooperation so valuable"*, says Erich Kollegger (IRE).

## **An increase in capacity**

The production facility will be located on the premises of SCK CEN in Mol. Construction will begin in the autumn of 2022 and be completed in 2024. It is possible that a second increase in capacity will be made available later. The two partners are also working on a plan to accelerate production in case of increasing demand. *"Patients need to be confident that their treatment will happen. The market must therefore be able to count upon a reliable supply of radioisotopes. We want to keep this promise even in the face of increasing demand"*, concludes Eric van Walle (SCK CEN). The second production facility would then be located on the IRE premises in Fleurus.

### **Lutetium-177: personalised medicine**

Lutetium-177 is currently used in hospitals to treat neuroendocrine tumours. Neuroendocrine cells are found primarily in the organs of the digestive system, including the stomach, pancreas and intestines. But this radioisotope is also very promising for treating prostate cancer. It is used in combination with gallium-68 (<sup>68</sup>Ga). This radioisotope allows doctors to map the size of the prostate tumour and adjust accordingly the dose of lutetium-177 that will be administered to the patient during treatment.

## **SCK CEN**

### **70 years of experience in nuclear research and technology**

SCK CEN is one of the largest research centres in Belgium. Every day, more than 850 employees dedicate themselves to developing peaceful applications of radioactivity. SCK CEN's research activities focus on three main themes: the safety of nuclear facilities, the development of nuclear medicine, and protecting people and the environment from ionising radiation. SCK CEN is world-renowned and shares its knowledge through countless publications and training courses, so that this pool of exceptional competence can be maintained.

**More information:** [www.sckcen.be](http://www.sckcen.be)

## **IRE and IRE ELiT**

### **50 years dedicated to excellence in nuclear medicine**

The IRE or the National Institute for Radioelements is a public utility foundation, whose main activity is the production of radioisotopes for diagnostic and therapeutic applications in the field of nuclear medicine. The IRE is the world leader in the production of molybdenum-99, the "parent" isotope of metastable technetium-99, and the most widely used in nuclear medicine for many examinations (heart, bone, lungs, thyroid, brain, kidneys, etc).

In addition to its production activities, the IRE contributes to protection and environmental monitoring through its services of measuring radioactivity in various samples, radiological characterisation of waste and contaminated elements and consultancy and technical assistance in the fields of radiology and nuclear energy.

For its part, IRE ELiT is IRE's innovation subsidiary founded in 2010 to develop radiopharmaceuticals used for imaging and treatment of certain cancers and palliative care. In 2020, the group devoted 15% of its turnover to R&D, a percentage which has been steadily increasing since the company's creation. IRE and IRE ELiT currently employ 250 people.

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