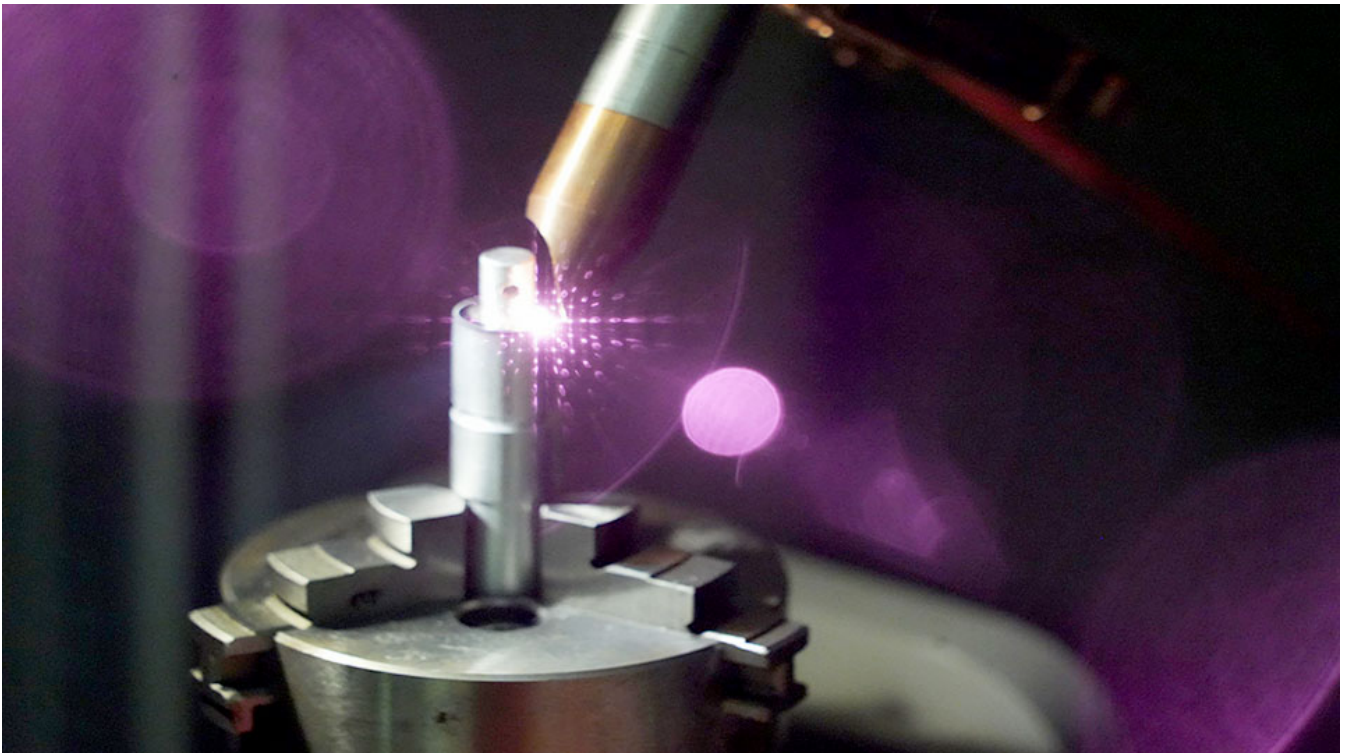


## Rosatom Develops Micro Sources for Internal Radiotherapy

- A Monitor Desk Report

Date: 05 December, 2024



Experts from Reactor Materials Institute (IRM), a company within Rosatom's Scientific Division, have developed new ionizing radiation sources based on iridium-192 for use in brachytherapy (internal or short-distance radiotherapy). The high-dose therapy using these sources is safe for patients and practitioners while being effective in treating numerous malignant tumors, both intracavitary and interstitial.

Rosatom's solution is unique because of its small size. It consists of a needle irradiated in the research reactor and enclosed in a capsule. A cable manufactured using specialized techniques is welded to the capsule. All these operations are performed remotely using a manipulator in a high-temperature chamber.

"We have already developed prototypes. Now we are ready to deliver them to clinics for testing. We plan to get our product certified and

registered as a medical device in 2025. We will launch the product in the Russian market and later the CIS market following receipt of necessary permits,” said Denis Butakov, Head of Radiation Technologies at IRM.

The gamma-therapy system “Brachium” allows precise point treatment due to the introduction of small applicators that deliver doses of ionizing radiation directly into or very close to the tumor. This makes it possible to target cancer cells with high-dose radiation while minimizing damage to the patient’s body. The system uses closed-source gamma radiation based on Cobalt-60 or Iridium-192 radionuclides.

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