

OXYgenii

The Faces behind Innovation

Event Edition

The Y90 radio-isotope
in the spotlight

20 & 21 November - F.I.R.E 2025
Marseille - Villa Gaby



Yttrium 90

A radioisotope with endurance!

What is the Yttrium 90 radio-isotope that will be in the spotlight during the F.I.R.E congress (Future of Interventional Radiology Expert panel), that will stand in Marseille, the 20 & 21 November ?

This radioisotope, which showed promise in therapeutic oncology several years ago, has continued to prove to be a therapeutical asset.

The therapy, that is an internal selective radiotherapy, treats primary and secondary liver tumours via an intra-arterial access. The principle is the injection of microspheres loaded with Y90 that will be selectively distributed. **The beta radiations will be maximized at the tumor location and limit the radiations to the normal liver parenchyma.**

Interventional radiologists, oncologists, nuclear medicine, radiophysicist, radiopharmacist are all involved as a **multidisciplinary team.**

In nuclear medicine department, the identification of Y90 is done by its physical characteristics : **β - emitter and half-life of 64.05 hours.**

The dedicated session « ONCOLOGY - Vectorised internal radiotherapy: beyond boundaries» is the one that drawn our attention.

Few insights today before joining the event.

Liver as First Indication

The guideline of *Europe* EASL (European Association for the Study of the Liver) outlines the circumstances in which **Selective Internal Radiation Therapy (SIRT)** and External Beam Radiation Therapy (EBRT) **may be used as an alternative to percutaneous ablation.**

The EASL is broadly aligned with NICE guidance on the use of SIRT in **patients with HepatoCellular Carcinoma (HCC).**



France In France, the last recommendations of the Association Française pour l'Etude du Foie (AFEF), published february 2025, reported that **studies involving personalised dosimetry** and improved patient selection ... are consistent and **have demonstrated very interesting clinical results (response rate, median overall survival > 20 months).**

These recommendations established the SIRT for locally advanced HCC in the therapeutic decision tree.

Approved for a French Reimbursement

“Hepatocellular carcinoma is a serious and common clinical condition whose treatment is a major public health concern.”, wrote the **French National Authority for Health (HAS)** in its decisions to approve reimbursement in

- nonresectable hepatocellular carcinoma (HCC),
- colorectal metastasis (mCRC),
- and in first line of palliative treatment for intrahepatic cholangiocarcinomas (CCi).

The French reimbursement pathway is known to be “unique”. To make it simple we have to keep in mind that 3 committees are involved.

FIRST, the **HAS**. Access to reimbursement in France requires companies to submit a dossier to HAS which is responsible for Health Technology Assessment following the granting of a CE marking.

The HAS assesses the efficiency and budget impact of health products that are presumed to be innovative and likely to have a significant impact on Health Insurance expenditure.

SECOND, the clinical assessment and appraisal of these dossiers is performed by the **National Committee for the Evaluation of Medical Devices and Health Technologies (CNEDiMTS)** whose recommendation is then submitted to a **THIRD** actor that is the **Economic Committee of healthcare products (CEPS)** in charge of pricing negotiation.

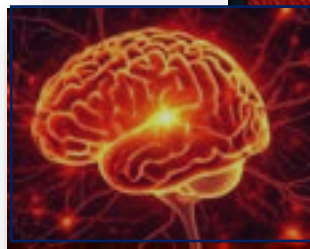
The final decision for registration of the reimbursement list is then published in the **OFFICIAL JOURNAL**.

Indications Extension ?

Two speakers will open the subject during the F.I.R.E Congress:

- **Riad SALEM**, (Department of Radiology, Northwestern Feinberg School of Medicine, Chicago, USA) : « **Yttrium-90 : from prostate to brain ?** »
- **Maxime BARAT**, (Department of Radiology, AP-HP, PARIS): « **Hepatic neuroendocrine tumours : SIRT perspectives** »

Brain ?



NeuroEndocrine
Tumour ?



Prostate ?



Flashforward



« *Guaranteed interesting sessions !* »
for the F.IR.E 2025.

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SOURCES

- EASL 2025: Update to Guidance on the Management of Hepatocellular Carcinoma
- European Association for the Study of the Liver. EASL Clinical Practice Guidelines on the management of hepatocellular carcinoma. *J Hepatol* 2025; **82** (2): 315–374
- NICE. Selective internal radiation therapies for treating hepatocellular carcinoma. NICE Technology Appraisal Guidance 688. NICE, 2024.
- AFEF recommendations (« Management of hepatocellular carcinoma & tools for practice »), february 2025 - « Prise en charge du carcinome hépatocellulaire & outils pour la pratique »
- CNEDiMTS decision, 24 may 2022.
- CNEDiMTS decisions, 8 october 2024.
- IRSN form (Institut de Radioprotection et de Sûreté Nucléaire)