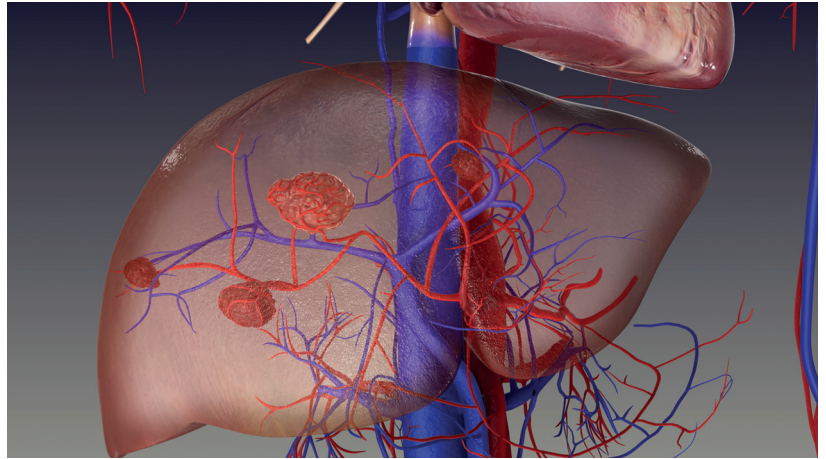
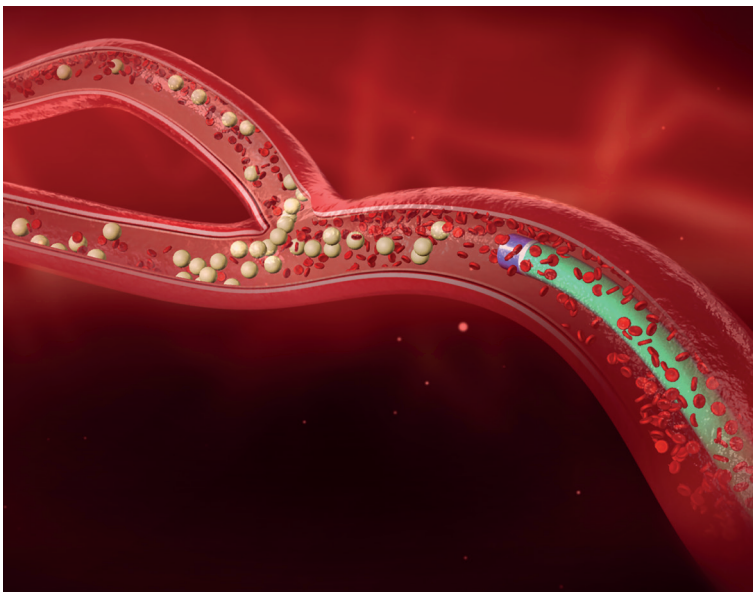


What is SIRT?

- Selective Internal Radiation Therapy (SIRT), also known as Radioembolisation, is a liver-directed therapy for inoperable liver tumours.
- SIRT is performed by specially trained physicians, called Interventional Radiologists and Nuclear Medicine Physicians.
- A microcatheter is used to deliver millions of microspheres with the radioactive isotope yttrium-90 (Y-90) into the liver through the hepatic arterial system, where they lodge in the tumour microvasculature and target liver tumours directly.



What are SIR-Spheres Y-90 resin microspheres?



- The high number of microspheres provide a more uniform radiation distribution, enabling treatment of solitary and multifocal liver tumours.¹⁻³
- With a specific density close to that of red-blood cells,¹ they are carried by the blood flow, penetrating deep into the tumour microvasculature.
- Tumour vasculature allows a targeted, high dose of radioactivity whilst sparing healthy liver tissue..
- Alternating injections of SIR-Spheres and contrast allow improved visualisation and control, at any time during the procedure.
- Injections can be interrupted and restarted, and the catheter position can be verified and adjusted easily.
- Administration is done using a specially designed acrylic box and a V-Vial holder for beta-radiation shielding.



V-Vials with prepared activity, shipping vial and lead pot for shipment

Product information

Product features

Manufacturer	Sirtex Medical Pty Ltd
Approval	CE mark since 2002
Indication	Treatment of unresectable hepatocellular carcinoma (HCC) or unresectable metastatic liver tumors from primary colorectal cancer in patients refractory to or intolerant of chemotherapy.
Isotope	Yttrium-90
Decay product	Zirconium-90
Composition	Resin
Specific density	1.125-1.6 g/ml (comparable to red blood cells)
Diameter	32.5 µm ± 2.5 µm (range 20-60 microns)
T _{1/2}	64.1 h (94% within 11 days, about 1% decay/hour)
β-energy (max.)	2.27 MeV (I _β = 100%)
Activity-to-dose conversion factor	49.67 Gy/ (GBq x Kg)
Penetration in tissue	2.5 mm (mean)
Radioactivity per sphere	68 Bq ± 10% at calibration date & time*
Presentation of activity	Single dose size containing 3.0 GBq ± 10% of Y-90 at calibration date & time in 5 ml water for injection, moist sterilised
No. of microspheres per 3 GBq vial	44 million*

Treatment features

Possible treatment strategy	Bilobar disease: Whole liver, sequential Unilobar disease: Single lobe selectively Segmental disease: Segmental, super-selective
Nature of administration	Flow-directed, slow and controlled with full visibility
Flexibility of administration	Shipping vial can be divided into multiple treatment vials for a single patient

Services

Training	TEC** Programme, Workshops, Ongoing support
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Ordering information

Item number	Item
SIR-Y001	SIR-Spheres Y-90 resin microspheres (available in various activities at time of delivery) Each dose shipment includes one accessory pack (SIR-K002)
SIR-K002	Accessories Pack (includes 1 Delivery Set, 1 V-Vial and 1 V-Vial Holder)
SIR-V001	V-Vial
SIR-D001	Delivery Set
SIR-H001	V-Vial Holder
SIR-S001	Syringe Shield
SIR-B001	Delivery Box

References:

1. Sirtex internal data
2. Burrill J *et al.* J Nucl Med Radiat Ther 2011; 2:107. doi:10.4172/2155-9619.1000107.
3. Chiesa *et al.* J Nuc Med Molmaging 2011; 55: 168-197.

* On average there are 44 million microspheres in each SIR Spheres Y-90 resin microsphere delivery vial with a standard deviation of 2.6 million. Engineering test results on file

**Training, Education & Certification

APM-EMEA-007-05-21-V2

SIR-Spheres® is a registered trademark of Sirtex SIR-Spheres Pty Ltd

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