THE HARLEY STREET CLINIC
INTERVENTIONAL ONCOLOGY CENTRE

A GUIDE TO SELECTIVE INTERNAL RADIATION THERAPY (SIRT)
WHAT IS SELECTIVE INTERNAL RADIATION THERAPY (SIRT)?

SIRT is a procedure in which a large dose of radiation is injected directly into the liver to destroy cancer cells. The radiation is mounted onto microscopic beads which are injected directly into the blood vessels which supply the tumour and hence minimising any damage to your surrounding tissue. This also means the rest of your body isn’t exposed to the effects of the treatment.

SIRT is used to treat primary cancer of the liver (hepatocellular carcinoma) and secondary spread from the bowel and other organs. It may shrink a tumour enough to make it possible to remove with surgery.

SIRT may be given in combination with chemotherapy, as there is some evidence to suggest synergistic action. It also offers a treatment option if other treatments, such as chemotherapy or surgery aren’t suitable for you or have failed.

SIRT is performed in two stages, usually one to three weeks apart. The first part is to assess the liver and prepare it for treatment. The second part is to deliver therapy.
Preparing for SIRT

Before your procedure
The radiologist will see you in clinic prior to the procedure to discuss what will happen during and after the procedure. He or she will also discuss the benefits and risks of SIRT. This is a good opportunity to ask any questions so you understand exactly what is going to happen before you sign a consent form to go ahead.

Let the radiologist know if you take any medicines and if you have any allergies. You will need to have a blood test to check that your blood clots normally.

The day of your procedure
Do not have any food for six hours before and food for 2 hours prior to the procedure. You can take all your regular medicines except any which thin your blood, such as warfarin, aspirin or clopidogrel.

When you are on the ward, a nurse will ask you several questions about your health and any medicines you take. He or she will also check your blood pressure and pulse, and ask you to change into a gown. Your nurse will bring you to the X-ray department on your bed.

What happens during the procedure?
Stage 1 (angiogram and embolisation)
In the procedure room, you will lie on a special X-ray table. The radiologist will shave your groin and clean your skin with antiseptic fluid and cover it with a sterile sheet. Next, the radiologist will inject a local anaesthetic. This may sting a little at first but will then completely block pain from the area. The radiologist will insert a catheter (fine plastic tube) through the skin in your groin and into your artery. He or she will inject dye through the catheter to highlight your blood vessels and take X-ray images. You may get a warm feeling and a metallic taste in your mouth from the dye. The radiologist will look at the X-ray images to
identify the blood vessels that supply the tumour. He or she will then inject an embolic agent, for example tiny coils, to block off any blood vessels that the radiation therapy might escape through to other parts of your body. At the end of the procedure, the radiologist will give you an injection of a radioactive dye and you will have a scan in the nuclear medicine department of the hospital. This can take up to an hour. The radiologist will then remove the catheter and apply pressure to stop any bleeding. He or she will place a dressing over your skin afterwards. The procedure can take a number of hours. The procedure will be performed under mild sedation.

Stage 2 (treatment)
The radiologist will again insert a fine catheter into the artery in the groin and pass it into the artery that supplies the liver. Through this the radiation particles will be injected into the tumour. The microspheres will emit radiation for about two weeks, which will destroy the cancer cells. You will have another scan after the procedure to assess the distribution of radiation in the liver. This procedure will be performed under sedation or general anaesthetic.

AFTER THE PROCEDURE
You will return to your ward to recover and will need to stay lying on your back for around four hours, and stay in hospital for 1 to 2 nights.

Common side-effects of the procedure include:

- pain – you may need pain relief to help with this
- nausea or vomiting
- a fever
- tiredness

Going home
Ask a friend or family member to take you home. Keep your dressing on for 4 days. The dressing is waterproof so you can have a shower but don’t have a bath until your skin has healed.
When you go home, you will still have the radiation in your body and will need to take some precautions to protect people around you.

- Wash your hands thoroughly after you go to the toilet.
- If you have a partner, sleep in a separate bed for two nights.
- Do not spend long periods in close contact with children or pregnant women for two days.

**ARE THERE ANY RISKS?**

SIRT is commonly performed and generally safe. However, as with every procedure, there are some risks associated with SIRT. It is common to have some bruising or bleeding in your groin after the procedure. You may have a reaction to the dye and feel sick or get a rash on your skin too.

There is also a small chance of an infection so you will be given antibiotics prior to treatment.

It’s possible that the embolisation material can lodge in the wrong place and cut off the blood supply to normal tissue. There is also a chance the radiation may damage other organs. If you have had previous treatment for cancer in the liver, it is possible the radiation can cause liver disease. Individual patient risk will be assessed prior to treatment.

**HOW TO FIND US**

**By Car**
The nearest long stay National Car Park (NCP) is in Cavendish Square. Short stay meter parking is also available in surrounding streets as well as on Harley Street.
By Train
The nearest tube stations are Regent’s Park (Bakerloo line), Baker Street (Bakerloo, Circle, Hammersmith and City, Jubilee and Metropolitan lines) and Bond Street (Central and Jubilee lines).

By Bus
Bus routes 18, 27, 30, 205 and 453 all stop near the top of Harley Street.

Any questions, email us at: IOC@HCAhealthcare.co.uk

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