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Selective internal radiation therapy (SIRT) in radiology

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Patients with isolated colorectal cancer (CRC) liver metastases who are unable to undergo surgical resection due to tumour size, locality, multifocality or insufficient hepatic reserve may be a suitable candidate for Selective Internal Radiation Therapy (SIRT). SIRT, also known as transarterial radioembolisation or radioembolisation, is a minimally invasive procedure performed by an Interventional Radiologist in the angiography suite. Patients who have primary or secondary liver cancer have greater survival benefit as the liver tumour reduces in size creating the possibility of liver tumour resection or liver transplant. Prior to the procedure the patient would have a baseline PET/CT scan followed by the first part known as the “work up” phase where patient suitability is assessed and patient

specific dose of radioactive microspheres is ordered for the second part known as the SIR-Spheres implantation phase. Arterial access is gained through a groin puncture where guidewires and a thin catheter allows the radiologist to identify the hepatic artery leading to the liver tumour avoiding the portal vein primarily supplying blood to normal liver parenchyma. Millions of radioactive microspheres or SIR-Spheres are injected through the catheter selectively irradiating liver tumours minimising damage to healthy surrounding tissue. Four weeks to three months post procedure the patient will have a progress scan and may be retreated with SIR-Spheres although it is normally a single treatment.

Biography

Grace Moscatelli completed her Bachelor of Nursing at University of Western Sydney and is currently studying Bachelor of Nursing with Professional Honours Specialising in Anaesthetic and Recovery Nursing at University of Tasmania. Moscatelli works at a local Sydney hospital in Australia as a Registered Nurse in the Radiology, Nuclear Medicine and PET Department. She has presented at Medical Imaging Nurses Association National Conference in Melbourne in 2017 and Euro Cancer International Conference in Rome, Italy in 2018.

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