Radiology at the Basingstoke and North Hampshire Hospital (BNHFT)

The work of the Radiology Department at the Basingstoke and North Hampshire Hospital (BNHFT) can be divided into diagnostic and interventional work.

The diagnostic side involves the use of the whole gamut of x-ray imaging equipment such as body scanners, both CT and magnetic resonance (MRI) scanners, ultrasound and nuclear medicine as well as the whole range of x-ray techniques.

We use this equipment on a wide variety of patients with all types of illness; heart failure, trauma such as car crashes, broken wrists, abdominal pain from gall stones etc but a significant portion of our work deals with finding patients who have cancer, recognising the type of cancer and mapping its position in the body. This is used for planning a wide range of surgical techniques or before starting and then to monitor the affects of chemotherapy or radiotherapy.

Working within the department of radiology is the department of interventional radiology, also known as “radiological surgery” particularly in the States, which deals with an increasing variety of minimal access surgical techniques. These techniques are used in places where it is not possible to look directly at the area in question, such as within blood vessels where the density of the blood prevents light from penetrating.

In places where we can use light we prefer to look directly, for example during laparoscopic surgical techniques, however, there are multiple places within the body where it is not possible to use light or to visualise things directly.

As an example, over the last three years, we have developed the technique of radio frequency ablation of tumours in the liver, kidneys and lung. This involves placing a fine needle through the skin directly into the heart of the tumour and then firing microwave energy down the needle into the tumour, heating it up and killing it.

These techniques are applicable to many people with relatively small tumours and, appropriately used, usually result in patients being able to go home after 24 hours with minimal discomfort or inconvenience. We work closely with the other surgical teams and the combination of sets of techniques can be very advantageous.

As an example, there are some patients with liver cancer who need to have part of their liver removed but we know that the remnant of liver would not normally be able to sustain life. In some of these patients we block off one of the blood vessels to the liver approximately one month prior to the rest of the liver surgery, this is done from within the blood vessels using long, thin catheters to block off portions of the portal vein to the liver (with a type of superglue!). The patients go home the next day and by the time they return for their surgery the segment of liver that is due to be left in place will have grown significantly and will allow the surgery to go forwards with far greater safety.

These interventional radiological/radiological surgical techniques also widen the range of tools at our disposal to sort out individual problems posed by patients with particularly complex disease. We may be able to sample “lumps and bumps” which we can see with other scanning so that we can tell whether they are part of the disease process or not.

We can allow surgery to proceed with far greater safety in patients who have a history of deep vein thrombosis, possibly causing clots to travel up into the lungs (pulmonary emboli). This potentially fatal condition can be almost completely prevented by placing a small metallic filter in the main blood vessel that brings blood up from the lower half of the body.

The department of radiology, both diagnostic and interventional is constantly on the look out for new techniques that help in the battle against cancer. As an example, the most recent technique involves PET/CT scanning which is a new form of body scanner that is able to identify disease more accurately in at least one third of cases. There are only a handful of these modern scanners in the UK at present but we have gained access to our closest one, at Guildford where when of our radiologists is one of three specialists who report all of the cases scanned there.

About Dr Graham Plant - Consultant Interventional Radiologist

Dr Graham Plant has been a Consultant Interventional Radiologist at the North Hampshire Hospital for 20 years.

Interventional Radiology, also referred to in the US as Radiological Surgery, is the use of "X-ray" equipment to see what is happening during a variety of minimal access operations.

He set up the department and has developed a service including tumour ablation in the liver, kidneys and lungs, hepatobiliary interventions in conjunction with the rest of the hepatobiliary surgical team as well as a wide variety of vascular and non vascular interventional procedures on both cancer and other patients.

Dr Plant has a particular interest in the prevention of the effects deep vein thrombosis and pulmonary emboli by the use of vena caval filters, and in particular the long term efficacy and effects of these devices.

He is the Chairman of the North Hampshire Medical Education Trust, the charity that built and runs The Ark, the education and conference centre building that houses the Pelican Cancer Foundation.