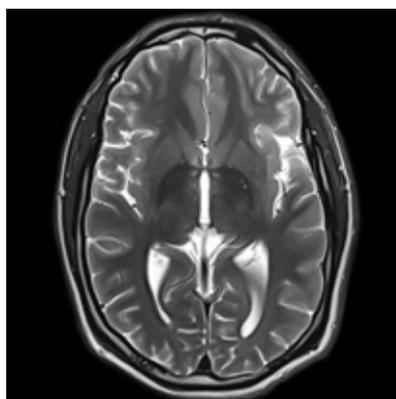


March 2012

Top New 3T MRI Scanner on the Shore



Auckland Radiology Group is proud to announce the installation of a Siemens Magnetom SKYRA 3 Tesla MRI scanner at The Northern Clinic, 212 Wairau Rd., Glenfield, next door to the Southern Cross Hospital. This is the first high-field MRI scanner ever situated north of the Harbour Bridge.

Magnetic resonance imaging (MRI) has contributed to a revolution in the practice of clinical medicine, especially in neurology, orthopaedics and sports medicine.

In terms of basic principles, MRI works by low frequency radio waves penetrating the body and being reflected back off magnetised protons within the tissues. This enables superb fat/water differentiation and thus excellent imaging of the soft tissues throughout the body. Superconducting magnets which function at near absolute zero temperature (-270 degrees Celsius) allow for high magnetic fields without significant heat production. Most MRI scanners utilise 1.5 Tesla magnetic fields. By doubling the strength of the magnetic field, a 3 Tesla magnet quadruples the signal-to-noise ratio of the scanner, which can be translated into higher resolution images or faster scan times or both.

Non-irradiating, non-invasive, safe and exquisitely sensitive, high-field magnetic resonance imaging is the gold standard diagnostic technique for a host of medical applications, particularly neurological and musculoskeletal.

This new top-of-the line, fast, short, wide-bore scanner, which is to commence operation in March, offers unprecedented patient comfort, accurate quick high resolution imaging, consistency and efficiency. It will be particularly welcomed for neurological, musculoskeletal, head & neck and pelvic imaging applications, especially for detailed imaging of small structures. This allows fast, accurate non-invasive presurgical diagnostic assessment, conveniently accessible to the people of the North Shore. Patients will feel less claustrophobic and much more comfortable in this scanner because of its wider bore.

ARG values our reputation as the top sports-medicine imaging experts in Auckland. We also offer subspecialty expertise in neurological, oncological, gynaecological and general MR imaging.

As our second MRI scanner at the Northern Clinic, the new SKYRA 3T adds an exciting new dimension to our existing GE 1.5T MRI service. MRI doesn't come any better than this!

A whole body STIR image, frequently used to search for skeletal metastases, myeloma or unknown primary neoplasms. The MRI version of a bone scan, but including the soft tissues.

FOR APPOINTMENTS AND ENQUIRIES PHONE: (09) 442 2963

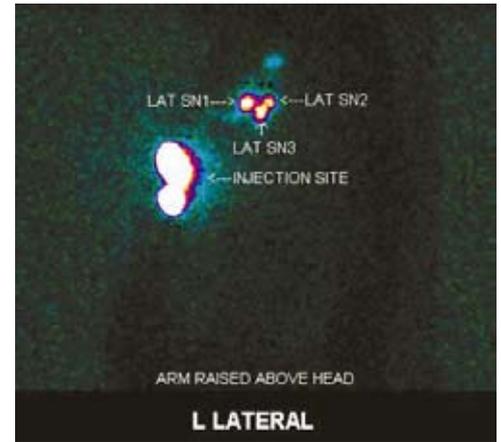
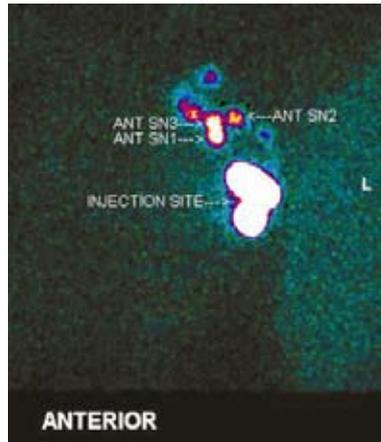
LYMPHOSCINTIGRAPHY

The lymphatic system carries lymph through a complex network of channels and nodes. Lymphoscintigraphy is a simple way to accurately assess the specific lymphatic drainage pathway(s) of a tumour. A small amount of radiopharmaceutical/colloid agent is injected adjacent to the tumour and its lymphatic drainage serially imaged by gamma camera over a period of time. CT scanning (SPECT/CT) may also be performed.

Breast cancer and melanoma frequently spread through the lymphatic system. Lymphoscintigraphy can be used in these patients to identify the first node or nodes responsible (sentinel node) for draining the cancer site. This enables a surgeon to plan a procedure to the specific characteristics of each individual case.

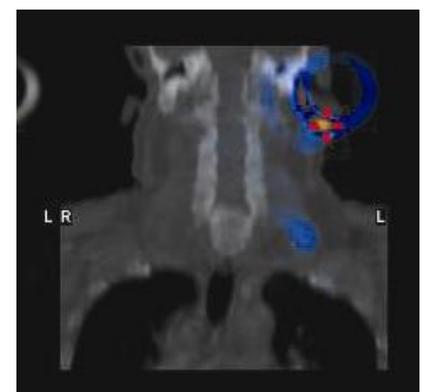
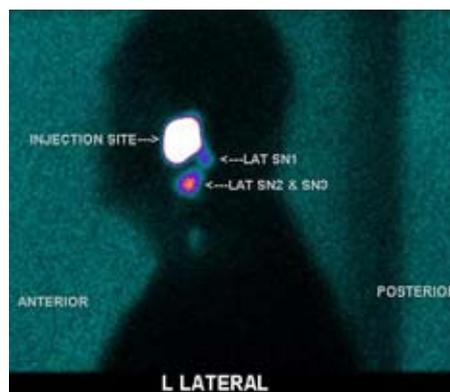
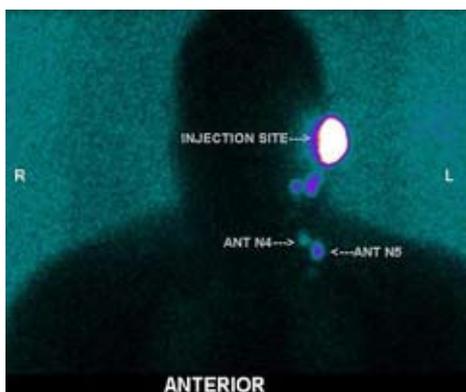


Fig 1(a) A mammogram shows a nodular, spiculated carcinoma in the upper outer quadrant of the left breast. A screening mammogram 12 months earlier was normal.



Figs 1(b) Anterior and **(c)** lateral lymphoscintigraphy images show that Technetium – 99m/Colloid has been injected in the region of the tumour and has drained into 3 sentinel axillary nodes (SN 1-3). Marks made on the skin and/or a hand –held Geiger-counter will help the surgeon to these nodes.

Auckland Radiology Group, 101 Remuera Road, is the only Nuclear Medicine private practice in Auckland that offers an on-site radiologist and full-time nursing staff. We also offer immediate reporting for this procedure, and use the latest SPECT / CT gamma camera. Lymphoscintigraphy is readily available, accurate and safe, even in pregnant women.



Figs 2(a) Anterior and **(b)** lateral lymphoscintigraphy images after injection of Technetium – 99m/Colloid into the region of a left pre-auricular Primary Small Cell Carcinoma of the skin (Merkel tumour). Primary lymphatic drainage is to 3 local sentinel nodes (SN1-3) and these delayed images show secondary drainage to 2 supraclavicular nodes (ANT N 4&5)

Fig 2(c) is a SPECT/CT image of the same patient. This combination of CT with lymphoscintigraphy facilitates precise localisation of sentinel nodes in 3 planes.

We are happy to tailor each examination to the referrer’s individual requirements: i.e. subcutaneous, periareolar or pre tumoral injection, local anaesthesia, ultrasound guidance or multiple injections. Please specify your requirements on the request form. Should you require this service or if you have any queries regarding this procedure please do not hesitate to contact radiologist Dr Nicholas Dodd or Charge nuclear technologist Nick Mafi on 5294850, extension# 223.

Paul White