

Lymphoma — A cancer under control



The body has

a lymphatic system - a network that conveys electrolytes, water, proteins, antibodies, etc. from tissues to the bloodstream. At various points along the system are lymph nodes, particularly in the groin and armpit, which act as filters for lymph. Lymphatic tissue is also in many organs of the body, such as the spleen, liver, bone, skin, marrow and intestine. Lymphoma is a malignant tumour disease of the lymph nodes, divided into Hodgkin's Disease ("HD") and Non-Hodgkin's Lymphoma ("NHL"). HD starts in a single location, and then spreads to adjacent lymph nodes in a regular pattern, while NHL does not spread in a regular pattern, and can show up almost anywhere in the body. Lymphoma is indicated by enlargement of the lymph nodes.

There are approximately 7080 new cases of lymphoma annually in Canada, 810 of them in BC. It is the fifth most common cancer, and the seventh most common cause of death. While cancer in general is primarily a disease of older Canadians, NHL demonstrates a significantly increasing incidence trend among young adults aged 24 - 44 years.

Lymphoma is one of the most successfully treated cancers, and in the past CT and MRI scans have been relied on to stage disease (check for spread) and monitor lymphoma patients. However, CT and MRI see only bone structure and tissue, and therefore have significant shortcomings. Therapy may successfully kill off tumour cells without noticeable anatomic changes so that CT and MRI may misread an enlarged lymph node as still being a

disease site when in fact the tumour has been destroyed. On the other hand, if there is no physical evidence of disease (or none has yet developed), a CT or MRI scan will likely be negative.

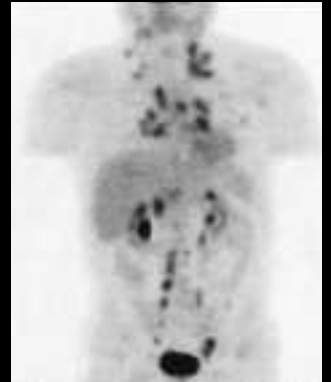
PET (Positron Emission Tomography) scans detect diseased cell function, rather than the effects of disease on the anatomy. Because lymphoma is a disease that is often widespread, PET scans, which survey the whole body, are particularly valuable.

For example, a 27-year-old man with lymphoma had a PET scan before chemotherapy. Cancer was found in the right shoulder and thoracic spine. After commencing chemotherapy, a PET scan showed non-specific bone marrow response. A later follow-up demonstrated complete remission. PET scans were useful in this patient's management because they showed the chemotherapy was working and that the cancer cells were being destroyed. This helped doctors know that further treatment was not needed, and gave the patient the relief of knowing that despite the hardships of chemotherapy, his condition was improving.

PET scans are used in Lymphoma cases:

- > To determine the extent of the disease before treatment
- > To monitor the response to treatment
- > To check for recurrence
- > To make a difference in diagnosis

LYMPHOMA CASE STUDY



PRE-TREATMENT PET IMAGE



POST-TREATMENT PET IMAGE

Patient History: 29-year-old male patient with a history of lymphoma, recurrent after chemotherapy and stem cell transplantation. After the initial PET showed extensive metastatic disease (wide spread cancer), patient underwent repeat stem cell transplantation. The follow-up PET scan shows a complete response to the transplant, indicating the disease is in remission.

Full-body clinical PET scans are available at the Vancouver PETSCAN Centre.



For more information call:
(604) 689-7776
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