

Malignant Melanoma — Cancer of the Skin — The “Wild Card” Cancer



Malignant

melanoma is aggressive cancer of the skin. The occurrence of this cancer is increasing dramatically in people with light-colour skin throughout the world, and the death rate has also increased, particularly in the older Caucasian population. In Canada there are approximately 3,500 new cases of malignant melanoma annually, 600 of them in BC.

As with many cancers, the causes of malignant melanoma are many. The progression of melanoma relates to increasing levels of exposure to the sun, especially ultraviolet B radiation, in combination with the patient's family and gene characteristics. Melanomas can be located anywhere on the body, most commonly on the lower

extremities of women and the back in men. The “ABCD” rule used to watch for melanoma is: A - Asymmetry of the lesion; B - Border irregularities; C - Colour variation; and D - Diameter greater than 6 mm. A lesion with changes in size, configuration or colour should be investigated. Where patients are diagnosed early, surgical removal can be the cure.

As is usually the case in cancer, the presence or risk of metastases (spread) is the major issue, and the spread of malignant melanoma is unpredictable. Proper tumour staging (determining the extent of disease) is key to choosing the appropriate treatment strategy. Conventional imaging with CT and MRI are intrinsically spot-imaging methods, and do not

evaluate the entire body. CT often misses small metastases and so can fail to detect spread of the disease. PET takes the “wild card” out of the pack.

The best single imaging modality to define the extent of malignant melanoma is PET. PET (positron emission tomography) scans are images of the actual functioning of metabolic activity in the body, including the functioning of active disease, which shows up on the image as a “hot spot”. CT and MRI scans, on the other hand, image body anatomy.

PET can replace the standard battery of imaging tests performed on patients who are at high-risk for melanoma. Studies show PET to be highly accurate in differentiating benign from malignant lesions. In one melanoma study, PET found previously unknown metastases in 20% of the patients, and in most cases, the metastases were surgically removed. PET typically has excellent results in staging patients, tracing spread to the lymph nodes and viscera and discovering cancer as small as 4 to 5 mm in size.

The major advantage with PET in melanoma, with its characteristic of unpredictable metastases, is the whole body examination.

The next article will focus on the use of PET with lymphoma. ■

MELANOMA CASE STUDY



MELANOMA PET IMAGE

MELANOMA CASE STUDY

Patient History: 69-year-old male patient with metastatic melanoma on left shoulder.

Original Diagnosis: CT scan demonstrated tumour of the distal femur with negative findings in the abdomen. Bone scans showed an abnormal femur and four spine lesions.

PET Diagnosis: Whole body PET scan demonstrated numerous lesions throughout the body.

Change in treatment: Patient was scheduled for an amputation and total knee replacement based on CT and bone scan results. After PET found multiple lesions, surgery was cancelled, avoiding the trauma of an operation that would not be effective.

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



For more information call:
(604) 689-7776
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www.petscan.ca

