

The International Harmonization Project is a group of international experts who have suggested some common guidelines to follow when using PET scans for response assessment after treatment completion. Several issues have been addressed in these guidelines:

PET scans are a good imaging test for response assessment:

PET scans are more accurate than most other imaging tests for correctly picking up residual disease after treatment. Though CT scans and MR scans can pick up masses remaining after treatment, they are unable to make out whether these masses actually contain active disease. Some masses may have only fibrosis or dead (necrotic) tissue. PET scans can differentiate between these inactive masses and residual active disease.

Most of the common types of lymphoma show up well on PET scans:

Hodgkin lymphoma, diffuse large B-cell lymphomas, and follicular lymphomas make up the majority of lymphomas that occur. These lymphomas show up well on PET scans and this test should be used for response assessment. Some other lymphomas, like mantle cell lymphomas and some slow growing lymphomas show up less well on PET and the role of this test in these lymphomas is less certain.

PET scans for response assessment should be timed correctly:

Treatment with chemotherapy and radiation often results in temporary inflammatory changes that may show up positive on a PET scan when there is no real disease. These changes take some time to subside. It is recommended that PET scans be performed only after 3 weeks of chemotherapy and 8-12 weeks of radiation for the true picture to emerge.

Interpreting PET scan uptakes in different regions of the body:

PET scans sometimes turn up positive in certain areas even when there is no active disease (this is called a 'false positive'). This happens because some areas with inflammation or infection, or even active normal cells can show up bright on PET scans. In order to interpret PET scans better, some basic points have been suggested to the radiologists reporting your PET scan. Guidelines have been presented regarding what to consider as positive, how to report lung nodules, bone marrow involvement and liver and spleen involvement.

Should PET scans be done during treatment?:

There is no consensus on whether performing a PET scan during treatment offers any real benefit. It can give us an idea on whether the disease is regressing, but if it turns out that it is not – there may not be much one can do in terms of change of treatment that may improve a

patient's chances. On treatment scans are also spoiled by factors such as inflammation that can make the interpretation of on-treatment scans more complex.