Guidelines for PET Reporting

To standardize reporting for PET/CT studies, our group will use the following structure and format for reporting lesions.

Tumor Lesion Format: Tumor lesions should be reported in the following format, using bullets for more than one lesion.

- **Location, image number, CT measurement (in cm), previously** prior CT measurement (in cm)**, SUV, previously** prior SUV

***Note:** There is no need to say SUVmax as we indicate this in the report header that all SUVs refer to SUVmax

If a macro is preferred instead of dictating this, there are two macros under Mount Sinai systemwide under PET section.

- *PET lesion* – use if no prior comparison
- *PET lesion prior* – use to compare to prior measurements

If there is more than one lesion, please convey using a general statement first to denote the number of lesions, FDG avidity (and degree if relevant), and the organ/site of lesions

1. Number of lesions. Use standardized words to convey overall number of lesions – see macro “PET lesion numbers”
    a. Few = 5 lesions or less
    b. Multiple = 6-15 lesions
    c. Numerous = >15 lesions
2. FDG avidity: mildly FDG avid, moderately FDG avid – this is pretty subjective and some readers like to convey degree while others do not, so will have variability here.
3. Organ/site of lesions: hepatic, lung, nodes, osseous, etc

Put together, an example of this structure would be.

Multiple FDG avid liver lesions, for example:

- Segment 6, image 71, 3.2 x 2.3 cm, previously 2.1 x 2.0 cm, SUV 5.1, previously 3.2
- Segment 7, image 65, 2.2 x 1.0 cm, previously 1.2 x 1.0 cm, SUV 7.6, previously 4.2

In this example, this patient has 6-15 liver lesions and we are giving some representative examples.

***Note:** Please note that only the lesion location by the hepatic segment is mentioned, and the words “lesion, hepatic lesion, hepatic hypodensity” are not repeated. This is for reporting brevity and conciseness and also to decrease reader fatigue. Similarly, for nodes, there is no need to repeat “lymph node” again under the bulleted lesions, just mention in the general statement part, for example:

Few FDG avid bilateral neck nodes,

- Right level 2, image 31, 2.1 x 1.2 cm, SUV 4
- Left level 3, image 42, 1.2 x 1.0 cm, SUV 5

In general, **two representative lesions per organ or site is enough,** however this can be up to discretion of the reader. Typically, the two largest and/or most FDG avid lesions are chosen or the most reproducible lesions to measure are chosen.

For lesions with a discordant or mixed response, then this may be a reason to provide more lesions.

Lesion response assessment:

In conveying response assessment, use the following words to denote an overall pattern

- Increased (or slightly increased) - lesions have increased in size and/or FDG avidity
- Decreased (or slightly decreased) - lesions have decreased in size and/or FDG avidity
- Unchanged or Stable – no significant change
- New lesions – this is usually in combination with increased, for example, new and increased FDG avid lung lesions
- Mixed changes – some lesions decreased, some increased -> discordant response

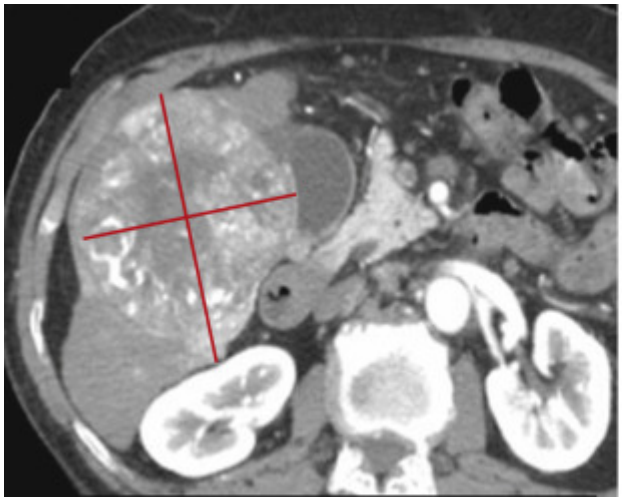
Using the same example as above, this would look like:

Increased multiple FDG avid liver lesions, for example:

- Segment 6, image 71, 3.2 x 2.3 cm, previously 2.1 x 2.0 cm, SUV 5.1, previously 3.2
- Segment 7, image 65, 2.2 x 1.0 cm, previously 1.2 x 1.0 cm, SUV 7.6, previously 4.2

How to measure:

In general, we want to measure the CT size using bidimensional measurements, with the longest dimension (long axis) first, followed by orthogonal measurement of the short axis. This goes for nodes as well as organ lesions.



If lesion is <1 cm, then can consider single long axis measurement, i.e. small lung nodules.

Some lesions may be too small to accurately measure, and for those, readers may choose to report as subcentimeter or punctate, with some variability here.

Note: MIM has a useful 2D Measure tool that will provide orthogonal CT measurements, with SUV max.