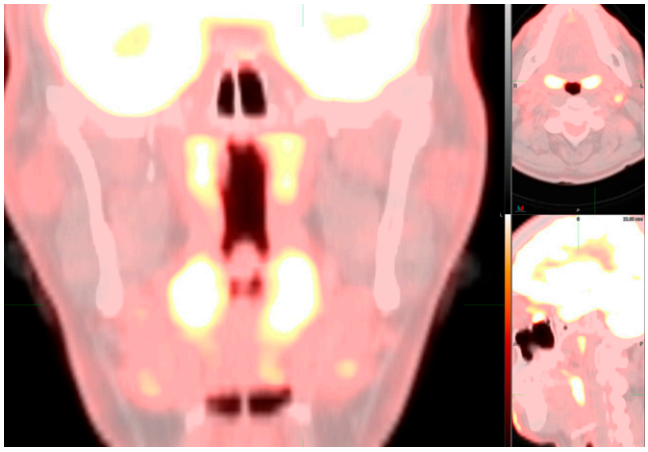
SNMMI Statement: Possible Effect of Omicron Infection on ^{18}F-FDG–Based Imaging

On January 14 the SNMMI COVID-19 Task Force released a statement on reports of an unusual imaging pattern seen in ^{18}F-FDG PET/CT and ^{18}F-FDG PET/MR imaging that could be the result of COVID-19 Omicron infection. Unlike ^{18}F-FDG PET/CT patterns seen with infections from previous strains of COVID-19 with principal involvement of the lungs, the new array of findings associated with Omicron are primarily centered in the upper aerodigestive tract and cervical lymph nodes. This includes prominent, symmetric ^{18}F-FDG uptake throughout the nasopharynx, oropharynx, and tonsils, with or without associated ^{18}F-FDG–avid cervical lymphadenopathy, particularly in the suprahyoid neck. The Task Group reported that "based on what we know about the Omicron variant, it is conceivable that this pattern, whenever correlated with COVID-19 infection, is a result of the presently dominant Omicron strain."

The Task Force recommended that this pattern be taken into consideration at the time of ^{18}F-FDG PET/CT interpretation and that the possibility of infection with the Omicron variant of COVID-19 should be entertained in differential diagnosis. Because this pattern can by no means be diagnostic of COVID-19 infection, the Task Force made the following recommendations:

1. Check the patient records to see if there is a recent positive COVID-19 test.
2. Determine if the patient is at higher risk of COVID-19 infection based on current symptoms or due to recent exposure or travel. If so, a recommendation can be made to test for COVID-19 in the appropriate setting.
3. Compare with prior ^{18}F-FDG PET/CT examinations and the patient's history to determine if this represents a chronic inflammatory/reactive process or stable malignancy, such as lymphoma.
4. Various differential diagnostic possibilities should be considered if this pattern is new or if there is interval progression, including, but not limited to, infection with COVID-19, other viruses such as Epstein-Barr virus, malignancy, and bacterial infections.
5. This pattern may also be seen in children and younger adults but should be interpreted cautiously in view of normal increased activity that can be physiologic. Correlation with history and symptoms and comparison to prior examinations are recommended.



SNMMI COVID-19 Task Force members have observed an unusual imaging pattern on ^{18}F-FDG PET/CT and ^{18}F-FDG PET/MR imaging, including symmetric ^{18}F-FDG uptake throughout the nasopharynx, oropharynx, and tonsils, with or without associated ^{18}F-FDG–avid cervical lymphadenopathy, particularly in the suprahyoid neck. They reported that this pattern is a possible result of COVID-19 infection with the Omicron variant.

Over the past 18 months, the SNMMI COVID-19 Task Force has met regularly to monitor, support, educate, and provide guidance to the nuclear medicine and molecular imaging communities. The Task Force is led by Munir Ghesani, MD (Mount Sinai Health System; New York, NY).

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