Radiology

Imaging of COVID-19 Vaccination at FDG PET/CT

Manuscript type: Images in *Radiology*

Authors:

1. Michal Eifer, MD, Department of Diagnostic imaging, Sheba Medical Center, Tel-Hashomer, Israel
2. Yael Eshet, MD, Department of Diagnostic imaging, Sheba Medical Center, Tel-Hashomer, Israel

Institution address: Sheba Medical Center Hospital- Tel Hashomer, Sheba road 2, 52621 Ramat Gan

Authors' address:

1. **Michal Eifer (Corresponding Author)**
   michal.eifer@sheba.health.gov.il, Sheba Medical Center Hospital- Tel Hashomer, Department of Diagnostic imaging, Sheba road 2, 52621 Ramat Gan, Israel
2. Yael Eshet
   yael.eshet@sheba.health.gov.il, Sheba Medical Center Hospital- Tel Hashomer, Department of Diagnostic imaging, Sheba road 2, 52621 Ramat Gan, Israel

No funding

A 72-year-old female came for follow-up FDG-PET/CT scan. The patient underwent left lumpectomy and sentinel lymph node biopsy and adjuvant treatment for HER2+ breast cancer in 2017. She was vaccinated for COVID-19 ten days prior to the scan in her right deltoid muscle (Pfizer-BioNTech COVID-19 Vaccine). At imaging, the scan was normal, except for new findings of mildly focally increased uptake in the right deltoid muscle and moderately increased uptake in two right axillary lymph nodes of normal size (Figure). These findings were likely related to the recent vaccination and not to pathological new contralateral axillary lymph node involvement in breast cancer. This case highlights a potential major FDG-PET/CT pitfall, which will probably be abundant in the next few months, as the world is entering a phase of massive immunization against COVID-19.

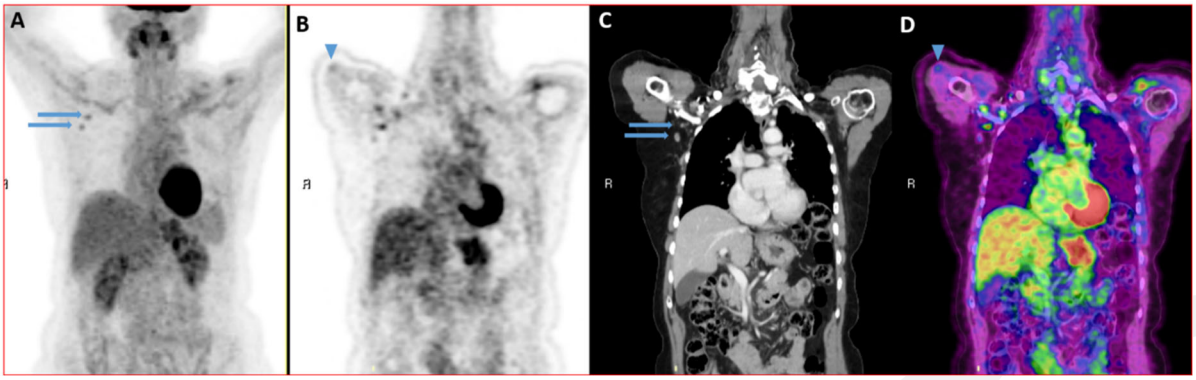

Figure: FDG PET/CT scan. *A,* MIP. *B,* Coronal MPR. *C,* CT. *D,* Fusion. Focally increased uptake in the right deltoid muscle (arrowhead), and moderately increased uptake in two right axillary lymph nodes of normal size (arrows), corresponding with recent COVID-19 vaccination.