**PET-CT Exam June 15, 2020**

FDG-PET mapping, glucose tracer, oncology

**History of illness**

49 yr. old female, adenocarcinoma of the lung, metastatic.

Treated with biological therapy, radiation therapy to the spine. Presently continuing chemotherapy.

Question for investigation – assessment of response to treatment

**Description of exam and findings**

Total body FDG PET exam up to the mid-thigh was performed.

The exam was performed with the DISCOVERY MI PET-CT system with simultaneous registration of CT and PET slices.

Dose injected: 12 mCi

Blood glucose level: 94 mg/dl

Telebrix was given to demonstrate intestinal loops in the CT which was used for registration.

Contrast agent was injected via IV, CT scan was done in the venous stage.

Comparison with the previous exam of May 2020

**Lungs**

Progression of neoplastic disease. New pulmonary nodules demonstrated with excessive FDG uptake, for example – new paramediastinal nodule in the RUL 0.9 cm in diameter.

Nodular infiltrates having a diameter of up to 1.7 cm at the apex of the rt. lung, which have exacerbated – grew in size and new ones are demonstrated

In the CT part, extensive shadows of GGO and thickening of the septum in the parenchyma of both lungs, with a differential diagnosis of extensive dissemination in the form of lymphangitic carcinomatosis, chronic lung disease, interstitial/infectious disease for correlation with a pulmonologist and with HRCT.

**Skeleton**

In the previous exam, pathological uptake in the process with fine blastic changes in the vertebral body D5 and in vertebra D11 was demonstrated, which this time appear more sclerotic and demonstrated weak uptake only, as evidence of improvement.

Pathological uptake in blastic lesions in vertebra D12 and in the rt. acetabulum, this time appear to be more extensive, suspicious for progression.

New pathological uptake in the remainder of the skeleton is not clearly seen.

Blastic foci in additional bones which are without change in the CT and without excessive uptake, disease sites controlled under treatment.

No active neoplastic disease demonstrated in the liver, which is in the resolution area of the PET method.

No pathological uptake demonstrated in the adrenals. Rt. nodular adrenal without change.

We mention that the FDG PET exam is not effective in assessing the treatment response in brain metastatic dissemination.

**In summary:**

Findings of the exam present a suspicion for progression of pulmonary dissemination and for mixed response to treatment for osseous dissemination.

Dr. Michal Katler June 16, 2020