

**Table 1.** *Main Clinical Applications of PET/CT.*

Initial Diagnosis	evaluation of solitary pulmonary nodule, investigation for cancer of unknown primary especially in head-neck cancers with cervical nodal metastases
Initial Staging	Lymphomas, Non-Small Cell Lung Cancer, Head-Neck Cancer, Advanced-Stage Melanoma, Oesophageal Cancer, locally advanced Cervical or Breast Cancer, Bone Sarcomas
Treatment Response Evaluation	Lymphomas, Lung Cancer, Head-Neck Cancer, GISTs, Oesophageal Cancer, Breast Cancer, Melanoma, Seminoma
Restaging – Evaluation for Recurrence & Disease Follow-up	Lung & Head-Neck Cancer, Melanoma, Gastrointestinal & Gynecological Cancers
Neoplastic disease detection in case of increased tumor marker levels	ovarian, colorectal, breast & thyroid (increased thyroglobulin levels with negative iodine whole body scan) neoplasms
Guidance of Biopsy	e.g., in suspicious nodal or distal metastases in lung cancer
Radiotherapy Treatment Planning	in cases of lung cancer to differentiate between tumor and adjacent atelectasis