

Evidence Discussion (ONC 31.1)

Lung Metastases

These guidelines act as a supplement to disease-specific guidelines. In scenarios where guidance regarding detection and surveillance of metastatic disease to the lung is not provided in the disease-specific guideline, this guideline should be applied.

All patients with a history of cancer who have new signs or symptoms suggestive of metastatic disease to the lung, or who have new or worsening findings on chest x-ray, warrant CT chest. Contrast is preferable in most scenarios to include evaluation of soft tissue and nodes, but a non-contrast study may be approved if there is a contraindication to contrast or if only parenchymal lung lesions are being evaluated (ACR 2024). CT with contrast (or without if for parenchymal lesion only) is supported to follow up new lung nodules in patients with a history of malignancy (ACR 2024, Christensen 2024). There is, however, no clear consensus on a timeline for this follow up across all malignancy types. Where guidance is not provided in the disease-specific eviCore guidelines, the eviCore guidelines suggest a follow up timeline of CT at 3,6,12 and 24 months from discovery of nodule, extrapolating from Fleischner and Lung-RADS data that a nodule stable >24 months is exceedingly unlikely to be malignant (MacMahon 2017, Christensen 2024). MRI with and without contrast is supported for suspected malignant infiltration of the brachial plexus or chest wall infiltration, for better soft tissue delineation (Szaro 2021, 2022, ACR 2024).

PET/CT is generally addressed in the guidelines for each specific cancer. If no specific guidance is provided, PET/CT is supported for lung nodules greater than or equal to 8mm (ACR 2024, MacMahon 2017). In the interest of patient safety to prevent futile invasive procedures on patients with occult metastatic disease, PET/CT is also supported by eviCore guidelines to confirm solitary metastasis on conventional imaging that may be amenable to curative-intent resection. PET/CT surveillance is not generally supported due to high radiation exposure, financial toxicity, and excess radiation exposure (ASCO 2021).

References

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