

Evidence Discussion (ONC 28.1-28.3)

Hodgkin Lymphoma

Suspected Lymphoma

-Workup of suspected lymphomas is addressed in evidence discussion for ONC 27

Initial staging and Restaging

PET imaging is useful for staging, prognosis, and treatment stratification in all subtypes of Hodgkin Lymphoma. Staging with PET/CT rather than CT often confirms a higher stage of disease (3). While overall survival outcome is not clearly improved by staging/restaging with PET/CT, stratification of treatment based on PET/CT benefits patients by preventing over- and under-treatment (2,3). PET is thus supported for initial staging, re-staging every 2 cycles, and at the end of therapy (1,2). False positive rates are elevated in the weeks following radiation, reaching up to 20% (2). Decisions based on scans done in close proximity to radiation may result in over-treatment. Therefore, PET/CT should not be performed until 12 weeks after completion of radiation (2,3).

Diagnostic CT with contrast is supported concurrently with PET/CT for initial staging as it may better differentiate nodal conglomerates from individual nodes in close proximity, and node bulk is prognostic and also used for treatment stratification (1,2,3). However, performing diagnostic CTs concurrently with PET/CT at restaging does not provide a benefit, as FDG avidity is highly indicative of response in Hodgkin lymphoma, where CT alone may over- or under- estimate response. FDG avidity guides response assessment and informs subsequent treatment decisions. This includes intensifying therapy if PET avidity persists after 2-4 cycles, or omitting consolidative radiotherapy in cases of good response on PET/CT after 4 cycles for low-stage disease (1,2,3,5). A complete metabolic response (Deauville score of 3 or less) should be confirmed to determine the end of treatment (1,2,3). If the end-of-therapy PET/CT shows a Deauville score of 4-5, repeating the PET/CT 3 months later is appropriate to confirm the metabolic status of residual masses and to prevent under-treatment (1,3).

While PET/MRI shows high concordance with PET/CT at a decreased radiation dose, it is inferior for assessing disease in the lungs, more time-consuming, and more costly. Furthermore, it has not been established as a standard for treatment stratification in adult Hodgkin Lymphoma and is therefore not recommended over PET/CT at the time of this writing (6).

Surveillance

Surveillance imaging with PET/CT is not supported, as the false-positive rate with PET scans in this context is greater than 20%, leading to unnecessary investigations, radiation exposure, biopsies, expense, and patient anxiety (1,3). In addition, no statistically significant difference in survival has been noted with CT surveillance imaging in Hodgkin Lymphoma, despite statistically significant increase in radiation exposure and cost (4). However, given that many existing protocols still require surveillance imaging, the NCCN continues to support CT surveillance every 6 months in the first two years post therapy if requested (1). Given that the

NCCN is viewed as the standard of care in most US Oncology treatment centers, we have chosen to align with this current NCCN recommendation for a patient and provider centric approach. (1)

References

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