

Eviti Imaging: B-Cell Lymphomas

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For Medicare members/enrollees, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Please refer to the CMS website at <http://www.cms.gov> for additional information.

For Medicaid members/enrollees, circumstances when state Medicaid coverage provisions conflict with the coverage provisions within this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

B-Cell Lymphoma Imaging

Discussion

This imaging guideline provides a standardized framework for the use of diagnostic and surveillance imaging in the management of common adult malignancies, specifically B cell-lymphomas. The goal is to ensure timely, evidence-based imaging that supports accurate staging, treatment planning, response assessment, and post-treatment surveillance.

Guiding Principles

- Follow evidence-based practices from major guidelines (e.g., NCCN, ESMO, ACR Appropriateness Criteria)
- Ensure imaging aligns with the clinical context and stage of disease
- Minimization of unnecessary radiation exposure
- Promote timely and cost-effective imaging utilization
- Incorporate multidisciplinary collaboration in imaging decisions

Imaging Guidelines

This guideline applies to the following patients:

1. At least 18 years of age with confirmed or suspected diagnoses of B-cell lymphomas; AND
2. All phases of oncologic care, including one of the following:
 - a) Initial staging
 - b) Treatment response evaluation
 - c) Post-treatment surveillance
 - d) Detection of recurrence or progression; AND
3. All imaging modalities used in oncology care, including but not limited to the following:
 - a) Computed Tomography (CT) (neck, chest, abdomen, pelvis, neck, or site-specific)
 - b) Magnetic Resonance Imaging (MRI) (including site-specific protocols such as pelvis MRI, brain MRI, liver MRI)
 - c) Fluorodeoxyglucose Positron Emission Tomography/CT (FDG-PET/CT)
 - d) PET/MRI
 - e) Somatostatin Receptor PET/CT (SSTR-PET/CT)
 - f) Nuclear Medicine (e.g., bone scan, PSMA PET)
 - g) Single Photon Emission Computed Tomography/CT (SPECT/CT) (e.g., octreotide SPECT/CT for neuroendocrine tumors)

Notes:

1. The concurrent utilization of multiple advanced imaging modalities—such as PET/CT and MRI—is not routinely warranted and should be considered only when each modality is expected to provide distinct and clinically relevant information that will directly impact patient management. The selection of the most appropriate imaging study should be individualized, taking into account tumor type, clinical presentation, prior imaging, and other patient-specific factors. Imaging requests will be evaluated on a case-by-case basis to ensure clinical necessity, appropriateness, and the potential to influence therapeutic decision-making.

- When PET imaging is clinically indicated, the appropriate radiotracer should be selected based on tumor type and clinical scenario.

B-Cell Lymphoma Imaging

B-cell lymphomas encompass a biologically diverse group of malignancies with variable FDG-avidity and growth kinetics.

Imaging selection and frequency are guided by disease subtype, stage, and treatment intent.

- Aggressive B-cell lymphomas (e.g., DLBCL, PMBCL, Burkitt, high-grade B-cell lymphoma) are FDG-avid and require PET/CT for staging and response assessment per Lugano criteria.
- Indolent and special subtypes (e.g., follicular, mantle cell, marginal zone, Waldenström) are variably FDG-avid and are best evaluated using contrast-enhanced CT or MRI.
- Primary CNS lymphoma (PCNSL) is a distinct aggressive subtype confined to the central nervous system and evaluated exclusively with MRI.

The same imaging modality used at baseline should be maintained during follow-up to ensure consistent comparison. Avoid alternating between PET/CT and diagnostic CT unless clinically indicated.

B-Cell Lymphomas Recommendations			
Clinical Scenario	Recommended Modality	Frequency/Timing	Purpose/Notes
Aggressive B-Cell Lymphomas (Diffuse Large B-Cell Lymphoma [DLBCL], Primary Mediastinal B-Cell Lymphoma [PMBCL], High-Grade B-Cell Lymphoma [HGBCL], Burkitt Lymphoma)			
Initial Staging	FDG-PET/CT	Once at diagnosis	Mandatory for staging, baseline metabolic activity, and radiation planning
	CT neck/chest/abdomen/pelvis	Once at diagnosis	Anatomical reference (in addition to PET/CT, if PET/CT equivocal), or if PET/CT contraindicated
	MRI brain ± spine	Once at diagnosis if neurologic symptoms, high-risk	Baseline central nervous system evaluation and

		features, or Burkitt lymphoma	cerebral spinal fluid cytology
Treatment Monitoring	FDG-PET/CT	Once mid-treatment (usually at 2-4 cycles) AND within 6–8 weeks after therapy	Evaluate early response using Deauville 5-point scale. Confirm metabolic remission per Lugano 2014 criteria
	CT neck/chest/abdomen/pelvis	Once mid-treatment (usually at 2-4 cycles) AND within 6–8 weeks after therapy	Only if PET/CT contraindicated
Surveillance	CT chest/abdomen/pelvis	Every 6 months for 2 years (DLBCL, PMLBC) Every 6 months for 1 year (Burkitt’s, HGBCL)	Routine PET/CT for surveillance is not recommended
Suspected Recurrence	FDG-PET/CT	As clinically indicated	Restaging and biopsy guidance
	CT neck/chest/abdomen/pelvis	Optional if PET/CT performed	
	MRI brain ± spine	As clinically indicated	Assess central nervous system (CNS) relapse in high-risk or symptomatic patients
Indolent and Special B-Cell Lymphomas (Follicular, Mantle Cell, Marginal Zone [Nodal, Extranodal, Splenic])			
Initial Staging	CT neck/chest/abdomen/pelvis	Once at diagnosis	Defines nodal and extranodal involvement. Mostly recommended in extranodal or splenic marginal zone lymphoma
	FDG-PET/CT	Once at diagnosis	Preferred for FDG-avid histologies such as follicular,

			mantle cell, nodal marginal zone. Not required for extranodal or splenic marginal zone lymphoma
Treatment Monitoring	CT neck/chest/abdomen/pelvis or FDG-PET/CT	Every 3 months AND within 4–8 weeks post-therapy	Use identical modality to baseline; PET/CT for FDG-avid subtypes, CT for non-avid. NCCN does not specify interval for treatment monitoring
Surveillance	CT neck/chest/abdomen/pelvis	Every 6 months for 2 years, then annually (stage I-II follicular, stage I-II mantle cell lymphoma) Every 3-6 months for 2 years then annually (stage II-IV follicular) Every 6 months for nodal marginal zone lymphoma Every 3-6 months for 5 years, then annually (stage II bulky, stage III-IV mantle cell and extranodal marginal zone)	Adjust frequency by disease behavior and therapy response
Suspected Recurrence - Progression or Transformation	FDG-PET/CT or	As clinically indicated	Identify sites of transformation (follicular lymphoma can transform to

	CT neck/chest/abdomen/pelvis		diffuse large B-cell lymphoma)
Primary CNS Lymphoma (Distinct Subtype)			
Initial Staging	MRI brain +/- orbits	Once at diagnosis	Cornerstone modality. Defines lesion number, location, and enhancement pattern
	MRI spine	Once at diagnosis (if neurologic symptoms or positive cerebral spinal fluid cytology)	Evaluates leptomeningeal or spinal cord involvement
	FDG-PET/CT	Once at diagnosis	
	CT neck/chest/abdomen/pelvis	Once at diagnosis (optional if PET/CT performed)	Anatomical reference, helpful if PET/CT unavailable or equivocal
Treatment Monitoring	MRI brain	Every 2-3 cycles AND within 4–8 weeks after therapy	NCCN does not specify imaging interval; additional MRI spine and imaging for systemic disease may be necessary to follow disease found at diagnosis
Surveillance	MRI brain	Every 3 months for 2 years, then every 6 months for 3 years, then annually indefinitely	Detect relapse early; use identical MRI protocol as baseline
	MRI spine	As clinically indicated if previous spinal involvement	
Suspected Recurrence	MRI brain ± spine		Evaluate new neurologic

	and/or PET or CT neck/chest/abdomen/pelvis	As clinically indicated	deficits or recurrent lesions If systemic recurrence is suspected
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Key NCCN Notes – Aggressive B-Cell Lymphomas

1. FDG-PET/CT is required for all aggressive B-cell lymphomas for staging and response assessment.
2. Deauville 5-point scale should be used for interim and end-of-treatment PET interpretation.
3. CNS imaging (MRI) indicated at baseline and relapse in Burkitt or DLBCL with high-risk features (testicular, renal/adrenal, breast, paranasal, epidural).
4. Maintain same imaging modality and field of view for consistent comparison.
5. Routine surveillance PET/CT is not recommended after complete remission.

Key NCCN Notes – Indolent and Special B-Cell Lymphomas

1. CT chest/abdomen/pelvis is the standard modality for staging and follow-up; PET/CT helpful for FDG-avid subtypes.
2. Waldenström macroglobulinemia and splenic marginal zone lymphoma are generally non-FDG-avid; PET adds little value.
3. Transformation suspicion warrants PET/CT to guide biopsy.
4. Maintain the same imaging modality throughout disease course to avoid variation in comparison.

Key NCCN Notes – Primary CNS Lymphoma

1. MRI with contrast is the definitive imaging modality; PET/CT is not recommended for staging or follow-up except to exclude systemic disease.
2. MRI spine and CSF analysis are indicated when leptomeningeal spread is suspected.
3. Use identical MRI protocol and slice thickness at each interval for consistent assessment.
4. Routine surveillance imaging is recommended for at least 5 years post-treatment, with decreasing frequency over time.¹

Revision and Review History

No.	Description	Date
1	Original Effective Date:	1/1/26
2	Policy Annual Review Dates:	
3	Department Owner:	Medical Affairs
4	NH Advisory Committee Approval Dates:	

5	Revision Changes:	
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References

¹ National Comprehensive Cancer Network Guidelines: B-Cell Lymphomas.
https://www.nccn.org/professionals/physician_gls/pdf/b-cell.pdf. Accessed December 12, 2025.