

NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)

Non-Hodgkin's Lymphomas

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Castleman's Disease

DIAGNOSIS^{a,b,c}

ESSENTIAL:

- Hematopathology review of all slides with at least one paraffin block representative of the lymphoproliferative disorder. Rebiopsy if consult material is nondiagnostic.
- An FNA or core needle biopsy alone is not generally suitable for initial diagnosis of Castleman's disease. Excisional or incisional biopsy are preferable.
- Adequate immunophenotyping to establish diagnosis^d
 - IHC panel: kappa/lambda, CD20, CD3, CD5, CD138, HHV-8 LANA-1
 - EBER-ISH

USEFUL UNDER CERTAIN CIRCUMSTANCES:

- Molecular analysis (PCR) to detect immunoglobulin and TCR gene rearrangements
- IHC: Ki-67 index; Ig heavy chains,^e CD10, BCL2, BCL6, cyclin D1, CD21, or CD23, CD38, MUM-1, PAX-5
- Cell surface marker analysis by flow cytometry: kappa/lambda, CD19, CD20, CD5, CD23, CD10

^aFor AIDS-related Lymphoma associated with Castleman's disease, [see AIDS-1](#). For DLBCL-associated with CD in non-HIV patients, [see BCEL-1](#).

^bThere are 2 variants – hyaline vascular (virtually always unicentric, HHV8-) and plasma cell (may be multicentric, often HHV8+, +/- HIV+).

^cTwo types of DLBCL are associated with the HHV8+ PC type: plasmablastic (EBV-) and "germinotropic" (EBV+).

^d[See Use of Immunophenotyping/Genetic Testing in Differential Diagnosis of Mature B-Cell and NK/T-Cell Neoplasms \(NHODG-A\)](#).

WORKUP^f

ESSENTIAL:

- Physical exam: attention to node-bearing areas, including Waldeyer's ring, and to size of liver and spleen
- Performance status
- Assess for criteria for active disease^g
- CBC, differential, platelets
- Comprehensive metabolic panel
- LDH, CRP, ESR
- Beta-2-microglobulin, serum protein electrophoresis and urine electrophoresis with immunofixation, serum light chains, quantitative immunoglobulins
- HIV ELISA, HHV-8 DNA titer by PCR, Hepatitis B testing,^h EBV DNA titer by PCR
- PET-CT scan (preferred) or chest/abdominal/pelvic CT with contrast of diagnostic quality
- Pregnancy testing in women of child-bearing age (if chemotherapy planned)

USEFUL UNDER CERTAIN CIRCUMSTANCES

- If HHV-8/KSHV or HIV positive, screening for concurrent Kaposi's sarcoma is strongly recommended
- Bone marrow biopsy + aspirate
- Neck CT with contrast
- MUGA scan/echocardiogram if anthracycline or anthracenedione-based regimen is indicated
- sIL-6, sIL10, VEGF, uric acid, ferritinⁱ
- Hepatitis C testing
- Discussion of fertility issues and sperm banking

^eIn plasma cell variant HHV8+, plasmablasts are IgM lambda while normal plasma cells are IgG or A polytypic.

^fIf concurrent polyneuropathy and monoclonal plasma cell disorder, a workup for POEMS syndrome is recommended.

^g[See Criteria for Active Disease \(CD-A\)](#).

^hHepatitis B testing is indicated because of the risk of reactivation with immunotherapy + chemotherapy. Tests include hepatitis B surface antigen and core antibody for a patient with no risk factors. For patients with risk factors or previous history of hepatitis B, add e-antigen. If positive, check viral load and consult with gastroenterologist.

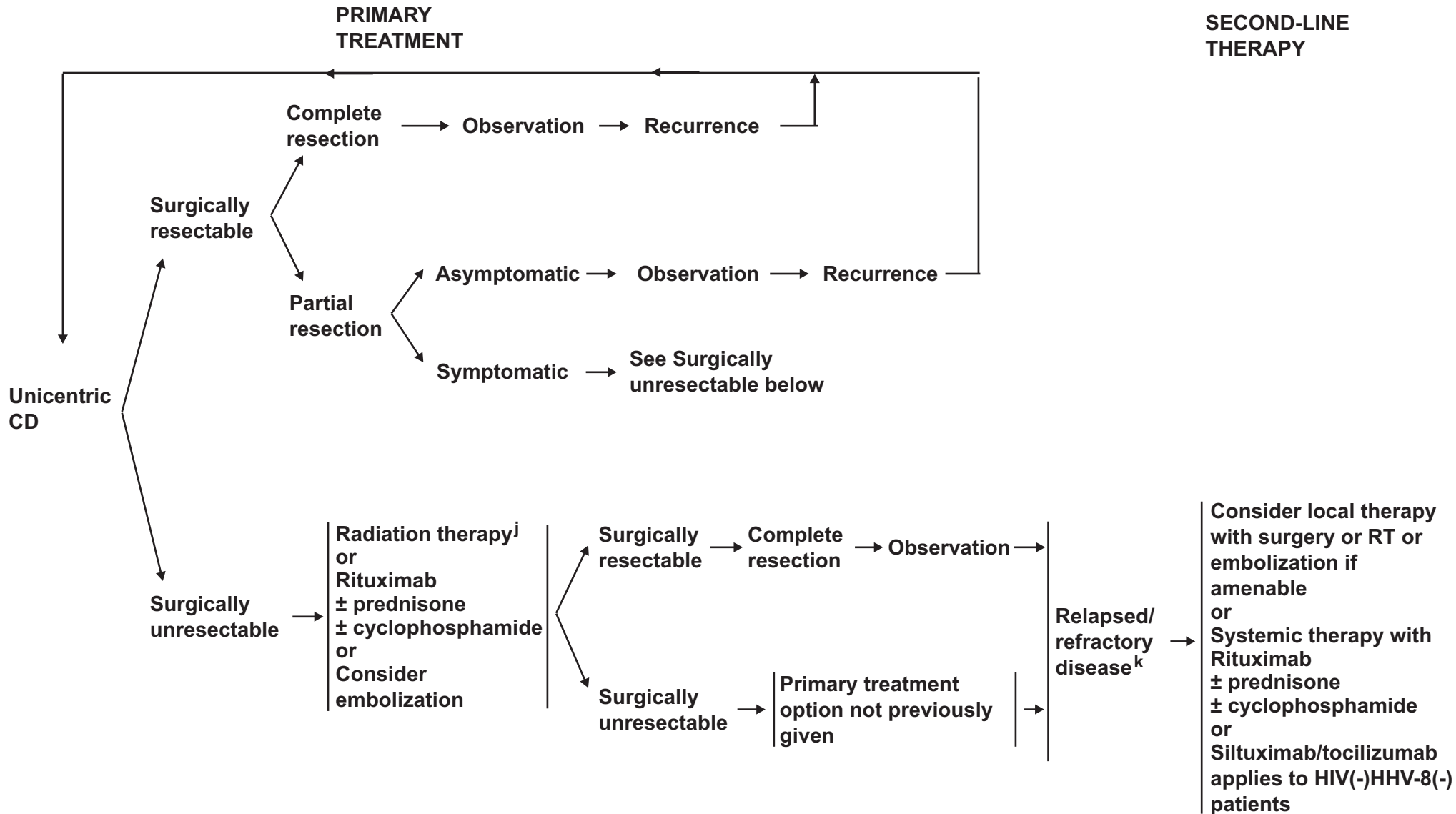
ⁱMeasurement of acute phase reactants maybe helpful in monitoring therapy.

Unicentric → [See CD-2](#)

Multicentric → [See CD-3](#)

Note: All recommendations are category 2A unless otherwise indicated.

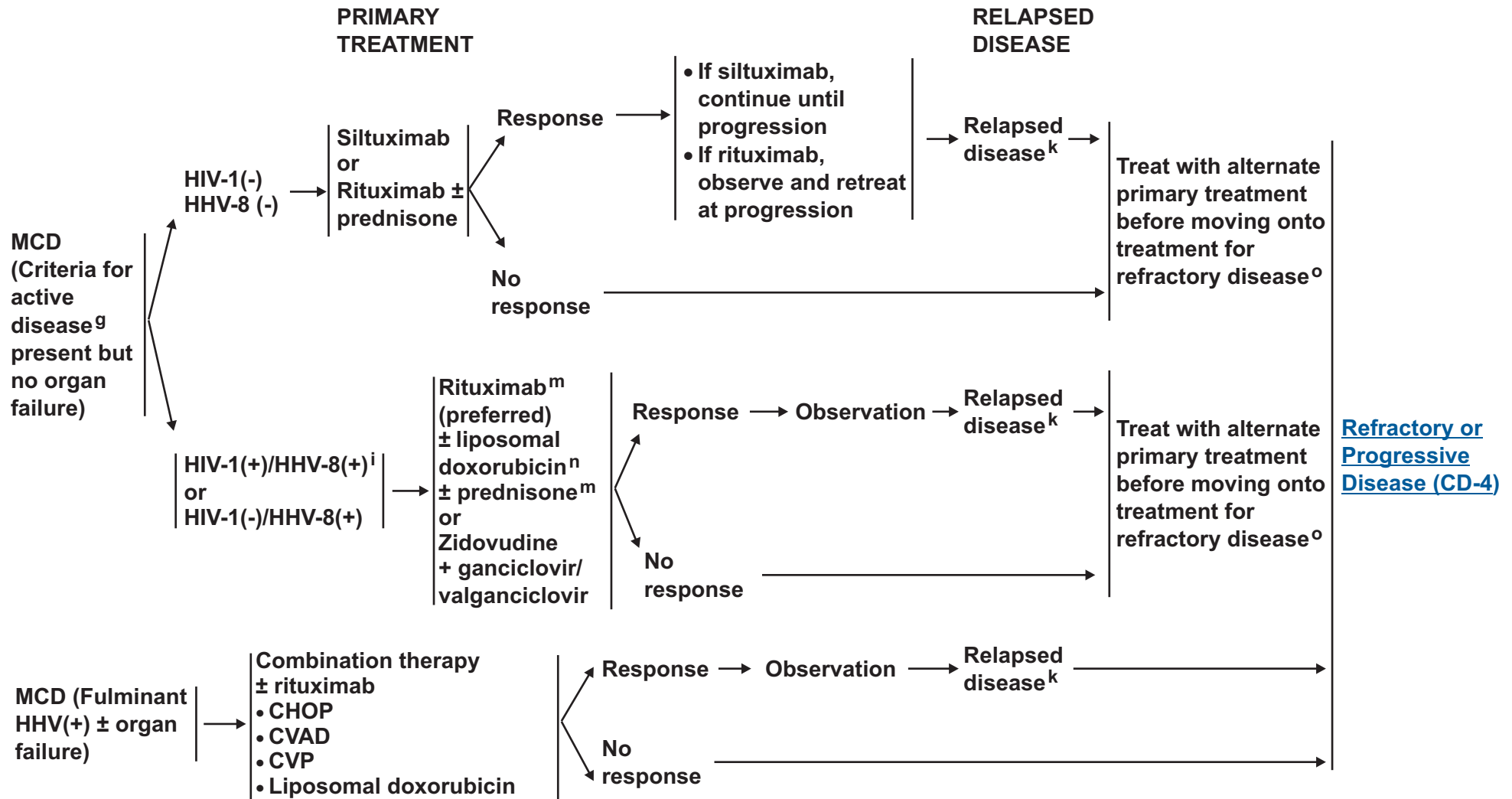
Clinical Trials: NCCN believes that the best management of any cancer patient is in a clinical trial. Participation in clinical trials is especially encouraged.



^jPatients with non-bulky disease may be observed after RT.

^kEncourage biopsy to rule out transformation to DLBCL or concomitant development of other malignancies or opportunistic infections.

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^g See Criteria for Active Disease (CD-A).

^k Encourage biopsy to rule out transformation to DLBCL or concomitant development of other malignancies or opportunistic infections.

^l All HIV+ patients should be on combination antiretroviral therapy (cART).

^m Concurrent Kaposi sarcoma therapy is required when rituximab or prednisone is given for primary treatment.

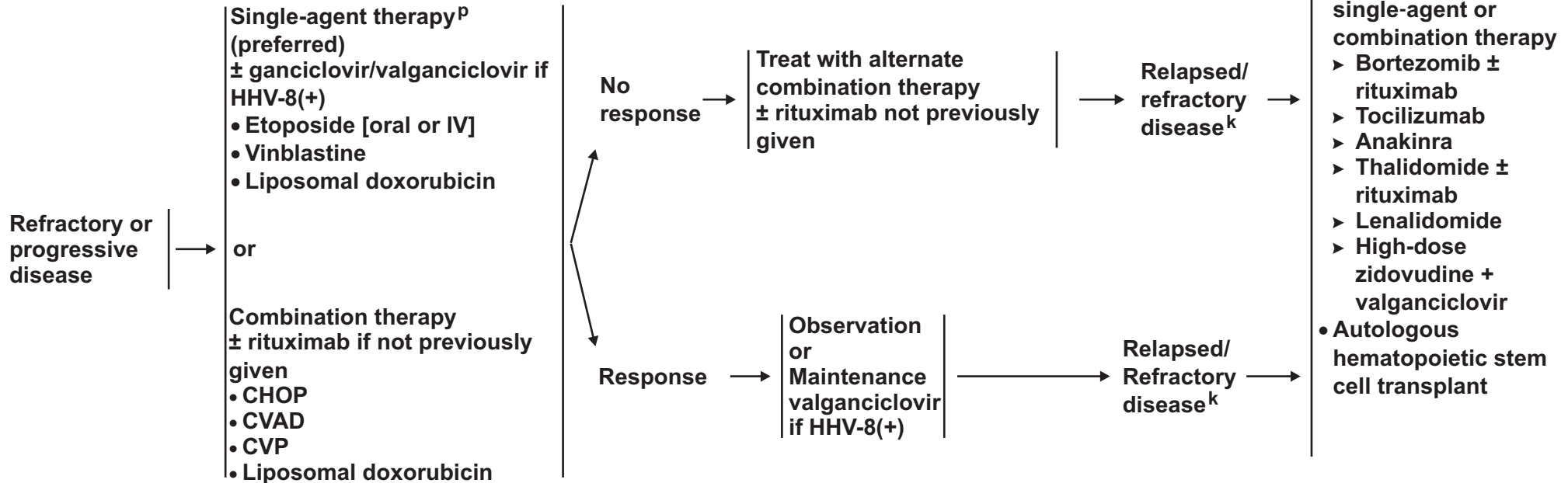
ⁿ Combination of rituximab and liposomal doxorubicin is strongly recommended for patients with Kaposi sarcoma to avoid flare-up.

^o Rituximab ± prednisone may repeat without limit if progression ≥6 months of completion of rituximab.

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**REFRACTORY OR
PROGRESSIVE
DISEASE**



^PSingle agent therapy is preferred for asymptomatic patients with no organ failure; combination therapy is preferred for patients with fulminant disease and organ failure.

⁹See [Criteria for Active Disease \(CD-A\)](#).

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CRITERIA FOR ACTIVE DISEASE^a

- Fever
- Increased serum C-reactive protein level >20 mg/L in the absence of any other etiology
- At least three of the following other MCD-related symptoms
 - ▶ Peripheral lymphadenopathy
 - ▶ Enlarged spleen
 - ▶ Edema
 - ▶ Pleural effusion
 - ▶ Ascitis
 - ▶ Cough
 - ▶ Nasal obstruction
 - ▶ Xerostomia
 - ▶ Rash
 - ▶ Central neurologic symptoms
 - ▶ Jaundice
 - ▶ Autoimmune hemolytic anemia

^aGérard L, Bérezné A, Galicier L, et al. Prospective study of rituximab in chemotherapy-dependent human immunodeficiency virus associated multicentric Castleman's disease: ANRS 117 CastlemaB Trial. J Clin Oncol 2007;25:3350-3356.

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