

Radiotherapy Guideline for Lymphoma

中山醫學大學附設醫院 放射腫瘤科

(2024.09 Version 9.0)

Hodgkin's lymphoma

- Involved-site Radiation Therapy (ISRT): ISRT is recommended as the appropriate field for all Hodgkin's lymphoma patients. ISRT targets the site of the originally involved lymph node(s). The volume encompasses the original extent of disease suspicious volume prior to chemotherapy or surgery. However, it spares adjacent uninvolved organs (eg, lungs, bone, muscle, kidney) when lymphadenopathy regresses following chemotherapy.

Disease	Indication		Dose
HL	stage I-II	Non-bulky disease	20-30Gy, 1.5–2.0 Gy per fraction
	stage IB-IIB		30 Gy, 1.5–2.0 Gy per fraction
	all stages	Bulky disease sites (all stages)	30–36 Gy; 1.5–2.0 Gy per fraction
	Partial response/refractory disease		36–45 Gy
Palliative			4–30 Gy

Non-Hodgkin's lymphoma

- ISRT is recommended as the appropriate field for NHL. ISRT targets the site of the originally involved lymph node(s). The volume encompasses the original extent of disease suspicious volume prior to chemotherapy or surgery. However, it spares adjacent uninvolved organs (eg, lungs, bone, muscle, kidney) when lymphadenopathy regresses following chemotherapy.
- Definitive RT (1.5–2.0 Gy daily fractions)
 - FL: 24–30 Gy

- Marginal zone lymphoma (MZL):
 - ◆ EMZL of the stomach can be treated with 24–30 Gy in 20 fractions (1.5 Gy/fractions) to minimize acute GI toxicity.
 - ◆ Orbital and Salivary Gland MZL – 4 Gy in 2 fractions may be considered in select patients (ie, the elderly or patients with Sjogren syndrome) for whom the increased risk of late organ toxicity outweighs the documented efficacy of definitive dose schedules (24 Gy). Careful regular follow-up is essential when using this low-dose regimen with physical exam and imaging as appropriate. Definitive doses are recommended for incomplete response or relapsed disease.
- MCL: 24–36 Gy
- DLBCL/HGBL/PMBL/Mediastinal gray zone lymphoma
 - ◆ Primary treatment (without chemoimmunotherapy): 40–55 Gy
 - ◆ Consolidation after chemoimmunotherapy
 - – CR (5-PS 1–3) - 30–36 Gy
 - – PR (5-PS 4) - 36–50 Gy
 - ◆ Refractory disease (5-PS 4–5) - 40–55 Gy
 - ◆ In combination with HCT: 20–36 Gy, depending on sites of disease and prior RT exposure
 - ◆ Prophylactic testicular irradiation (25–30 Gy)

➤ Palliative RT

- FL/MZL/MCL/SLL: 2 Gy X 2 fractions or 4 Gy X 1 fraction (which may be repeated as needed); doses up to 30 Gy may be appropriate in select circumstances
- DLBCL/HGBL/PMBL/Mediastinal gray zone lymphoma and BL: (higher doses/fraction typically appropriate)
 - ◆ 20–30 Gy in 5–10 fractions. Standard hypofractionated palliative treatment schedules such as 20 Gy in 5 fractions and 30 Gy in 10 fractions are appropriate depending upon clinical scenario.
- HIV-related B-cell lymphomas and PTL: Treated based on underlying histologic subtype and

- Bridging RT with CAR T-cell Therapy
 - Localized disease - 20-40 Gy (higher doses and comprehensive coverage preferred if feasible; hypofractionate as appropriate to expedite CAR T-cell procedure)
 - Extensive disease - 20-30 Gy {hypofractionate as outlined above)

Simulation and immobilization

- CT-based simulation (3-5 mm slice thickness depending on the tumor volume and treatment field size) is required.
- Patients may be simulated with a supine position
- Immobilization devices: depends on tumor location
 - Vacuum cushion
 - Mask

Constraints for organ at risk

- As common organ at risk constrains in our department

Reference

- NCCN Practice Guidelines in Oncology, 2024
- Perez and Brady's : Principles and Practice of Radiation Oncology, 7th ed, 2018
- K.S. Clifford Chao. Practical Essentials of Intensity Modulated Radiation Therapy, 3rd ed, 2013