Lymphoma

Hodgkin and non-Hodgkin · how to stage it, what drives first-line choice, and the emergencies that outrank the workup

Excisional biopsy
not an FNA

GETTING THE DIAGNOSIS RIGHT *the single commonest avoidable delay*

EXCISIONAL BIOPSY, NOT AN FNA

Lymphoma is classified by **architecture as well as cell type**, so a fine-needle aspirate is usually non-diagnostic and simply costs weeks. Ask for an **excisional or generous core biopsy**, sent **fresh** for flow cytometry, not only in formalin.

WHICH NODE

Choose the **largest and most FDG-avid** node rather than the most accessible. **Inguinal nodes are the worst choice**, being frequently reactive. Persistent nodes above **2 cm**, or any node with B symptoms, warrant biopsy rather than another course of antibiotics.

B SYMPTOMS ARE DEFINED

Not just "feeling unwell": **fever above 38°C, drenching night sweats, or unintentional loss of more than 10% of body weight over 6 months.** They carry staging and prognostic weight, so document them explicitly.

THE LANDSCAPE *and the paradox that confuses everyone at first*

HODGKIN

Reed-Sternberg cells in an inflammatory background. **Bimodal age**, peaking in young adults and again after 55. Spreads **contiguously** node group to node group, typically cervical and mediastinal. **Among the most curable cancers there are.**

NON-HODGKIN

A large family, roughly **85% to 90% B-cell**. Spreads **non-contiguously** and involves **extranodal sites** far more often, so it can present as a gastric, cerebral, testicular or bone lesion.

THE PARADOX

Aggressive lymphomas are the curable ones. DLBCL and Burkitt grow fast, so chemotherapy kills them, and treatment is given with curative intent and urgency. **Indolent lymphomas are generally incurable** but behave as chronic disease over many years, which is why watchful waiting is rational rather than negligent.

STAGING & RISK *Lugano staging, and the score that picks the regimen*

Tool	What it is
Lugano staging	**PET-CT is the standard** for FDG-avid lymphomas, which includes Hodgkin and DLBCL. **Stage I** one node region · **II** two or more on the same side of the diaphragm · **III** both sides · **IV** diffuse extranodal involvement. Suffix **A** or **B** for absence or presence of B symptoms. **Routine bone marrow biopsy is no longer required in Hodgkin or usually in DLBCL** when PET-CT is done, since marrow uptake is seen on the scan
IPI *aggressive NHL*	One point each for **age above 60**, **LDH above normal**, **ECOG performance status 2 or worse**, **stage III or IV**, and **more than one extranodal site**. It stratifies survival and increasingly informs whether to intensify first-line therapy
Deauville score	A **5-point PET scale** used for interim and end-of-treatment response. It is what allows **response-adapted therapy**, where a negative interim PET permits dropping the most toxic component rather than completing it blindly

FIRST-LINE, BY DISEASE *the three you will actually meet*

Disease	Treatment	What to know
DLBCL *the commonest aggressive NHL*	**R-CHOP** for 6 cycles remains standard. **Pola-R-CHP** substitutes polatuzumab vedotin for vincristine	**POLARIX** randomized 879 previously untreated intermediate- and high-risk patients: **5-year PFS 64.9% with pola-R-CHP versus 59.1% with R-CHOP, HR 0.77**, without an overall survival difference. The case is strongest in **higher IPI and non-GCB biology**, so it is a risk-directed choice rather than a blanket replacement. **Potentially curable, so treat with curative intent**
Hodgkin lymphoma	**ABVD** is the classic backbone, given **PET-adapted**: a negative interim PET allows **dropping bleomycin** for the remaining cycles	**Among the most curable of all cancers**, including advanced stage. **Bleomycin causes pulmonary fibrosis**, which is exactly why interim PET is used to stop it early. Newer brentuximab- and checkpoint-inhibitor-based regimens have moved into first line for advanced disease
Follicular lymphoma *indolent*	**Watchful waiting** is appropriate for asymptomatic low-burden disease. Treat with a **rituximab-based** regimen when symptomatic or bulky	**Treating early does not prolong survival** in low-burden disease, which is why observation is an active decision rather than neglect. Generally **incurable but chronic**, measured in many years. **Sudden growth or a rising LDH suggests transformation** to an aggressive lymphoma and needs re-biopsy

FOUR MORE WORTH RECOGNIZING *each has a management twist you will not guess*

Type	Recognize	The twist
Burkitt	**MYC** translocation, **"starry sky"** histology, one of the fastest doubling times of any tumor	**A true emergency.** Treat within days, with intensive regimens and **CNS prophylaxis**. Expect **severe tumor lysis** and pre-empt it rather than react to it
Mantle cell	**t(11;14)** with **cyclin D1** overexpression. Usually **advanced at diagnosis**, often with GI involvement	Behaves aggressively yet is difficult to cure, so it sits awkwardly between the two categories above. **Consider it when "follicular" lymphoma behaves badly**
Gastric MALT	Marginal-zone lymphoma of the stomach, strongly associated with **Helicobacter pylori**	**Eradicating H. pylori alone can cure early-stage disease.** Antibiotics before chemotherapy is the correct order, which is unique among lymphomas
Primary CNS lymphoma	Solitary or multiple enhancing brain lesions, more common with immunosuppression and HIV	**Do not give steroids before the biopsy if you can avoid it**: the lesion can melt away and become non-diagnostic, delaying treatment for weeks. Treatment is **high-dose methotrexate-based**, not R-CHOP, which does not cross into the CNS

EMERGENCIES & SAFETY

- **Screen for hepatitis B before rituximab, without exception.** Check **HBsAg and anti-HBc**. Reactivation in an anti-HBc-positive patient can cause **fulminant hepatic failure**, and it is prevented by antiviral prophylaxis. This is the most consequential thing on this sheet.
- **Tumor lysis before and during treatment.** Highest with **Burkitt**, which has one of the fastest doubling times of any human tumor and is a genuine oncologic emergency. Hydrate, give **rasburicase** for high risk, and remember it is **contraindicated in G6PD deficiency**.
- **SVC obstruction and cord compression outrank the workup.** Facial and arm swelling with distended veins, or back pain with any neurological sign, are treated urgently. **Get tissue first where it is safe to do so**, since steroids can obscure the diagnosis, but **never delay treatment of a threatened airway or cord**.
- **CNS prophylaxis in selected aggressive lymphoma.** High CNS-IPI, testicular or certain other extranodal sites raise the risk of CNS relapse, which carries a poor outcome. Also plan **fertility preservation before starting**, and remember **anthracycline cardiotoxicity** means a baseline echocardiogram.

References: Lugano classification for staging and response assessment · POLARIX (NEJM 2022) with long-term follow-up · International Prognostic Index · RATHL response-adapted therapy in Hodgkin lymphoma · NCCN B-cell lymphoma guidance.

Educational aid; verify against current guidance, local formulary and patient factors.

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