Non Hodgkin Lymphoma

NON HODGKIN LYMPHOMA - Low Grade (CLL/SLL, FL, MZL)

1. **Stage 1 & 2**
   Asymptomatic patients can be observed or treated with local RT
   Combined modality chemo-immunotherapy x 3 cycles → local RT

2. **Stage 3 & 4 - Asymptomatic**
   Observation alone or Single agent Rituximab weekly x 4 followed by
   Maintenance 2 to 3 monthly for 2 years.

3. **Stage 3 & 4 - Symptomatic**
   Chemo-immunotherapy x 6 cycles followed by Maintenance Rituximab for 2 years

**Note:** Symptomatic* disease is largely based on the BNLI Criteria which include the
following: Subjective symptoms, threatened end organ dysfunction, Bulky disease,
Cytopenias, disease progressing steadily (doubling time short).

Choice of regimen should be based on patient age (≤ 65yr or ≥65yrs), co-morbidities. It
should be dictated by the local expertise. Common regimens include,

- CVP +/-R
- CHOP+/-R
- Bendamustine+/- R
- In CLL, also consider FCR, Ofatumumab-Chl, Alemtuzumab-Rituximab
  (high risk CLL).

NON HODGKIN LYMPHOMA- (Common Adult Lymphoma)

**Lymphoblastic Lymphoma (LBL):** Patients with LBL have typically been treated
with regimens appropriate for acute lymphoblastic leukaemia (ALL). Cytogenetics
and risk stratification is applicable to these patients also. Patients with systemic LBL
can be treated with any one of the chemotherapy regimens. For bcr-abl positive
patients, a TKI containing protocol must be used.

Young Adults and Adolescent: Use Paediatric ALL Protocols like MCP-841, BFM or
MRC-UKALL or COG,etc.

In Older Adults (>40yrs): Use any of the following: GMALL, HyperCVAD, GRALL
protocol

**NOTE:**
1. Patients with CR to induction therapy should be continued with other components of the treatment protocols. It
   is important that patients be treated with a given treatment protocol in its entirety and not be treated with
different components taken from different protocols.
2. Patients with high risk features (such as bcr-abl +) and a matched sibling donor should be offered an allogeneic
   transplantation in first remission.
**Diffuse Large B Cell Lymphoma (DLBCL):** The treatment options vary between patients with localized (stage I-II) and advanced (stage III-IV) disease. Prognosis is extremely good for patients with no adverse risk factors (Normal LDH, stage I or II non-bulky disease, age less than 60 years or ECOG performance status less than 2).

**Stage I-II:** For patients with Non-bulky (<10 cm) stage I or II disease, CHOP +/- Rituximab (R) for 3 cycles with IFRT or 6 cycles of CHOP +/- R alone is recommended (Category 2A).

Patients with bulky disease (10 cm or more) should be treated with 6 cycles of CHOP+/−R with or without IFRT (Category 1).

**Stage III-IV:** For patients with advanced stage disease, treatment with 6 cycles of CHOP+/−R repeated every 21 days is recommended (Category 1).

- In selected cases, RT to bulky sites may be beneficial (Category 2B).
- Patients at increased risk of CNS relapse (those with involvement of the paranasal sinuses, testes, breast, bone-marrow involvement with large cells or having two or more extra-nodal sites with elevated LDH) should receive CNS prophylaxis with 4 doses of Intrathecal methotrexate or 3-3.5 Gm/M² of systemic methotrexate.

**Mantle cell lymphoma (MCL)**

**Stage I-II:** Very few patients present with localized low grade MCL. Local RT (30-36Gy) alone or combination chemo-immmunotherapy with CHOP-R is recommended (Category 2A).

**Stage II (bulky) and stage III-IV:** In highly selected patients (low Ki 67) with asymptomatic disease, close observation without any therapy is a reasonable option, especially for those with good performance status and lower IPI.

Aggressive therapies commonly used are CHOP+/−R alternating with high dose Ara-C based regimens (CHOP-R alternating with DHAP-R x 6 cycles). Other regimens include R-HyperCVAD, R-CHOP / R-ICE, Nordic regimen, CALGB, etc. Choice of the regimen should be based on local expertise and support.

**Note:**

1. For young patients with CR to first line therapy, consolidation with HDT/ASCR is recommended.
2. For patients with PR to first line therapy, second line therapy may be considered in an effort to improve the quality of a response before they are taken for consolidation with HDT/ASCR.
Less aggressive therapies or Bendamustine and Rituximab (B-R x 6 cycles) are recommended for elderly patients, cardiac compromise and patients unfit to tolerate aggressive regimens.

**Maintenance rituximab** is recommended for patients who are not candidates for HDT/ASCR and are in remission after first line therapy with R-CHOP.

**Burkitts Lymphoma (BL):** There is a high incidence of tumour-lysis syndrome and measures should be taken to prevent and treat this complication. Patients with bulky disease and organ dysfunction may be treated with modified dose therapy (e.g. ‘prephase-CVP’), in an attempt to modify the effects of tumor lysis. Then proceed to more intensive therapy as outlined below based on local expertise and supportive care,

- daEPOCH +/-R
- MCP-842
- The BFM protocol (B-NHL 2002)
- Hyper CVAD+/-R
- CALGB
- CODOX-M alternating with IVAC (MaGrath regimen)

**Peripheral T - Cell (PTCL) and Anaplastic large cell lymphoma (ALCL):**
Aggressive T cell lymphoma is divided into two groups:

a. ALK positive ALCL, and

b. PTCL-NoS & others (including ALK negative ALCL).

Treatment with an anthracycline-based chemotherapy regimen – CHOP is recommended.

**Limited stage:** ALCL and no adverse prognostic features by IPI should be treated with 3-4 cycles of CHOP chemotherapy and involved field radiotherapy.

**Advanced Stage:** patients should receive 6-8 cycles of CHOP chemotherapy.

**Note:**
1. ALK-negative ALCL should be treated as for PTCL-NOS
2. There is insufficient data to recommend an alternative regimens like CHOEP, CHOP-14, daEPOCH, HyperCVAD in this clinical scenario.
3. Consideration should be given to consolidation with auto-HSCT in the PTCL-NoS group.

**NK/T-Cell Lymphoma**

**Stage 1 and II:** SMILE x 4 cycles followed by local Radiotherapy is recommended. For patients unable to tolerate intensive chemotherapy Involved field RT is recommended. **Advanced stage disease** (III and IV) SMILE x 6 cycles followed by Local RT

**Note:** All other subtypes of lymphoma are rare and need to be managed individually as per prevailing guidelines.