INTRODUCTION:

Hodgkin lymphoma is a relatively rare cancer with 9,060 new cases diagnosed and 1,190 deaths in 2012. The incidence of Hodgkin lymphoma has remained constant. However, the mortality rate has significantly improved over the past few decades due to more effective treatment options. Due to the significant improvement in treatment for this disease, Hodgkin disease is further classified into classical Hodgkin lymphoma (that accounts for 95% of all Hodgkin cases) and lymphocyte predominant Hodgkin lymphoma. Staging for Hodgkin lymphoma is based on the Ann Arbor staging system (stage I–IV), further subdivided into “A” (no systemic symptoms presents) and “B” (weight loss of >10%, fevers, or night sweats). Unfavorable prognostic factors include bulky mediastinal disease, nodal mass >10 cm, numerous sites of disease, significantly elevated erythrocyte sedimentation rate, or B symptoms. Treatment recommendations are typically based on three subgroups of Hodgkin lymphoma: early stage favorable (stage I–II with no unfavorable factors), early stage unfavorable (stage I–II with any unfavorable factors as mentioned above), and advanced stage disease (stage III and IV). When radiation therapy is used for the treatment of Hodgkin disease, it is usually in combination with chemotherapy. If chemotherapy is used alone, radiation therapy can be used for relapse. Radiation therapy alone for definitive treatment is uncommon, except for lymphocyte predominant Hodgkin lymphoma.

GOAL OF THE GUIDELINE:

The goal of these guidelines is to delineate appropriate indications for the employment of radiation therapy and the treatment of Hodgkin lymphoma, and to define suitable methods of delivery of radiation therapy for these indications.

GENERAL CONSIDERATIONS:

CT-based simulation with 3-dimensional conformal treatment planning is recommended. The use of IMRT for the treatment of Hodgkin lymphoma is limited with small sample sizes and weak study designs. Therefore, there is insufficient data to support routine use of IMRT for Hodgkin lymphoma. There is also insufficient data to support the use of stereotactic body radiotherapy.

Preliminary results from single institutions have shown dose reduction to organs at risk achieved with proton beam radiation therapy. This may have a positive influence on reducing the risk of late affects; however, long term follow up is needed to confirm the efficacy of this treatment.
MEDICALLY NECESSARY INDICATIONS FOR RADIATION THERAPY AND TREATMENT OPTIONS:
2D and 3D conformal radiation therapy techniques are considered medically necessary for treatment of Hodgkin’s Lymphoma

Stage I-II (nonbulky disease)
- Chemotherapy + radiation therapy (20-30 Gy)

Stage IB-IIB (nonbulky disease)
- Chemotherapy + radiation therapy (30-36 Gy)

Stage III-IV (nonbulky disease)
- Chemotherapy + radiation therapy (30-36 Gy)

Stage I-IV (bulky disease)
- Chemotherapy + radiation therapy (30-36 Gy)

Palliative
- Up to 10 fractions of external radiation may be indicated for symptom control.

When radiation therapy is used for the treatment of Hodgkin disease, it is usually in combination with chemotherapy. If chemotherapy is used alone, radiation therapy can be used for relapse.
Radiation therapy alone is uncommon (except for lymphocyte predominant Hodgkin lymphoma). If used, doses of 30-36 Gy is recommended (uninvolved regions 25-30 Gy).

Unless otherwise indicated standard radiation fractionation consists of 1.8 Gy to 2.0 Gy per day

TREATMENT OPTIONS REQUIRING ADDITIONAL CLINICAL REVIEW:

Intensity Modulated Radiation Therapy (IMRT)
IMRT is not indicated as a standard treatment option and should not be used routinely for the delivery of radiation therapy for Hodgkin’s lymphoma. IMRT is strictly defined by the utilization of inverse planning modulation techniques. IMRT may be appropriate for limited circumstances in which radiation therapy is indicated and 3D conformal radiation therapy (3D-CRT) techniques cannot adequately deliver the radiation prescription without exceeding normal tissue radiation tolerance, the delivery is anticipated to contribute to potential late toxicity or tumor volume dose heterogeneity is such that unacceptable hot or cold spots are created.

Clinical rationale and documentation for performing IMRT rather than 2D or 3D-CRT treatment planning and delivery will need to:

- Demonstrate how 3D-CRT isodose planning cannot produce a satisfactory treatment plan (as stated above) via the use of patient specific dose volume histograms and isodose plans.
- Provide tissue constraints for both the target and affected critical structures.
Stereotactic Body Radiation Therapy
Stereotactic Body Radiation Therapy (SBRT) is not currently an approved treatment option for the treatment of Hodgkin’s lymphoma. Recent studies comparing SBRT conventional radiation therapy are limited. If requested, this would require peer to peer review to determine medical necessity.
REFERENCES


NCCN Clinical Practice Guidelines in Oncology 2012 (www.nccn.org).


