

# Report of the Committee on Hodgkin's Disease Staging Classification

Paul P. Carbone (Chairman), Henry S. Kaplan, Karl Musshoff, David W. Smithers, and Maurice Tubiana

*National Cancer Institute, Bethesda, Maryland 20014 [P. P. C.]; Stanford University, Stanford, California 94305 [H. S. K.]; Roentgen-Radium-Abteilung, Freiburg, Germany [K. M.]; Royal Marsden Hospital, London, England [D. W. S.]; and Institut Gustave Roussy, Villejuif, France [M. T.]*

Since the Rye classification for staging was produced in 1965, the significance of 2 important observations with major impact on staging has been appreciated. First, extralymphatic disease, if localized and related to adjacent lymph node disease, does not adversely affect the survival of patients. Patients with localized extralymphatic disease do as well as comparable patients of the same stage without extralymphatic spread. Secondly, laparotomy with splenectomy has been introduced as a method of obtaining more information on disease extent in the abdominal region. Thus, it has become necessary to reconsider the Rye classification and to recommend a modified scheme.

Staging has 2 aims. The first is to facilitate communication and exchange information. This can be done only at the expense of a loss of some information, as it is necessary to condense in one number a considerable amount of data. Furthermore, intercomparison demands that all the staging procedures performed should be as similar as possible in each center to avoid bias in staging and interpretation of the therapeutic results. The second aim is to provide guidance of prognosis and to assist in therapeutic decisions. This latter aim is best achieved when the greatest amount of information is collected for each patient. It has been recognized that a single staging procedure cannot achieve these 2 purposes. For instance, it is obvious that laparotomy and splenectomy provide much information, but these procedures cannot yet be recommended for every patient. A staging classification based on information obtained by histopathological examination of the spleen and lymph nodes obtained at laparotomy cannot be compared with another done without such vigorous exploration. As a result, unless these factors are taken into account, either intercomparisons of therapeutic results become virtually impossible or much valuable information is excluded from the staging method. Therefore, 2 systems of classifications are presented. Clinical staging (CS), while recognized as incomplete, is easily performed and should be reproducible from one center to another. The second, called pathological staging (PS), takes into account all the extrapathological data obtained from vigorous staging procedures and has a higher degree of precision but is restricted in its application to relatively few centers.

## Clinical Staging (CS)

Clinical staging will be determined by history, physical examination, radiological studies, isotopic scans, laboratory

tests of urine and blood, and the initial biopsy results. Clinical evidence of liver involvement must include an enlarged liver and at least an abnormal serum alkaline phosphatase value, 2 different liver function test abnormalities, or an abnormal liver scan and 1 abnormal liver function test. Either palpable enlargement of the spleen confirmed by radiographic or radioisotopic studies or an isotopic scan of the spleen showing marked filling defects will be acceptable as clinical evidence of spleen involvement.

## Pathological Staging (PS)

The Committee recognizes the wide diversity in the kinds and amounts of surgical removal of tissue to improve the accuracy of clinical staging at different institutions. To increase the amount of data reported and to allow for more precise comparisons, we recommend the use of a simultaneously recorded PS staging in all patients. The PS classification is to be subscripted by symbols indicating the tissue sampled and the results of histopathological examination by + when positive for Hodgkin's disease or – when negative. The abbreviations recommended are as follows:

- N+ or N– For other lymph node positive for disease or negative by biopsy
- H+ or H– For liver positive or negative by liver biopsy
- S+ or S– For spleen positive or negative following splenectomy
- L+ or L– For lung positive or negative by biopsy
- M+ or M– For marrow positive or negative by biopsy or smear
- P+ or P– For pleural involved or negative by biopsy or cytological examination
- O+ or O– For osseous involvement or negative by biopsy
- D+ or D– For skin involvement or negative by biopsy

## Symptoms A or B

Each stage will be subdivided into A and B categories, B for those with defined general symptoms and A for those without. The B classification will be given those patients with (a)

unexplained weight loss of more than 10% of the body weight in the 6 months previous to admission; (b) unexplained fever with temperatures above 38°; and (c) night sweats. [Note: Pruritus alone will no longer qualify for B classification; also, a short, febrile illness associated with a known infection will not qualify for B classification.]

**Other Considerations**

It must be emphasized that the CS and PS staging classifications apply *only* to the patient at the time of disease presentation and prior to definitive therapy. The lymphatic structures are defined as the lymph nodes, spleen, thymus, Waldeyer's ring, appendix, and Peyer's patches. Liver involvement (H+) is always considered to be diffuse and, thus, Stage IV of the disease. Bone marrow biopsies must be taken from a clinical or radiographically uninvolved area of bone.

**Stage I.** Involvement of a single lymph node region (I) or of a single extralymphatic organ or site (I<sub>E</sub>).

**Stage II.** Involvement of 2 or more lymph node regions on the same side of the diaphragm (II) or localized involvement of extralymphatic organ or site and of 1 or more lymph node regions on the same side of the diaphragm (II<sub>E</sub>). An optional recommendation is that the numbers of node regions involved be indicated by a subscript [*e.g.*, II<sub>3</sub>].

**Stage III.** Involvement of lymph node regions on both sides of the diaphragm (III), which may also be accompanied by localized involvement of extralymphatic organ or site (III<sub>E</sub>) or by involvement of the spleen (III<sub>S</sub>), or both (III<sub>SE</sub>).

**Stage IV.** Diffuse or disseminated involvement of 1 or more extralymphatic organs or tissues with or without associated lymph node enlargement. The reason for classifying the patient as Stage IV should be identified further by defining site by symbols.

**Staging Classification Examples**

Multiple nodules in the lung limited to 1 lobe or perihilar extension associated with ipsilateral hilar adenopathy will be classified ordinarily as localized extralymphatic disease. Unilateral pleural effusion with or without lung involvement but with hilar adenopathy will be considered as localized extralymphatic disease.

CS IA PS I<sub>S-H-N-M</sub>-

Implies clinical Stage I without symptoms and pathological Stage I and negative spleen following splenectomy, liver biopsy negative, additional lymph node biopsy negative, and marrow biopsy negative.

CS IIA<sub>3</sub> PS III<sub>S+N+H-M</sub>-

Implies clinical Stage IIA, 3 lymph node regions involved, PS III with spleen positive, abdominal lymph node positive, liver biopsy negative, bone marrow biopsy negative.

CS IIIB PS IV<sub>H+M-S</sub>-

Implies clinical Stage IIIB with pathological Stage IV due to positive liver biopsy, marrow and spleen negative.

CS IVB<sub>LH</sub> PS IV<sub>H+M</sub>-

Implies clinical Stage IVB with gross evidence of lung and liver involvement and pathological Stage IV due to positive liver biopsy. Marrow biopsy was negative.