

Rappaport H, Winter W J & Hicks E B. Follicular lymphoma: a re-evaluation of its position in the scheme of malignant lymphoma, based on a survey of 253 cases. *Cancer* 9:792-821, 1956.

[Armed Forces Institute of Pathology and Veterans Administration Central Laboratory for Anatomical Pathology, Washington, DC]

Malignant lymphomas other than Hodgkin's disease are classified according to their cellular composition and growth pattern, which may be either nodular (follicular) or diffuse. Both cellular composition and growth pattern are relevant in predicting the natural history and prognosis of the disease. Among lymphomas of similar cellular composition, a nodular pattern has a favorable prognostic significance. [The *SCJ*® indicates that this paper has been cited in over 550 publications.]

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The work upon which the paper on follicular lymphoma is based was done during a five-year period (1949-1954) when I was head of the Section of Reticuloendothelial Pathology and Hematology at the Armed Forces Institute of Pathology and the registrar of the Lymphatic Tumor Registry of the American Registry of Pathology, both in Washington, DC.

The Armed Forces Institute of Pathology serves as a repository and reference center for the Army, Navy, and Public Health Service, but its staff and facilities are also available for consultations requested by pathologists who are not associated with the military services. The institute possesses a great number of slides, blocks, and gross specimens of malignant tumors, including lymphomas. Among these, I was able to select specimens from more than 250 cases of follicular lymphoma. This type of lymphoma was thought at that time to be a clinical and pathologic entity with a prognosis more favorable than that for malignant lymphomas devoid of a follicular pattern.

I carried out the studies on follicular lymphoma in collaboration with William J. Winter and Ethel B. Hicks, who provided assistance with statistics. For four years, we made a detailed evaluation of histologic features, clinical data, and life expectancy. We concluded

that in the comparison of lymphomas with and without a follicular pattern, but with approximately the same cellular composition, a follicular pattern did, indeed, indicate a better prognosis. The observations recorded in this paper provided the basis for the subsequently proposed classification and nomenclature of malignant lymphoma, which was published in a monograph.¹

The clinical validity of our findings was first confirmed in the early 1970s, when Stephen Jones and his associates at Stanford University published several papers that culminated in a clinicopathologic correlation study of 405 cases of non-Hodgkin's lymphoma.² Since then, many comprehensive reviews and analyses have appeared, pointing out both shortfalls and merits of the classification, which has become known as the Rappaport classification.

In a recent monograph on surgical pathology of the bone marrow,³ Wittels states that, "to the practicing pathologist, the contributions of Rappaport have been among the foremost. The acceptance of the nodular and diffuse form of malignant lymphoid lesions, coupled with his emphasis on cytological characteristics of the participating cells, set the stage for most of the practical and meaningful nomenclatures and classifications currently applied to the malignant lymphomas." Referring to an error in the classification, the author added the following footnote: "Rappaport's failure to distinguish the reticulum cell or histiocyte from the subsequently identified transformed lymphocyte must be viewed within the context of the information then available, and should not detract from his major contribution."

In 1982 a comprehensive classification was proposed for use in clinical studies.⁴ In contrast to other histologic classifications of malignant lymphoma, it retains "follicular" and "diffuse" as important architectural features because of their relevance to both prognosis and histologic reproducibility. A more recent publication by my former associate, Bharat Nathwani,⁵ provides both a historical review and an up-to-date modification of the classification that my coworkers and I had presented in 1956.

1. Rappaport H. Malignant lymphomas: nomenclature and classification. *Tumors of the hematopoietic system*. Washington, DC: Armed Forces Institute of Pathology, 1966. p. 97-161. (Cited 145 times.)
2. Jones S E, Fuks Z, Bull M, Kadin M E, Dorfman R F, Kaplan H S, Rosenberg S & Kim H. Non-Hodgkin's lymphomas IV. Clinicopathologic correlation in 405 cases. *Cancer* 31:806-23, 1973. (Cited 480 times.)
3. Wittels B. *Surgical pathology of bone marrow—core biopsy diagnosis*. Philadelphia: Saunders, 1985. p. 49.
4. The Non-Hodgkin's Lymphoma Pathologic Classification Project. National Cancer Institute sponsored study of classifications of non-Hodgkin's lymphomas: summary and description of a working formulation for clinical usage. *Cancer* 49:2112-35, 1982.
5. Nathwani B N. The Rappaport classification of the non-Hodgkin's lymphomas: is it pertinent for the 1980's? (Bennett J M, ed.) *Controversies in the management of lymphomas*. Boston: Martinus Nijhoff, 1983. p. 183-224.