

The American Joint Committee on Cancer: Updating the strategies in cancer staging

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Since its inception, the American Joint Committee on Cancer (AJCC) has been instrumental in fostering the concepts of cancer staging through the Tumor (T), Node (N), and Metastasis (M) system initially espoused by Pierre Denoix in the 1940s.* As a result of the partnership with the International Union Against Cancer (UICC), a worldwide staging system developed and was formally recognized in the late 1980s, when the UICC and AJCC launched an effort to coordinate publications on cancer staging that would be periodically updated and reflect support for a global TNM system.†

The prime motivation for having a unified and worldwide system of cancer staging is to ensure that a common language is used by all those caring for cancer patients and, in the case of TNM, to maintain a dialog in solid tumor management that will be understood by clinicians in all specialties. As in any language, there are always new and interesting phrases that creep into the vernacular, and these must be codified and documented appropriately as new data become available in cancer care. While new strategies of cancer classification become apparent, it is also important that the basic principles by which TNM was developed are not radically changed so that future generations will understand the strategies formulated by past generations.

Importantly, in the 1970s, the first edition of the *AJCC Cancer Staging Manual* was published. It has been re-edited every five to seven years since, reflecting new staging information resulting from advances in clinical and pathological diagnostic studies relating to many solid tumors. In 1997,

the fifth edition of the *AJCC Cancer Staging Manual* was published, continuing the publication's tradition of serving as a resource for physicians and cancer registrars throughout the U.S. An updated version of the manual became available earlier this year.

This article describes the collaborative efforts of the ACS and the AJCC in developing strategies for cancer staging, describes the role of the *AJCC Cancer Staging Manual*, and informs readers about recent updates to that publication.

College's role

The American College of Surgeons was instrumental in the formation of the AJCC more than four decades ago. In January 1959, the AJCC (formerly known as The American Joint Committee for Cancer Staging and End Results Reporting) was established in response to invitations to six organizations by the chairman of the board of chancellors of the American College of Radiology and the Chair of the ACS Board of Regents to participate as cofounders. The six organizations (see Table 1, p. 14) remain as founding organizations of the AJCC and continue to participate fully in its activities. In addition to these founders, sponsoring organizations (see Table 2, p. 14) and liaison organizations (see Table 3, p. 14) help to direct the efforts of the AJCC.

As a further indication of support for the TNM system of cancer staging, the College's Commission on Cancer (COC) mandated use of the TNM system for all patients with solid tumors cared for in COC-approved hospitals in the U.S. This acceptance of TNM and the role of the AJCC in cancer staging has helped to foster education in the use of the TNM system among all those caring for cancer patients and has strengthened the collaboration between the AJCC and the ACS.

*Denoix PF: Tumor, node and metastasis (TNM). *Bull Inst Nat Hyg (Paris)*, 1:1-69, 1944.

†Hutter RV: At last —worldwide agreement on staging of cancer. *Arch Surg*. 122:1235-1239, 1987.

In addition to this partnering effort, the College has served as the administrative support arm of the AJCC. The housing of the AJCC office and support staff in the ACS headquarters in Chicago, IL, and the continued role of the Medical Director of the Cancer Program of the College as executive director of the AJCC, has fostered this close relationship.

New manual available

In May 2002, the AJCC reached an additional significant milestone. The sixth edition of the *AJCC Cancer Staging Manual* was published and became available for all those individuals taking part in cancer care, both in the U.S. and throughout the world. The changes in TNM cancer staging strategy appearing in the sixth edition will be used by cancer registrars and physicians beginning in January 2003.

The groundwork for the latest edition began several years ago when several hundred clinicians, registrars, and dedicated AJCC personnel combined their efforts to develop task forces specific to organ sites of cancer. These groups reviewed pertinent literature, patient databases, and new clinical and pathological techniques that would impact staging strategies appearing in the sixth edition. These groups met and worked diligently to debate concepts that are critically important not only to cancer staging, but to the methods of collecting and analyzing a vast amount of material related to staging concepts. To complement the efforts of the task forces, representatives of the UICC have contributed greatly and have ensured that the sixth editions of both the AJCC and UICC publications will be seamless and reflect the important working relationship between both organizations.

The panels that prepared the sixth edition of the *AJCC Cancer Staging Manual* required a full understanding of the tenets upon which TNM staging is based, as well as a full knowledge of new concepts of imaging and pathologic diagnosis, especially in this era of molecular biology. In certain organ sites, especially the breast, new concepts of sentinel node imaging were fully discussed and led to new descriptors for this important concept in the new manual. In the new editions of both the AJCC and UICC publications, terms to

record minimal cellular involvement are proposed. The importance of the isolated tumor cell is discussed in the new publication and, hopefully, will lay the groundwork for future editions as the role of immunohistochemistry and polymerase chain reaction (PCR) technology evolve in the identification and use of molecular markers and minimal tumor involvement.

The sixth edition of the *AJCC Cancer Staging Manual* includes changes in the staging of breast cancer, hepatobiliary tumors, pancreatic carcinoma, and melanoma. In addition, staging of head and neck cancer will reflect the surgeon's role in identifying "resectable" versus "unresectable" tumors. In order for staging to be relevant, it has to apply to the primary use of extirpation of solid

Table 1

AJCC founding organizations

American Cancer Society
American College of Physicians
American College of Radiology
American College of Surgeons
College of American Pathologists
National Cancer Institute

Table 2

AJCC sponsoring organizations

American Cancer Society
American College of Surgeons
American Society of Clinical Oncology
Centers for Disease Control and Prevention

Table 3

AJCC liaison organizations

American Urological Association
Association of American Cancer Institutes
National Cancer Registrars Association
North American Association of Central Cancer Registries
American Society of Colon and Rectal Surgeons
Society of Gynecologic Oncologists
Society of Urologic Oncology

tumors. Once the concepts of resection are planned, then the staging strategies must be equally effective in planning both chemotherapy and radiation management. This implies that the TNM system must never become static but should always be a dynamic and useful system for all clinicians.


In addition, the pathologist continues to play a role in the ultimate analysis of TNM staging based on resection of solid tumors. Through the coordinating efforts of the College of American Pathologists (CAP), a founding organization of the AJCC, synoptic reporting of cancer for all COC-approved hospitals will be instituted in 2003 and will be based on the principles of TNM as espoused by the AJCC. This interaction is another indication of the importance of open dialog among organizations dedicated to cancer care.

The role of the AJCC goes well beyond creation and maintenance of the TNM system for cancer staging. The organizations and individuals supporting the AJCC are also dedicated to the education and promotion of TNM concepts for all physicians, nurses, registrars, and members of the health care team who treat our cancer patients. The target population for immediate use of the sixth edition of the *AJCC Cancer Staging Manual* will be the cancer registrars who work diligently in hundreds of hospitals throughout the U.S. to ensure that clinical information is recorded properly and that this information is maintained in a consistent form to be used for primary patient care and clinical research. In developing the new manual, the input of our cancer registry community was solicited and recommendations for improvements in the sixth edition were adhered to whenever possible. The goal of the editorial board was to make the publication as "user friendly" as possible and to have it serve as an educational tool for medical students, house officers, physicians, cancer registrars, and all those who care for the cancer patient.

In partnering with a new publisher, Springer-Verlag, the AJCC has also realized the importance of new methods of information gathering and dissemination represented by computerization, the Internet, and CD-ROM technology. The new version uses these exciting techniques to help physicians and registrars in their daily application of TNM staging. Through modern concepts of infor-

mation transfer and dissemination, the educational mission of the AJCC will be realized. The eventual goals of the AJCC relating to cancer staging can never be attained unless newer generations of practitioners and registrars are introduced to cancer staging strategies during their training.

Both the current and future goals of the AJCC and the American College of Surgeons are intertwined and based on the premise that excellent patient care can only be derived through the education and dedication of enlightened physicians. The *AJCC Cancer Staging Manual* is another example of this partnering effort. We anticipate that all surgeons and Fellows of the American College of Surgeons will embrace the concepts developed in the sixth edition and will use this valuable material in their daily patient management whether it be at tumor conference, in the operating room, in documentation of the medical record, or at any venue where excellence in cancer staging is paramount.

Surgeons who are interested in purchasing a copy of the sixth edition of the *AJCC Cancer Staging Manual* may order via the Internet at www.cancerstaging.net or by phoning 800/777-4643. 

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