The WHO Classification of Tumours of the Central Nervous System, 4th Edition

Gregory N. Fuller, MD, PhD

The recently revised WHO Classification of Tumours of the Central Nervous System (4th edition, 2007) follows in the highly successful footsteps of previous editions of this widely used reference. The latest version is the product of the combined efforts of an international group of oncologic neuropathologists and brain tumor researchers that culminated in an Editorial and Consensus Conference convened in Heidelberg, Germany, on November 17 and 18, 2006. The World Health Organization (WHO) scheme for brain tumor classification and grading has been widely adopted worldwide, and it commonly serves as the recommended reference standard for central nervous system tumor research studies and clinical protocols as, for example, in the “Protocol for the Examination of Specimens From Patients With Tumors of the Brain/Spinal Cord” described by Parisi and colleagues in this issue of the ARCHIVES.

The 2007 WHO Classification includes a number of significant modifications compared with the preceding volume (WHO 2000), which it supplants. Among the modifications are newly introduced tumor entities, variants, patterns, and tumor syndromes, changes in grade for some tumor types, clarification of grading criteria for others, reorganization of some tumor categories, and conceptual shifts for some entities. An illustration of the latter is provided by the evolving view of the most highly infiltrative form of diffuse glioma, gliomatosis cerebri, which has previously been treated by the WHO as an independent tumor entity sui generis but is now widely viewed as a pattern of widespread brain invasion that, although usually astrocytic in phenotype, can be seen with any diffuse glioma subtype, including oligodendroglioma and oligoastrocytoma. Several reviews of the 2007 classification, including detailed descriptions of the newly codified tumor entities, have recently been published and are highly recommended. In this issue of ARCHIVES, Brat et al provide the readership with a summary of the most significant updates that have been incorporated into the 4th edition, emphasizing those aspects that are of particular relevance to the surgical pathologist.

See also pp 907 and 993.

As with most areas of surgical pathology, there remain unresolved issues and controversies. Some aspects of the revised WHO classification were the subject of spirited discussion before, during, and after the Heidelberg conference, and these topics will continue to be explored and debated in the subspecialty literature; this is but a sign of vibrancy in a dynamic and evolving field. Nosologic controversies notwithstanding, the WHO classification provides an invaluable common terminologic language and definitional foundation for international discourse, and the 4th edition is an essential reference work for surgical pathologists whose practice includes tumors of the central nervous system. Brat and colleagues have provided the ARCHIVES readership with an excellent, concise update that will quickly bring the reader up to speed on the current 2007 classification.

References