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cIMPACT-NOW: The Consortium to Inform Molecular and Practical Approaches to CNS Tumor Taxonomy

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The 2016 WHO Classification of CNS Tumours for the first time incorporates molecular characteristics in the definitions of some CNS neoplasms, allowing for a much more precise diagnosis, especially for diffuse gliomas and embryonal tumors. Meanwhile, further elucidation of the molecular underpinnings of these tumors and of the diagnostic/clinical relevance of these markers is occurring at a rapid pace. The cIMPACT-NOW consortium, consisting of expert-neuropathologists and a clinical advisory panel, was established in 2017 to facilitate incorporation of such novel, relevant molecular information. Since then, cIMPACT-NOW has published recommendations regarding the terms 'not otherwise specified' (NOS) versus 'not elsewhere classified' in the context of CNS tumor diagnosis (cIMPACT update 1), and a clarification of the diagnosis of H3 K27M-mutant gliomas and of diffuse low-grade and anaplastic, IDH-mutant astrocytomas (cIMPACT update 2). Furthermore, given that the traditional microscopic criteria for grading of diffuse gliomas are no longer sufficient, cIMPACT update 3 has proposed how EGFR amplification and/or combined gain of chromosome 7 and loss of chromosome 10 can be used to diagnose a histologically lower-grade, diffuse, IDH-wildtype astrocytoma as 'molecular glioblastoma'. An ongoing effort is focussing on improved classification of pediatric low-grade gliomas. The cIMPACT-NOW consortium thus facilitates rapid and adequate implementation of novel molecular information in the diagnosis of CNS tumors and paves the way for improved future WHO classification of these neoplasms. (Contribution on behalf of the cIMPACT-NOW Consortium; chair Dr. David N Louis).

ICCR Datasets as Tools to Standardize and Improve Reporting of Pathology Information on CNS Tumors

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Global standardization of pathology information on tumor classification, staging, prognostic and predictive information forms the basis for best practice in patient care and is a prerequisite for international epidemiological research and benchmarking. The International Collaboration on Cancer Reporting (ICCR; founded by major pathology organizations from around the world) produces validated and evidence-based pathology datasets to improve cancer reporting internationally. Starting in 2017 and supported by the ICCR, a group of 15 experts (mainly neuropathologists) has produced three datasets with a consistent style and content on primary CNS tumors. The dataset "Final integrated report/diagnosis for CNS specimens" should be used in conjunction with the datasets "Histological assessment of CNS specimens" and "Molecular information for CNS specimens". The backbone of these datasets is a set of CORE elements that (supported by level III-2 evidence or unanimously agreed upon by the experts) are considered to be the minimum for adequate reporting of the tumor. In addition, the datasets include information on many NON-CORE elements that were unanimously considered to be important as well. All pathology reports on CNS tumors should strive to render a diagnosis from the 2016 WHO Classification of CNS Tumours, preferably by using the layered approach described in the 2014 ISN-Haarlem guidelines. It is expected that implementation of the ICCR datasets (which will be published on the ICCR website and as a journal article) will improve international reporting and benchmarking of CNS tumors. (Contribution on behalf of the ICCR CNS tumor expert committee; chair Dr. David N Louis)

<http://www.iccr-cancer.org/datasets/published-datasets/central-nervous-system>