

## Neuro-Oncology in the Real World: Challenges, Innovations, and Impact

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Neuro-oncology has advanced considerably over the past two decades through developments in molecular diagnostics, neuroimaging, microsurgical techniques, precision radiotherapy, systemic therapies, and artificial intelligence. These innovations have improved the diagnosis and management of primary and metastatic brain and spinal tumours, resulting in better patient outcomes and quality of life. However, translating these advances into routine clinical practice remains challenging, particularly in low- and middle-income countries (LMICs), where limited resources, inadequate infrastructure, and disparities in access to specialized care continue to affect patient outcomes.

Modern neuro-oncology relies on a multidisciplinary approach involving neurosurgeons, neurologists, medical and radiation oncologists, neuroradiologists, neuropathologists, rehabilitation specialists, palliative care teams, nurses, and allied health professionals. Close collaboration among these disciplines is essential to provide timely diagnosis, individualized treatment, comprehensive supportive care, and long-term follow-up. At the same time, expanding research capacity and

improving access to advanced diagnostics and evidence-based therapies remain priorities for strengthening neuro-oncology services in resource-constrained settings.

Against this backdrop, the 7th Annual Neuro-Oncology Symposium (7ANOS), themed "Neuro-Oncology in the Real World: Challenges, Innovations, and Impact," provides a multidisciplinary platform for clinicians, researchers, educators, and trainees to exchange knowledge, share scientific advances, and discuss practical solutions to contemporary challenges in neuro-oncology. The symposium aims to bridge the gap between emerging evidence and real-world clinical practice by promoting innovation, collaboration, and evidence-based care while addressing the unique needs of healthcare systems in LMICs.

We hope this supplement will stimulate further research, strengthen multidisciplinary collaboration, and contribute to the development of sustainable, evidence-based neuro-oncology services across Pakistan and other LMICs. Ultimately, our shared goal is to ensure that advances in neuro-oncology translate into meaningful improvements in patient care and become accessible, effective, and impactful for all patients with brain and spinal tumours.

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