

## Emerging Medical and Clinical Challenges: An Australasian Regional Perspective

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### Editor's Note

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Medical research has progressed a great deal all across the world. This short communication brings forth the latest clinical and medical research status in the Australasian Region. The studies included in this report summarizes novel insights, current developments, and observations that were specific to the region and provides an excellent opportunity to the diverse research groups all across the world to interpret the research trend and emerging medical science challenges in the Australasian region.

Murray and Mason (2010) have presented the important challenges and the areas of medical research that are relevant to the Australasian region. These include palliative care of people affected with life threatening diseases, preemptive screening and diagnosis of chronic degenerative diseases, providing clinical and psychological care and reaching out to the poor sections of populations for raising the quality of life.

Bryant et al. (2020) reported the clinical experience of Hospital in the Home Society of Australasia. During the COVID-19 pandemic the hospitalizations have been unprecedented and the patients were required to be isolated at home during quarantine. The provision of hospital like facilities at home has become highly relevant. The research group noted that such service operations include staffing, equipment, sanitization and telehealth infrastructure. The authors have suggested that new clinical pathways need to be devised for COVID-19 patients and the risk of transmission, clinical protocol for the patients and well-being of staff need to be addressed in advance.

Phan et al. (2020) presented the clinical services of Clinical Immunogenomics Research Consortium Australasia (CIRCA) in the Australasian region. The consortium with expertise in genomics, data science and medicine diagnose and treat patients with congenital immunological disorders. The group analyzes the gene variants by functional validation and customized treatment of patients throughout Australia and New Zealand and with a distributed network beyond these regions. CIRCA activities can be scaled up to other rare diseases providing the required clinical experience and applied genomics. Kroon et al. (2018) presented their observations on credentialing the radiotherapy centers in the Australasian region on stereotactic ablative body radiotherapy of early stage lung cancer. Trans-Tasman Radiation Oncology Group facilitated the randomized clinical trial with conventional radiotherapy and proposed that technical credentialing is a prerequisite for joining the trial. The study reported that all the participating centers were able to deliver the radiotherapy with required accuracy and wearable to produce acceptable plans for the test cases. Credentialing provides an opportunity to discuss technical issues including the four dimensional CT and patient immobilization small field dosimetry,

During the pandemic there were several diversions of the health resources for the treatment and management of the health resources. Most of the health care infrastructure was reserved for the COVID-19 quarantine and primary care. Interventional procedures and surgical treatments were postponed unless they are very critical. Parsi et al. (2020) have developed The Venous and Lymphatic Triage and Acuity Scale to rationalize and harmonize patients affected with venous and lymphatic disorders and vascular anomalies and was based on the clinical assessment of the urgency. This provision was in accordance with the International consensus on classification of the clinical categories and triage urgency. This initiative was in

association with the Interventional radiology society of Australasia.

Baticulon et al. (2020) reported the latest status of the pediatric and neurological aspects in Asia and Australasia and identified the gaps in the knowledge level and the skills to improvise the pediatric neurological case in the region. This assessment was based on the demographic statistics, pediatric neurological training in the surgical aspects and the clinical practice. The Asian and Australasian Society for Pediatric neurosurgery conducted the survey through the social media. Pediatric neurosurgeons participated in the survey. The results revealed that trained neurosurgeons completed a high number of the pediatric neurosurgical operations. The study also found that the country economic status determine the training level in pediatric neurosurgery. Smith et al. (2020) have reported that the abdomino-perineal excision rates in the Australian and New Zealand were high when compared to the International frequency and almost one third of the rectal cancers were treated based on this clinical practice. The study identified that the major determinants of the abdominoperineal excision were the tumor height, T stage and the requirement for the adjuvant.

Wang et al. (2019) performed a bibliometric analysis and quantitative assessment of research by vascular surgeons in the Australasia and New Zealand along with the trends in the vascular surgery in the region based on the Royal Australasian College of Surgeons and the Australasia and New Zealand Society for Vascular Surgery database. A large quantum of research took place in the thoraco-abdominal aortic pathologies followed by the peripheral arterial disease. The trend of research was more directed to the endovascular surgeries. The study highlights that Australasian vascular surgeons have made significant contributions to the medical research.

These studies are of immense significance in highlighting the contributions of the Australasian region including the countries of Australia, New Zealand and Asia in the field of medical science and their relevance to all other regions of the world as well. The clinical and medical research were highly relevant, focuses and considers the future requirement for the treatment of patients across age and physiological age groups. These research activities were also

promoted due to sustained funding from various Australasian regional medical organizations and societies. The model of research funding and structure can be emulated all across the world to reap the benefits and secure the health of future generations.

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