

# Haematological Malignancies in Pakistan: A Critical Gap in Cancer Registration Requiring Urgent Attention

Sana Khurram and Muhammad Asif Qureshi

*Department of Pathology, Dow University of Health Sciences, Karachi, Pakistan*

Haematological malignancies (HM), including leukaemias, lymphomas (Hodgkin and non-Hodgkin), and multiple myeloma, accounted for over 1.34 million cases globally in 2019.<sup>1</sup> While HM statistics from Pakistan are reported by the Global Cancer Observatory (GLOBOCAN), their representation of nationwide remains arguable. Moreover, discrepancies exist between the cancer numbers for HMs in Pakistan reported in the GLOBOCAN 2022 and those in the recently published National Cancer Registry Report. It is therefore essential to establish strong local data profiles and registries for a true representation of HM numbers from Pakistan.

A recent study by Tufail and Wu, based on cancer data from the Shaukat Khanum Memorial Cancer Hospital registry between 1994 and 2021, reported leukaemia (5.3% cumulative), non-Hodgkin lymphoma (5.1%), and Hodgkin lymphoma (notably 20.1% in children) amongst the most common malignancies in Pakistan.<sup>2</sup> However, 67.6% of these data originated only from the province of Punjab, followed by 20.2% from Khyber Pakhtunkhwa — highlighting the significant underrepresentation of other regions of Pakistan, including Sindh and Balochistan.<sup>2</sup> This geographical under-coverage likely underestimates the true national burden of HMs. Moreover, the absence of effective mechanisms to track long-term outcomes, including mortality, further compromises the accurate estimation of HM burden in Pakistan.

Various regional and local cancer registries have been established in Pakistan, including those in Karachi, Quetta, Hyderabad, Larkana, and Punjab.<sup>3,4</sup> The Punjab Cancer Registry (fed largely by the Shaukat Khanum Cancer Registry) remains the mainstay of cancer statistics and contributes largely to the numbers reported by the GLOBOCAN. However, data from other provinces of Pakistan are sporadic and are largely not standardised across these regional and local registries. Concerns regarding data duplication, coverage, and monitoring patients' survival and outcomes exist. Among the few regional registries in Pakistan outside Punjab, the Karachi Cancer Registry — established in 1995 in collaboration with the International Agency for Research on Cancer (IARC) — marked a pioneering step.<sup>3</sup>

However, the Registry became non-functional for years until recently, when it was revived to generate new cancer data from Karachi.<sup>4</sup> Another valuable addition to the cancer statistics from the province of Sindh is the establishment of the Hyderabad Cancer Registry, which also recently published cancer numbers from the Hyderabad region.<sup>5</sup> Despite contributions from the Punjab Cancer Registry and other institutional registries across other provinces, a functional and cohesive national framework for documenting HMs remains lacking.

A review conducted by Moore *et al.* emphasised that while regional data on solid tumours such as breast, oral, and oesophageal cancers are well-documented, HM remain largely underreported, especially in rural and underserved areas.<sup>6</sup> In this context, recently published report from the National Cancer Registry of Pakistan detailing cancer data during 2015 and 2019 becomes highly significant.<sup>7</sup> It reports a total of 5,510 leukaemia cases, 6,661 non-Hodgkin lymphoma cases, 3,872 Hodgkin lymphoma cases, and 1,188 multiple myeloma cases. Additionally, 3,229 tumour cases were classified under Bone Marrow (C42.1), potentially representing unclassified haematological malignancies. Despite these figures, the overall burden of blood cancers appears lower than expected, particularly given Pakistan's predominantly young population. In comparison with global cancer estimates (GLOBOCAN 2022), HM seem underrepresented in Pakistan's national registry, especially among paediatric and adolescent populations.

To effectively and, if necessary, separately document HM in Pakistan, various steps can be undertaken. It is essential to establish a unified national cancer registry with a focus on HM, integrating all regional and provincial data sources. This will require the enforcement of federal and provincial legislation mandating that all relevant stakeholders report cancer cases to the central HM registry. It is also important to strengthen diagnostic services in peripheral healthcare facilities to gather nearly accurate disease burden profiles from these areas. Moreover, initiating public health campaigns and building local capacity through training and standardised registry protocols can further strengthen data collection. Finally, collaboration with international bodies for technical support and alignment with global reporting standards will have a huge impact on the quality of data collected and reported.

In summary, the establishment of a central or nationwide HM registry requires concerted efforts by all concerned stakeholders to better understand the disease burden and to

*Correspondence to: Dr. Muhammad Asif Qureshi, Department of Pathology, Dow University of Health Sciences, Karachi, Pakistan*  
E-mail: email2asifqureshi@gmail.com

Received: June 17, 2025; Revised: July 22, 2025;  
Accepted: August 11, 2025  
DOI: <https://doi.org/10.29271/jcpsp.2025.09.1081>

devise strategies and policies for improving healthcare for these disorders in Pakistan.

# COMPETING INTEREST:

The authors declared no conflict of interest.

# AUTHORS' CONTRIBUTION:

SK, MAQ: Conceived the idea, conducted the literature search, drafted, and proofread the manuscript.

Both authors approved the final version of the manuscript to be published.

# REFERENCES

1. Zhang N, Wu J, Wang Q, Liang Y, Li X, Chen G, *et al.* Global burden of haematologic malignancies and evolution patterns over the past 30 years. *Blood Cancer J* 2023; **13(1)**:1-3. doi: 10.1038/s41408-023-00853-3.
2. Tufail M, Wu C. Cancer statistics in Pakistan from 1994 to 2021: Data from cancer registry. *JCO Clin Cancer Inform* 2023; **7**:e2200142. doi: 10.1200/CCI.22.00142.
3. Qureshi MA, Mirza T, Khan S, Sikandar B, Zahid M, Aftab M, *et al.* Cancer patterns in Karachi (all districts), Pakistan: First results (2010-2015) from a Pathology based cancer registry of the largest government-run diagnostic and reference center of Karachi. *Cancer Epidemiol* 2016; **44**:114-22. doi: 10.1016/j.canep.2016.08.011.
4. Pervez S, Jabbar AA, Haider G, Qureshi MA, Ashraf S, Lateef F, *et al.* Karachi Cancer Registry (KCR): Consolidated data of 5-years 2017-2021. *J Coll Physicians Surg Pak* 2023; **33(5)**:560-5. doi: 10.29271/jcsp.2023.05.560.
5. Pervez S, Khan MR, Ujjan ID, Mumtaz N, Alam E, Qureshi H. Hyderabad (Sindh, Pakistan) cancer registry report of four years (2020-2023). *J Coll Physicians Surg Pak* 2025; **35(5)**:622-7. doi: 10.29271/jcsp.2025.05.622.
6. Moore MA, Shin HR, Curado MP, Sobue T. Establishment of an Asian cancer registry network: Problems and perspectives. *Asian Pac J Cancer Prev* 2008; **9(4)**:815-32.
7. Ikram A, Pervez S, Khadim MT, Sohaib M, Uddin H, Badar F, *et al.* National Cancer Registry of Pakistan: First comprehensive report of cancer statistics 2015-2019. *J Coll Physicians Surg Pak* 2023; **33(6)**:625-32. doi: 10.29271/jcsp.2023.06.625.

.....