

INTRODUCTION

- ❖ The Adolescent & Young Adults Oncology Progress Research Group defines AYA cancers as occurring in the 15-39 age group.
- ❖ AYA is a scaffold between the pediatric & adult ages.
- ❖ Recently being recognised as a disenfranchised niche field with unique epidemiology, cancer biology, risk factors, and treatment implications.
- ❖ Massive socio-economic impact on the most economically-productive age group.
- ❖ No significant improvement in treatment strategies & outcomes, especially in low- & middle-income countries(LMICs)
- ❖ A paucity of well-collated high-quality data from LMICs.

AIM & OBJECTIVES

- ❖ Descriptive analysis burden of AYA cancers from a sizeable rural teaching hospital in South India.
- ❖ Demographic & site distribution, and primary diagnosis were noted.
- ❖ Compare with the published data from National Cancer Registry Program.

MATERIALS & METHODS

- ❖ Descriptive analysis of all AYA cancers registered at Kasturba Medical College, Manipal, India between January 2019 to December 2021.
- ❖ Medical records were accessed after institutional ethics board clearance.
- ❖ 7973 patients were diagnosed with cancer from January 2019 to December 2021.
- ❖ 983 (12.3%) occurred in the AYA age group.
- ❖ Demographic characteristics like age & sex distribution, geographic distribution, site of cancer, and primary diagnosis were analyzed & collated.
- ❖ Comparison with the published data from National Cancer Registry Program (28-Population Based Cancer Registries & 58-Hospital Based Cancer Registries)

**Vishwapriya M Godkhindi, S.Mailankody, K.S.Udupa, A.Pai et al.*

Department of Pathology, Kasturba Medical College, Manipal, Manipal Academy of Higher Education(MAHE), Manipal, India.

Department of Medical Oncology, Kasturba Medical College, Manipal, Manipal Academy of Higher Education (MAHE), Manipal, India.

Demographic Characteristics (n=983)	
Characteristics	Number (%)
Age (years)	
• 15 - 19	104 (10.6%)
• 20 – 24	126 (12.9%)
• 25 - 29	153 (15.5%)
• 30 - 34	226 (23.0%)
• 35 - 39	374 (38.0%)
Sex	
• Male	439 (44.7%)
• Female	544 (55.3%)

Cancer Characteristics (n=848)	
Diagnosis	Number n (%)
• Haematolymphoid	201 (20.4%)
• Thyroid	188 (19.1%)
• Breast	113 (11.5%)
• Bone & Soft tissue	92 (9.30%)
• Head & Neck	79 (8.00%)
• Central Nervous system	65 (6.60%)
• Gynaecological	62 (6.30%)
• Lower GI tract	48 (4.90%)

Age-specific cancer type distribution	
• 15 – 19 years	Acute leukemia Non-Hodgkin lymphoma CNS tumors Bone & soft tissue
• 20 – 24 years	Non-Hodgkin lymphoma Thyroid cancer CNS tumors Bone & soft tissue
• 25 – 29 years	Thyroid cancer Bone & soft tissue CNS tumors Head & Neck cancer
• 30 – 34 years	Head & Neck cancer Breast cancer Thyroid cancer Gynaecological cancers
• 35 – 39 years	Head & neck cancer Breast cancer Gynaecological cancers Lower gastrointestinal tract cancer

Site-specific cancer types distribution	
Haematolymphoid	Acute leukaemia Non-Hodgkin lymphoma
Thyroid	Papillary thyroid carcinoma Follicular carcinoma
Breast	Invasive breast carcinoma, NOS
Bone & Soft tissue	Osteosarcoma Ewing sarcoma Malignant mesenchymal tumours
Oral cavity	Buccal mucosa Tongue
CNS	Astrocytoma Oligodendroglioma
Gynaecological	Cervical cancer Endometrial carcinoma
Lower GI Tract	Carcinoma colorectum

DISCUSSION

- ❖ Globally in 2018, 1.2 million cancer cases & 400,000 deaths were recorded in the AYA population.
- ❖ In India, as per published data, the median AAR is 22.2/100,000 for males & 29.2/100,000 for females.
- ❖ Age-specific incidence rates increase with increasing age in both genders, highest incidence in the 35-39 age group.
- ❖ Haematolymphoid cancers overall followed by thyroid & breast cancers were the most common malignancies.
- ❖ Haematolymphoid malignancies predominated in the 15-19 & 20-24 age groups, while cancers of the Head & neck, breast & gynaecological were higher in the 35-39 age group, mirroring adult trends.
- ❖ >50% of patients presented with an advanced-stage disease on presentation.
- ❖ Increasing incidence of cancer with an estimated 178,617 cases in 2025 in India.

CONCLUSION

- ❖ AYAs deserve multicenter collaboration, organisational support, and resource-appropriate treatment adaptation.
- ❖ Dedicated survivorship clinics with educational & vocational rehabilitation.
- ❖ Mapping the epidemiology will improve surveillance, further focused research and guide national policies & resource allocation.

REFERENCES

- ❖ Mathur, P., Nath, A., & K, S. K. (2022). Adolescent and young adult cancers in India-Findings from the National Cancer Registry Programme. *Cancer epidemiology*, 78, 102124. <https://doi.org/10.1016/j.canep.2022.102124>
- ❖ Kakkar, N., Gupta, A., Sharma, N. K., Agarwal, P., & Kaur, J. (2017). Adolescents and young adults: A study of distribution of cancer at ages 15-39 years in a tertiary care hospital from North India: Epidemiological considerations. *South Asian journal of cancer*, 6(4), 180-182.
- ❖ Singh, R., Shirali, R., Chatterjee, S., Adhana, A., & Arora, R. S. (2016). Epidemiology of cancers among adolescents and young adults from a tertiary cancer center in Delhi. *Indian journal of medical and paediatric oncology : official journal of Indian Society of Medical & Paediatric Oncology*, 37(2), 90-94. <https://doi.org/10.4103/0971-5851.180135>

*Declaration of conflict of interest: None to declare

*Financial /Funding declaration: None to declare

For any further details feel free to contact
Dr. V.M Godkhindi, +91-8600040545
vishwapriya.mg@manipal.edu