

# Abstract NO. 281 AN HOSPITAL-BASED STUDY OF PEDIATRIC CANCER SEEN IN TATA MEMORIAL HOSPITAL, MUMBAI

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## INTRODUCTION

The paediatric cancer incidence rate in India is 6.3 per 105 while the global estimates are 8.8 per 105. The types of cancers that occur in children vary greatly from those seen in adults. Despite its rarity and major advances in treatment and supportive care, cancer is still the leading cause of death from disease in children younger than 15 years old.

## OBJECTIVES

To study different types of childhood cancers registered in Tata Memorial Hospital (TMH) during the years 1985-2013.

## METHODS

Methods: During this period, 23,727 cancer cases were registered. These cancer cases were coded by the International Classification Of Disease for Oncology (ICD-O-3). Since the classification of childhood cancer is based on tumour morphology and primary site with an emphasis on morphology rather than the emphasis on primary site for adults, all paediatric cancers were further classified according to the ICCC category (International Classification for Childhood Cancer) provided by the SEER Program.

## RESULTS

Of the 23,727 paediatric cancer cases seen (M:F ratio is 2:1), 40-42% cases were reported as Leukaemia, in which, Lymphoid Leukaemia, itself was contributing 27-28% of the total cancer cases, followed by Hodgkin's lymphoma which contributes 5-6% of total cancer cases, lymphomas and so on. In contrast with predominance of carcinomas seen among adults, paediatric tumours exhibit substantial histological and biological diversity, and most were not of epithelial origin.

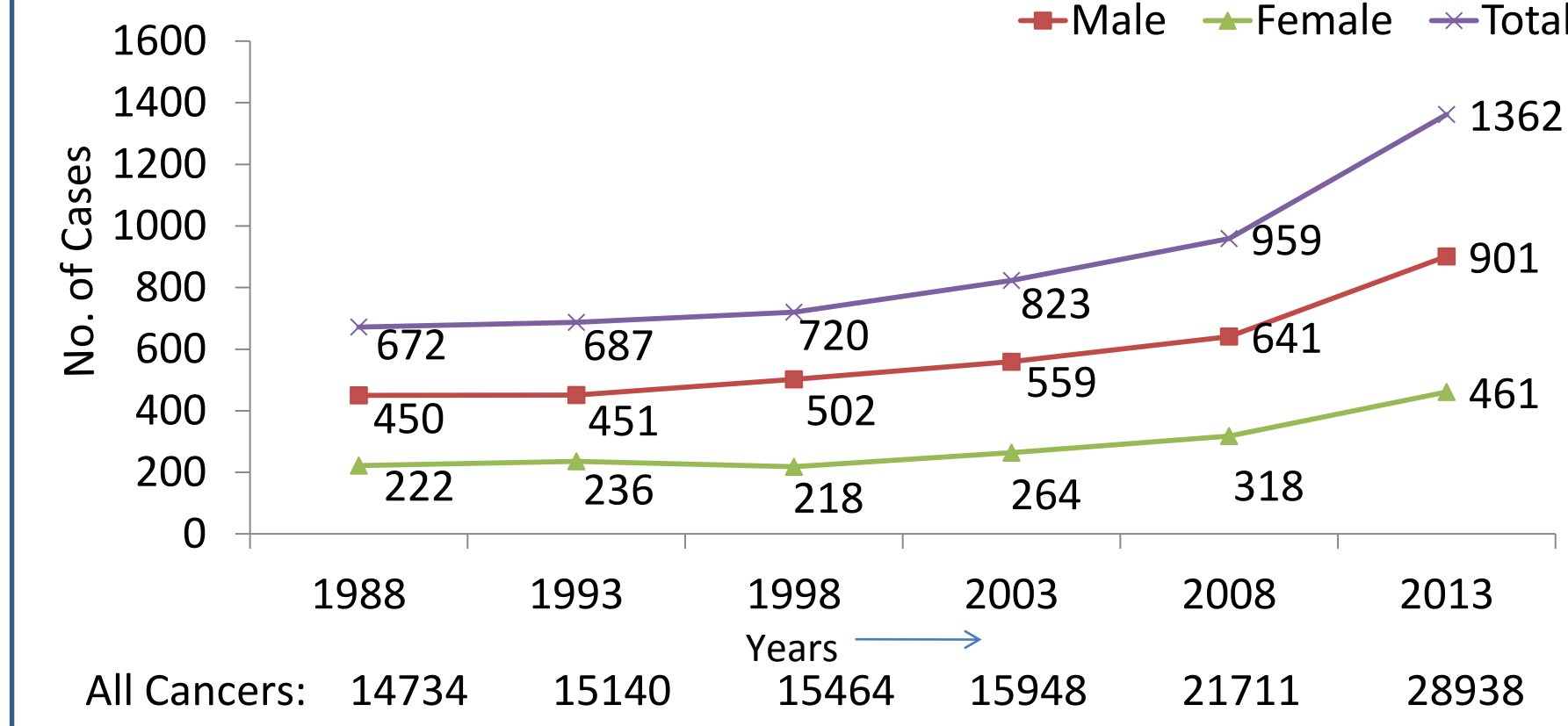
### World Scenario

	Incidence Rate per 10 <sup>5</sup>		New Paediatric Cases/yr	
	India (ASR)	World (ASR)	India	World
Male	9.1	11.4	28,712	
Female	6.5	9.1	2,00,166	

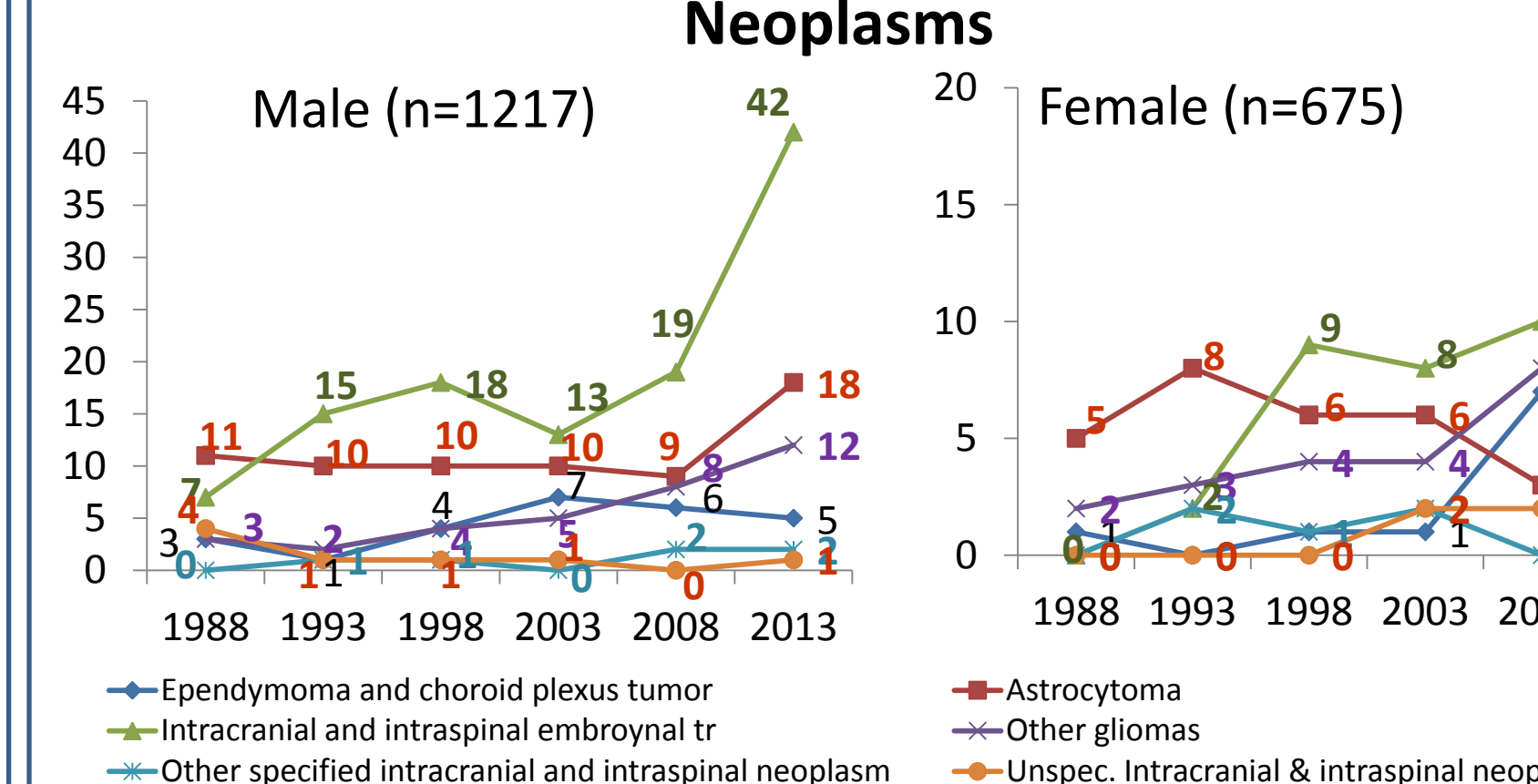
### Incidence Rates (AAR) (per 10<sup>5</sup>) in Indian PBCRs

Registry	Boys	Girls
Mumbai	110.5	69.9
Bangalore	85.2	68.3
Chennai	156.7	85.6
Thiruvananthapuram	118.9	108.0

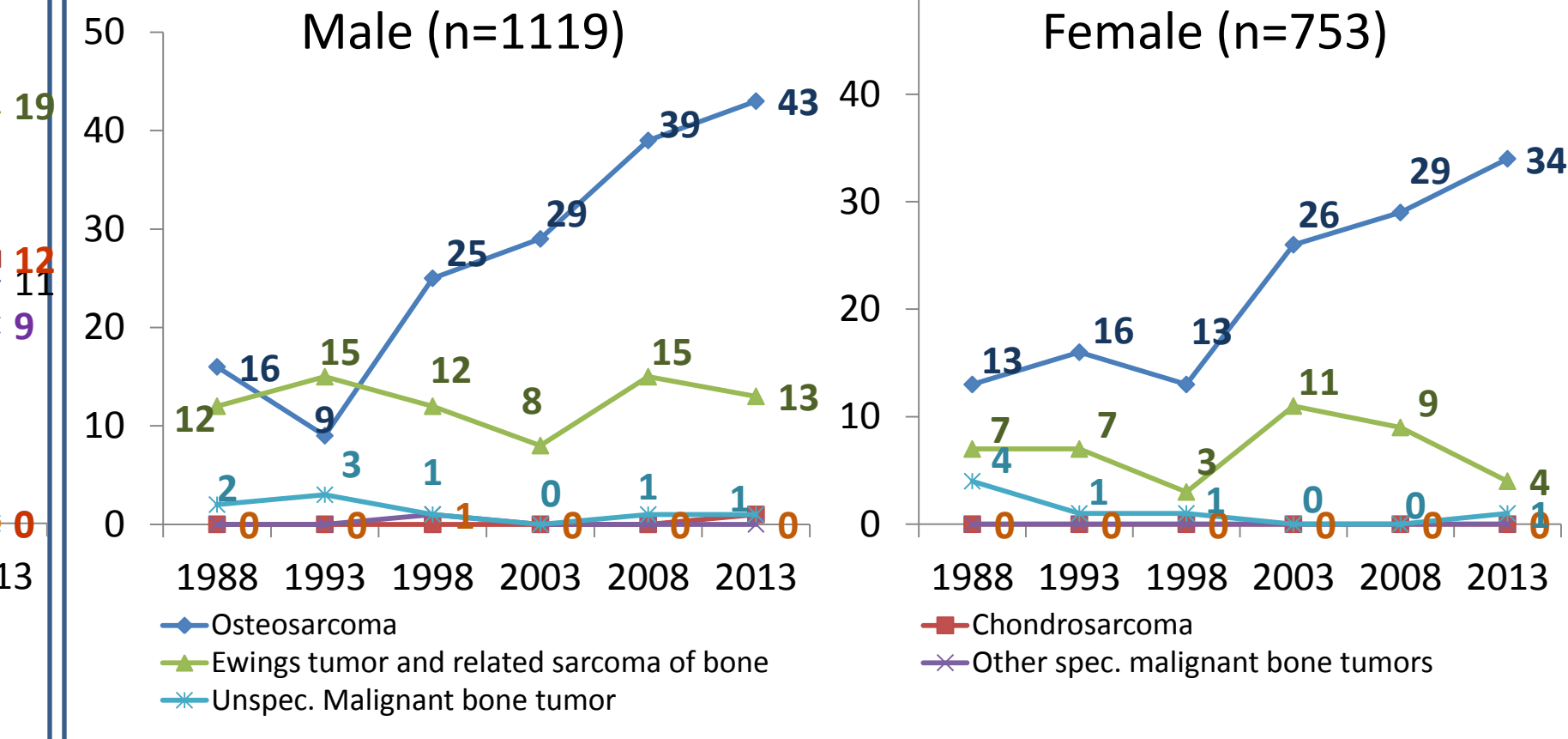
### Trends in TMH



### CNS And Miscellaneous Intracranial & Intraspinal Neoplasms



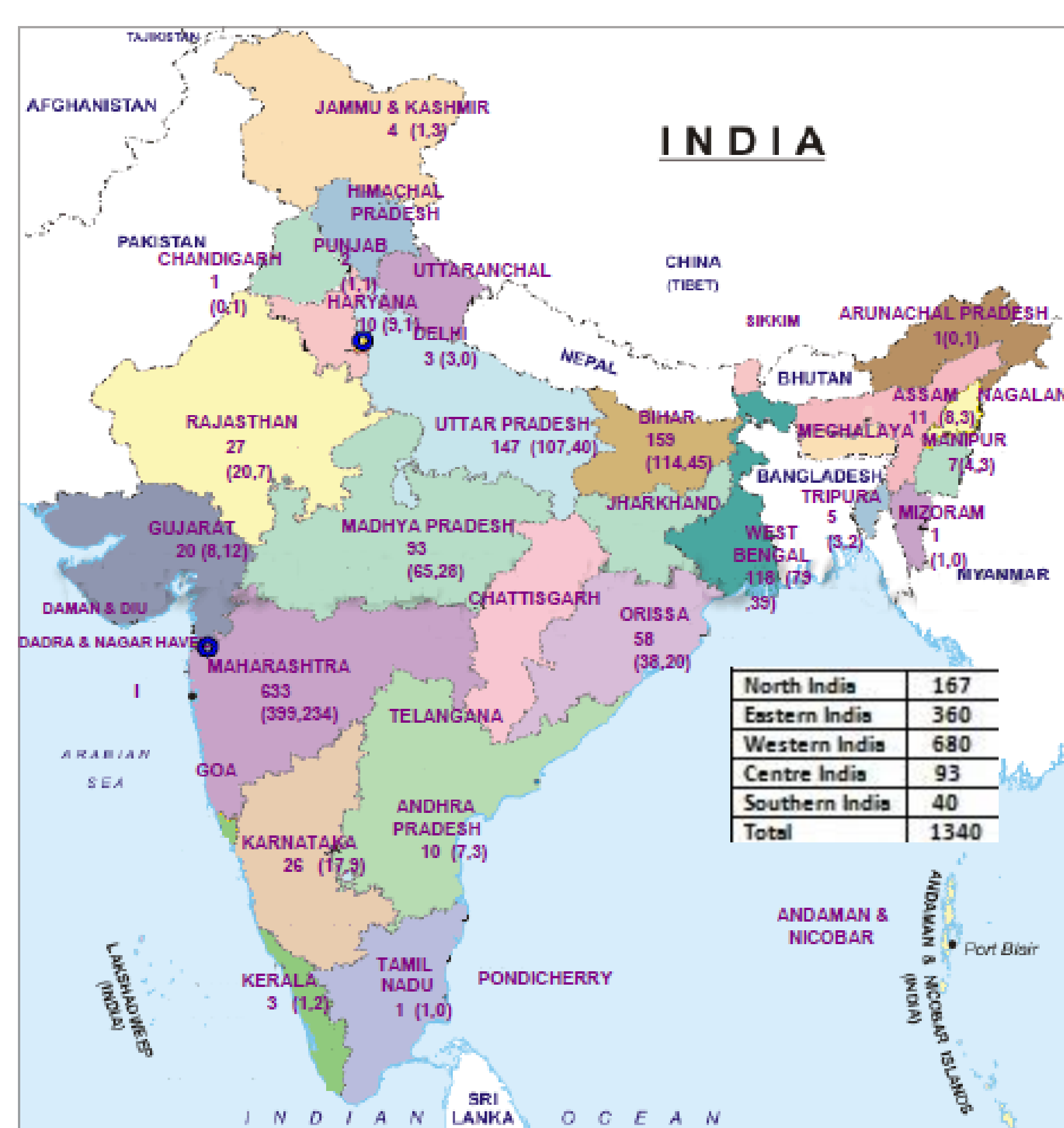
### Malignant Bone Tumours



### Comparison in diagnostic groups for the year 1985 and 2013

Site/Year	1985				2013			
	Boy	Girl	Total	%	Boy	Girl	Total	%
Leukemia	150	75	225	40.4	368	173	541	39.7
Malig. NHL & Hodgkin's	68	12	80	14.4	144	29	173	12.7
Central Nervous System	19	10	29	5.2	80	51	131	9.6
Sympathetic Nervous System	12	10	22	3.9	42	26	68	5.0
Retinoblastoma	17	12	29	5.2	24	15	39	2.9
Renal	11	11	22	3.9	31	15	46	3.4
Hepatic	1	0	1	0.2	13	6	19	1.4
Bone	39	16	55	9.9	58	39	97	7.1
Soft Tissue Sarcomas	28	17	45	8.1	99	73	172	12.6
Germ Cell Tumors	7	17	24	4.3	13	19	32	2.3
Carcinomas Others and unspecified	10	3	13	2.3	4	1	5	0.4
<b>Grand Total</b>	<b>369</b>	<b>188</b>	<b>557</b>		<b>901</b>	<b>461</b>	<b>1362</b>	

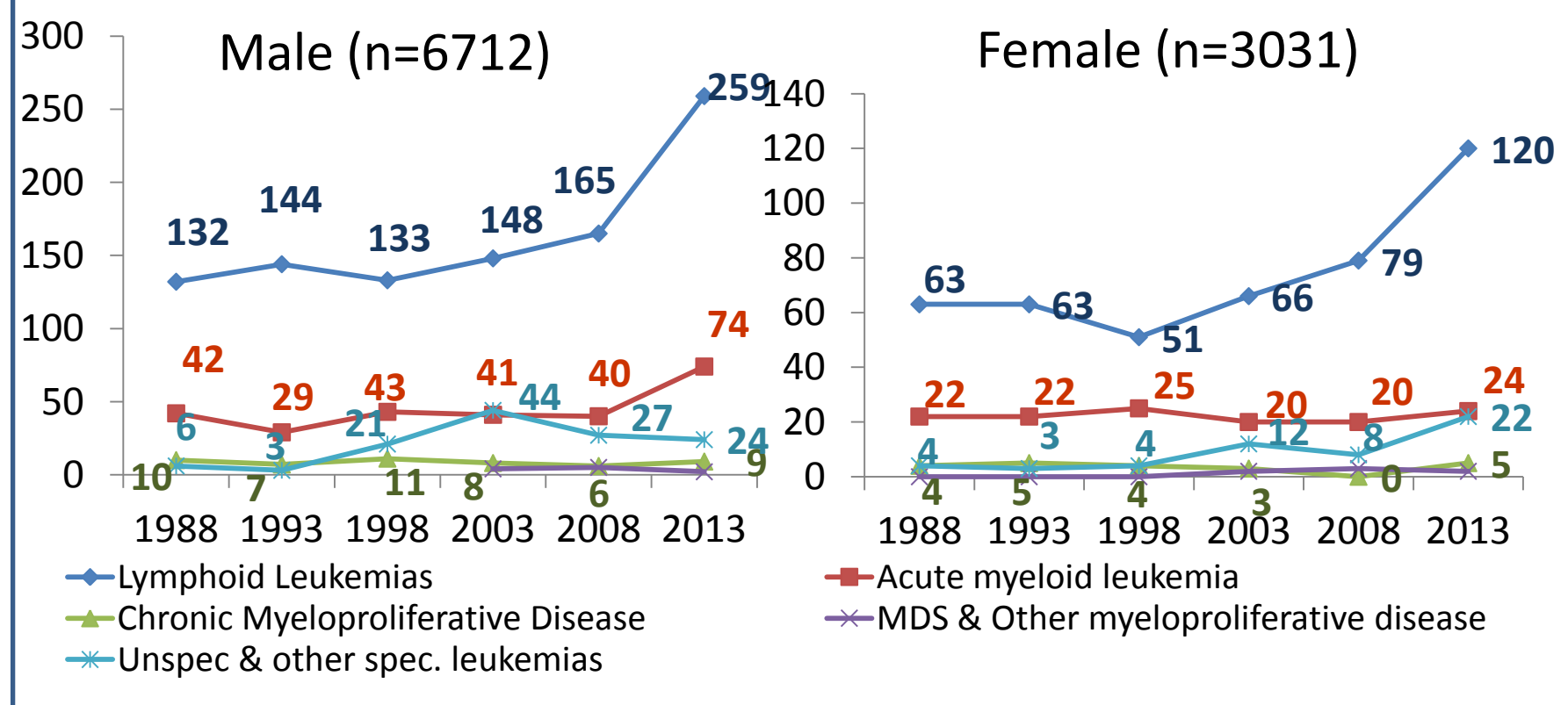
### Distribution of TMH Paediatric Cancers 2013



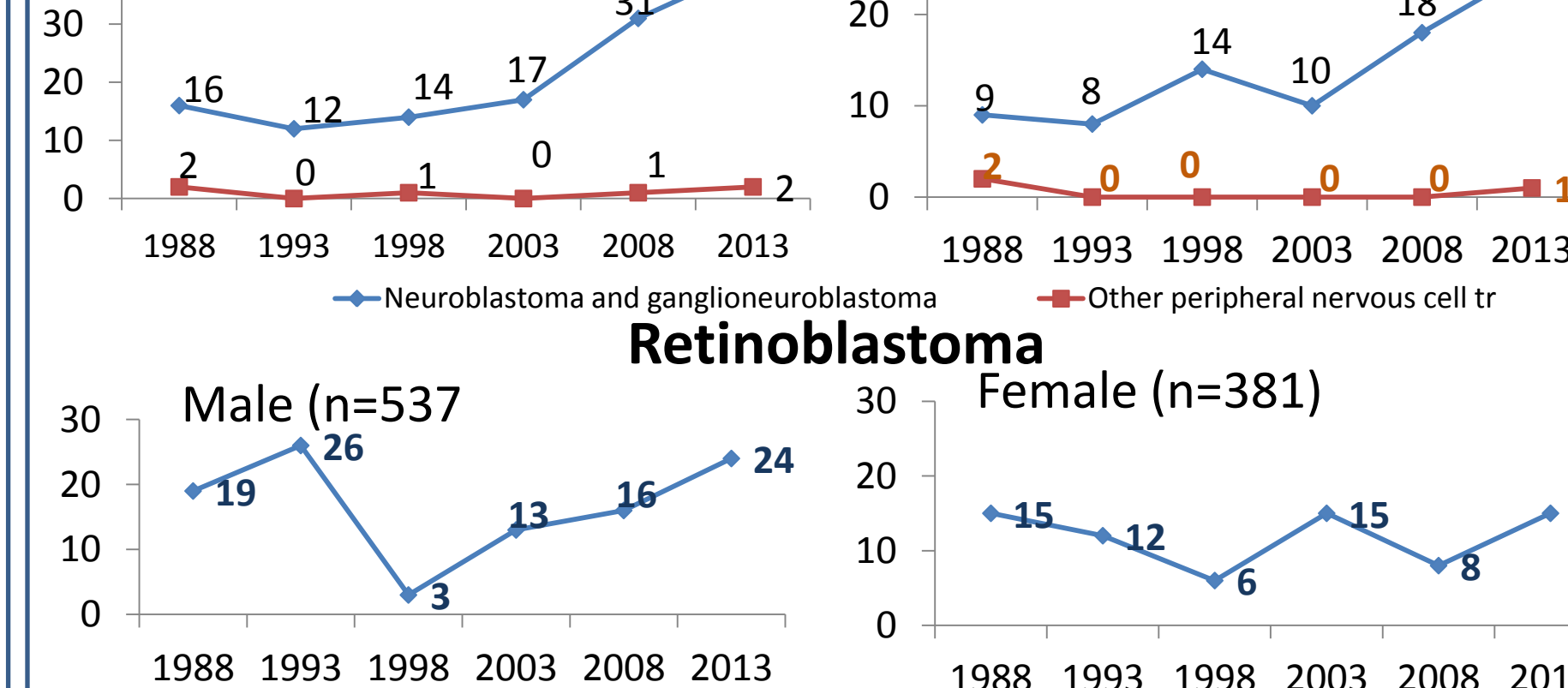
### Proportion of Childhood Cancers Relative to All Cancers in Indian HBCRs (2012-14)

Registry	Boys (%)	Girls (%)
Mumbai	5.2	3.7
Bangalore	6.1	3.5
Chennai	3.4	2.0
Thiruvananthapuram	4.8	3.7

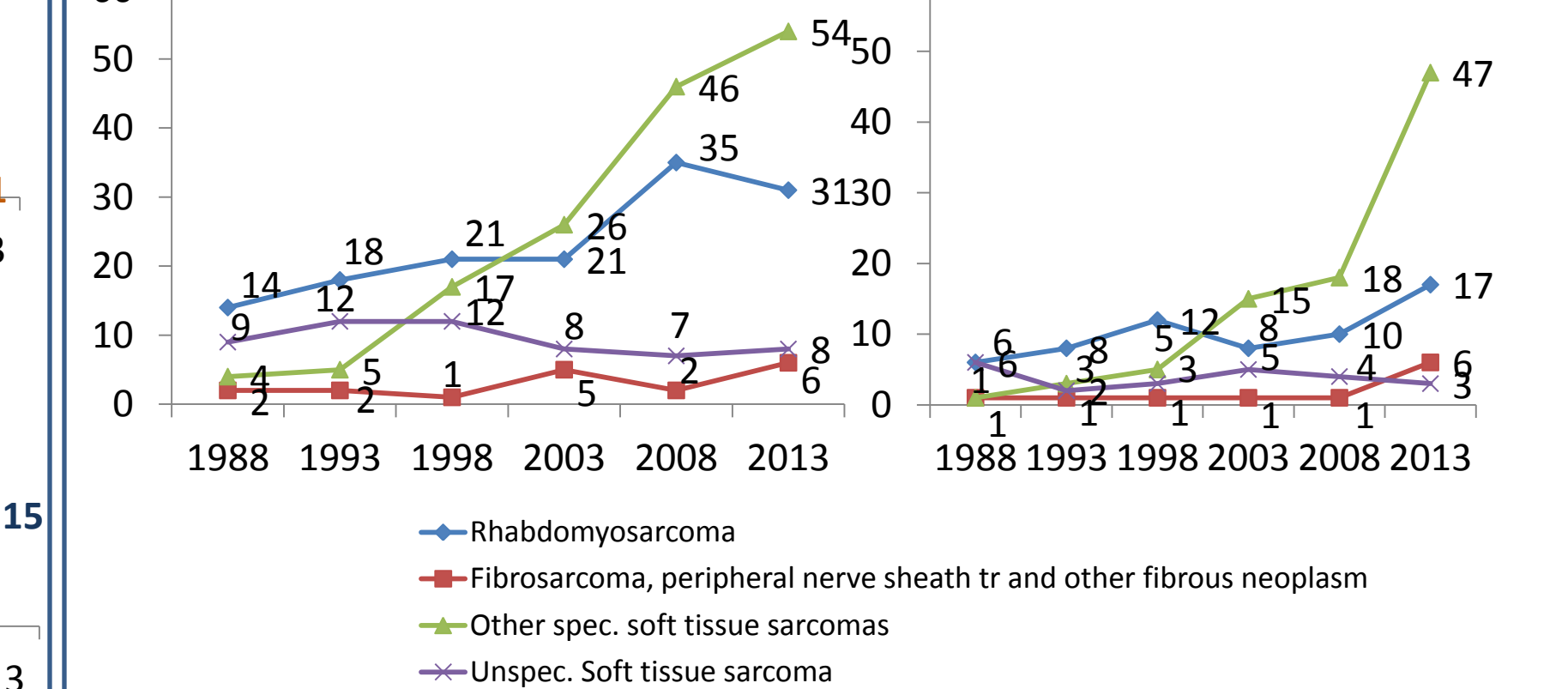
### Leukaemia, Myeloproliferative Disease & Myelodysplastic Diseases



### Neuroblastoma & Other Peripheral Nervous Cell Tumors



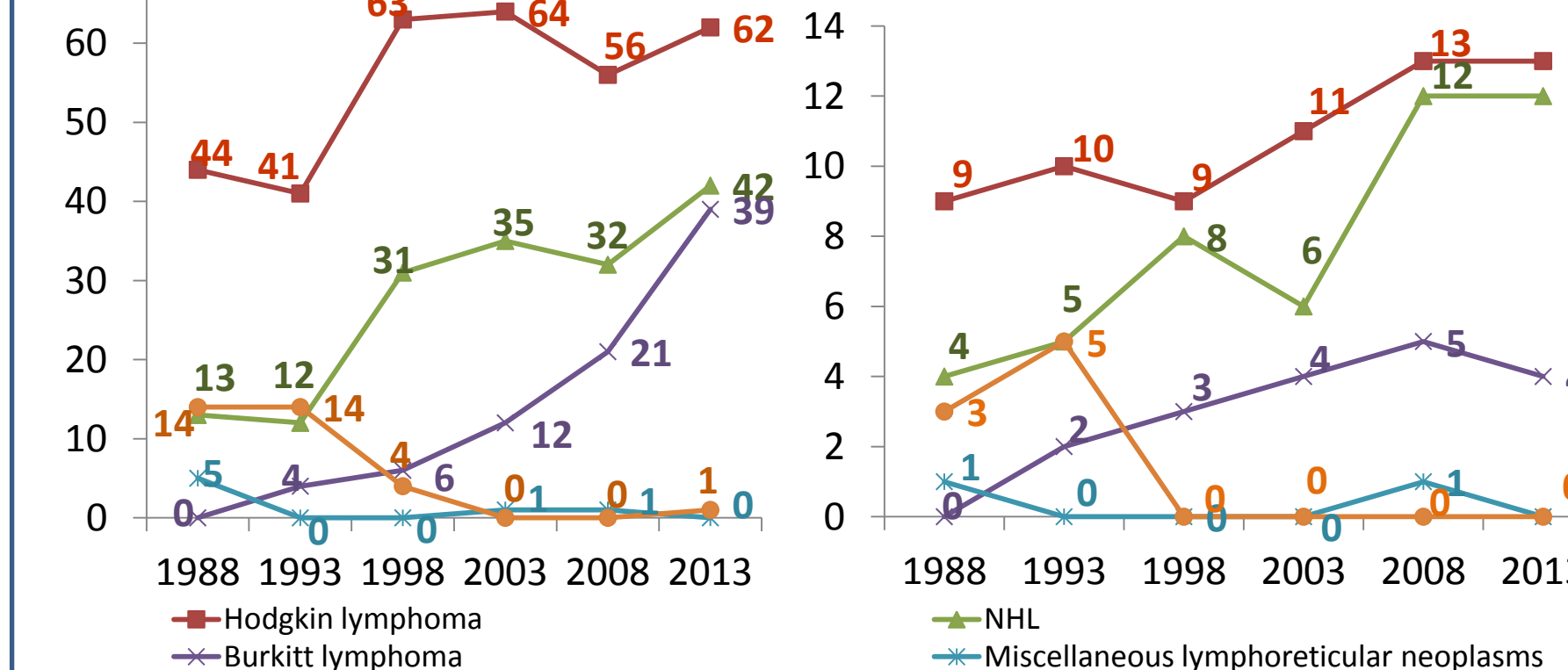
### Soft Tissue And Other Extra-osseous Sarcomas



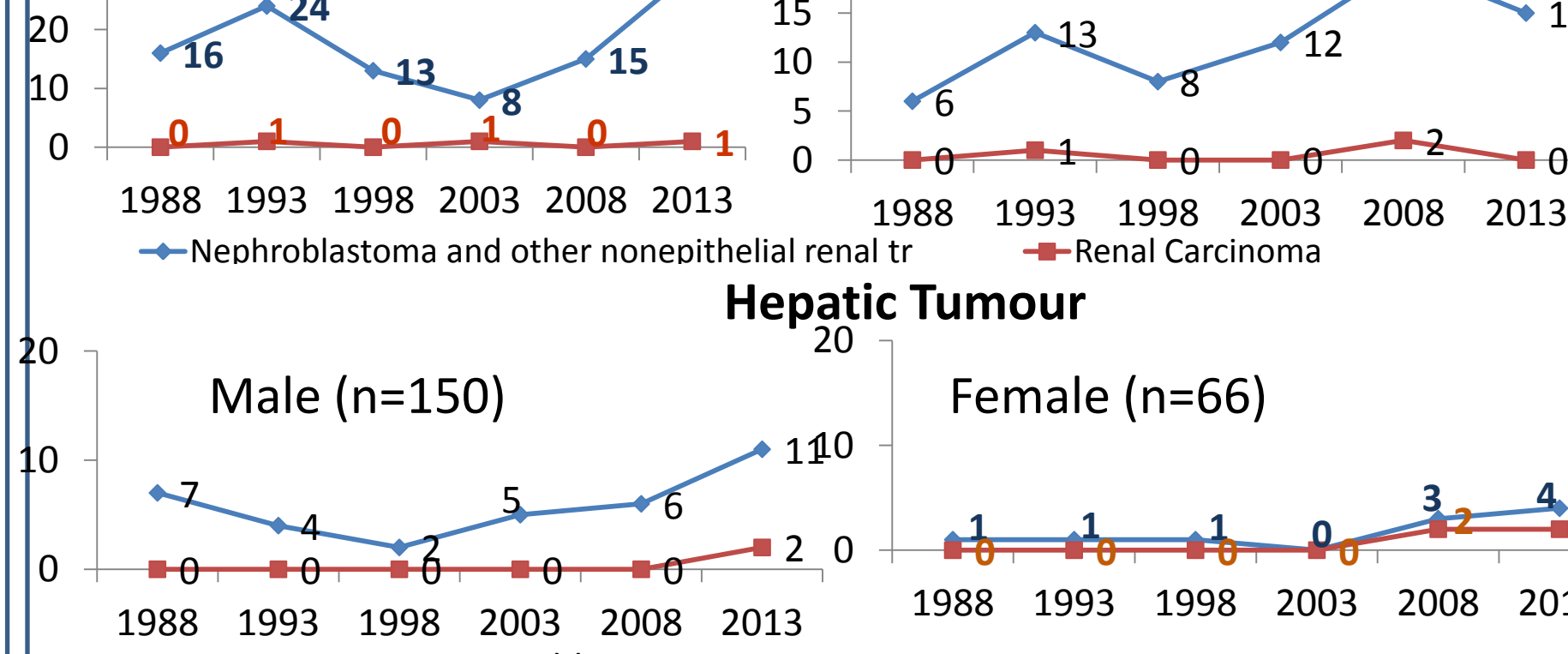
### Age-distribution of Pediatric Cancer Year 2013

Age-group (yrs)	Male	Female	Total	%
<1	11	8	19	1.4
1-4	281	143	424	31.1
5-9	302	155	457	33.6
10-14	307	155	462	33.9
<b>Total</b>	<b>901</b>	<b>461</b>	<b>1362</b>	<b>100.0</b>

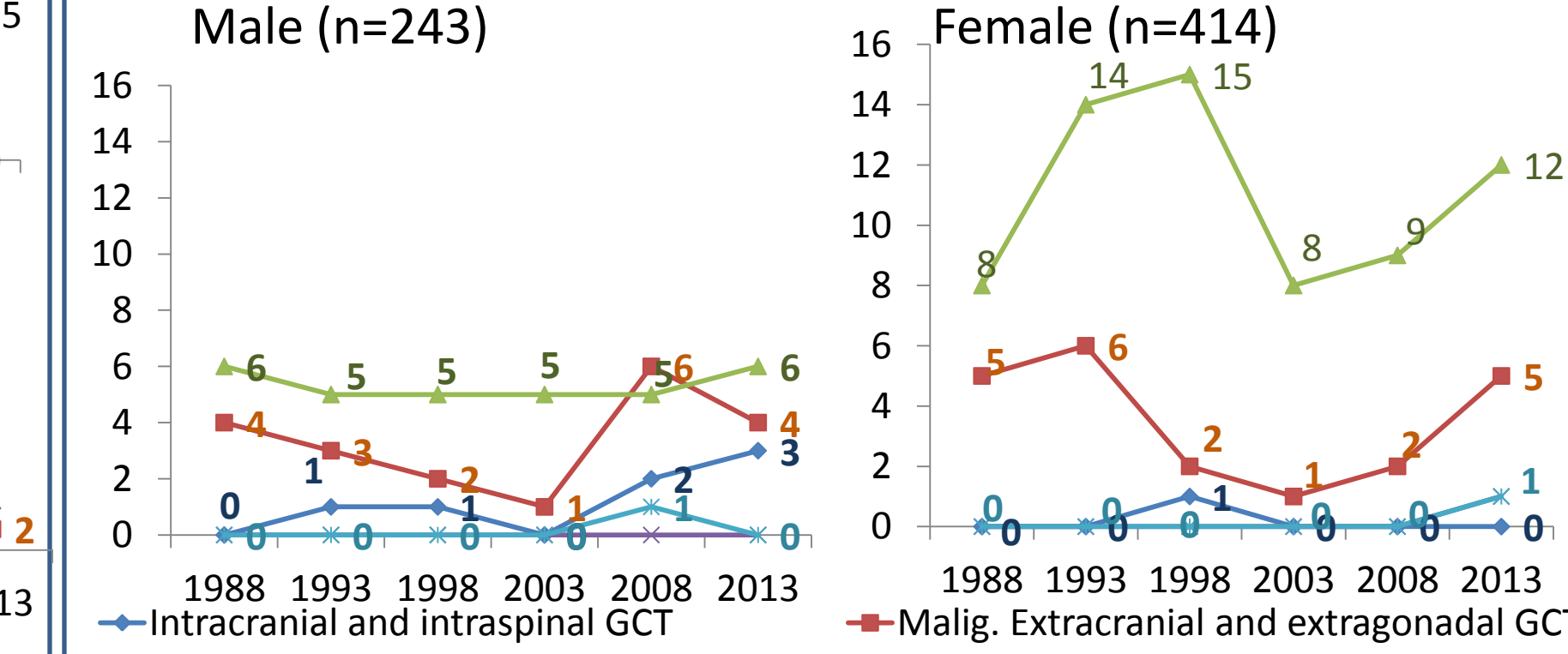
### Lymphomas and Reticuloendothelial Neoplasms



### Renal Tumour



### Germ Cell Tumors, Trophoblastic Tumors & Neoplasms Of Gonads



## DISCUSSION & CONCLUSION

The most common cancers in paediatric group were Leukemias, lymphomas followed by Bone and soft tissue sarcomas, Malignant Bone Tumours, CNS-intra cranial neoplasm's, Retinoblastoma and other tumours like Renal tumours, Neuroblastoma, Hepatoblastoma and germ cell tumours were also observed.