

Chapter 2

CANCERS IN CHILDHOOD

The proportion of childhood cancers relative to cancers in all age groups varied between 1.2 and 10.5% (Table 2.1). The relative proportion was lowest in BBCI - Guwahati for boys (1.7%), AMC - Dibrugarh for girls (1.2%) whereas it was highest in BRAIRCH - New Delhi for boys (10.5%) and PGIMER - Chandigarh for girls (6.3%).

The five year age distribution of childhood cancers in different HBCRs has been given in Table 2.2. The relative proportion (out of all childhood cancers) in the age group 0-4 varied from 33.7% in boys in TMH - Mumbai and 34.1% in girls in KMIO - Bangalore to a high of 43.8% in AMC - Dibrugarh boys and 48.1% in BBCI - Guwahati girls. The relative proportion in the age group 5-9 years among boys and girls respectively varied from 30.4% in CI (WIA) - Chennai and 17.1% in BBCI - Guwahati to a high of 37.5% in AMC - Dibrugarh boys and 31.9% in PGIMER - Chandigarh girls. Among the age group 10-14 years, the relative percentage of cancers in boys varied from 18.8% in AMC - Dibrugarh to 33.5% in BBCI - Guwahati. In girls this ranged from 21.3% in PGIMER - Chandigarh to 40.9% in AMC - Dibrugarh.

Table 2.3 and Figure 2.1 present the relative proportion according to broad types of childhood cancer. Tables 2.4(a) and 2.4(b) give further details of types of childhood cancer (Parkin et al., 1988).

Leukaemia is the predominant form of childhood cancer in both boys and girls. In boys, lymphoma is the second most common in all HBCRs except RCC - TVM where C.N.S. tumours are the second most common followed by lymphoma. Among girls the second most common cancer shows variations. Tumours of the C.N.S., bone, soft-tissue sarcomas and retinoblastoma are other important types of cancer in childhood.

Table 2.1: Number (#) and Proportion (%) of Cancers in Childhood Relative to All Cancers

Registry	Boys			Girls		
	All Cancers	#	%	All Cancers	#	%
TMH	14519	751	5.2	11022	408	3.7
KMIO	3897	236	6.1	4790	167	3.5
CI (WIA)	4085	138	3.4	4469	90	2.0
RCC - TVM	11447	549	4.8	11759	434	3.7
AMC	1794	48	2.7	1793	22	1.2
BBCI	13124	221	1.7	9438	129	1.4
PGIMER	9650	983	10.2	7532	474	6.3
BRAIRCH	4430	463	10.5	3609	192	5.3

Table 2.2: Number (#) and Proportion (%) of Childhood Cancers by Five-Year Age Group

Registry	Age Group (years)						All Childhood Cancers
	0-4		5-9		10-14		
	#	%	#	%	#	%	
BOYS							
TMH	253	33.7	252	33.6	246	32.8	751
KMIO	85	36.0	82	34.7	69	29.2	236
CI (WIA)	50	36.2	42	30.4	46	33.3	138
RCC - TVM	217	39.5	172	31.3	160	29.1	549
AMC	21	43.8	18	37.5	9	18.8	48
BBCI	75	33.9	72	32.6	74	33.5	221
PGIMER	411	41.8	306	31.1	266	27.1	983
BRAIRCH	176	38.0	142	30.7	145	31.3	463
GIRLS							
TMH	140	34.3	124	30.4	144	35.3	408
KMIO	57	34.1	46	27.5	64	38.3	167
CI (WIA)	38	42.2	24	26.7	28	31.1	90
RCC - TVM	180	41.5	121	27.9	133	30.6	434
AMC	8	36.4	5	22.7	9	40.9	22
BBCI	62	48.1	22	17.1	45	34.9	129
PGIMER	222	46.8	151	31.9	101	21.3	474
BRAIRCH	71	37.0	52	27.1	69	35.9	192
BOTH SEXES							
TMH	393	33.9	376	32.4	390	32.4	1159
KMIO	142	35.2	128	31.8	133	31.8	403
CI (WIA)	88	38.6	66	28.9	74	28.9	228
RCC - TVM	397	40.4	293	29.8	293	29.8	983
AMC	29	41.4	23	32.9	18	32.9	70
BBCI	137	39.1	94	26.9	119	26.9	350
PGIMER	633	43.4	457	31.4	367	31.4	1457
BRAIRCH	247	37.7	194	29.6	214	29.6	655

Table 2.3: Number (#) and Relative Proportion (%) of Broad Types of Cancer in Childhood (0-14 years)**Boys**

Broad Types of Cancer in Childhood		TMH		KMIO		CI (WIA)		RCC - TVM		AMC		BBCI		PGIMER		BRAIRCH	
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
I	Leukaemias	310	41.3	117	49.6	76	55.1	277	50.5	18	37.5	57	25.8	456	46.4	141	30.5
II	Lymphomas	108	14.4	31	13.1	21	15.2	60	10.9	7	14.6	43	19.5	120	12.2	81	17.5
III	C.N.S. Tumours	61	8.1	29	12.3	5	3.6	69	12.6	-	-	27	12.2	106	10.8	60	13.0
IV	S.N.S. Tumours	32	4.3	6	2.5	4	2.9	15	2.7	4	8.3	1	0.5	48	4.9	16	3.5
V	Retinoblastoma	11	1.5	6	2.5	1	0.7	1	0.2	2	4.2	32	14.5	48	4.9	40	8.6
VI	Renal Tumours	23	3.1	7	3.0	4	2.9	10	1.8	1	2.1	4	1.8	47	4.8	17	3.7
VII	Hepatic Tumours	19	2.5	2	0.8	-	-	10	1.8	2	4.2	1	0.5	11	1.1	10	2.2
VIII	Bone Tumours	41	5.5	10	4.2	11	8.0	32	5.8	1	2.1	9	4.1	24	2.4	38	8.2
IX	Soft-Tissue Sarcomas	74	9.9	6	2.5	10	7.2	31	5.6	3	6.3	17	7.7	54	5.5	31	6.7
X	Germ-Cell Tumours	12	1.6	4	1.7	-	-	9	1.6	2	4.2	8	3.6	18	1.8	8	1.7
XI	Other Carcinoma	10	1.3	6	2.5	-	-	7	1.3	2	4.2	9	4.1	15	1.5	14	3.0
XII	Other Malignant Neop.	19	2.5	5	2.1	6	4.3	10	1.8	3	6.3	7	3.2	16	1.6	3	0.6
XIII	Others	31	4.1	7	3.0	-	-	18	3.3	3	6.3	6	2.7	20	2.0	4	0.9
All Types		751	100.0	236	100.0	138	100.0	549	100.0	48	100.0	221	100.0	983	100.0	463	100.0

Girls

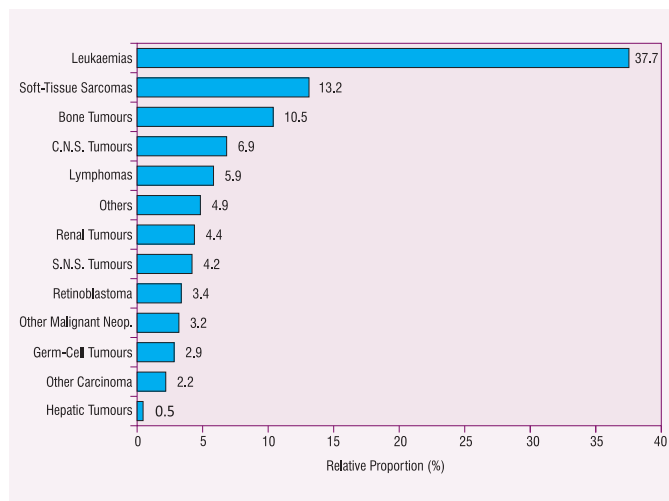
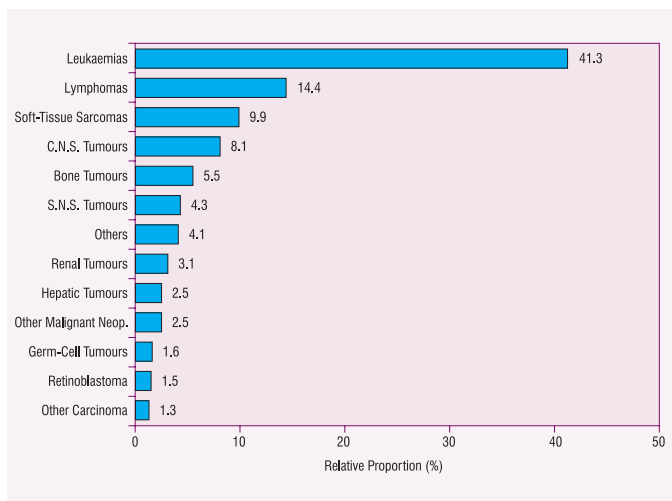
Broad Types of Cancer in Childhood		TMH		KMIO		CI (WIA)		RCC - TVM		AMC		BBCI		PGIMER		BRAIRCH	
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
I	Leukaemias	154	37.7	74	44.3	42	46.7	186	42.9	7	31.8	32	24.8	170	35.9	52	27.1
II	Lymphomas	24	5.9	22	13.2	9	10.0	22	5.1	2	9.1	8	6.2	31	6.5	16	8.3
III	C.N.S. Tumours	28	6.9	23	13.8	5	5.6	60	13.8	-	-	13	10.1	43	9.1	21	10.9
IV	S.N.S. Tumours	17	4.2	5	3.0	1	1.1	27	6.2	1	4.5	1	0.8	34	7.2	12	6.3
V	Retinoblastoma	14	3.4	2	1.2	2	2.2	4	0.9	-	-	25	19.4	43	9.1	21	10.9
VI	Renal Tumours	18	4.4	4	2.4	3	3.3	15	3.5	3	13.6	5	3.9	28	5.9	9	4.7
VII	Hepatic Tumours	2	0.5	1	0.6	2	2.2	7	1.6	1	4.5	1	0.8	13	2.7	2	1.0
VIII	Bone Tumours	43	10.5	8	4.8	11	12.2	39	9.0	-	-	11	8.5	18	3.8	24	12.5
IX	Soft-Tissue Sarcomas	54	13.2	5	3.0	5	5.6	18	4.1	1	4.5	11	8.5	38	8.0	13	6.8
X	Germ-Cell Tumours	12	2.9	3	1.8	-	-	10	2.3	1	4.5	1	0.8	4	0.8	-	-
XI	Other Carcinoma	9	2.2	4	2.4	2	2.2	10	2.3	1	4.5	3	2.3	3	0.6	4	2.1
XII	Other Malignant Neop.	13	3.2	4	2.4	2	2.2	5	1.2	1	4.5	5	3.9	13	2.7	-	-
XIII	Others	20	4.9	12	7.2	6	6.7	31	7.1	4	18.2	13	10.1	36	7.6	18	9.4
All Types		408	100.0	167	100.0	90	100.0	434	100.0	22	100.0	129	100.0	474	100.0	192	100.0

Fig. 2.1: Proportion of Broad Types of Childhood Cancer (0-14 years)

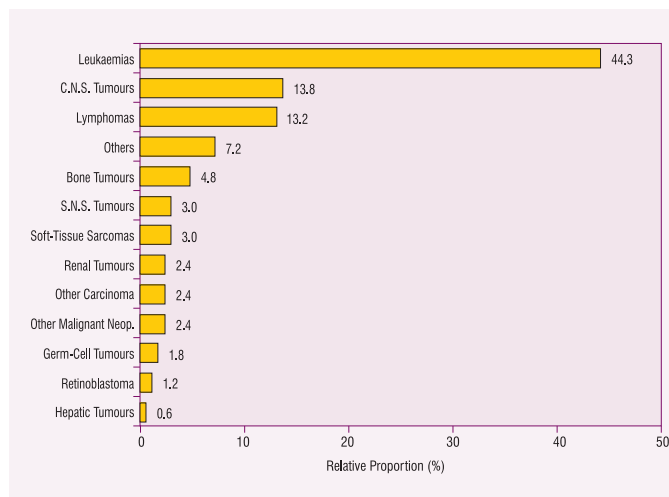
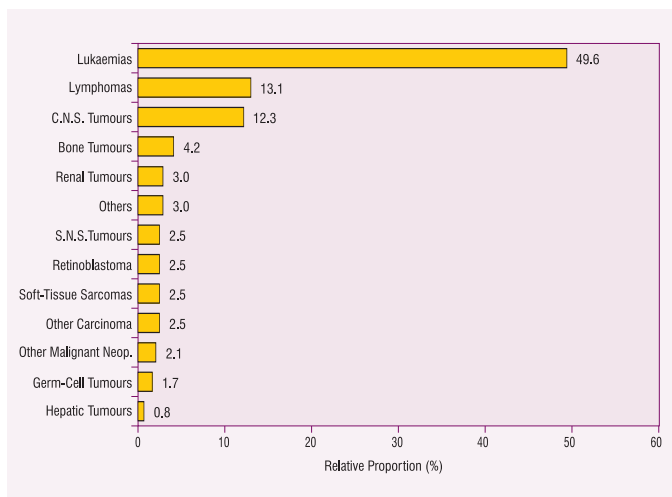
Boys

Girls

TMH - Mumbai



KMIO - Bangalore



CI (WIA) - Chennai

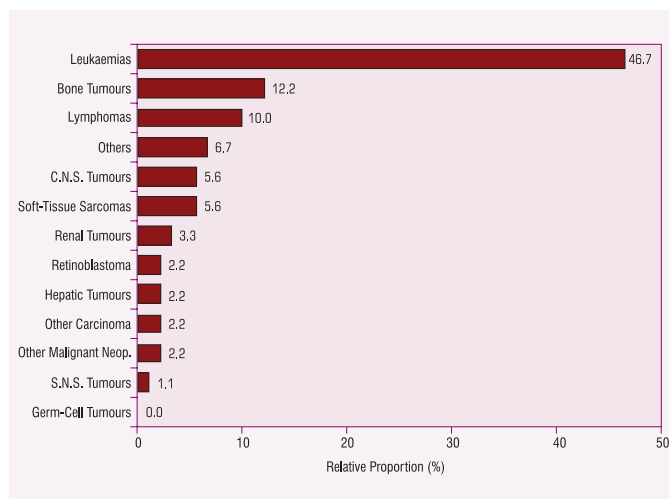
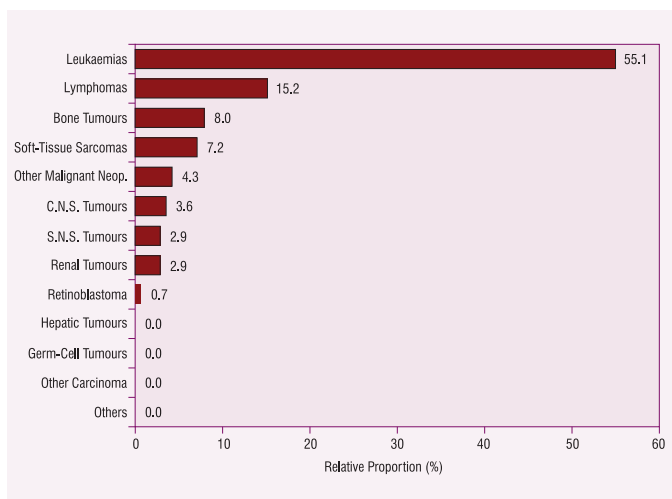
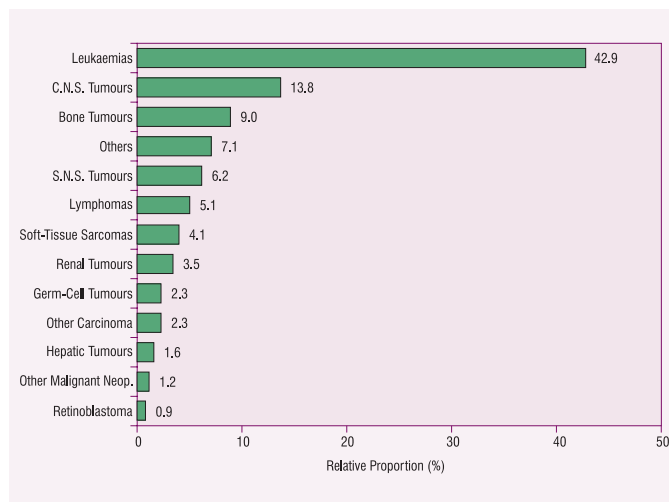
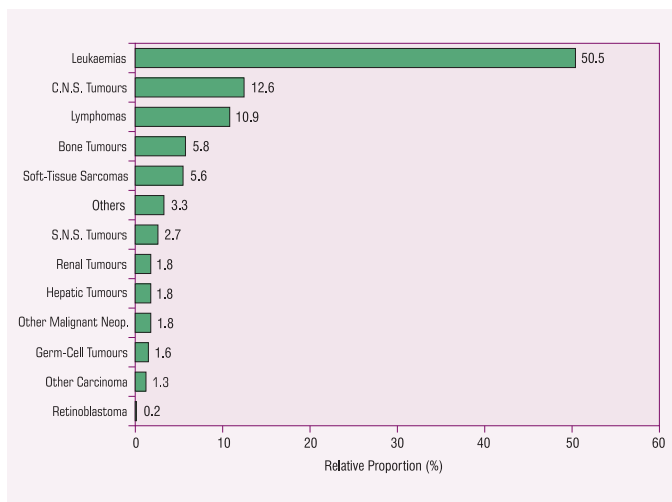


Fig. 2.1: Proportion of Broad Types of Childhood Cancer (0-14 years) (contd...)

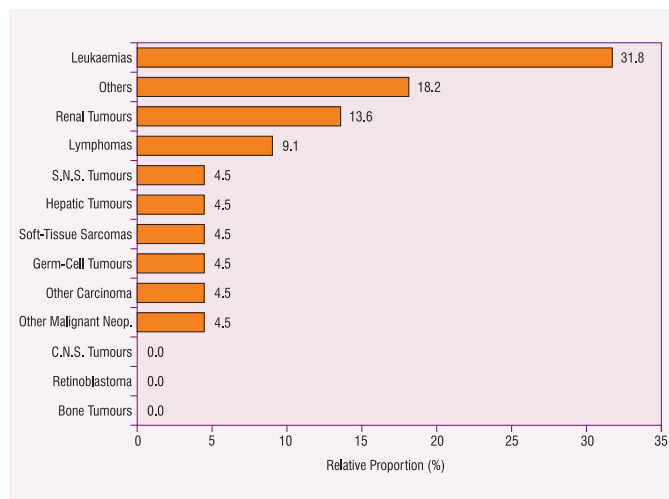
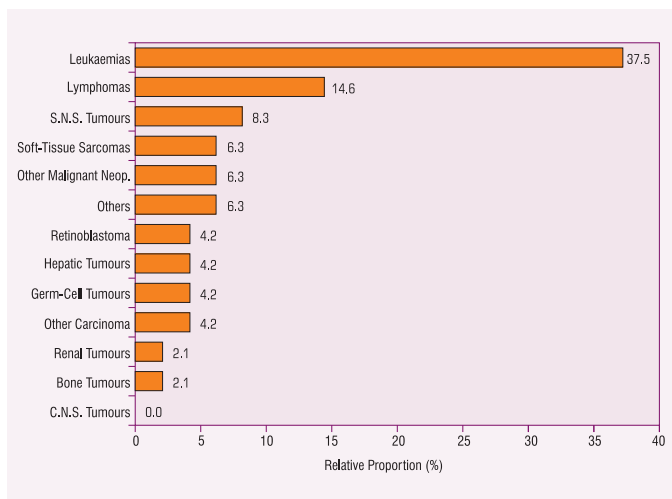
Boys

Girls

RCC - Thiruvananthapuram



AMC - Dibrugarh



BBCI - Guwahati

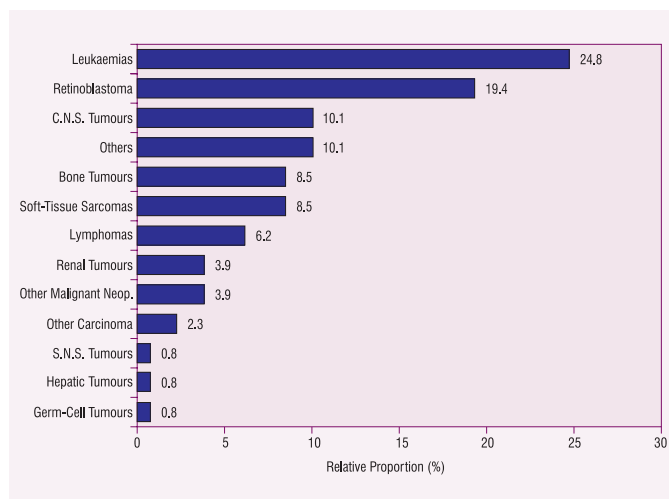
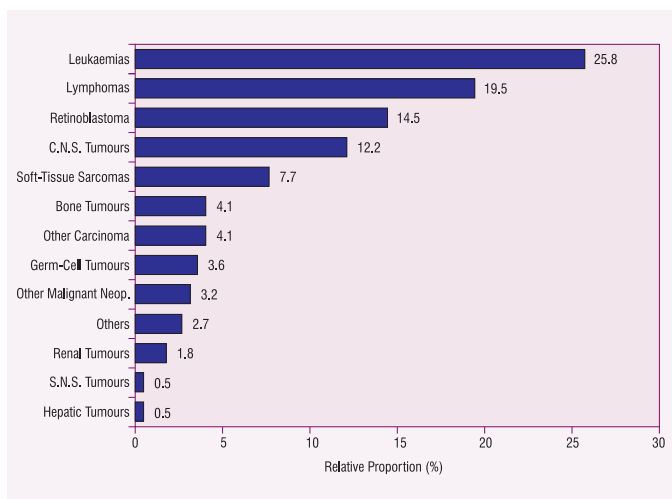
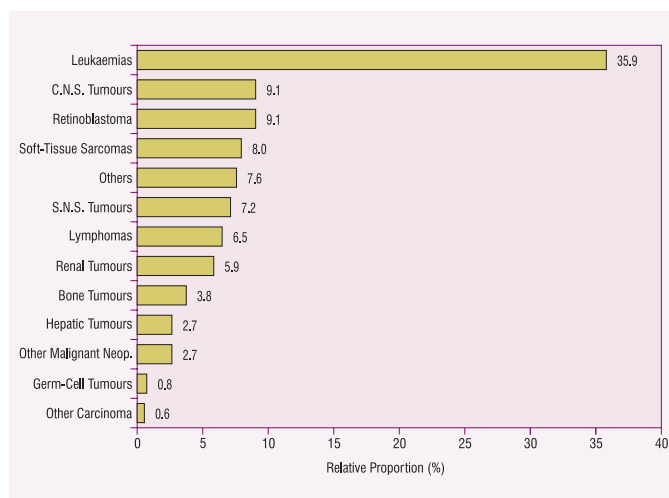
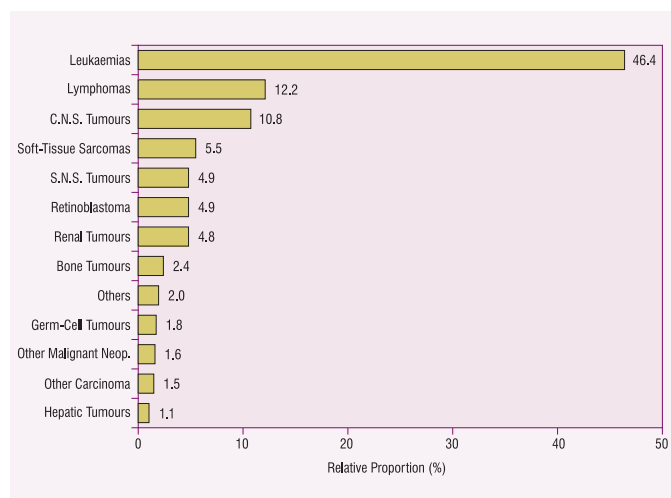


Fig. 2.1: Proportion of Broad Types of Childhood Cancer (0-14 years) (contd...)

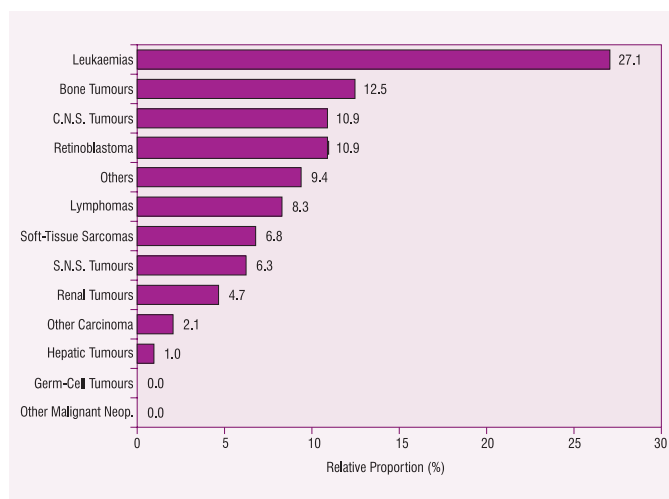
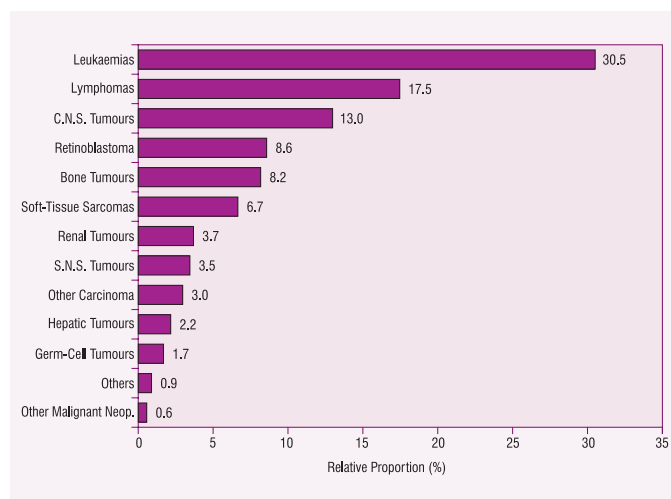
Boys

Girls

PGIMER - Chandigarh



BRAIRCH - New Delhi



“From inability to let well alone; From too much zeal for the new and contempt for the old; From putting knowledge before wisdom, science before art, and cleverness before common sense; From treating patients as cases, and From making the cure of the disease more grievous than the endurance of the same, Good Lord, deliver us”

- Sir Robert Hutchinsinon

