

Cancer Incidence of Childhood in Urban Wuhan from 1993 to 2012, China

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WHCDC

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- 1 Outlook of Wuhan City
- 2 Wuhan Cancer Survey
- 3 Preliminary Analysis Results
- 4 Problems and Challenges

Outlook of Wuhan



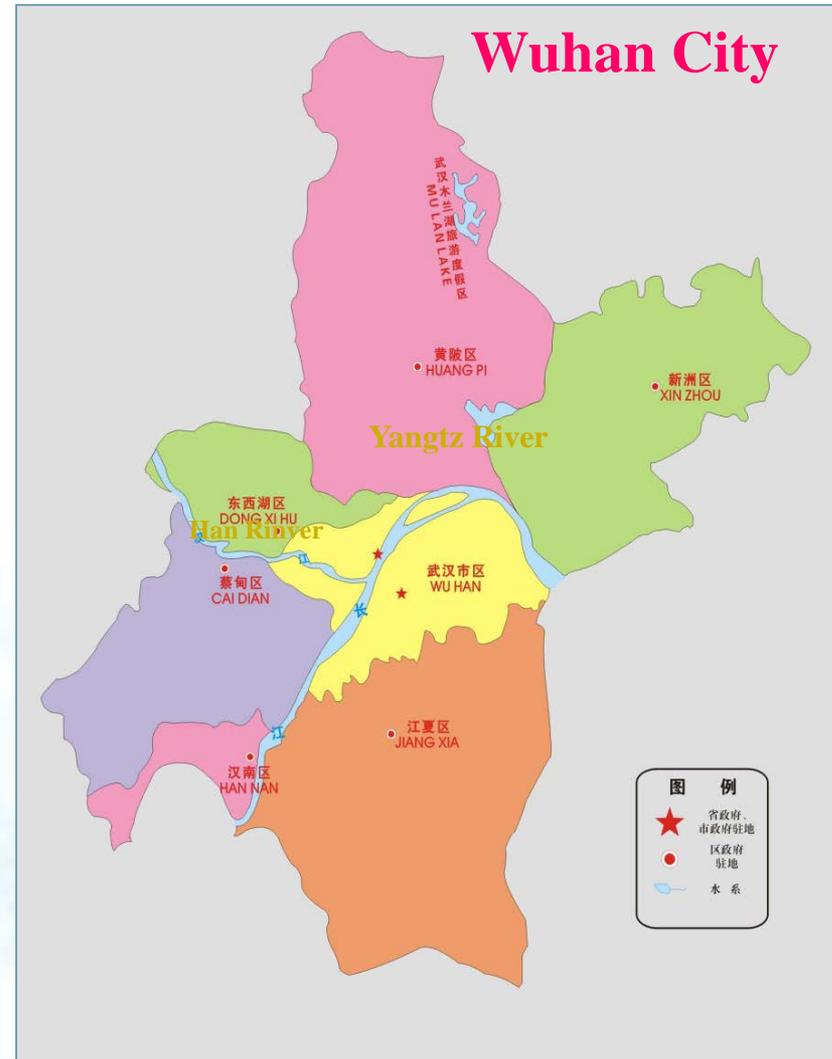
- History of more than 500 years;
- Capital of Hubei province;
- 1,000 kilometers away from Shanghai, Chongqing, Guangzhou and Beijing;
- The political, economic, scientific, technological, cultural and financial center in inland China.



Outlook of Wuhan



- The third longest river (Yangtze River), and its longest branch (Han River), divide into three parts.
- Composed of 13 administrative districts with over 8.0 million residents.
- Cancer survey covered 9 districts in urban with about 4.0 million residents, and including about average population of 900000 people aged below 20 years old.



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Wuhan Cancer Registry



- WCR established in 1980, which is the national Cancer Registration demonstration site in China.
- Hospital-based cancer registry, and each of more than 100 hospitals has a special department to collect and send the cancer incidence data to the registry using the standardized procedures.
- The Registry audits the hospitals and undertakes training regularly.
- Population data from Municipal Public Security Bureau.
- Cancer data recorded in Cancer incidence in Five continents (CI5) since 1993.

Wuhan Cancer Registry



International Agency for Research on Cancer



CI5X

Cancer Incidence in Five Continents Volume X



- ABOUT
- TECHNIQUES OF REGISTRATION
- TABLES (PDF)
- ONLINE ANALYSIS
- HELP

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REGISTRY SUMMARY TABLES

This option presents the population pyramid and the sex-, age-specific and summary incidence tables by population.

Continent

- Africa
- Central and South America
- North America
- Asia
- Europe
- Oceania

Country

China

Registry

Wuhan City

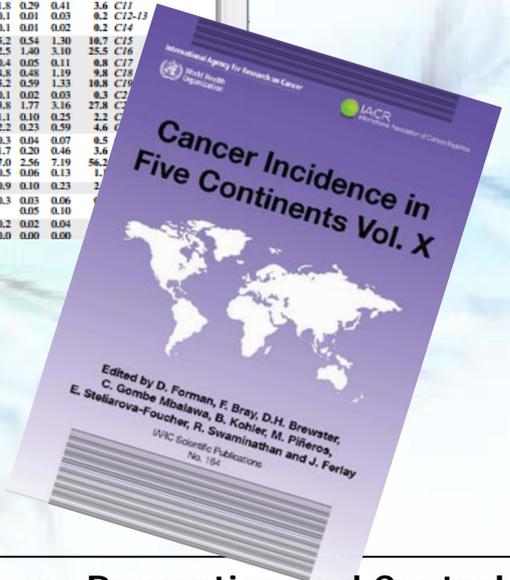
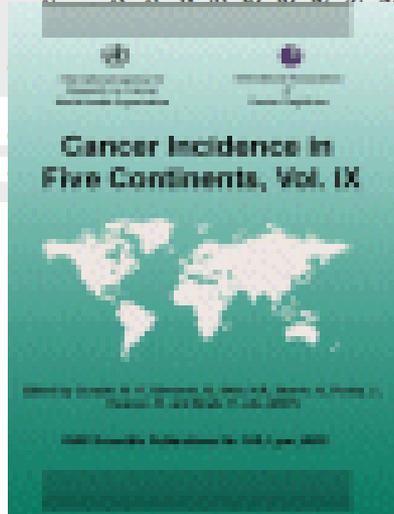
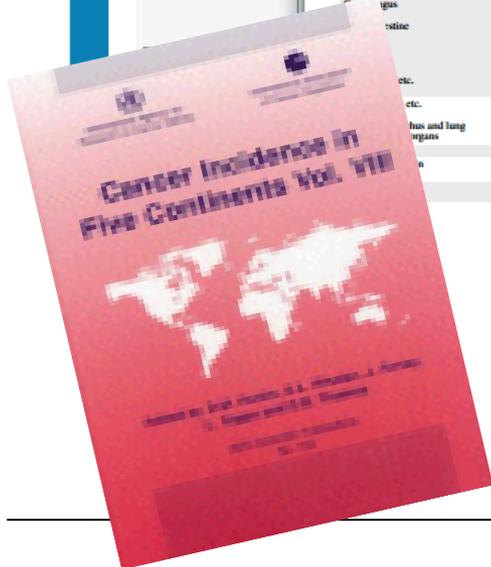
Population

...

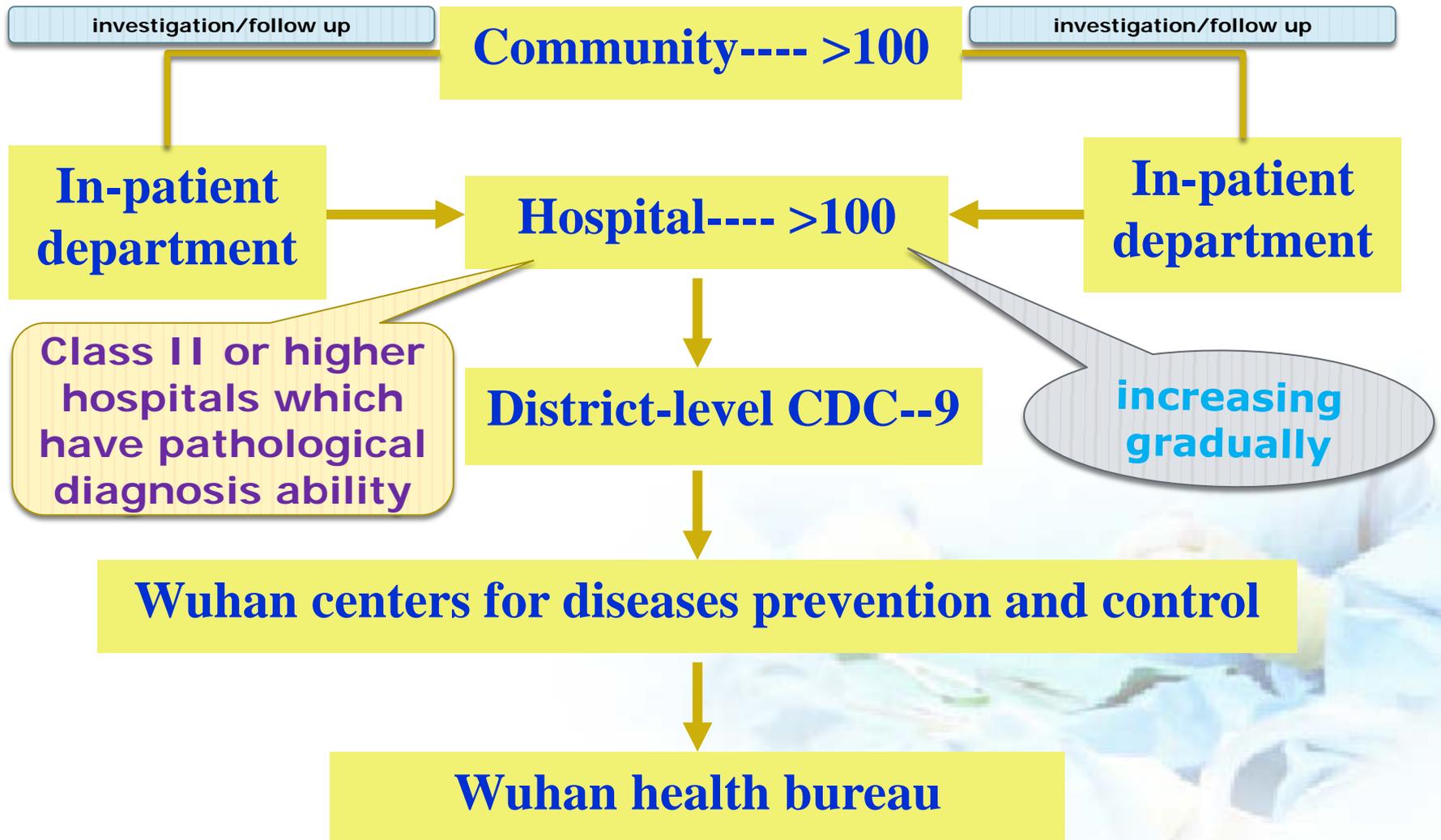
<http://ci5.iarc.fr/CI5-X/PDF/Asia/41560999.pdf> - 360安全浏览器 6.3

***China, Wuhan City (2003-2007)**
Annual incidence per 100,000 by age group - Male

SITE	ALL AGE	AGES UNK	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+	CRUDE RATE	(%)	CUM 0-64	CUM 65-74	ASR (W)	ICD (10/06)			
Lip	13	0	-	-	-	-	-	-	0.1	-	-	-	0.4	0.2	0.5	0.3	1.0	0.6	1.2	-	0.1	0.0	0.01	0.01	0.1	C00			
Tongue	89	0	-	-	-	-	-	0.1	0.1	0.2	0.6	1.6	1.5	2.2	2.3	2.5	4.4	1.1	3.5	2.5	0.7	0.3	0.04	0.08	0.6	C01-02			
Mouth	114	0	-	-	-	-	-	0.2	0.2	0.3	1.4	1.6	2.5	3.3	4.4	5.4	5.7	4.6	7.6	0.9	0.4	0.05	0.10	0.8	C03-06				
Salivary glands	77	0	-	0.2	0.1	0.1	0.2	0.4	0.3	0.2	0.6	1.2	1.9	2.3	1.7	1.3	5.1	1.2	5.1	0.6	0.3	0.04	0.05	0.6	C07-08				
Tonsil	12	0	-	-	-	-	-	-	-	-	0.1	0.3	0.1	0.3	0.7	-	-	-	-	1.1	-	-	-	-	0.1	C09			
Other oropharynx	23	0	-	-	-	-	-	-	-	-	-	0.3	0.2	0.5	0.5	1.1	1.7	0.6	2.3	2.5	0.2	0.1	0.01	0.02	0.2	C10			
Nasopharynx	538	0	-	-	0.3	0.3	0.1	1.0	2.0	3.2	6.0	7.9	10.2	14.2	12.9	11.9	12.7	10.8	4.6	2.5	4.5	1.8	0.29	0.41	3.8	C11			
Hypopharynx	33	0	-	-	-	-	-	-	0.1	0.3	0.2	0.7	0.3	0.2	2.2	1.0	2.3	2.3	2.5	0.3	0.1	0.01	0.03	0.2	C12-13				
Pharynx unspecified	25	0	-	-	-	-	-	-	-	-	0.3	0.2	0.8	0.8	0.2	1.1	0.7	-	-	1.2	-	0.2	0.1	0.01	0.02	0.2	C14		
Esophagus	1528	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	106.4	121.7	76.0	12.7	5.2	0.54	1.30	C15	
Stomach	3673	0	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	253.5	214.5	157.0	30.6	12.5	1.40	3.10	C16	
Colon	120	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.4	3.5	2.5	1.0	0.4	0.05	0.11	0.8	C17
Rectum	1407	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	107.5	78.8	78.5	11.7	4.8	0.48	1.19	9.8	C18
Bladder	1542	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	99.6	71.7	76.0	12.8	5.2	0.59	1.33	10.8	C19
Prostate	40	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	4.6	-	0.3	0.1	0.02	0.03	0.3	C20
Testis	4061	0	0.9	0.2	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	195.2	201.7	134.2	33.8	13.8	1.77	3.16	27.8	C21
Penis	315	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28.3	33.6	20.3	2.6	1.1	0.10	0.25	2.2	C22
Vulva	662	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44.7	51.0	30.4	5.5	2.2	0.23	0.59	4.6	C23
Vagina	78	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	1.2	2.5	0.6	0.3	0.04	0.07	0.5	C24
Cervix	509	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31.1	26.7	7.6	4.2	1.7	0.20	0.46	3.8	C25
Uterus and lung	7963	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	608.3	583.2	397.7	66.3	27.0	2.56	7.19	56.2	C26
Endometrium	152	0	0.9	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	13.9	5.1	1.3	0.5	0.06	0.13	1.1	C27
Bladder	273	0	-	-	0.7	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.9	11.6	5.1	2.3	0.9	0.10	0.23	2.1	C28
Uterus	74	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.0	4.6	5.1	0.6	0.3	0.03	0.06	0.6	C29
Ovary	132	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.4	15.1	5.1	1.1	0.05	0.10	0.1	C30	
Testis	48	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.2	4.6	-	0.4	0.2	0.02	0.04	C31	
Prostate	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	C32			



Working Network of Cancer Survey





Access to Cancer Report System



肿瘤病例报告管理系统

系统登录

用户名

密码

登录

重置



武汉市疾病预防控制中心版权所有 武汉云林科技提供技术支持

More than
100 report
units

Hospital: reporting
card

District CDC:
checking quality

Wuhan CDC: Manage,
quality control,
supervision, training
and statistic

System of Cancer Reporting



肿瘤病例报告管理系统 - 360安全浏览器 7.1



肿瘤病例报告管理系统

超级管理员, 您已经登录!

桌面

后退

前进

重新登录

退出系统

快速导航

- ▶ 报告卡管理
- ▶ 随访表管理
- ▶ 报告卡审核
- ▶ 报告卡查重
- ▶ 死亡卡管理
- ▶ 人口数据库
- ▶ 统计分析
- ▶ 用户管理
- ▶ 系统管理
- ▶ 交流平台

Quickly
Navigation

恶性肿瘤病例报告卡

门诊号:	<input type="text"/>	住院号:	<input type="text"/>		
患者姓名:	<input type="text"/>	性别:	2-女	民族:	汉族
出生年月:	<input type="text"/>	年龄:	<input type="text"/>	身份证号:	<input type="text"/>
联系电话1:	<input type="text"/>	联系电话2:	<input type="text"/>	联系电话3:	<input type="text"/>
职业:	请选择			工作单位:	<input type="text"/>
户口地:	武汉市	区(县):	武汉市	街道(乡):	<input type="text"/>
居住地:	武汉市	区(县):	武汉市	街道(乡):	<input type="text"/>
ICD10:	<input type="text"/>				
ICDO:	<input type="text"/>			备注:	<input type="text"/>
确诊时期:	IS	N0	M0	0-I期 0-II期 0-III期 0-IV期 0-无法确定	
确诊日期:	<input type="text"/>	报告日期:	<input type="text"/>	报告医师:	<input type="text"/>
报告单位:	武汉市疾病预防控制中心		诊断依据:	<input type="checkbox"/> 1. 临床 <input type="checkbox"/> 6. 病理(续发)	
				<input type="checkbox"/> 2. X线, 超声波, 内窥镜 <input type="checkbox"/> 7. 病理(原发)	
				<input type="checkbox"/> 3. 手术, 尸检(无病理) <input type="checkbox"/> 8. 尸检(有病理)	
				<input type="checkbox"/> 4. 生化, 免疫 <input type="checkbox"/> 9. 不详	
				<input type="checkbox"/> 5. 细胞学, 血片 <input type="checkbox"/> 0. 死亡补发病	
<input type="checkbox"/> 是否死亡	死亡日期:	<input type="text"/>	根本死因:	肿瘤	

Cancer report card



Date Collection

- **Demographic Data:** name, gender, birth date, age, marriage, job occupation, identity card, Address, telephone number.
- **Disease Information:** Physician diagnosis, ICD10, ICD0, date of diagnosis, whether death, date of death, date of report.
- **Diagnostic Information:** Hospital of diagnosis, diagnostic basis—
—Option of clinical symptoms, X-rays, ultrasonic and endoscope test, surgery test, Biochemical test and immunologic test, cytologic examination and blood slice, pathological test of secondary tumor, pathological test of primary tumor, postmortem examination and DCO (Death Certificate Only)

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The Overall Incidence

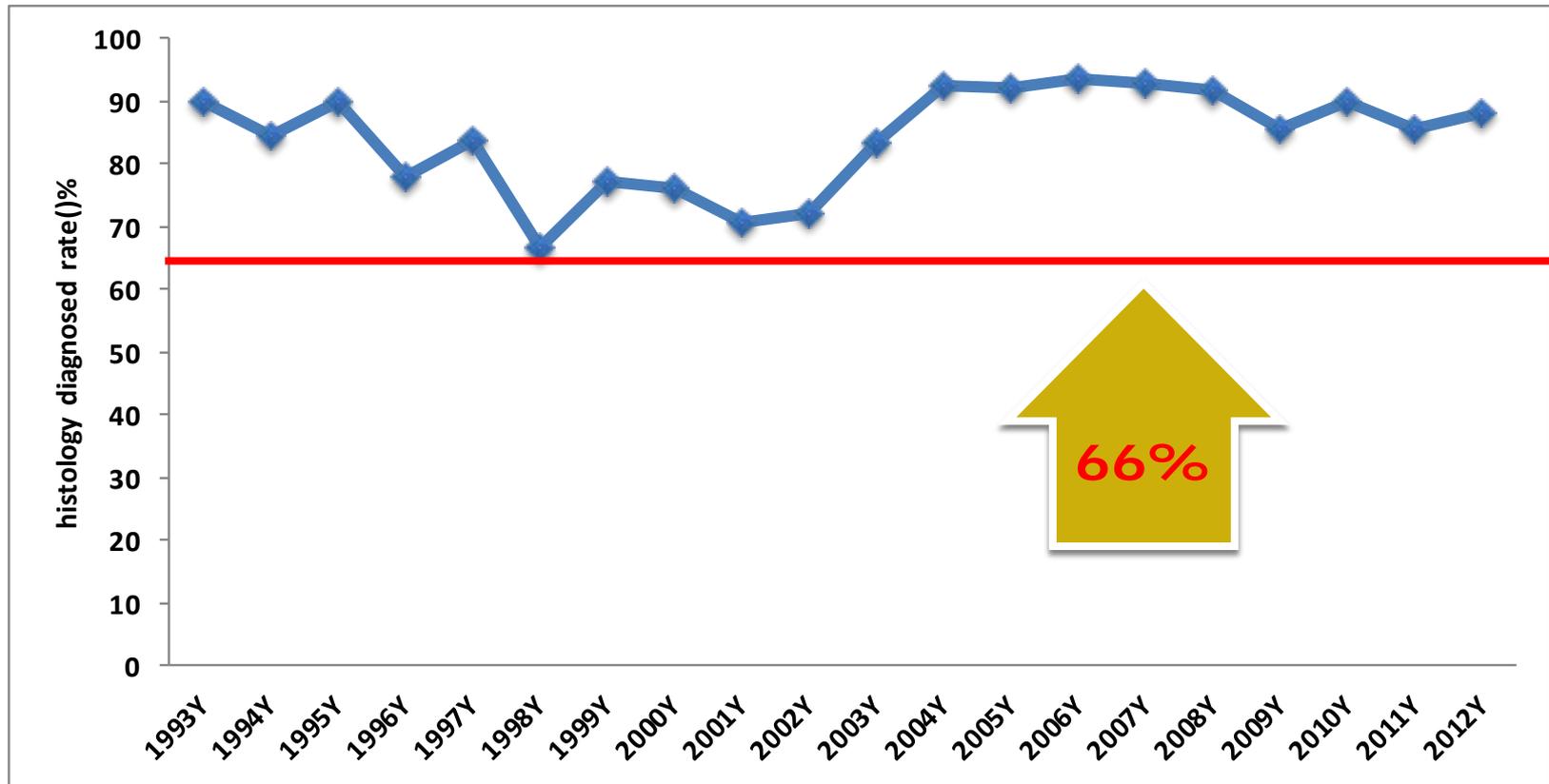


- ❖ **Accumulated cases:** **1887** new childhood cancer cases aged below 20 years old, (**1053** males and **834** females), nearly 95 new cases each year, sex ratio of **1.3**.
- ❖ **Incidence:** Crude incidence rate was **99.8** per million with **105.8** in male and **93.1** in female. From CI5 data, the incidence of 27 European countries were from 101 to 158 per million.
- ❖ **APC rate:** Annual percentage change in incidence rates was **3.9%** (95% confidence interval was **2.5 to 5.2%**) .
- ❖ **Classification:** The classification was according to the third International Classification of Childhood Cancer (ICCC-3).
- ❖ **ICCC-3:** 12 main diagnostic groups and 48 subgroups.
 - ❖ 1 Leukemia, 2 Lymphomas and Reticuloendothelial Neoplasms, 3 CNS and Miscellaneous Intracranial and Intraspinial Neoplasms, 4 Sympathetic Nervous System Tumors, 5 Retinoblastoma, 6 Renal Tumors, 7 Hepatic Tumors, 8 Malignant Bone Tumors, 9 Soft-Tissue Sarcomas, 10 Germ-Cell, Trophoblastic and other Gonadal Neoplasms, 11 Carcinomas and other Malignant Epithelial Neoplasms, 12 Other and Unspecified Malignant Neoplasms.



Reliability — the Rate of Histology Diagnoses

- ❖ Average cancer histology rate was 85.0 percent;
- ❖ With 85.0, 72.5, 91.2 and 88.5 during the periods of 1993-1997, 1998-2002, 2003-2007 and 2008-2012, respectively.

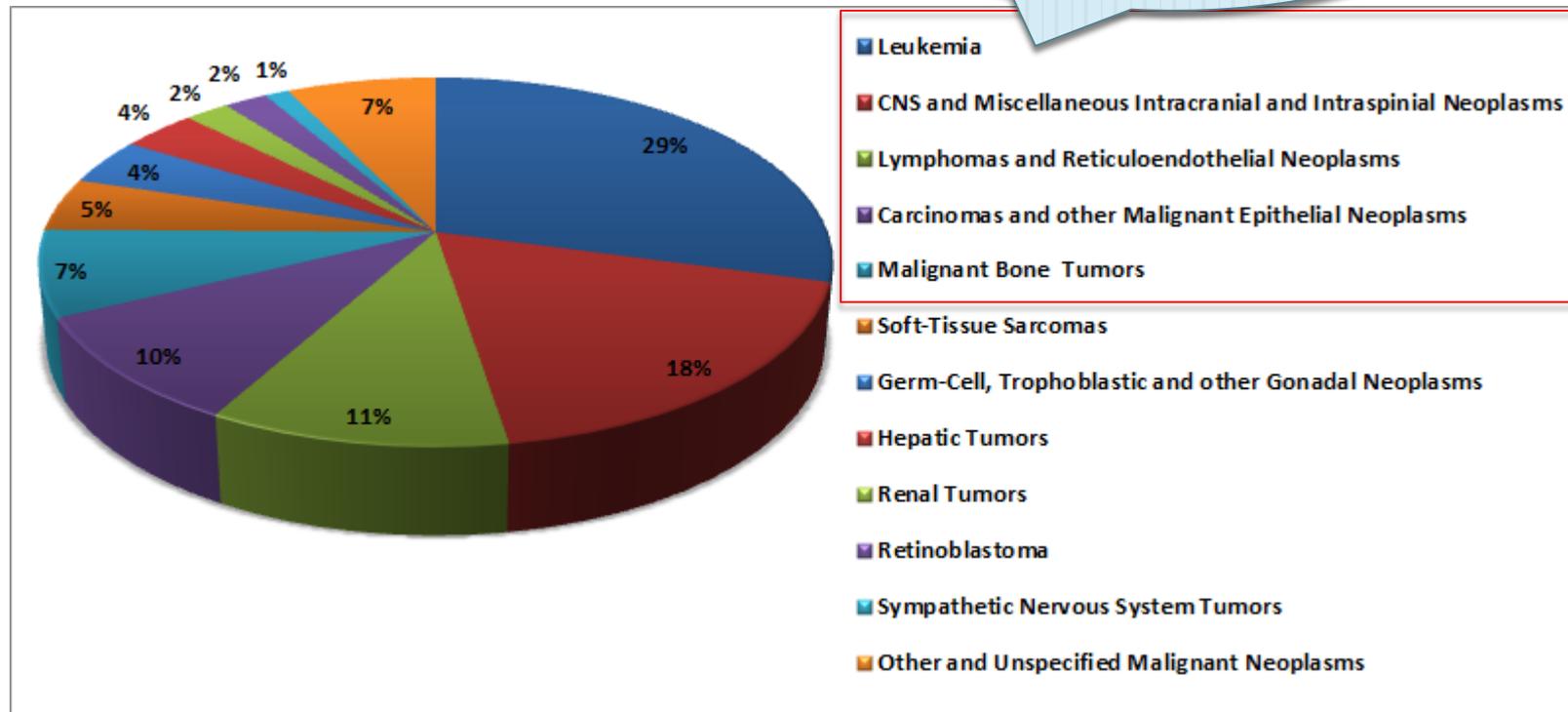


The Overall Incidence



❖ Distribution

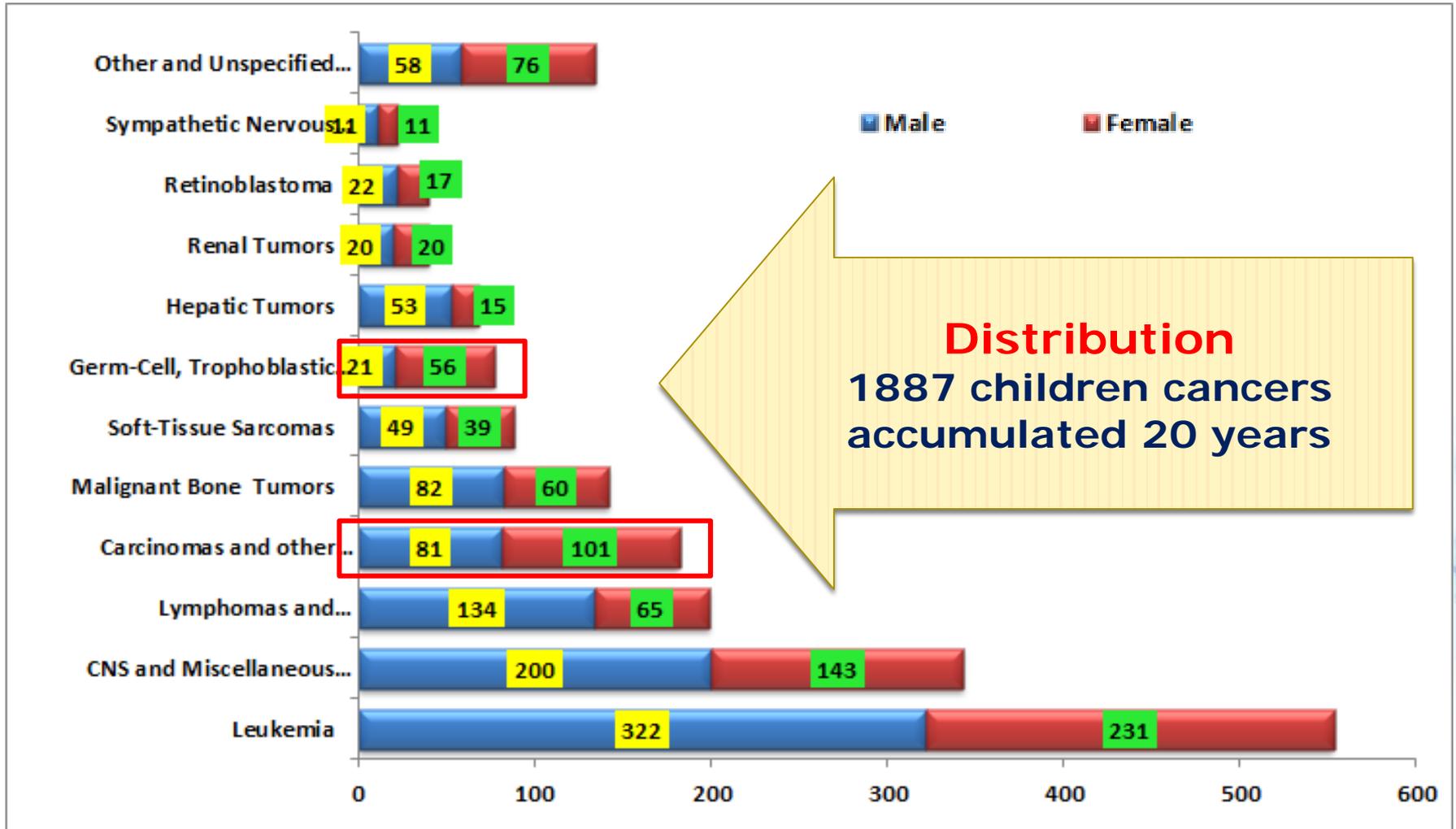
Top 5 main groups covered 75.2 percent





Gender Distribution — Count of Cases

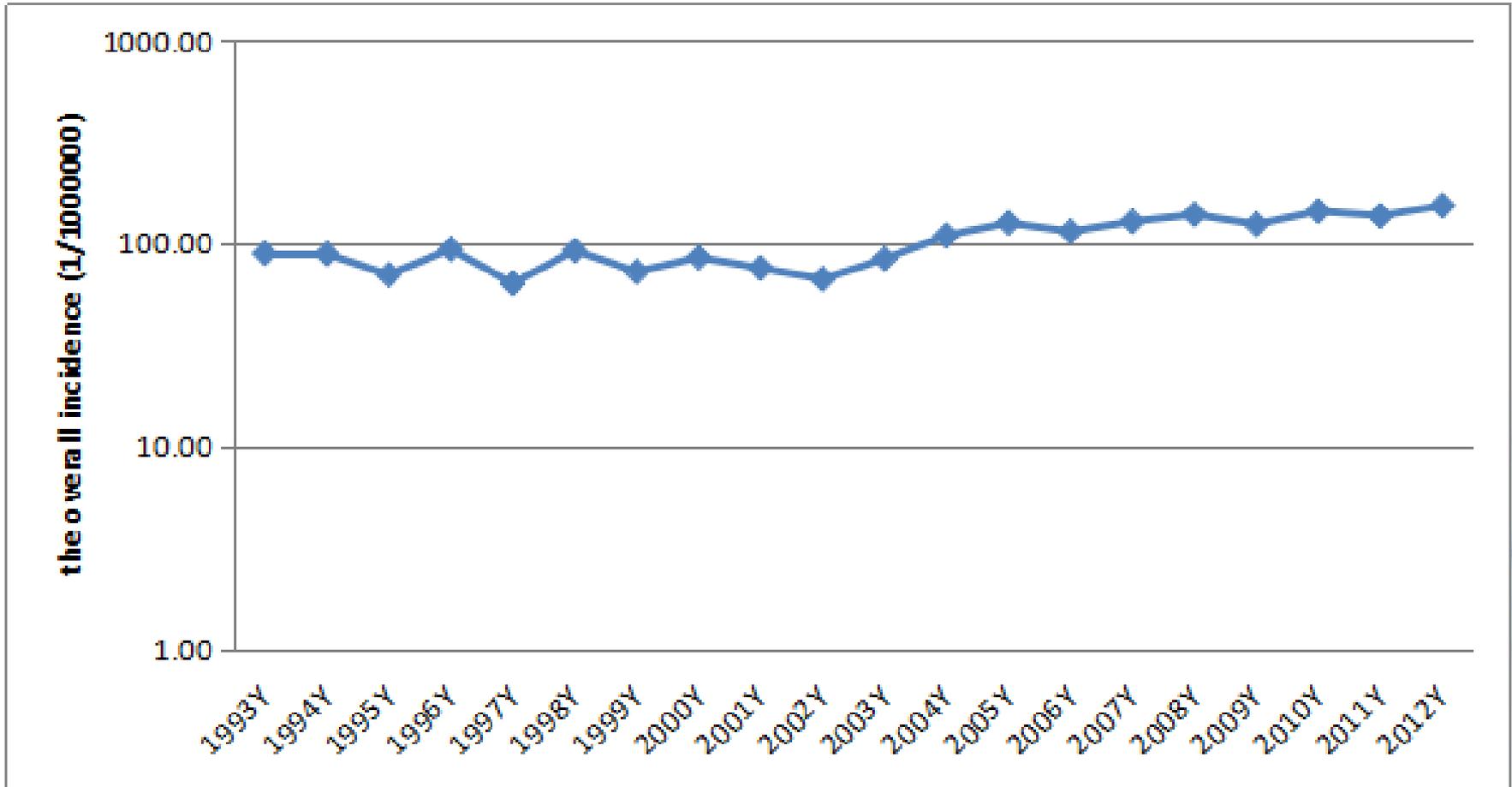
Gender comparison in different classification of cancer



Time Trend — overall



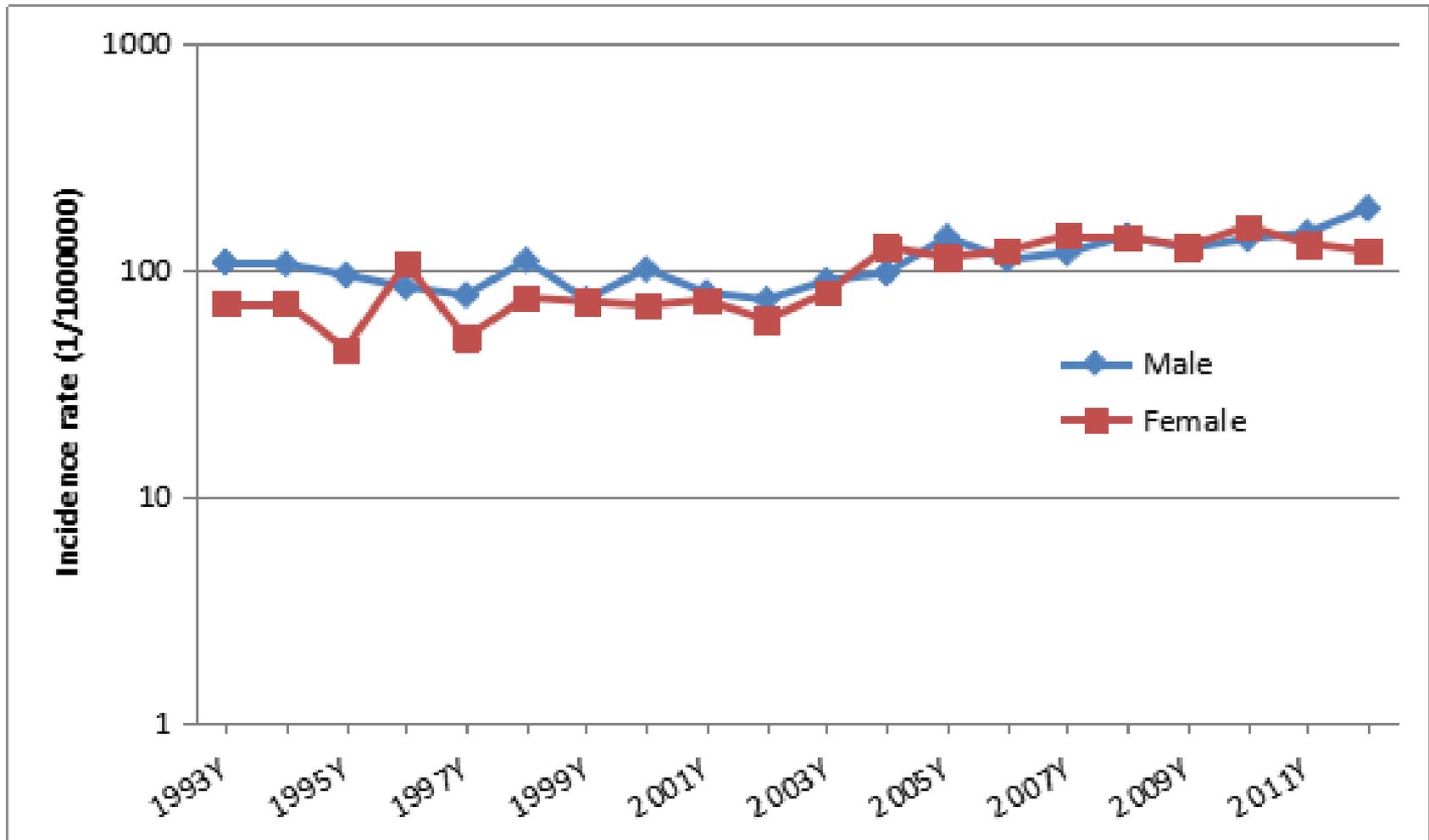
❖ Crude incidences of childhood Cancer during 1993 - 2012



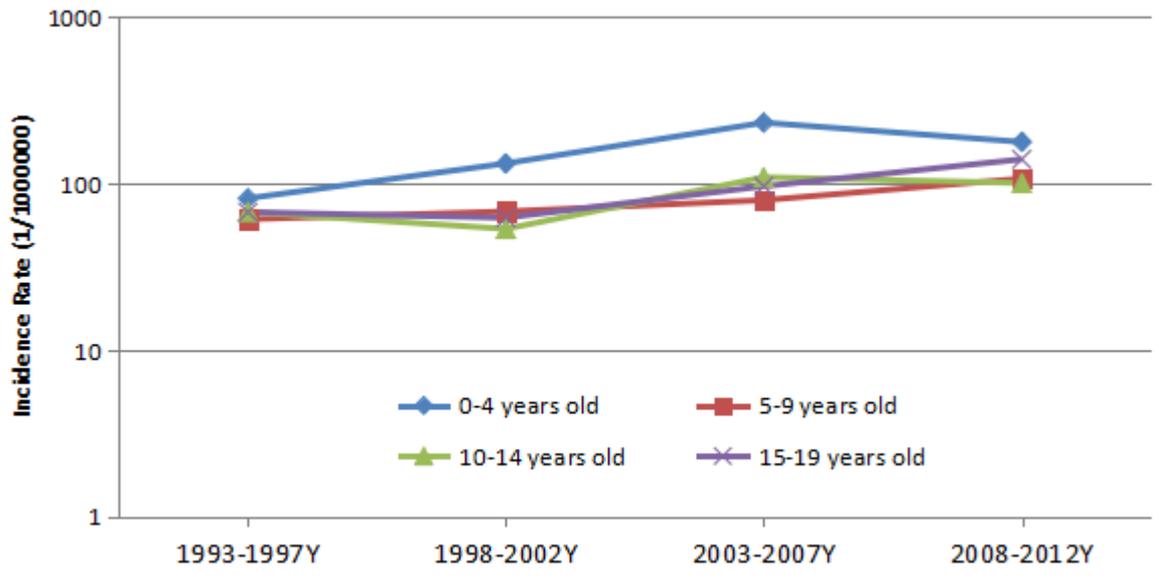
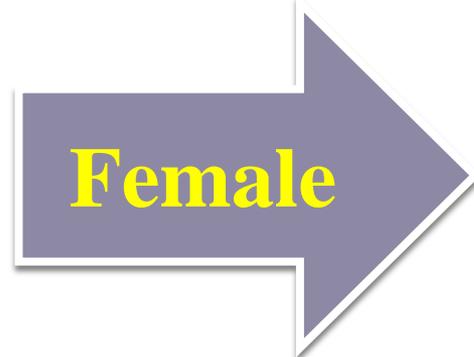
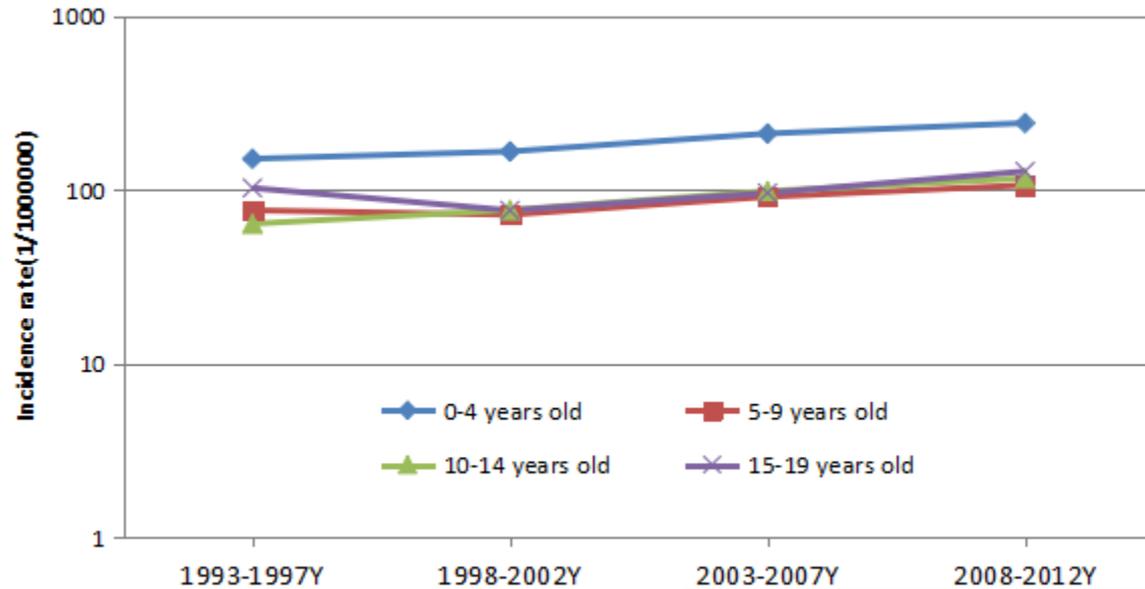
Time Trend — by Gender



- ❖ Incidences of childhood cancer in different calendar year, by gender, 1993 - 2012



Incidences — Age-specific in Different Period



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Problems and Challenges



- From 1993 to 2012, the crude incidence of Wuhan childhood malignant tumor is 99.8 per million, a relatively low level comparing with other countries and regions.
- While, the annual incidence rate are increasing year by year, especially in the nearly five years, the incidence reached 153.6 per million in 2012.
- Increasing so fast! Why? Diagnosibility improved? Survey quality increased? Environmental exposure seriously? Changes of residents' lifestyle? Or mixed factors?
- We need to develop further research in the future, case-control studies, nested case-control studies, cohort studies.....

Thanks for your listening!

<http://www.whcdc.org/>



WHCDC