

PATTERNS OF CHILDHOOD CANCER INCIDENCE IN 19 SELECTED POPULATION-BASED BRAZILIAN REGISTRIES

Claudio Pompeiano Noronha (INCA); Juliana Moreira de Oliveira Ferreira (INCA/ENCE); Julio Fernando Pinto Oliveira (INCA); Karine Silva Duarte (INCA/UERJ);
Rejane de Souza Reis (INCA); Marcell de Oliveira Santos (INCA).
Instituto Nacional de Câncer – INCA – Coordenação de Prevenção e Vigilância – Divisão de Informação.
www.inca.gov.br - e-mail: conprev@inca.gov.br

INTRODUCTION

At the end of the sixties, the population-based cancer registries (PBCR) appeared in Brazil as result of initiatives to get information on cancer incidence and the worldwide scenario influence by cancer registries emergence in several places in the world. The PBCR produce information that allows to describe and to monitor the profile of the cancer incidence, it becomes an essential source for clinical and epidemiological research development, as also, to plan cancer-control programs and to monitor and evaluate their performance.

OBJECTIVE

To describe patterns of childhood cancer incidence rates for 19 Brazilian PBCR with available data during the period 1994-2002.

METHODS

Percent distribution of Leukemia, Lymphomas, Brain tumors and others for all 19 Brazilian PBCR.

Average age adjusted incidence rates by the world standard population, expressed per 100,000 inhabitants, by sex and from all childhood cancer, leukemia, lymphomas and brain tumors.

The average age adjusted incidence rates were calculated only for Brazilian PBCR with three years or more of consolidate data, after 1996.

Incidence data: PBCR of Aracaju, Belém, Belo Horizonte, Campinas, Campo Grande, Cuiabá, Curitiba, Distrito Federal, Fortaleza, Goiânia, João Pessoa, Manaus, Natal, Palmas, Porto Alegre, Recife, Salvador, São Paulo e Vitória.

Population data: Brazilian Institute of Geography and Statistics Foundation - IBGE

RESULTS

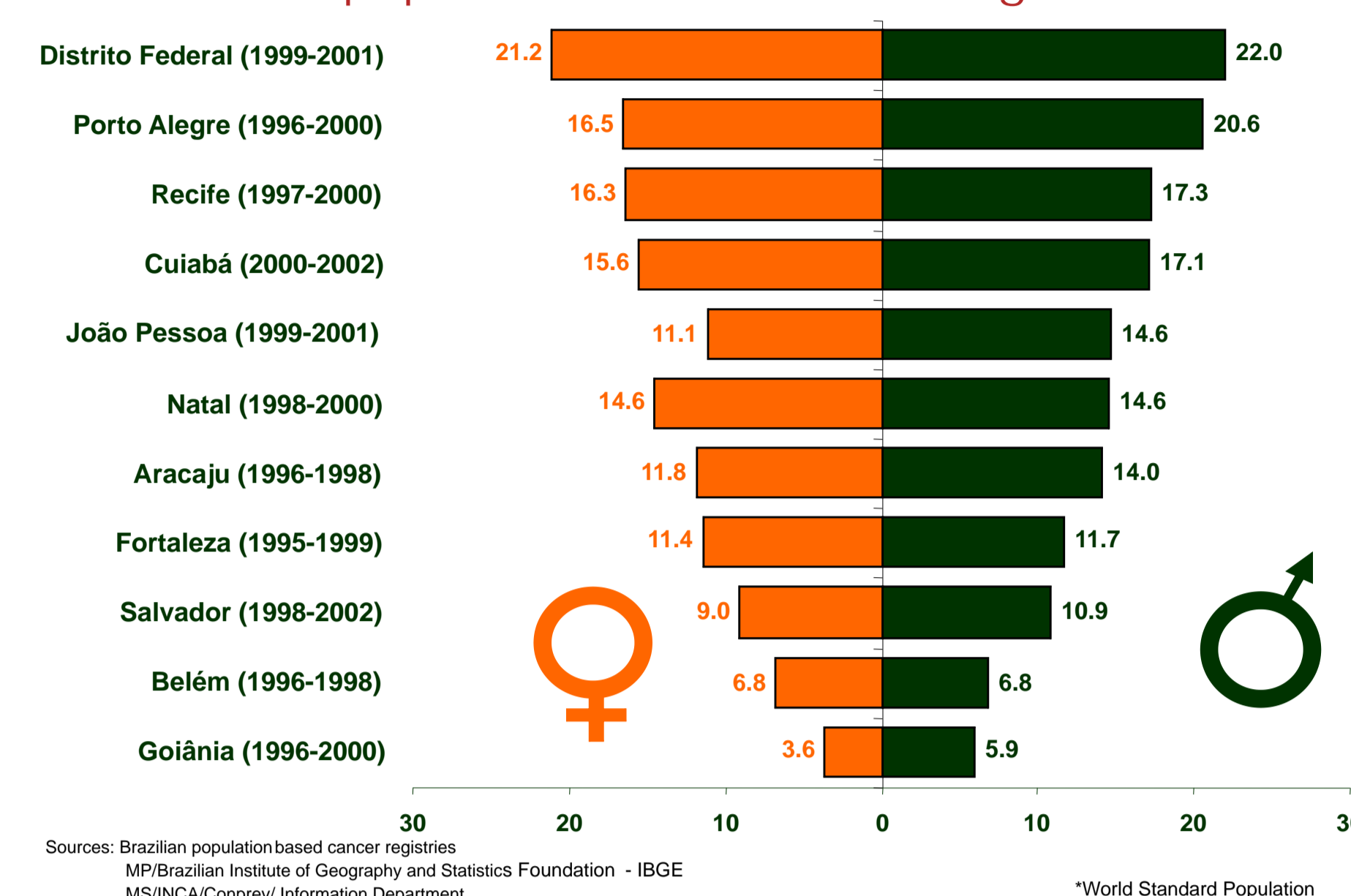
Percentage distribution of cancer incidence for all cancer and childhood cancer Brazilian population-based cancer registries.

PBCR	Childhood Cancer		All cancer, but childhood cancer		Total new cases
	new cases	%	new cases	%	
Campo Grande (2000)	42	4.6	874	95.4	916
Manaus (1999)	71	3.8	1,819	96.2	1,890
Belém (1996-1998)	135	3.7	3,504	96.3	3,639
João Pessoa (1999-2001)	84	3.4	2,357	96.6	2,441
Salvador (1998-2002)	548	3.2	16,794	96.8	17,342
Cuiabá (2000-2002)	134	3.1	4,190	96.9	4,324
Recife (1997-2001)	404	3.0	13,146	97.0	13,550
Distrito Federal (1999-2001)	485	3.0	15,597	97.0	16,082
Campinas (1994-1995)	73	3.0	6,316	260.0	2,429
Fortaleza (1995-1999)	475	2.7	16,837	97.3	17,312
Vitória (1997)	39	2.8	1,342	97.2	1,381
Curitiba (1998)	92	2.7	3,364	97.3	3,456
Natal (1998-2000)	114	2.2	4,979	97.8	5,093
Aracaju (1996-1998)	65	2.1	2,968	97.9	3,033
São Paulo (1999-2000)	1601	1.9	82,310	98.1	83,911
Belo Horizonte (2000)	179	1.5	11,440	98.5	11,619
Porto Alegre (1996-2000)	386	1.5	25,440	98.5	25,826
Goiânia (1996-2000)	226	1.3	16,663	98.7	16,889
Palmas (2000-2001)	3	1.0	298	99.0	301

Sources: Brazilian population-based cancer registries
MP/Brazilian Institute of Geography and Statistics Foundation - IBGE
MS/INCA/Conprev/ Information Department

Average age-adjusted incidence rates* from childhood cancer by sex.

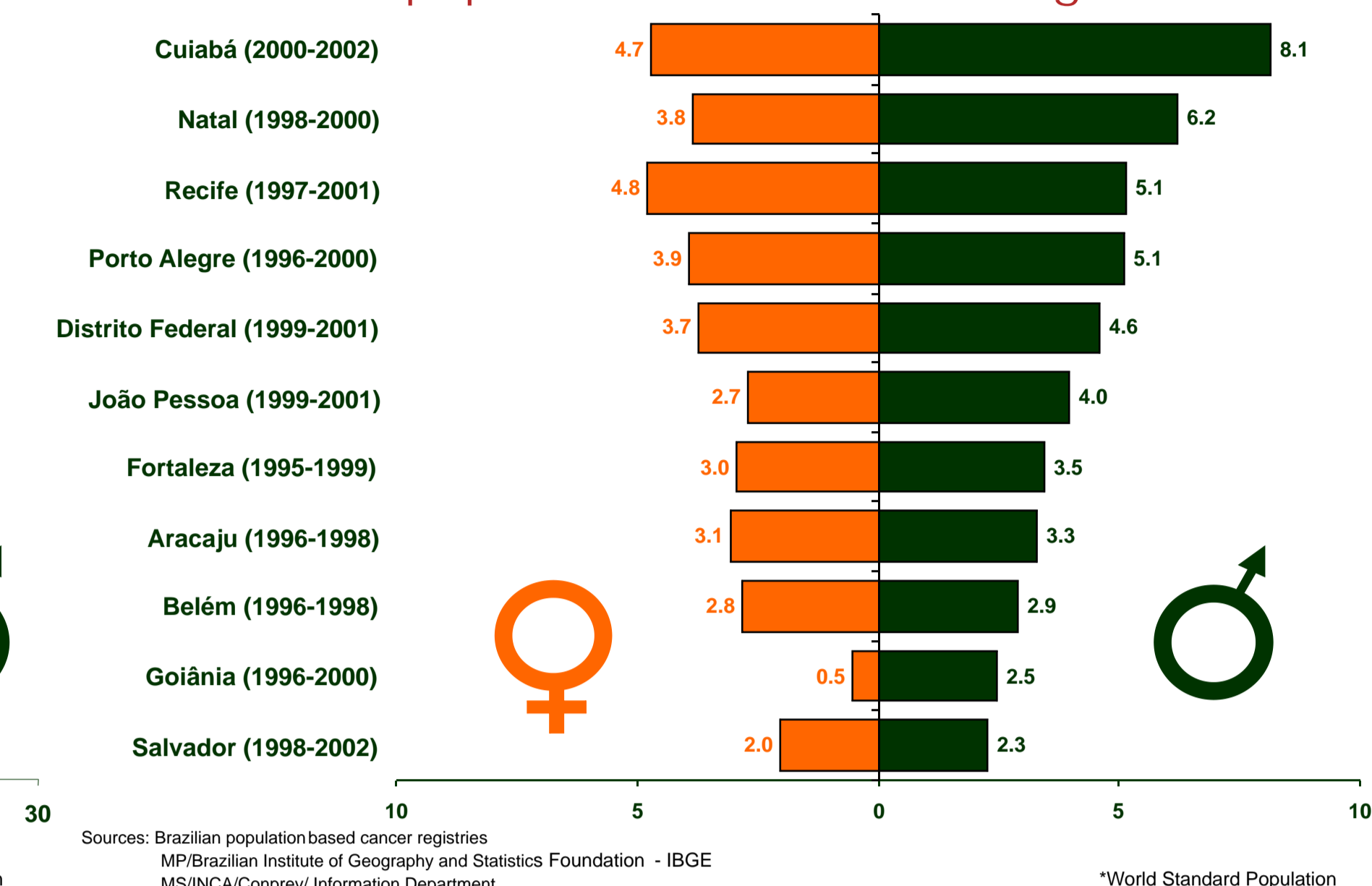
Brazilian population-based cancer registries.



Sources: Brazilian population-based cancer registries
MP/Brazilian Institute of Geography and Statistics Foundation - IBGE
MS/INCA/Conprev/ Information Department

Average age-adjusted incidence rates* From Leukemia for children under age 18 by sex.

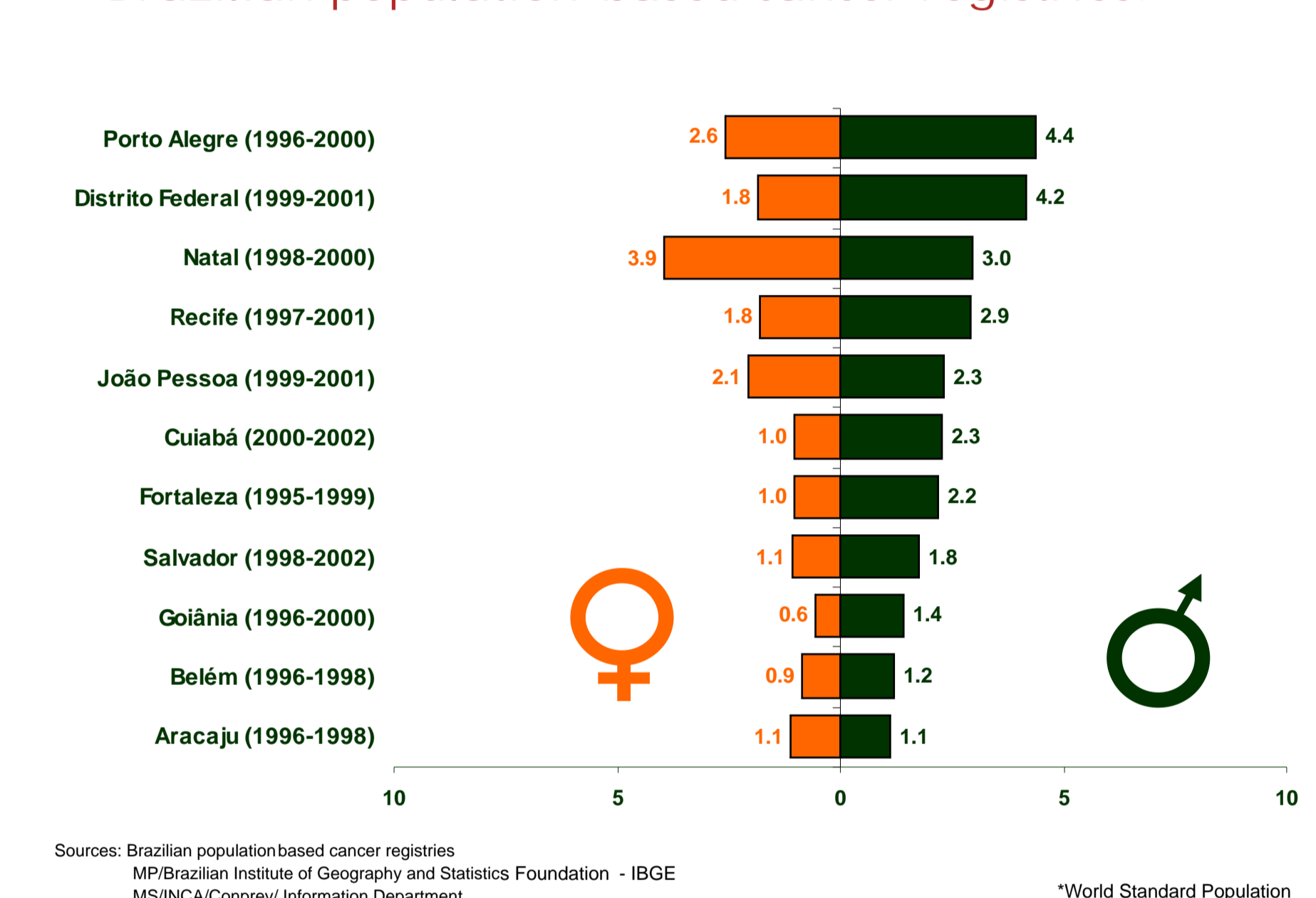
Brazilian population-based cancer registries.



Sources: Brazilian population-based cancer registries
MP/Brazilian Institute of Geography and Statistics Foundation - IBGE
MS/INCA/Conprev/ Information Department

Average age-standardized incidence rates* from Lymphoma for children under age 18 by sex.

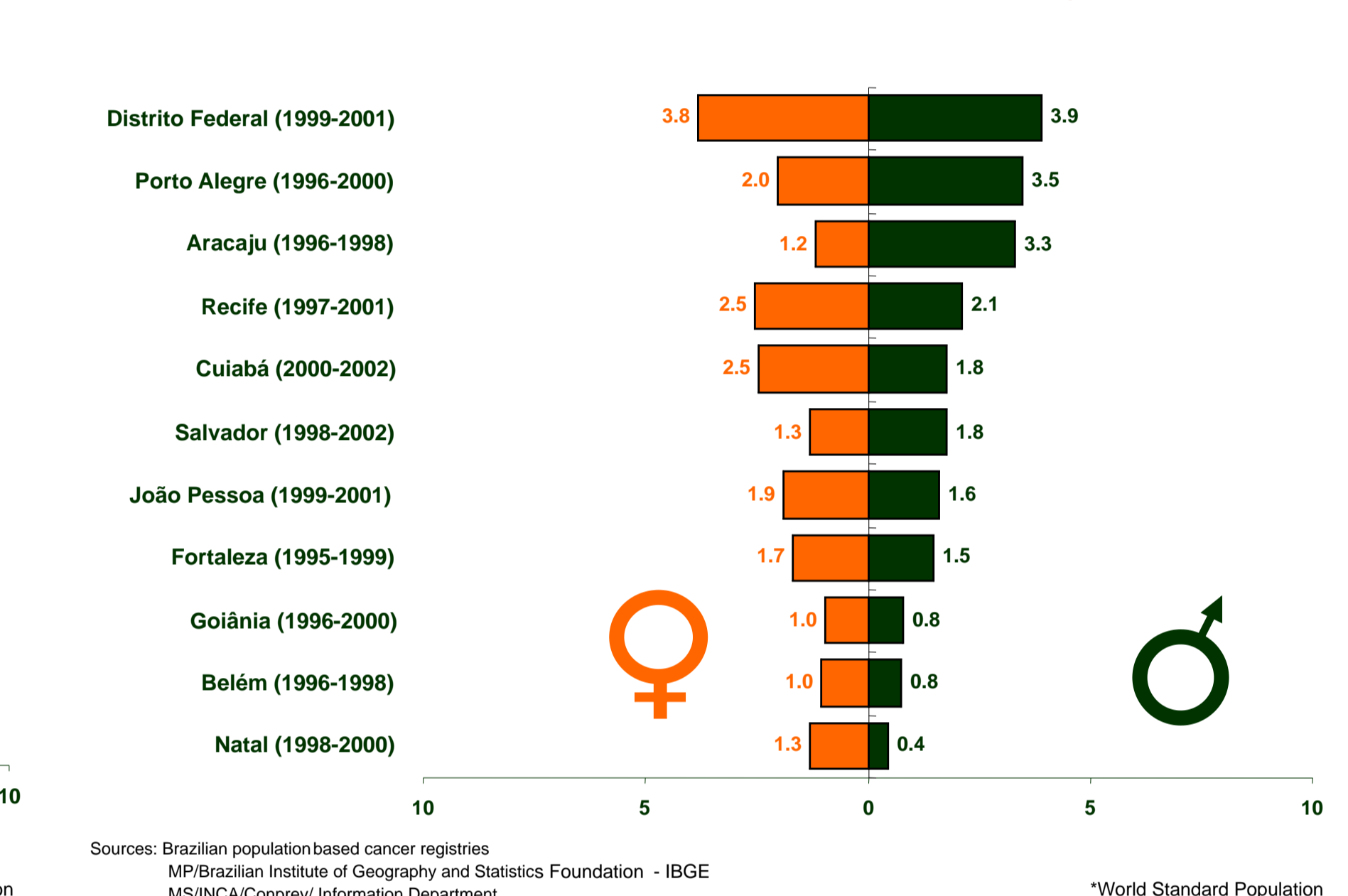
Brazilian population-based cancer registries.



Sources: Brazilian population-based cancer registries
MP/Brazilian Institute of Geography and Statistics Foundation - IBGE
MS/INCA/Conprev/ Information Department

Average age-standardized incidence rates* from Brain tumors for children under age 18 by sex.

Brazilian population-based cancer registries.



Sources: Brazilian population-based cancer registries
MP/Brazilian Institute of Geography and Statistics Foundation - IBGE
MS/INCA/Conprev/ Information Department

Leukemias

Leukemia was the most common cancer in children for all Brazilian PBCR. The highest percentage was observed in Manaus (45 % of childhood cancer). The city of Belo Horizonte has the lowest percentage - 15%.

For males the average adjusted incidence rates in eleven PBCR varies since 8.1/100,000 in Cuiabá (2000-2002) to 2.3/100,000 in Salvador (1998-2002). To females the highest average age adjusted incidence rate was observed in Recife (1997-2001) 4.8/100,000 and the lowest in Goiânia (1996-2000) 0.5/100,000.

Lymphomas

Lymphomas was the second most common cancer in children for all Brazilian PBCR. The highest percentage was observed in Natal (23 % of childhood cancer). The city of Aracaju has the lowest percentage - 9%.

For males the average adjusted incidence rates in eleven PBCR varies since 4.4/100,000 in Porto Alegre (1996-2000) to 1.1/100,000 in Aracaju (1996-1998). To females the highest average age adjusted incidence rate was observed in Natal (1998-2000) 3.9/100,000 and the lowest in Goiânia (1996-2000) 0.6/100,000.

Brain Tumors

Brain tumors was the third most common cancer in children for all Brazilian PBCR. The highest percentage was observed in Goiânia (18% of childhood cancer). The city of João Pessoa has the lowest percentage - 2%.

For males the average adjusted incidence rates in eleven PBCR varies since 3.9/100,000 in Distrito Federal (1999-2001) to 0.4/100,000 in Natal (1998-2000). To females the highest average age adjusted incidence rate was observed in Distrito Federal (1999-2001) 3.8/100,000 and the lowest in Goiânia (1996-2000) 1.0/100,000.

Conclusions

Childhood cancer incidence information of these Brazilian cities had demonstrated similar to those of developing countries.

The information of Brazilian PBCR contribute to monitoring and evaluating their performance. Childhood information of these Brazilian cities allows planning effective and efficient cancer control programmes aiming reduce cancer morbi-mortality and improve life quality of Brazilian children.