

PEDIATRIC RENAL TUMOR IN CHILDREN IN BRAZIL

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INTRODUCTION

Primary renal tumors account for 6% of all cancers in children under 15 years of age. Our aim was to describe incidence, mortality rate of renal tumors in Brazil, describe the accrual rate of participation on the Brazilian Wilms Tumor Study Group (BWTSG) and to identify barriers to improve registration of children with renal tumors in Brazil.

METHODS

Data from cases of renal tumors (RT) in 0-14 year old children from 15 Population Based Cancer Registries were extracted. Frequencies and age-adjusted incidence rates (AAIR) as well as age-specific incidence rates (ASIR) were described for all RT. Mortality trends were obtained from the Brazilian Health Mortality Information System (SIM-1980-2014) according to the five geographic regions of Brazil and age-adjusted mortality rate (AAMR) were calculated. Joinpoint regression including annual average percent change were evaluated to mortality trends. Hospital-based tumor registry (HBTR) data were compared with the observed numbers of pediatric renal tumors registered at the BWTSG during the same period. To identify the importance of participation on a cooperative group we submitted a 5-point Likert-type scale questionnaire to members of the Brazilian Pediatric Oncology Society SOBOPE regarding the opinion of participation on cooperative groups.

RESULTS

The median AAIR and AAMR for RT by region can be seen in Figure 1. The mortality trend decreased across the entire period (AAPC = -0.7).

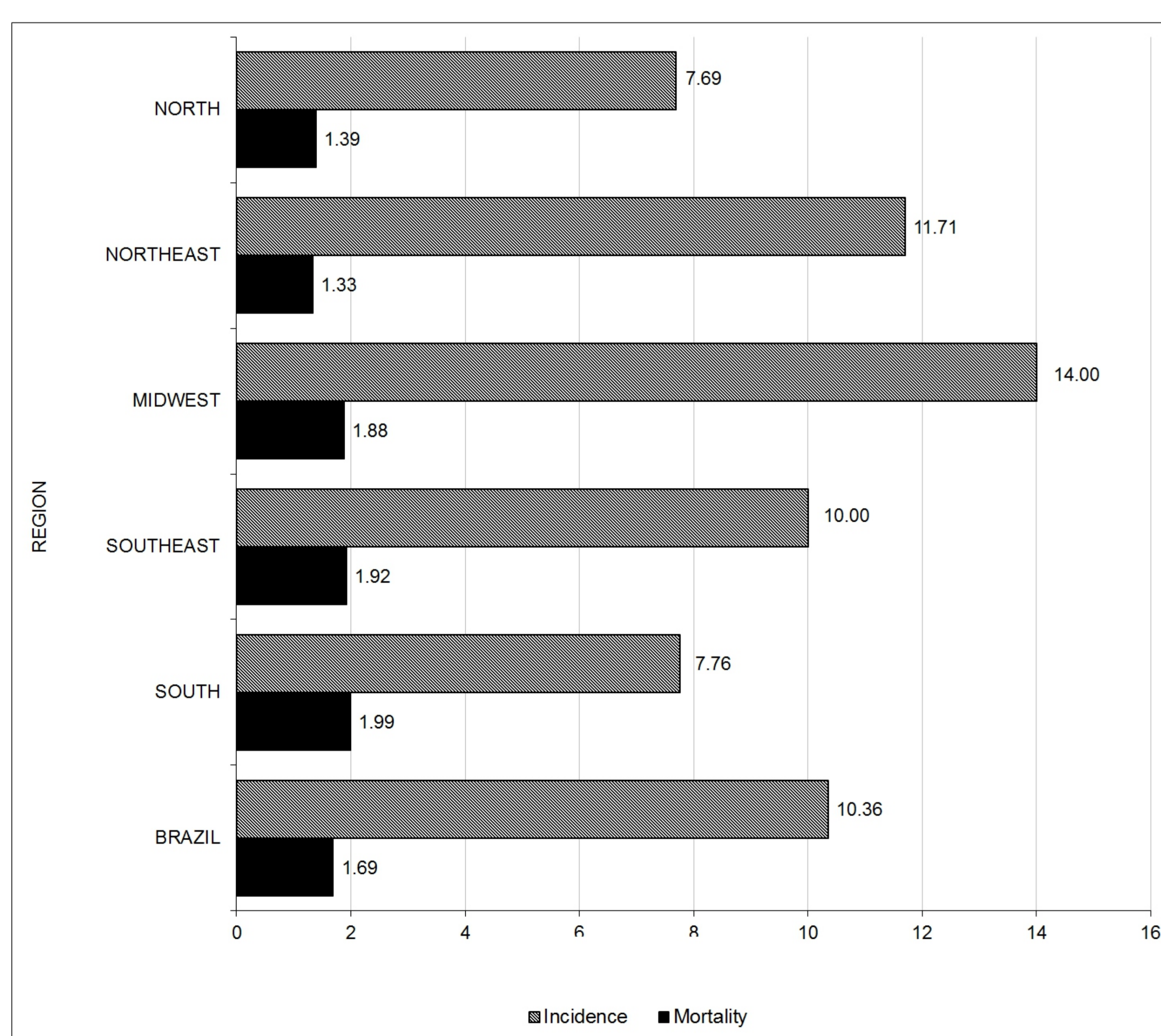


Figure 1

Regarding accrual rate of participation in cooperative group, 1497 patients were diagnosed with RT and registered in 104 HBTR from 22 Brazilian states between 2001- 2009 and 498 cases were enrolled at BWTSG during the same period (Figure 2.A and 2.B).

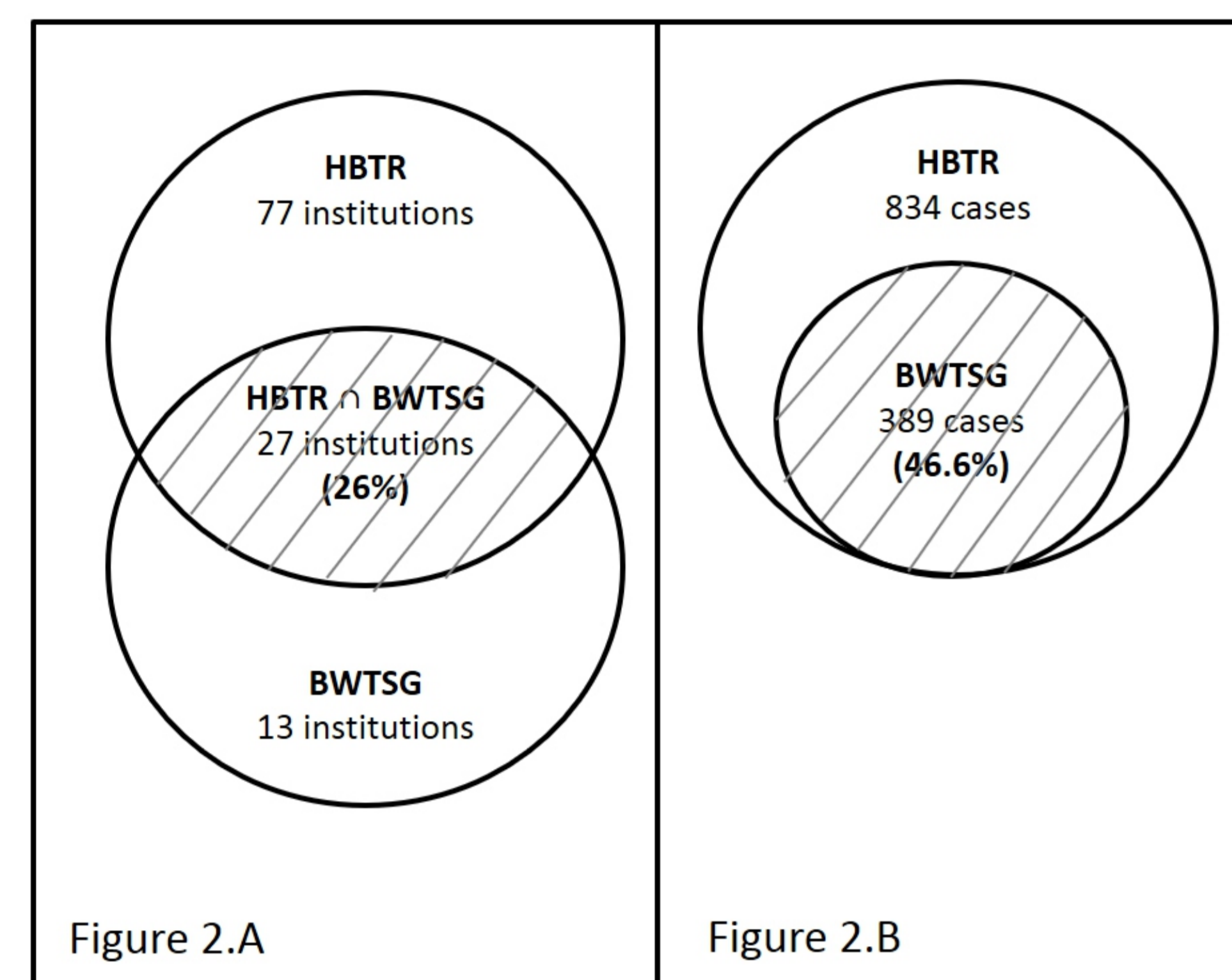


Figure 2

Accrual rate of patient participation per institution vary from 18 to 76%, higher in South region. Accrual rate of institution participation vary by region (20- 75%), higher on Midwest region (Table 1).

Table 1

REGIONS	N° Institutions		Accrual rate	N° of cases		Accrual rate
	BWTSG	HBTR	%	BWTSG	HBTR	%
NORTH	1	5	20.0	1	4	25.0
NORTHEAST	5	23	21.7	62	92	67.3
MIDWEST	3	4	75.0	11	61	18.0
SOUTHEAST	13	47	27.6	251	593	42.3
SOUTH	5	25	20.0	64	84	76.1
BRAZIL	27	104	25.9	389	834	46.6

Regarding the participation consensus, 13 statements were proposed and 10 achieved agreement (Table 2).

Table 2

Statement	number of participants	median score (IQR)	Agreement*	Consensus reached
1) To participate in a cooperative group it is necessary a extra time on daily activities.	89	1(1-2)	87,7	yes
2) To participate in a cooperative group it is necessary a financial suport.	89	3(3-4)	39,3	no
3) Complete registry of all cases is essential to participate on a cooperative group.	89	1(1-1)	98,9	yes
4) The participation on a cooperative group is benefit to the institution.	89	1(1-1)	95,5	yes
5) A task to participate is to obtain the inform consent from children/parents.	89	4(4-5)	28,1	no
6) To participate on a cooperative group is necessary an multidisciplinary team participating to fill in the forms.	89	2(2-2)	92,1	yes
7) The participation in a cooperative group is important for treatment sucess and overall survival of children with cancer.	89	1(1-2)	95,5	yes
8) Health system improves with the participation on a cooperative group.	89	1(1-2)	96,6	yes
9) The major benefit to participate in a cooperative group is the scientific contribution.	89	2(2-2)	87,6	yes
10) Extra time in filling the forms jeopardize the participation on a cooperative group.	89	2(2-4)	69,6	no
11) Despite the extra time it is worth to participate on a cooperative group.	89	1(1-2)	96,6	yes
12) To follow strictly the treatment protocol is essential to participate on a cooperative group.	89	1(1-2)	97,7	yes
13) The participation on a cooperative group is benefit to all participants colleagues.	89	1(1-2)	93,2	yes

* Agreement was defined as scores of 1 or 2 (1=strongly agree;2=agree, 3=neither agree or disagree, 4=disagree, 5=strongly di sagree).

CONCLUSIONS

These data represent the incidence, mortality trends and a low accrual rate of participation on the BWTSG for childhood renal tumor in Brazil and indicate the variability across regions.