

IMPROVEMENT OF CARE AND OUTCOMES BY A MULTIDISCIPLINARY APPROACH IN PATIENTS WITH RETINOBLASTOMA AT NATIONAL CANCER INSTITUTE – BRAZIL

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Background

Retinoblastoma(RB) management is complex and remains a challenge in low- and middle-income countries

Still a challenge due to: late diagnosis

limited specialized treatment centers

higher rates of extraocular dissemination and metastasis

lower rates of overall survival and ocular preservation

A multidisciplinary approach and access to adequate treatment can improve care and outcomes.

Objective

Measure the impact of the implementation of a multidisciplinary team and the improvement of treatment approach on outcomes by describing the number of advanced cases, ocular preservation rate and overall survival of RB patients since its implementation as team with international collaboration to optimize results in RB cases at the National Cancer Institute in Brazil in 2006

Results

1st period: 1980 - 1994

- Enucleation, chemotherapy and radiotherapy.

2nd period: 1995 - 2005

- Chemoreduction and focal therapies.

3rd period: 2006 - 2015

- Implementation of ocular oncology facilities (laser therapy, cryotherapy, intravitreal), intra-arterial chemotherapy and autologous transplant.

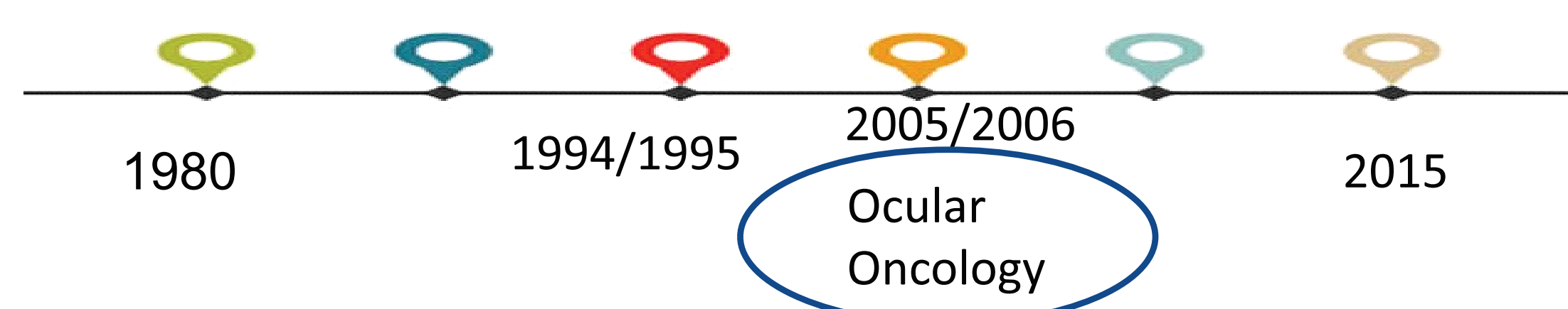


Table1: Clinical Characteristics

Clinical Characteristics	Number (%)
Total patients	338 (100%)
Gender	
Female	273 (51.2%)
Male	165 (48.8%)
Laterality	
Unilateral	228 (67.3%)
Bilateral	103 (30.4%)
Trilateral	8 (2.4%)
Staging	
Intraocular	221 (65.2%)
Extraocular	73 (21.5%)
Metastatic	45 (13.3%)

Table2: Cases distribution by periods

Period	1980 - 1994	1995 - 2005	2006 - 2015
Total cases/year	6,7 (n=94)	10,7 (n=107)	15,3 (n=138)
Intraocular cases	50% (n=47)	66,4% (n=71)	74,6% (n=103)
Extraocular & Metastatic cases	50,0% (n=47)	33,6% (n=36)	25,4% (n=35)
Ocular preservation rate	16,3%	24,8%	32,6%

Total cases/year has increased 128% during the analysis. Extraocular and metastatic cases were reduced by 49% (50 to 25.4%). Ocular preservation rate has increased 100% (16,3 to 32,6%). Median follow-up was 22.5 years (20.5-24.6). Ten-year overall survival(OS) was 72.5% (95% CI 69.9-75.1)(Figure1). In univariate analysis, 5y- OS was affected by laterality (unilateral $p<0,0001$); by staging (intraocular $p<0,0001$) (Figure2) and by period of time, 3rd period compared to previous ($p<0,0026$)(Figure3).

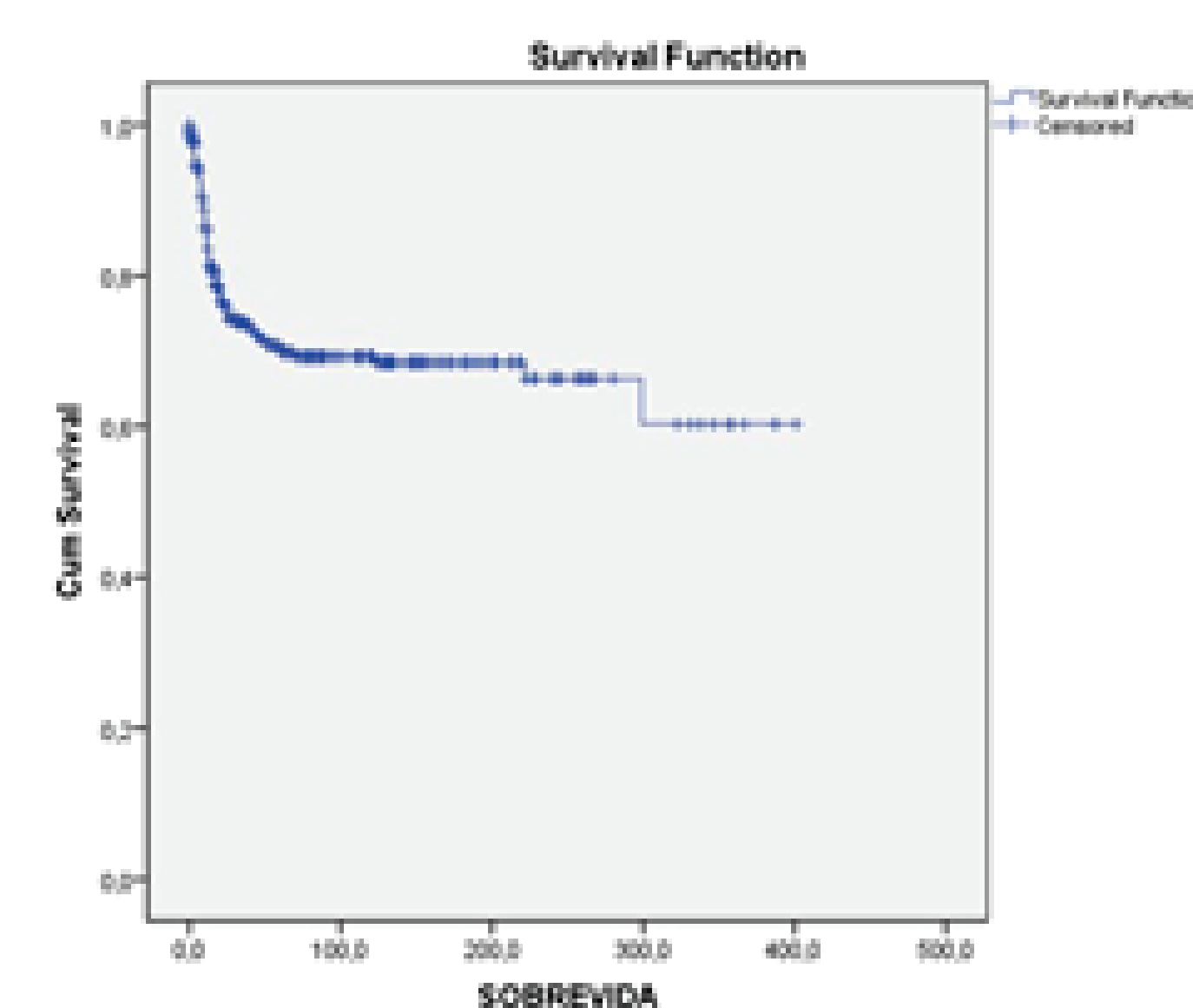


Figure1: Ten-year overall survival(OS)

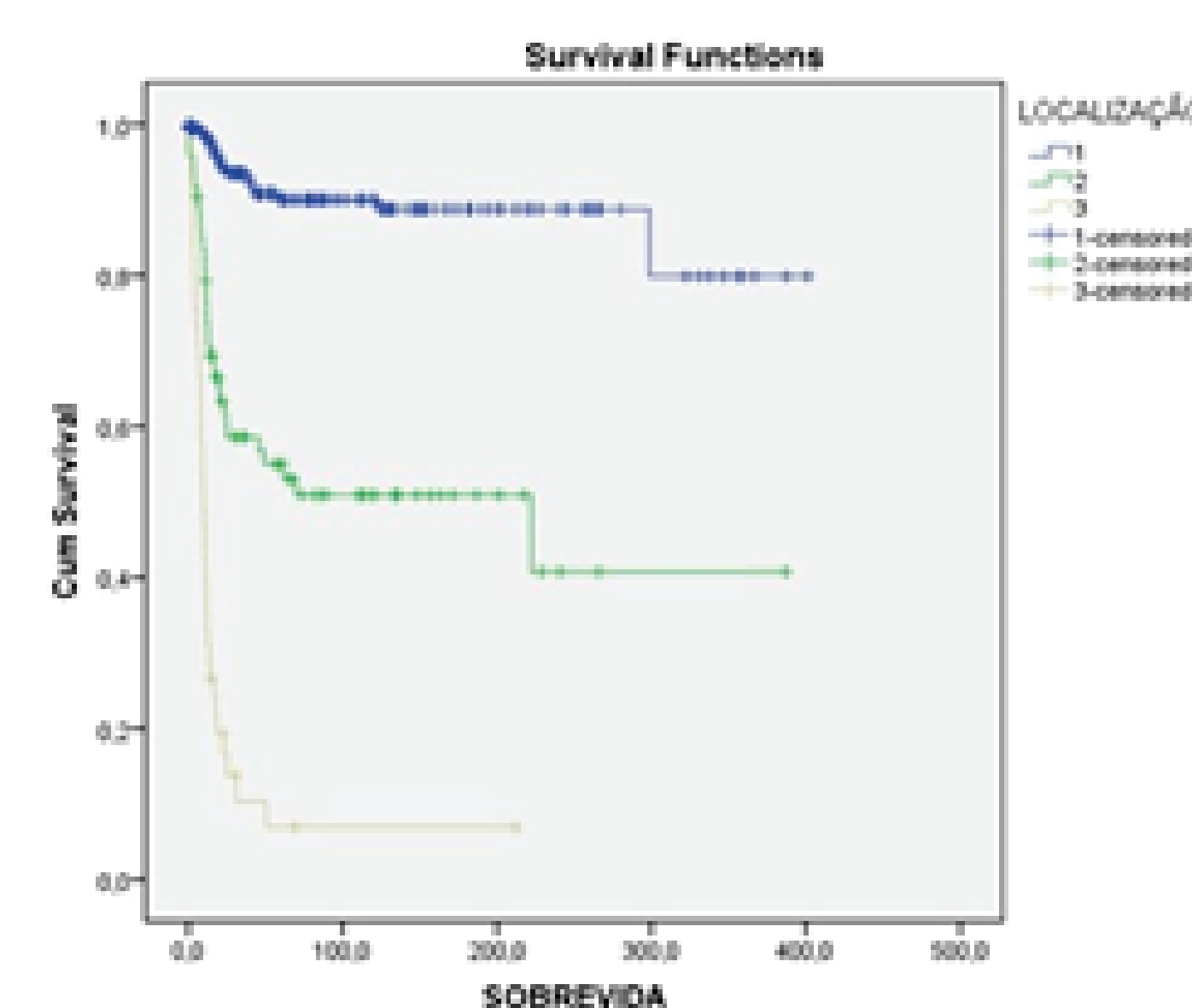


Figure2: 5y- OS stratified by staging ($p<0,0001$)

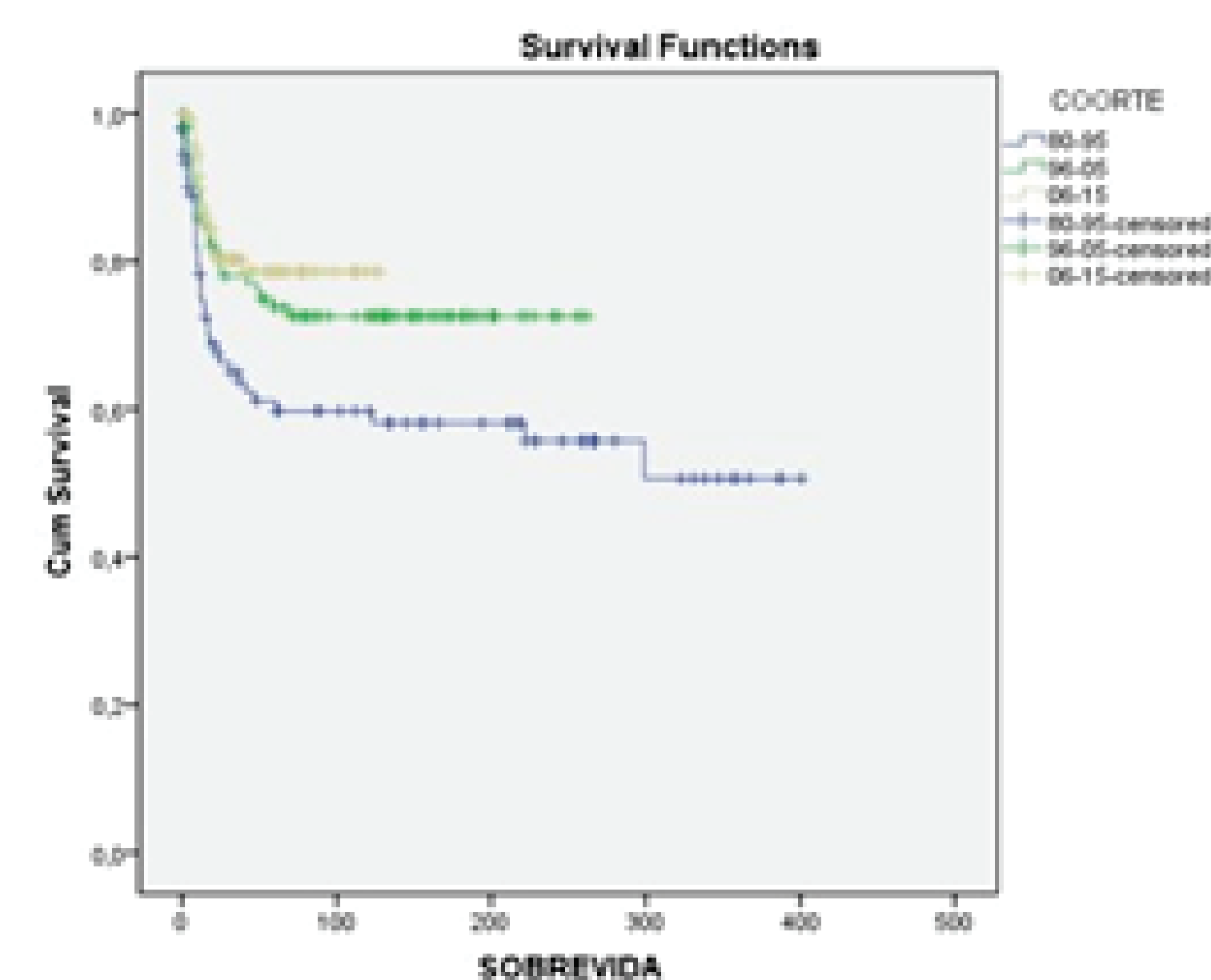


Figure3: 5y- OS stratified by period($p<0,0001$)

Conclusions

Our results support the effect of multidisciplinary approach in the outcomes for patients with retinoblastoma in a cancer center in Brazil through measurable parameters. This partnership across multiples disciplines and collaborative initiative possibly reflects earlier diagnosis and greater access to appropriate treatment.