

Trends of cancer survival in children and adolescents in the province of Granada in the period 1985-2013

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BACKGROUND AND OBJECTIVE

Although cancer in children and adolescents is rare, it is a leading cause of death by disease in children in Spain with great social and emotional repercussion. Cancer survival in this population is generally high and it is expected to increase as treatments progress. The objective was to analyze the evolution of 5-year survival in children and adolescents in the province of Granada diagnosed for the first time with cancer in the period 1985-2013.

METHODOLOGY

From the information of the Granada Cancer Registry, all incident cancer cases from 0 to 19 years diagnosed in the period 1985-2013 were studied. The date of follow-up was updated to December 31th 2016.

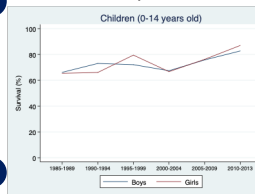
The observed 5-years survival was calculated using the Kaplan-Meier method along five-year periods of the year of incidence from 1985 to 2013. For each period and for each stratum, the probability of surviving 5 years from the diagnosis was estimated, together with its 95% confidence intervals (95% CI).

RESULTS

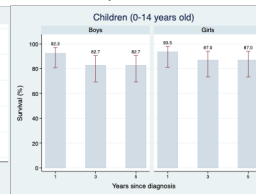
In the period 1985-2013, 627 cases of childhood cancer and 330 cases of cancer in adolescents were diagnosed in Granada.

The 5-year survival among the children diagnosed with a cancer had an increasing trend to reach 84.7% (95% CI: 75.9-90.5) in the most recent period (2010- 2013), almost 20 points more than in the period 1985-1989 (65.8%). The evolution was similar in boys and girls. By age groups, children 0-4 years old had a 5-year survival lower (80%) compared to the 5-9 years (88.9%) and 10-14 years (88.5%) groups in the period 2010-2013. Among adolescents, the 5-year survival in 2010-2013 was 87.3% (95% CI: 72.1-87.3), 20 points higher than survival in 1985-1989. The boys from 15 to 19 years had a greater evolution (27 percentage points) than the girls (11 points).

Trend of 5-year survival

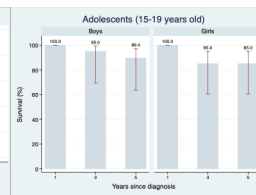
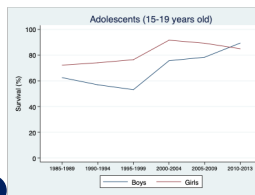


1,3 and 5-year survival, 2010-2013



5-years observed survival (OS) and 95% confidence interval (CI)

Edad	Periodo	Niños			Niñas		
		N	SO	IC 95%	N	SO	IC 95%
0-4	1985-1989	32	71.9	(52.9-84.3)	17	52.9	(27.6-73.0)
	1990-1994	27	74.1	(53.2-86.7)	27	59.3	(38.6-75.0)
	1995-1999	17	70.6	(43.1-86.6)	11	90.9	(50.8-98.7)
	2000-2004	16	50.0	(24.5-71.0)	15	66.7	(37.5-84.6)
	2005-2009	25	88.0	(67.3-96.0)	22	77.3	(53.7-89.8)
	2010-2013	22	77.3	(53.7-89.8)	23	82.6	(60.1-93.1)
5-9	1985-1989	13	61.5	(30.8-81.8)	11	72.7	(37.1-90.3)
	1990-1994	17	58.8	(32.5-77.8)	12	72.7	(37.1-90.3)
	1995-1999	16	75.0	(46.3-89.8)	14	78.6	(47.2-92.5)
	2000-2004	14	64.3	(34.3-83.3)	13	53.8	(24.8-76.0)
	2005-2009	20	85.0	(60.4-94.9)	20	70.0	(45.1-85.3)
	2010-2013	15	86.7	(56.4-96.5)	12	91.7	(53.9-98.8)
10-14	1985-1989	17	58.8	(32.5-77.8)	24	70.8	(48.4-84.9)
	1990-1994	19	84.2	(58.7-94.6)	15	73.3	(43.6-89.1)
	1995-1999	10	70.0	(32.9-89.2)	14	71.4	(40.6-88.2)
	2000-2004	16	87.5	(58.6-96.7)	14	78.6	(47.2-92.5)
	2005-2009	21	52.4	(29.7-70.9)	21	80.0	(55.1-92.0)
	2010-2013	15	86.7	(56.4-96.5)	11	90.9	(50.8-98.7)
15-19	1985-1989	24	62.5	(40.3 - 78.4)	19	73.7	(47.9 - 88.1)
	1990-1994	28	56.9	(36.8 - 72.8)	27	74.1	(53.2 - 86.7)
	1995-1999	32	53.1	(34.7 - 68.5)	34	76.5	(58.4 - 87.5)
	2000-2004	37	75.7	(58.5 - 86.5)	24	91.7	(70.6 - 97.8)
	2005-2009	37	78.4	(61.4 - 88.5)	28	89.3	(70.4 - 96.4)
	2010-2013	20	89.4	(63.8 - 97.3)	20	85.0	(60.4 - 94.9)



Distribution of cases by sex

53%

47%



CONCLUSIONS

Cancer survival in children and adolescents of the province of Granada has shown a remarkable improvement in the last decades, reaching values around 85% at 5 years from the diagnosis. These values are slightly higher than those estimated for European countries, which are around 80%. In spite of the advances in the last decades, efforts must be remained to continue improving the life expectancy in this population.

