

	Children of childhood cancer survivors (6,129 children)		Children of siblings of childhood cancer patients (3,101 children)	
	Number of cases	Frequencies	Number of cases	Frequencies
Cytogenetic abnormality	7	0.1%	6	0.2%
Mendelian disorders	14	0.2%	8	0.3%
Malformation	136	2.2%	97	3.1%
<b>Total</b>	<b>157</b>	<b>2.6%</b>	<b>111</b>	<b>3.6%</b>

\* The average gonadal dose among cancer survivors is 1.26 Gy for females and 0.46 Gy for males.

Source: Prepared based on Green DM et al: J Clin Oncol Vol.27, 2009: 2374-2381

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Green DM et al: Journal of Clinical Oncology 2009 27:14, 2374-2381  
<https://ascopubs.org/doi/10.1200/JCO.2008.21.1839>

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This is the results of the survey of children of childhood cancer survivors in the United States and Canada. As in the case of the surveys targeting children of atomic bomb survivors, excess incidence of chromosome aberrations, Mendelian disorders and malformation was not observed. Based on the study on heritable effects among laboratory mice, the International Commission on Radiological Protection (ICRP) estimates the doubling dose for hereditary disorders to be 1 Gy. However, these survey results do not show any increases in chromosome aberrations and Mendelian disorders expected from the average gonadal doses.

Source:

• D.M. Green et al.: J. Clin. Oncol. 27: 2374-2381, 2009.

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