

Supplementary table 1. Additional characteristics of included studies evaluating radioactive iodine treatment in pediatric Graves' disease.

Study	Study type	Treatment period	Number of patients	Age at RAI therapy (years)	Indication for RAI treatment
Azizi and Amouzgar 2018 [36]	Retrospective	1981 – 2015	136	-	Relapse following ATD withdrawal or persistent hyperthyroidism under ATD treatment in Graves' disease
Ballal et al 2015 [15]	Retrospective	1995 – 2012	114 (84 F)	17.0 ± 3.1	Graves' disease with primary ATD treatment with absence of remission, noncompliance to ATDs or side effects of ATDs (n=74); primary treatment for Graves' disease (n=40)
Clark et al 1995 [23]	Retrospective	1986 – 1993	35 (25 F)	6 - 19	Graves' disease - Initial treatment (n=6) Prior ATD (n=29): noncompliance (n=13); relapse or failure to control hyperthyroidism (n=13); side effects of ATDs (n=3)
Cohen et al 2015 [30]	Retrospective	2002 – 2014	51 (41 F)	14.5 (5.7 - 20.3)	Graves' disease patients with persistent hyperthyroidism or failure of remission after ATD treatment or side effects of ATD treatment
Crile Jr and Schumacher 1965 [17]	Retrospective	1949 – 1961	32 (26 F)	12 (7 - 15)	Graves' disease
Enes Romero et al 2014 [29]	Retrospective	1982 – 2012	14	15.4 ± 1.5	Graves' disease
Freitas et al 1979 [21]	Retrospective	1951 – 1972	51 (43 F)	6 - 18	Graves' disease
Getsuwan et al 2016 [31]	Retrospective	2009 – 2014	46 (41 F)	11.7 ± 1.4	Graves' disease - First line treatment (37%) Second line treatment (63%)
Hamburger 1984 [22]	Retrospective	1961 – 1984	191	3 – 18 at referral	Hyperthyroidism due to Graves' disease - Relapse after surgery (n=5) - Initial treatment (n=73) After ATD treatment (n=113)
Hayek et al 1970 [19]	Retrospective	1941 – 1968	30 (28 F)	8 - 10 (n=3) 11 - 15 (n=15) 16 - 18 (n=12)	Thyrotoxicosis*** - Recurrence of thyrotoxicosis after surgery (n=5) - Failure or complications of ATD (n=15) Initial treatment (n=10)
Kaplowitz et al 2020 [33]	Retrospective	2008 – 2017	72 (53 F)*	15.5 ± 2.9	Graves' disease with poor control, relapse or absence of remission under ATD treatment or side effects of ATDs
Kogut et al 1965 [18]	Retrospective	1949 – 1962	23	12 (2 - 16)	Thyrotoxicosis***
Moll Jr and Patel 1997 [24]	Retrospective	1988 – 1996	23 (16 F)	11 ± 2.5	Failure of long-term remission after ATD treatment in Graves' disease (n=15) Primary treatment for Graves' disease (n=8)

Nakatake et al 2011 [28]	Retrospective	2000 – 2010	49 (39 F)	16.4 ± 1.8	Graves' disease patients with lack of remission after or side effects of ATD treatments and patient's desire
Nebesio et al 2002 [14]	Retrospective	1993 – 2001	40 (30 F)	13 ± 2.6	Graves' disease; 70% of the patients was primarily treated with ATDs
Pavia et al 2002 [35]	Retrospective	Not reported	11 (10 F)	13 - 18	Graves' disease
Pinto et al 2007 [27]	Retrospective	1990 – 2003	22 (16 F)	15.1 (5.6 - 18.8)	Graves' disease with poor response to ATD therapy or not obtaining remission after 18-24 months of ATD therapy
Read et al 2004 [26]	Retrospective	1953 – 1973	107 (82 F)**	15 (3.6 - 19.8)	Graves' disease
Rivkees and Cornelius 2003 [25]	Retrospective	1991 – 2001	31 (22 F)	7 – 18	Graves's disease with absence of remission after or toxic reaction to ATDs (n=30)
Safa et al 1975 [20]	Retrospective	1949 – 1968	87 (63 F)	3 - 5 (n=2) 6 - 10 (n=8) 11 - 15 (n=39) 16 - 18 (n=38)	Graves' disease
Sheline et al 1961 [34]	Retrospective	1946 – 1953	18	< 20	Graves' disease
Starr et al 1964 [16]	Retrospective	1949 – 1961	73 (56 F)	1 - 5 (n=1) 6 - 10 (n=13) 11 - 15 (n=40) 16 - 18 (n=16)	Hyperthyroidism***
Wu et al 2016 [32]	Retrospective	2003 – 2015	27	13.4 ± 3.7	Graves' disease

The studies in this table are listed in an alphabetical order based on the name of its first author.

Age at RAI therapy is presented in years ± standard deviation or range.

Abbreviations: ATD = anti-thyroid drugs; n = number of patients; RAI = radioactive iodine.

* 72 unique patients, including 6 patients who received a second RAI treatment.

** 98 patients were included at follow up in 2001-2002.

*** The cause of thyrotoxicosis or hyperthyroidism was not specified in these papers. Based on the epidemiology of hyperthyroidism in childhood it can be suspected that the vast majority of cases in these studies were caused by Graves disease.