

## Particle Therapy Patient Statistics (per end of 2022)

(Data collected by the Particle Therapy Co-Operative Group)

COUNTRY	WHERE SITE	PARTICLE	FIRST (-LAST) PATIENT	PATIENTS TOTAL	DATE OF TOTAL
Austria	Wiener Neustadt (MedAustron)	p	2017	1321	Dec-22
Austria	Wiener Neustadt (MedAustron)	C-ion	2019	363	Dec-22
Belgium	Louvain-la-Neuve	p	1991 (-1993)	21	1993
Belgium	Uni Leuven PTC, Leuven	p	2020	142	Dec-22
Canada	Vancouver (TRIUMF)	$\pi^-$	1979 (-1994)	367	1994
Canada	Vancouver (TRIUMF)	p	1995 (-2017)	204	2017
Czech Rep.	Prag (PTCCZ)	p	2012	9000	Dec-22*
China	Wanjie (WPTC)	p	2004	2200	Dec-22*
China	Lanzhou	C-ion	2006 (-2013)	213	2013
China	Shanghai (SPHIC)	p	2014	969	Sep 22
China	Shanghai (SPHIC)	C-ion	2014	3015	Sep 22
China	Shanghai (SPHIC)	C-ion, p <sup>(1)</sup>	2014	1016	Sep 22
China	Wuwei (WHITC)	C-ion	2019	734	Dec-22
China	Shanghai (Ruijin Hospital)	p	2021	47	Dec-22
Denmark	Aarhus (DCPT)	p	2019	550	Dec-22*
France	Nice (CAL)	p	1991	7868	Dec-22
France	Orsay (CPO)	p	1991	12000	Dec-22*
France	Caen (Cyclhad)	p	2019	611	Dec-22
Germany	Darmstadt (GSI)	C-ion	1997 (-2009)	440	2009
Germany	Berlin (HZB)	p	1998	4428	Dec-22
Germany	Munich (RPTC)	p	2009 (-2019)	4000	2019
Germany	HIT, Heidelberg	p	2009	3500	Dec-22*
Germany	HIT, Heidelberg	C-ion	2009	4400	Dec-22*
Germany	WPE, Essen	p	2013	3597	Dec-22
Germany	UPTD, Dresden	p	2014	1741	Dec-22
Germany	MIT, Marburg	p	2015	1000	Dec-22*
Germany	MIT, Marburg	C-ion	2015	850	Dec-22*
India	Apollo (Chennai)	p	2018	840	Dec-22
Italy	Catania (INFN-LNS)	p	2002	350	Dec-22
Italy	Pavia (CNAO)	p	2011	2046	Dec-22
Italy	Pavia (CNAO)	C ion	2012	2234	Dec-22
Italy	Trento (APSS)	p	2014	1820	Dec-22*
Japan	Chiba	p	1979 (-2002)	145	2002
Japan	Tsukuba (PMRC, 1)	p	1983 (-2000)	700	2000
Japan	Chiba (HIMAC)	p	1994	200	Dec-22*
Japan	Chiba (HIMAC)	C ion	1994	15024	Mar-23
Japan	Kashiwa (NCC)	p	1998	4350	Dec-22*
Japan	Hyogo (HIBMC)	p	2001	6685	Dec-22
Japan	Hyogo (HIBMC)	C ion	2002	3326	Dec-22
Japan	WERC	p	2002 (-2009)	62	2009
Japan	Tsukuba (PMRC, 2)	p	2001	7313	Apr 23
Japan	Shizuoka (PTCC)	p	2003	2869	Dec-22
Japan	Koriyama-City (STPTC)	p	2008	6500	Dec-22*
Japan	Gunma (GHMC)	C ion	2010	6142	Dec-22

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Japan	Ibusuki (MMRI)	p	2011	5372	Dec-22
Japan	Fukui City (Prefectural Hospital)	p	2011	1817	Dec-22
Japan	Nagoya (Nagoya PTC)	p	2013	6000	Dec-22*
Japan	Tosu (Saga-HIMAT)	C ion	2013	8000	Dec-22*
Japan	Nagano (Aizawa PTC)	p	2014	700	Dec-22*
Japan	Hokkaido (Univ.Hospital PBTC)	p	2014	850	Dec-22*
Japan	Kanagawa (i-Rock)	C-ion	2015	2675	Dec-22
Japan	Kobe PTC	p	2017	1005	Dec-22
Japan	Tsuyama Chuo PTC, Okayama	p	2016	689	Mar-23
Japan	Hakuhokai Group PTC, Osaka	p	2017	247	Mar-23
Japan	Narita Memorial PC, Toyohashi	p	2018	450	Dec-22*
Japan	Osaka Heavy Ion Therapy	C-ion	2018	2900	Dec-22*
Japan	Hokkaido Ohno, Sapporo	p	2018	450	Dec-22*
Japan	Takai Hospital, Tenri	p	2018	350	Dec-22*
Japan	Nagamori Memorial H., Kyoto	p	2019	955	Mar-23
Japan	East Japan HIC, Yamagata	C-ion	2021	50	Dec-22*
Japan	Shonan Kamakura, Kanagawa	p	2022	80	Dec-22*
Poland	Krakow (IFJ PAN)	p	2011	980	Dec-22*
Russia	Dubna (JINR, 1)	p	1967 (-1996)	124	1996
Russia	Moscow (ITEP)	p	1969	4368	Dec-22*
Russia	St. Petersburg	p	1975 (-2018)	1386	2018
Russia	Dubna (JINR, 2)	p	1999	1299	Dec-22*
Russia	St. Petersburg (MIBS)	p	2018	750	Dec-22*
Russia	MRRRC, Obninsk	p	2018	756	Dec-22
South Africa	Capetown (iThemba LABS)	p	1993 (-2017)	524	2017
South Korea	Ilsan, Seoul (KNCC)	p	2007	4800	Dec-22*
South Korea	Seoul (Samsung PTC)	p	2015	5076	Dec-22
Spain	Quironsalud PTC, Madrid	p	2019	408	Dec-22
Spain	CUN PTC, Madrid	p	2020	450	Dec-22*
Sweden	Uppsala (1)	p	1957 (-1976)	73	1976
Sweden	Uppsala (2)	p	1989 (-2014)	1431	2014
Sweden	Uppsala (The Skandion Clinic)	p	2015	1856	Dec-22
Switzerland	Villigen PSI (Piotron)	$\pi^-$	1980 (-1993)	503	1993
Switzerland	Villigen PSI (OPTIS 1)	p	1984 (-2010)	5458	2010
Switzerland	Villigen-PSI, incl OPTIS2	p	1996	4706	Dec-22
Thailand	Bangkok, HRH Maha Chakri S.	p	2021	346	Dec-22
Taiwan	Taipei (Chang Gung Memorial)	p	2015	4111	Dec-22
Taiwan	Chang Gung Kaoshiung	p	2018	1401	Dec-22
Taiwan	Taipei Medical University	p	2022	50	Dec-22*
Taiwan	Taiwan Veterans General Hosp.	C-ion	2022	10	Dec-22*
The Netherlands	Groningen (UMC PTC)	p	2018	1681	Dec-22
The Netherlands	Delft (Holland PTC)	p	2018	1068	Dec-22
The Netherlands	Maastricht (ZON PTC)	p	2019	520	Dec-22*
United Kingdom	Clatterbridge	p	1989	4300	Dec-22*
United Kingdom	Manchester (NHS)	p	2019	1000	Dec-22*
United Kingdom	London (NHS)	p	2021	250	Dec-22*
USA, CA.	Berkeley 184	p	1954 (-1957)	30	1957
USA, CA.	Berkeley	He	1957 (-1992)	2054	1992

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USA, NM.	Los Alamos	$\pi^-$	1974 (-1982)	230	1982
USA, CA.	Berkeley	ions	1975 (-1992)	433	1992
USA, MA.	Harvard (HCL)	p	1961 (-2002)	9116	2002
USA, CA.	Loma Linda (LLUMC)	p	1990	23000	Dec-22*
USA, IN.	Bloomington (MPRI, 1)	p	1993 (-1999)	34	1999
USA, CA.	UCSF - CNL	p	1994	2380	Dec-22*
USA, MA.	Boston (NPTC)	p	2001	12505	Dec-22
USA, IN.	Bloomington (IU Health PTC)	p	2004 (-2014)	2200	2014
USA, TX.	Houston (MD Anderson)	p	2006	11200	Dec-22*
USA, FL	Jacksonville (UFHPTI)	p	2006	10568	Dec-22
USA, OK.	Oklahoma City (PTC)	p	2009	4434	Dec-22
USA, PA.	Philadelphia (UPenn)	p	2010	6862	Dec-22
USA, IL.	Chicago (NW Medicine PC)	p	2010	6126	Dec-22
USA, VA.	Hampton (HUPTI)	p	2010	4800	Dec-22*
USA, NY.	New Jersey (ProCure PTC)	p	2012	6400	Dec-22*
USA, WA	Seattle (Fred Hutch CC, PTC)	p	2013	4405	Dec-22
USA, MO.	St. Louis (S. Lee King PTC)	p	2013	1350	Dec-22*
USA, TN.	Knoxville(Thompson Proton Center)	p	2014	4271	Dec-22
USA, CA.	San Diego (California PCTC)	p	2014	5500	Dec-22*
USA, LA.	Shreveport (Willis Knighton)	p	2014	1091	Dec-22
USA, FL.	Jacksonville (Ackerman CC)	p	2015	2400	Dec-22*
USA, MN.	Rochester (Mayo PBTC)	p	2015	7152	Dec-22
USA, NJ.	Brunswick (Laurie PC)	p	2015	900	Dec-22*
USA, TX.	Irving (Texas Center for PT)	p	2015	3300	Dec-22*
USA, TN.	Memphis (St.Jude Red Frog)	p	2015	1800	Dec-22*
USA, AZ.	Phoenix (Mayo PBTC)	p	2016	3500	Dec-22*
USA, MD.	Baltimore (Maryland PTC)	p	2016	3800	Dec-22*
USA, OH.	Cincinnati (Children's PTC)	p	2016	2350	Dec-22*
USA, FL.	Orlando (Orlando Health PTC)	p	2016	1200	Dec-22*
USA, OH.	Cleveland (UH Sideman PTC)	p	2016	750	Dec-22*
USA, MI.	Detroit (Beaumont Health PTC)	p	2017	1000	Dec-22*
USA, FL.	Miami (Baptist Hospitals PTC)	p	2017	1846	Dec-22
USA, GA.	Atlanta (Emory PTC)	p	2018	2718	Dec-22
USA, D.C.	Washington (MedStar PTC)	p	2018	800	Dec-22*
USA, TN.	Nashville (Provision Care PTC)	p	2018	950	Dec-22*
USA, OK.	Oklahoma (Stephenson CC)	p	2019	450	Dec-22*
USA, MI.	Flint (Mc Laren PTC)	p	2019	700	Dec-22*
USA, NY.	New York (New York PTC)	p	2019	2500	Dec-22*
USA, DC.	Washington (Johns HopkinsPC)	p	2019	993	Dec-22
USA, FL.	Delray Beach (SFPTI)	p	2019	750	Dec-22*
USA, VA.	Inova Schar Cancer I, Fairfax	p	2020	300	Dec-22*
USA, AL.	Univ. of Alabama PTC, Birmingham	p	2020	650	Dec-22*
USA, FL.	UM Sylvester Dvoskin, Miami	p	2020	250	Dec-22*
USA, MA.	Gordon Browne, Boston	p	2020	350	Dec-22*
USA, UT.	Huntsman, Cancer Institute	p	2021	200	Dec-22*

<b>Summary, 1954-2022</b>	<b>PARTICLES</b>	<b>PATIENTS TOTAL</b>	<b>DATES OF TOTAL</b>
<b>Total of all facilities (in and out of operation):</b>	<b>He</b>	<b>2054</b>	1957-1992
	<b>Pions</b>	<b>1100</b>	1974-1994
	<b>C-ions</b>	<b>50884</b>	1994-2022
	<b>Other ions</b>	<b>433</b>	1975-1992
	<b>Protons</b>	<b>313605</b>	1954-2022
	<b>Grand Total</b>	<b>368076</b>	1954-2022

\*= estimated or not yet confirmed  
<sup>(1)</sup>= protons as boost  
n.a.= no data available