

Patient and Transplant Numbers

N.Centres 696	Participating countries 50		
	Allogeneic	Autologous	Total
Number of patients with 1st HCT	19368	24534	43902
Re/Additional Transplants	1117	2712	3829
Total HCT	20485	27246	47731
Myeloablative HCT	55.60%		

Main indication 1 st HCT			
Myeloid malignancies	11748	192	11940
Lymphoid malignancies	4850	22205	27055
Solid tumors	38	1608	1646
Non-malignant disorders	2558	517	3075
Other	174	12	186

Myeloid malignancies			
AML 1 st CR	4522	158	4680
not 1 st CR	1849	19	1868
AML therapy related or MDS related changes	1431	2	1433
CML 1 st cP	180	5	185
not 1 st cP	186	0	186
MDS or MDS/MPN overlap, MPN	3580	8	3588

Lymphoid malignancies			
ALL 1 st CR	1930	36	1966
non1 st CR	1159	3	1162
CLL	174	5	179
Plasma cell disorders	188	14271	14459
Hodgkin lymphoma	366	2281	2647
Non-Hodgkin lymphoma	1033	5609	6642

Solid tumors			
Neuroblastoma	28	571	599
Soft tissue sarcoma/Ewing	4	222	226
Germ cell tumors	1	481	482
Other solid tumors	5	334	339

Non malignant disorders			
Bone marrow failure - SAA	742	2	744
Bone marrow failure - other	268	0	268
Thalassemia	311	4	315
Sickle cell disease	393	3	396
Inborn errors of immunity	624	2	626
Inborn errors of metabolism	194	2	196
Auto immune diseases	26	504	530

Pediatric HCT													
Family									Unrelated			Autologous	
HLA-id/twin			Haplo ≥ 2MM		Other family								
BM	PBPC	CB	BM	PBPC	BM	PBPC	CB	BM	PBPC	CB	BM	PBPC	CB
862	392	17	351	565	83	66	0	729	917	129	12	1330	2
2336									1775			1344	

- Pediatric HCT: N= 5 455: 4 111 (+0.1%) allogeneic (-0.5%), 1 344 auto (+1.7%). Allogeneic cell source: BM: 2 025 (36% unrelated), PBSC: 1 929 (47.7% unrelated), CB: 146 (88.4% unrelated).

- IST for bone marrow failure: N: 736: 605 Aplastic anemia, 88 Other bone marrow failures.
- Un-manipulated DLI: N= 2 875; graft enhancement/failure: 686; residual disease: 432; relapse: 1 299; per protocol: 458.
- Non HCT cellular therapies using manipulated or selected cells: N= 6 042 (+39.6% and 1 713 therapies) reported by 333 centers in 35 countries.
- CAR-T: 4 888 (+52.5%), MSC: 434, selected/exp T cells: 184, other CT: 352, NK: 66, genetically mod. T cells: 30, TREGS: 39, genetically mod. CD34+ cells: 20, dendritic: 16, exp.CD34+ cells: 13.

New Developments in Data Reporting

- For the first time centres used an **online system** to report their data.
- New questions about the immunosuppressive treatment (IST) for bone marrow failure were introduced.

Main trends observed in the numbers of HCT reported in 2023

- Transplant activity increased by 3.4%, (7.8% allo and 0.4% auto).
- Allogeneic HCT has fully recovered post-pandemic, surpassing 2019 levels, while autologous HCT remains lower.
- Allogeneic HCT activity remains primarily focused on myeloid malignancies, including AML but also MDS and MPN.
- Autologous HCT for PCD is increasing, whereas lymphoma cases decline, likely due to CAR-T therapy.
- An increase in HCT was reported across all donor types except for cord blood, where a continued decline was observed (-6.2%).
- Pediatric transplant counts showed a slight increase of 0.1%.

Fig 1. Number of patients receiving the first allogeneic or autologous HCT from 1990 to 2023

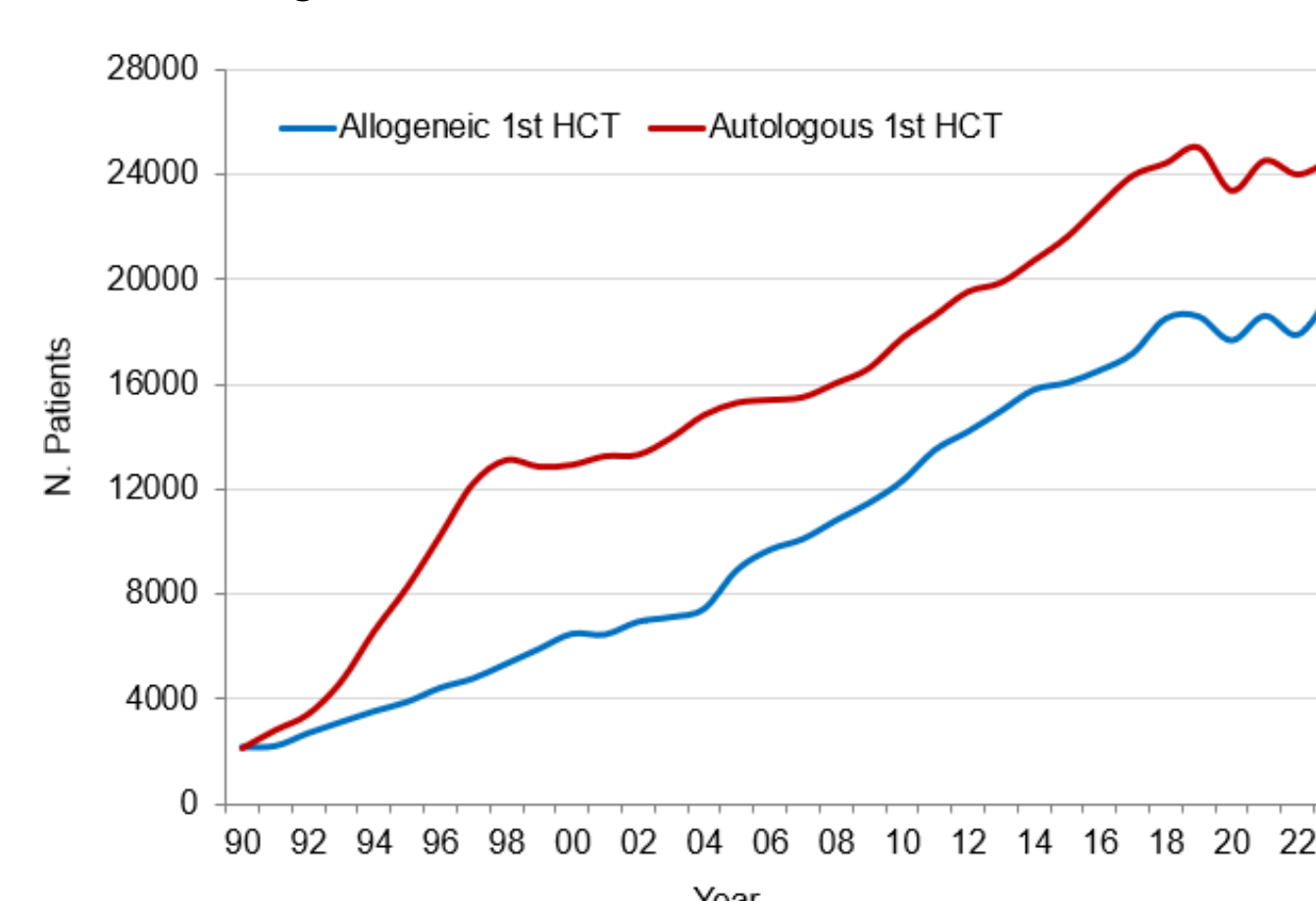


Fig 2. Change in type of donor for first allogeneic HCT from 1990 to 2023

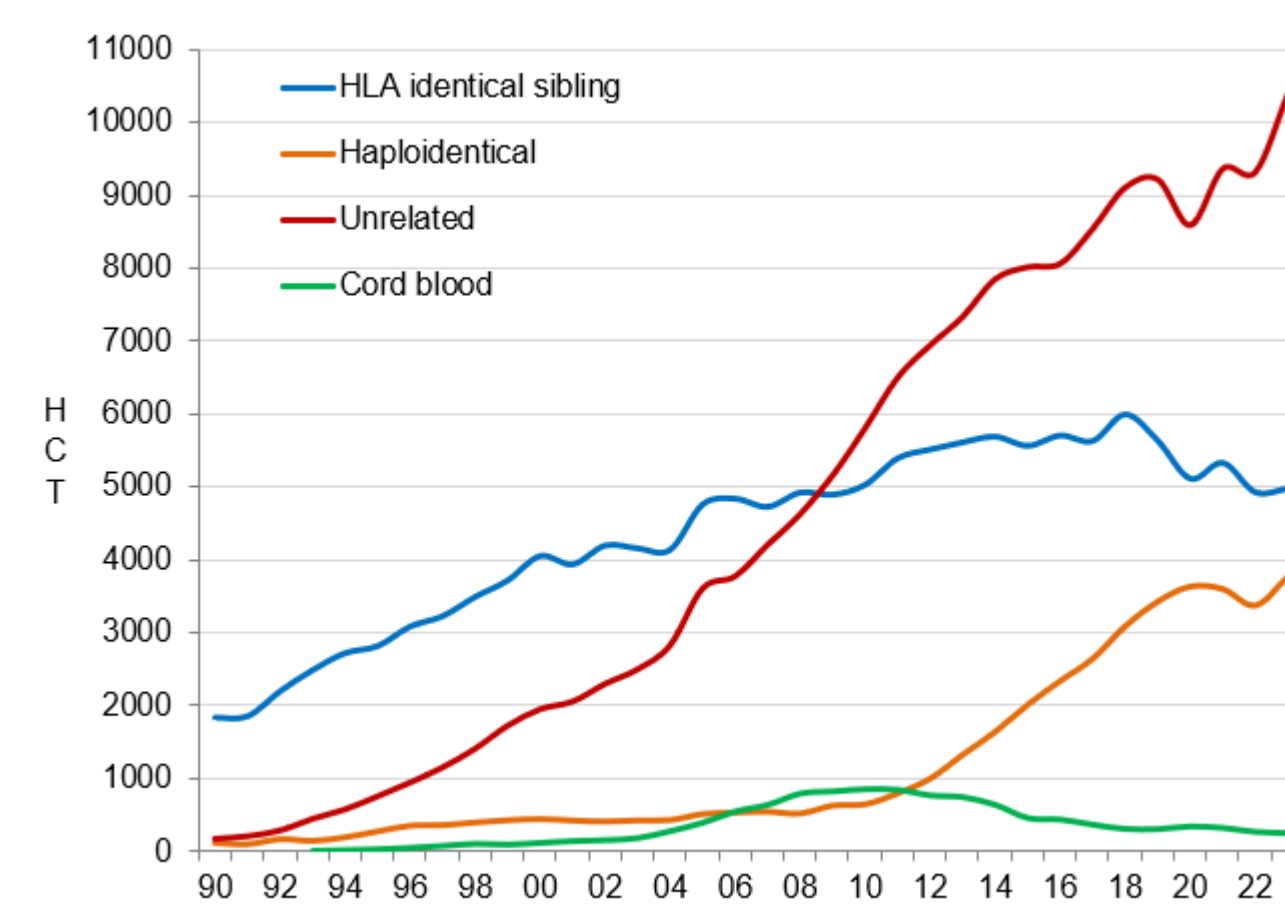
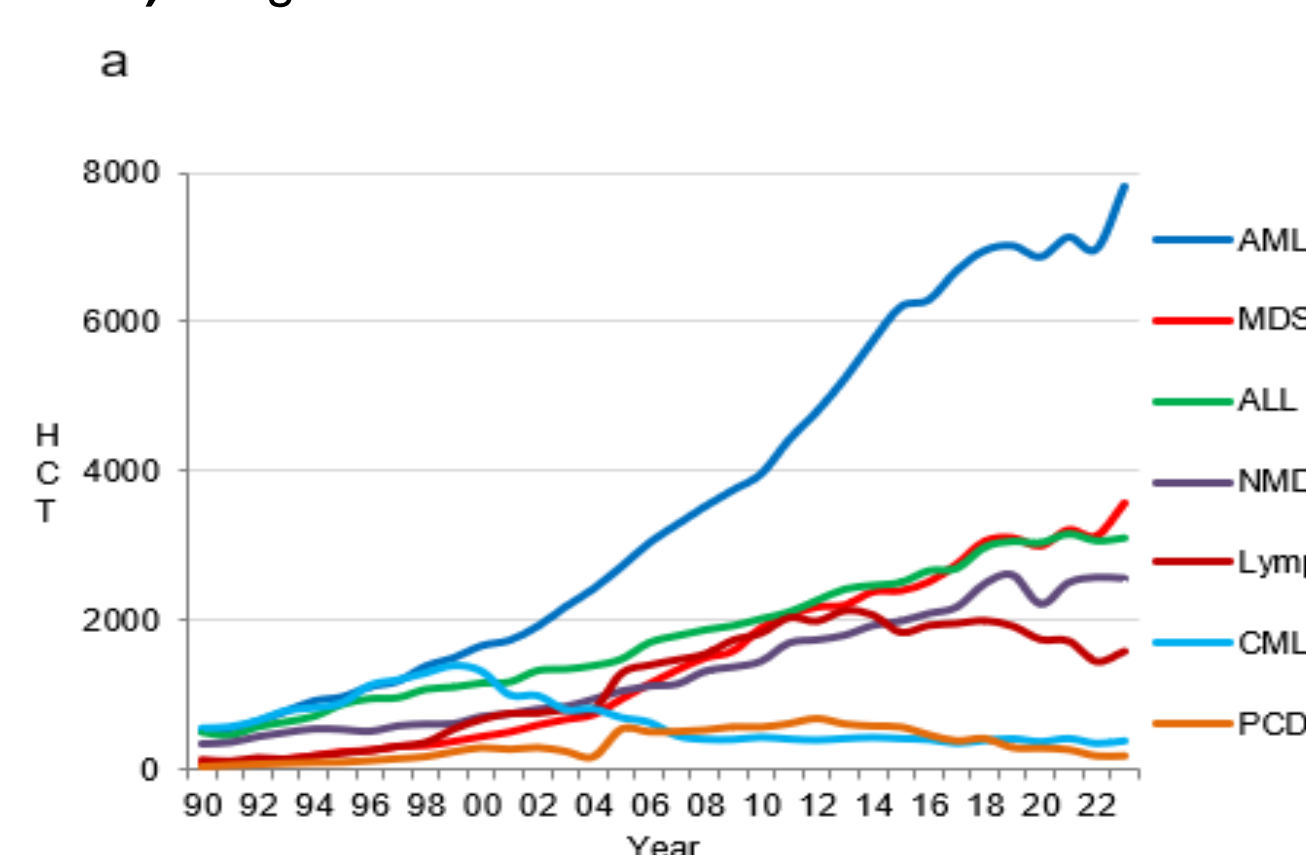
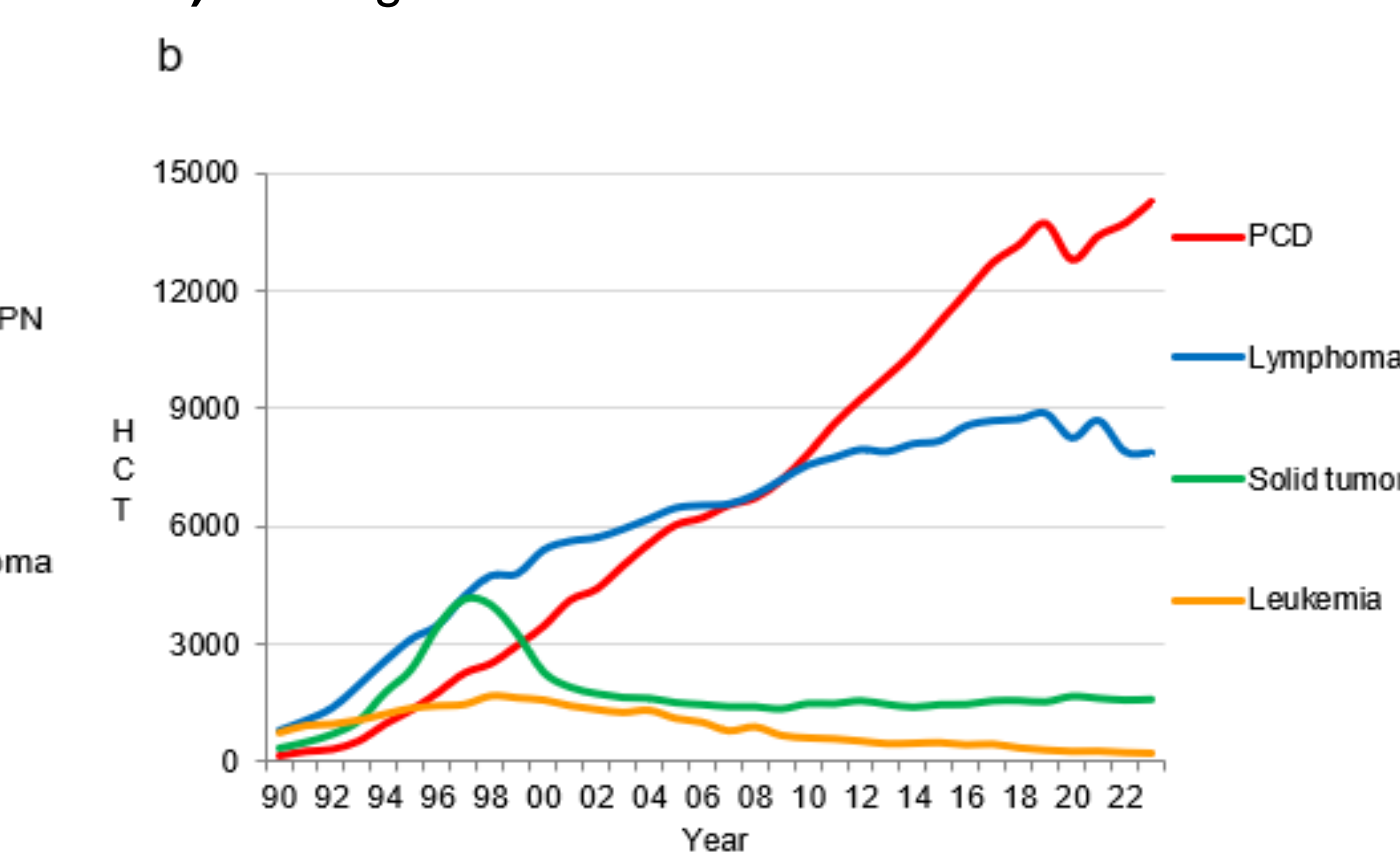


Fig 3. Change in main disease indication for allogeneic and autologous HCT 1990 to 2023

a) Allogeneic HCT



b) Autologous HCT



CAR-T Cellular therapies 2019 to 2023

- CAR-T continues to rise, with a significant increase of 52.5% since 2022.
- The main indication for CAR-T cellular therapy since 2019 was B-NHL, increasing from 826 in 2019 to 3462 in 2023.
- The use of cellular therapy continues to rise, with over 13,000 CAR-T patients in Europe by 2023 (258 centers in 30 countries).
- Treatment for myeloma is expanding but remains behind NHL, with first reports of use in AID.
- Continuous impressive increase in the use of CAR-T especially for NHL and PCD in autologous HCT.
- Eighty-five patients receiving allogeneic CAR-T cell therapy were reported by 19 centers in 12 countries.
- The median number of patients receiving CAR-T cell therapy reported by country was 47 (range 1–1160) and the median CAR-T cell rate per 10 mil population was 44.7.

Fig 4. Increase in the number of patients receiving CAR-T therapy by main indication from 2019 to 2023

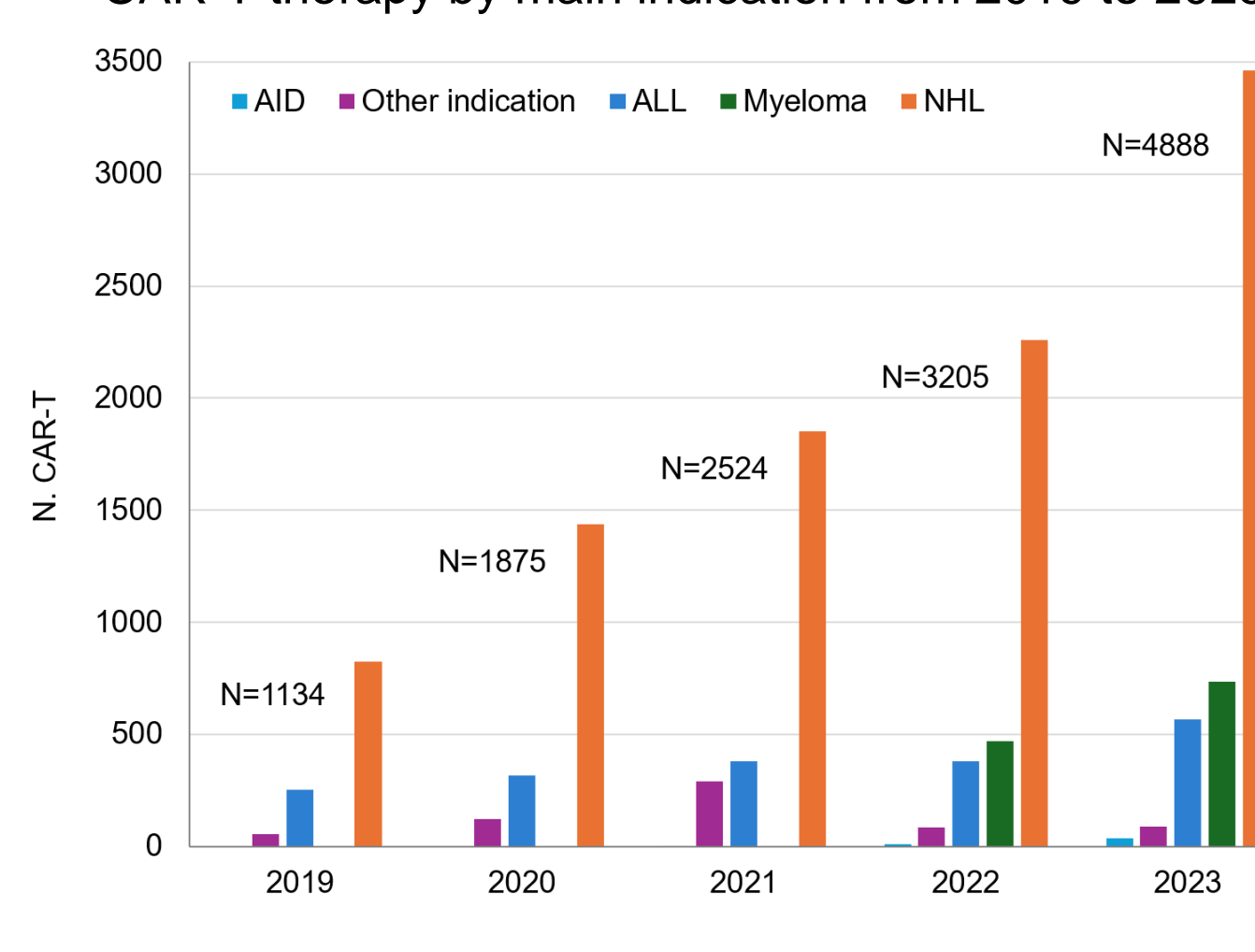
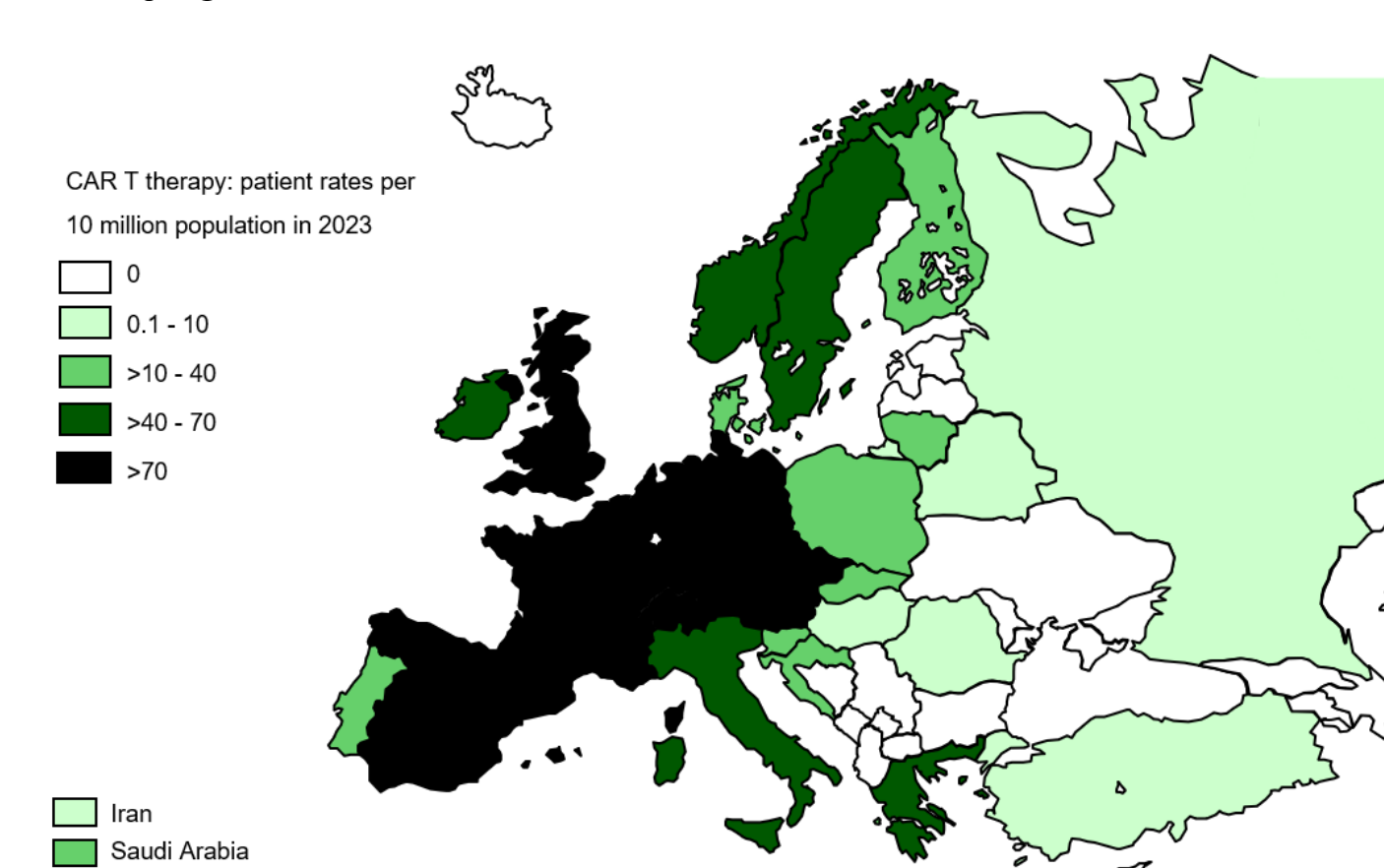


Fig 5. CAR-T therapy rates per 10 million population in 2023



* 2019-2021: no distinction was made between other indication and myeloma