



Attualità nella gestione della terapia piastrinica

Aggiornamento dei trend nazionale ed internazionali nella produzione ed utilizzo del prodotto piastrinico

Sergio D'Antico

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Il sottoscritto, in qualità di Relatore
dichiara che

nell'esercizio della Sua funzione e per l'evento in oggetto, NON È in alcun modo portatore di interessi commerciali propri o di terzi; e che gli eventuali rapporti avuti negli ultimi due anni con soggetti portatori di interessi commerciali non sono tali da permettere a tali soggetti di influenzare le mie funzioni al fine di trarne vantaggio.

Sergio D'Antico

Introduzione

- trend di produzione e trasfusione in Italia
- trend di produzione e trasfusione in EU
- trend di produzione e trasfusione worldwide
- driver della domanda
- driver del mercato

Produzione

Table 5. Blood component production (2022-2023)

Blood component	2022	2023	Δ%
Red Blood Cells	2,485,068	2,506,415	0.86
Red Blood Cells from whole blood	2,473,806	2,498,237	0.99
Red Blood Cells by apheresis	11,262	8,178	-27.38
Platelets from single donors	13,673	7,058	-48.38
Platelet pools	228,881	236,348	3.26
Platelets by apheresis	55,912	57,728	3.25

aumento pool e aferesi >3%
pool / aferesi 4:1



Utilizzo

Table 6. Transfused units of blood components (2022-2023)

Blood component	2022	2023	Δ%
Red Blood Cells	2,393,798	2,392,289	-0.06
Red Blood Cells from whole blood	2,383,058	2,384,659	-0.07
Red Blood Cells by apheresis	10,740	7,630	-28.96
Platelets from single donors	934	113	-87.90
Platelets Pools	193,041	201,316	4.29
Platelets by apheresis	47,305	47,292	-0.13

aumento pool >4%

Table 7. Blood components discarded for reasons linked to health, technical issues, quality control and expiry dates (2022-2023)

Blood component	2022	2023	Δ%
Red Blood Cells	68,189	91,235	33.82
Platelets from single donors	10,934	4,948	-54.75
Platelet Pools	32,684	32,720	0.11
Platelets by apheresis	5,932	7,159	20.68

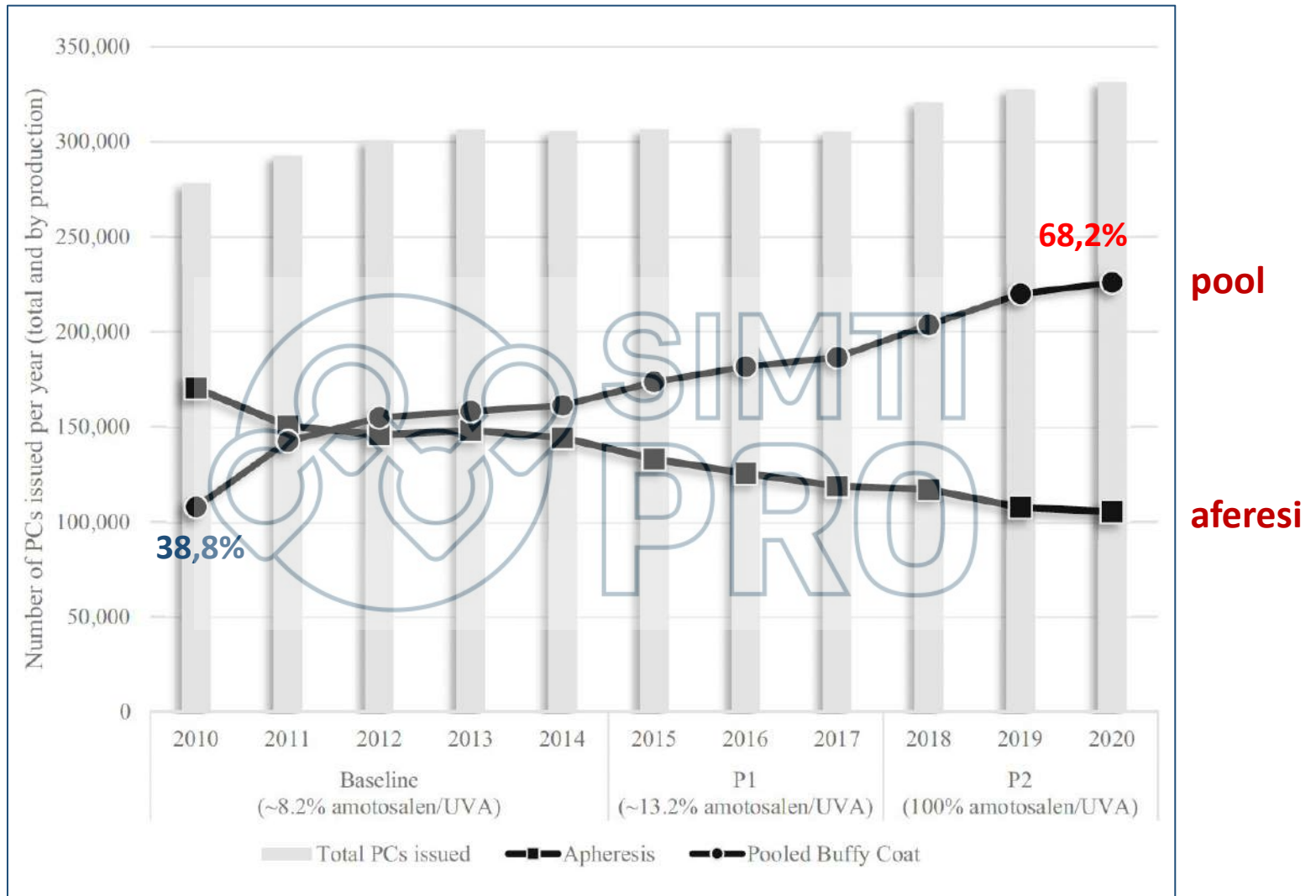
Longitudinal analysis of annual national hemovigilance data to assess pathogen reduced platelet transfusion trends during conversion to routine universal clinical use and 7-day storage

John P. Pitman¹ | Jean-Marc Payrat² | Min-Sun Park³ | Kathy Liu³ |
Laurence Corash¹ | Richard J. Benjamin¹

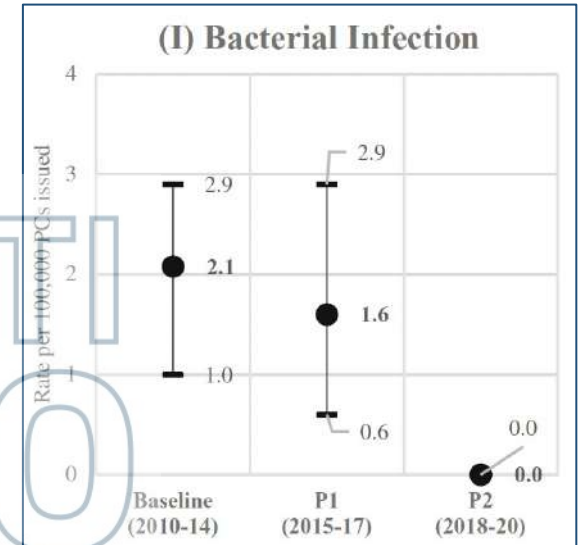
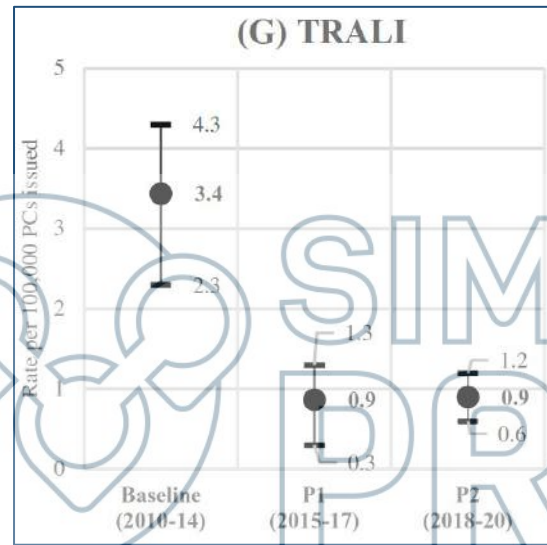
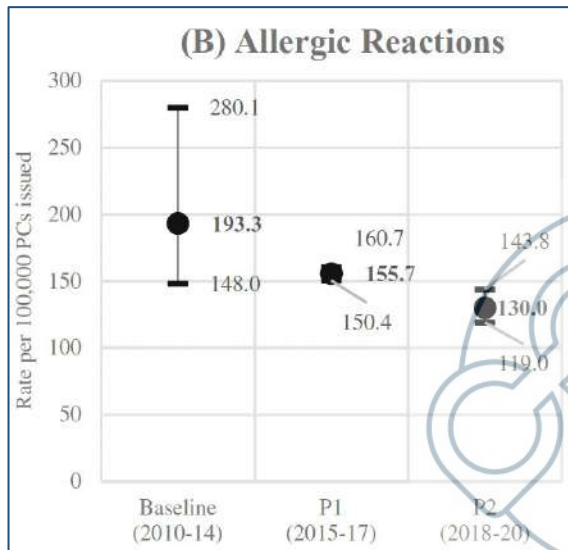
FRANCIA

- dal 2010 al 2020: **+19,1%** uso di concentrati piastrinici
- dal 2018 riduzione patogeni nel 100%
- shelf life da 5 a **7** gg
- dose standard da 4,0 a **3,2** x10¹¹

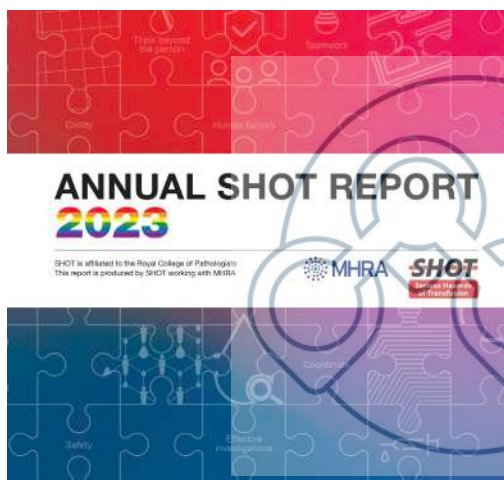
Francia 2010 - 2020



Francia 2010 - 2020



Reazioni severe ridotte del **34,8%**



Platelets

2023	291.554
2022	290.207
2021	287.057
2020	268.771
2019	297.088

+0,5%



SUMMARY OF THE 2023 ANNUAL REPORTING OF SERIOUS ADVERSE REACTIONS AND EVENTS FOR BLOOD AND BLOOD COMPONENTS

DATA COLLECTED FROM 01/01/2022 to 31/12/2022
SUBMITTED TO THE EUROPEAN COMMISSION IN 2023

Parameter	2021 (Data 2020)	2022 (Data 2021)	2023 (Data 2022)
Reporting Countries	30 27 EU member states plus Iceland, Liechtenstein and Norway	30 26 EU member states plus Iceland, Liechtenstein, Norway and the United Kingdom (Northern Ireland)	30 26 EU member states plus Iceland, Liechtenstein, Norway and the United Kingdom (Northern Ireland)
Number of establishments	3 617	3 307	3 387
Units issued	22 104 136 (30 countries)	20 633 199 (30 countries)	21 393 810 units (30 countries)
Units transfused	18 881 223 (24 countries)	17 808 869 (26 countries)	17 197 062 units (24 countries)
Transfusion recipients	3 167 732 (19 countries)	2 912 307 (20 countries)	3 094 799 recipients (22 countries)

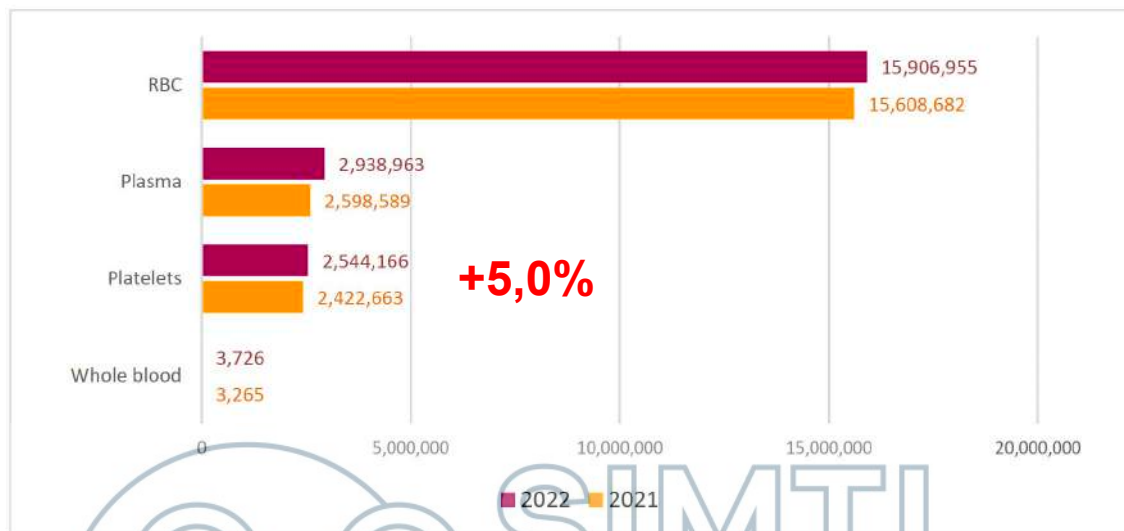


Figure 2. Units issued per blood component type; 2021 – 2022 comparative data

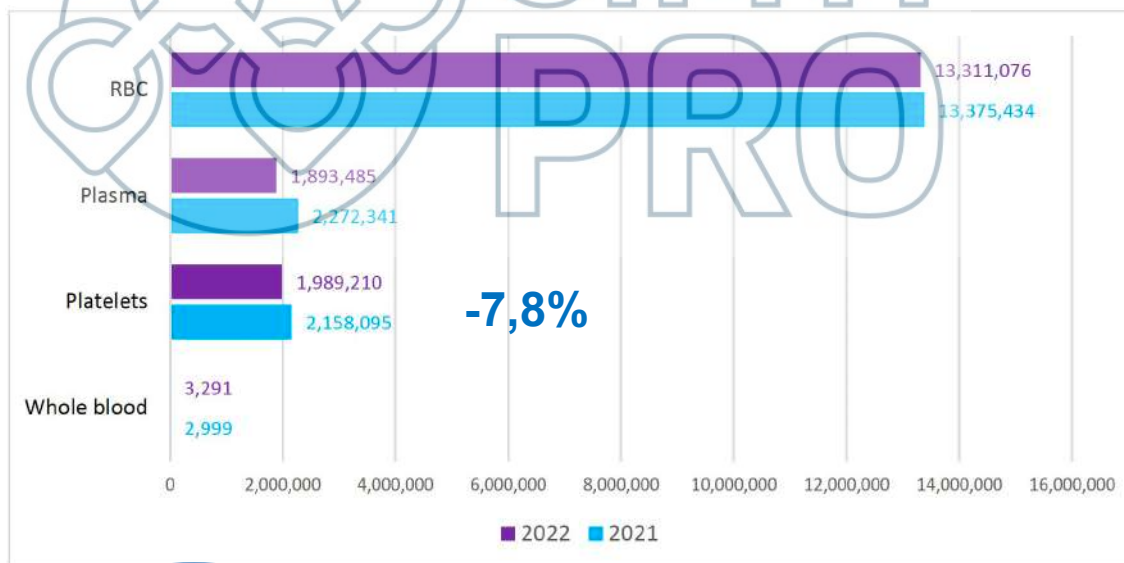


Figure 3. Units transfused per blood component; 2021 – 2022 comparative data

Country	RBC		Platelets		Plasma	WB	
	2022	2021	2022	2021		2022	2021
Austria (AT)	34 933	30 923	4 383	3 841	14%	346	
Belgium (BE)	33 517	34 949	5 389	5 668	-5%	3 739	
Bulgaria (BG)	16 718	14 886	3 976	3 576	11%	10 047	1.0
Croatia (HR)	45 207	43 451	7 405	7 020	5%	10 283	
Cyprus (CY)	74 556	72 168	6 866	6 615	4%	15 022	1.1
Czechia (CZ)	40 210	40 109	4 229	4 474	-5%	9 355	170.7
Denmark (DK)	31 395	31 226	5 781	6 067	-5%	6 409	
Estonia (EE)	33 285	33 495	5 116	5 282	-3%	8 094	1.5
France (FR)	32 341	33 422	4 985	4 945	1%	3 272	3.2
Germany (DE)	38 521	42 279	5 811	7 165	-19%	10 489	
Greece (EL)	32,078		9,532				
Iceland (IS)	27,729	27,091	7,375	5,564	33%	3,650	
Ireland (IE)	24,060	24,328	4,445	4,472	-1%		3.2
Italy (IT)	40,552	40,747	4,087	3,999	2%	3,970	0.1
Liechtenstein (LI)	5 037	5 505	178	77		77	
Luxembourg (LU)	26 993	28 789	1 407	4 881	-71%	3 803	
Malta (MT)	-	26 985	-	3 893		3 790	
Netherlands (NL)	21 650	22 225	2 848	2 957	-4%	42	
Norway (NO)	27 278	27 450	4 378	4 406	-1%	7 538	102.6
Portugal (PT)	27 627	28 139	5 091	4 939	3%	1 109	1.4
Romania (RO)	20 252	18 258	6 437	5 579	15%	10 270	62.8
Slovakia (SK)	43 341	37 606	3 983	4 425	-10%	20 469	
Spain (ES)	31 484	31 962	4 774	4 853	-2%	2 927	0.2
Sweden (SE)	33 999	35 013	4 503	4 509	0%	3 631	2.4
UK (NI)	18 196	18 747	3 443	3 197	8%	1 767	4.3

Table 2. Incidence (number of units transfused per million population by blood component and by country), 2021 – 2022 comparative data

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SUPPLEMENT ARTICLE

Blood Donors and Blood Collection

TRANSFUSION

Have we reached a new baseline for blood collection and transfusion in the United States? National Blood Collection and Utilization Survey, 2023

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NBCUS 2023



U.S. Department of Health and Human Services

Enhancing the health and well-being of all Americans



	Blood centers	Hospitals	Combined 2023 totals	95% CI	2021 totals ^a	% change 2023–2021
Distributed						
Apheresis platelets	2,458	99	2,557	(2,429–2,685)	2,422	5.6%
Whole blood-derived PLTs ^b	54	7	61	(24–98)	107	–43.1%
Total platelets	2,511	107	2,618	(2,483–2,753)	2,528	3.6%
Pathogen-reduced apheresis platelets	1,354	56	1,410	(1,337–1,483)	916	53.9%
Transfused						
Apheresis platelets		2,160		(1,988–2,332)	2,091	3.3%
Whole blood-derived PLTs ^b		55		(28–83)	80	–30.6%
Total platelets (includes directed units)		2,220		(2,040–2,400)	2,175	2.1%
Pathogen-reduced apheresis platelets		1,258		(1,099–1,416)	843	49.2%

TABLE 5 Platelet units transfused by location in 2023 and 2021 (expressed in thousands) as reported to the National Blood Collection and Utilization Survey.

	2023 (95% CI)	2021	% diff	Matched median % diff
All Surgery (including transplant)	318 (242–394, <i>n</i> = 703)	281	11.8%	–9.6% (<i>n</i> = 215)
Emergency Department	107 (93–121, <i>n</i> = 717)	105	1.3%	6.5% (<i>n</i> = 220)
Inpatient Medicine (including hematology/oncology)	800 (659–942, <i>n</i> = 707)	815	–1.8%	–0.7% (<i>n</i> = 236)
Obstetrics/Gynecology	16 (10–22, <i>n</i> = 712)	14	12.2%	–3.7% (<i>n</i> = 120)
Pediatrics	107 (59–154, <i>n</i> = 713)	92	13.5%	–4.5% (<i>n</i> = 41)
Neonates	38 (24–51, <i>n</i> = 728)	40	–5.4%	0.0% (<i>n</i> = 73)
Critical Care	400 (331–468, <i>n</i> = 674)	398	0.5%	7.5% (<i>n</i> = 200)
Outpatient and non-acute inpatient settings ^a	380 (292–468, <i>n</i> = 697)	322	15.4%	0.0% (<i>n</i> = 171)

^aIncludes outpatient dialysis, rehabilitation, long term care.

NBCUS 2023



ARTICLE OPEN



The 2023 EBMT report on hematopoietic cell transplantation and cellular therapies. Increased use of allogeneic HCT for myeloid malignancies and of CAR-T at the expense of autologous HCT

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Bone Marrow Transplantation (2025) 60:519–528;



2023 (696 EU centers)

- 47731 HCT
- 43902 pts

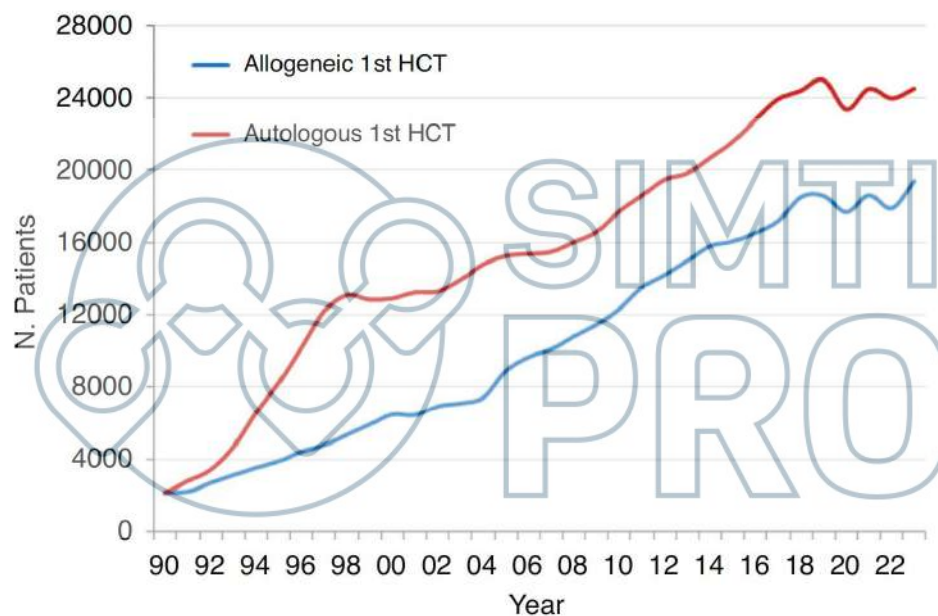


Fig. 1 Number of patients receiving the first allogeneic or autologous HCT from 1990 to 2023.

Bone Marrow Transplantation (2025) 60:519–528;

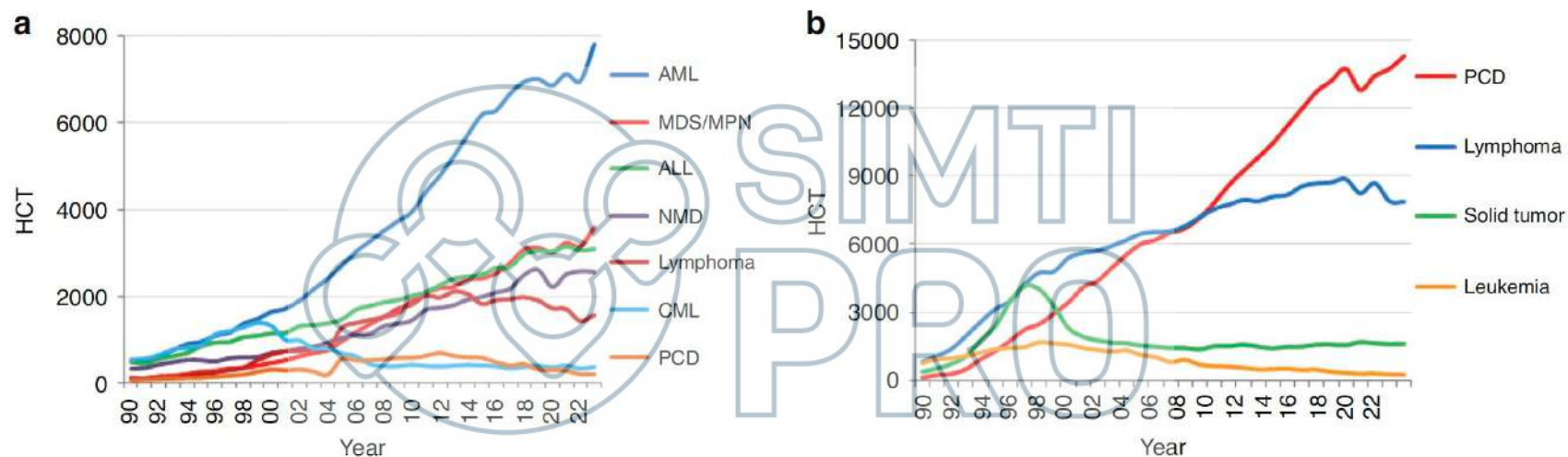
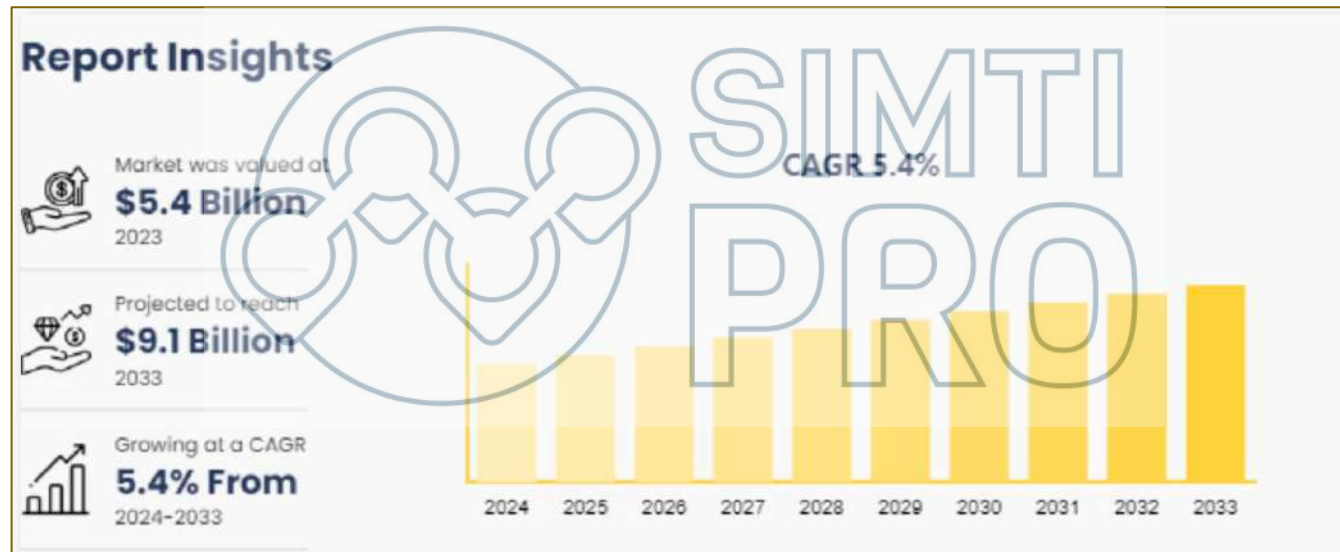


Fig. 2 Change in main disease indication for allogeneic and autologous HCT 1990 to 2023. a Allogeneic HCT. **b** Autologous HCT.

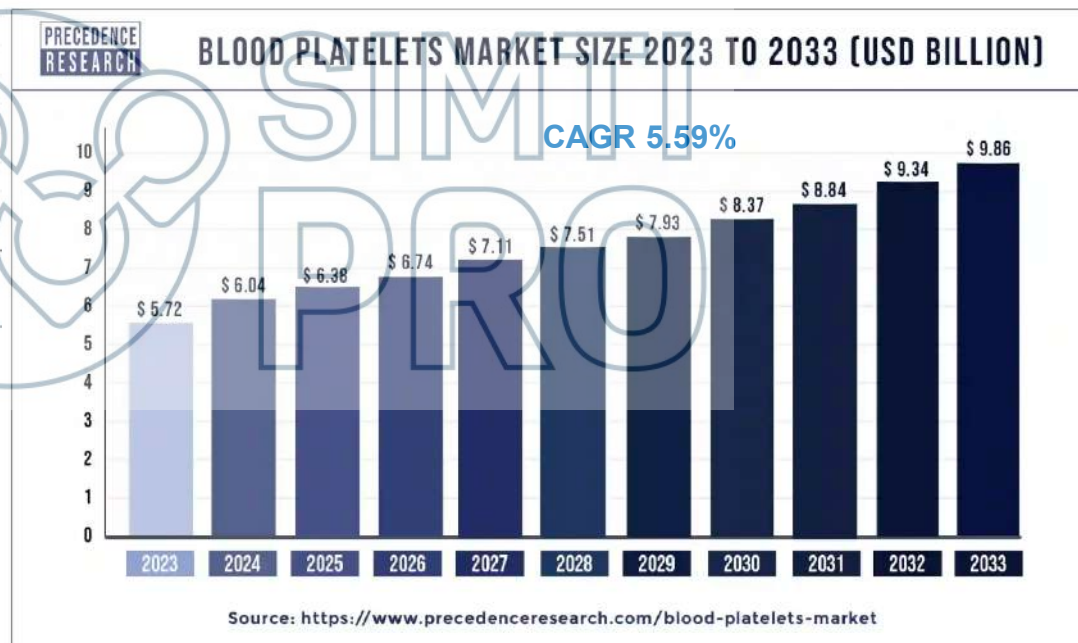
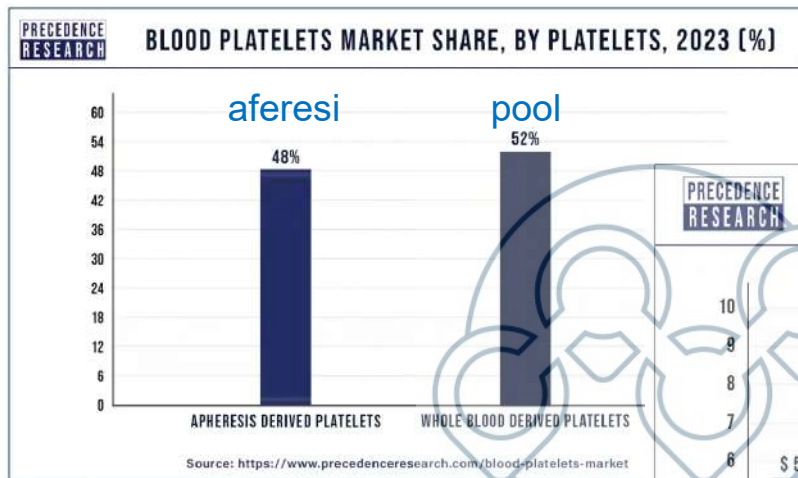
Bone Marrow Transplantation (2025) 60:519–528;

Blood Platelets Market Research, 2033



CAGR - compound annual growth rate

Blood Platelets Market Size, Share, and Trends 2025 to 2034



CAGR - compound annual growth rate

Spunti

- prospettico incremento della domanda
- invecchiamento della popolazione e delle malattie croniche (neoplasie, m. oncoematologiche...)
- aumento della complessità delle tecniche chirurgiche
- aumentato supporto nella traumatologia
- aumento richiesta di PRP (ortopedia, m. sport, vulnologia, ch. orale, anti-age...)

Spunti

- evoluzione tecnologica nella raccolta e processazione
- sistemi di raccolta automatica e time-sparing
- riduzione dei patogeni: minori rischi di TTI
- sviluppo incubatori e sol. conservanti
- allungamento della shelf-life (8-10 gg)

