

44°

CONVEGNO NAZIONALE  
di Studi di Medicina Trasfusionale

Rimini | Palacongressi, 3-5 maggio 2022



# Il Registro IBMDR, gli iscritti, le donazioni: luci e ombre

*Nicoletta Sacchi*

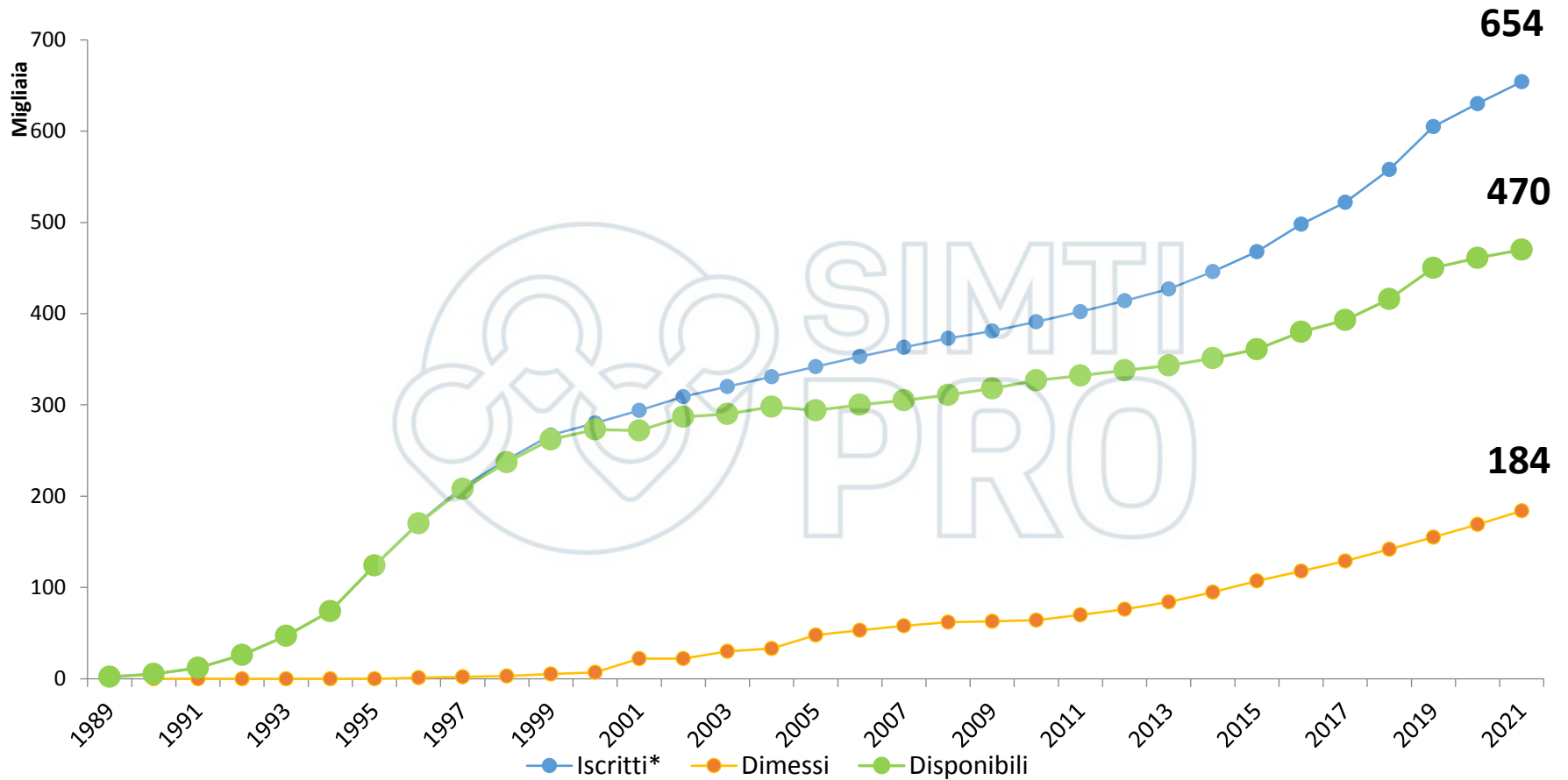
*IBMDR – E.O. Galliera*

La sottoscritta, 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 sue funzioni al fine di trarne vantaggio.*



# Luci e ombre: i donatori



# I donatori: l'inventario Italiano

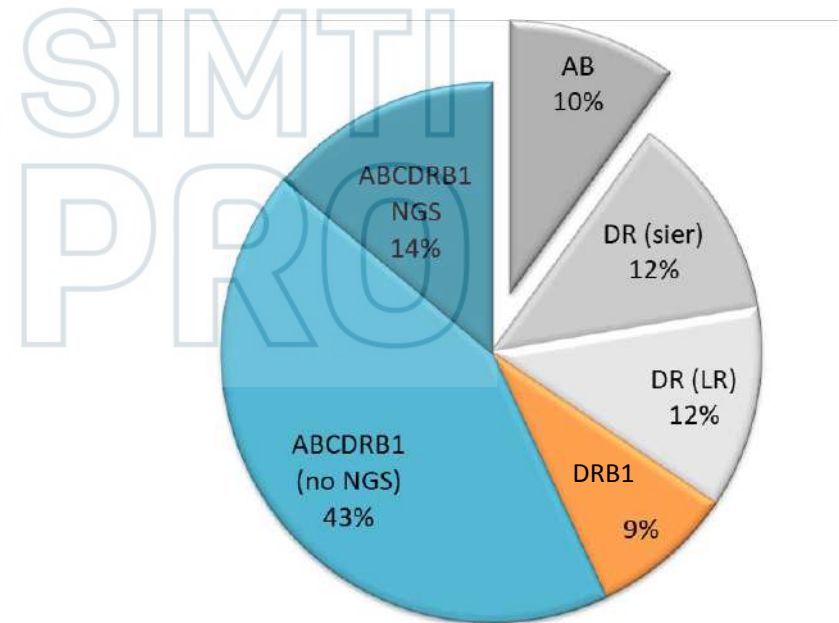
Country	Organisation	ABDR% Typed	Totale
US	NMDP	96.5	9.026.384
DE	DKMS	99.2	7.274.851
BR	REDOME	100	5.004.566
DE	ZKRD	87.6	2.480.677
PL	Fundacja DKMS	100	1.797.046
IL	Ezer Mizion	93.5	1.116.890
CN	Chinese Marrow Donor Program	100	993.145
GB	DKMS United Kingdom	100	909.666
GB	Anthony Nolan	97.3	875.790
JP	JMDP -	100	535.878
IT	Italian Bone Marrow Donor Registry	90.1	472.582
IN	DATRI	99.8	460.084
ES	(REDMO)	95.1	457.319
CA	Canadian Blood Services Stem Cell Registry	97.6	441.483
US	Gift of Life Marrow Registry	97.2	400.625
PT	CEDACE/Portuguese BMD Registry	99.6	398.005
GB	NHS Blood and Transplant - BBMR	97.8	382.506
NL	Matchis Foundation	99.8	379.081

**11° Registro nel mondo  
per numero donatori**

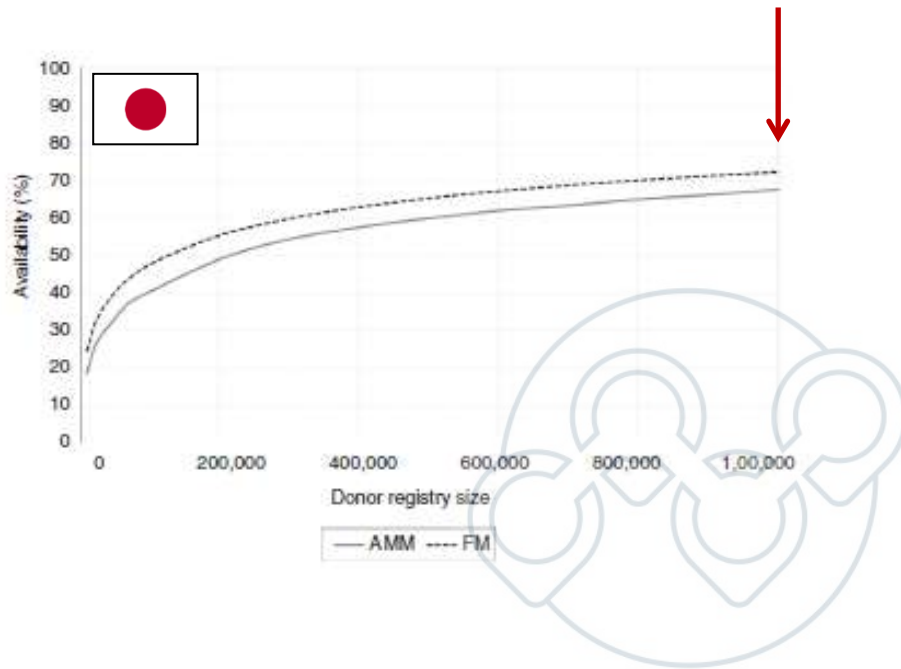
# I donatori: l'inventario Italiano

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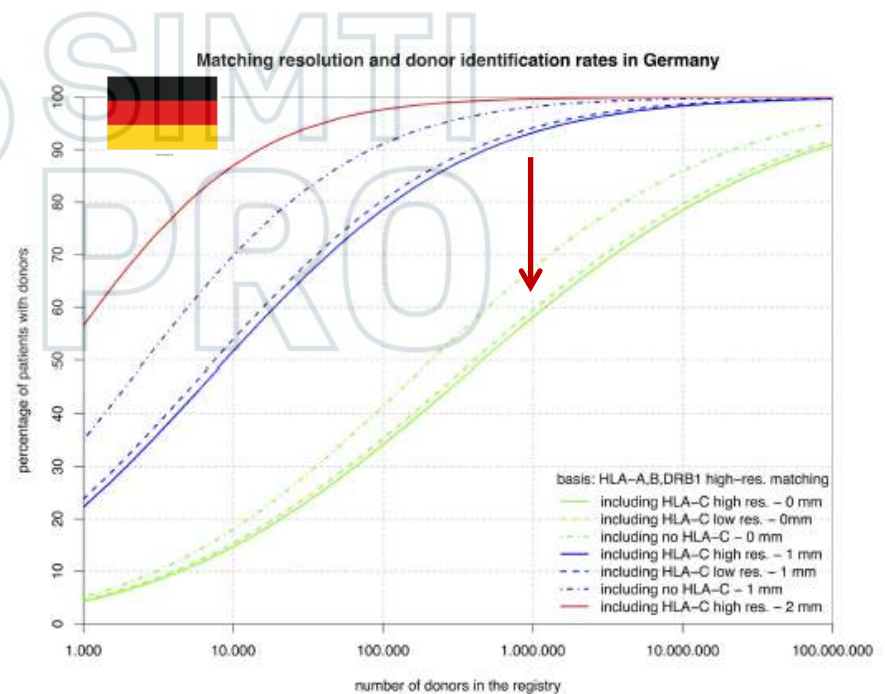
## 2° Registro pubblico in Europa



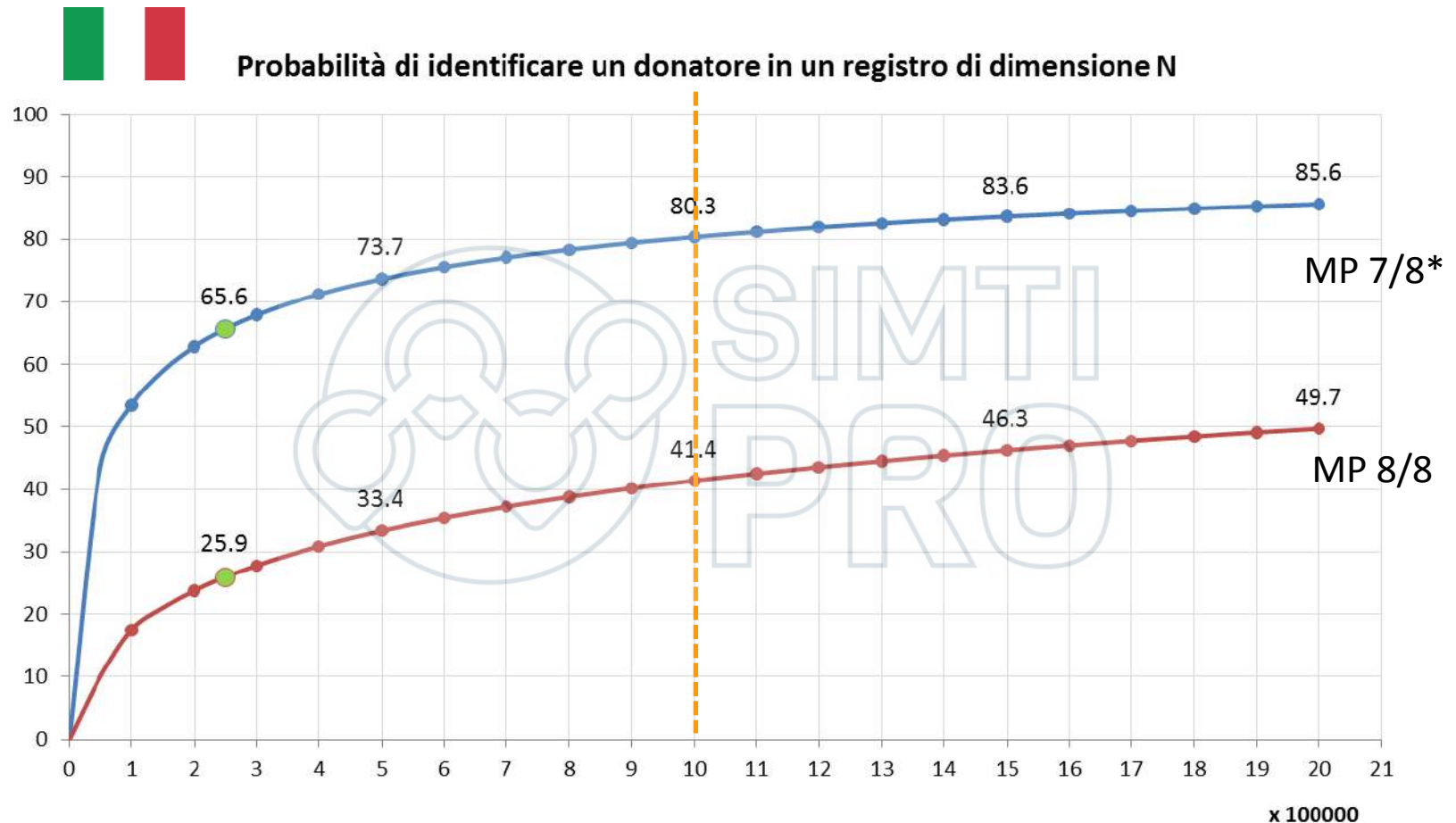
# Quanti donatori servono?



## Matching Probability



# Quanti donatori servono?

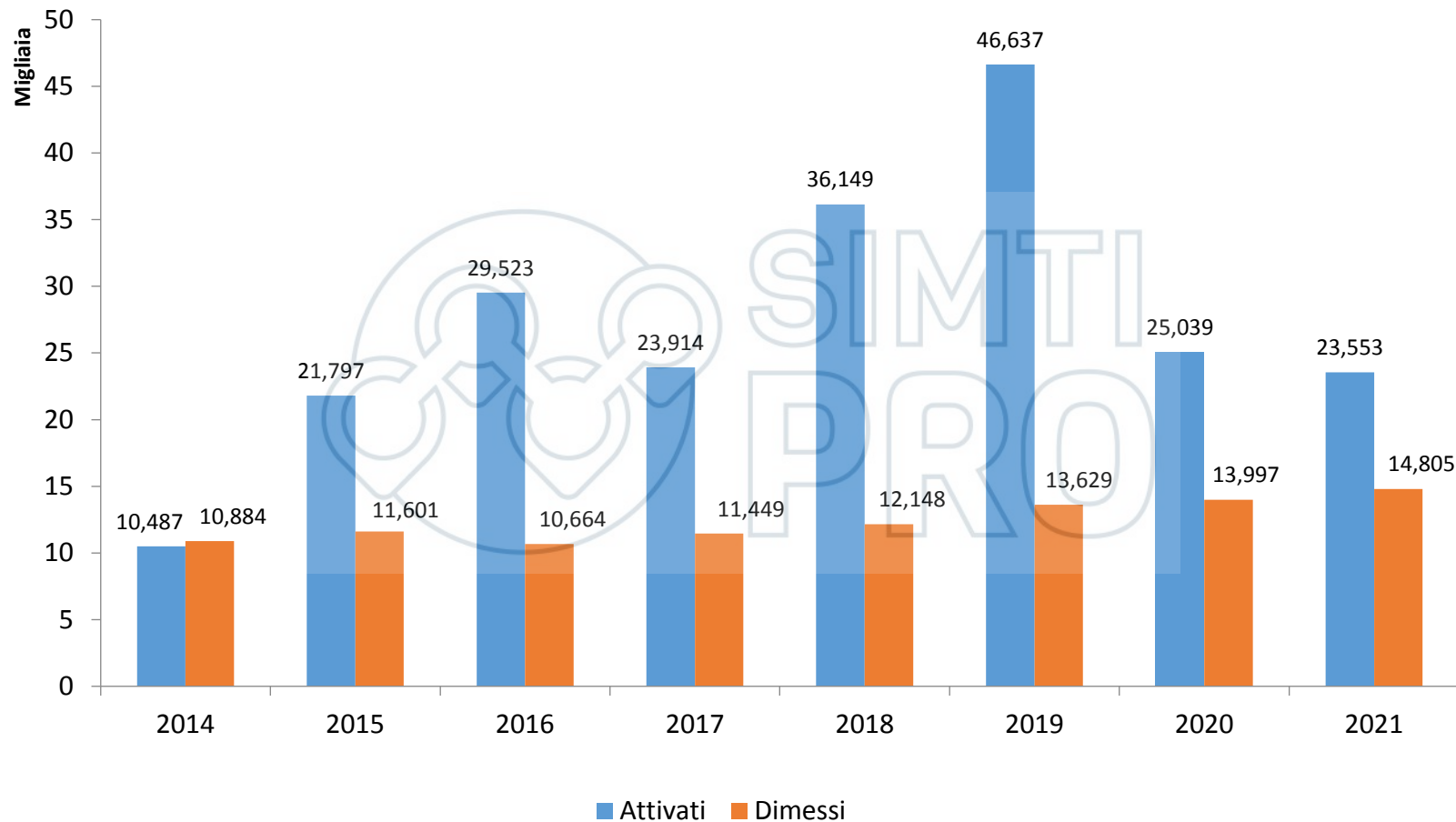


\* Con mismatched in I classe

# Luci e ombre: le iscrizioni e le tipizzazioni

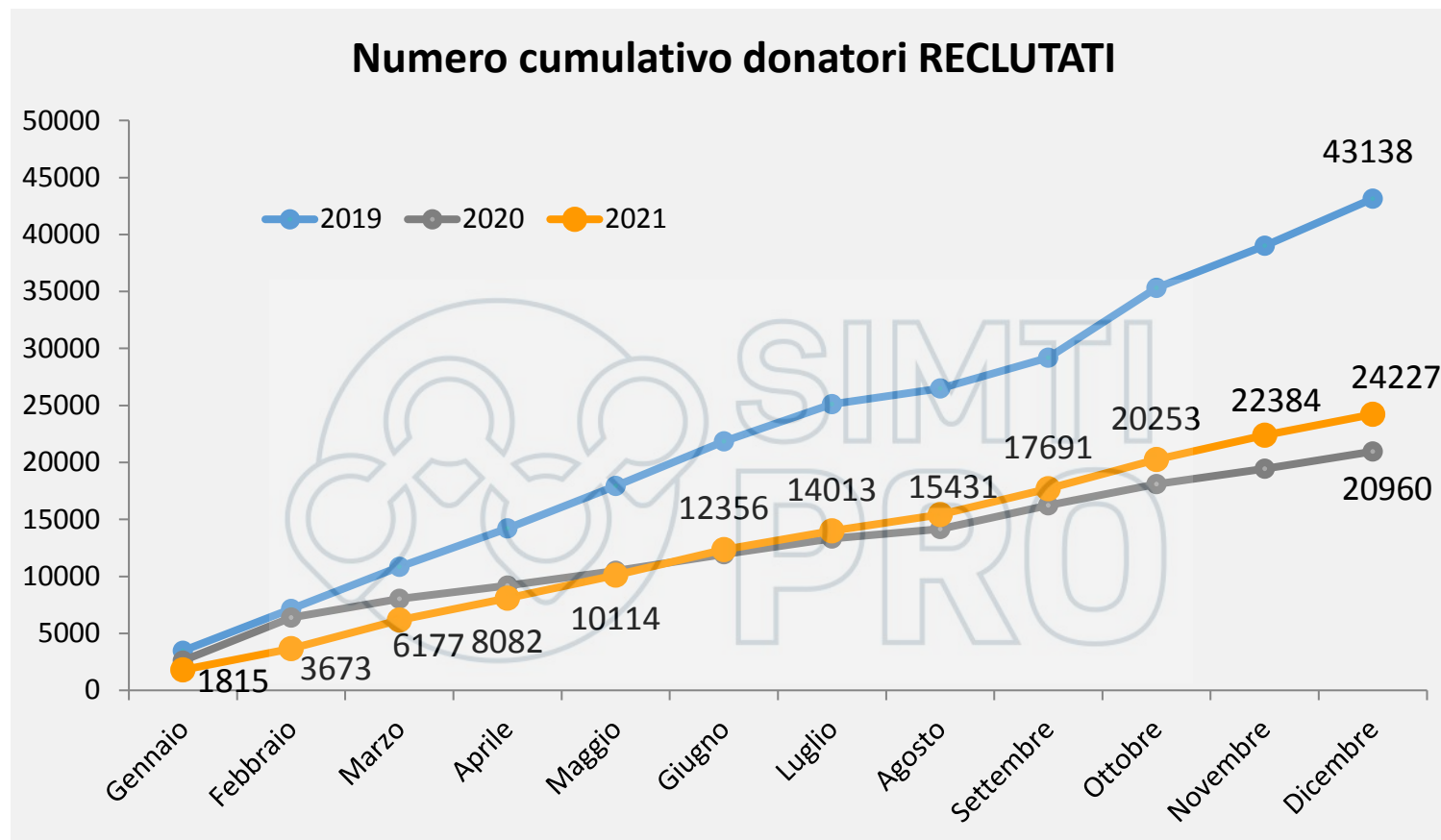
## Donatori attivati e dimessi per anno

foto al 31/12/2021





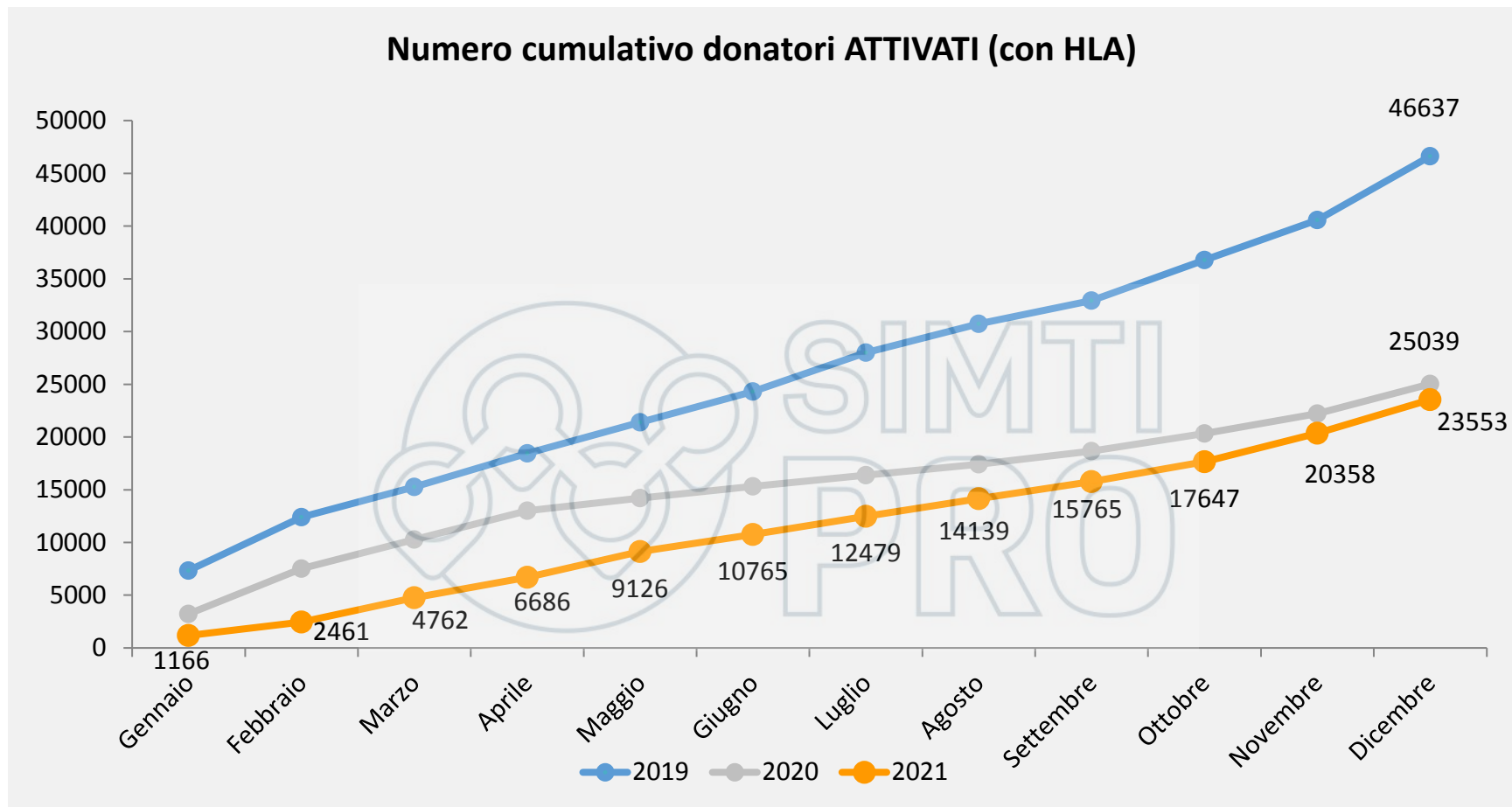
# Luci e ombre: le iscrizioni e le tipizzazioni



Aumento del **15%** 2021 vs 2020

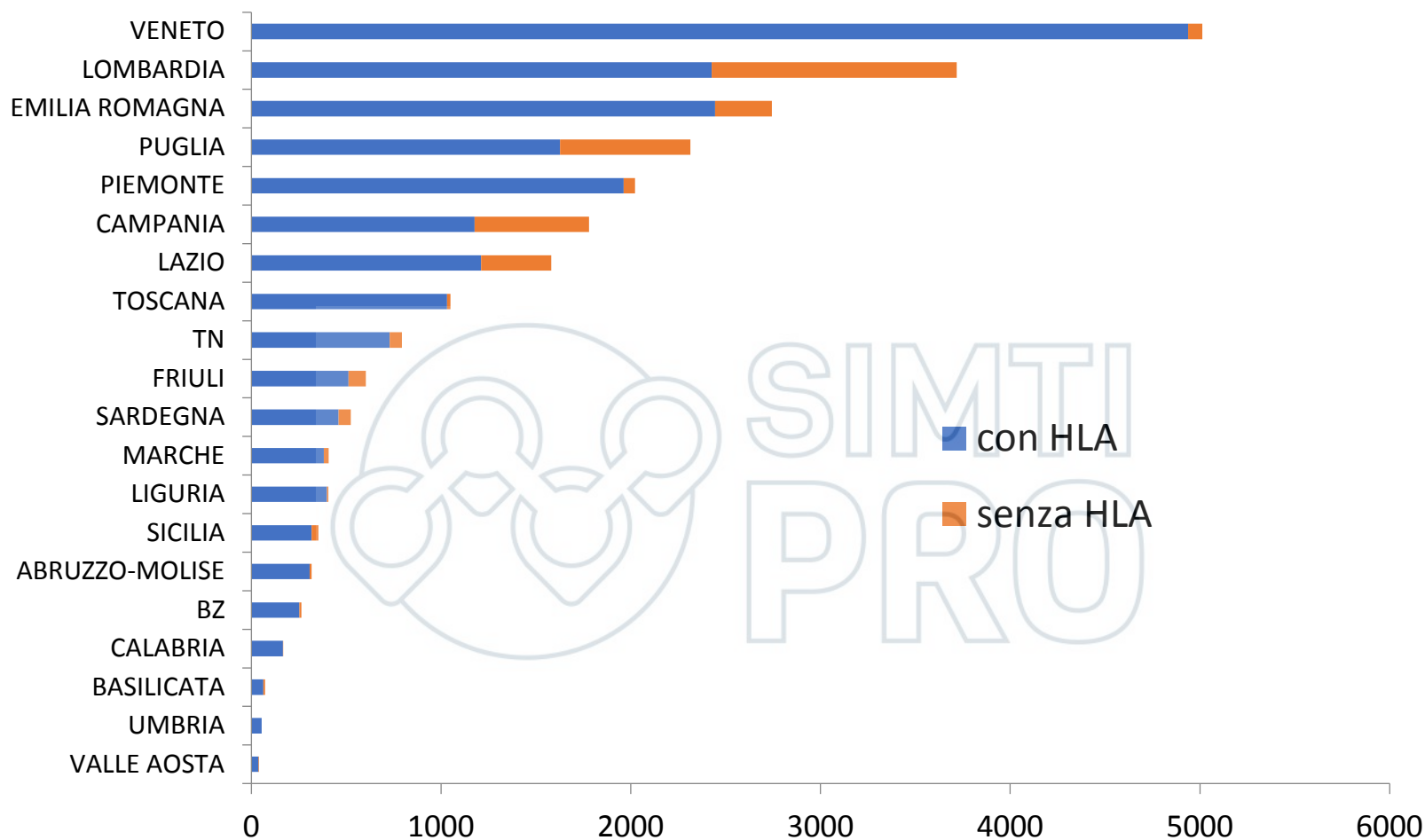
(Nel 2020 il reclutamento donatori in Italia è diminuito del 48%,  
a livello mondiale del 35%)

# Luci e ombre: le iscrizioni e le tipizzazioni



Diminuzione del **6%** 2021 vs 2020 e del **50%** rispetto al 2019

# Le iscrizioni per Regione

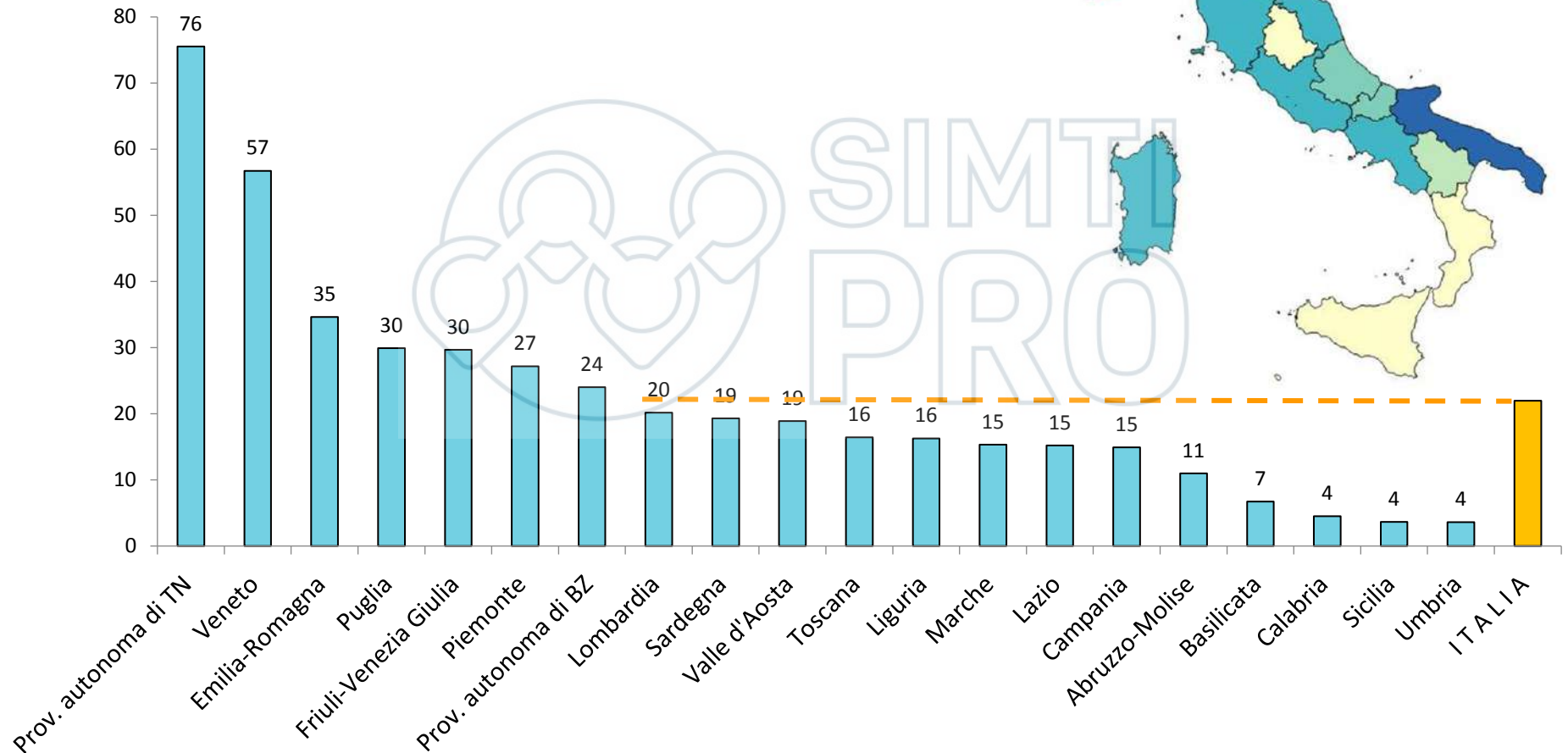
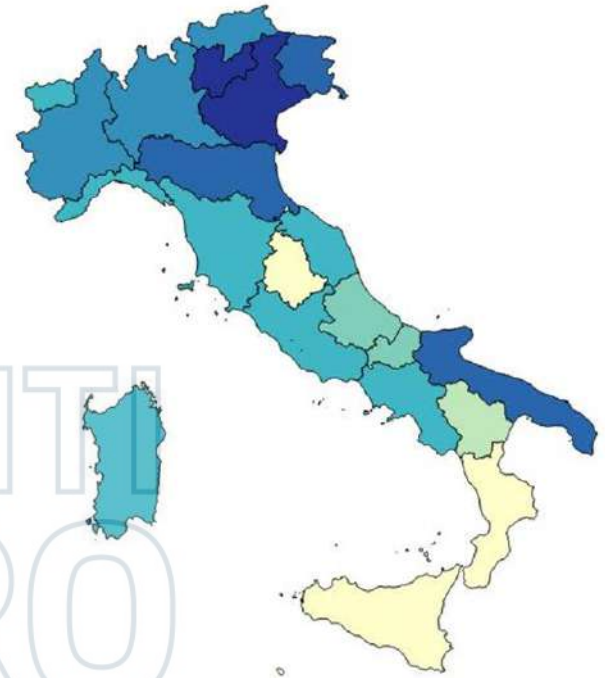


**15%** di non tipizzati (donatori iscritti durante l'anno 2021)

Nuovi iscritti 2022: con HLA **4.626**  
Senza HLA: **5.092**

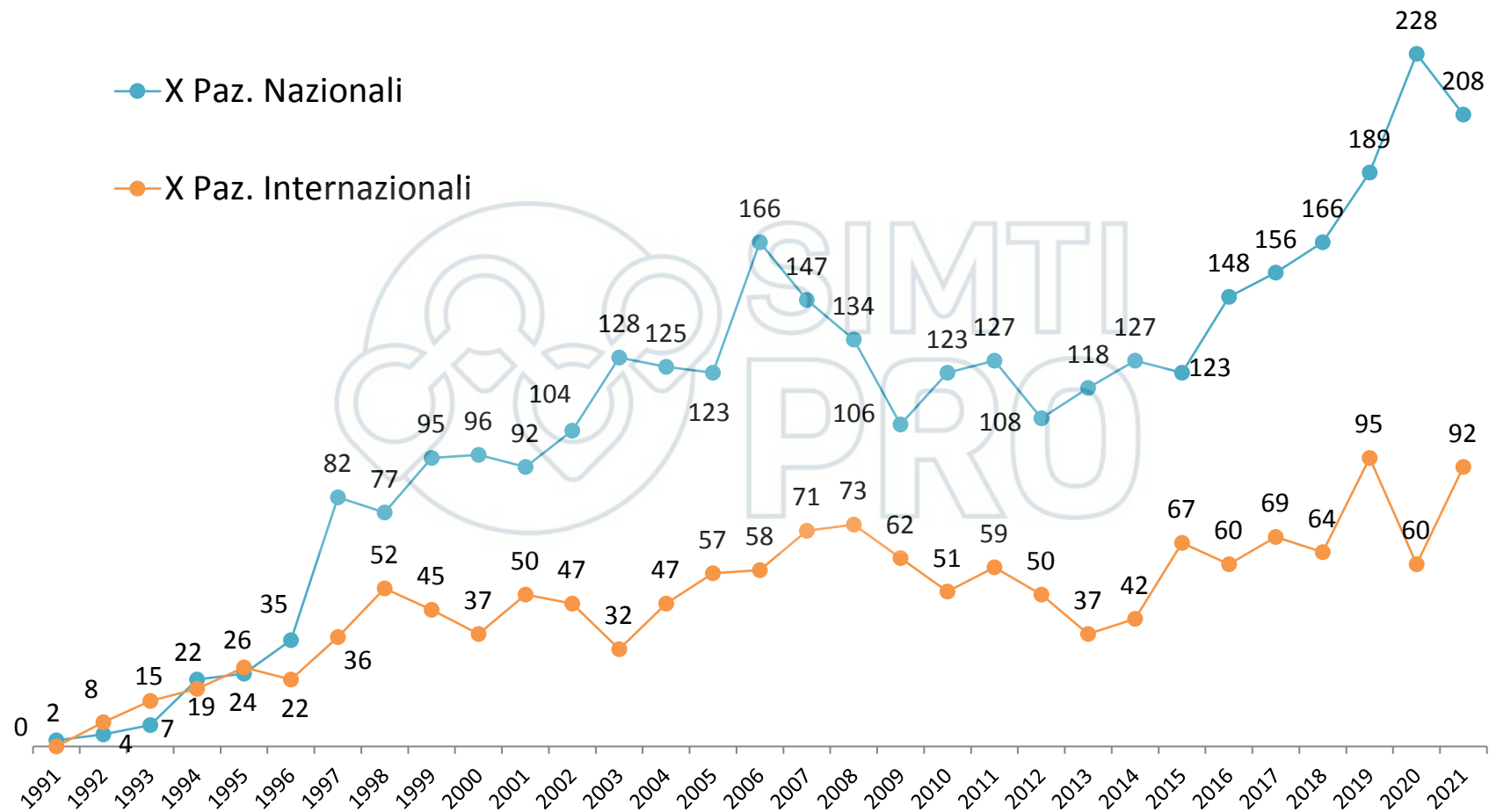
# Le iscrizioni per Regione

Indice di reclutamento  
(x 10.000 abitanti 18-35 anni)



# Luci e ombre: le donazioni IBMDR

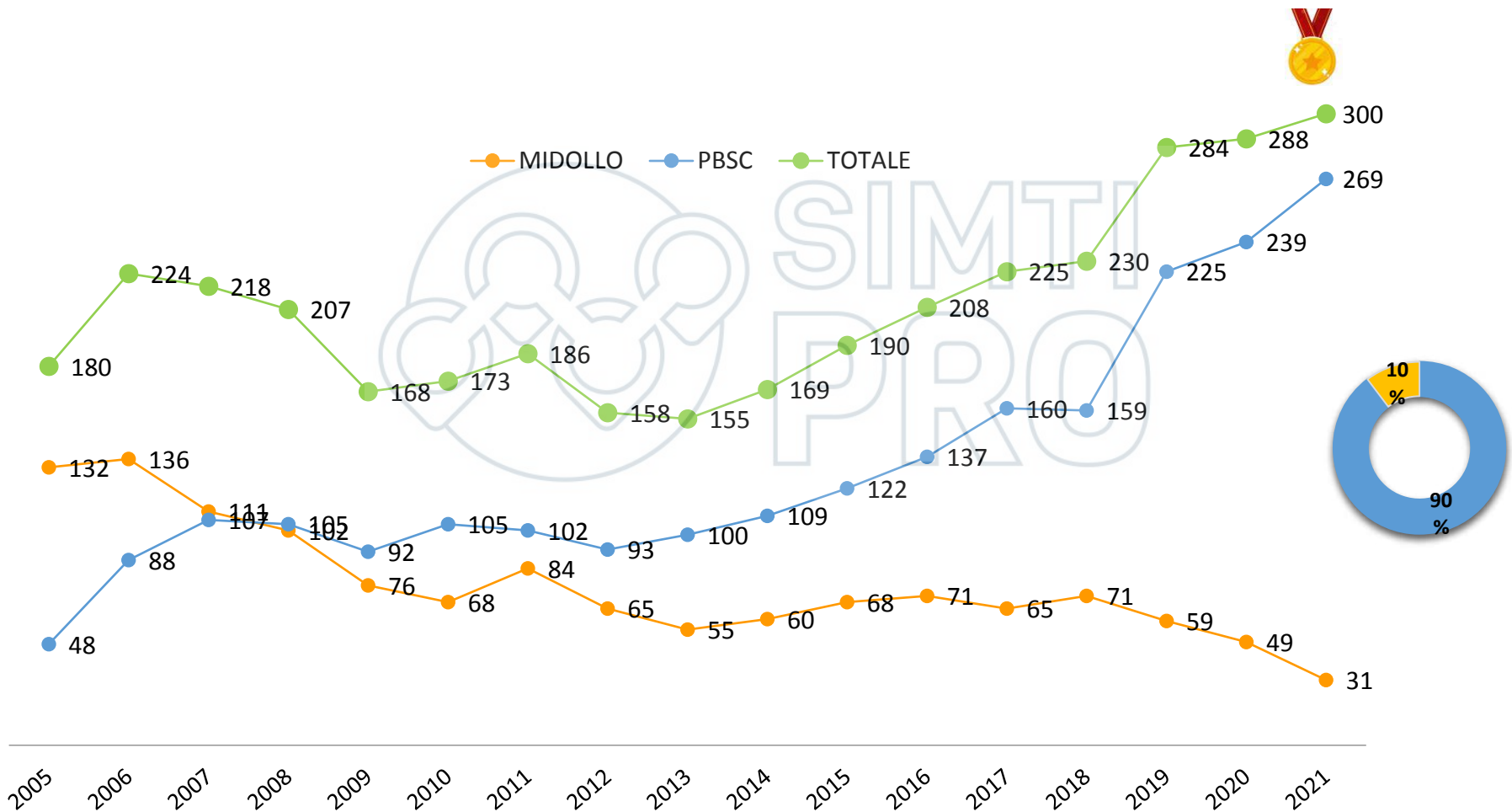
4.893 prime donazioni



# Le donazioni IBMDR: la sorgente

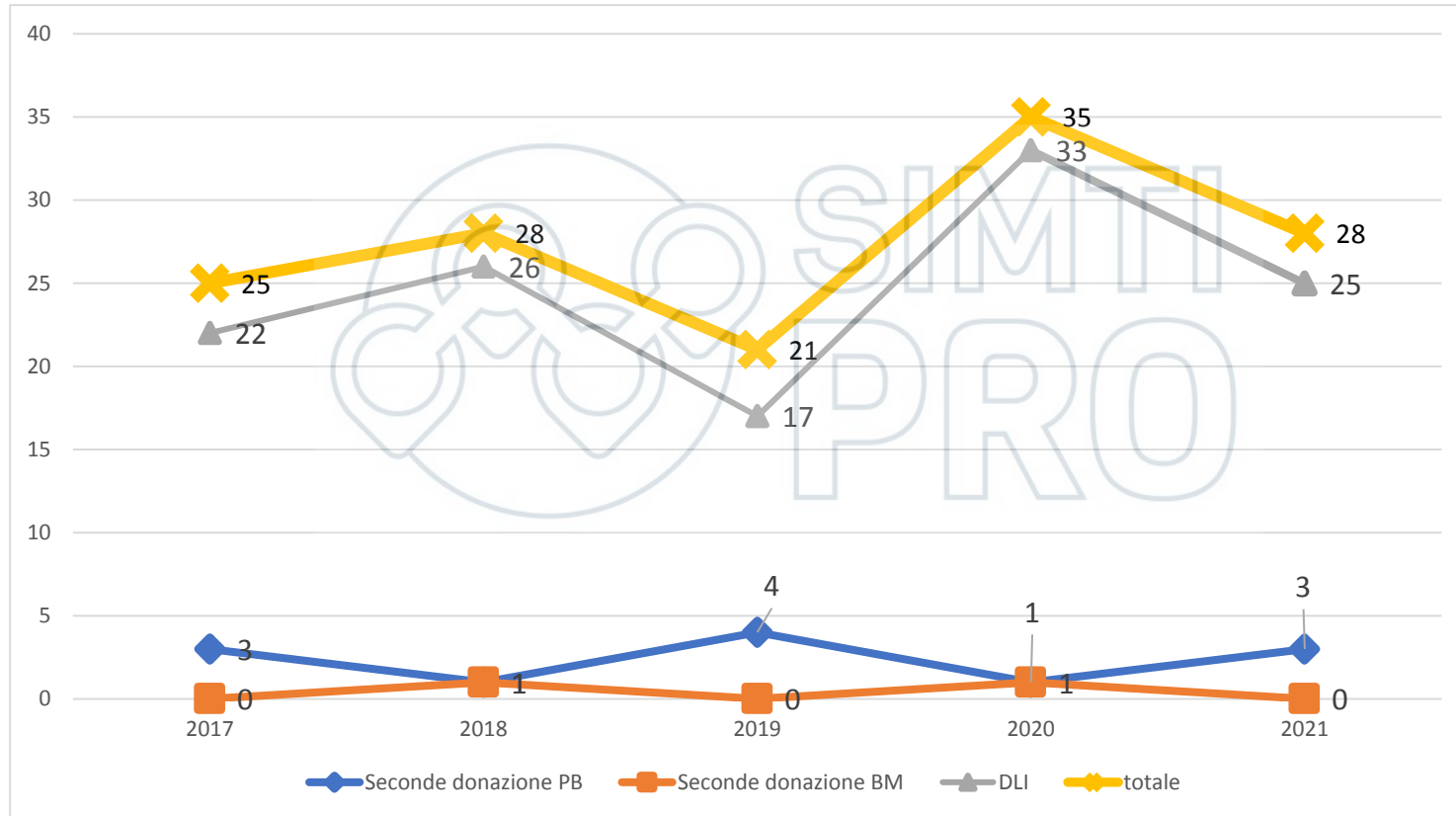
**2.634** prime donazioni da BM

**2.259** prime donazioni da PBSC

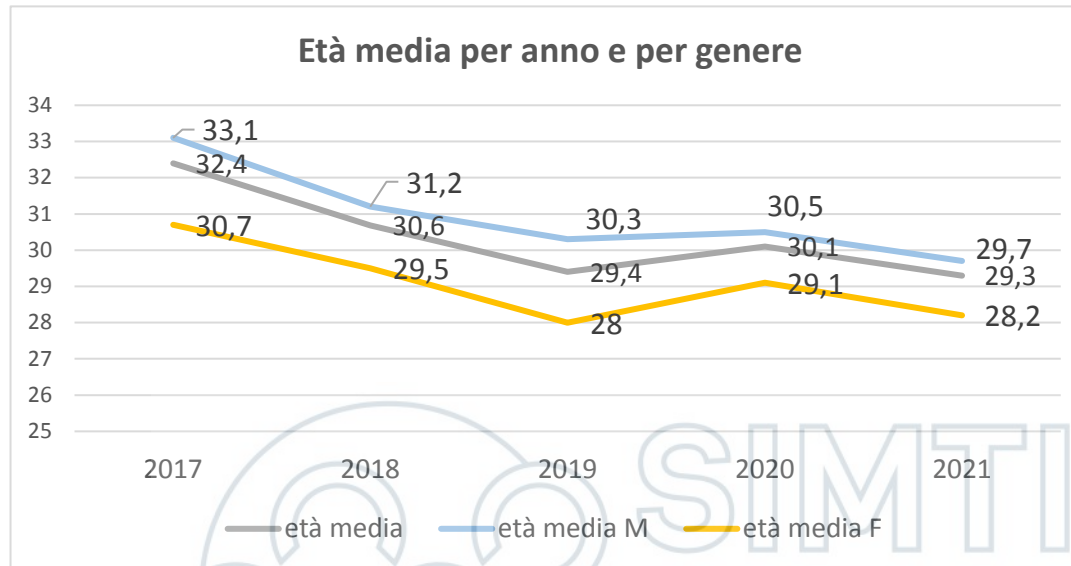


# Le ulteriori donazioni IBMDR

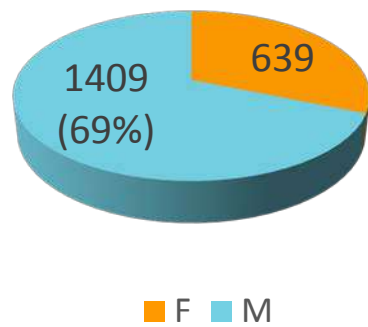
496 ulteriori donazioni (29 BM, 64 PBSC, 403 DLI)



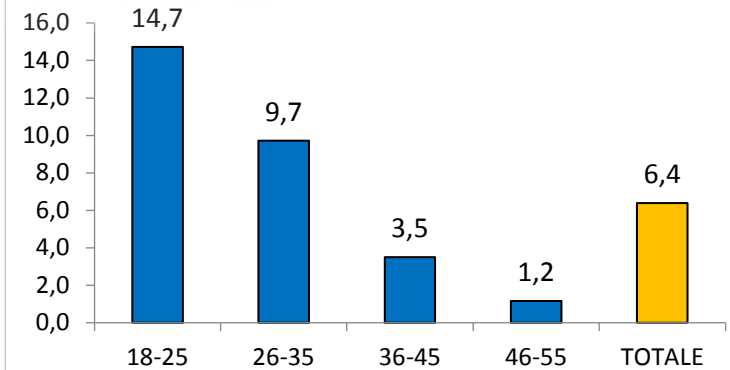
# Identikit donatore



Numero donazioni per genere

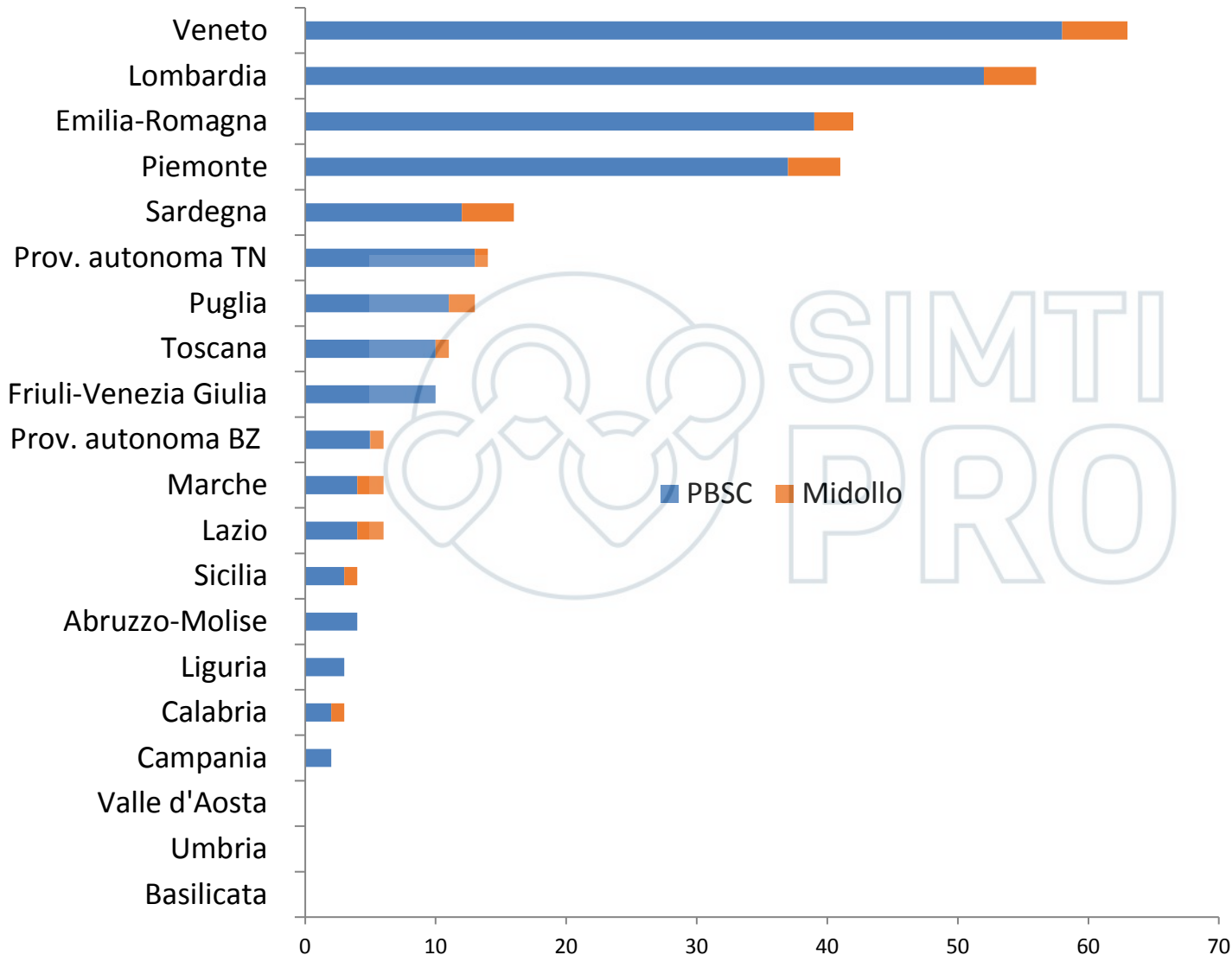


Indice di donazione (x10.000 donatori)





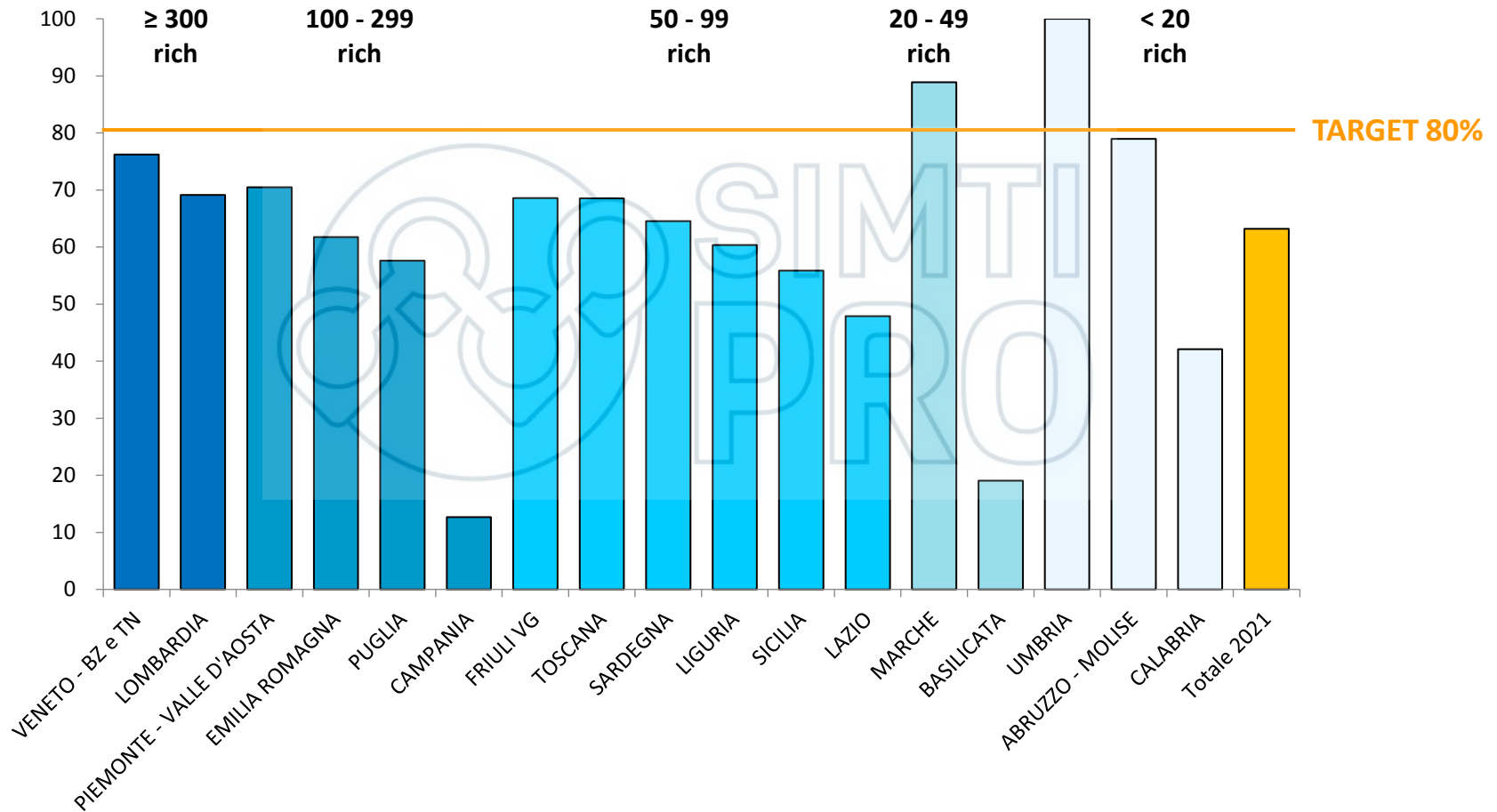
# Donazioni per Regione



# Luci e ombre: i richiami

## KPI 2

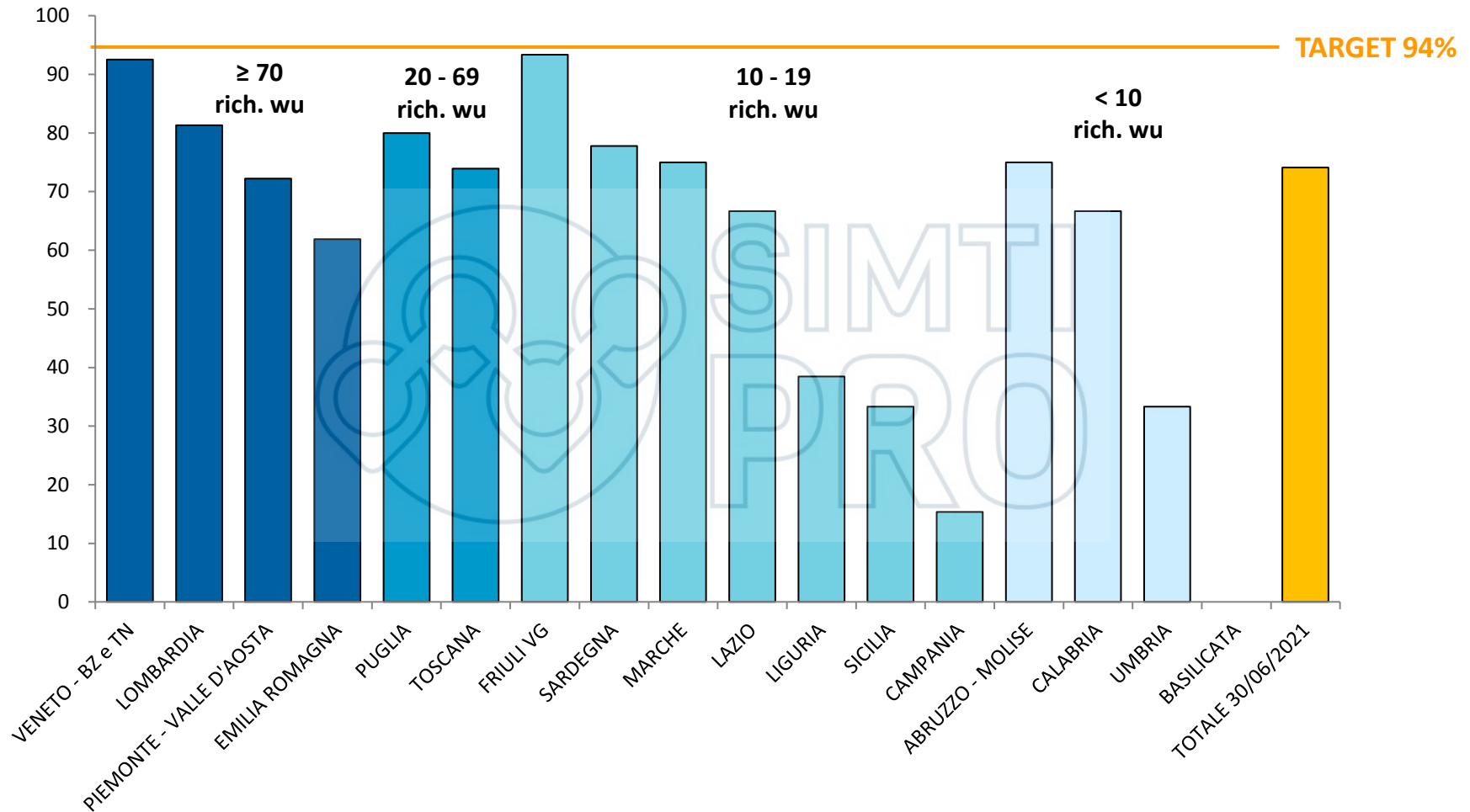
PERCENTUALE DI DONATORI DISPONIBILI ALL'INVIO CAMPIONE (1/1/2021– 31/12/2021)  
RIPARTITO PER REGISTRO REGIONALE



# Luci e ombre: i richiami

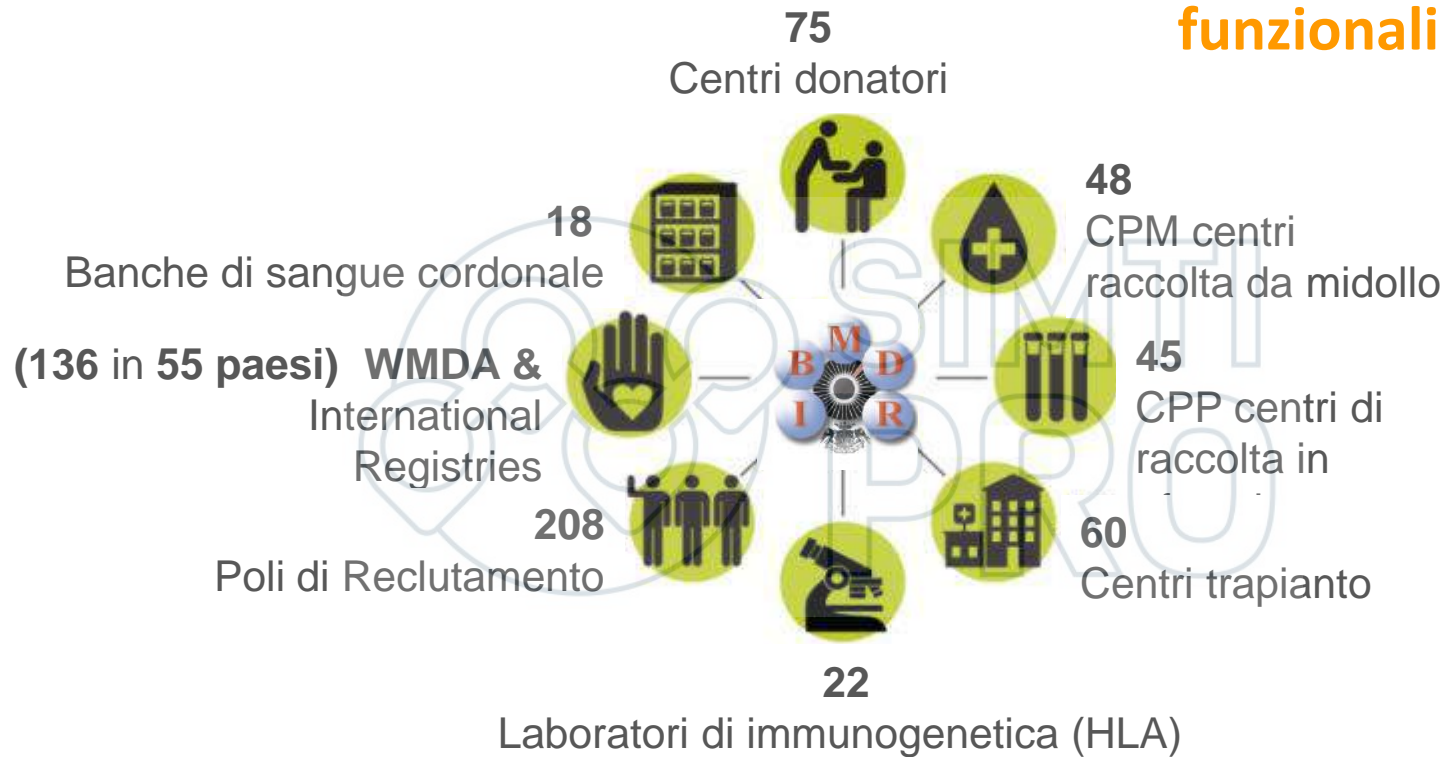
## KPI 3

PERCENTUALE DI DONATORI DISPONIBILI /IDONEI AL WORK UP (1/1/2021– 31/12/2021)  
RIPARTITO PER REGISTRO REGIONALE

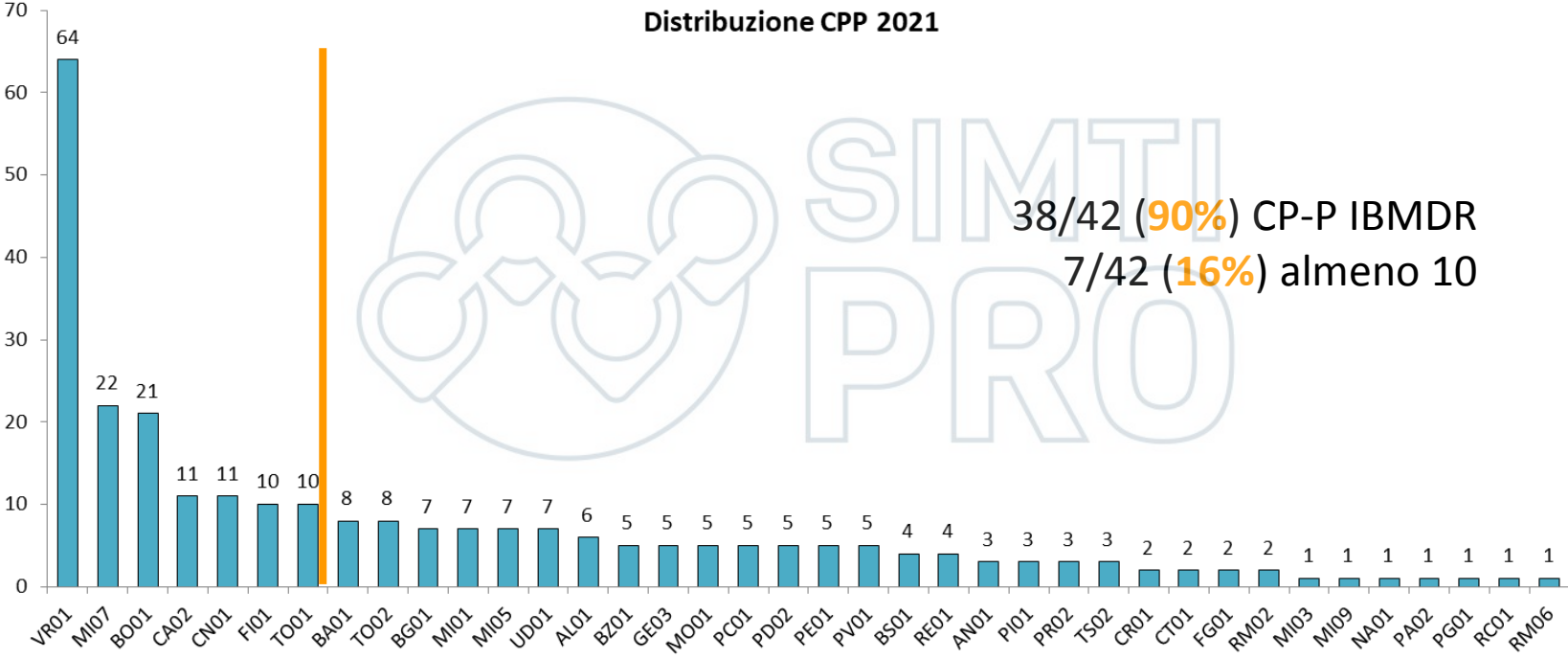


# Luci e ombre: i poli funzionali (...e gli Audit).

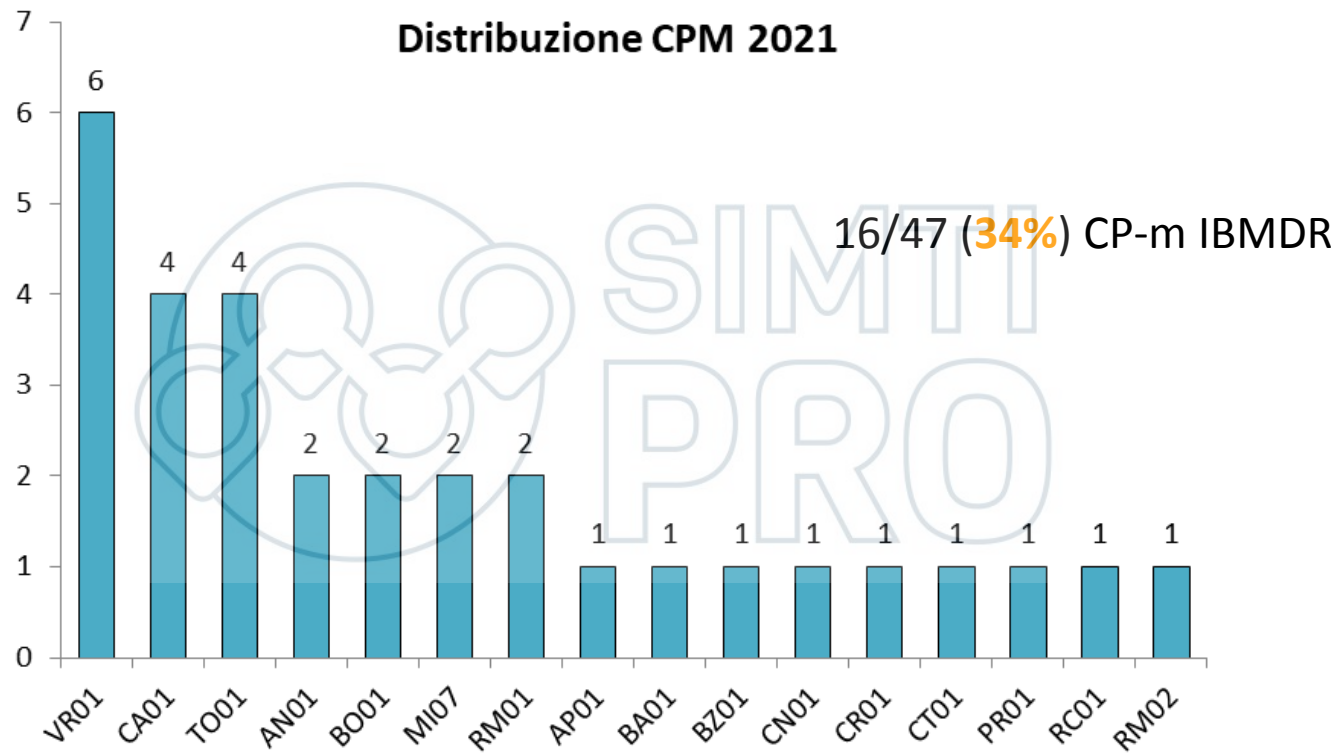
**476 Poli  
funzionali**



# Donazioni PBSC da donatore IBMDR

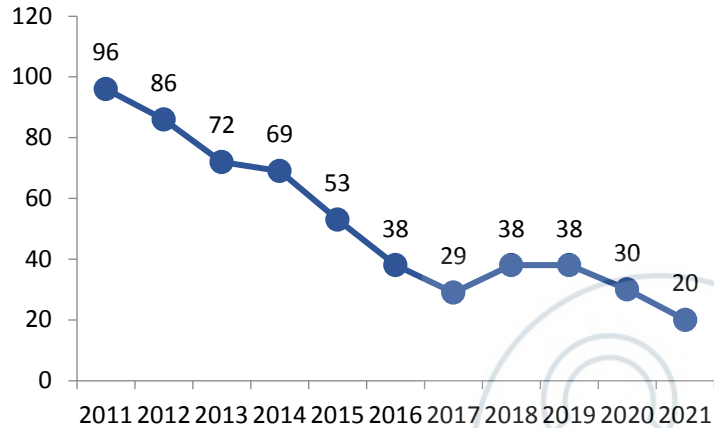


# Donazioni midollo da donatore IBMDR



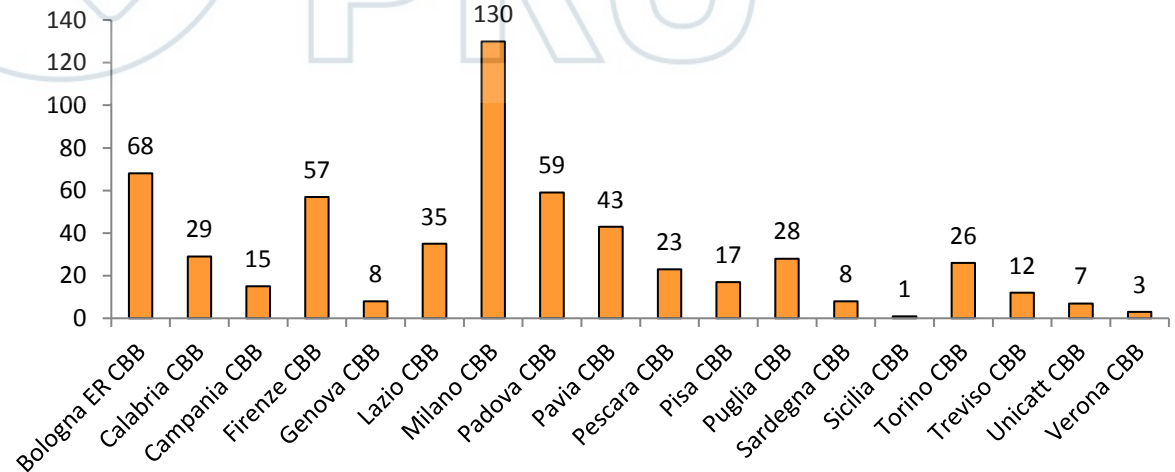
# Luci e ombre: le SCO

TREND unità rilasciate per anno

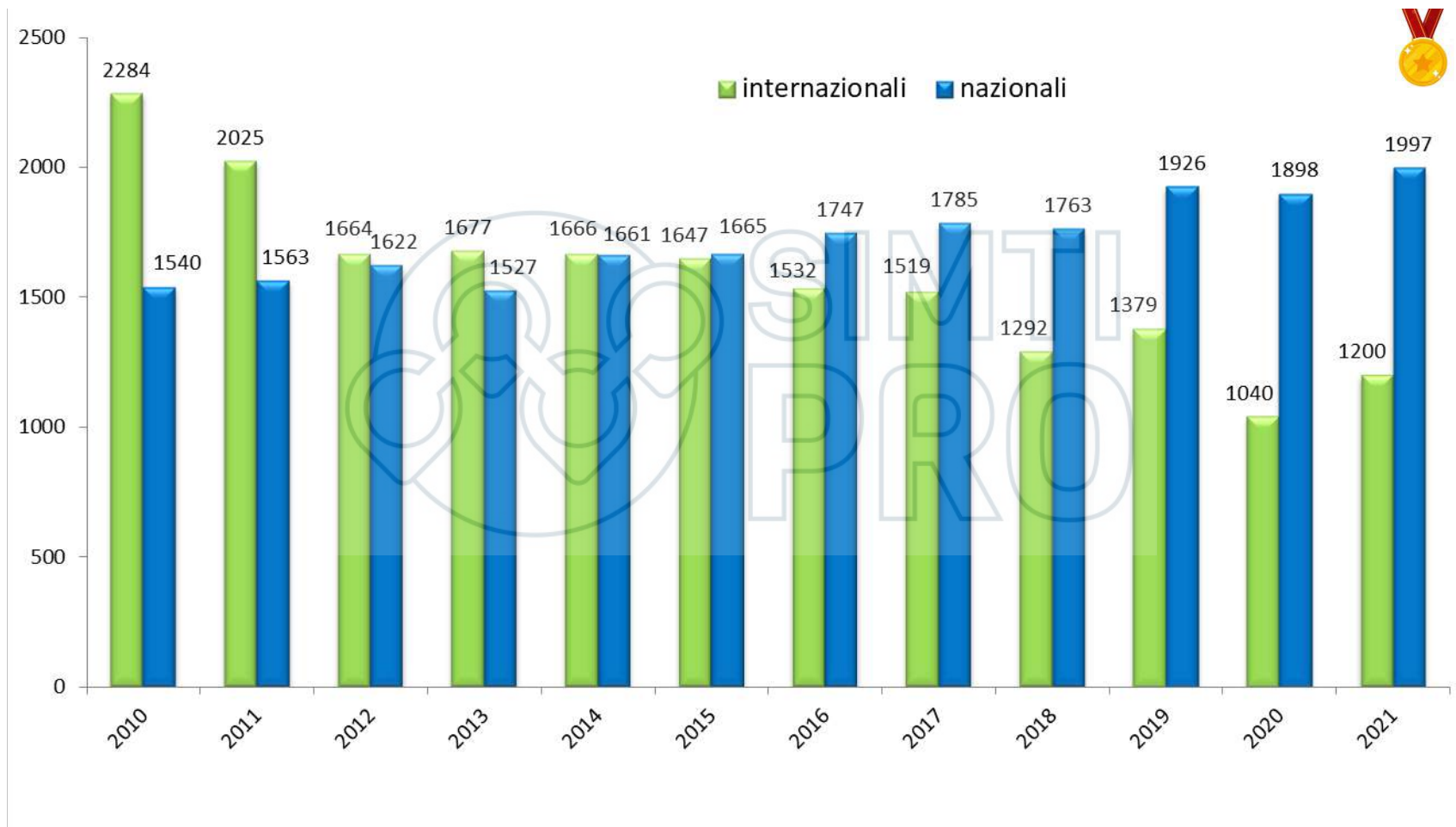


Inventario nazionale ITCBN:  
**38.355**

Unità rilasciate per banca  
dal 2011 al 2021

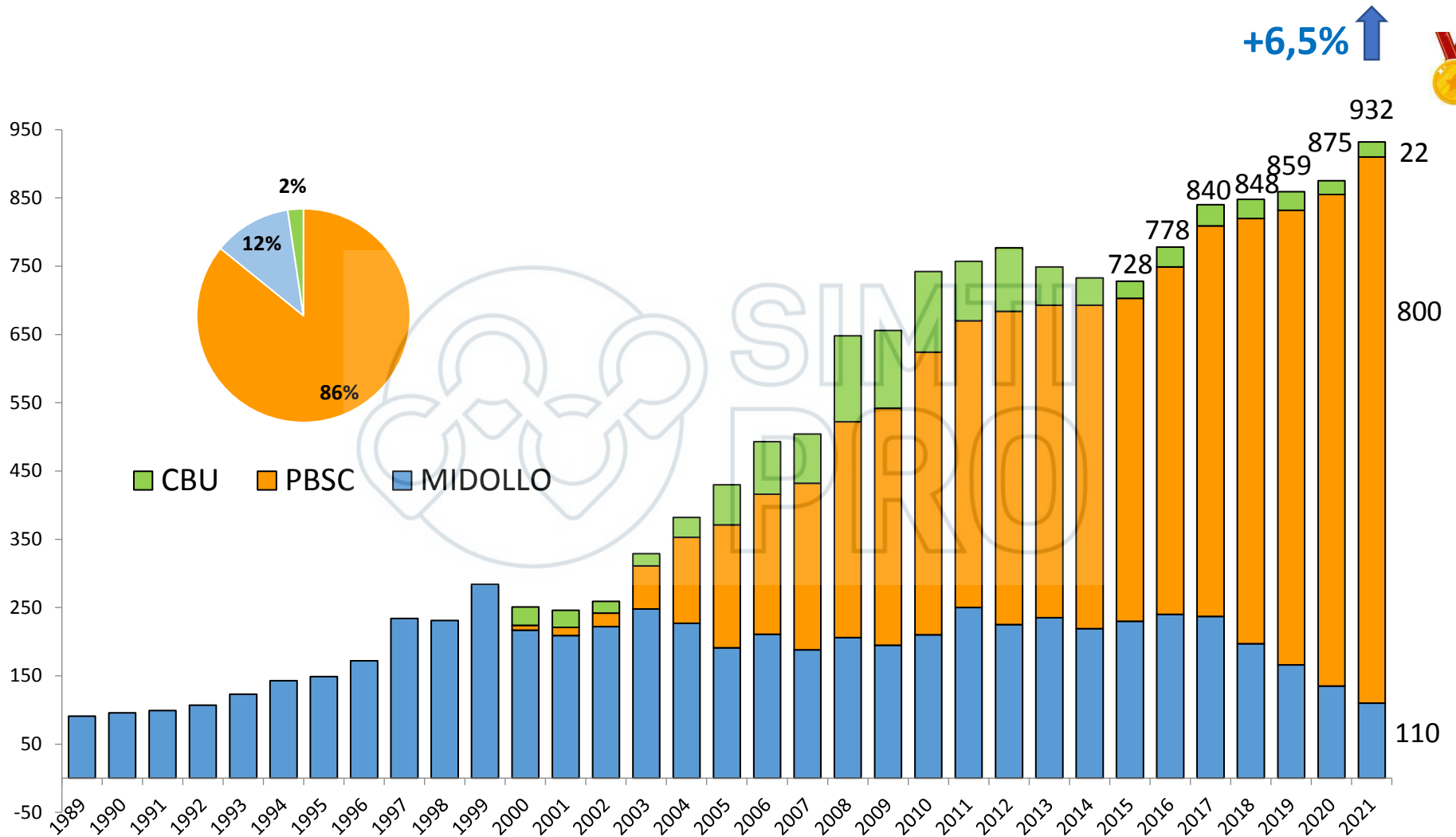


# Luci e ombre: le ricerche attivate



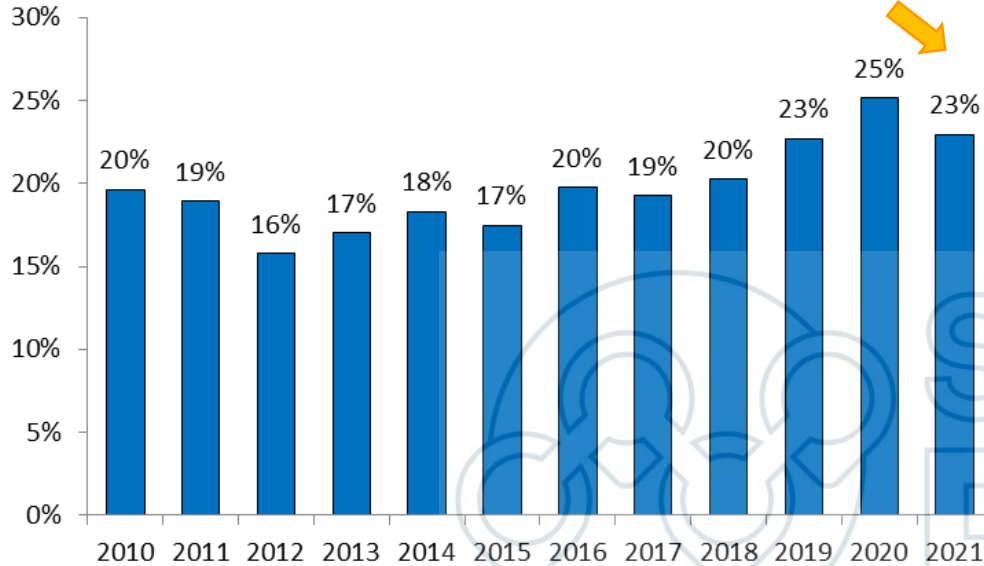


# Luci e ombre: 1° trapianto con donatore MUD

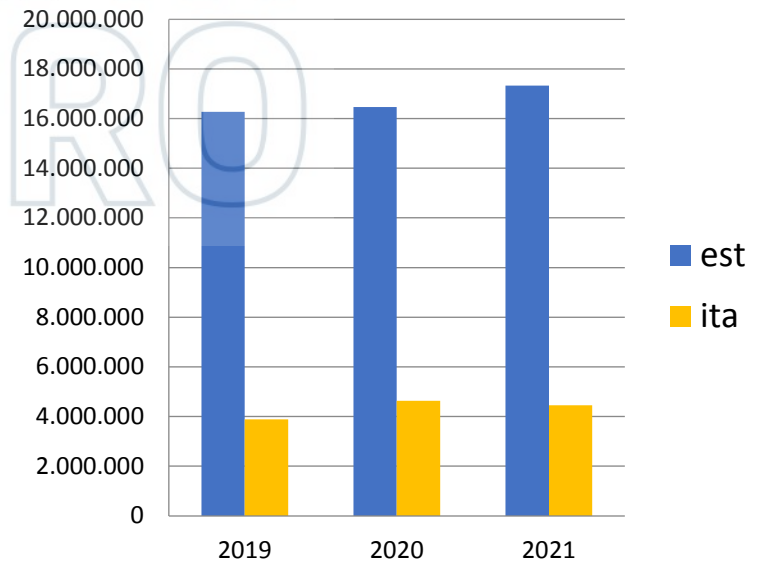


# Luci e ombre: l'autosufficienza

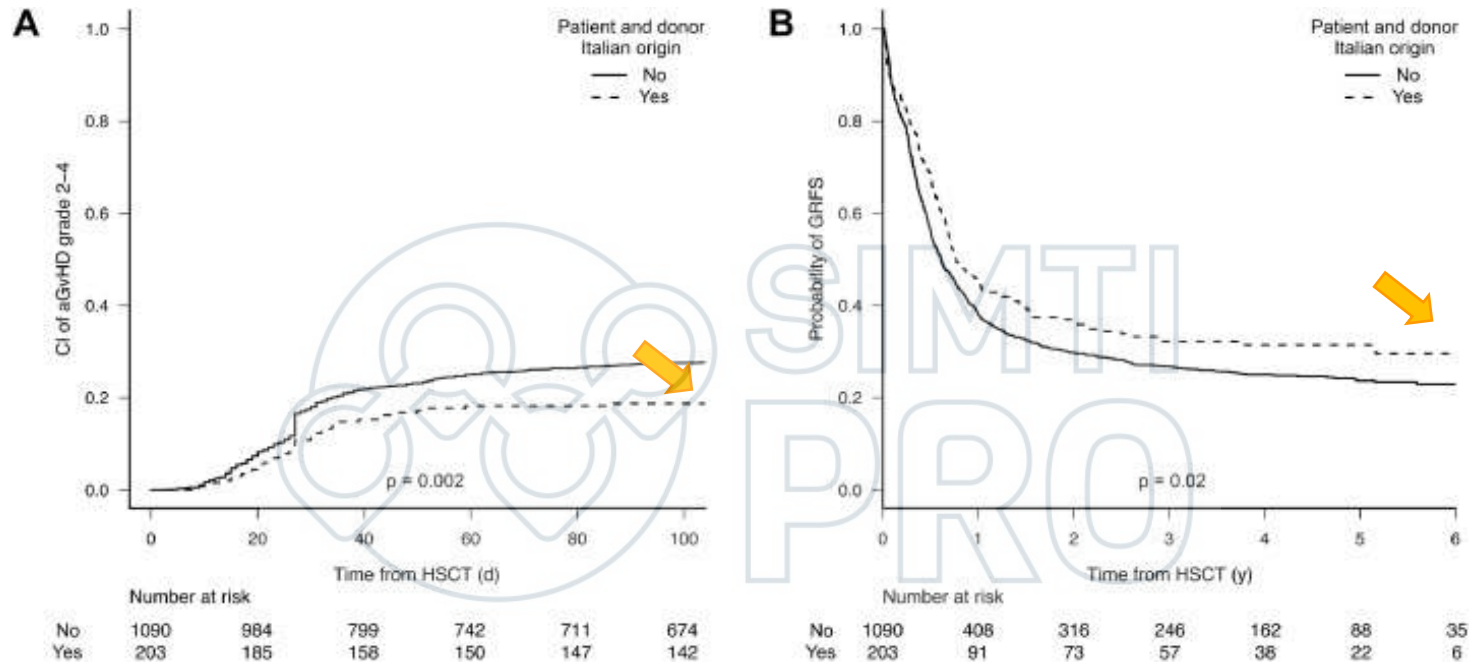
Autosufficienza



Costi di reperimento e ricerca di CSE da adulto in Italia e all'Estero



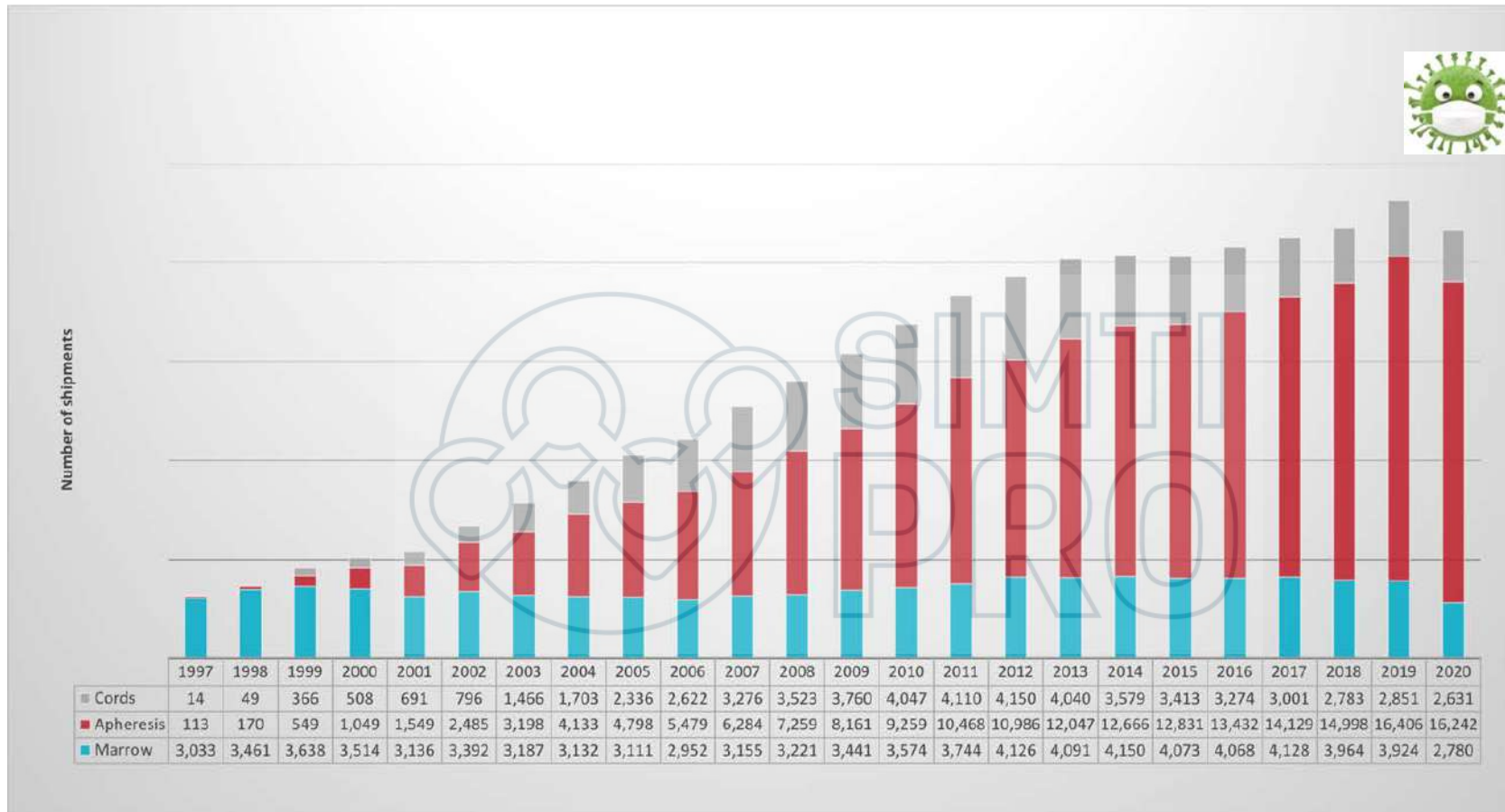
# Migliore outcome per coppie italiane



Allelic HLA Matching and Pair Origin Are Favorable Prognostic Factors for Unrelated Hematopoietic Stem Cell Transplantation in Neoplastic Hematologic Diseases: An Italian Analysis by the Gruppo Italiano Trapianto di Cellule Staminali e Terapie Cellulari, Italian Bone Marrow Donor Registry, and Associazione Italiana di Immunogenetica e Biologia dei Trapianti.

Picardi A et al, Transplantation and Cellular Therapy, 2021, ISSN 2666-6367, <https://doi.org/10.1016/j.jtct.2020.11.021>.

# Impatto pandemia nel mondo: il trapianto



Courtesy WMDA

Globalmente sono stati trapiantati il **7%** in meno dei pazienti

# Impatto pandemia nel mondo: il trapianto



www.nature.com/bmt

## CORRESPONDENCE



### Impact of COVID-19 pandemic on global unrelated stem cell donations in 2020—Report from World Marrow Donor Association

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*Bone Marrow Transplantation*; <https://doi.org/10.1038/s41409-022-01667-w>

#### TO THE EDITOR:

The ongoing COVID-19 pandemic has an unprecedented impact on national health care systems including hematopoietic stem cell transplantation (HSCT). Early in the pandemic this prompted the Worldwide Network for Blood and Marrow Transplantation [1] and The European Society for Blood and Marrow Transplantation [2] to publish guidelines regarding the care of patients in need of an HSCT. As World Marrow Donor Association (WMDA) promotes global collaboration for the benefit of stem cell donors and transplant patients, we were interested in examining the impact of the COVID-19 pandemic on unrelated hematopoietic stem cell (HSC) donation numbers. WMDA activities include yearly recording the number and details of unrelated HSC donations performed globally and compiling into a Global Trends Report (GTR). We used the 2020 WMDA GTR to examine trends in unrelated HSC donations during

HSC donations from unrelated donors (PBSC and BM) decreased by 3.5% ( $n = -707$ ) from 20,330 in 2019 to 19,623 in 2020, compared to an average annual growth rate of +3.9% from 2015 to 2019. The slowest development in that period was in 2015 with a growth rate of +0.5%. A negative development has not been observed before. The 3.5% decrease is composed of a 29.0% ( $n = -1139$ ) decrease for BM and a 2.6% ( $n = +428$ ) increase for PBSC, resulting in a drop in the BM share of unrelated HSC donations from 19.3% in 2019 to 14.2% in 2020. The percentage of national use of HSC products (PBSC and BM) (i.e. products which did not cross a national border) increased from 51.2 to 53.5%. The share of HSC donations requiring intercontinental transport decreased from 24.6% in 2019 to 21.9% in 2020. The number of cord blood unit (CBU) shipments globally decreased by 3.5% ( $n = -101$ ) from 2851 to 2750.

When considering the continent on which the patient was transplanted (Table 1), the change rate of use of donated HSC products (BM and PBSC) ranged from -28.0% ( $n = -155$ ) in South America to +18.2% ( $n = +6$ ) in Africa in 2020 vs. 2019. In absolute numbers, the largest decrease of HSC donations (BM and PBSC) occurred for patients in Asia ( $n = -478$ ; -9.1%) followed by Europe ( $n = -205$ ; -2.4%), and the largest increase occurred in North

# Ombre....

Top 10 decreased	2019 BM/PBSC <sup>a</sup>	2020 BM/PBSC <sup>a</sup>	Δn (%) BM/PBSC <sup>a</sup>	2019 CBUs <sup>b</sup>	2020 CBUs <sup>b</sup>	Δn (%) CBUs <sup>b</sup>	COVID-19 cases/1 M inhab	COVID-19 rel deaths/1 M inhab
Turkey	1013	866	-147 (-14.5%)	4	0	-4 (-100%)	26,188	248
Japan	1222	1094	-128 (-10.5%)	1416	1522	+106 (+7.5%)	1864	28
China	1571	1469	-102 (-6.5%)	UNK	UNK	NA <sup>c</sup>	66	3
Brazil	366	265	-101 (-27.6%)	16	8	-8 (-50%)	36,112	917
Russia	165	73	-92 (-55.8%)	0	0	0	21,430	386
UK	1078	989	-89 (-8.3%)	101	140	+39 (+38.6%)	36,771	1084
India	197	111	-86 (-43.7%)	0	0	0	7454	108
Germany	2540	2479	-61 (-2.4%)	6	2	-4 (-66.7%)	20,850	403
Argentina	120	96	24	1	1	0	25,066	957

HSC donations shipped within and to that continent/country/region; <sup>a</sup>The 2020 numbers for CBU in China were incomplete; <sup>c</sup>The 2019 numbers for CBU in South Korea were incomplete.

NA Not available, UNK unknown.

# Luci....



Top 10 increased	2019 BM/PBSC <sup>a</sup>	2020 BM/PBSC <sup>a</sup>	Δn (%) BM/PBSC <sup>a</sup>	2019 CBU <sup>s</sup> <sup>b</sup>	2020 CBU <sup>s</sup> <sup>b</sup>	Δn (%) CBU <sup>s</sup> <sup>b</sup>	COVID-19 cases/1 M inhab	COVID-19 rel deaths/1 M inhab
Italy	827	894	+67 (+8.1%)	24	20	-4 (-16.7%)	34,851	1227
Netherlands	383	449	+66 (+17.2%)	72	69	-3 (-4.2%)	47,178	673
Canada	509	557	+48 (+9.4%)	45	57	+12 (+26.7%)	15,564	418
Iran	136	175	+39 (+28.7%)	20	0	-20 (-100%)	14,586	657
USA	4773	4,803	+30 (+0.6%)	710	561	-149 (-21.0%)	60,943	1063
Australia	339	365	+26 (+7.7%)	37	24	-13 (-35.1%)	1115	36
Taiwan	210	235	+25 (+11.9%)	19	11	-8 (-42.1%)	34	0
Spain	446	459	+13 (+2.9%)	17	22	+5 (+29.4%)	41,242	1087
Finland	89	100	+11	1	0	-1	6517	101

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**Grazie per la vostra attenzione !**

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