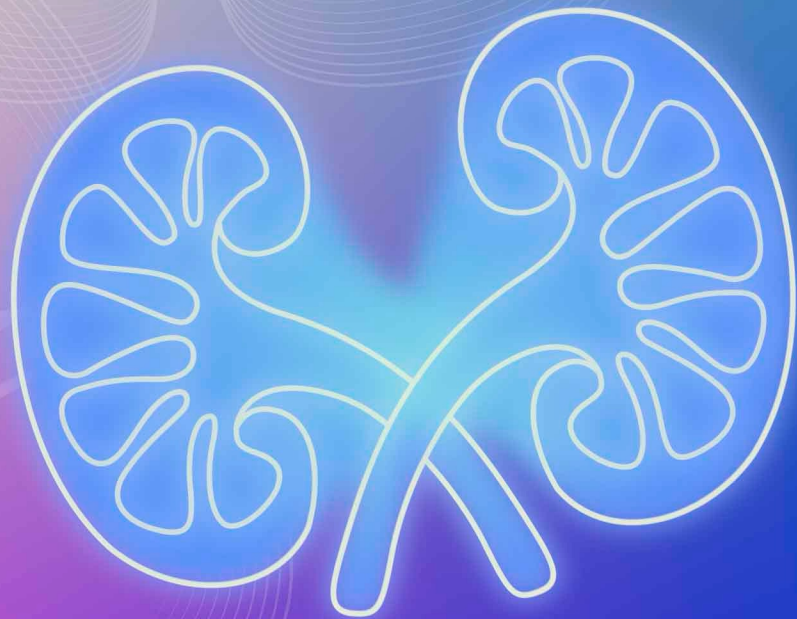




Encontro Renal

19-22
NOV
2025

Centro de Congressos do Estoril

XXXIX
CONGRESSO
PORTUGUÊS
DE NEFROLOGIA



SPNEFRO.PT

XVI
CONGRESSO
LUSO-BRASILEIRO
DE NEFROLOGIA



SBN.ORG.BR

XXXIX
CONGRESSO
APEDT



APEDT.PT

PORTUGUESE REGISTRY OF KIDNEY REPLACEMENT THERAPY

Gabinete do Registo da Doença Renal Crónica da
Sociedade Portuguesa de Nefrologia

2024

Encontro Renal 2025



Sociedade Portuguesa
Nefrologia

GABINETE DE REGISTO DA SPN

1997-2007
Dr. João Pinto dos Santos

2019-2024
Dra. Ana Galvão

Rui Filipe

Maria João Carvalho

Rita Leal

Marta Neves

Manuel Amoedo

Gil Silva

1993
Dr. João Ribeiro Santos

1991-1992
Dr. Pedro Ponce

1984-1990
Dr. João Ribeiro Santos

1991

1984

1994-1997
Dr. Francisco Remédio

1994

2007-2018
Dr. Fernando Macário

2007

1997

2019

ABBREVIATIONS

CKD – Chronic Kidney Disease
HD - Hemodialysis
PD - Peritoneal Dialysis
Tx - Kidney Transplant
PMP - Per Million Population
KRT - Kidney Replacement Therapy
Pts – patients
Nº - number
CKC – Conservative kidney Care

VA – Vascular Access
AVFistula – Arteriovenous fistula
Cat. – Catheter
CVC – Central Vein Catheter
ERA – European Renal Association
HT – Hypertension
GN – Chronic Glomerulonephritis
PKD – polycystic disease

Portuguese Registry of Kidney Replacement Therapy 2024

- Questionnaires for: Hemodialysis (HD), Peritoneal Dialysis (PD),
Conservative Kidney Care (CKC) and Kidney Transplantation (Tx)

143 Hemodialysis Centers

27 Peritoneal Dialysis Units

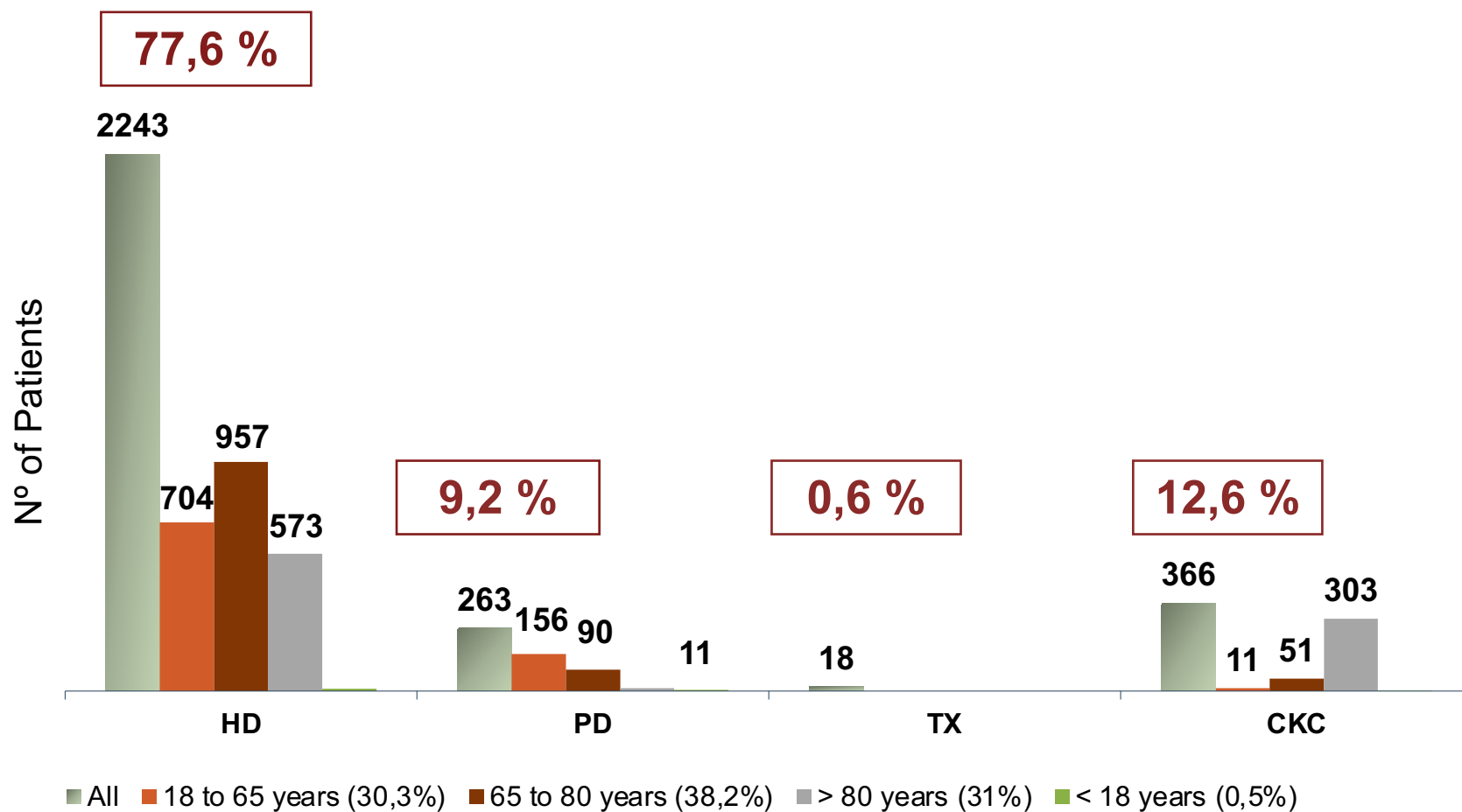
8 Adult and 1 Pediatric Kidney Transplantation Centers

100%

Response Rate



NEW PATIENTS STARTING KRT DURING 2024



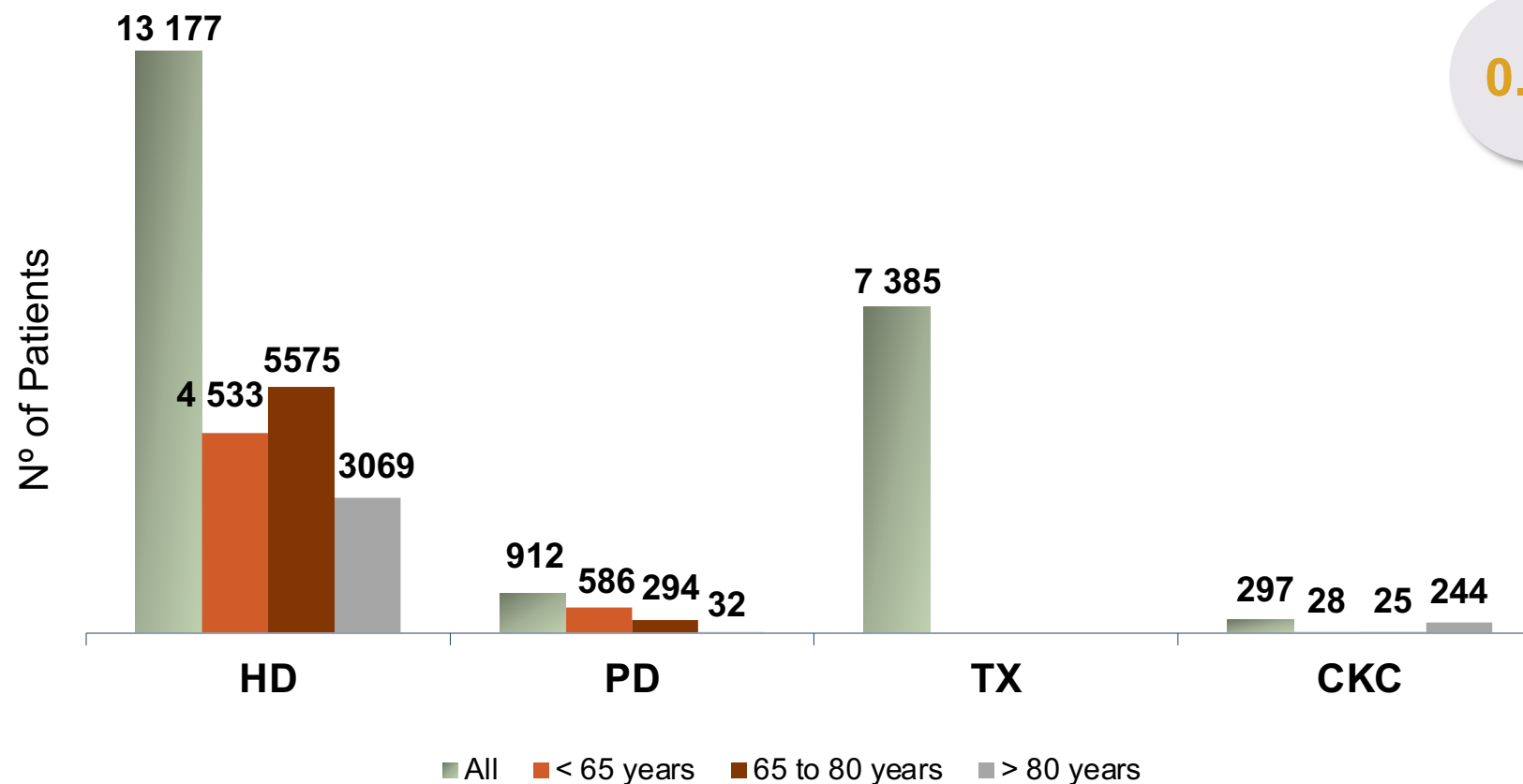
31 % > 80 years

PREVALENT PATIENTS ON KRT 31st DECEMBER 2024

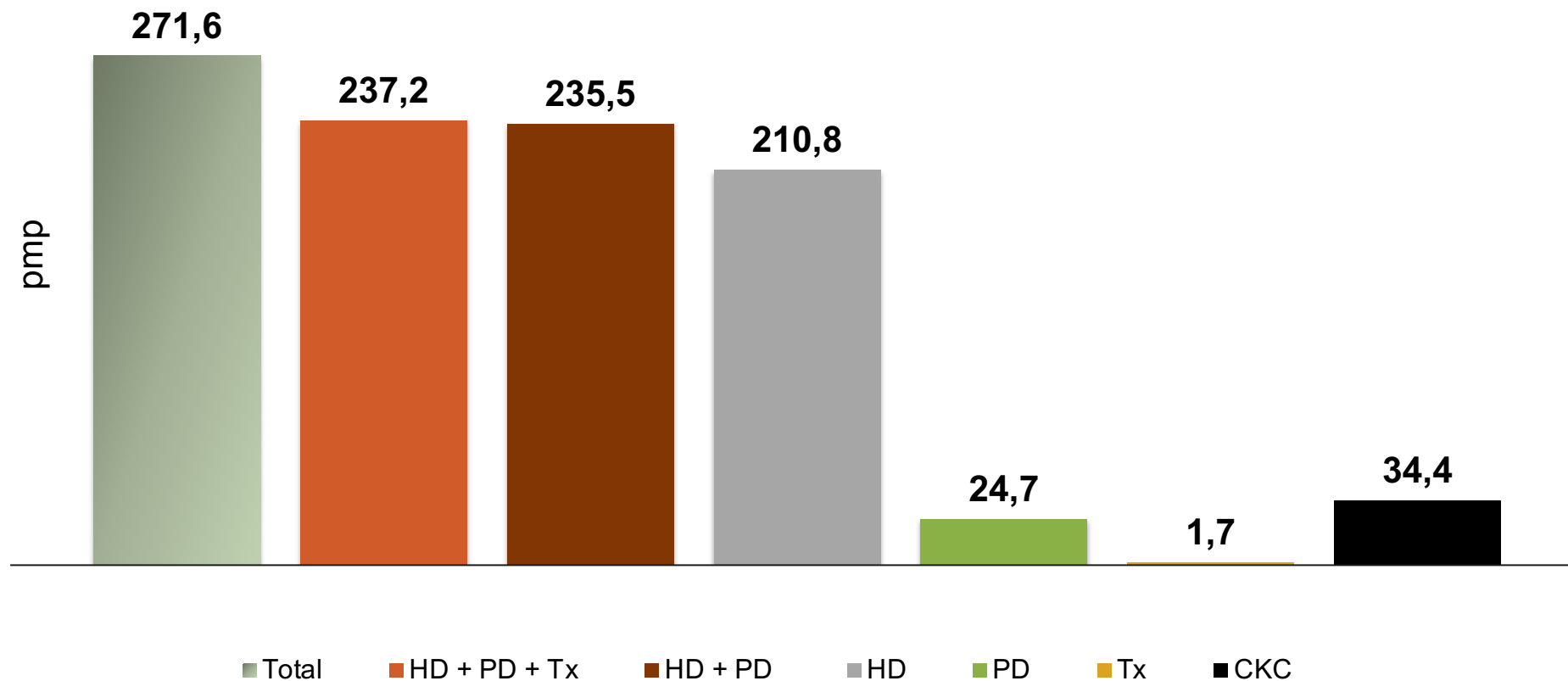
N = 21771

0.56

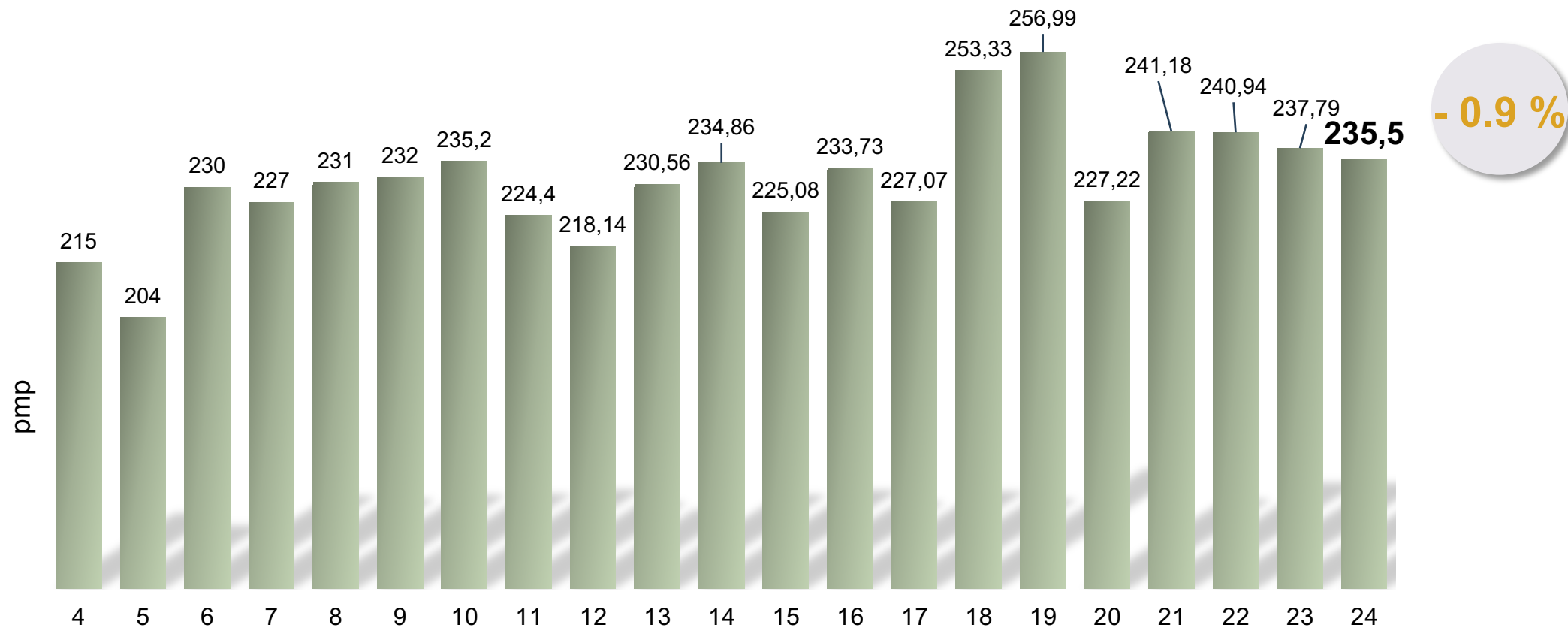
Nº of Pts Tx / Nº Pts HD/PD



INCIDENT PATIENTS ACCEPTED FOR KRT (PMP) DURING 2024



INCIDENT PATIENTS ACCEPTED FOR DIALYSIS (HD+PD) PMP 2004-2024

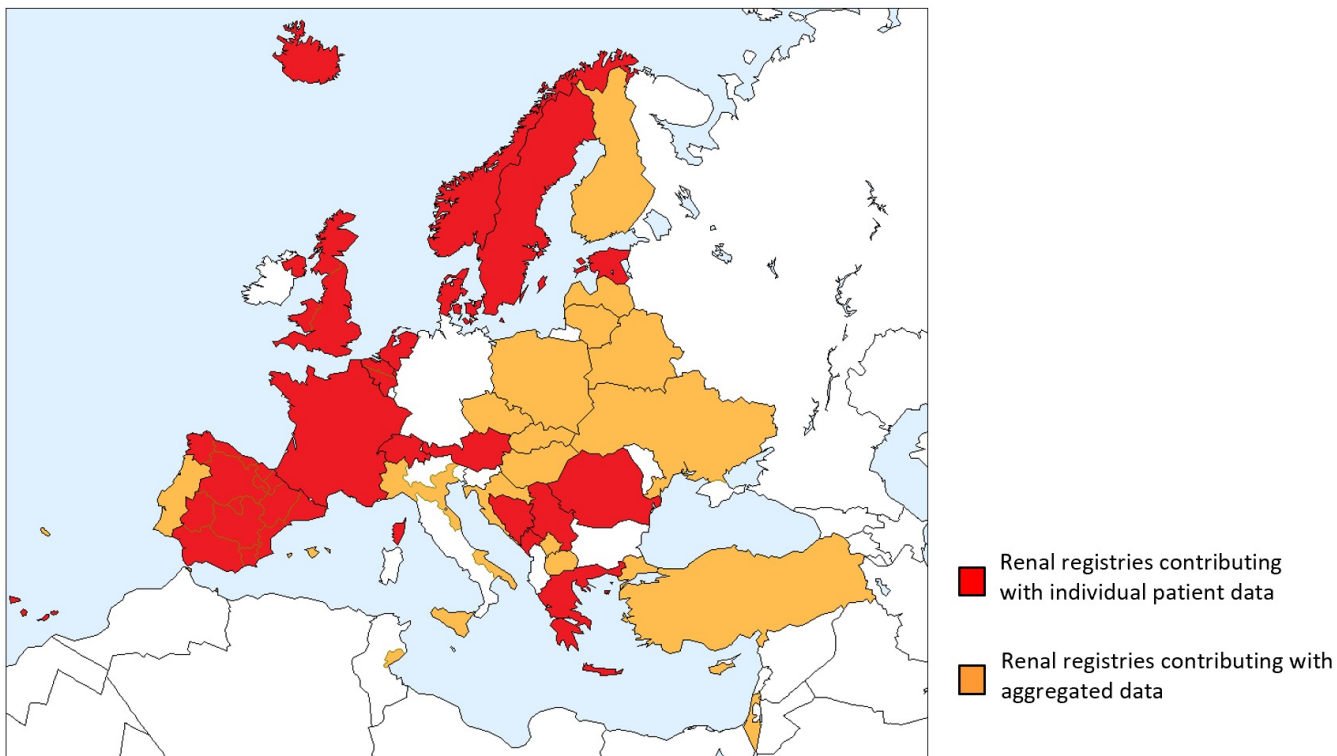


INCIDENCE

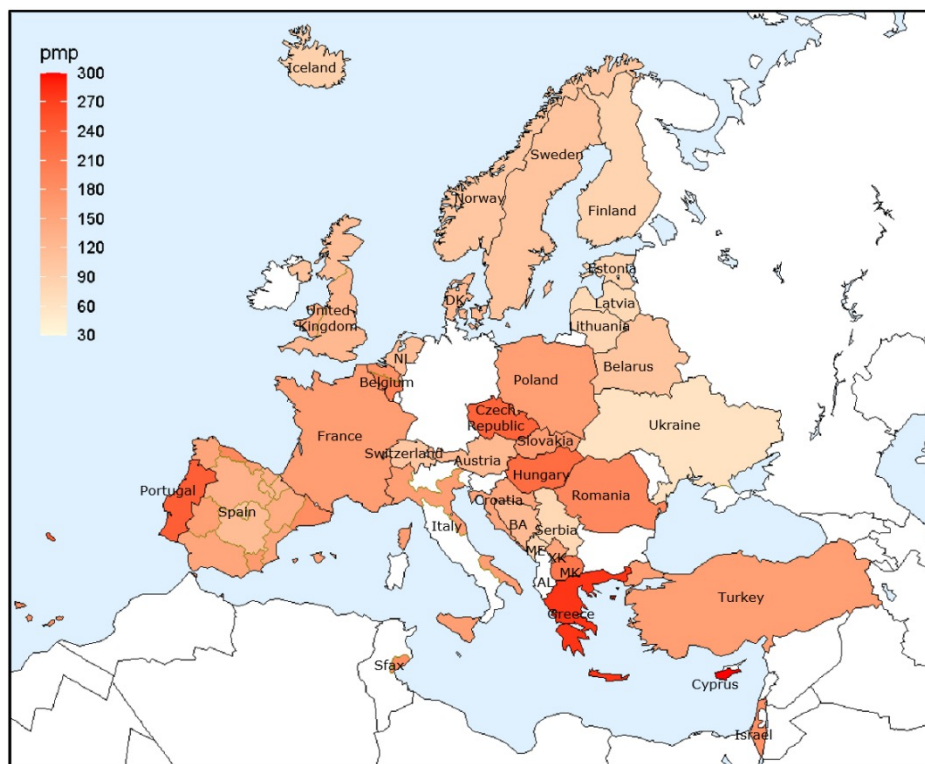
HOW DO WE COMPARE?



National and regional renal registries that contributed data to the 2022 ERA Registry Annual Report



Incident patients accepted for KRT in 2022, at day 1 by country



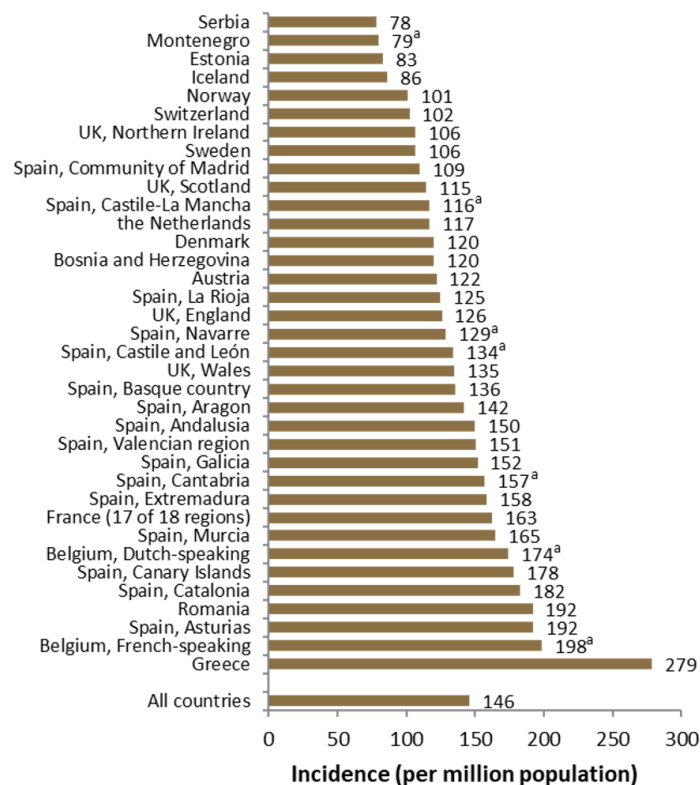
Incidence
240 pmp

Portugal 2022

Incident patients accepted for KRT in 2022, at day 1 by country

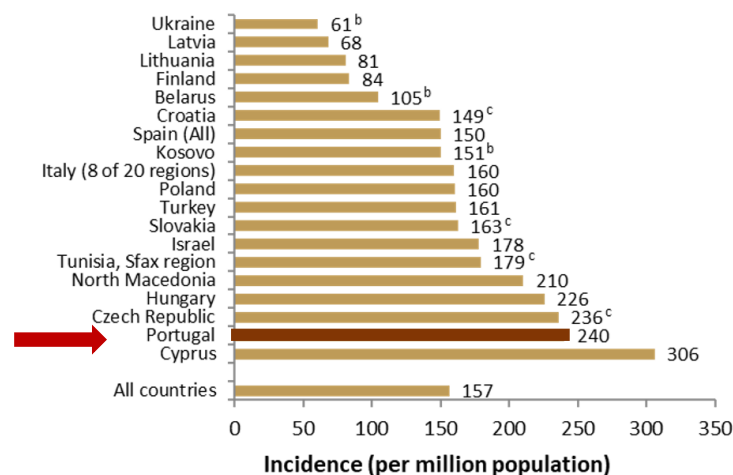
Unadjusted incidence

renal registries providing individual patient data



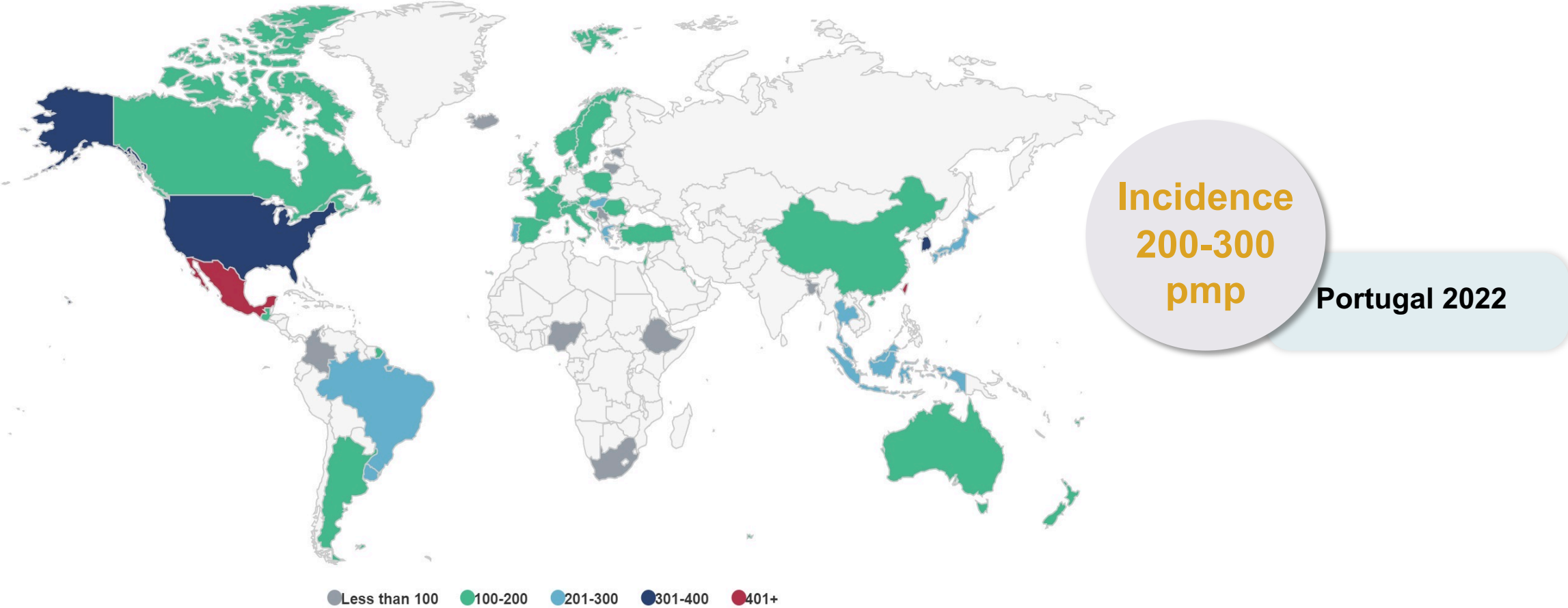
Unadjusted incidence

renal registries providing aggregated data



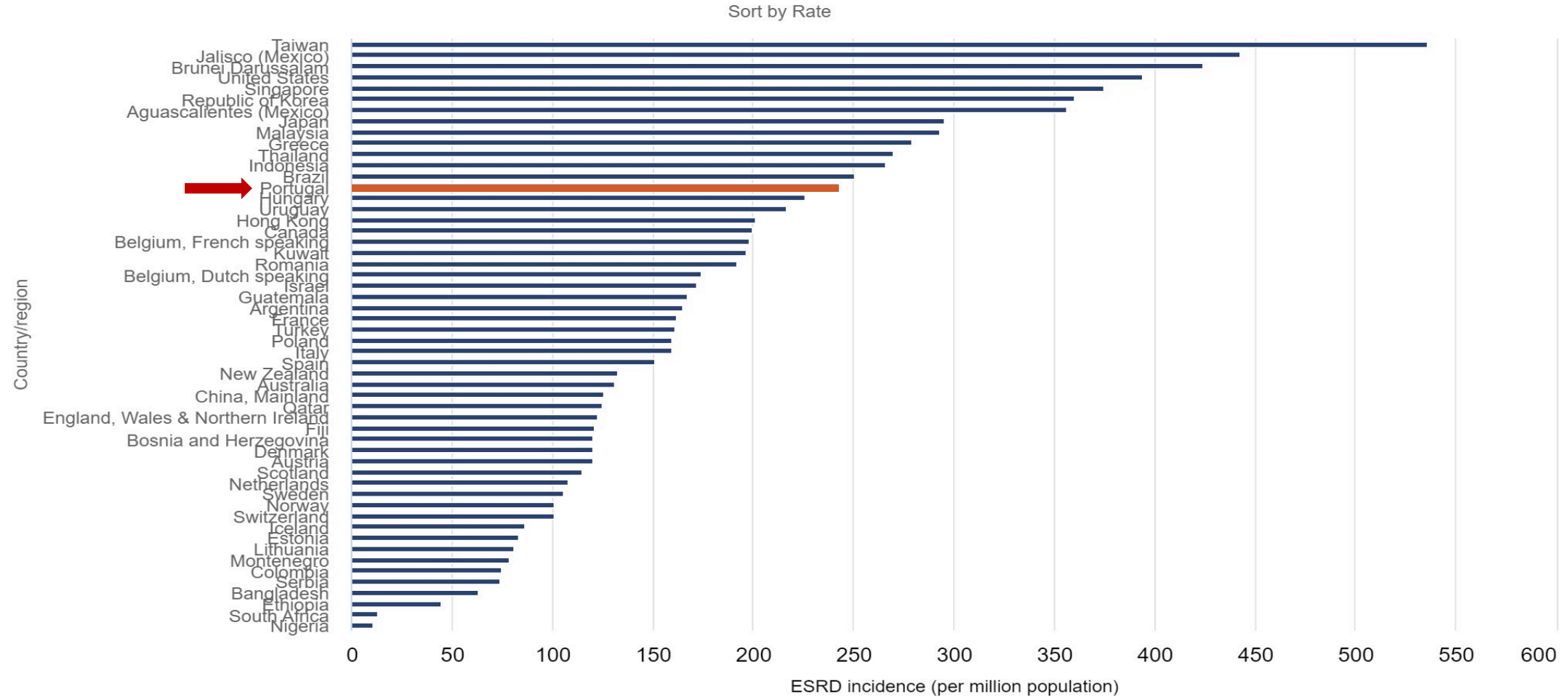
^a patients younger than 20 years of age are not included; ^b patients younger than 18 years of age are not included; ^c data includes patients receiving dialysis only

Figure 11.1 Geographic variation in incidence of treated ESRD per million population, by country or region, 2022



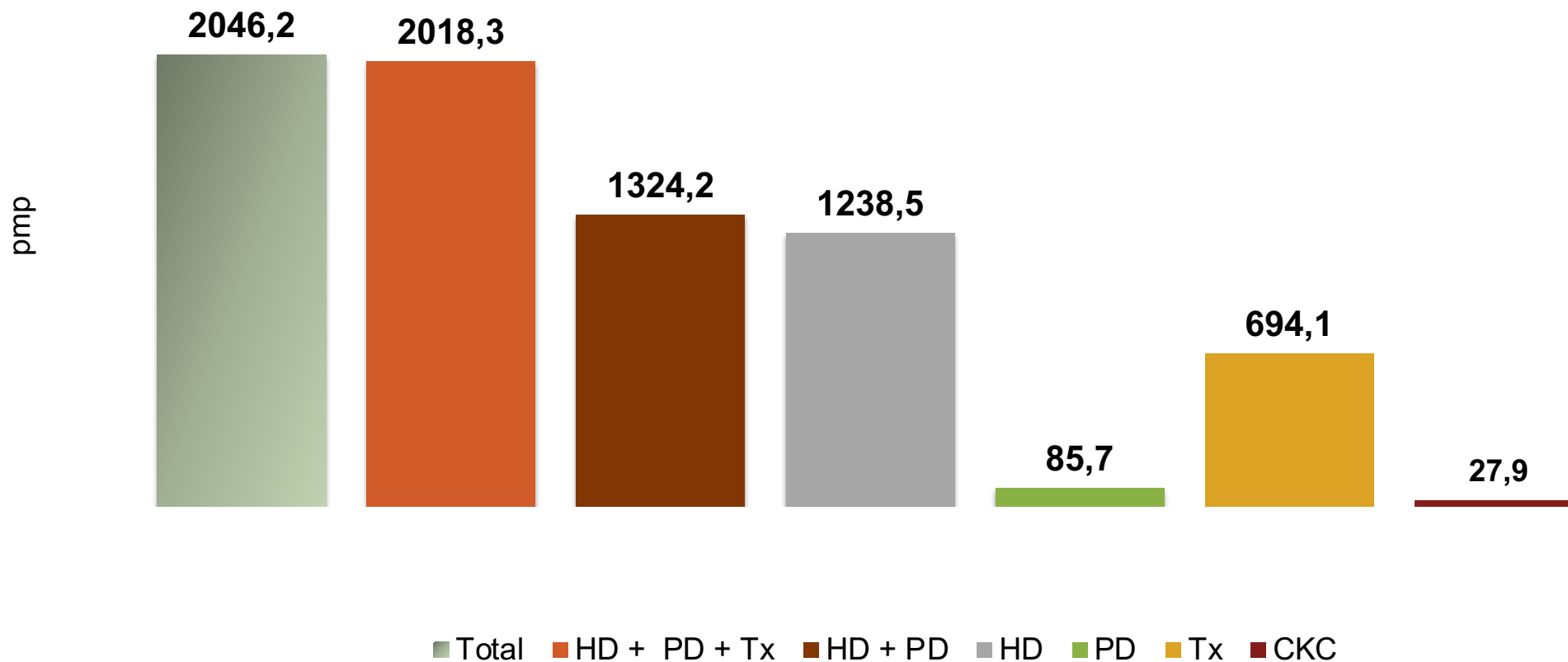
Data Source: 2024 United States Renal Data System Annual Data Report

Figure 11.2 Incidence of treated ESRD, by country or region, 2022

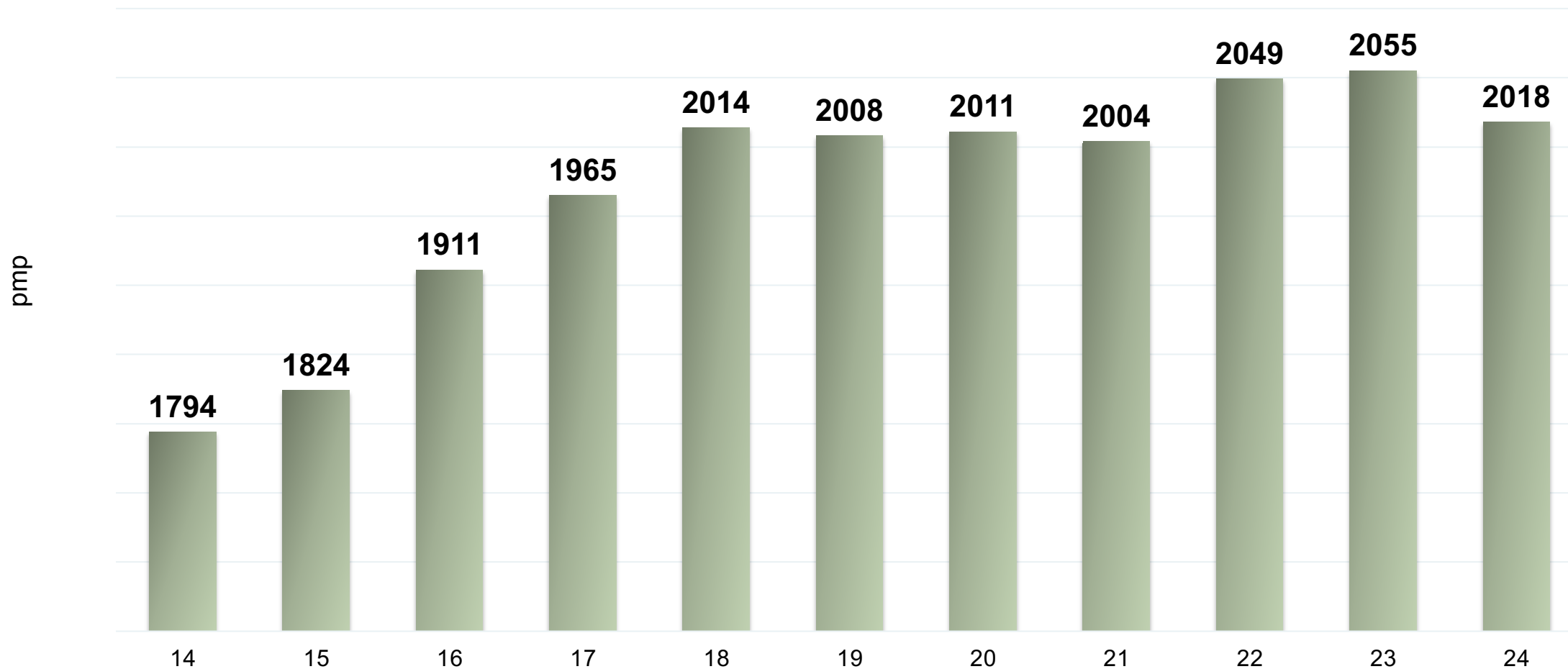


Data Source: 2024 United States Renal Data System Annual Data Report

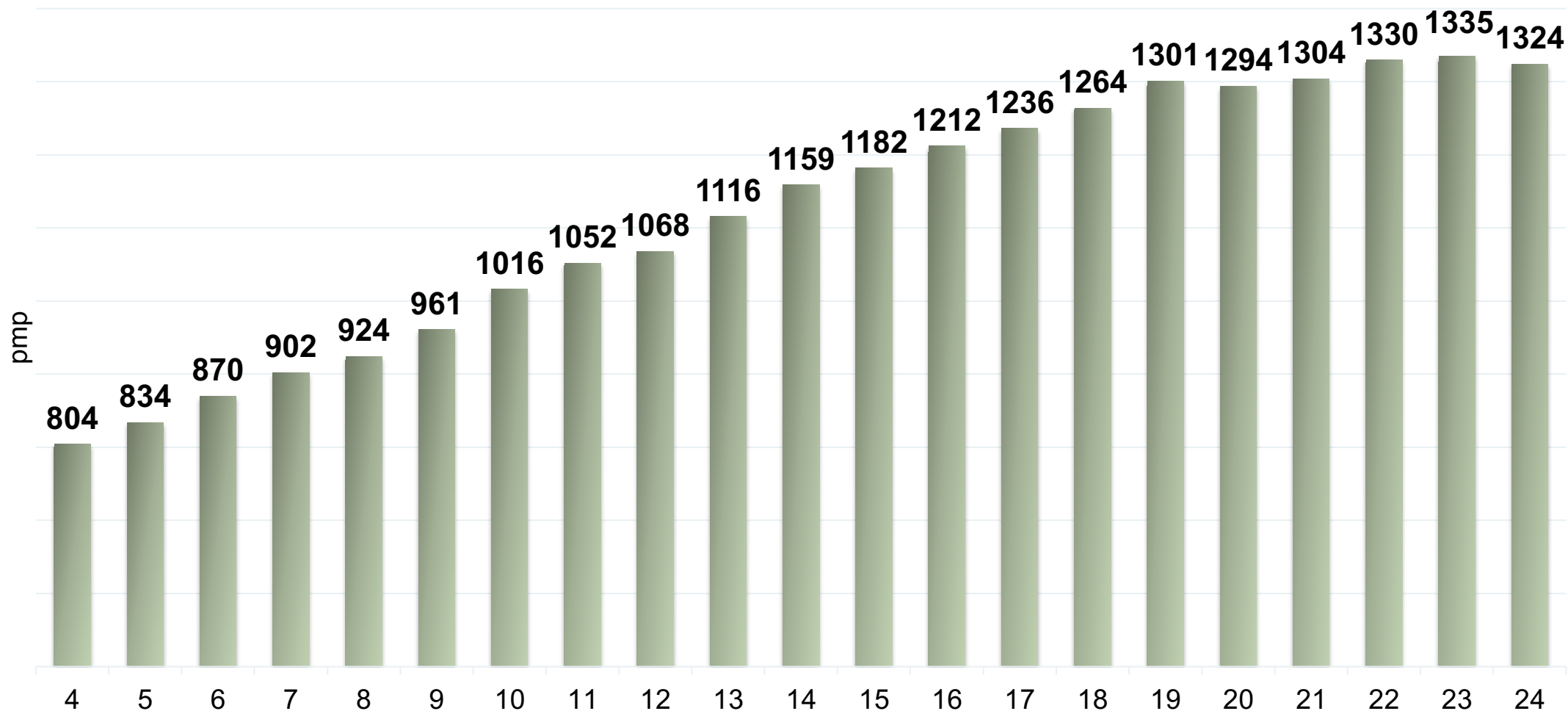
PREVALENT PATIENTS ON KRT BY MODALITY (PMP) 31st DECEMBER 2024



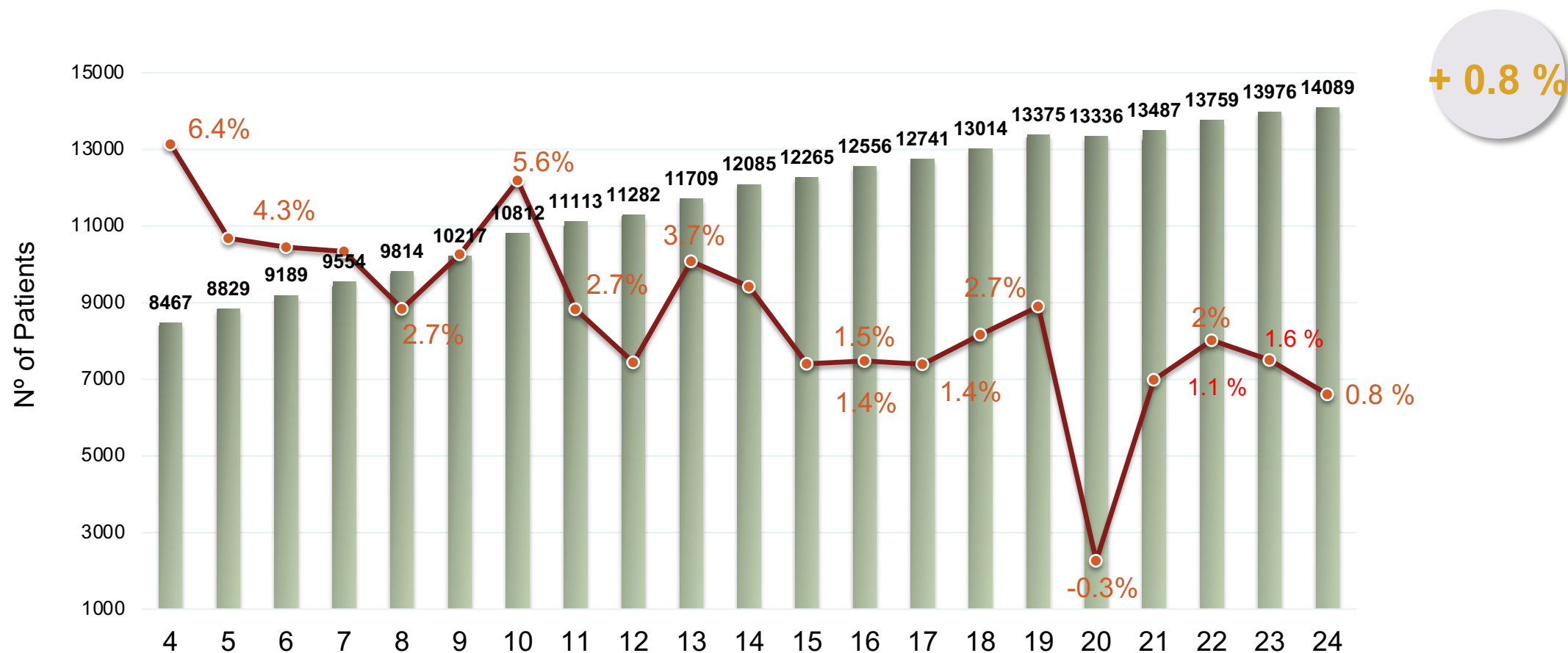
PREVALENT PATIENTS ON KRT (HD+DP+TX) PMP 31st DECEMBER 2014-2024



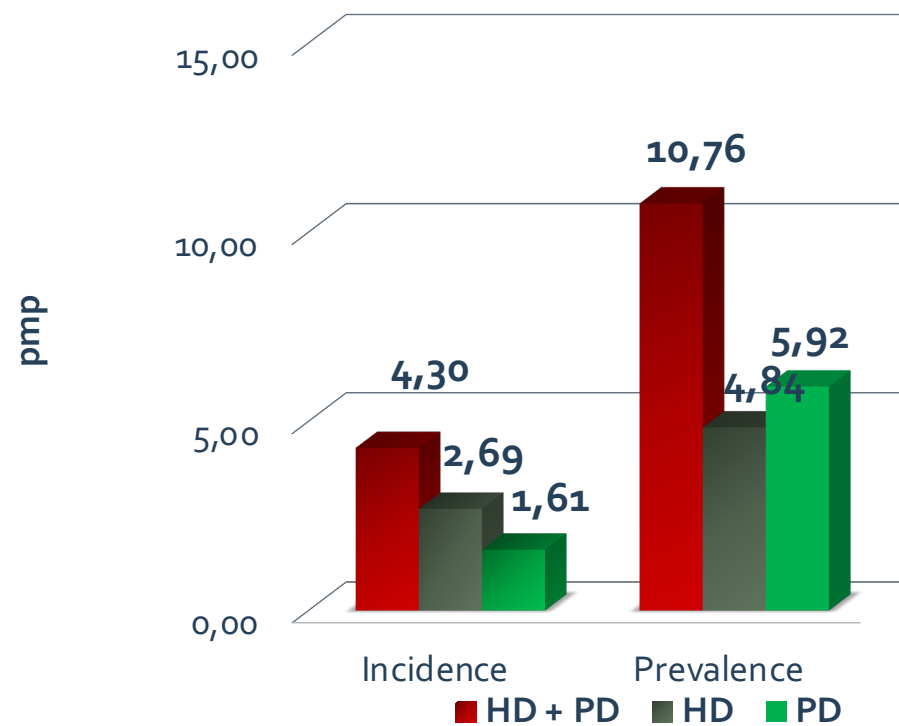
PREVALENT PATIENTS ON DIALYSIS (HD+DP) PMP 31st DECEMBER 2004-2024



PATIENTS ON DIALYSIS AND ANNUAL GROWTH AT 31st DECEMBER 2004-2024



INCIDENT AND PREVALENT PEDIATRIC PATIENTS ON HD AND PD PMP 2024

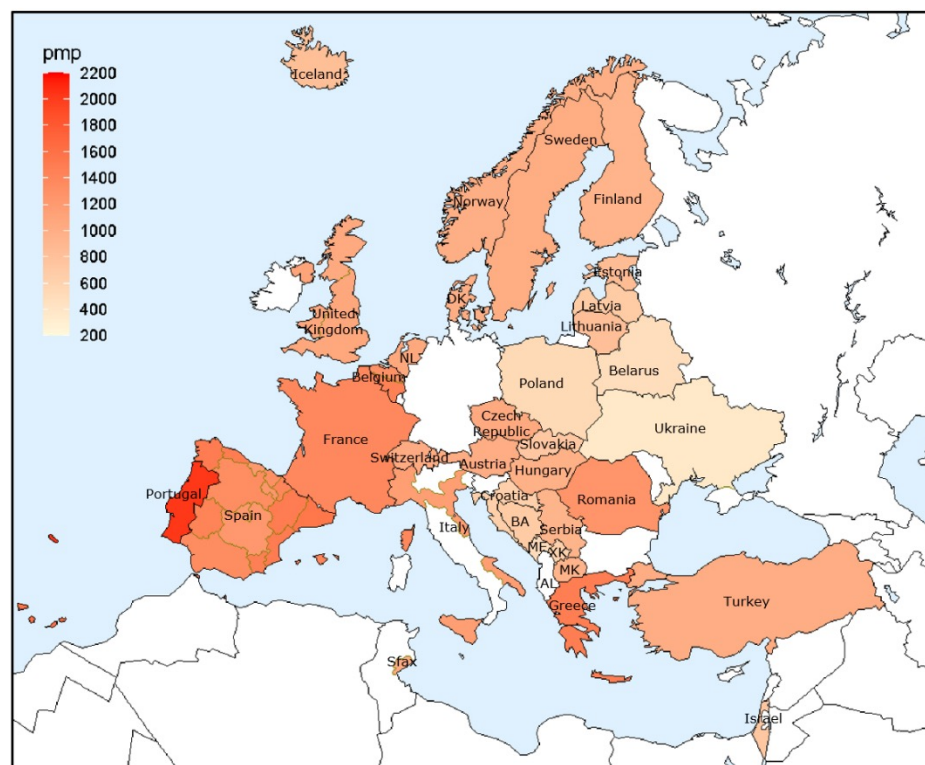


PREVALENCE

HOW DO WE COMPARE?

Prevalent patients on KRT in 2022

by country



**PREVALENCE
> 2000 pmp**

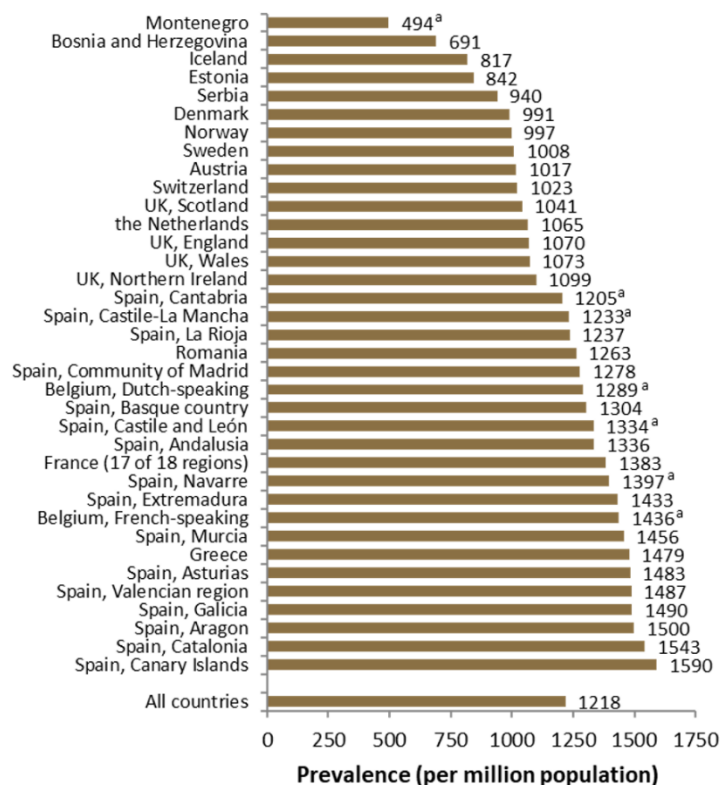
Portugal 2022

Prevalent patients on KRT in 2022

by country

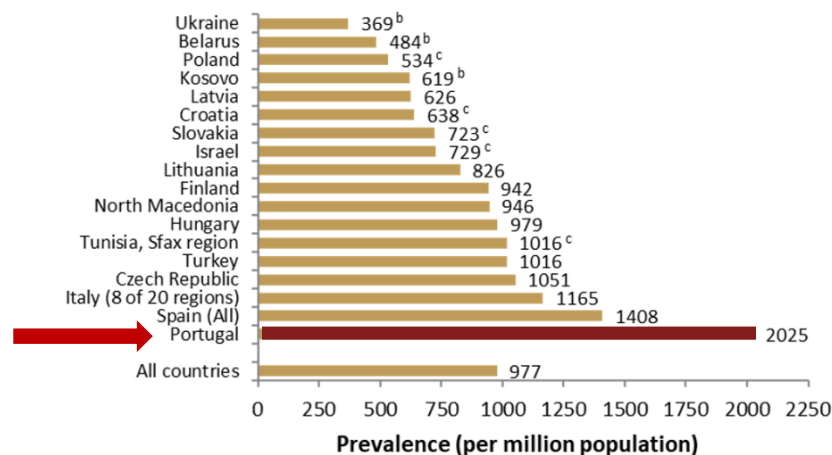
Unadjusted prevalence

renal registries providing individual patient data



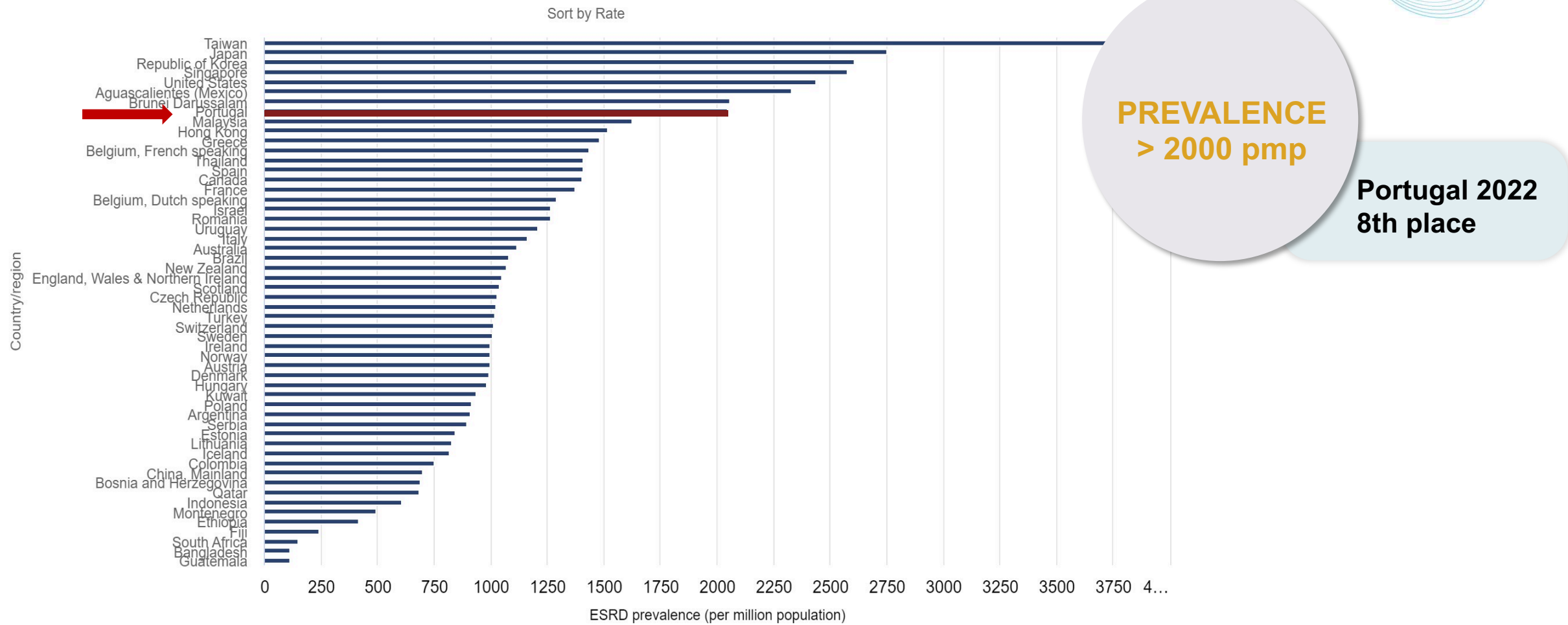
Unadjusted prevalence

renal registries providing aggregated data



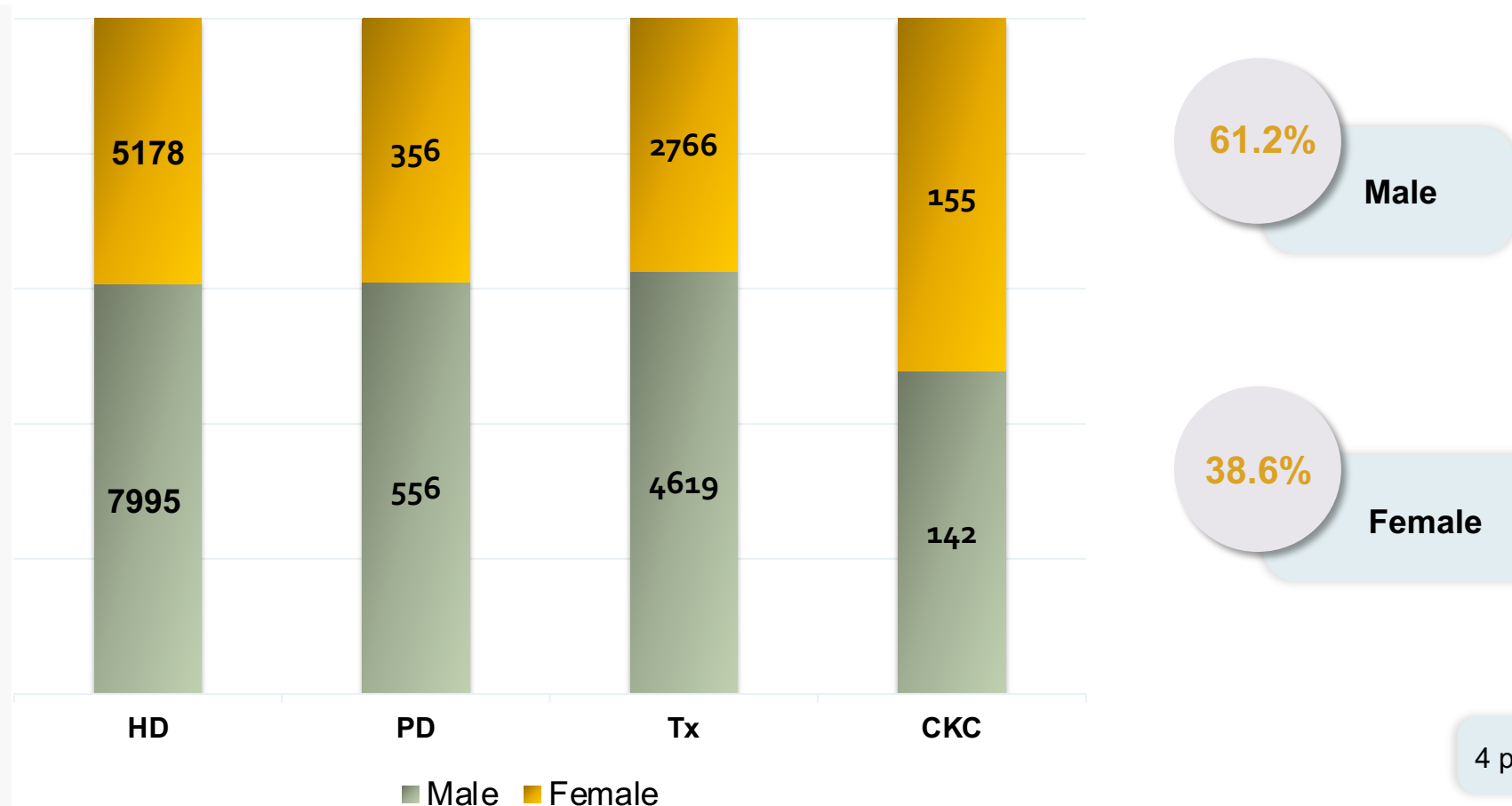
^a patients younger than 20 years of age are not included; ^b patients younger than 18 years of age are not included; ^c data includes patients receiving dialysis only

Figure 11.11 Prevalence of treated ESRD, by country or region, 2022

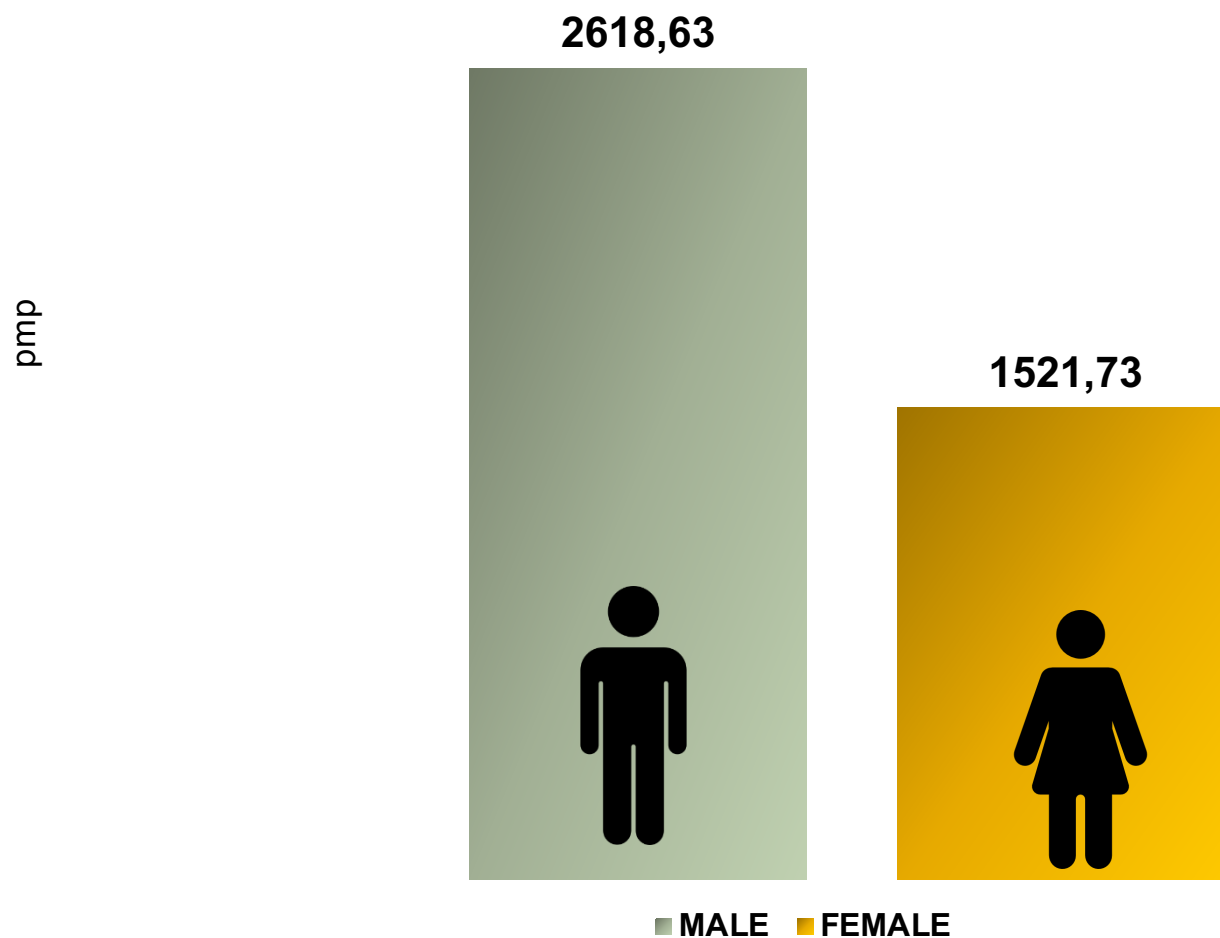


Data Source: 2024 United States Renal Data System Annual Data Report

GENDER DISTRIBUTION IN EACH MODALITY AT 31st DECEMBER 2024



PREVALENCE BY GENDER ALL KRT PMP AT 31st DECEMBER 2024

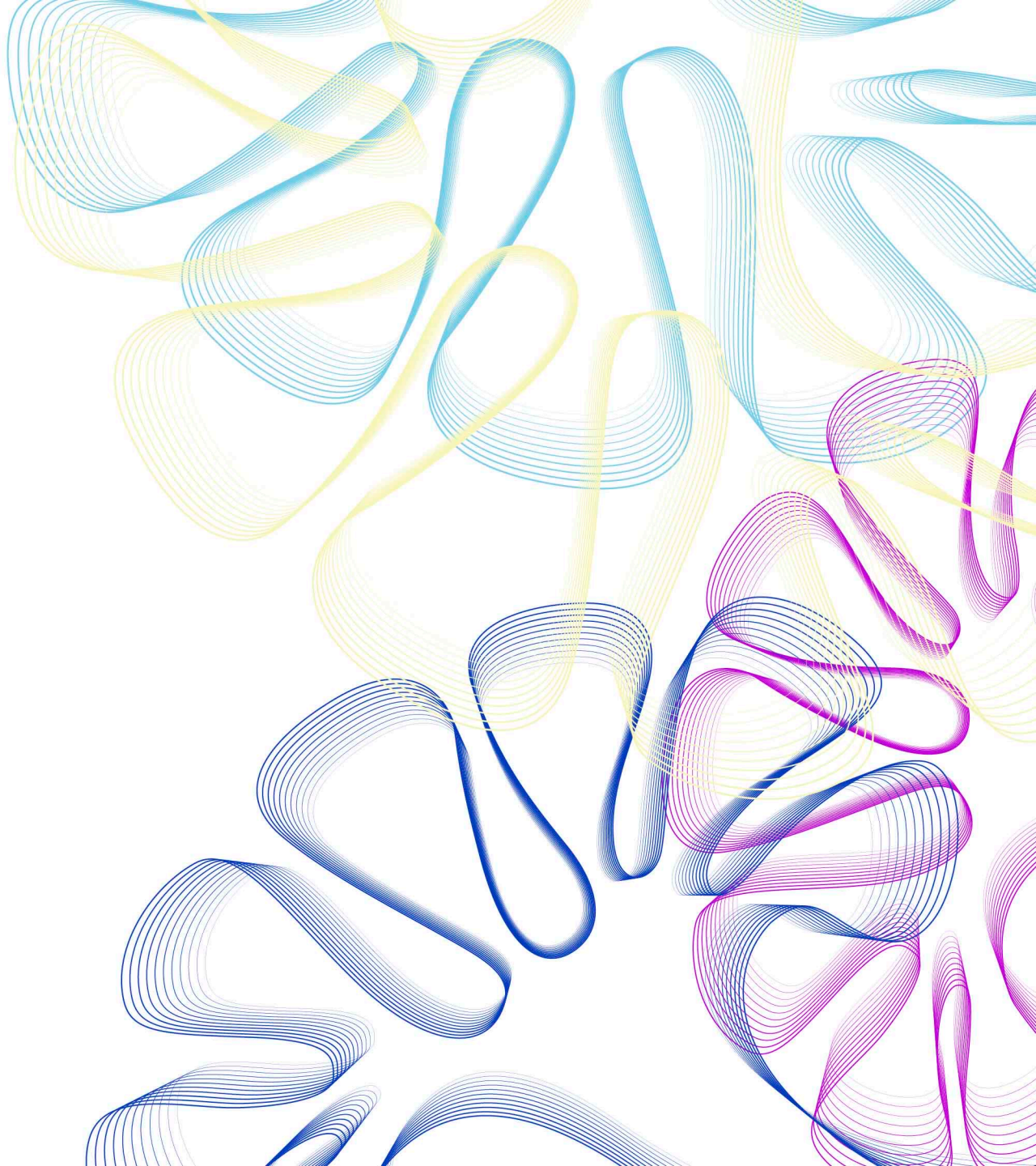


HEMODIALYSIS

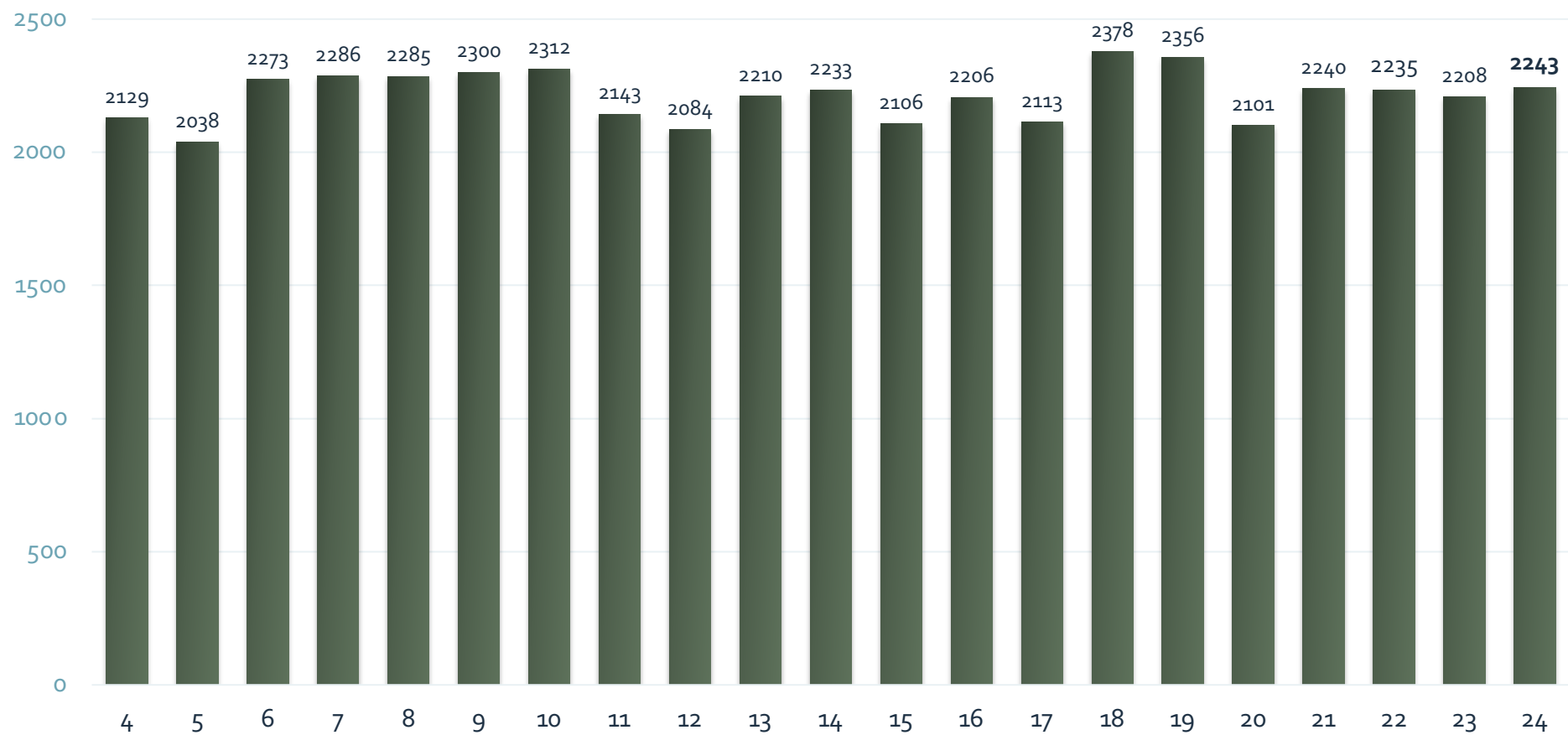
Encontro Renal 2025



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Nefrologia

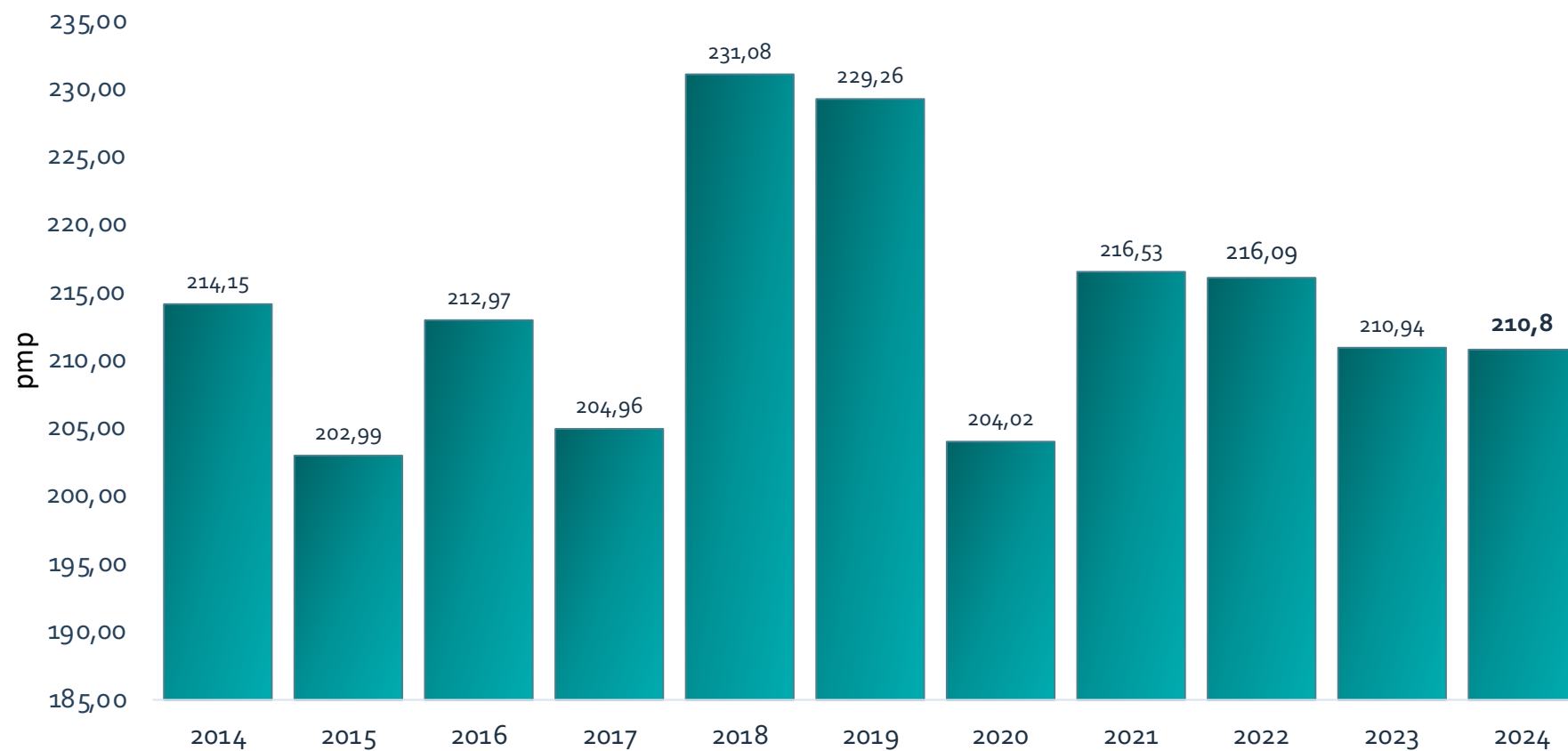


NEW PATIENTS ACCEPTED FOR HEMODIALYSIS 2004 - 2024

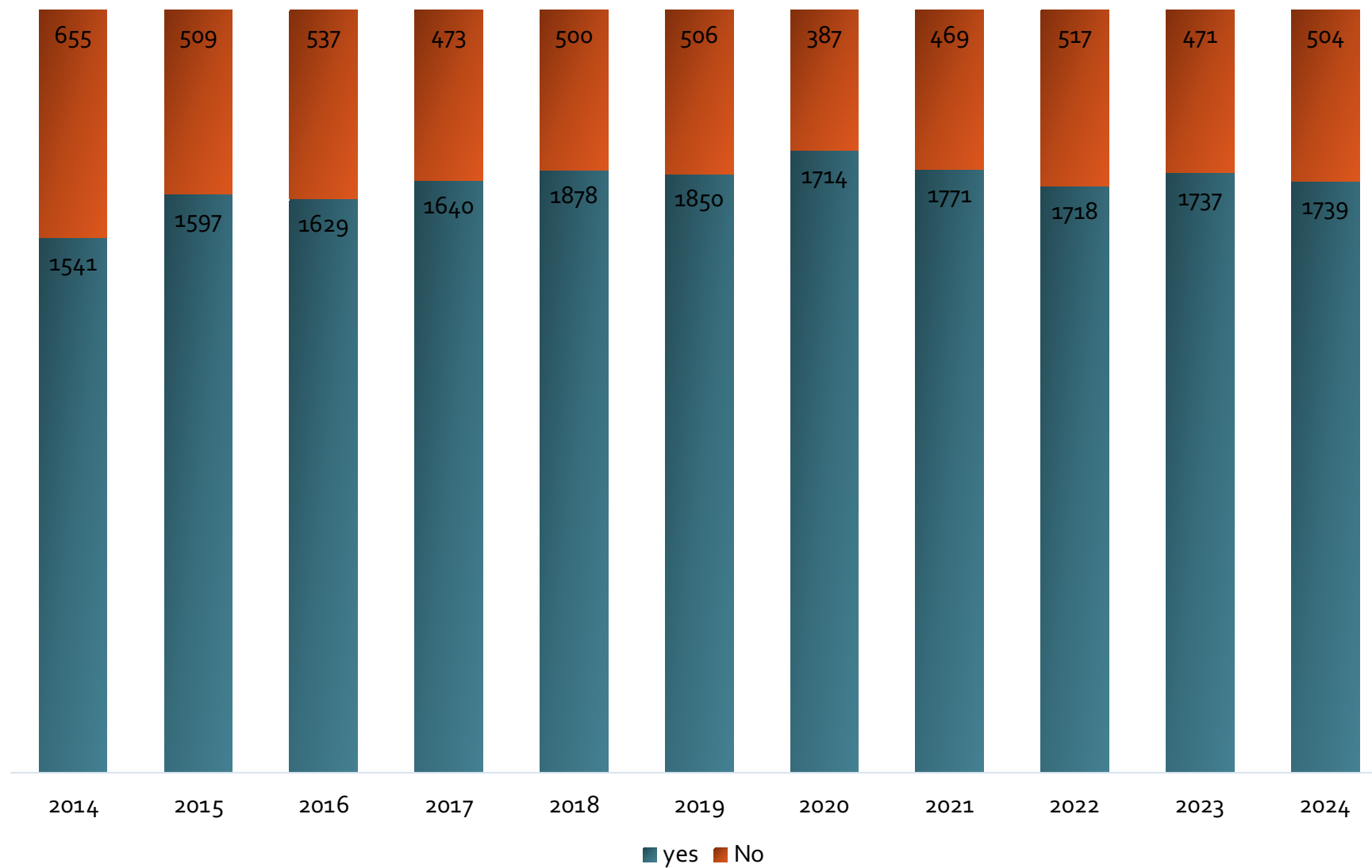


+1.5%

INCIDENT PATIENTS ACCEPTED FOR HEMODIALYSIS (pmp) 2014 - 2024

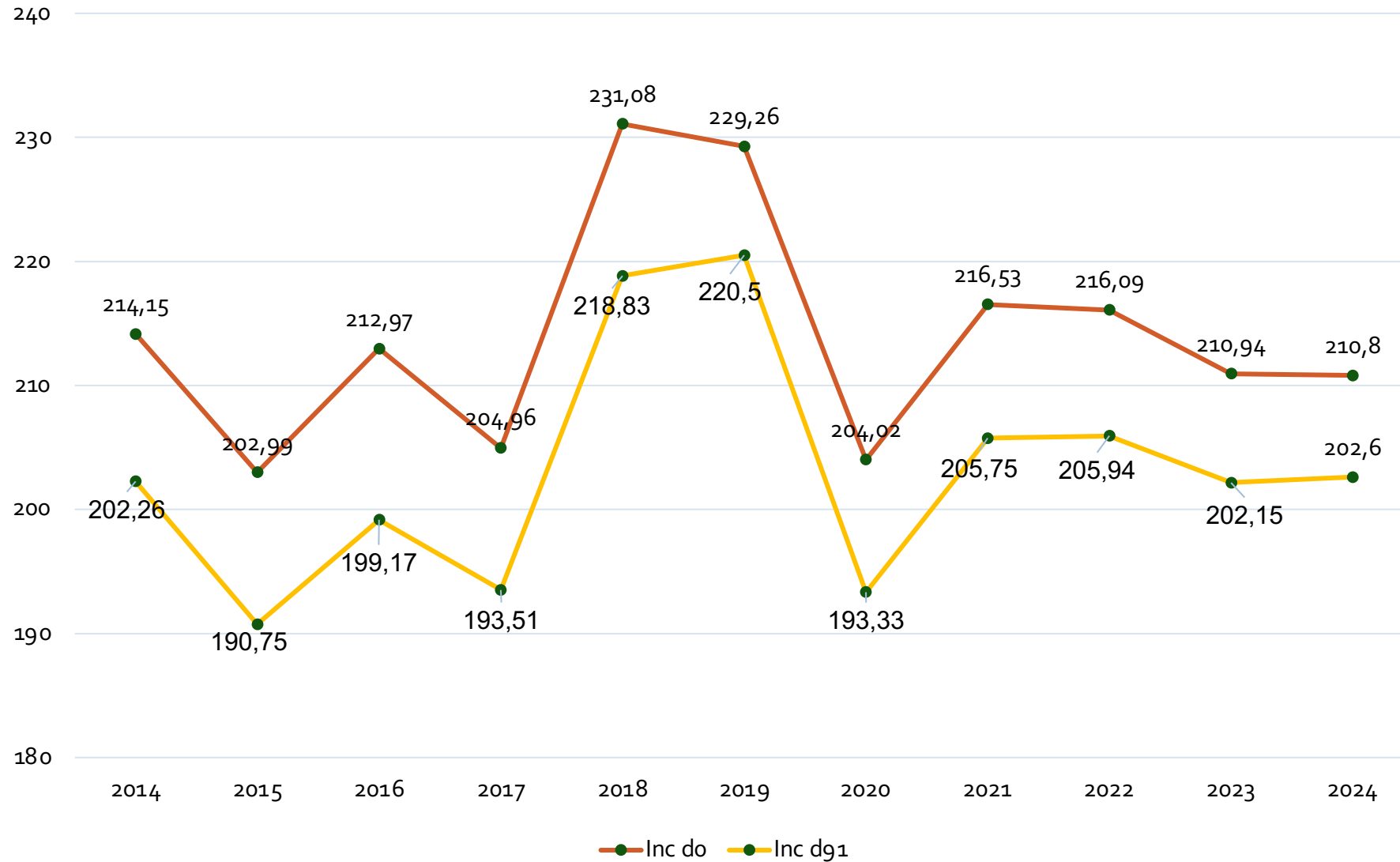


PREVIOUS FOLLOW UP BY NEPHROLOGY (> 3 MONTHS) HD PATIENTS 2014 – 2024



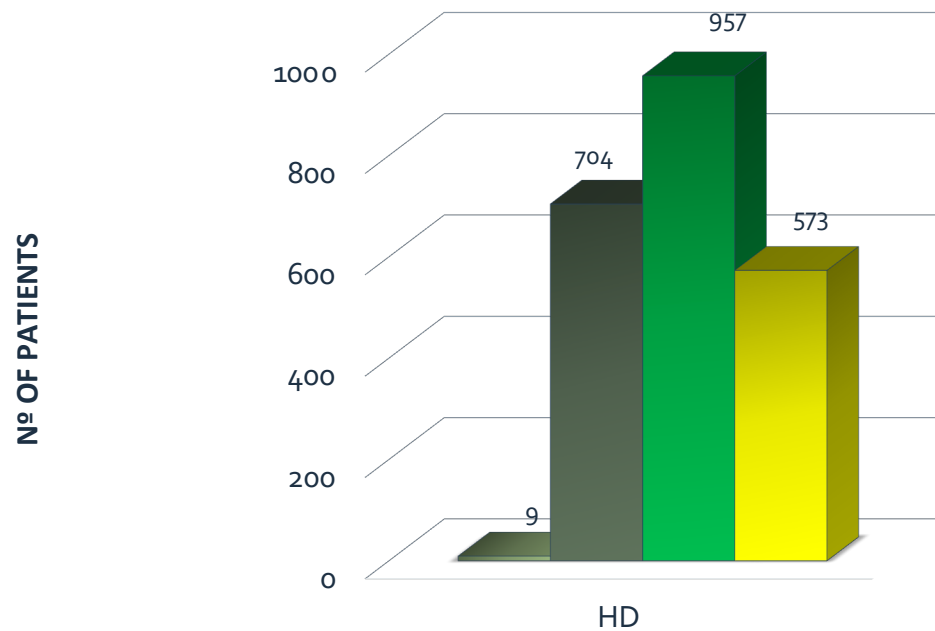
22.4%

INCIDENT PATIENTS ACCEPTED FOR HEMODIALYSIS DAY 0 AND DAY 91 2014-2024



↓4%

PATIENTS ACCEPTED FOR HEMODIALYSIS BY AGE GROUP - 2024

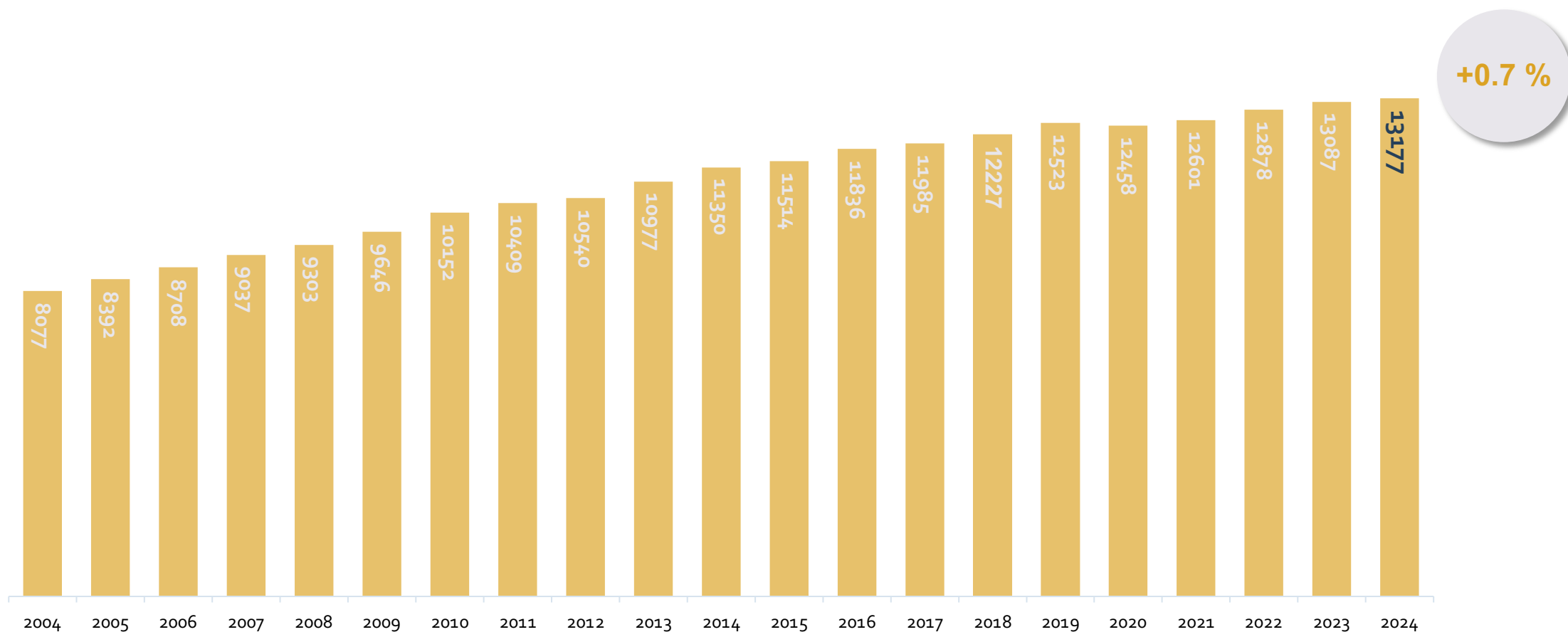


68.2 %

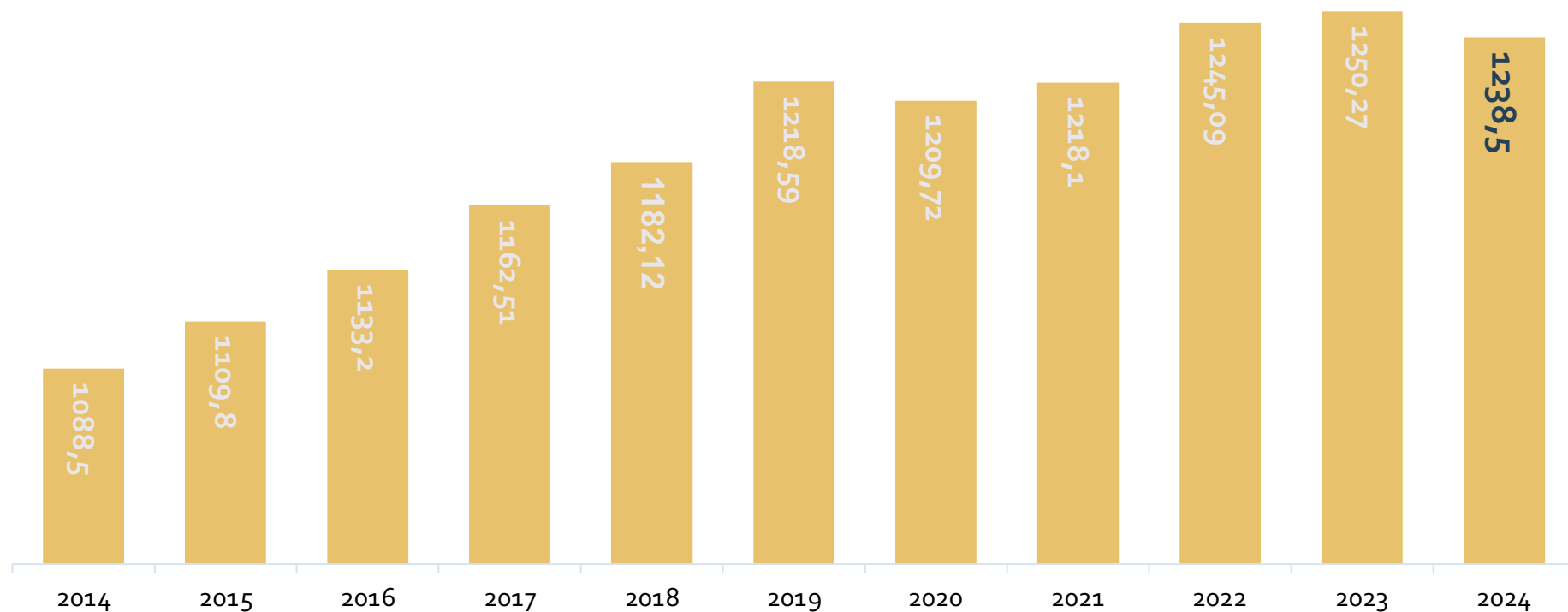
> 65 years old

■ < 18 years old (0,4%) ■ 18 to 65 years old (31,4%) ■ 65 to 80 years old (42,6%) ■ > 80 years old (25,6%)

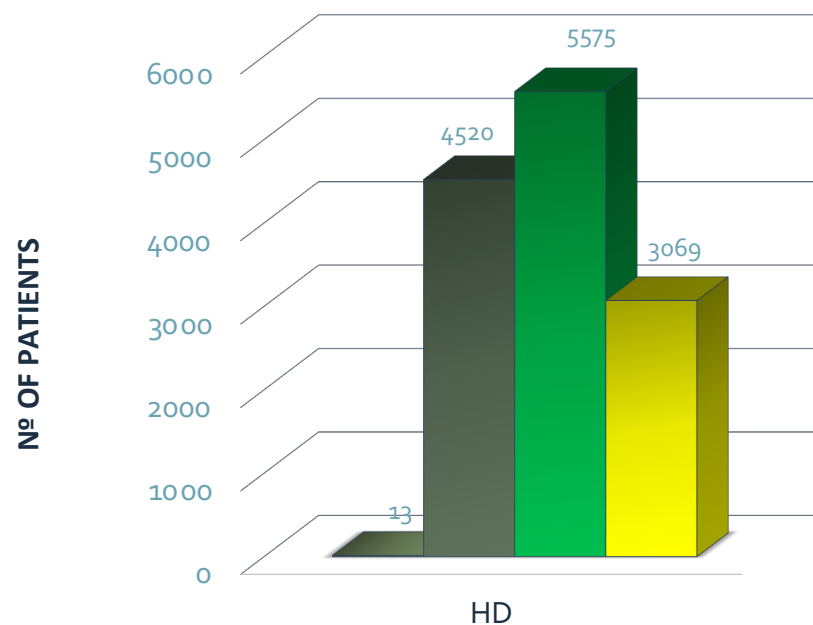
PREVALENT PATIENTS TREATED WITH HEMODIALYSIS 31st DECEMBER 2004-2024



PREVALENT PATIENTS TREATED WITH HEMODIALYSIS (PMP) 2014 - 2024



PREVALENT PATIENTS IN HEMODIALYSIS BY AGE GROUP 31st DECEMBER 2024



65.6%

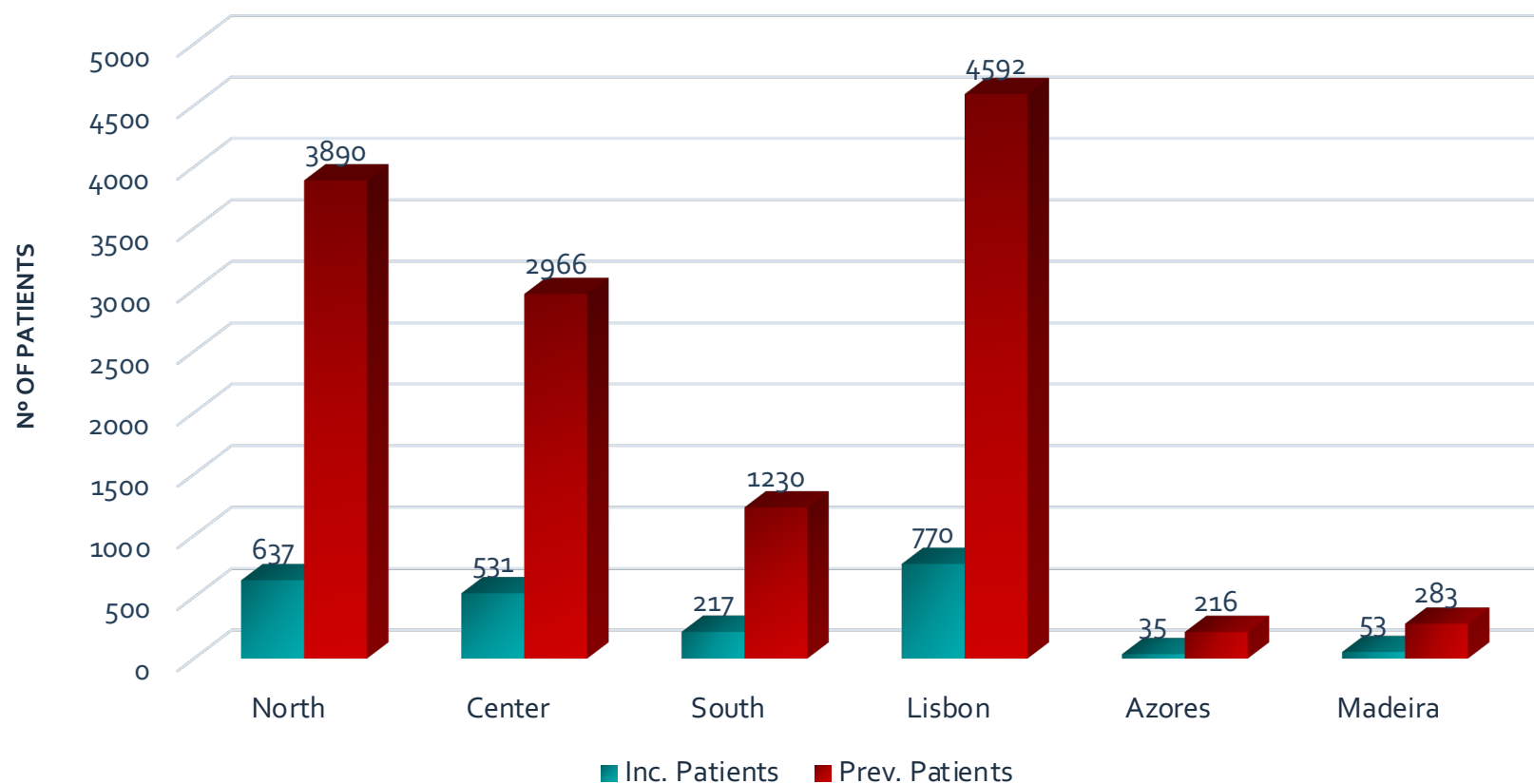
> 65 years old

23.3%

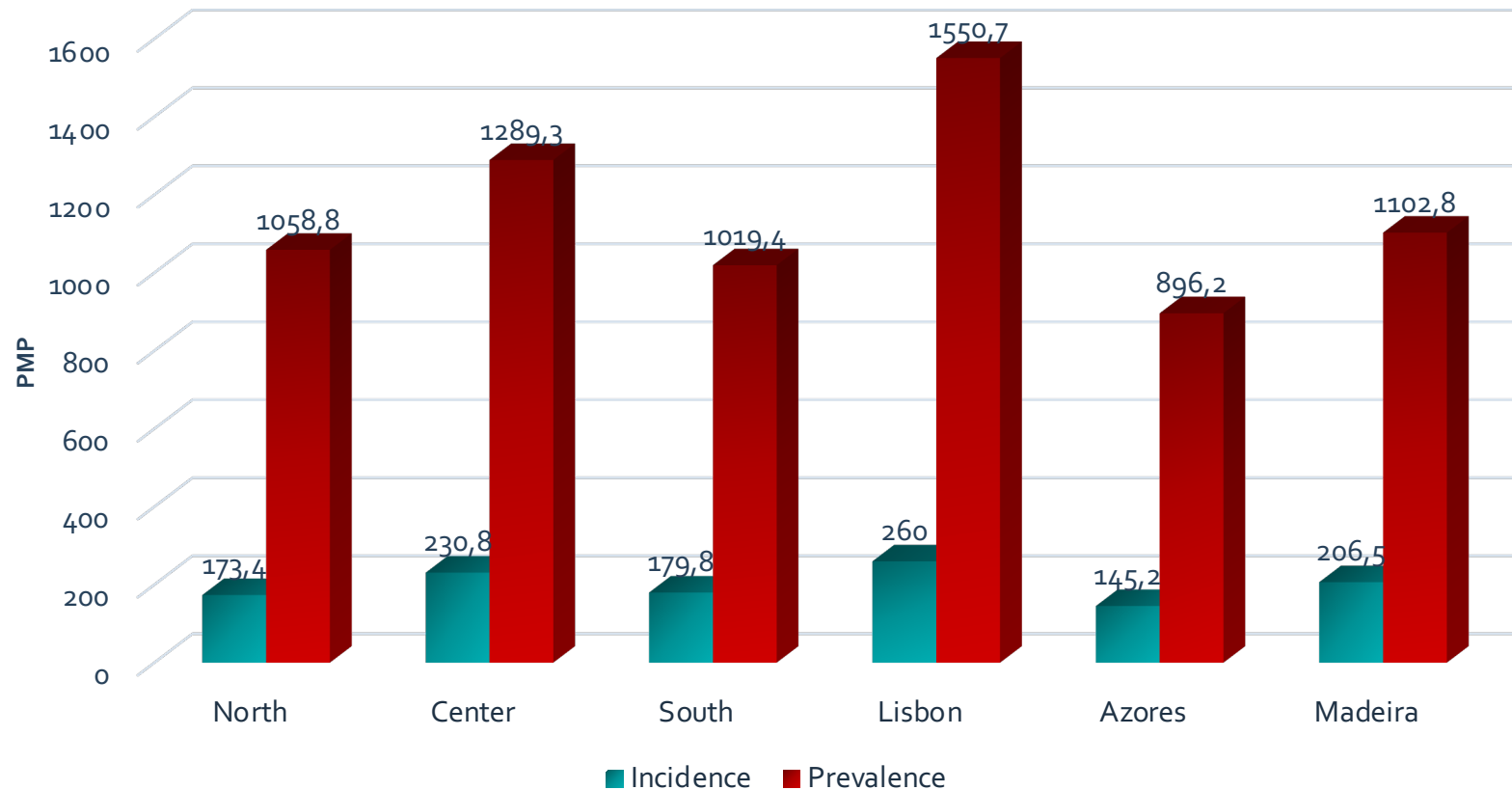
> 80 years old

■ < 18 years old (0,1%) ■ 18 to 65 years old (34,3%) ■ 65 to 80 years old (42,3%) ■ >80 years old (23,3%)

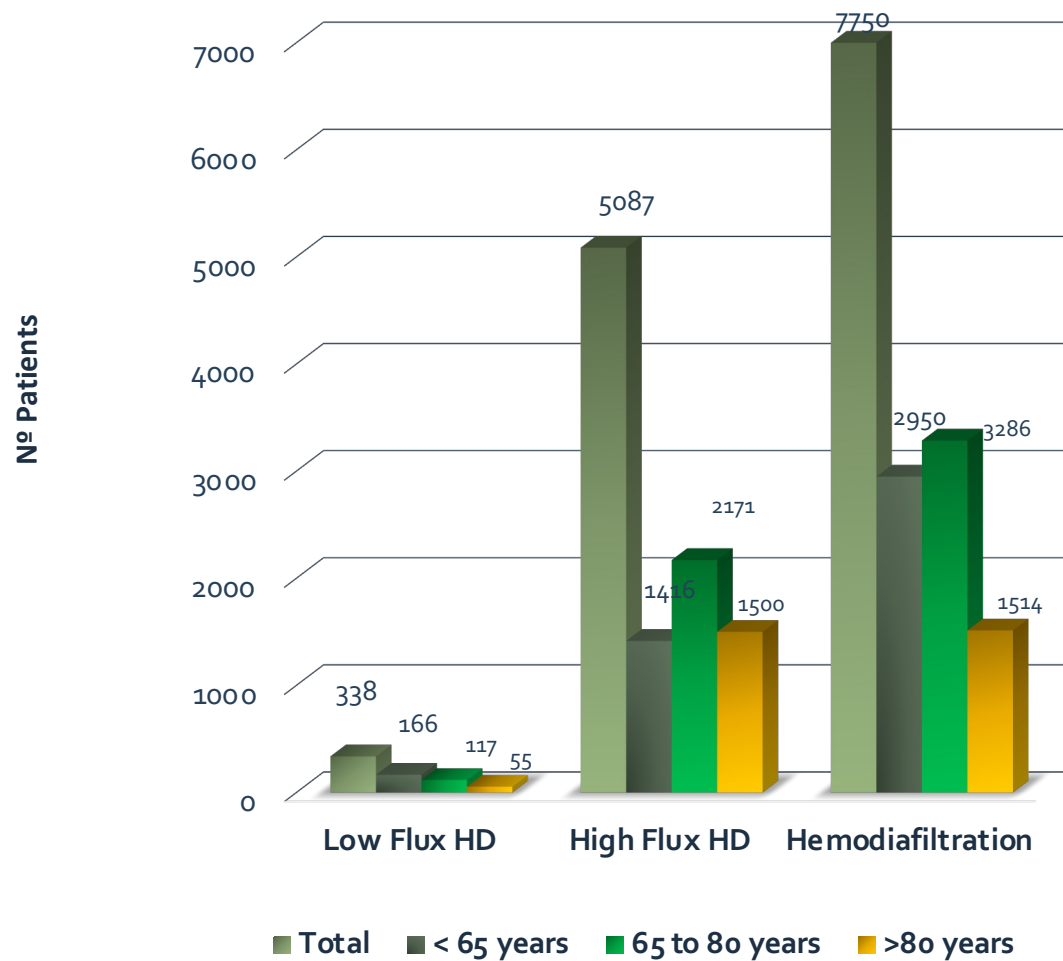
INCIDENT AND PREVALENT PATIENTS IN HEMODIALYSIS BY REGION (NUTS 2013) 2024



INCIDENCE AND PREVALENCE IN HEMODIALYSIS (PMP) BY REGION (NUTS 2013) 2024

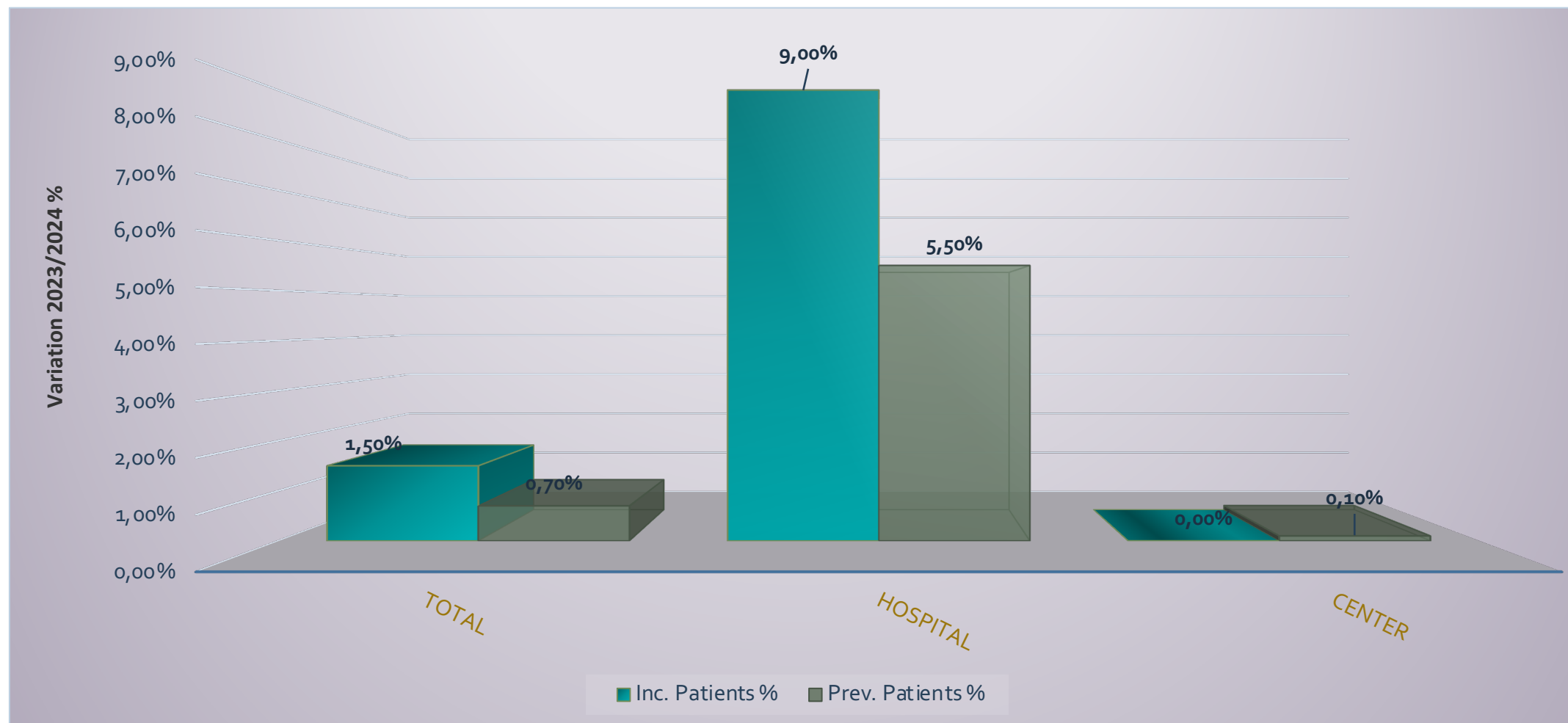


HD PATIENTS – DISTRIBUTION BY TECHNIQUE IN EACH AGE GROUP 31st DECEMBER 2024

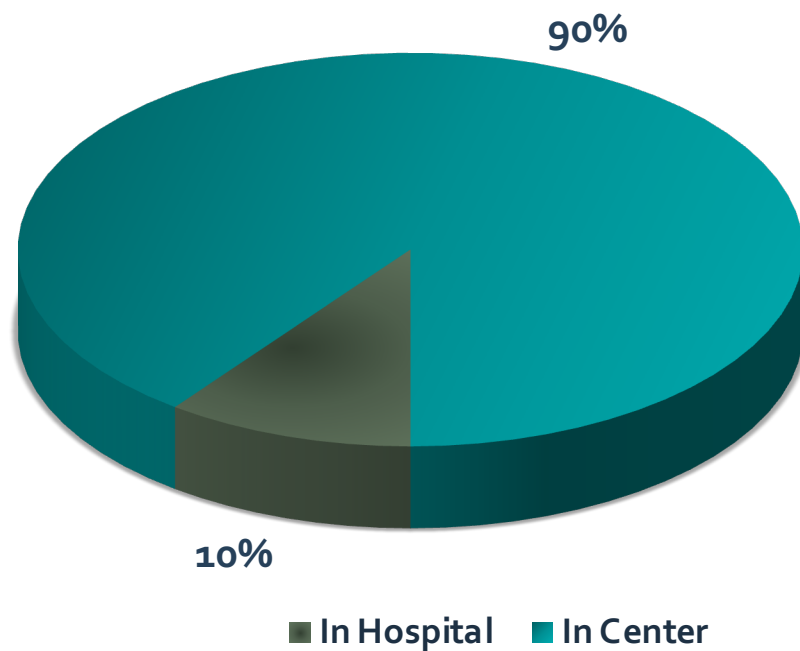


N = 13175
Hemodiafiltration – 58,8 %
Low Flux - 2,5 %

HEMODIALYSIS GROWTH 2023 Vs 2024 (%) 31st DECEMBER EACH YEAR



DISTRIBUTION OF HEMODIALYSIS PATIENTS BY TYPE OF UNIT 31st DECEMBER 2024



1347

In Hospital

11830

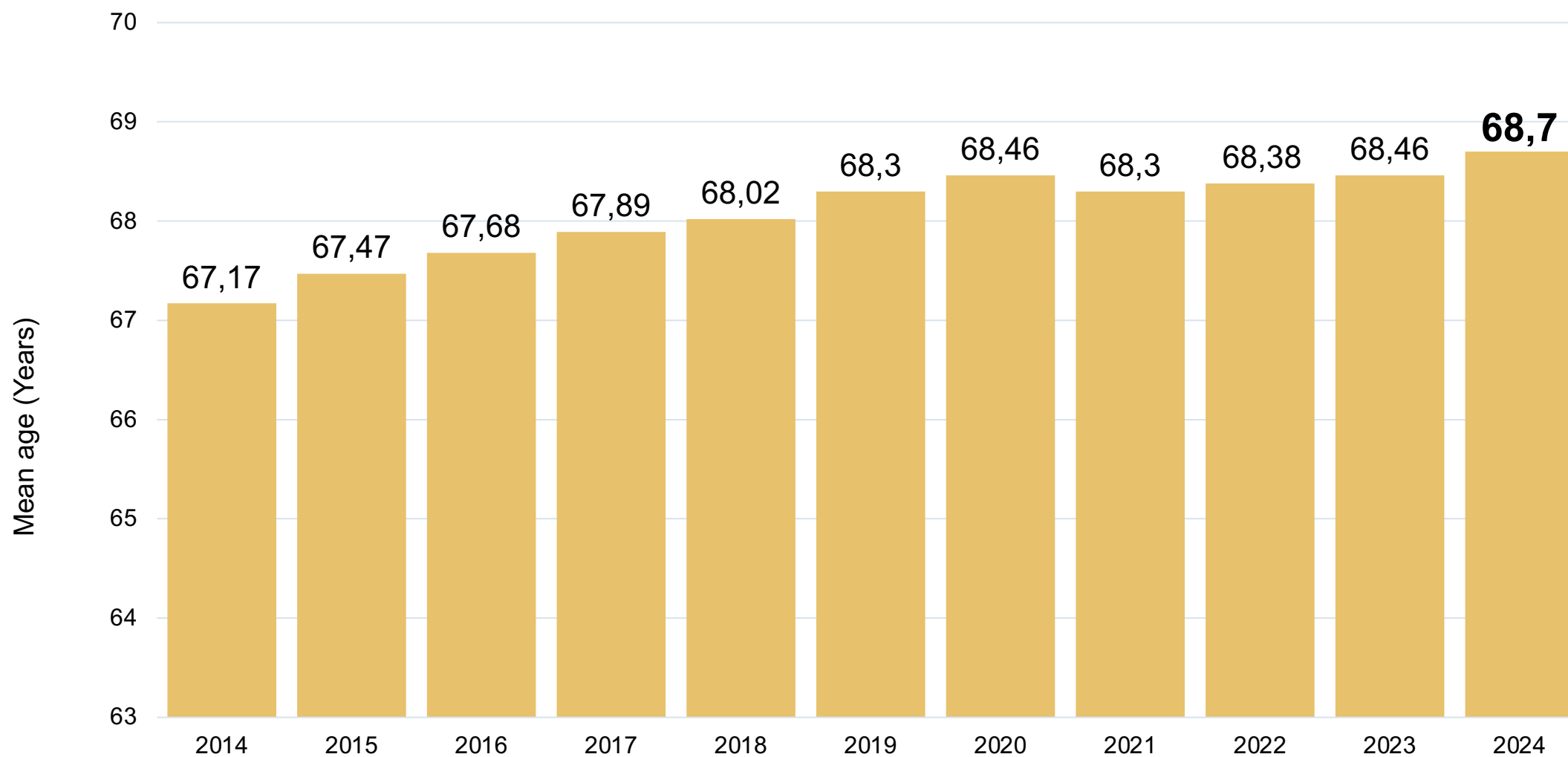
In Center

8
patients

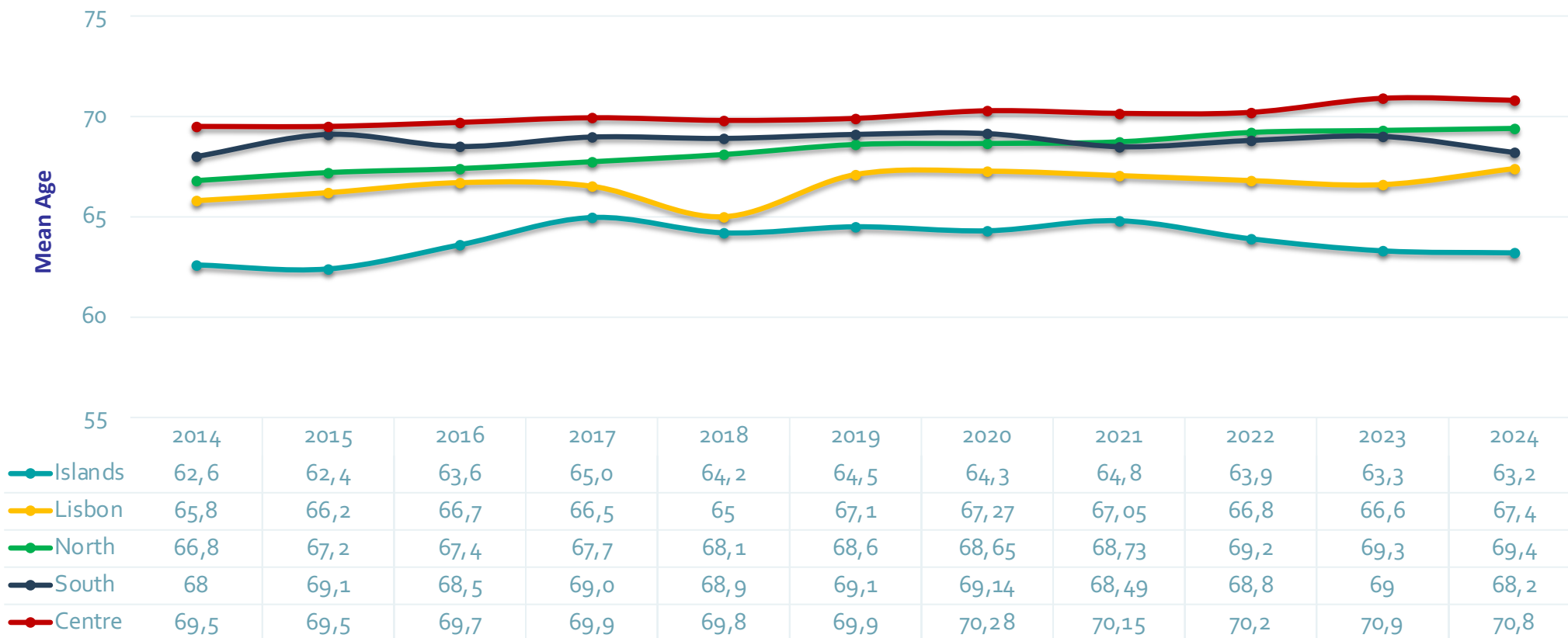
HOME HEMODIALYSIS

N = 13177

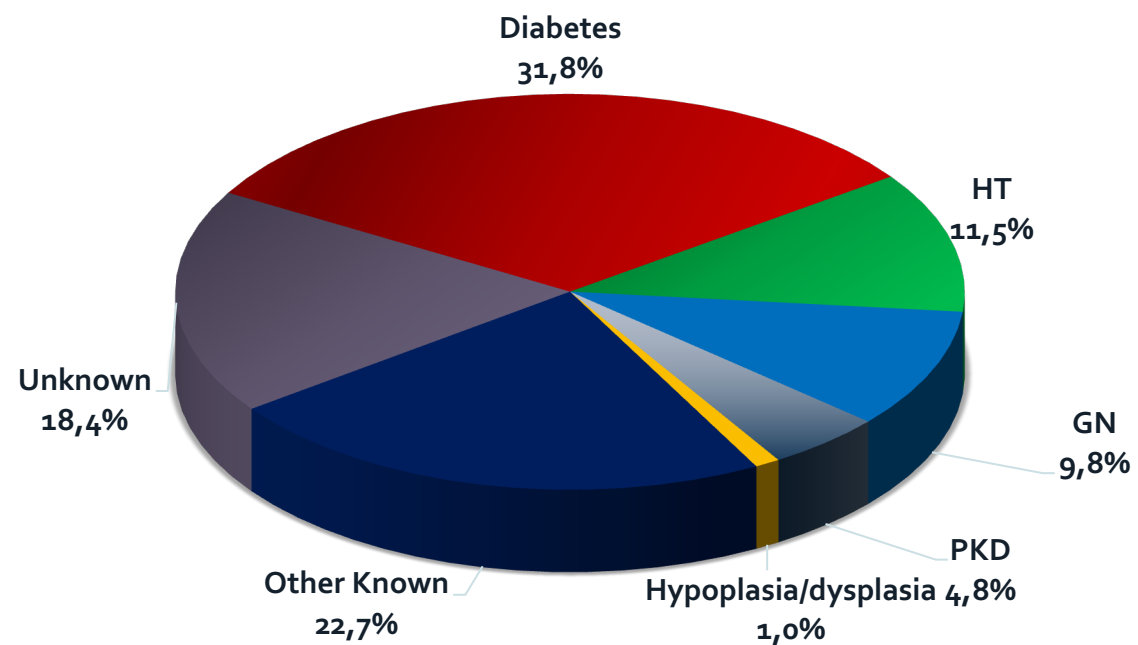
MEAN AGE OF PATIENTS TREATED WITH HEMODIALYSIS 31st DECEMBER 2014-2024



MEAN AGE OF PATIENTS TREATED WITH HEMODIALYSIS BY REGION 31st DECEMBER 2014-2024

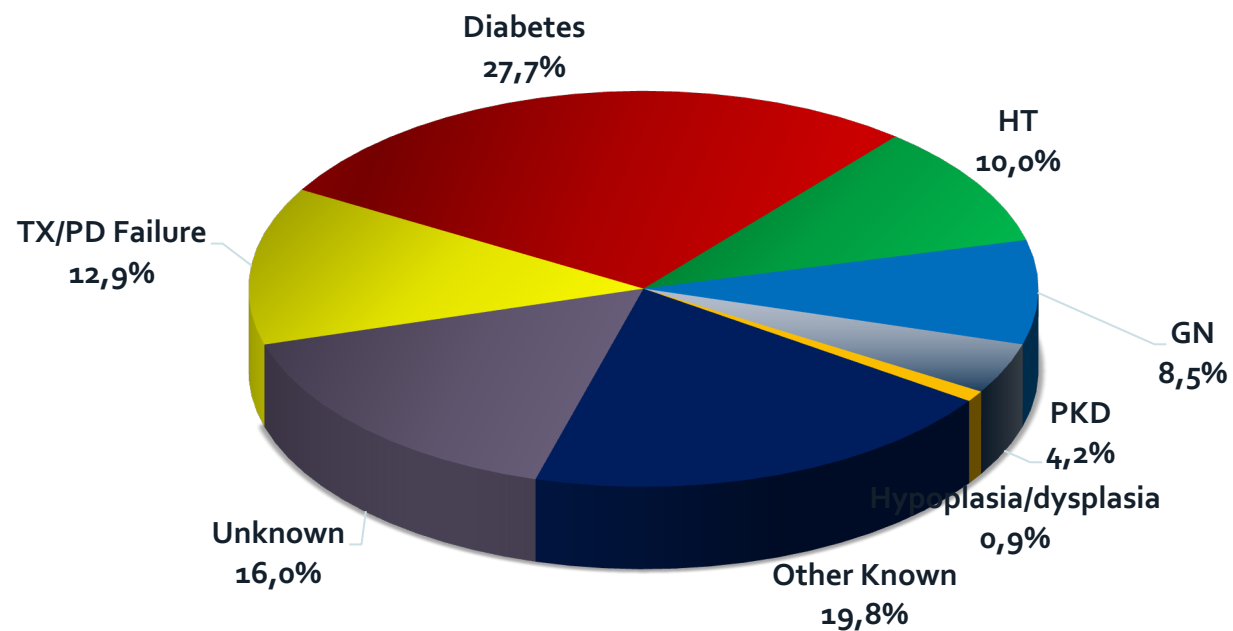


PRIMARY RENAL DISEASE OF PATIENTS ACCEPTED FOR HD - 2024



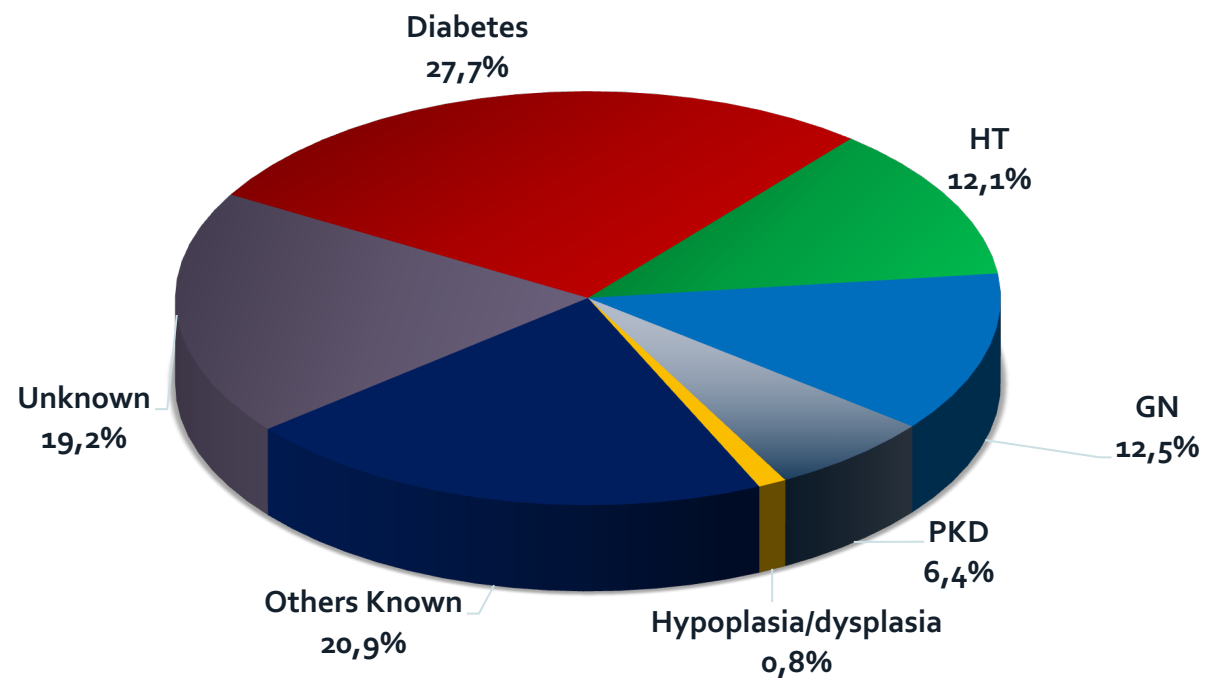
N = 2243

ETIOLOGY OF ALL PATIENTS ACCEPTED FOR HD - 2024



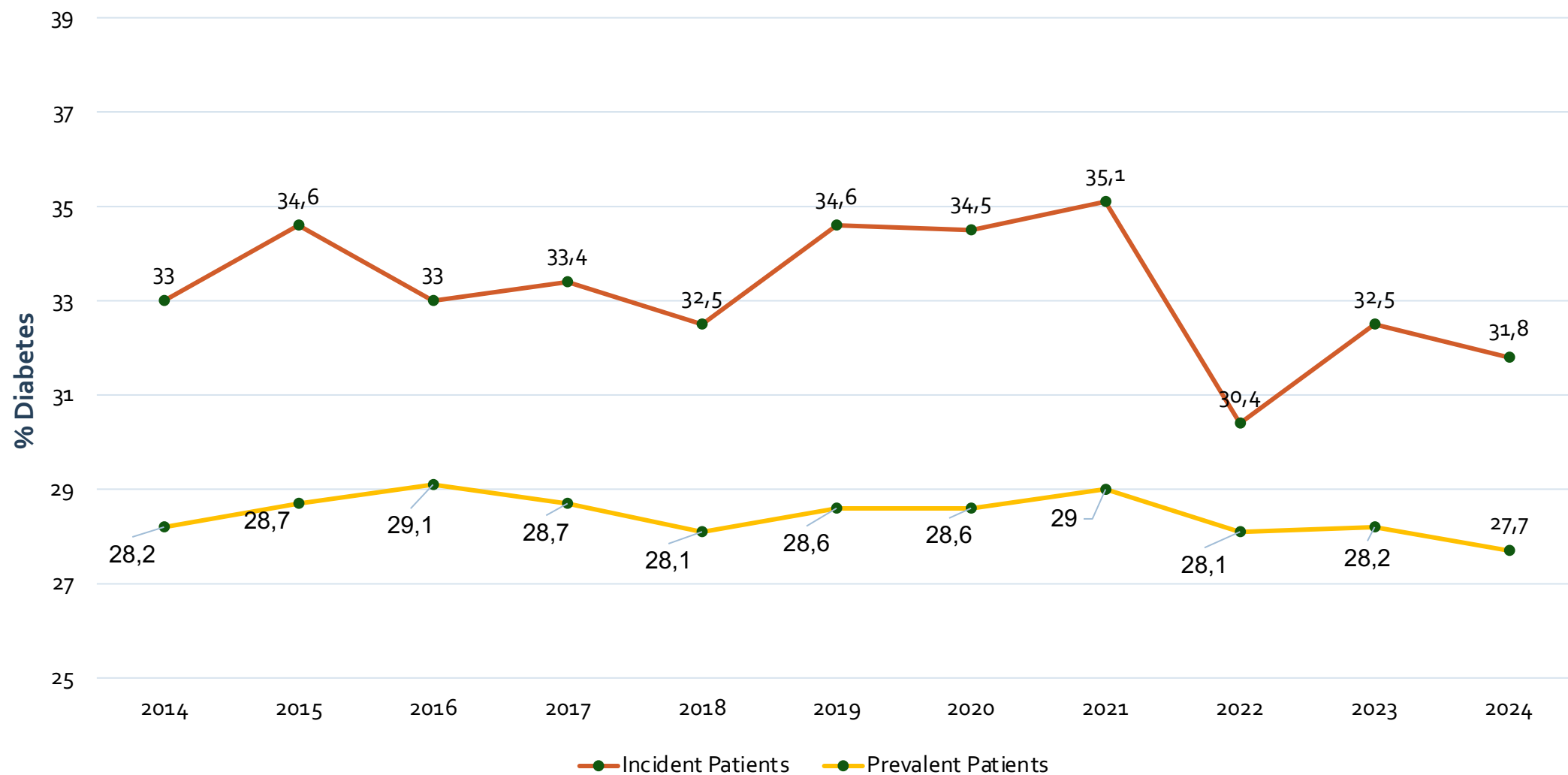
N = 2575
Not available = 38

PRIMARY RENAL DISEASE OF PREVALENT HEMODIALYSIS PATIENTS 31st DECEMBER 2024

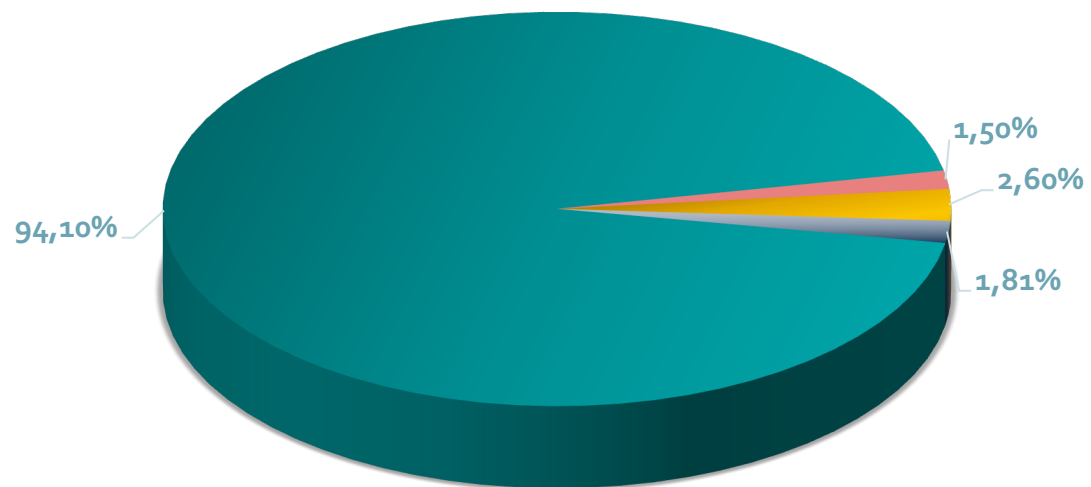


N = 13138
Not available = 39

DIABETES AS PRIMARY RENAL DISEASE IN HD PATIENTS (INCIDENT AND PREVALENT) (%) 2014 - 2024



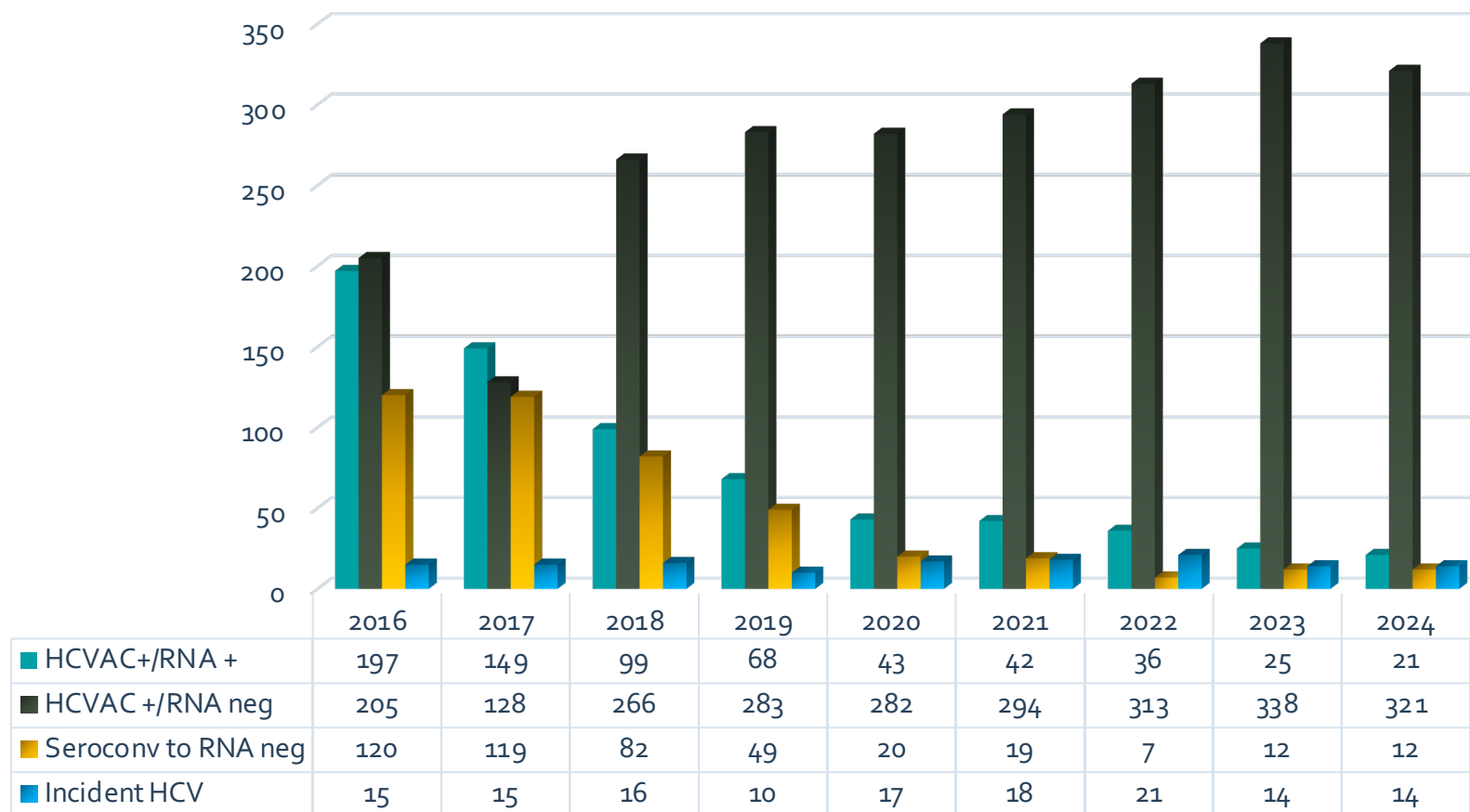
VIRAL STATUS IN HD PREVALENT PATIENTS 31st DECEMBER 2024



■ Neg ■ Hbs Ag + ■ HCV AC + ■ HIV AC +

N = 13177

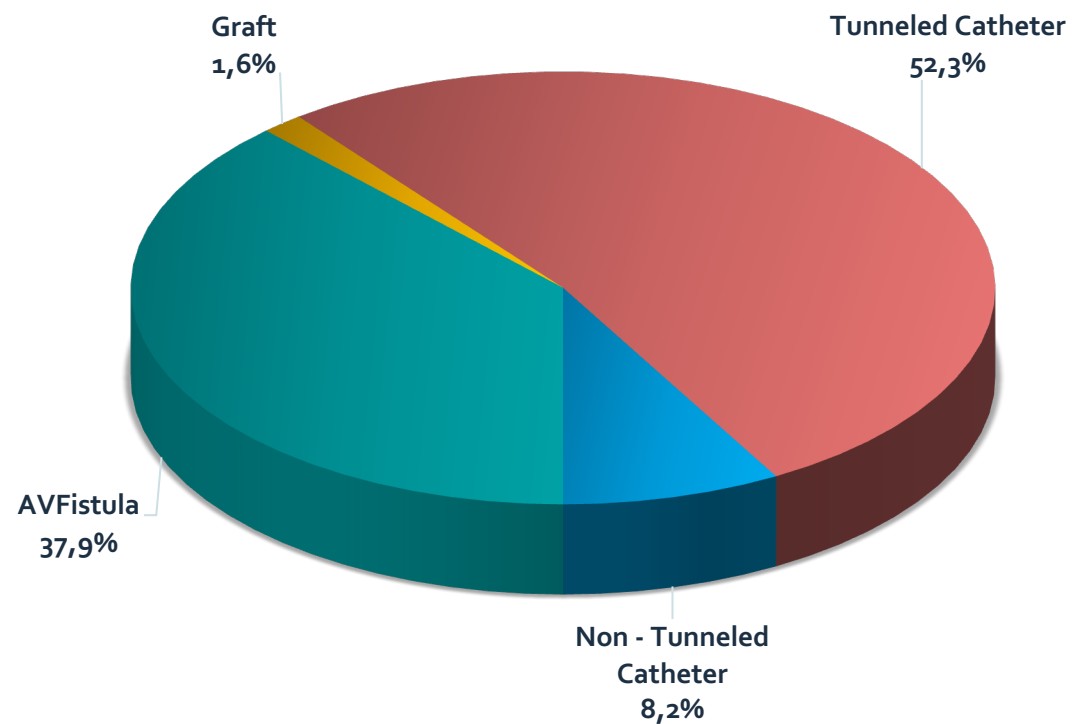
HEPATITIS C VIRAL STATUS IN HD PREVALENT PTS 31st DECEMBER 2016 - 2024



Vascular access



VASCULAR ACCESS IN INCIDENT HD PATIENTS - 2024



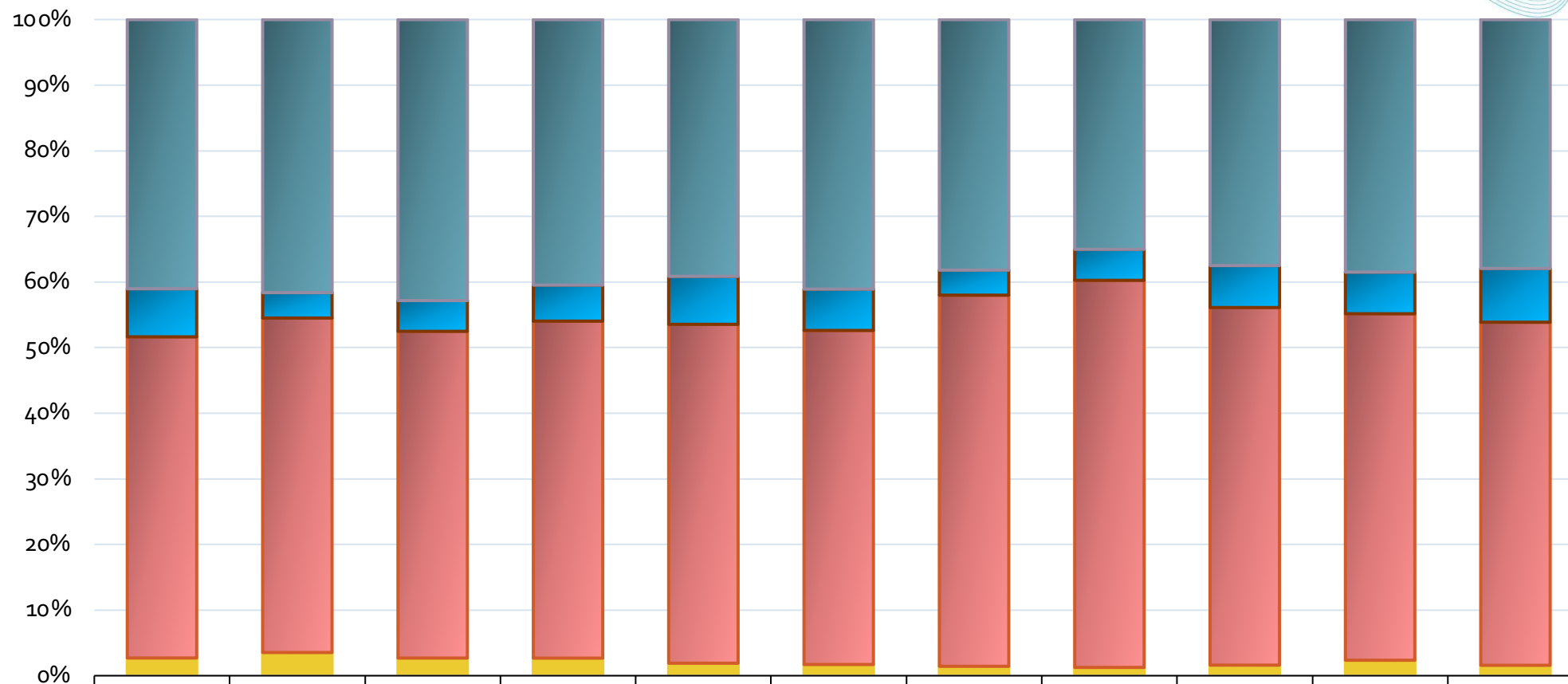
60.5 %

Patients starting HD by CVC

N = 2209

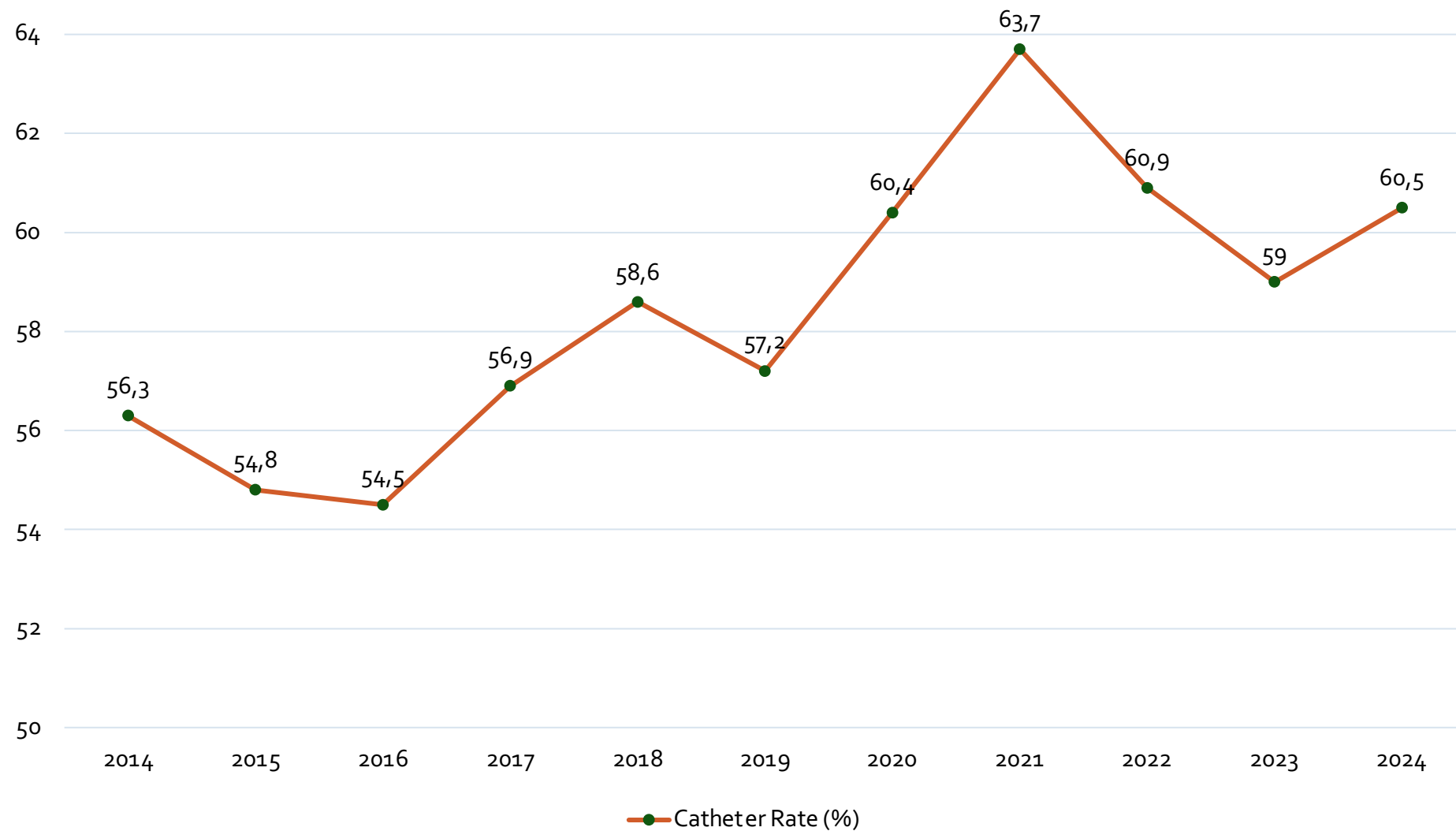
Not available- 34

VASCULAR ACCESS IN INCIDENT HD PATIENTS 2014 - 2024

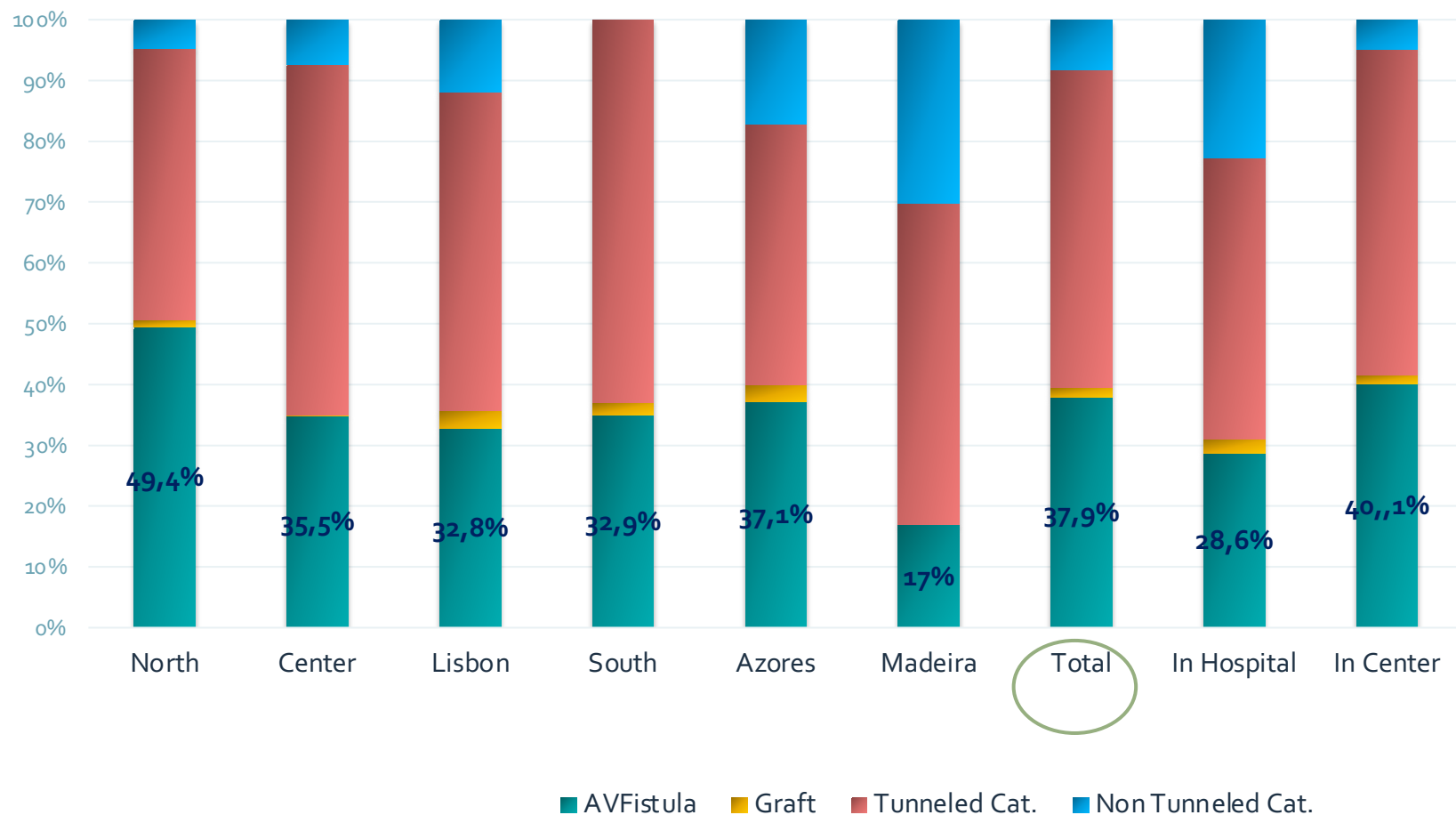


	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
AVFistula	912	872	940	862	926	965	800	777	838	850	838
Non Tunneled Cat.	163	81	103	117	173	148	80	105	143	140	181
Tunneled Cat.	1088	1068	1093	1094	1222	1196	1185	1309	1218	1166	1155
Graft	60	74	59	57	45	40	30	28	36	52	35

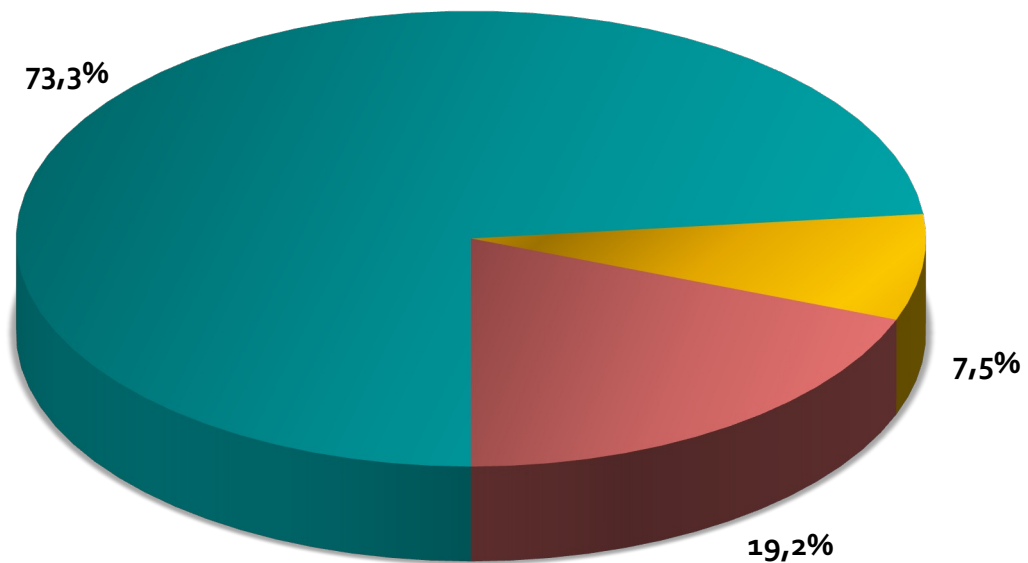
CATHETER RATE (%) IN THE FIRST HD SESSION OF INCIDENT PATIENTS 2014 - 2024



VASCULAR ACCESS IN INCIDENT HD PATIENTS BY REGION AND TYPE OF UNIT 2024



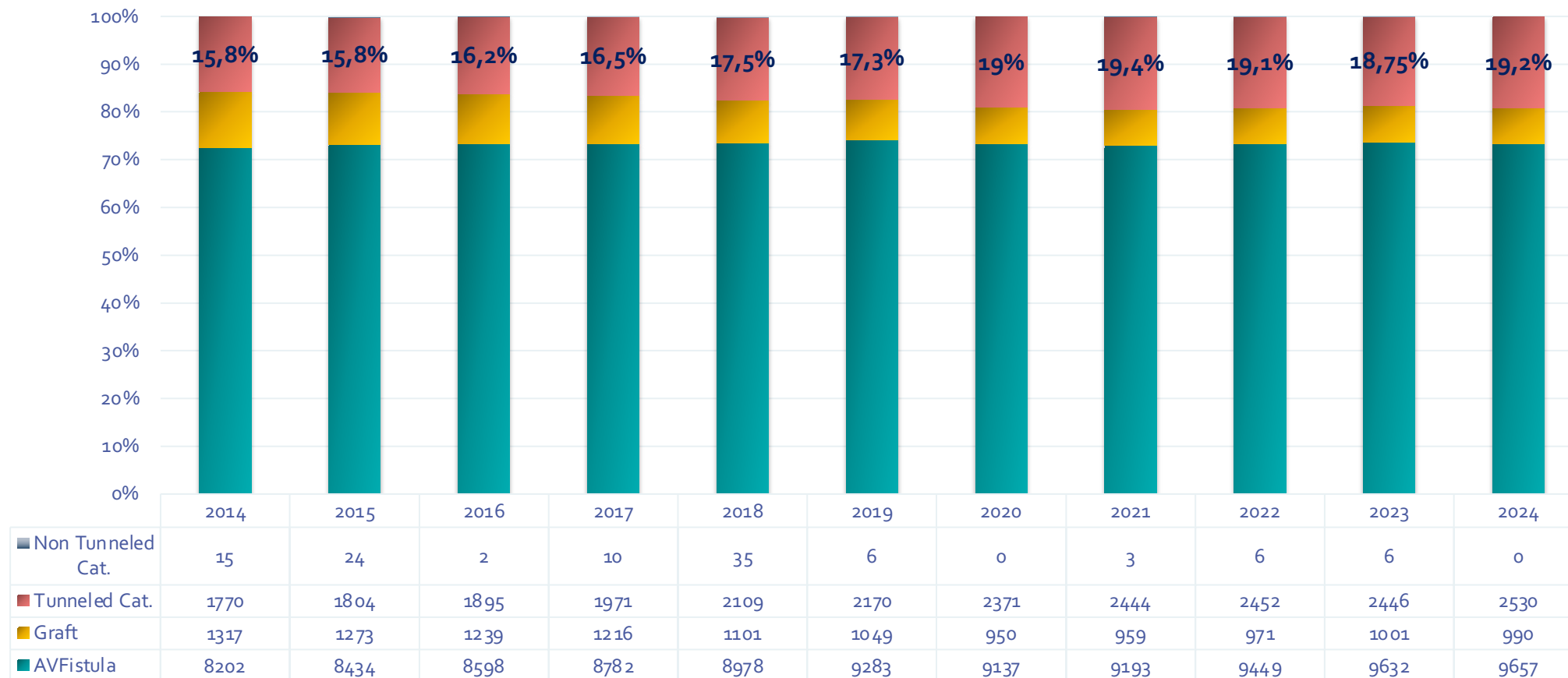
VASCULAR ACCESS IN PREVALENT HD PATIENTS 31st DECEMBER 2024



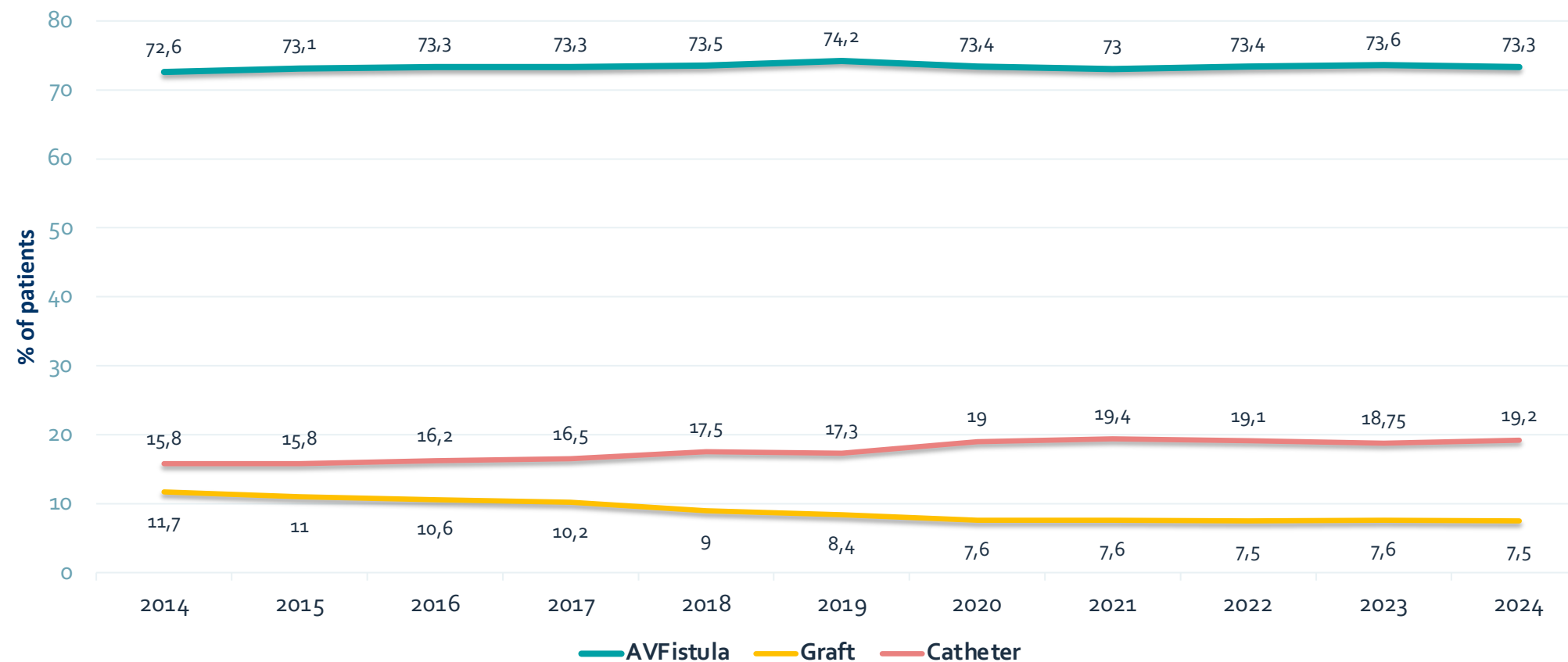
■ AVFistula ■ Graft ■ Tunneled Cat.

N = 13177

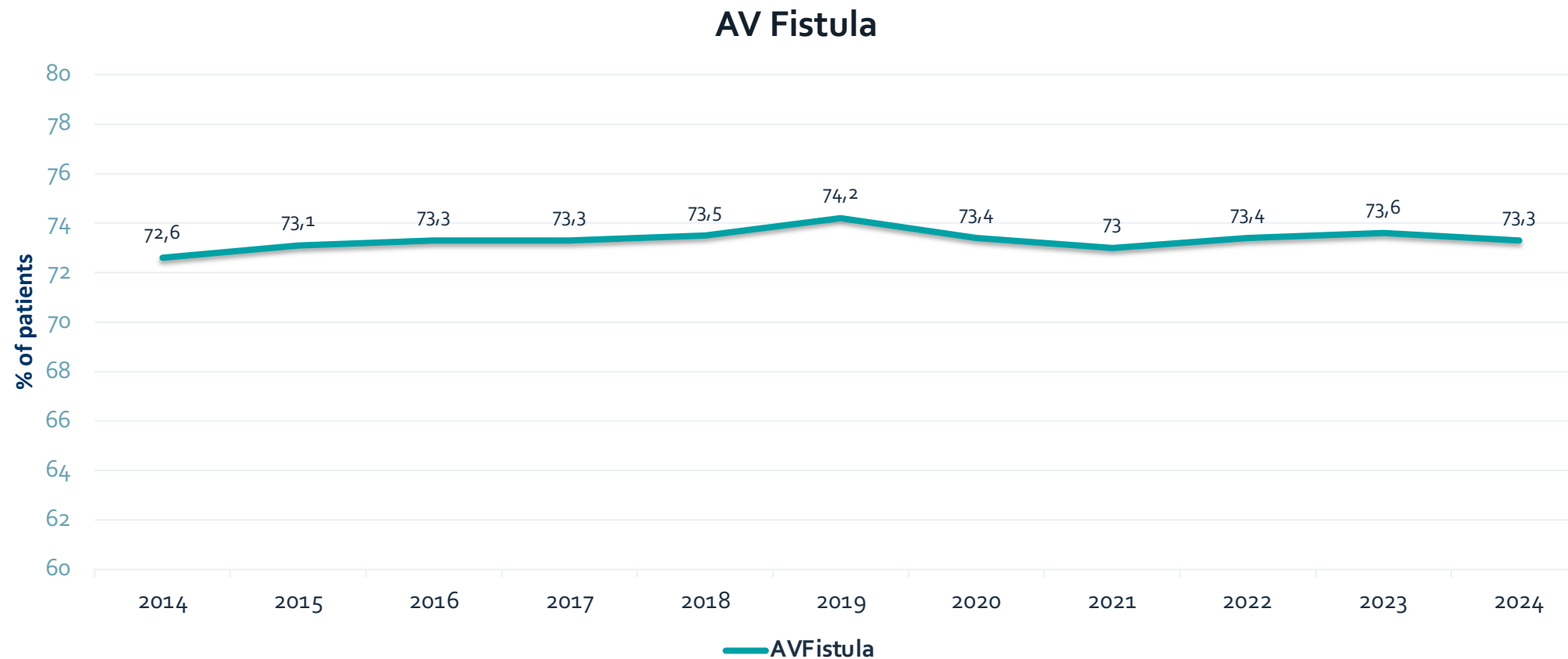
VASCULAR ACCESS IN PREVALENT HD PATIENTS 31st DECEMBER 2014 - 2024



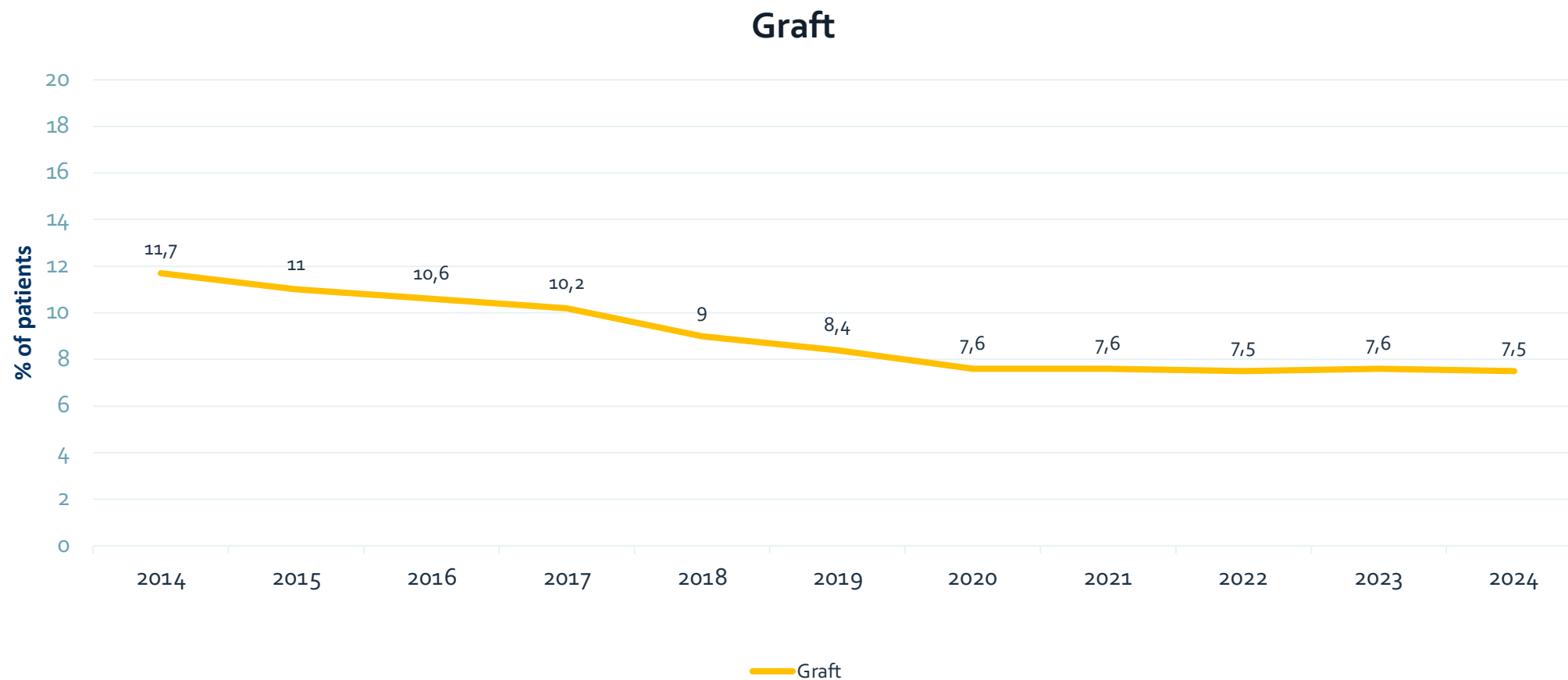
VASCULAR ACCESS IN PREVALENT HD PATIENTS (%) 31st DECEMBER 2014 - 2024



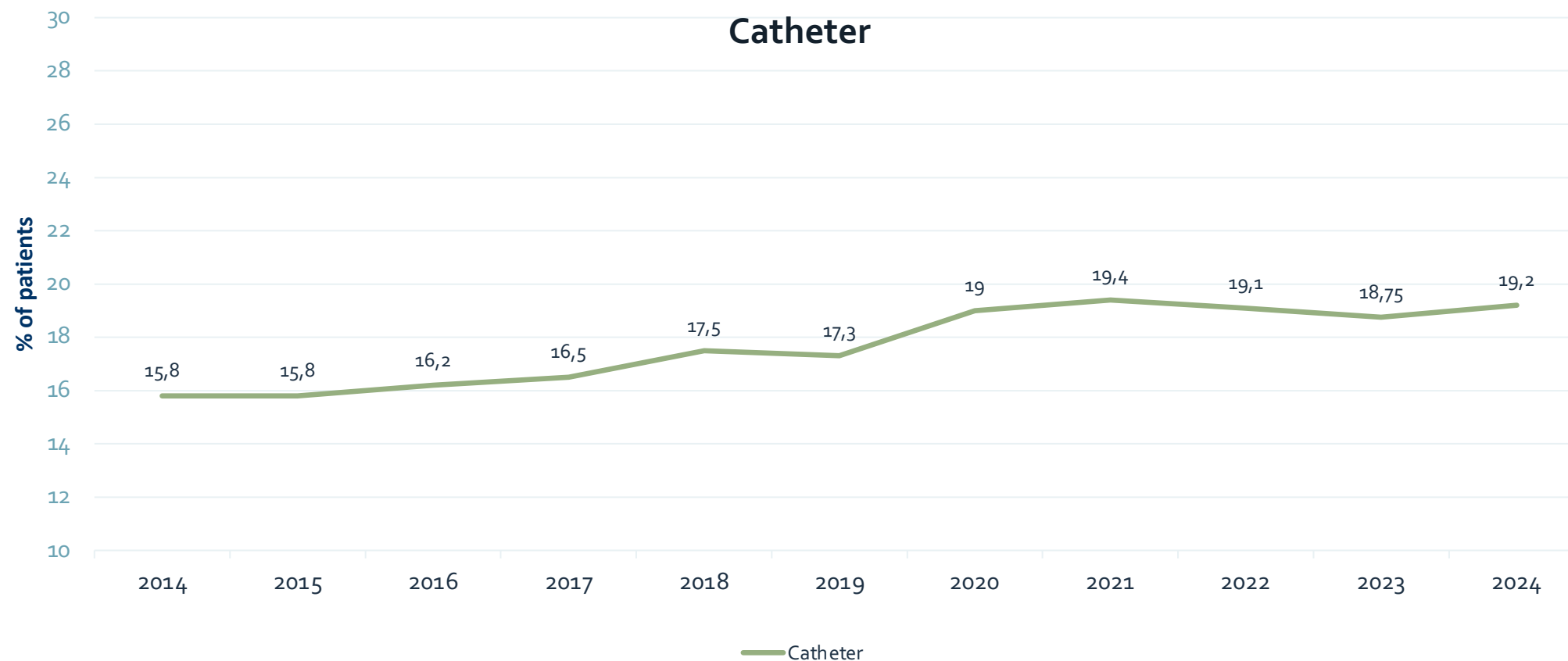
AV FISTULA RATE IN PREVALENT HD PATIENTS (%) 31st DECEMBER 2014 - 2024



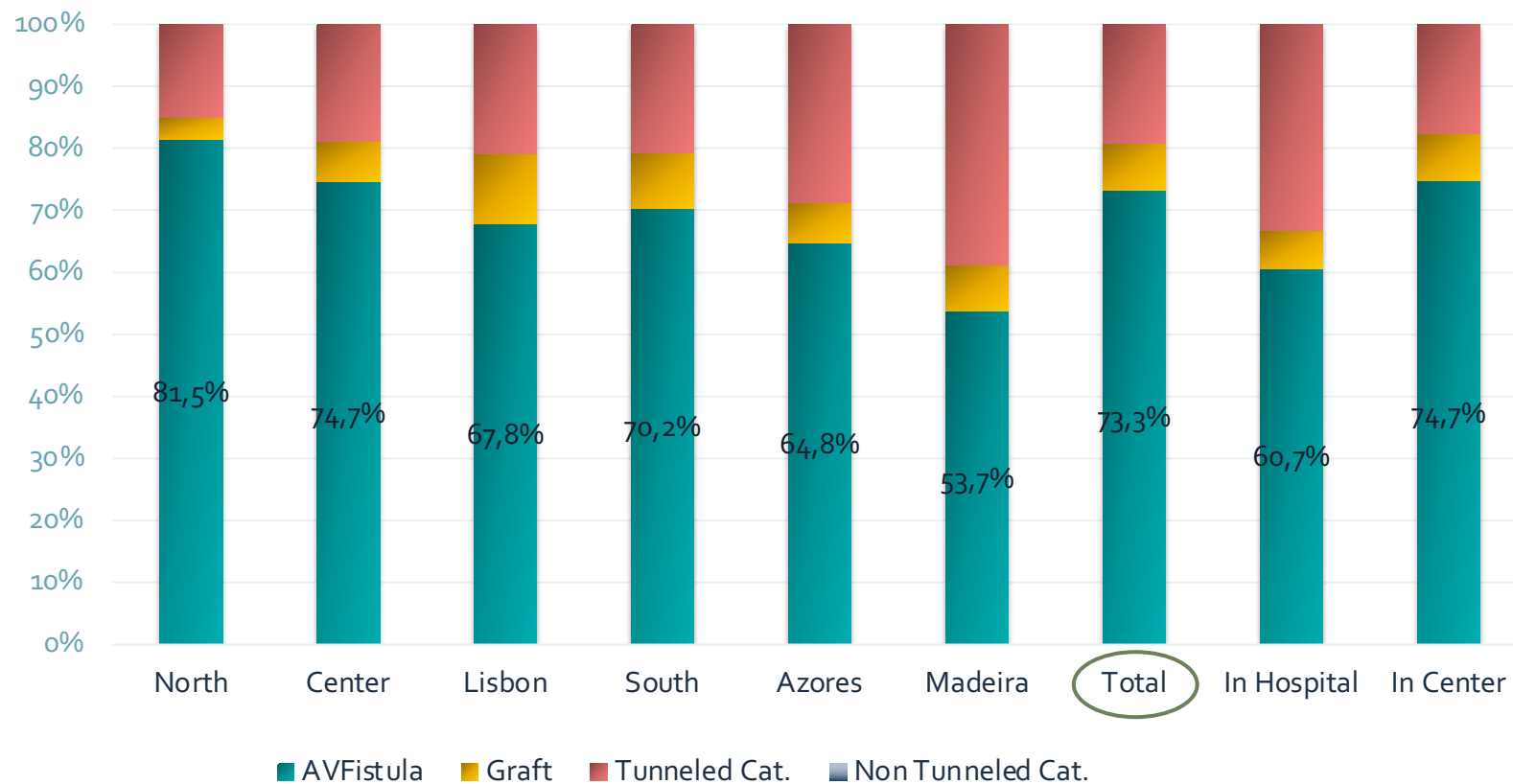
GRAFT RATE IN PREVALENT HD PATIENTS (%) 31st DECEMBER 2014 - 2024



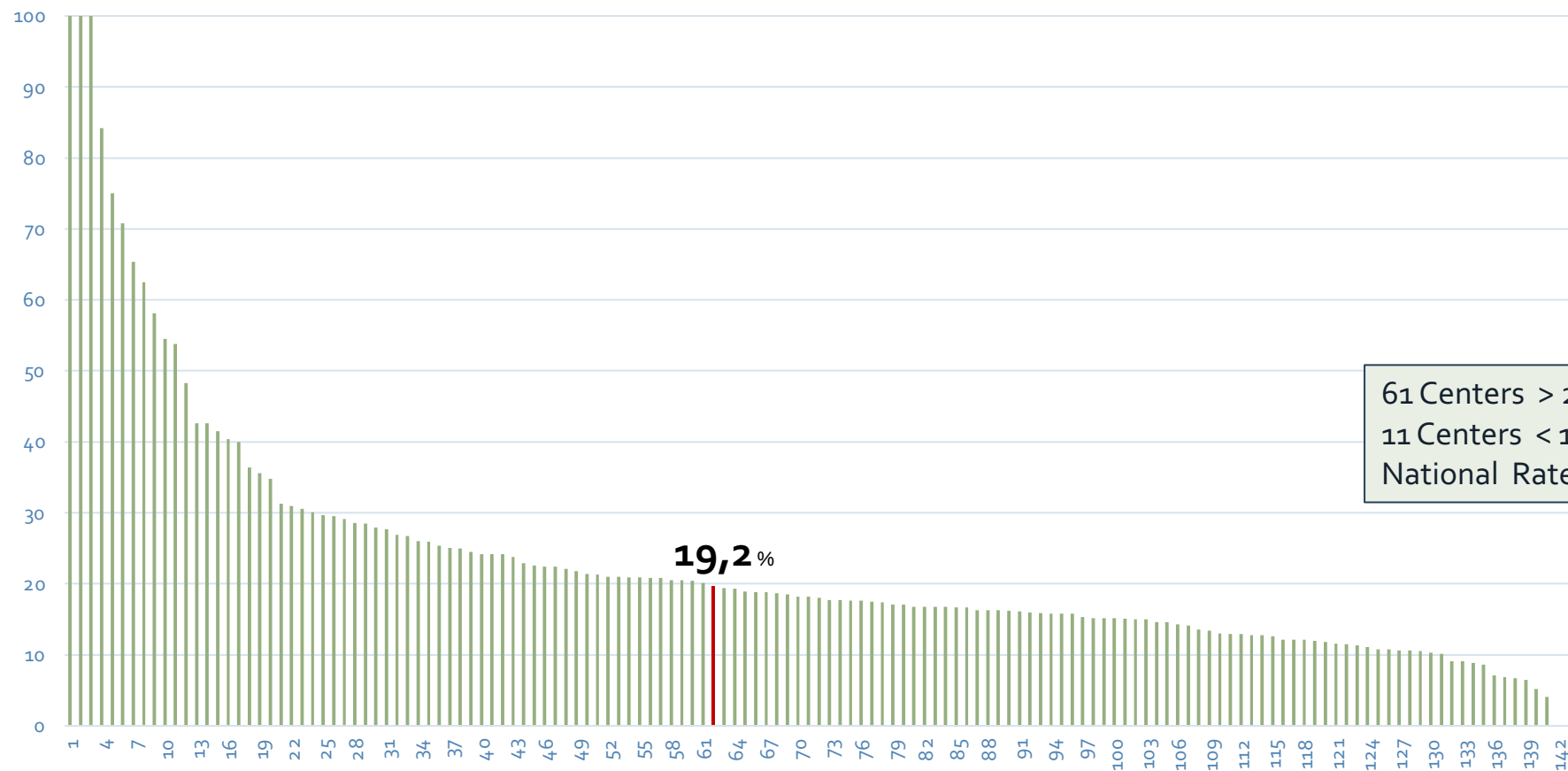
CATHETER RATE IN PREVALENT HD PATIENTS (%) 31st DECEMBER 2014 - 2024



VASCULAR ACCESS IN PREVALENT HD PATIENTS BY REGION AND TYPE OF UNIT 2024

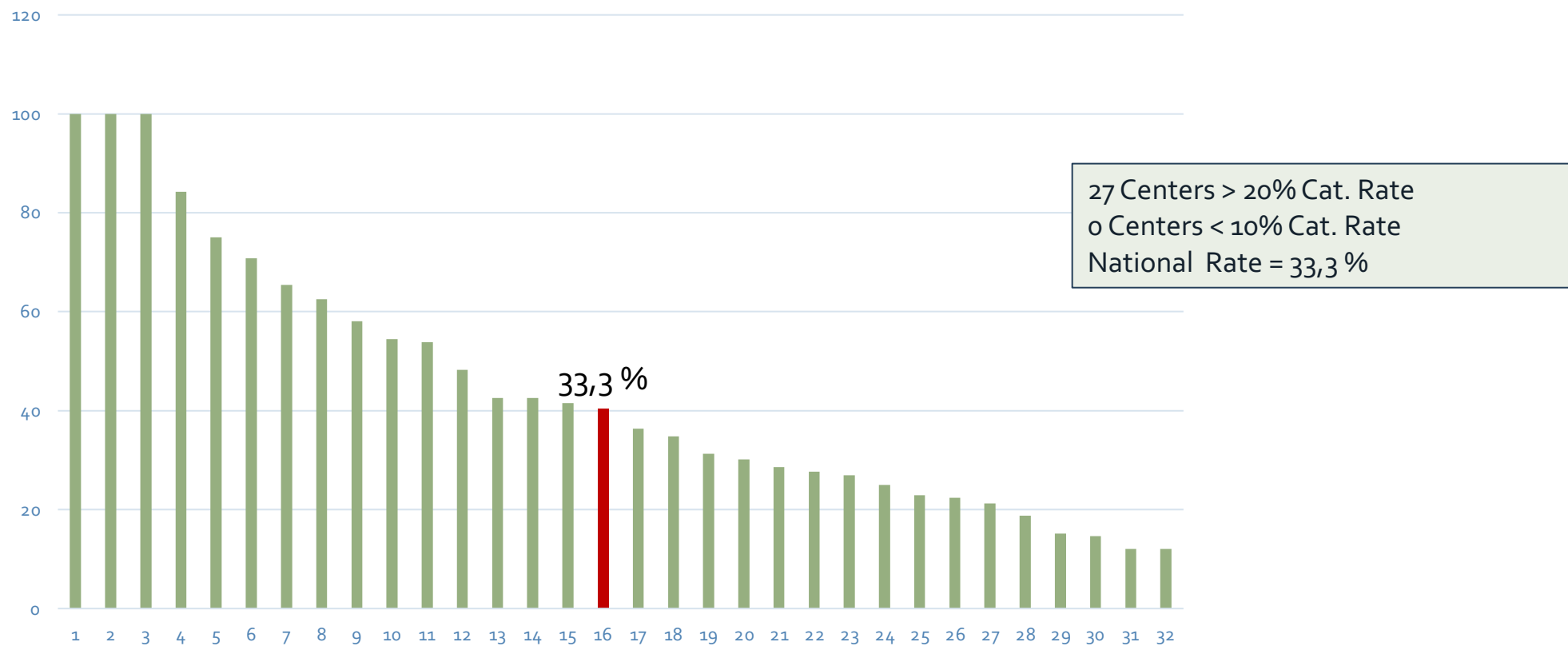


CATHETER RATE IN PREVALENT HD PATIENTS (%) 31st DECEMBER 2024

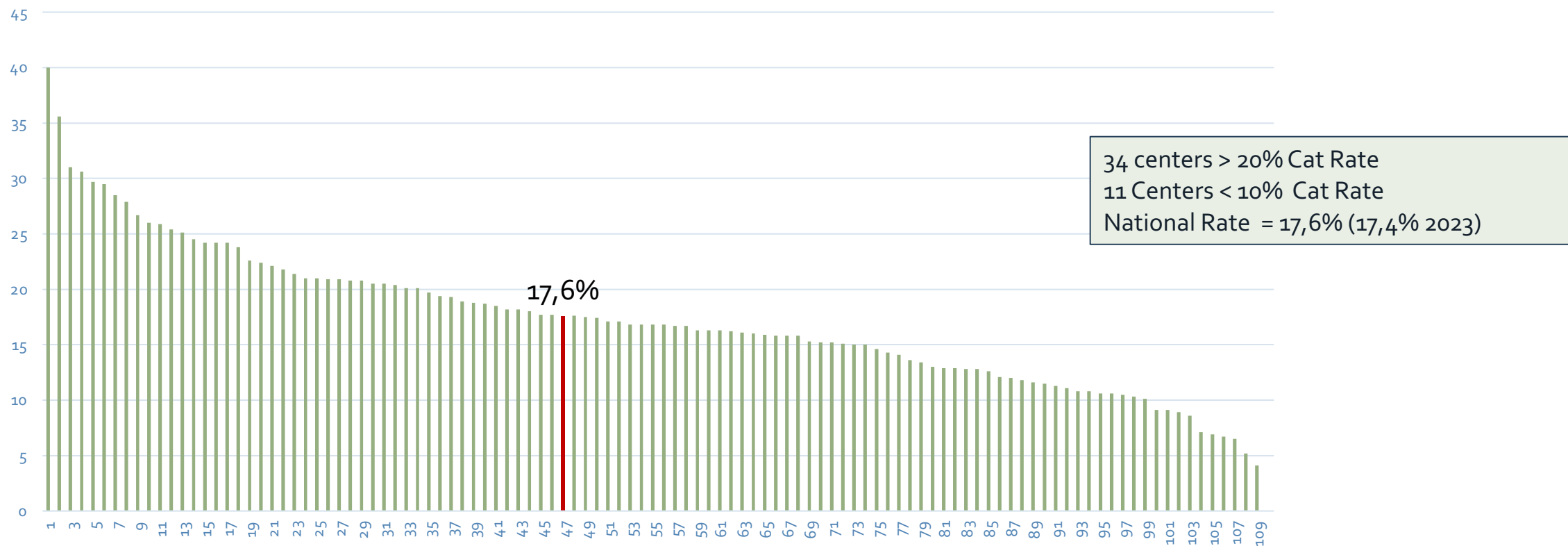


61 Centers > 20% Cat Rate
11 Centers < 10% Cat Rate
National Rate = 19,2%

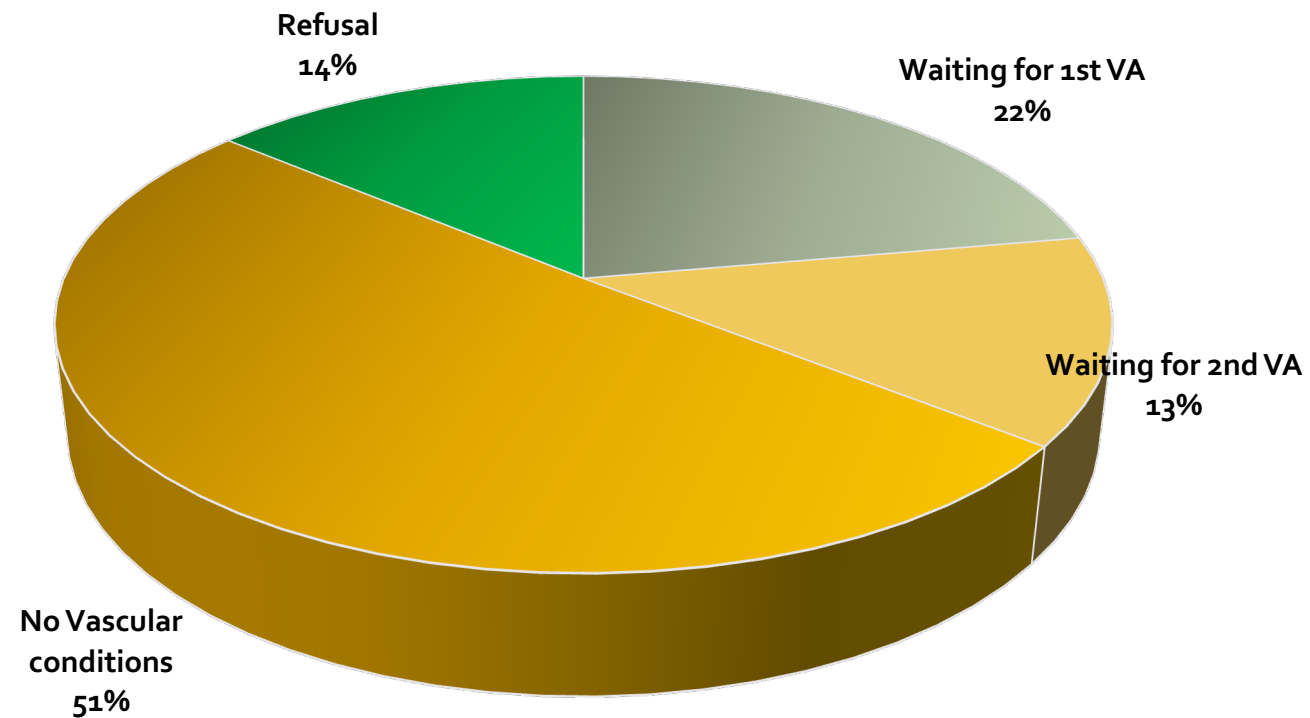
CATHETER RATE IN PREVALENT HD PATIENTS (%) IN HOSPITAL 31st DECEMBER 2024



CATHETER RATE IN PREVALENT HD PATIENTS (%) IN CENTER 31st DECEMBER 2024

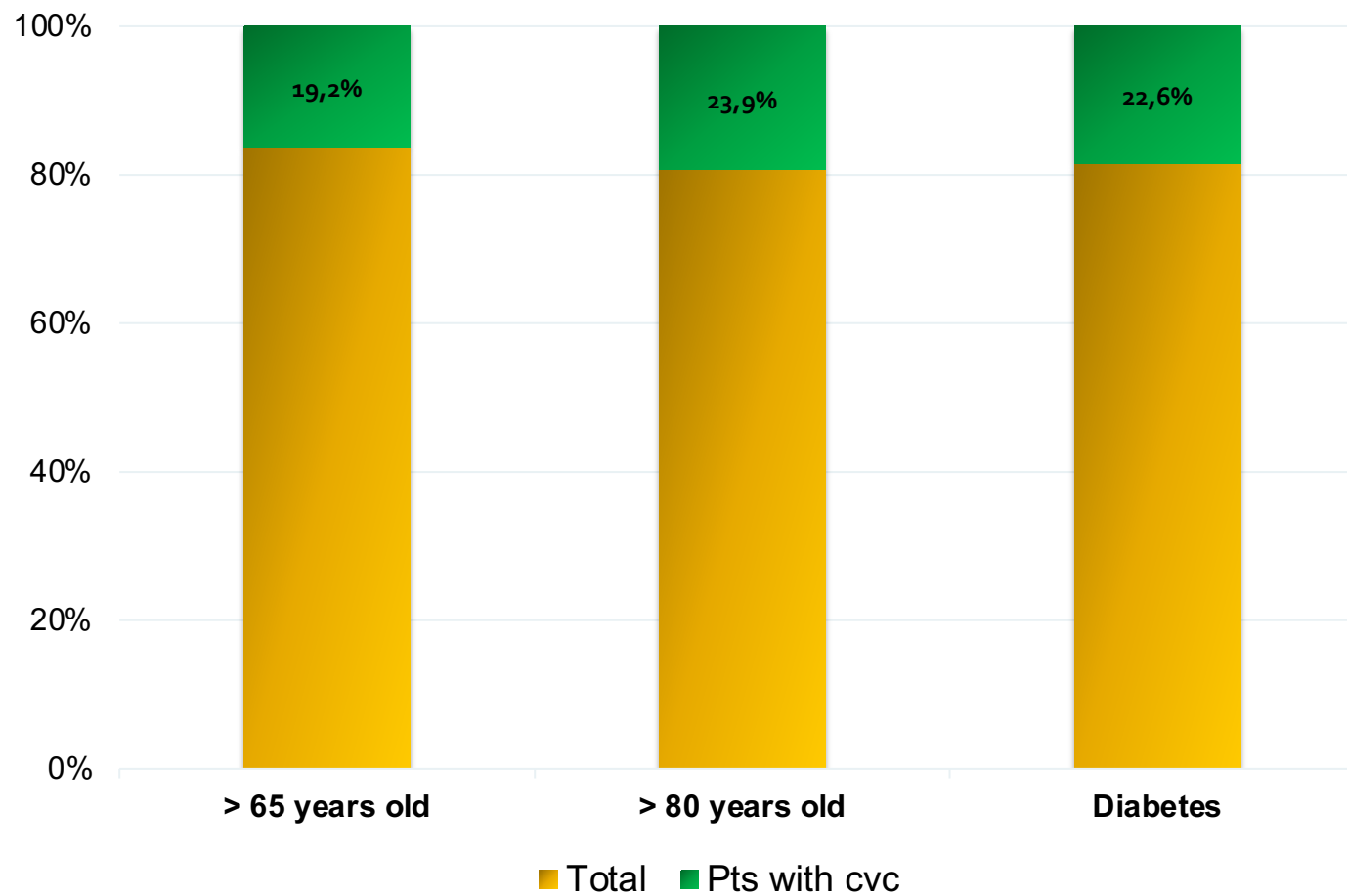


PREVALENT HD PATIENTS WITH CATHETER 31st DECEMBER 2024



N = 2300
Not Available - 230

PREVALENT HD PATIENTS WITH CATHETER 31st DECEMBER 2024

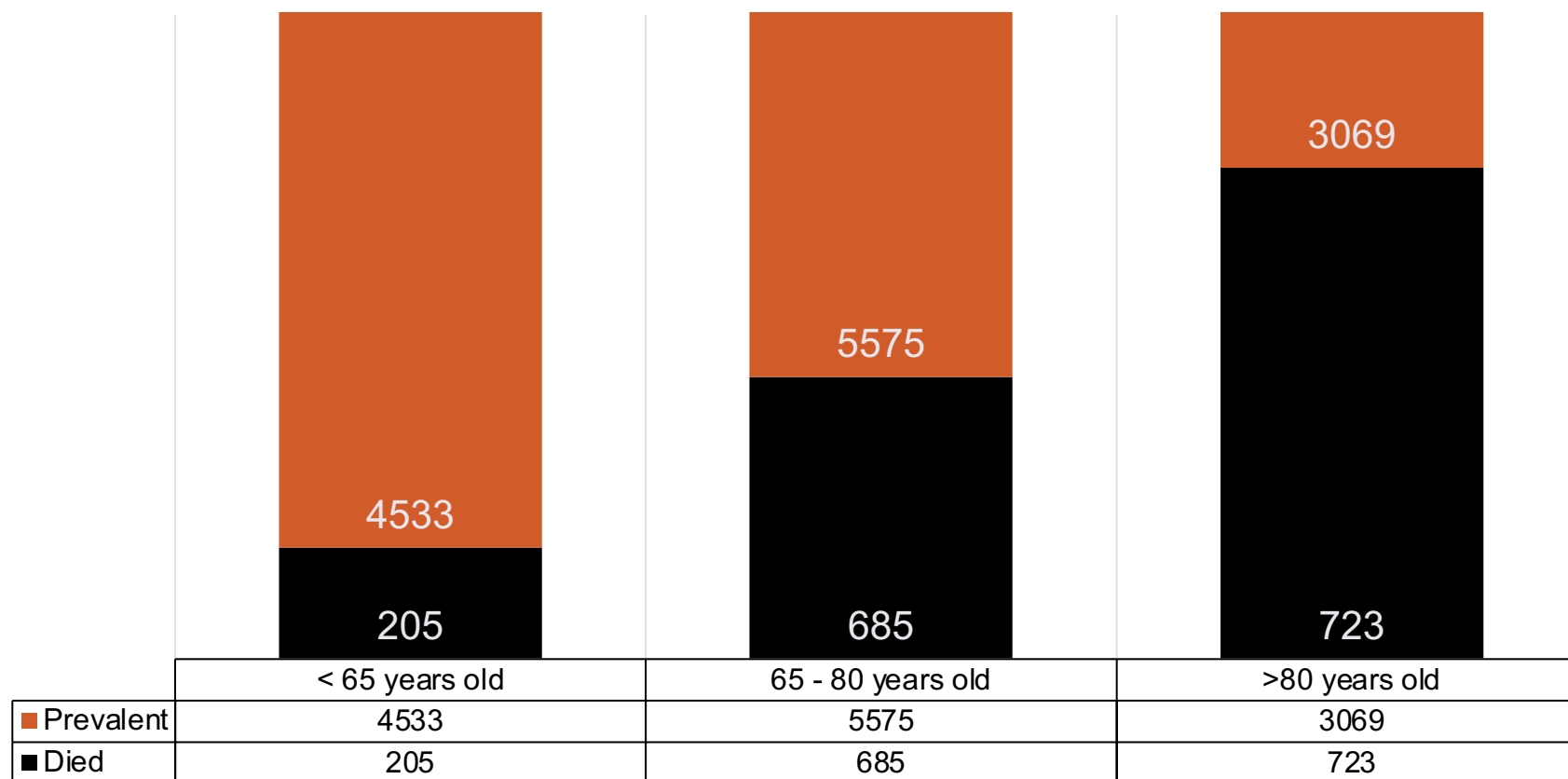


N = 2300
Not Available - 230

Mortality - hemodialysis



DEATHS IN HEMODIALYSIS BY AGE GROUP - 2024



87.3 % of Deaths > 65 Years old

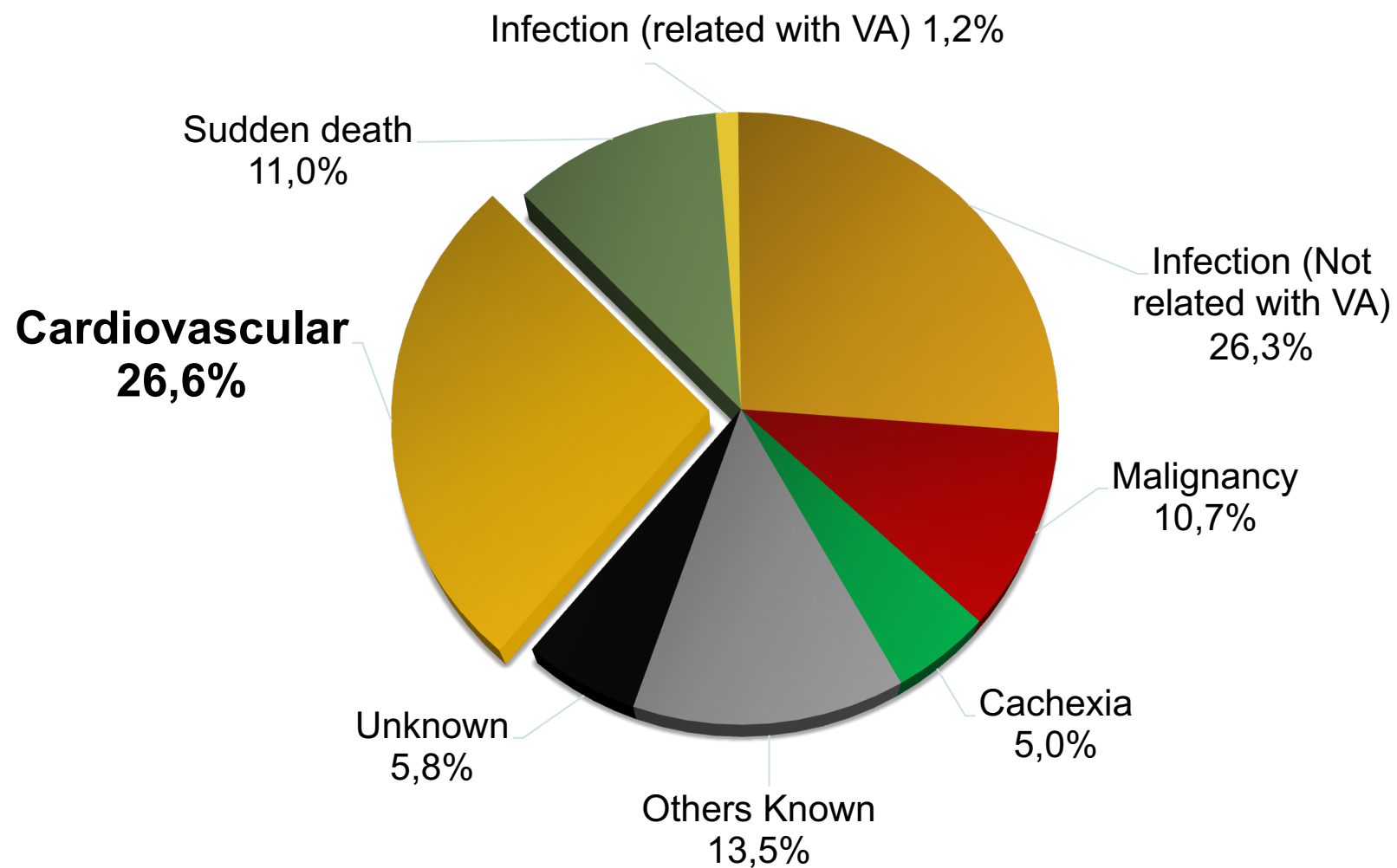
45% Of Deaths > 80 Years old

5.4% of deaths occurred during the first 90 days after starting dialysis

3.4% Mortality in the first 90 days (3,6% in 2023)

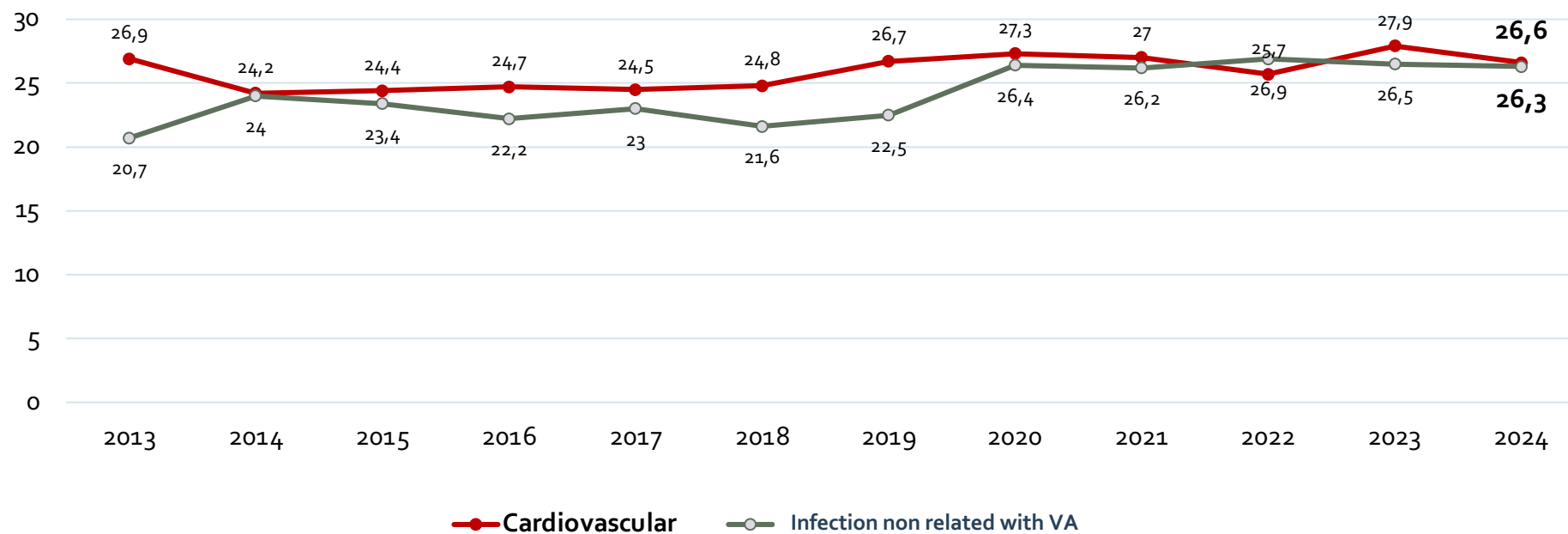
1613 Deaths

CAUSES OF DEATH IN HD PATIENTS 2024

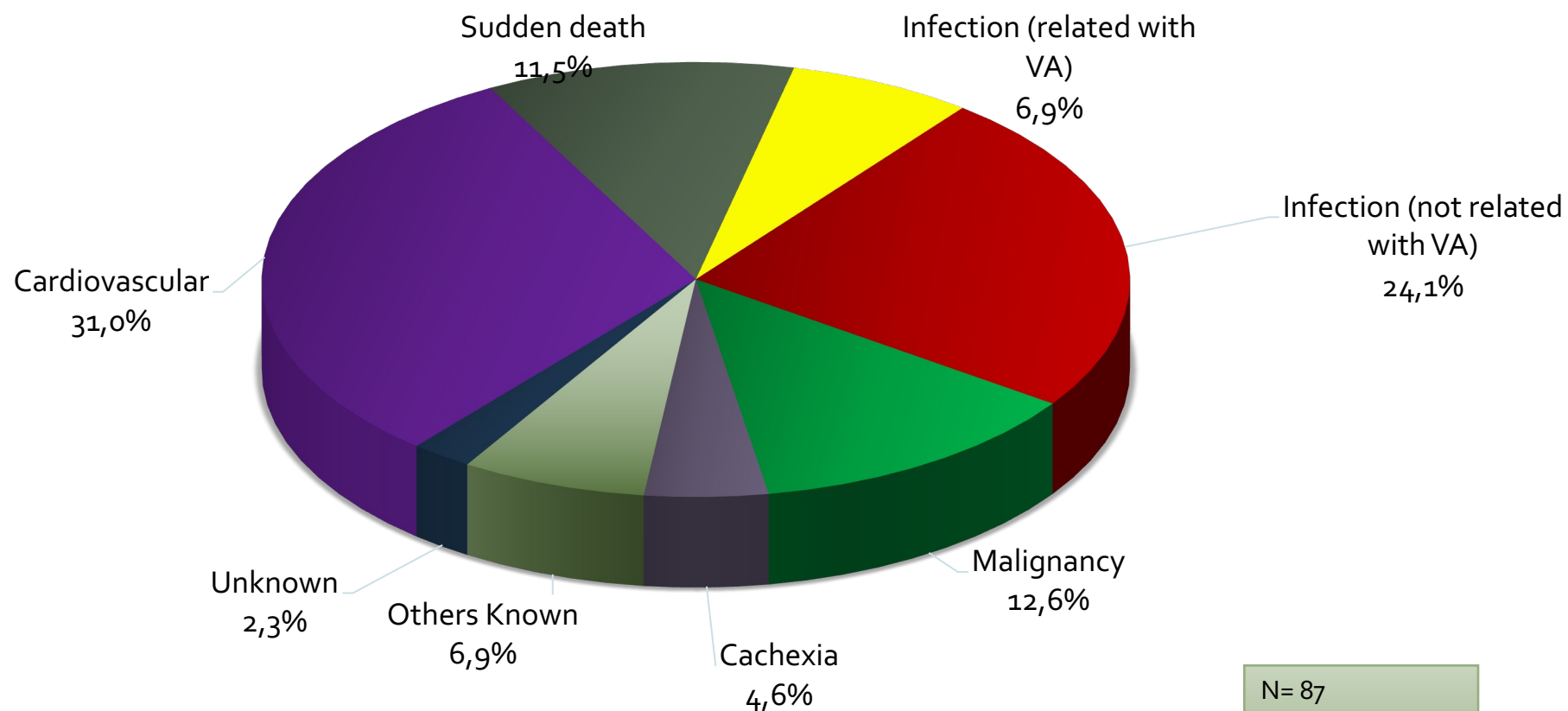


N=1613

CARDIOVASCULAR AND INFECTION DEATHS IN HD PATIENTS 2013 - 2024



CAUSES OF DEATH DURING THE FIRST 90 DAYS OF HD 2024



HD PATIENT MOVEMENT IN 2024

In

2243

First
Treatment

156

Transplant
Failure

176

PD to HD

Out

1613

Deaths

436

Transplanted

89

HD to PD

54

Stop
treatment or
recovery

209

HD to
Palliative care

84

?

GROSS MORTALITY RATE = 12,3%
(90D MORTALITY = 3,4%)

GROSS MORTALITY RATE = 12,3%

(90D MORTALITY= 3,4%)

In Hospital

15,8%

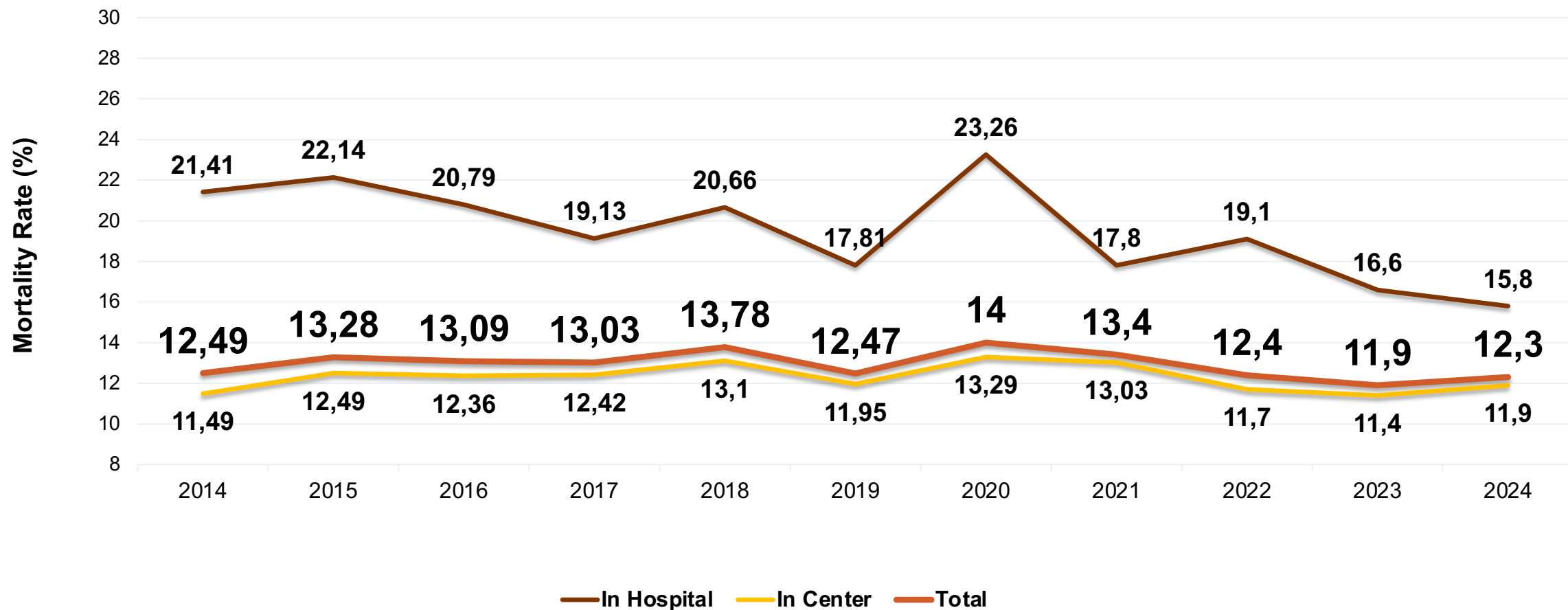
(90 D Mortality = 3,8%)

In Center

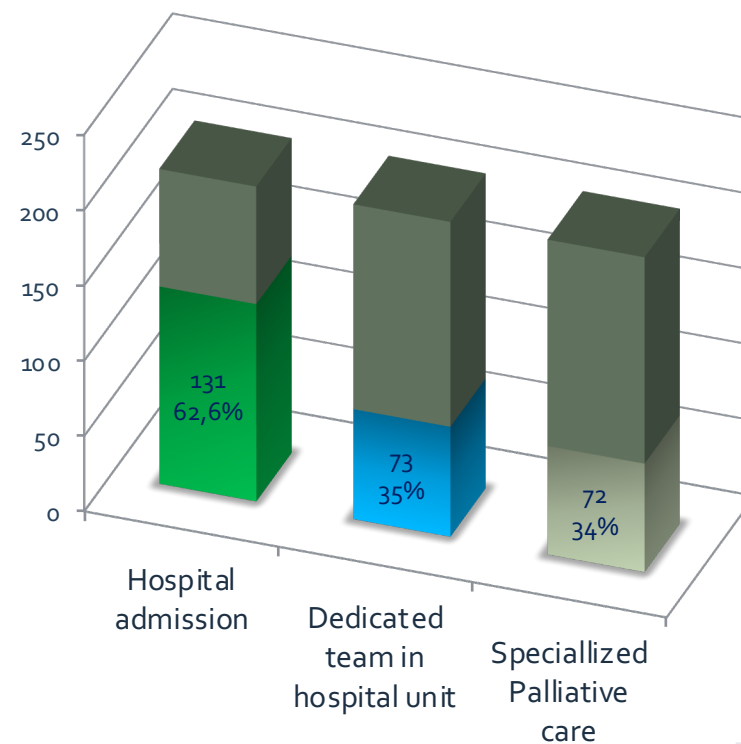
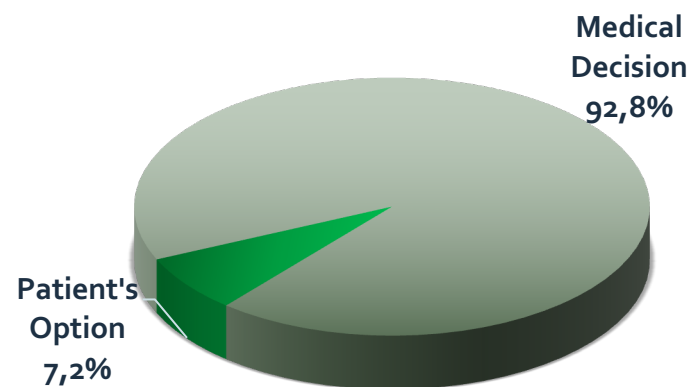
11,9%

(90 D Mortality = 3,2%)

MORTALITY RATE HEMODIALYSIS 2014 - 2024

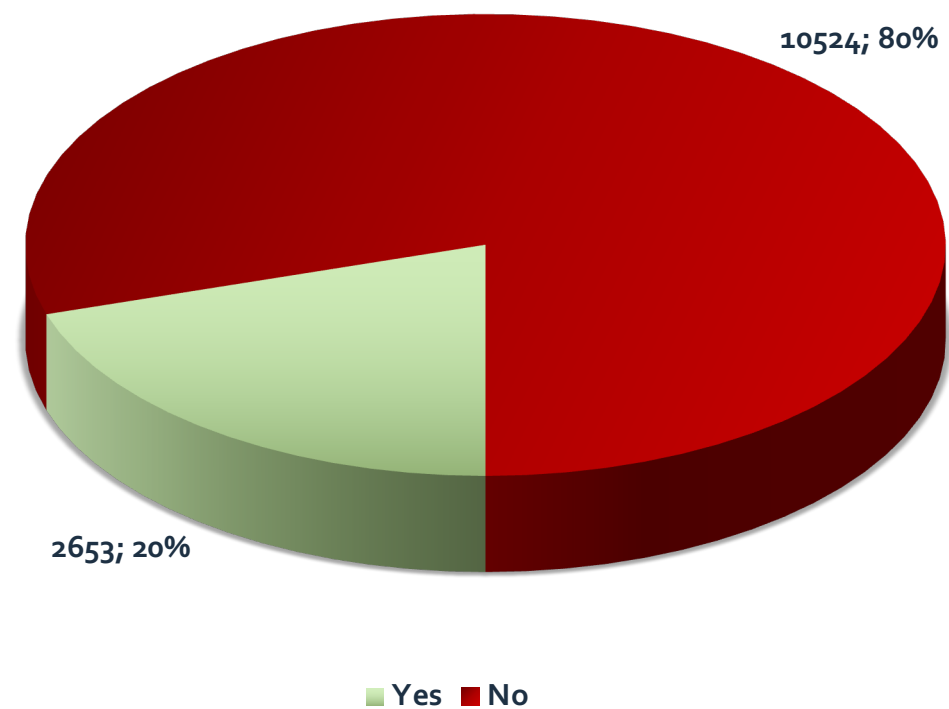


SWITCH FROM HD TO CKC

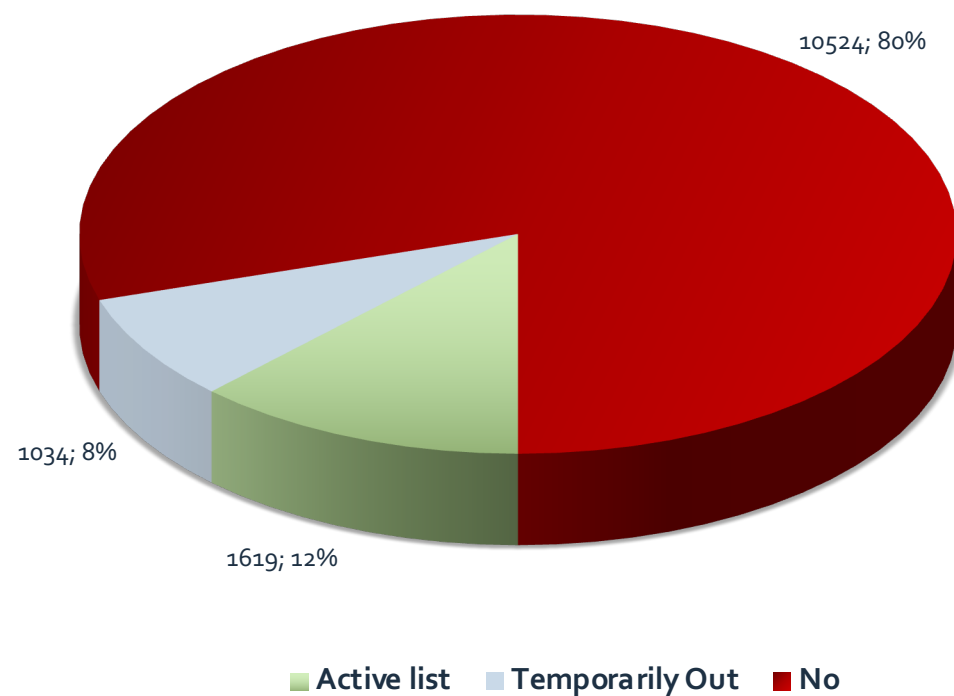


N = 209

WAITING LIST FOR RENAL TRANSPLANTATION HD PATIENTS 2024



WAITING LIST FOR RENAL TRANSPLANTATION HD PATIENTS - ACTIVE AND TEMPORARY CONTRAINDICATION

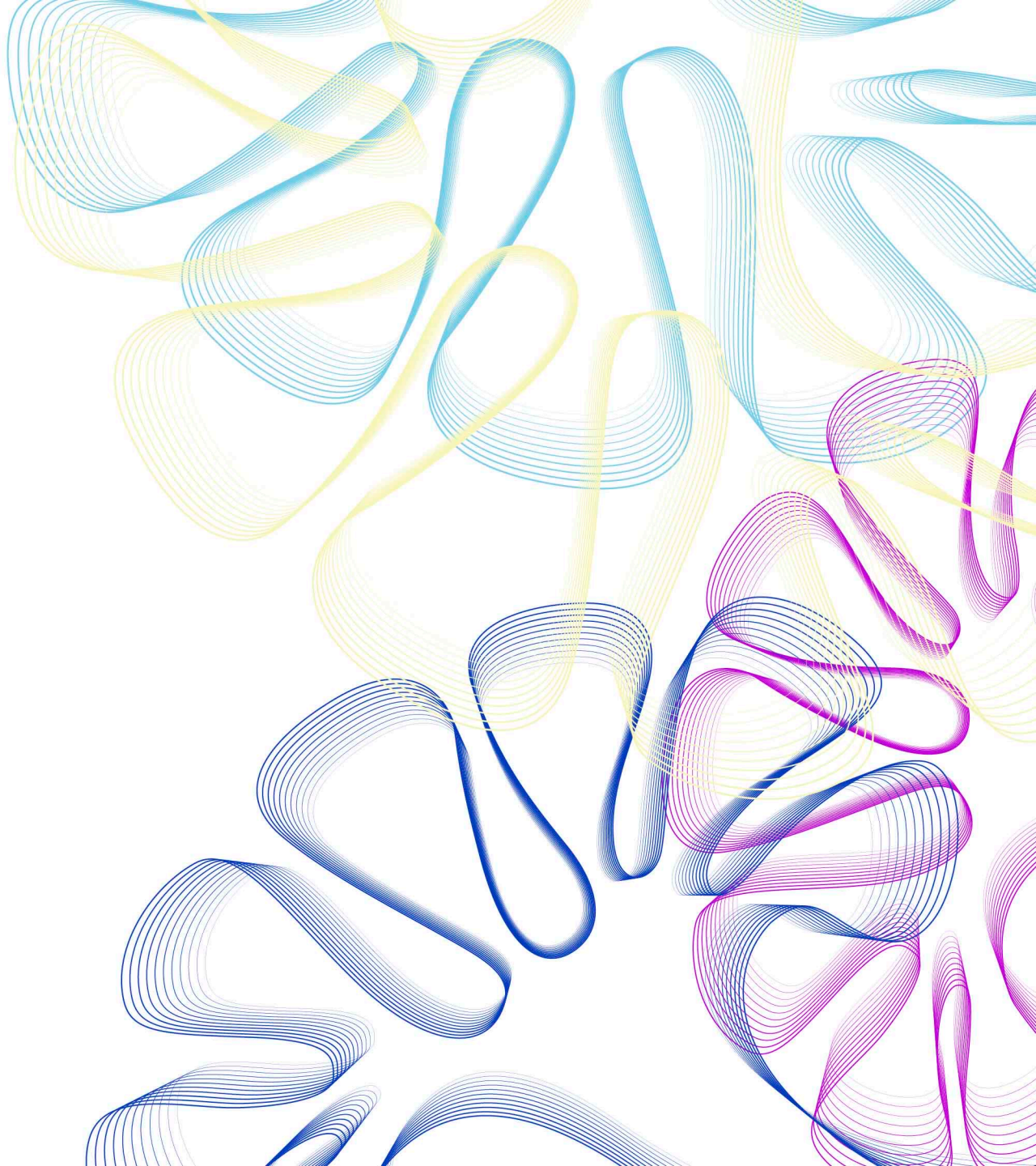


PERITONEAL DIALYSIS

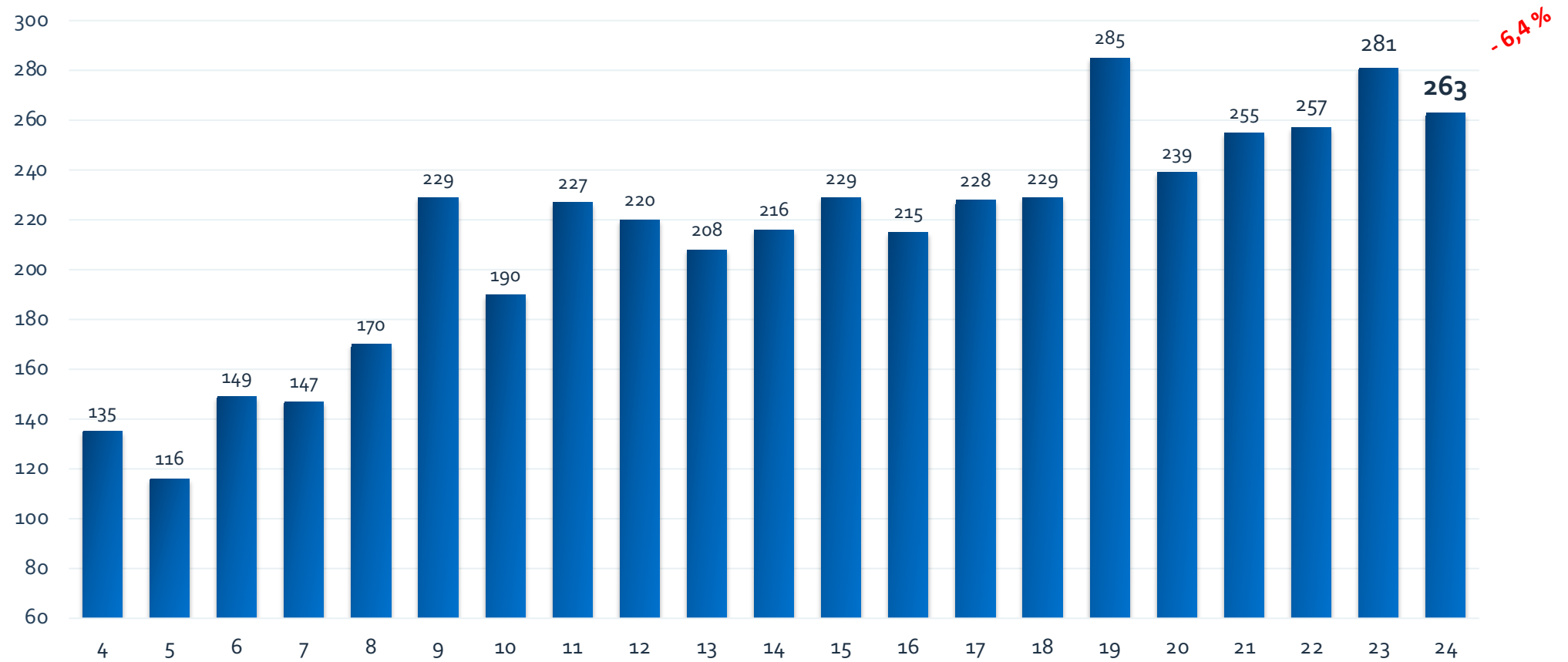
Encontro Renal 2025



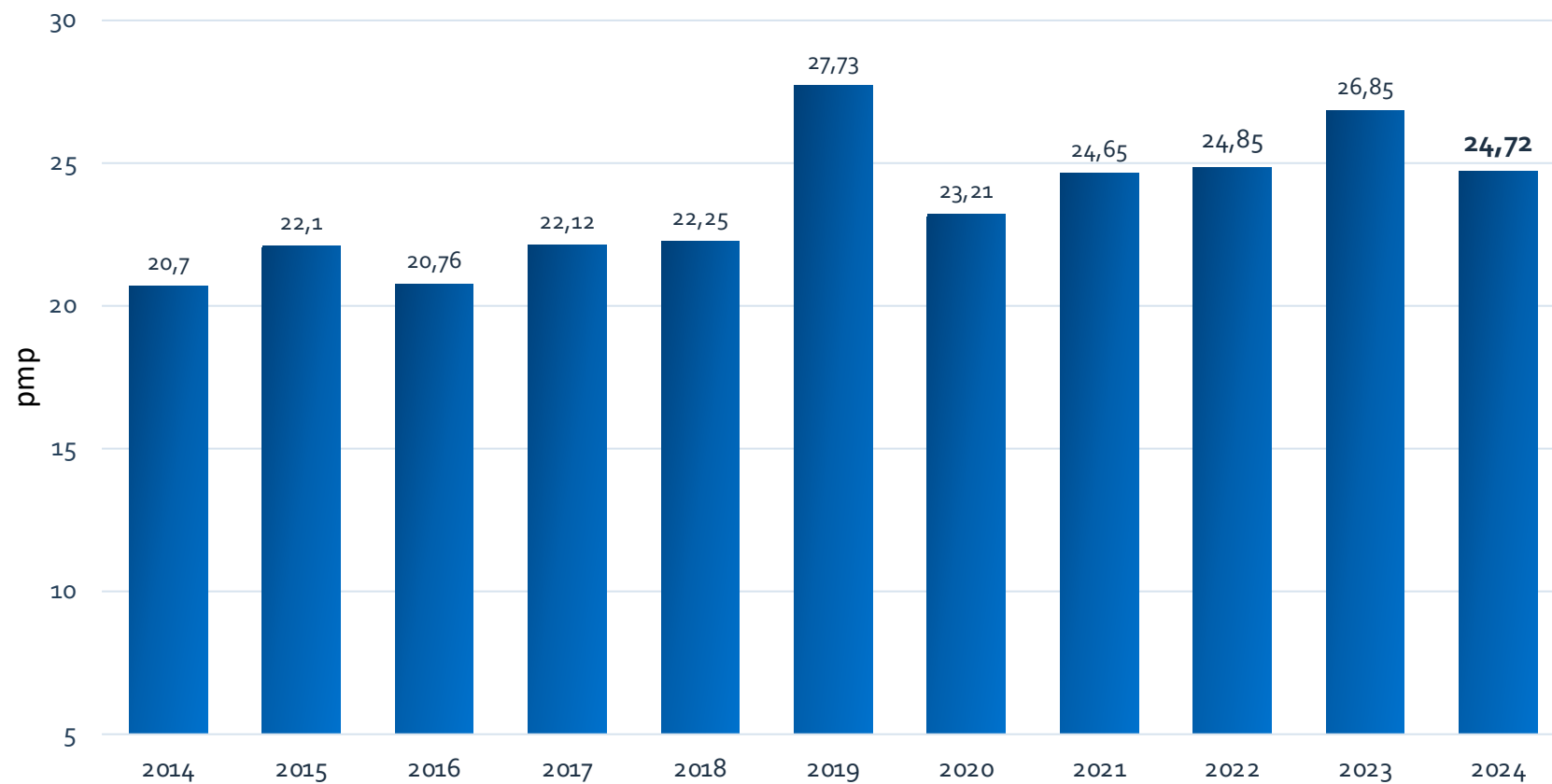
Sociedade Portuguesa
Nefrologia



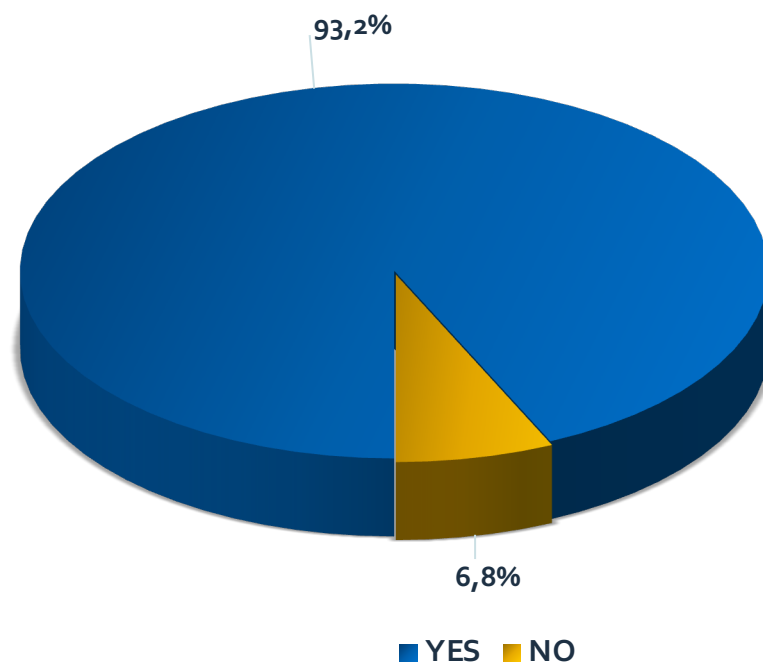
NEW PATIENTS STARTING PERITONEAL DIALYSIS 2004 - 2024



INCIDENT PATIENTS ACCEPTED FOR PD PMP 2014-2024

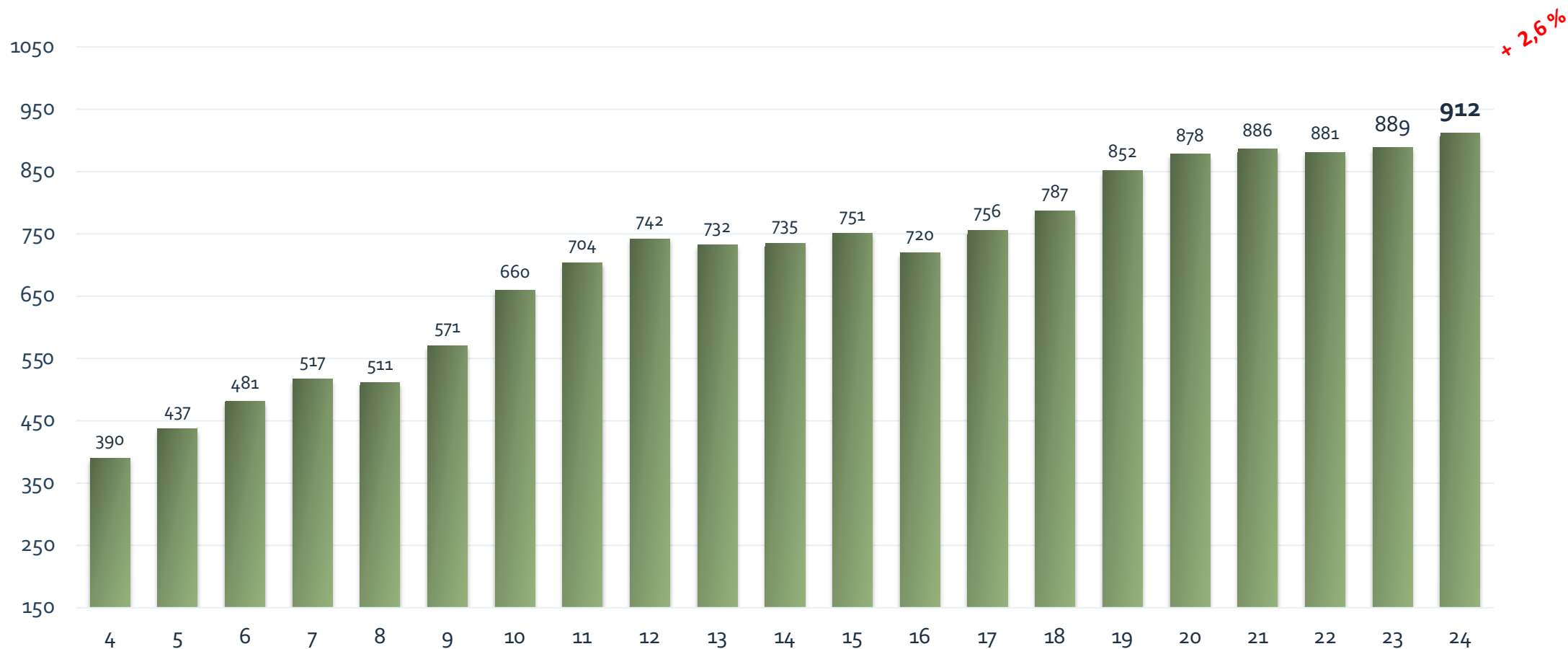


PREVIOUS FOLLOW-UP BY NEPHROLOGY > 3 MONTHS - 2024



N = 263

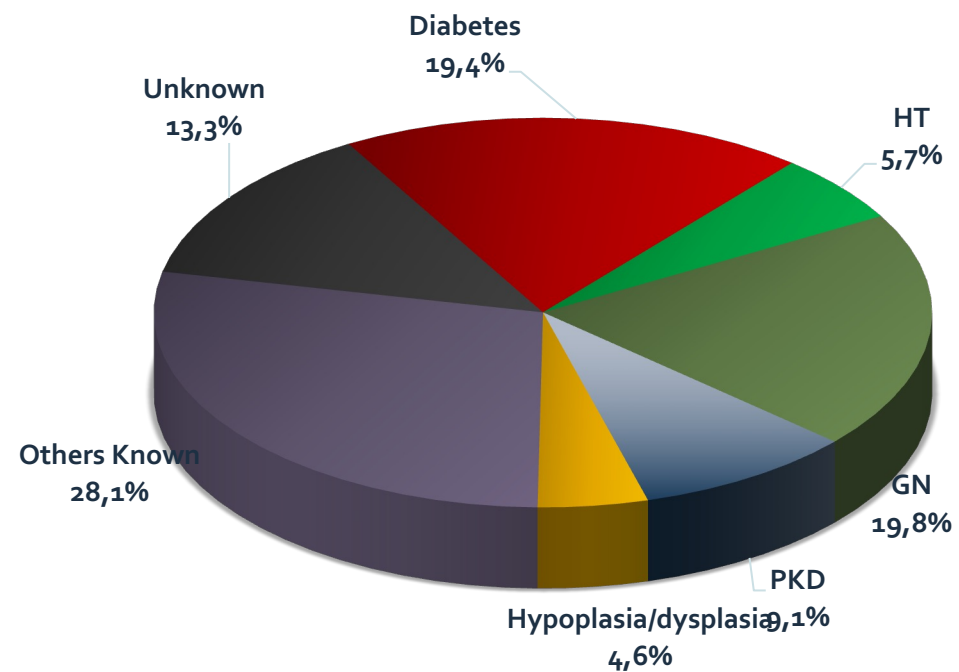
PATIENTS TREATED WITH PERITONEAL DIALYSIS COUNT AT 31st DECEMBER 2004-2024



PREVALENT PATIENTS TREATED WITH PD PMP 2014-2024

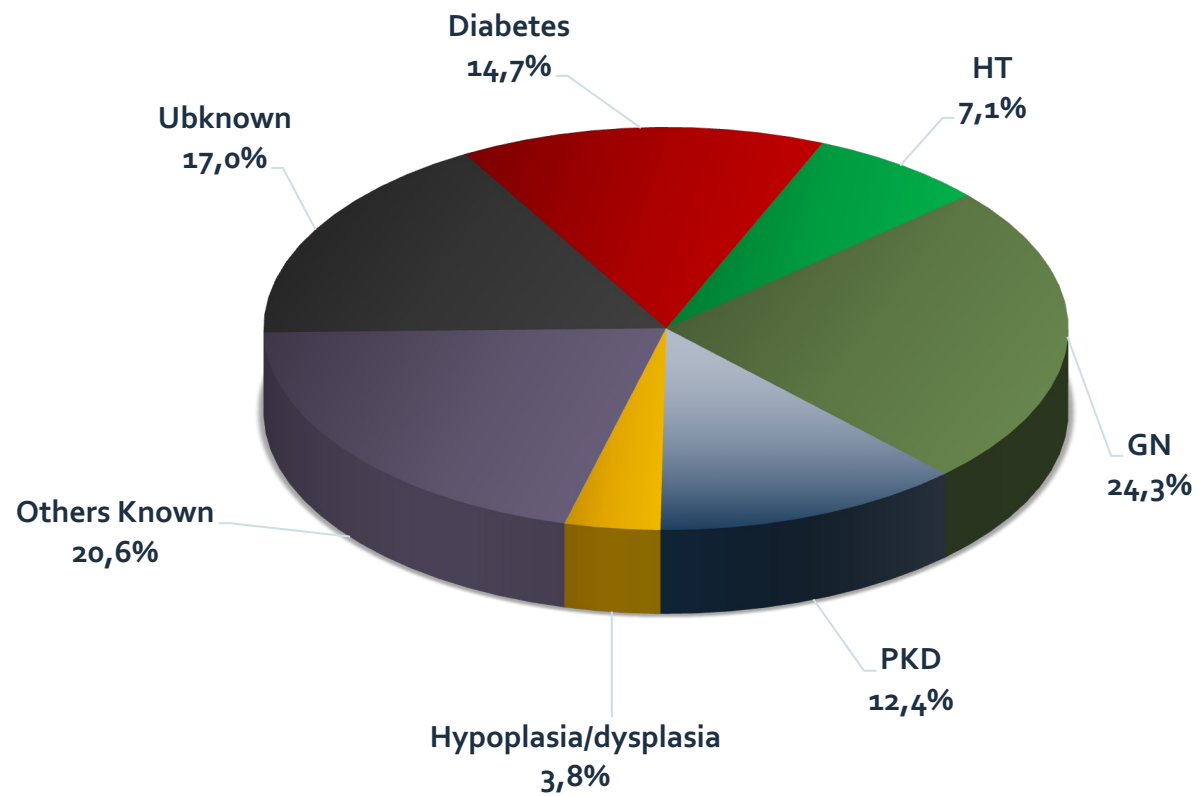


PRIMARY RENAL DISEASE IN PD PATIENTS ACCEPTED FOR PD - 2024



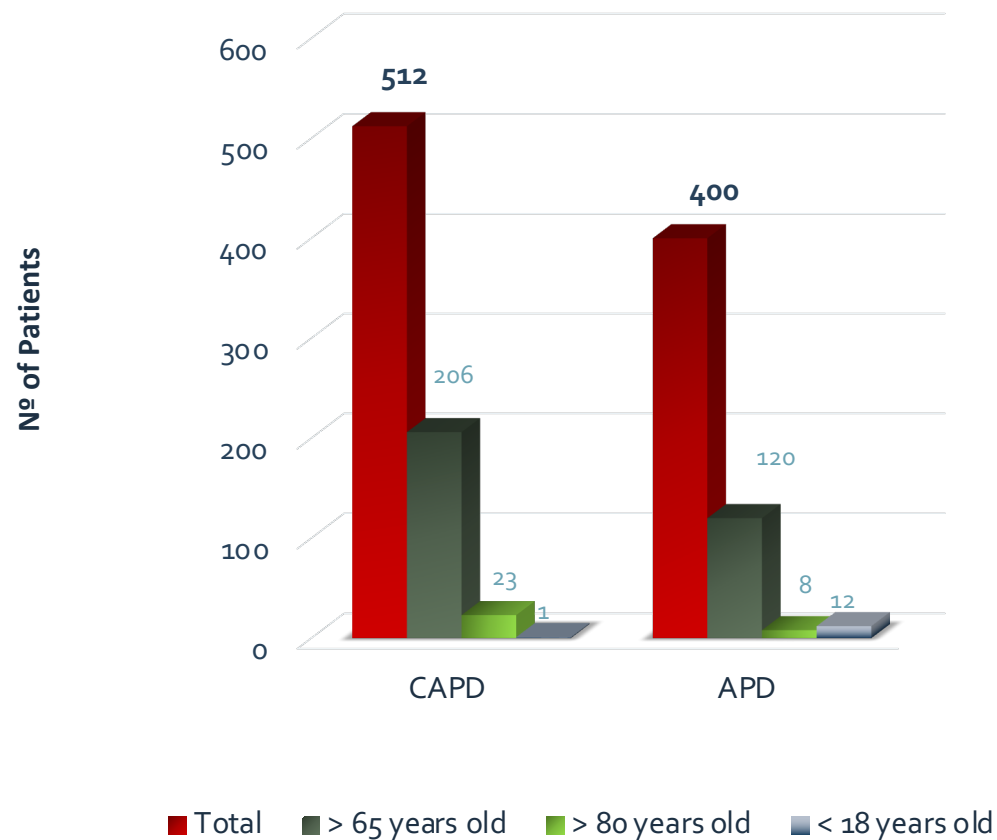
N = 263

PRIMARY RENAL DISEASE IN PREVALENT PD PATIENTS 31st DECEMBER 2024



N = 912

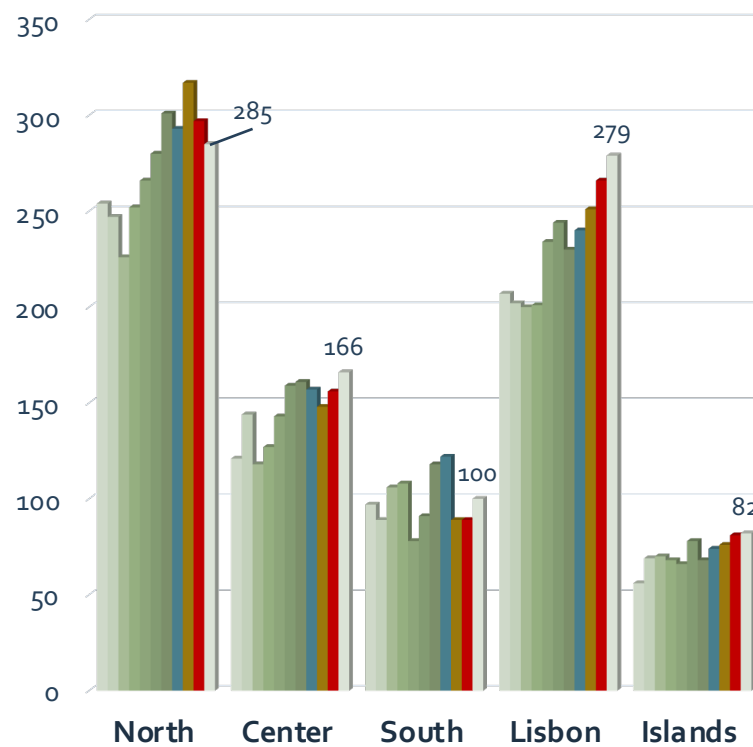
PATIENTS TREATED WITH MANUAL Vs AUTOMATED PD 31st DECEMBER 2024



N = 912
APD: 43,8%
Age >65 years : 35,7%;
Age >80 years : 3,5%

PATIENTS TREATED WITH PD BY REGION 31st DECEMBER 2024

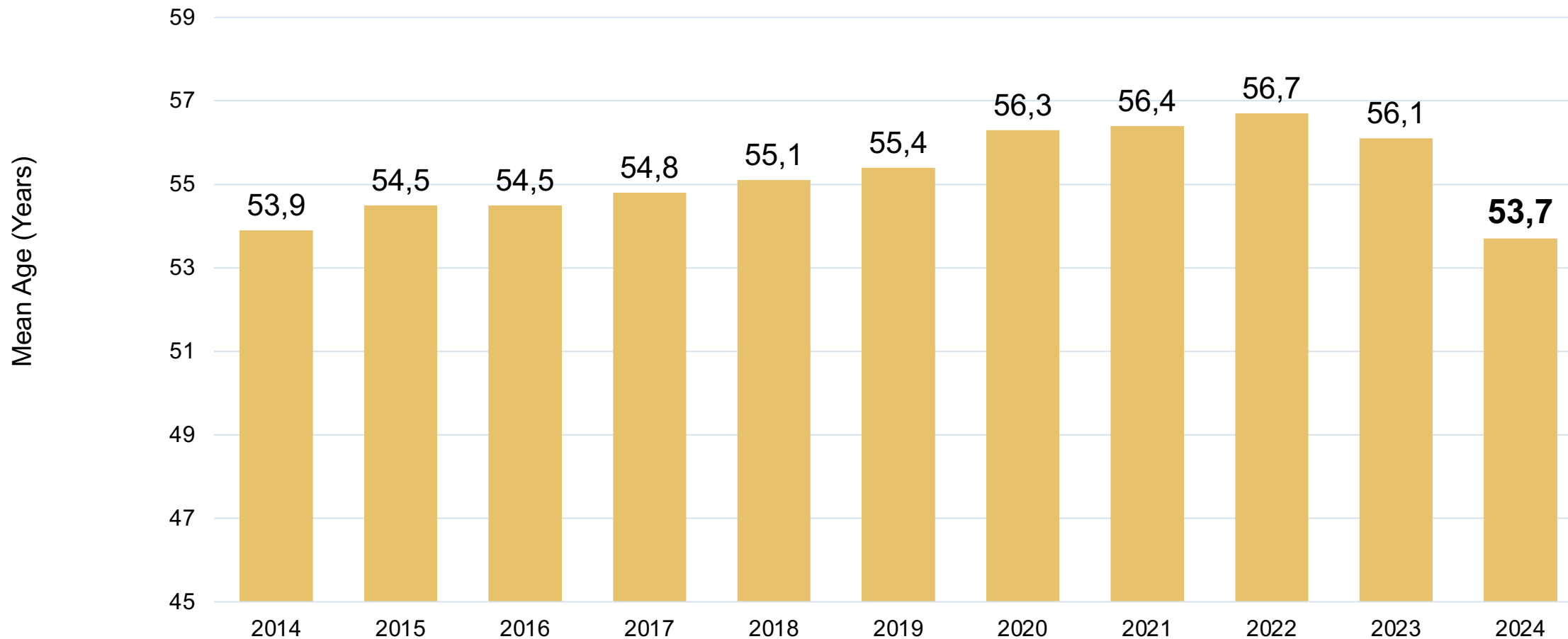
Nº of patients



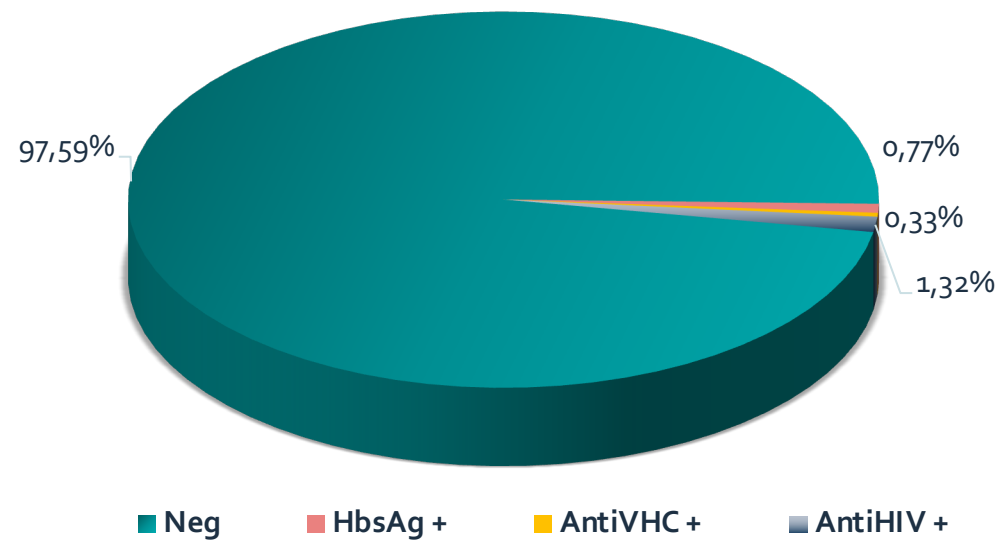
2015 2016 2017 2018 2019 2020 2021 2022 2023 2024

N = 912

MEAN AGE OF PATIENTS TREATED WITH PD 31st DECEMBER 2014-2024



VIRAL STATUS IN PREVALENT PD PATIENTS 31st DECEMBER 2024



N = 912

PD PATIENT MOVEMENT IN 2024

In

263

New Patients

14

Transplant
Failure

89

HD to PD

Out

36

Deaths

71

Transplants

176

PD to HD

9

Renal recovery

4

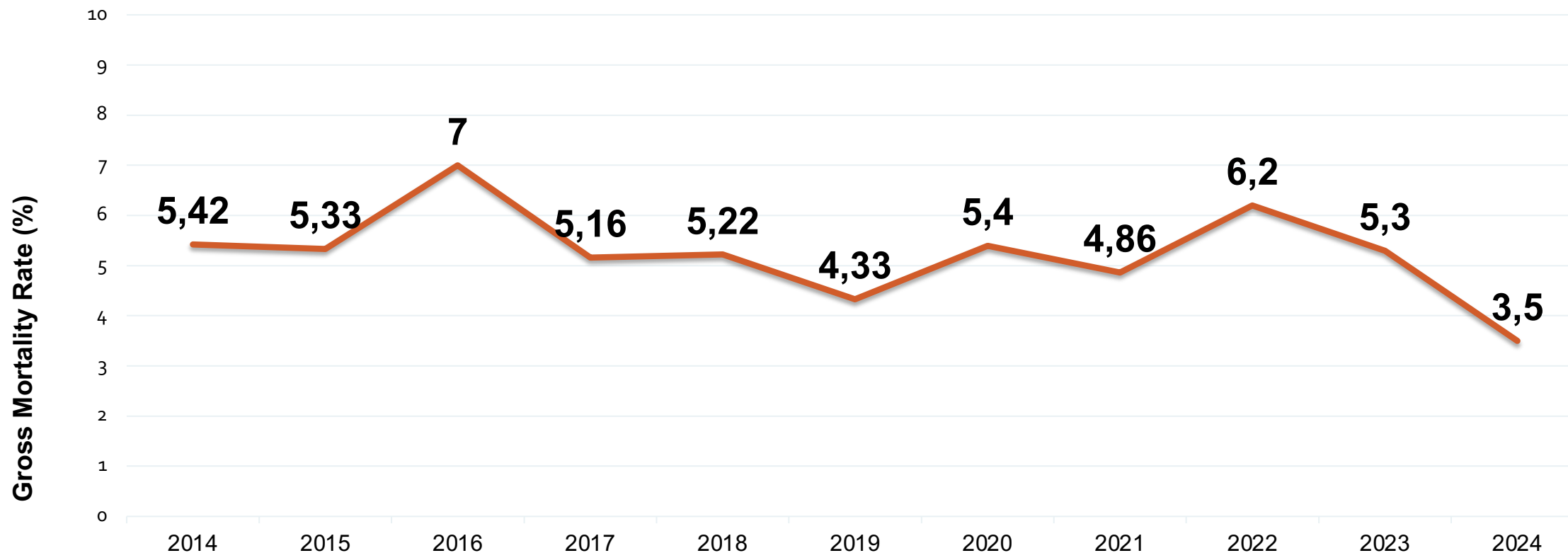
Palliative Care

47

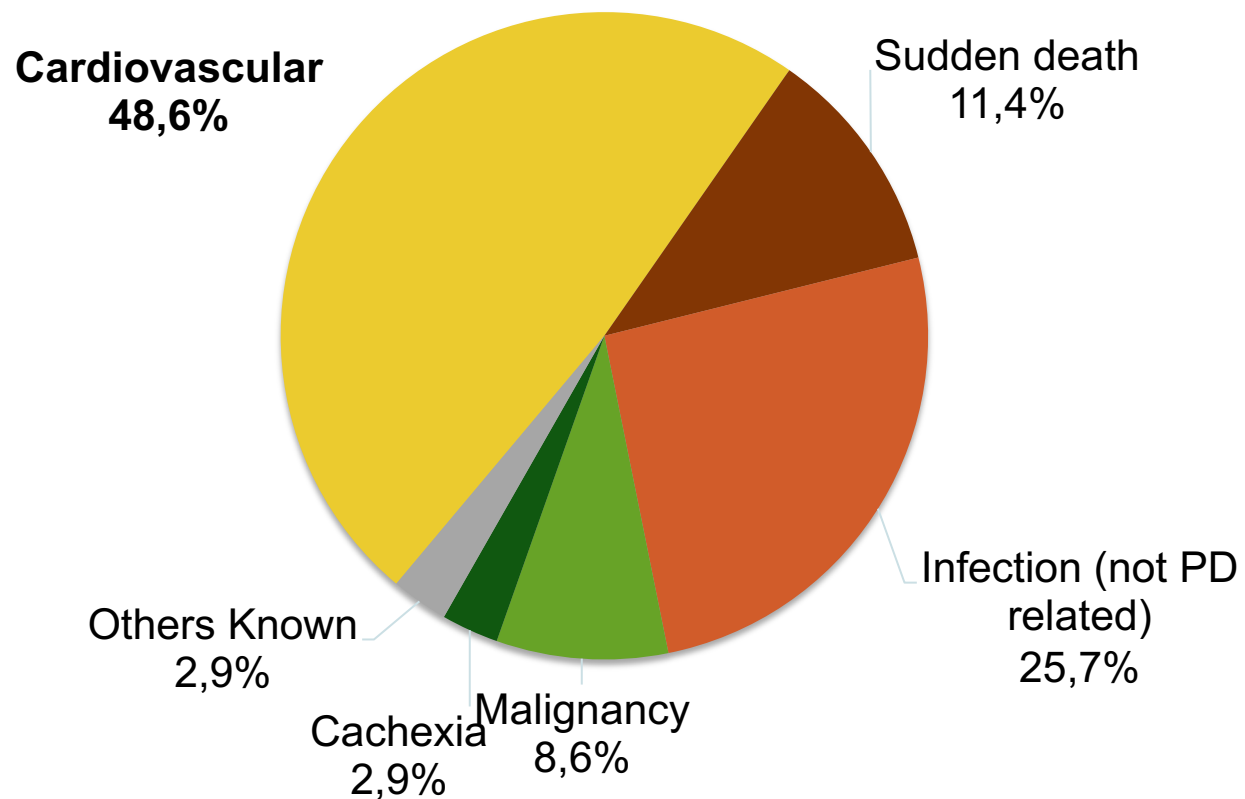
?

GROSS MORTALITY RATE = 3,5 %
(90D MORTALITY = 1,2 %)

GROSS MORTALITY RATE IN PD 2014-2024



CAUSES OF DEATH IN PD PATIENTS 2024



4

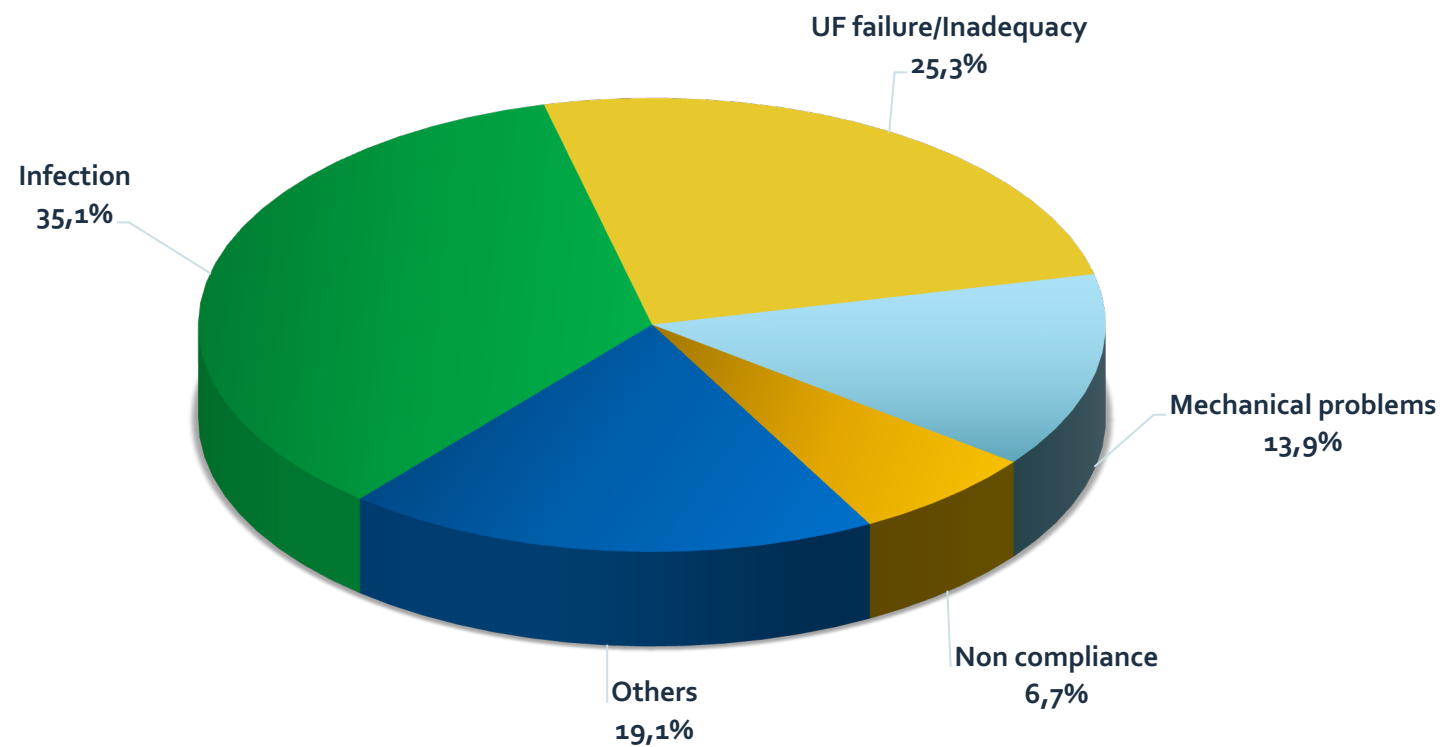
patients died within 90 days

1.2 %

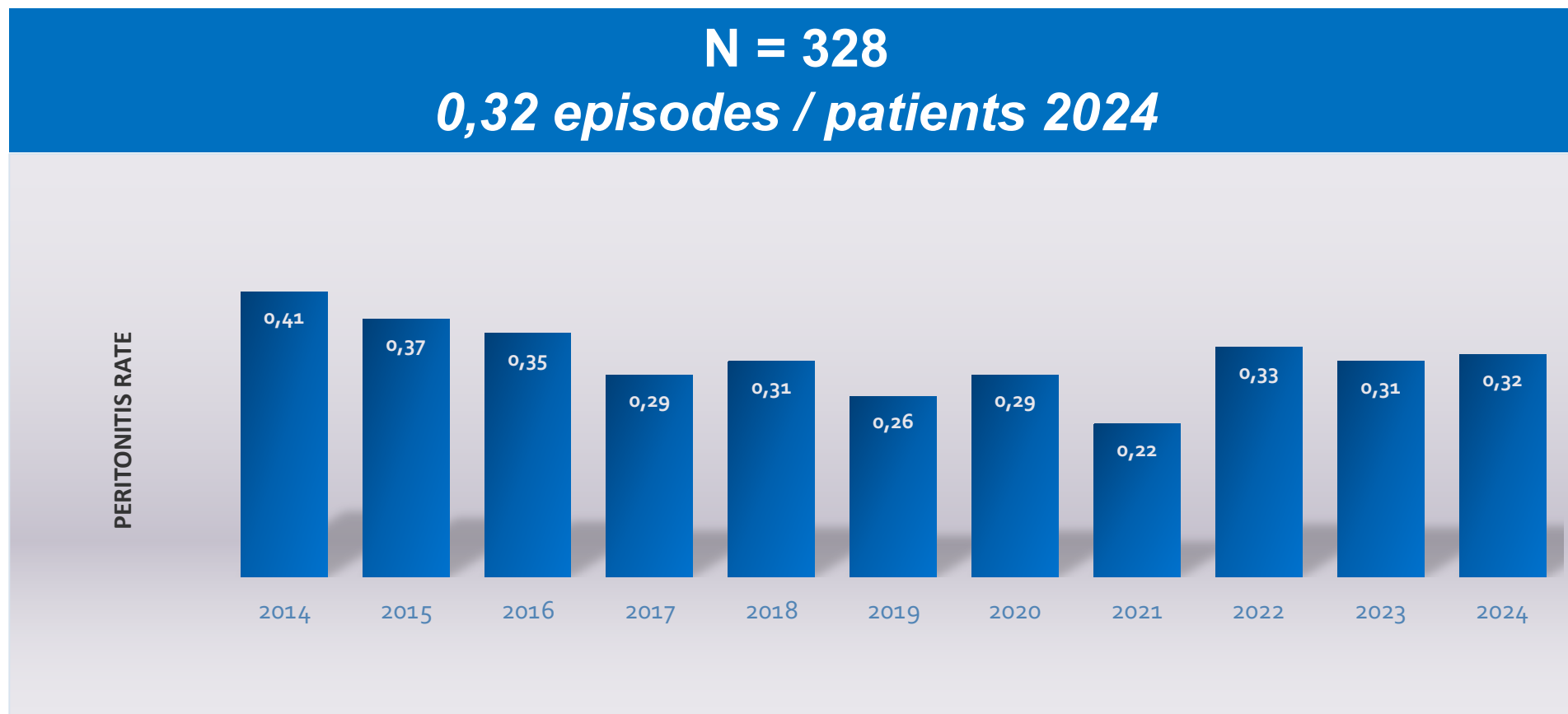
90D mortality

36 Deaths

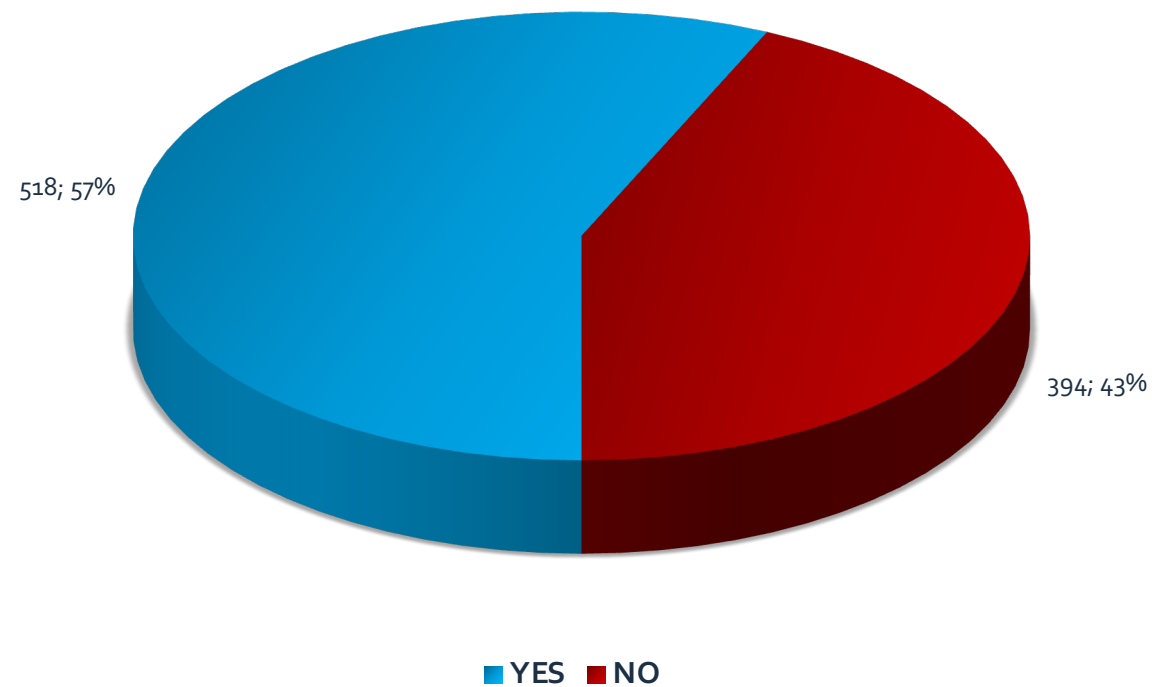
REASONS FOR PD WITHDRAWAL - 2024



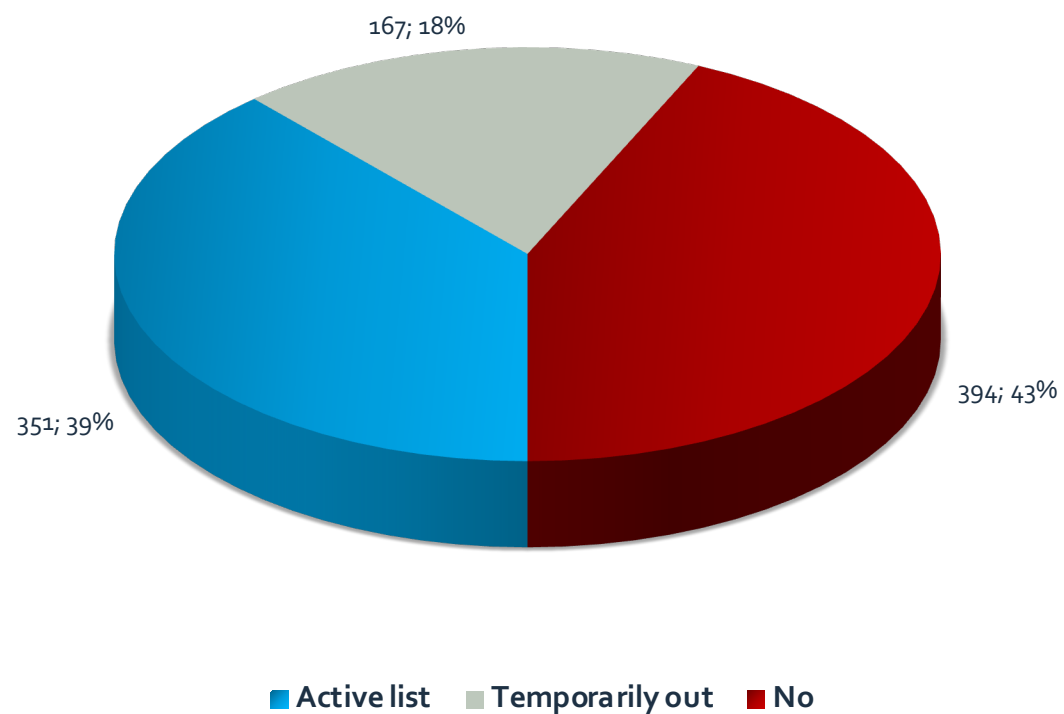
N = 194



WAITING LIST FOR RENAL TRANSPLANTATION PD PATIENTS 2024



WAITING LIST FOR RENAL TRANSPLANTATION PD PATIENTS - ACTIVE AND TEMPORARY CONTRAINDICATION



KIDNEY TRANSPLANTATION

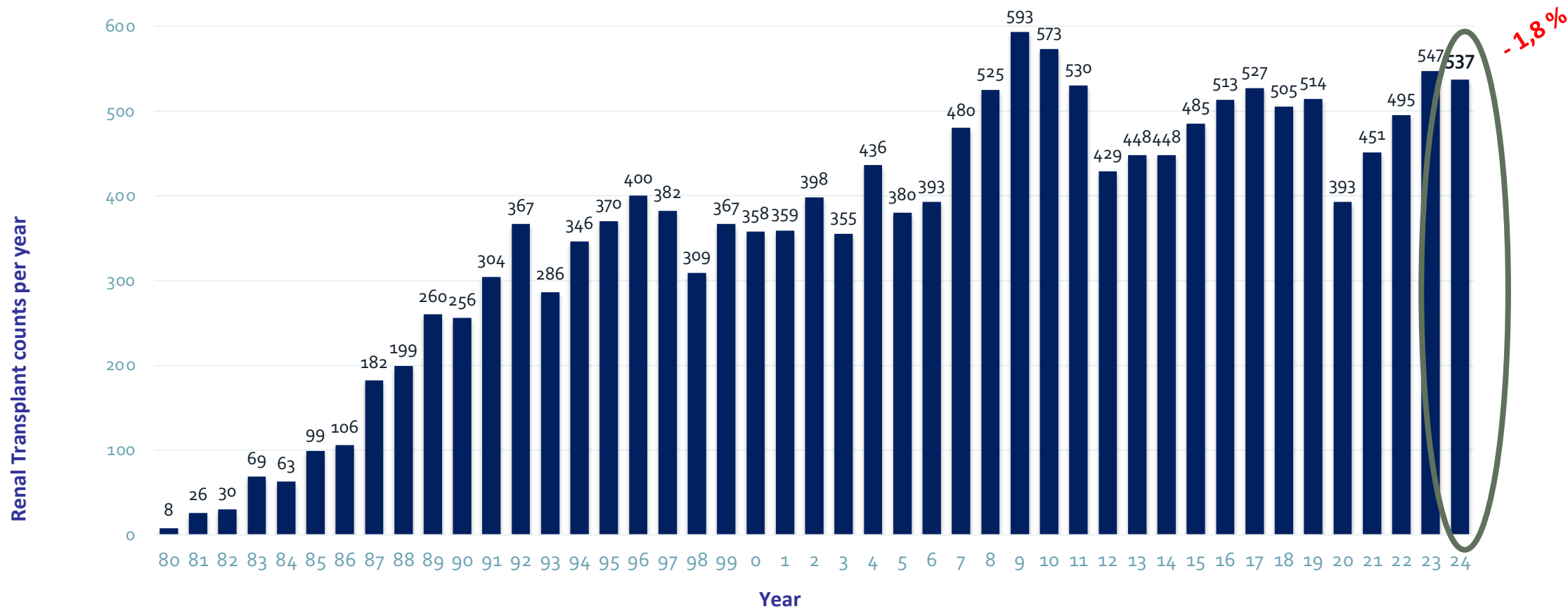
Encontro Renal 2025



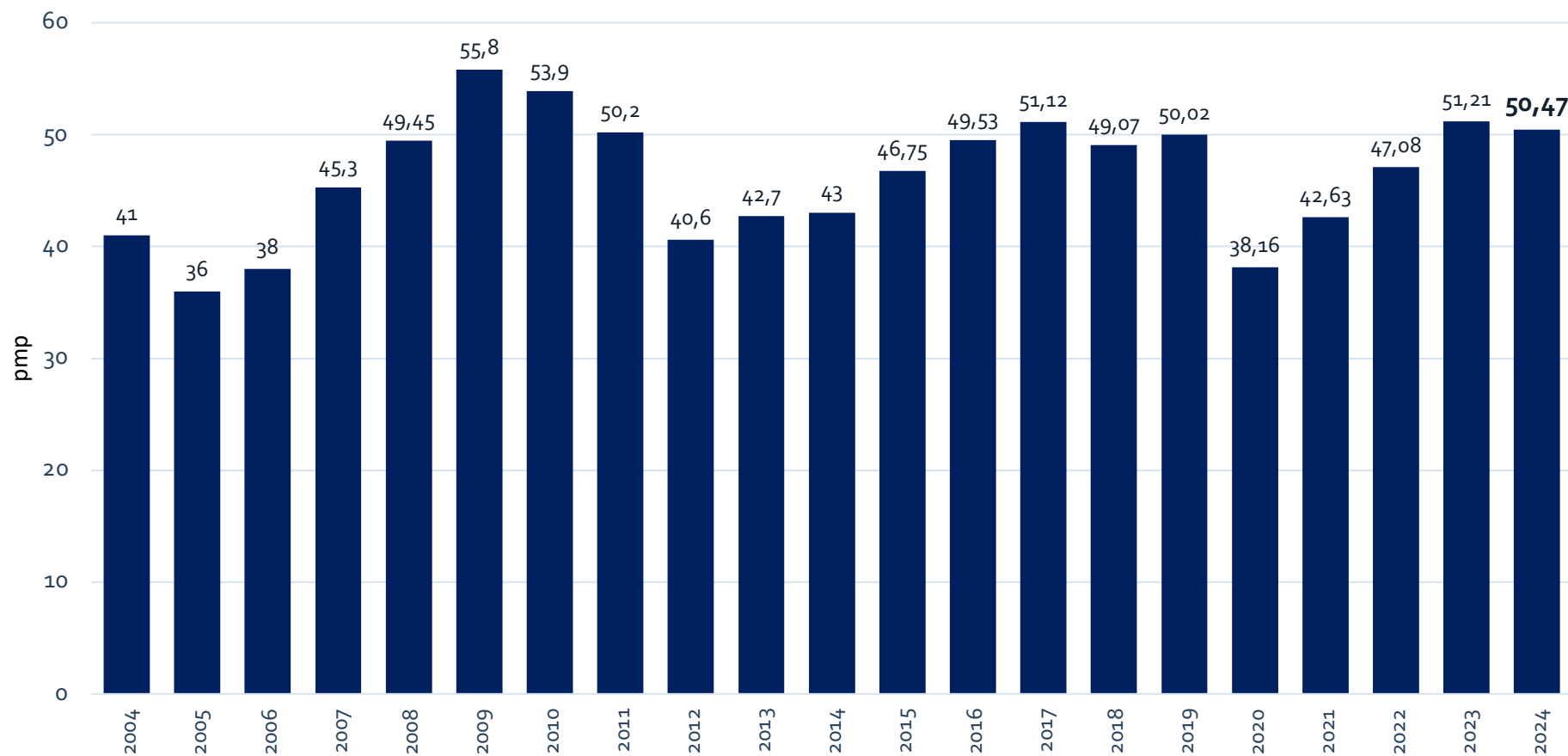
Sociedade Portuguesa
Nefrologia

KIDNEY TRANSPLANTS PERFORMED 1980 - 2024

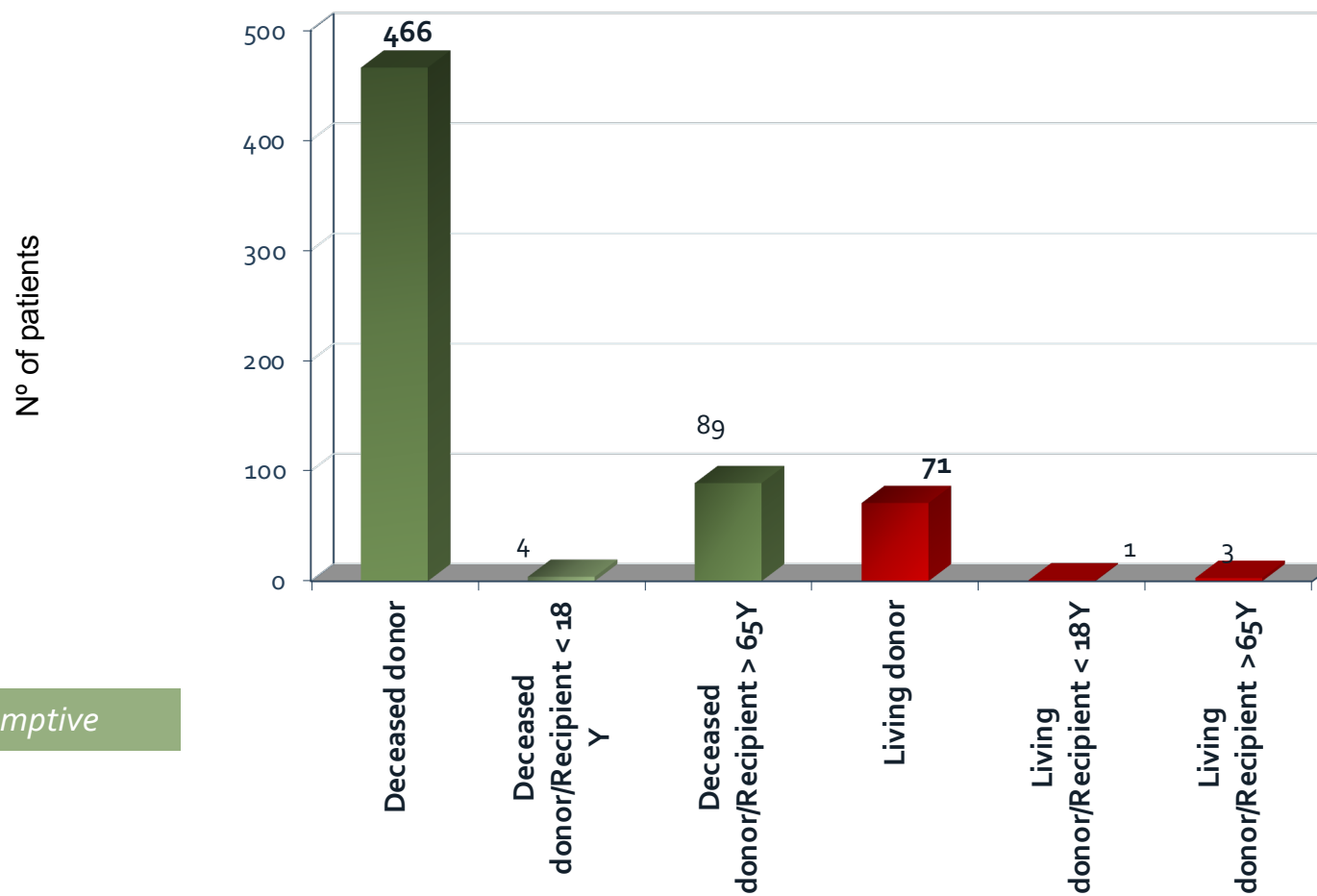
Total = 16116



KIDNEY TRANSPLANTS PERFORMED PMP 2004 - 2024

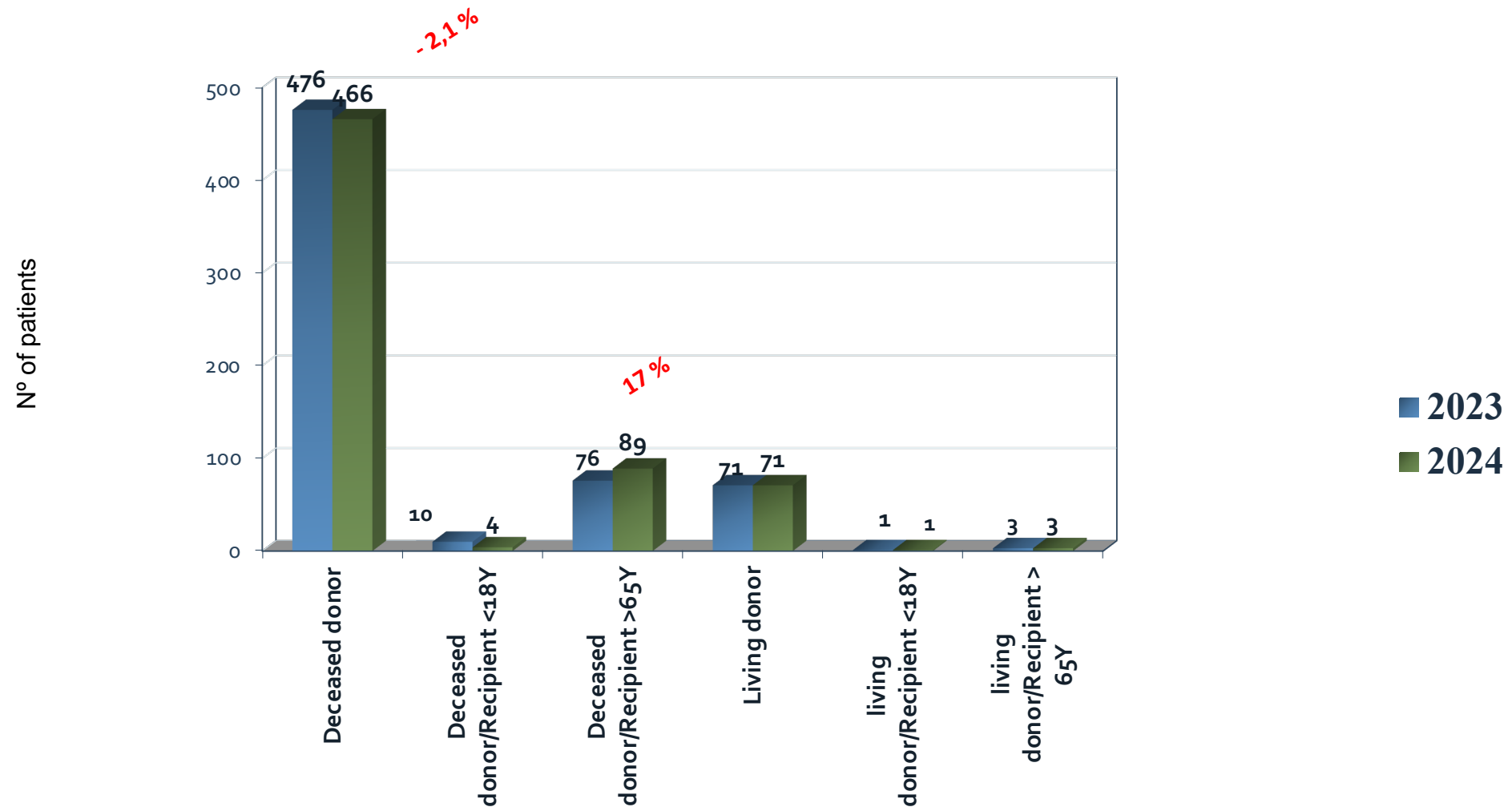


KIDNEY TRANSPLANTATION ACTIVITY CHARACTERIZATION - 2024

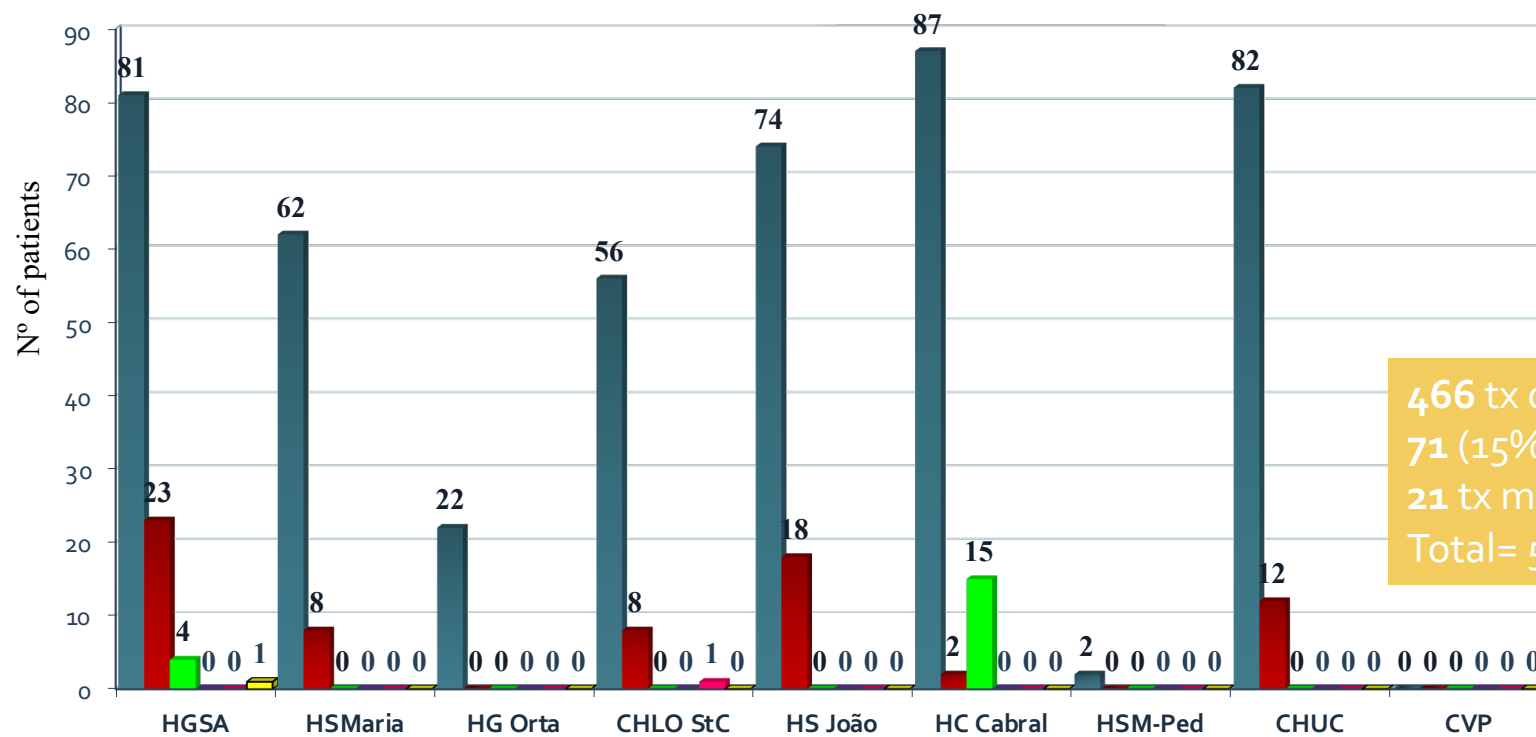


18 pre-emptive

KIDNEY TRANSPLANTATION ACTIVITY CHARACTERIZATION - 2023 Vs 2024

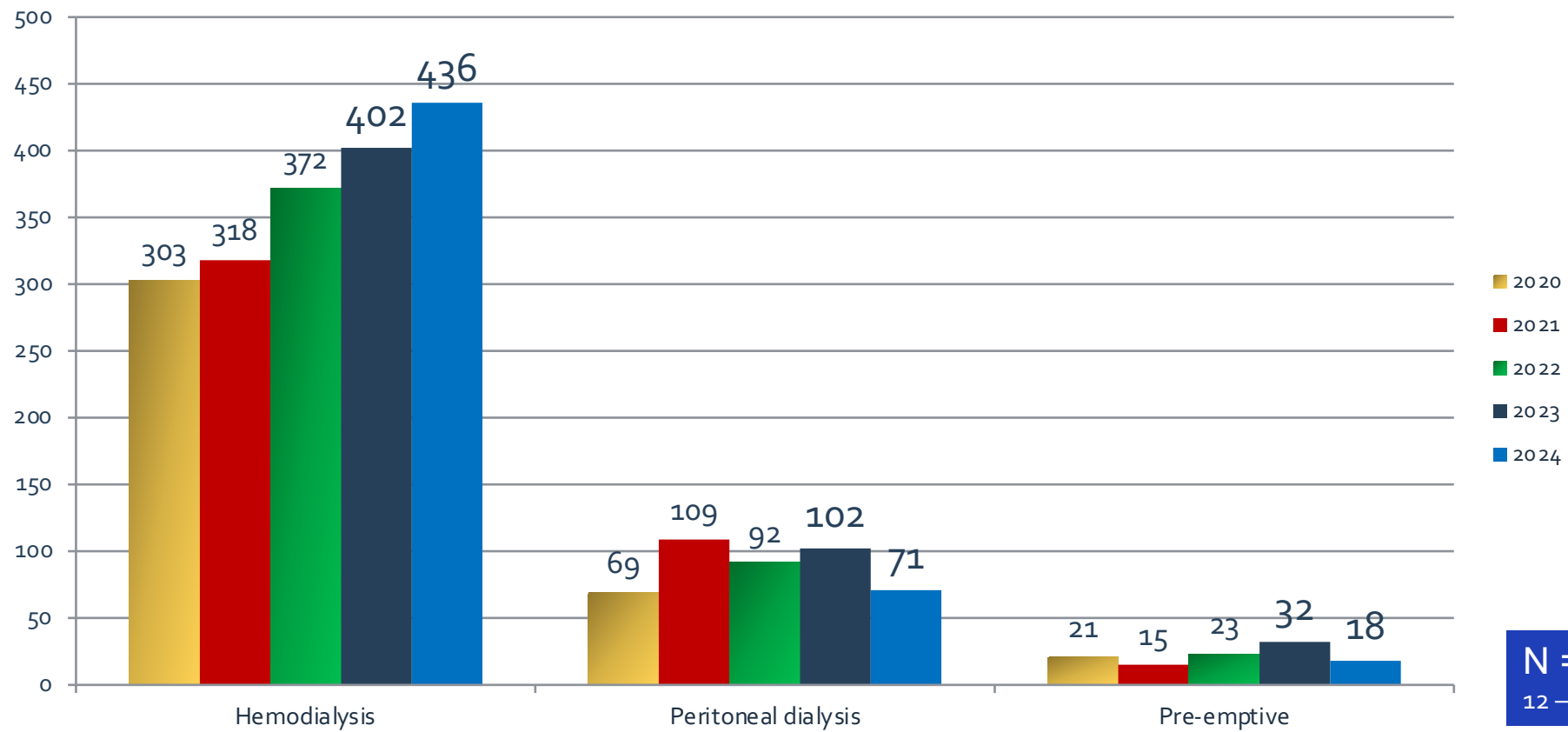


PORTUGUESE TRANSPLANT CENTERS ACTIVITY - 2024

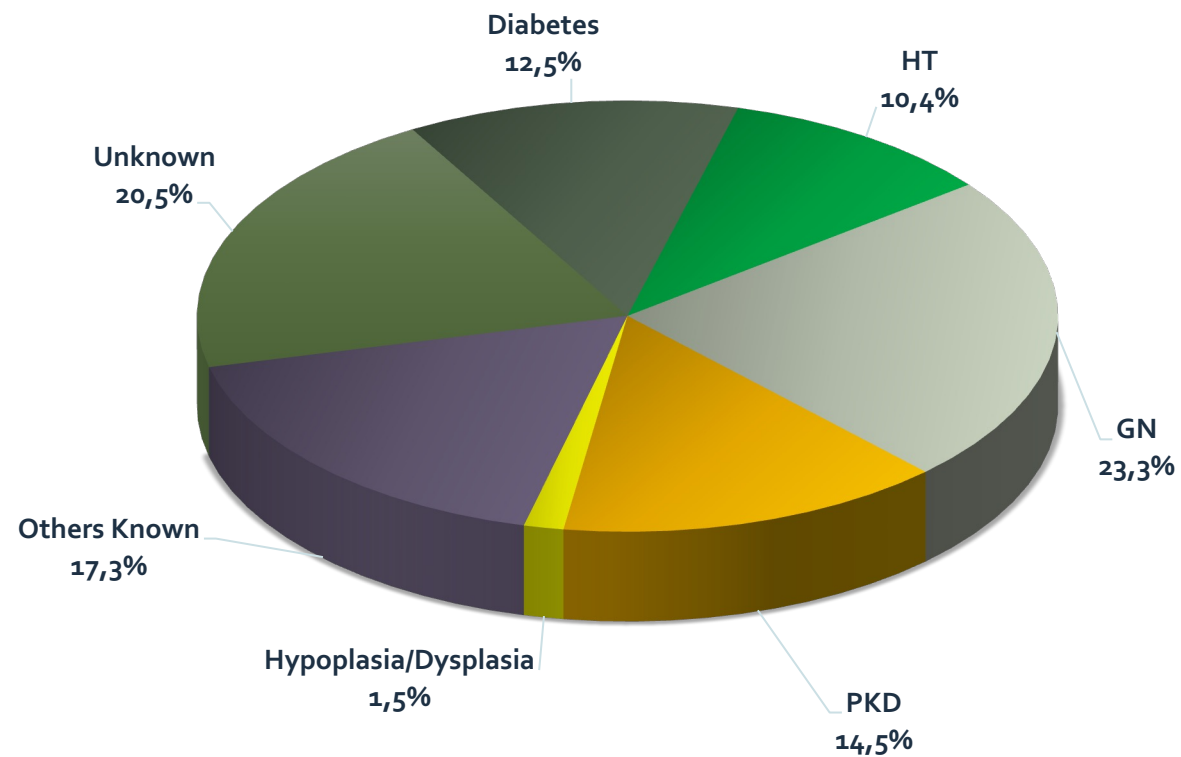


466 tx deceased donor
71 (15%) living donor
21 tx multi-organ
Total= 537

PREVIOUS KIDNEY REPLACEMENT THERAPY 2020-2024



PRIMARY RENAL DISEASE OF KIDNEY TRANSPLANT PATIENTS 2024

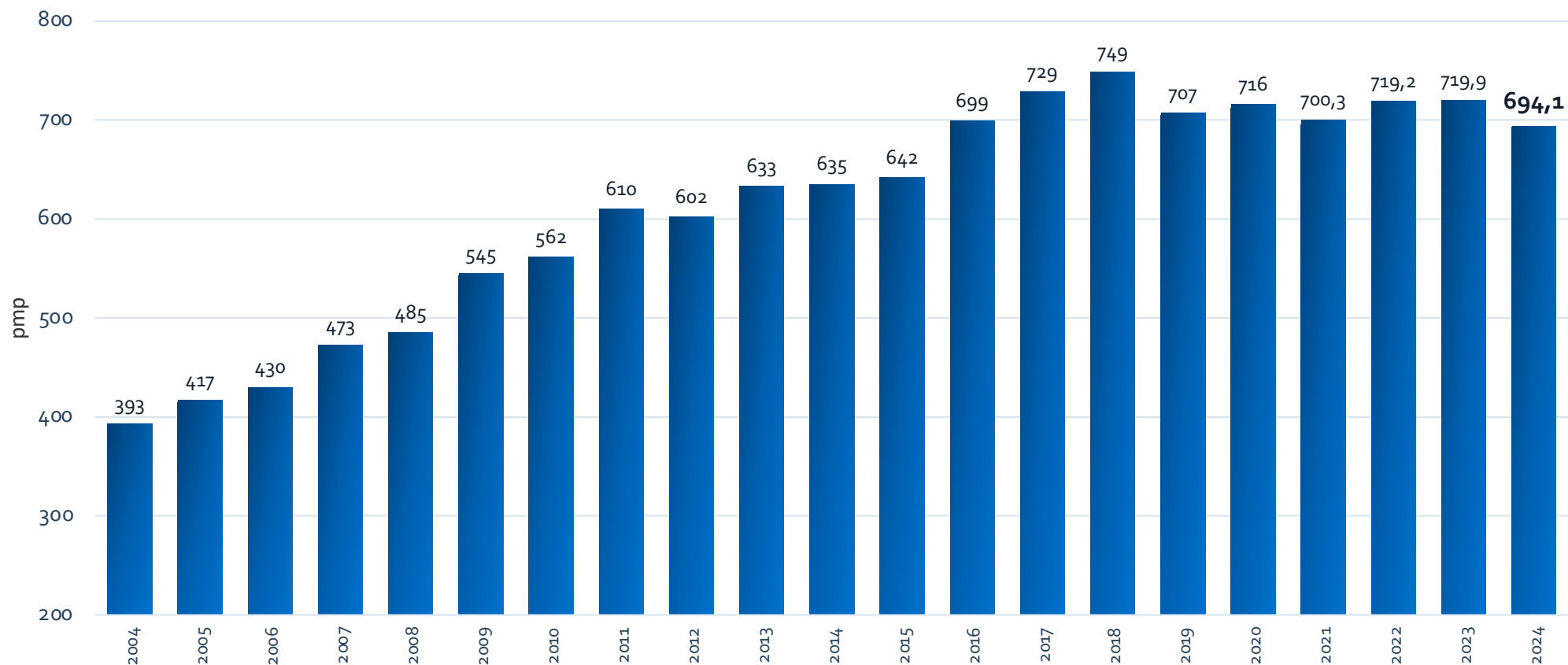


N = 537

PATIENTS WITH FUNCTIONING GRAFT AND ANNUAL GROWTH 31st DECEMBER 2004-2024

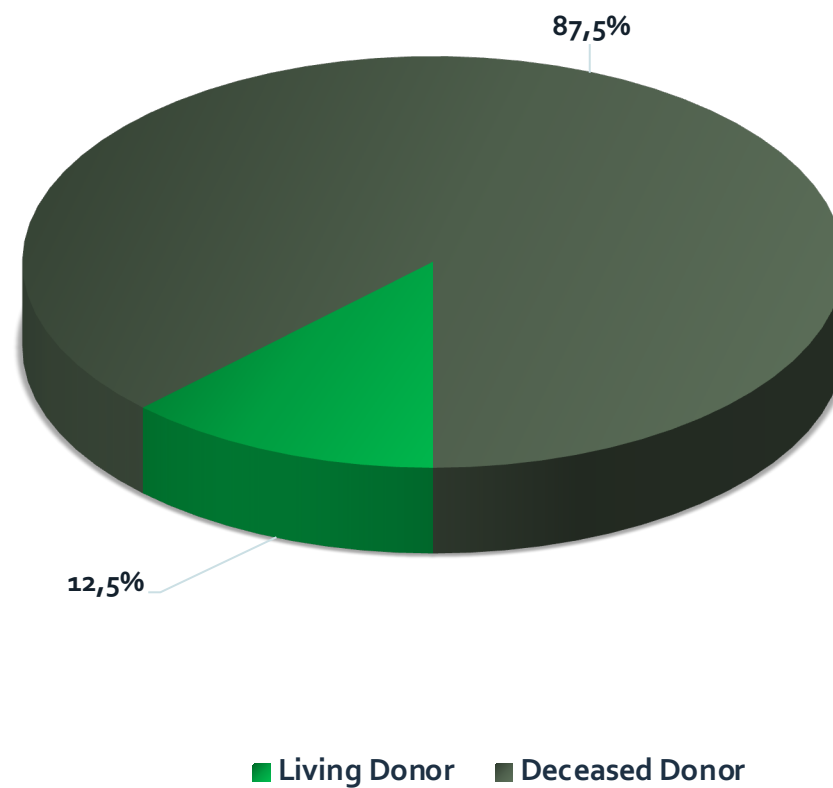


PATIENTS WITH FUNCTIONING GRAFT PMP 31st DECEMBER 2004-2024



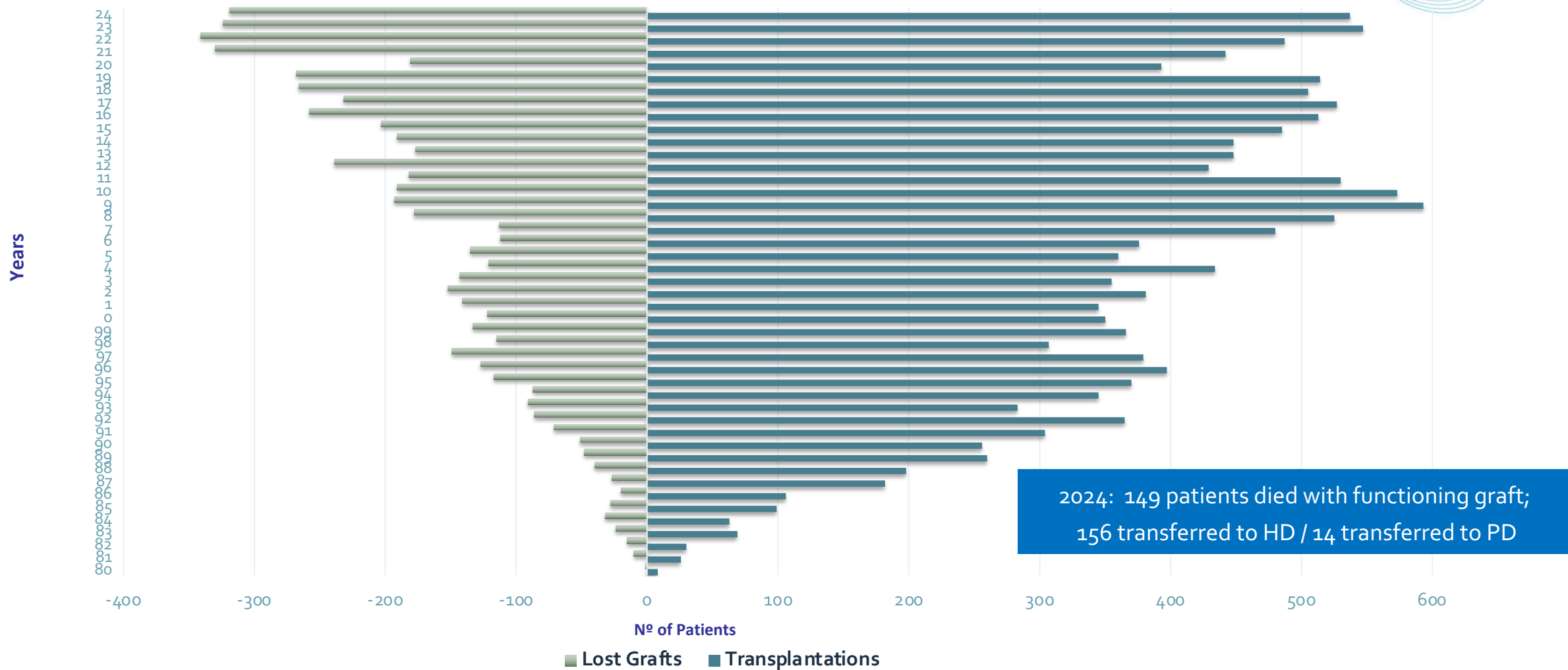
N = 7385

KIDNEY TRANSPLANTATION: LIVING Vs DECEASED DONOR - 2024



N = 7385

KIDNEY TRANSPLANTATION ACTIVITY 1980-2024

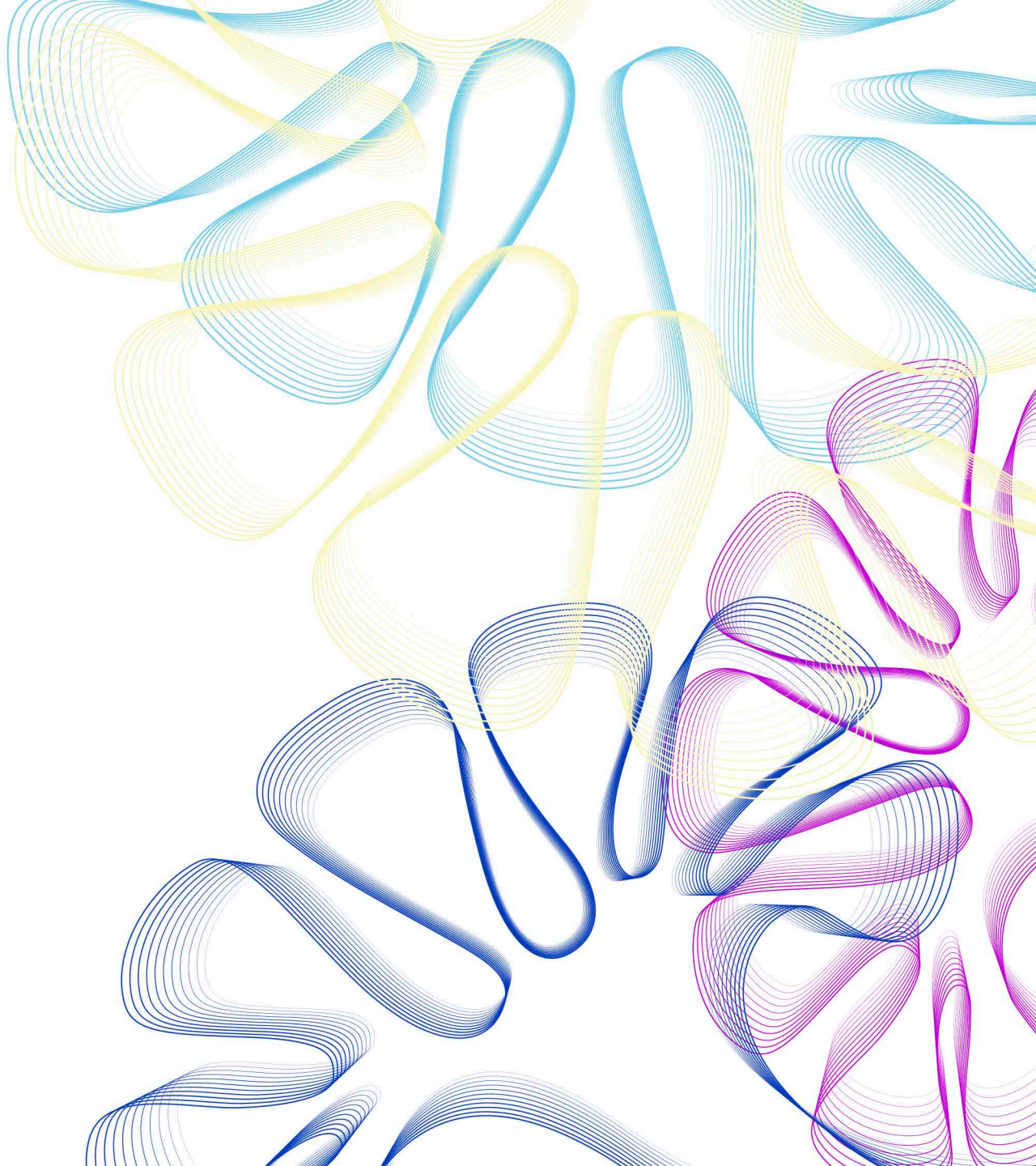


CONSERVATIVE KIDNEY CARE

Encontro Renal 2025



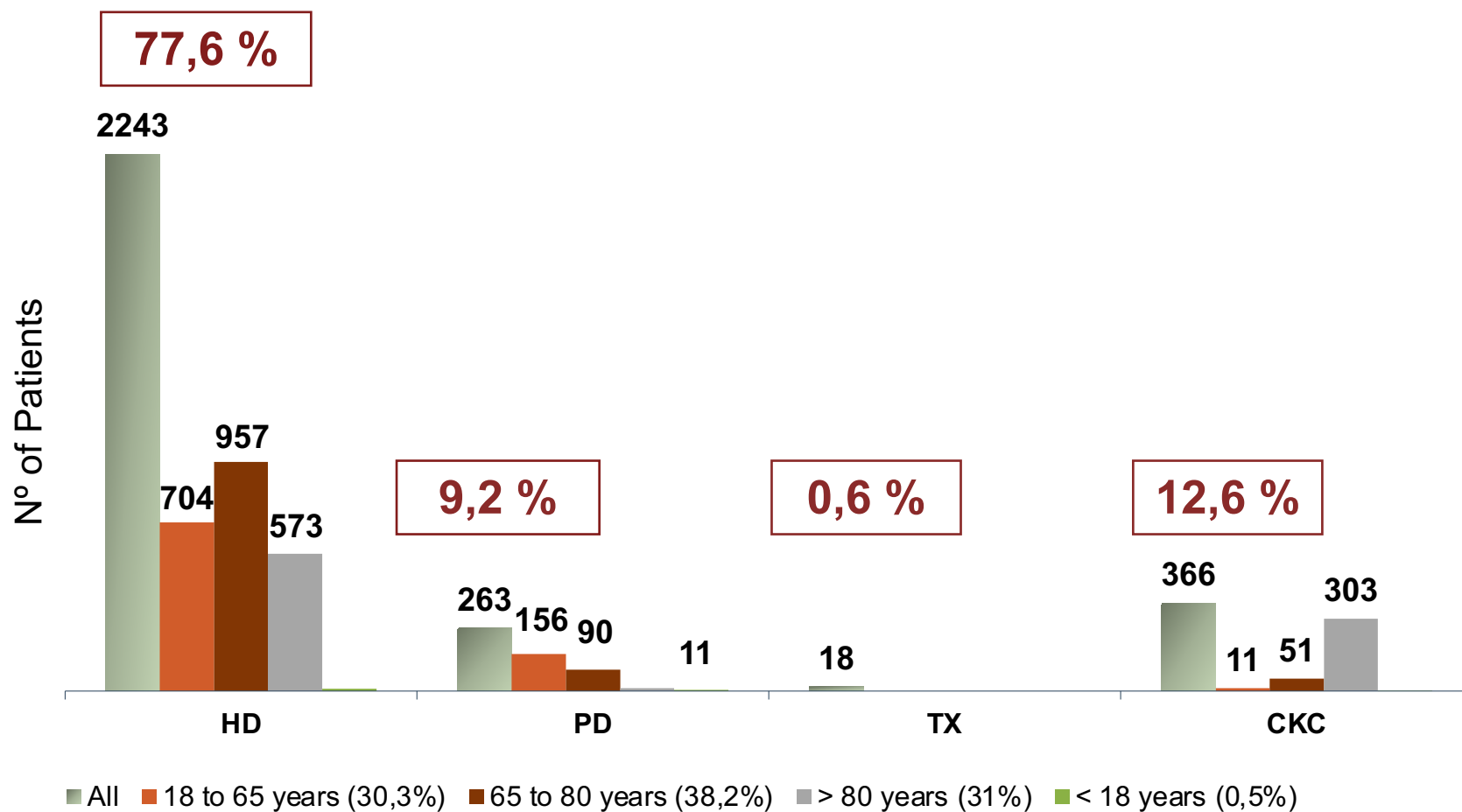
Sociedade Portuguesa
Nefrologia



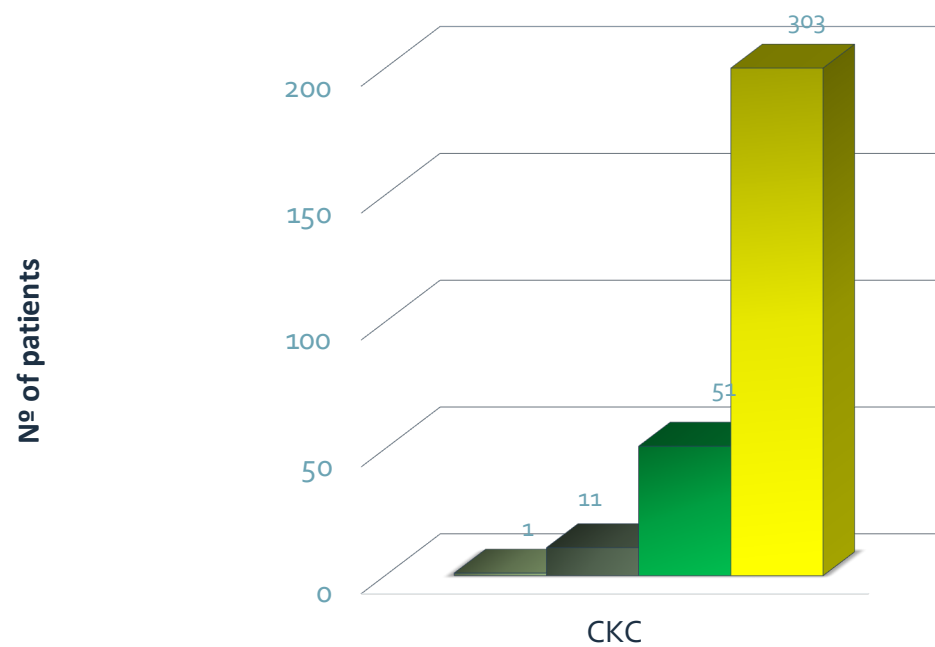
- Questionnaires sent to all Hospital Units (32)
- 23 hospital units provide CKC (72%)
- 17 have dedicated CKC team (53%)
- 13 with specialized elements in palliative care
- 17 coordinated with hospital palliative care
- 6 coordinated with community palliative care



NEW PATIENTS STARTING KRT DURING 2024



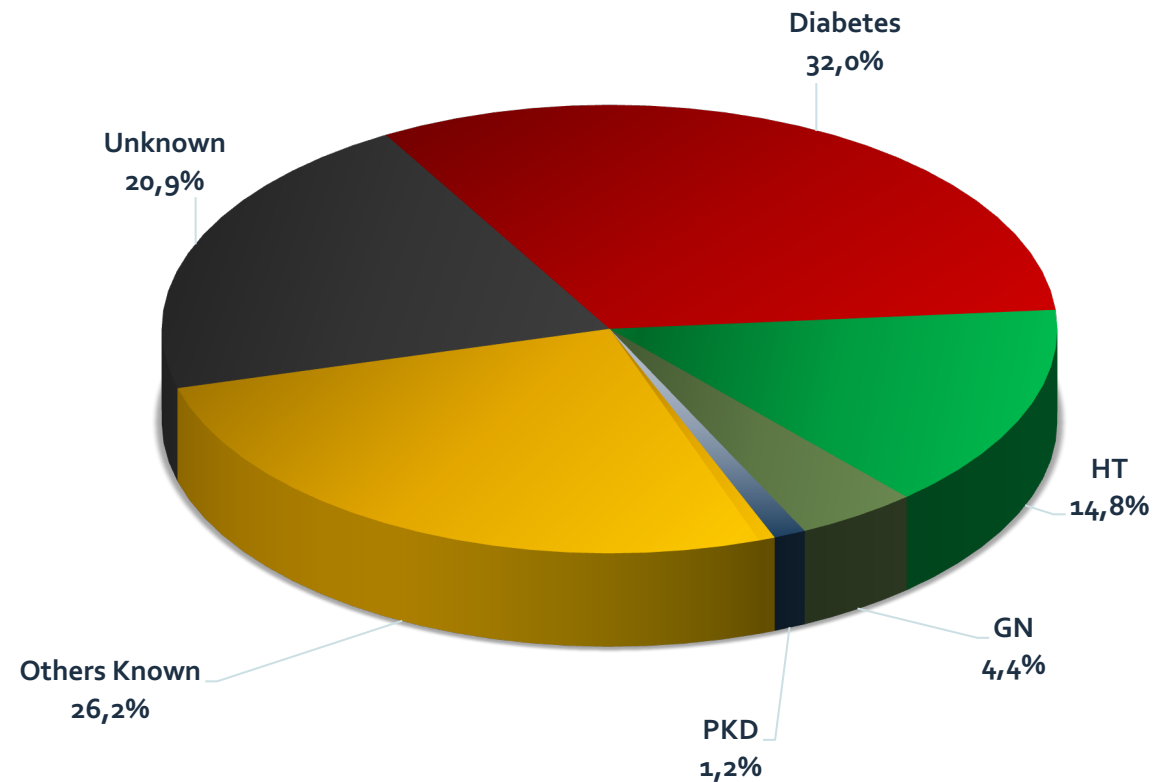
PATIENTS ACCEPTED FOR CKC BY AGE GROUP - 2024



■ < 18 years old (0,2%) ■ 18 to 65 years old (3%) ■ 65 to 80 years old (14%) ■ > 80 years old (82,8%)

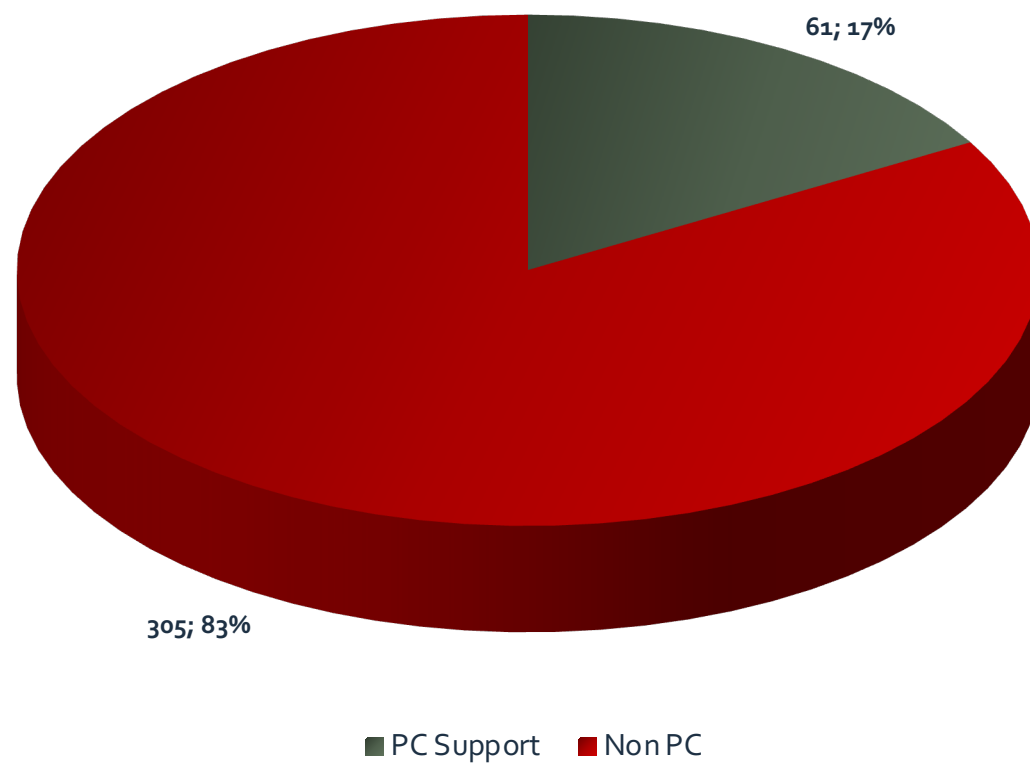
PRIMARY RENAL DISEASE OF PATIENTS ACCEPTED FOR CKC - 2024

CHARLSON INDEX
Age-adjusted Modified Charlson
Index (average):
7,1

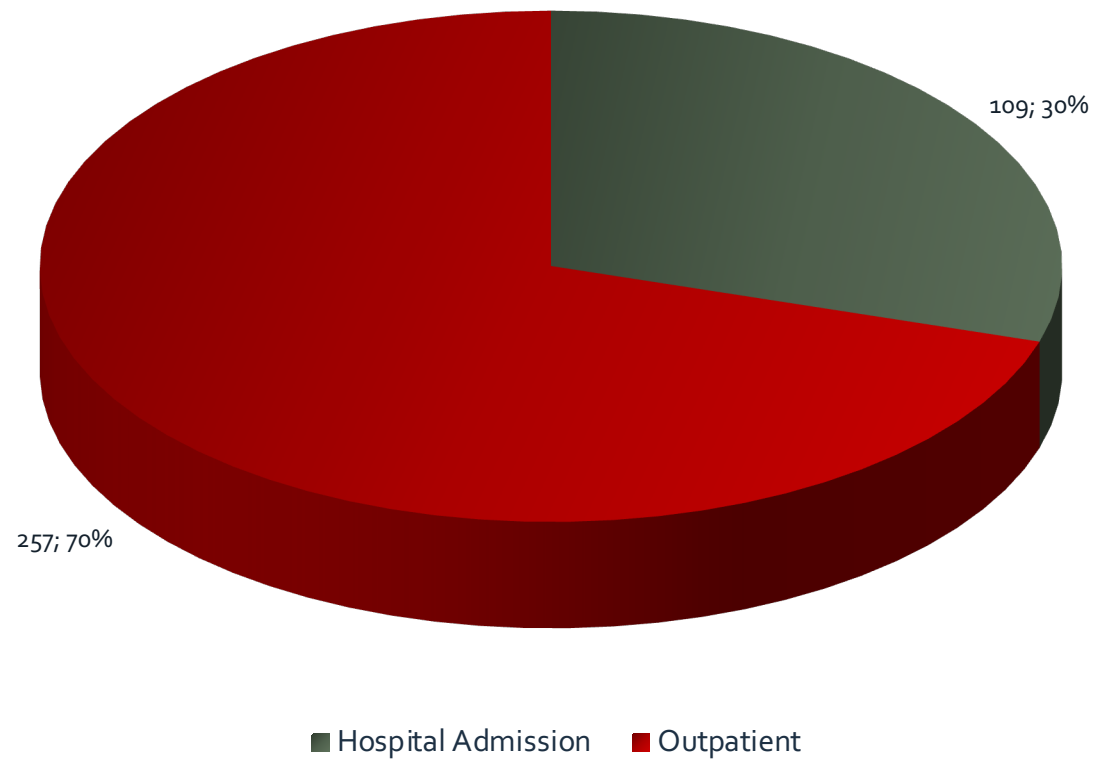


N = 344
Not available - 22

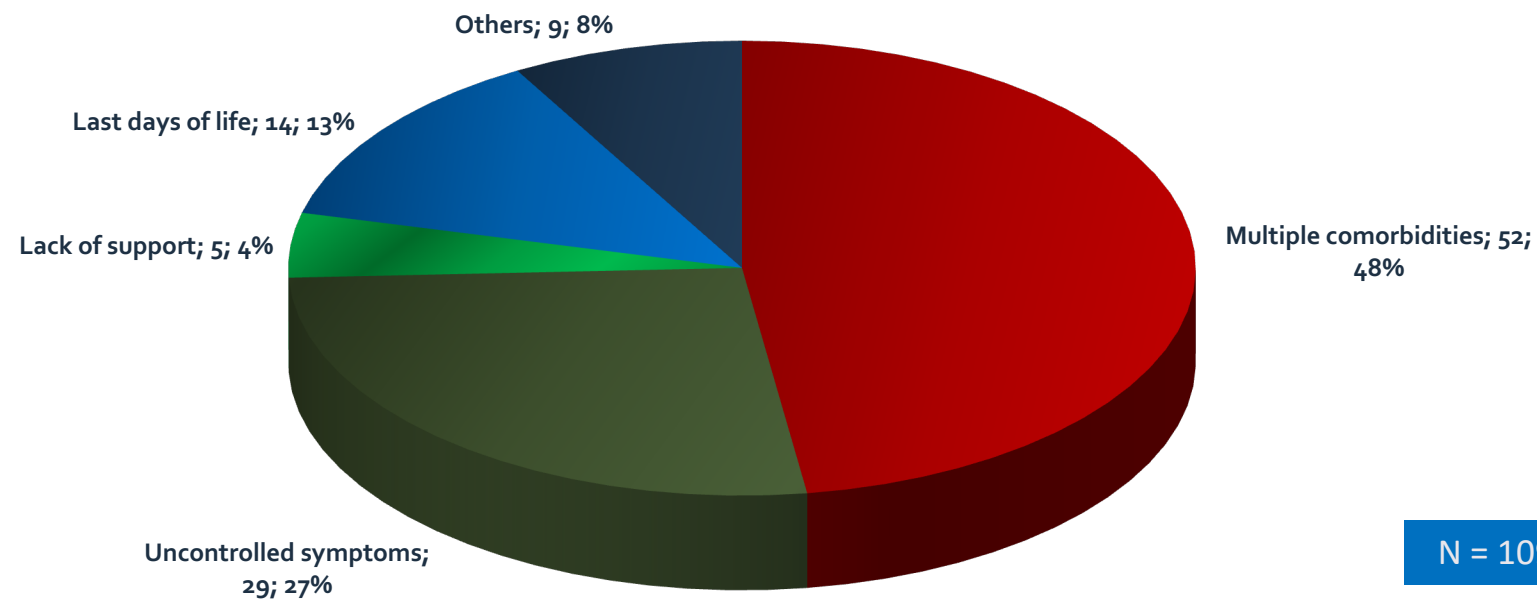
CKC 2024 (n=366) – DIFFERENTIATED PALLIATIVE CARE SUPPORT



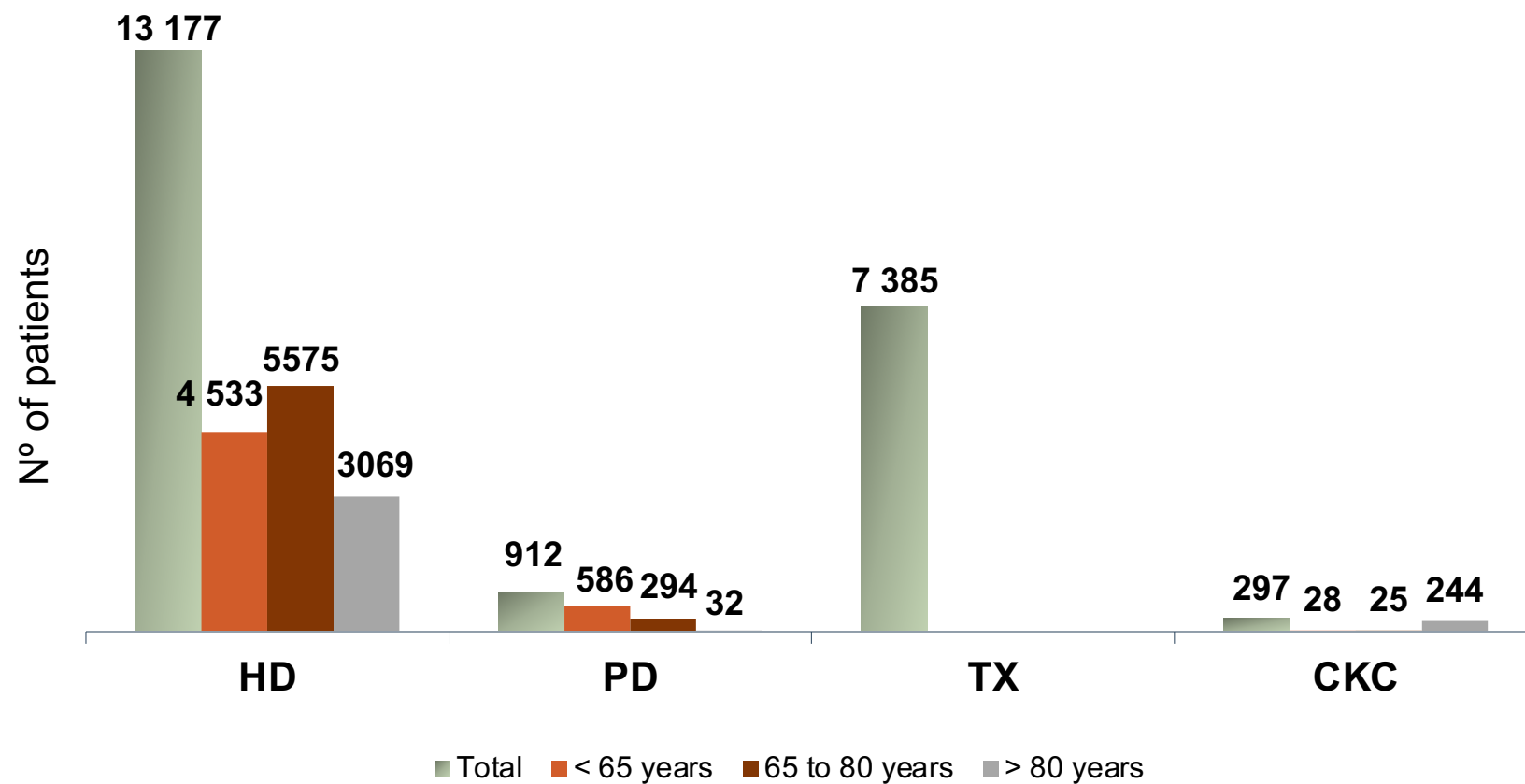
CKC 2024 (n=366) – HOSPITAL ADMISSION



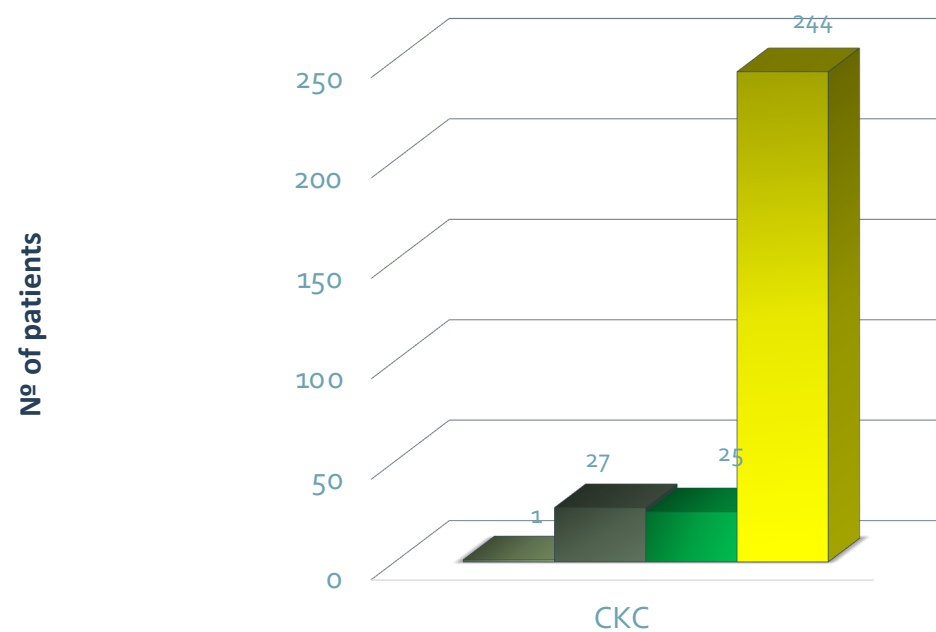
CKC 2024 – HOSPITAL ADMISSION - REASONS



PREVALENT PATIENTS ON KRT 31st DECEMBER 2024



PATIENTS TREATED WITH CKC BY AGE GROUP 31st DECEMBER 2024

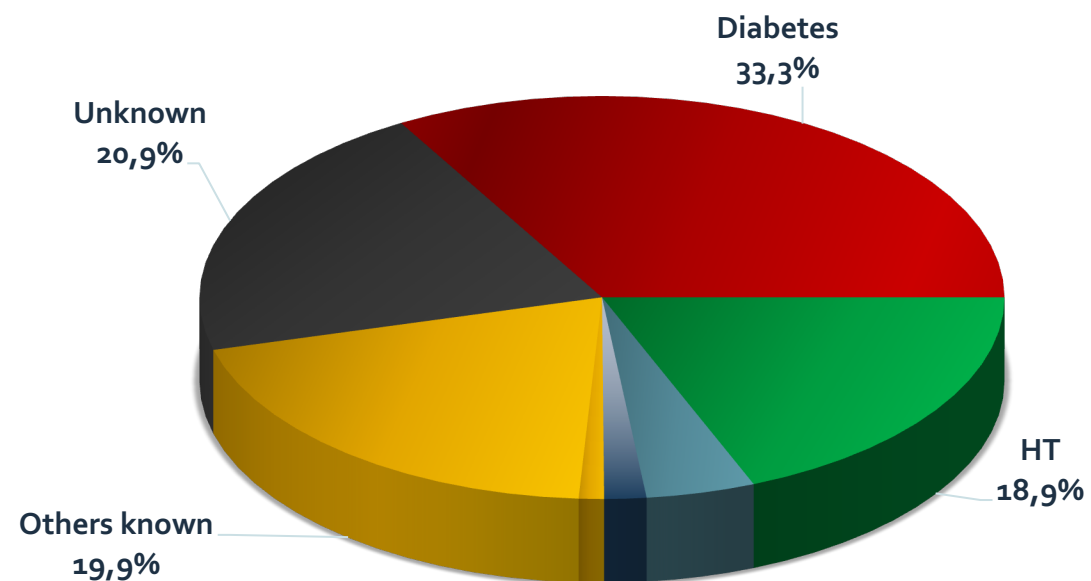


Mean Age = 84,3 Years
2023- 85,3 Years

N = 297

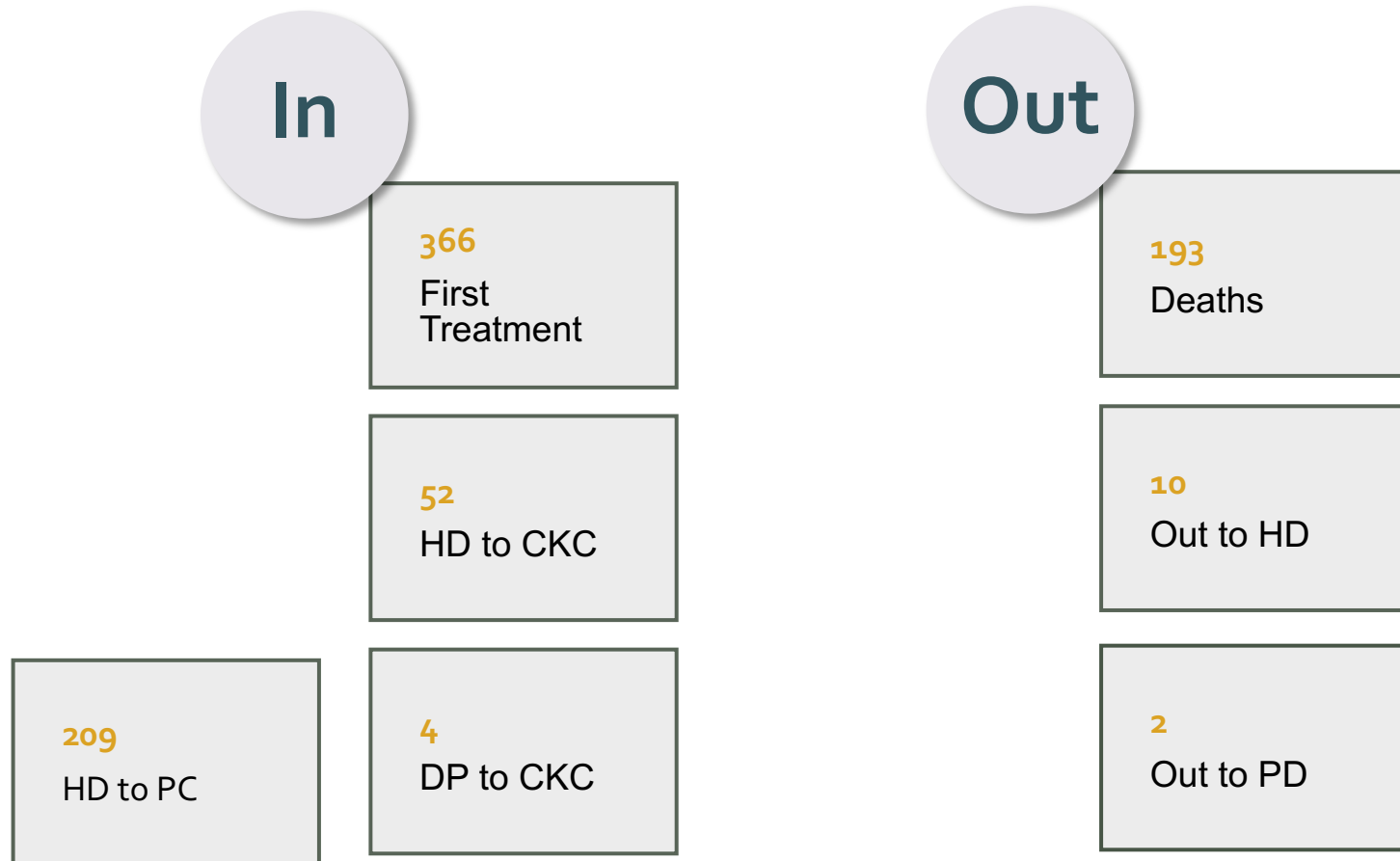
■ < 18 years old (0,3%) ■ 18 to 65 years old (9%) ■ 65 to 80 years old (8,4%) ■ > 80 years old (82,3%)

PRIMARY RENAL DISEASE OF PREVALENT PATIENTS (CKC) 31st DECEMBER 2024



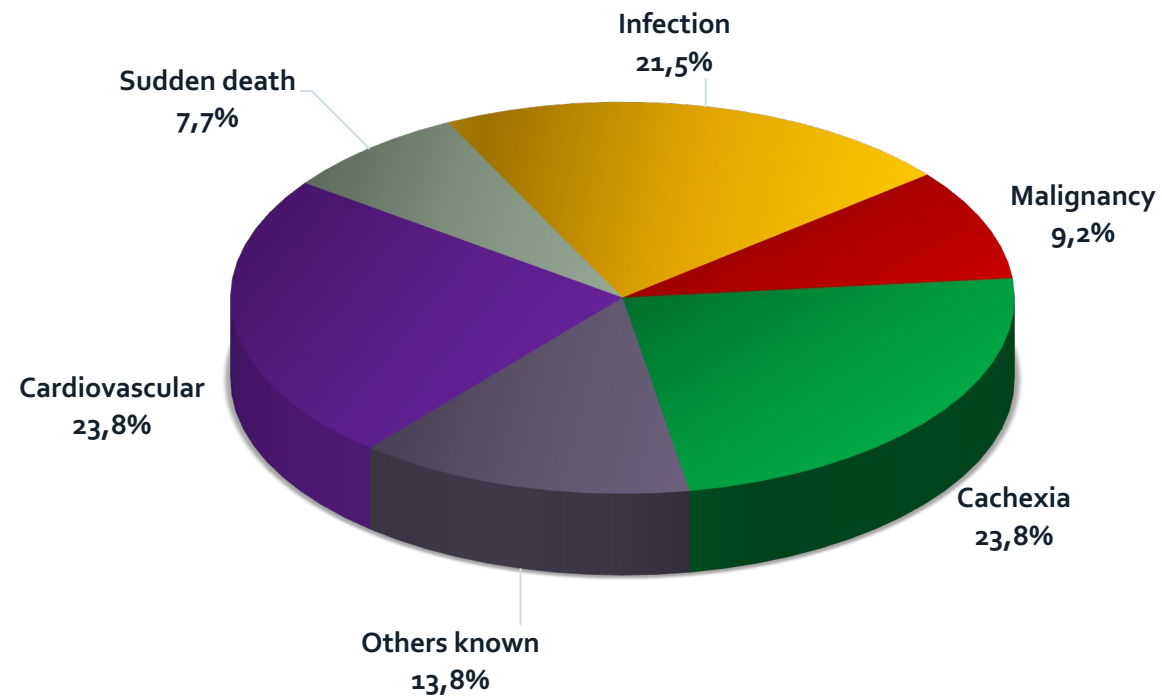
N = 297

CKC PATIENT MOVEMENT AND MORTALITY RATE - 2024



CAUSES OF DEATH IN CKC PATIENTS - 2024

N = 139



Main conclusions

- ✓ The incidence of new dialysis patients pmp is 0.9 % less than in 2023
- ✓ The incidence of new KRT patients is high – > 240 pmp
- ✓ 31 % of these patients are > 80 years old
- ✓ The prevalence of KRT patients remains very high - > 2000 pmp
- ✓ The prevalence of dialysis patients pmp has decreased but the dialysis patient pool continues to increase (by 0.8% compared to 2023). However, we have seen a deceleration in this growth.



Main Conclusions

Hemodialysis

- ✓ An increase in the number of incident (1.5%) and prevalent (0.7%) patients compared to 2023
- ✓ The increase in the HD patient pool is less marked
- ✓ The average age remains high (68.7 years)
- ✓ The mortality rate remains low – 12.4% - and the main cause of death is still cardiovascular

Peritoneal Dialysis

- ✓ The incidence has decreased but the prevalence has increased 2.6% compared to 2023
- ✓ The average age has decreased (53.7 anos)
- ✓ The mortality rate has reached its lowest value – 3.5%
- ✓ The main cause of death continues to be cardiovascular

Main Conclusions

Kidney Transplant

- ✓ The incidence has decreased 1.8% compared to 2023
- ✓ The number of kidney transplants with a living donor is the same as in 2023
- ✓ The pool of transplant patients continues to grow - 12.5 % of these are transplants with a living donor

Conservative Kidney Care

- ✓ 72 % of our hospital units provide CKC and 53 % have a dedicated CKC team
- ✓ 12.6% of all incident patients have started CKC (83% > 80 years old)
- ✓ The mortality rate is very high – 40.3%
- ✓ Only 30% have required hospitalization and 17% specialized palliative care



Encontro Renal

19-22
NOV
2025

Centro de Congressos do Estoril

GABINETE DE REGISTO DA SPN

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Rui Filipe

Maria João Carvalho

Rita Leal

Marta Neves

Manuel Amoedo

Gil Silva

Obrigado