

2020 ERDS

Egyptian Renal Data System

3rd Annual Report of End Stage Renal Disease in Egypt (2020)



The Egyptian Society Of
Nephrology & Transplantation

Table of Contents

Topic	Page
Abbreviations	1
Egyptian Society of Nephrology and Transplantation activities	2
For the soul of Prof. Hussein Sheashae	4
ERDS 2020 Board	5
ERDS Data Entry Team	6
ERDS 2020 Infographic	8
Chapter 1: Demographic and Dependence Data	9
Chapter 2: Dialysis Unit Data	16
Chapter 3: Original disease	20
Chapter 4: Viral Diseases	22
Chapter 5: Anemia Profile	29
Chapter 6: Mineral and Bone Disorder (MBD)	36
Chapter 7: Hypertension and Diabetes Mellitus Control	44
Chapter 8: Vascular Access	47
Chapter 9: Dialysis Adequacy and Data	50
Chapter 10: Morbidity and Mortality	57
Chapter 11: Transplantation	59

Abbreviations

AVF	Arteriovenous Fistula	HBV	Hepatitis B Virus
Cath	Catheter	HD	Hemodialysis
CKD	Chronic Kidney Disease	HCV	Hepatitis C Virus
CNE	Continuous Nephrology Education	IDH	Intradialytic Hypotension
CVD	Cardiovascular Disease	LMWH	Low Molecular Weight Heparin
DM	Diabetes Mellitus	SLE	Systemic Lupus Erythematosus
ERDS	Egyptian Renal Data Registry	TB	Tuberculosis
ESNT	Egyptian Society of Nephrology and Transplantation	TSAT	Transferrin Saturation
ESRD	End Stage Renal Disease	Tx	Transplantation
GN	Glomerulonephritis	UFH	Unfractionated Heparin

Egyptian Society of Nephrology and Transplantation (ESNT)



- ESNT is a non-profit organization.
- Its website: <http://www.esnt-online.com>.
- ESNT activities are summarized as follows:
 - Annual conference including national and international speakers. Website: <https://esntcongress.org>
 - Conferences of different chapters (Dialysis, CKD, Transplantation, Stem cells etc.)
 - Virtual Academy (see next).
 - Online frequent webinars for nephrology subspecialties.
 - Outreach educational programs to different Egyptian cities.
 - Journal of the ESNT (see next).
 - Egyptian best practice guidelines.
 - Annual Egyptian Renal Data Registry (ERDS).

Electronic Nephrology Education: ESNT Virtual Academy

- The ESNT CNE web page is <http://lms.mans.edu.eg/esnt>
- It is dedicated to display ESNT various CNE activities.
- It is dynamically changing and full of educational material and lectures for Nephrologists.
- It contains an index where you can search for ppt or a video for a specific topic or a specific lecturer by name.

Journal of the Egyptian Society of Nephrology and Transplantation



- It is the ESNT official journal: <http://www.jesnt.eg.net>
- It is a peer-reviewed online journal with quarterly print on demand compilation of important issues.

2020 ERDS

Egyptian Renal Data System



For the soul of Prof. Hussein Sheashae

ERDS 2020 Board



Prof. Said Khamis
(Scientific Editor)



Prof. May A Hassaballa
(Head of ERDS Board)



Dr. Tarek El Tantawy
(Editing & Revision Executive)



Prof. Hala El-Wakil
(Head of Communications and Logistics)



Dr. Mohammed Abdel Gawad
(Executive Secretary)



Prof. Magdy El-Sharkawy
(Editing & Revision Executive)



Dr. Wael Wahbi
(Programming / Analysis Director)



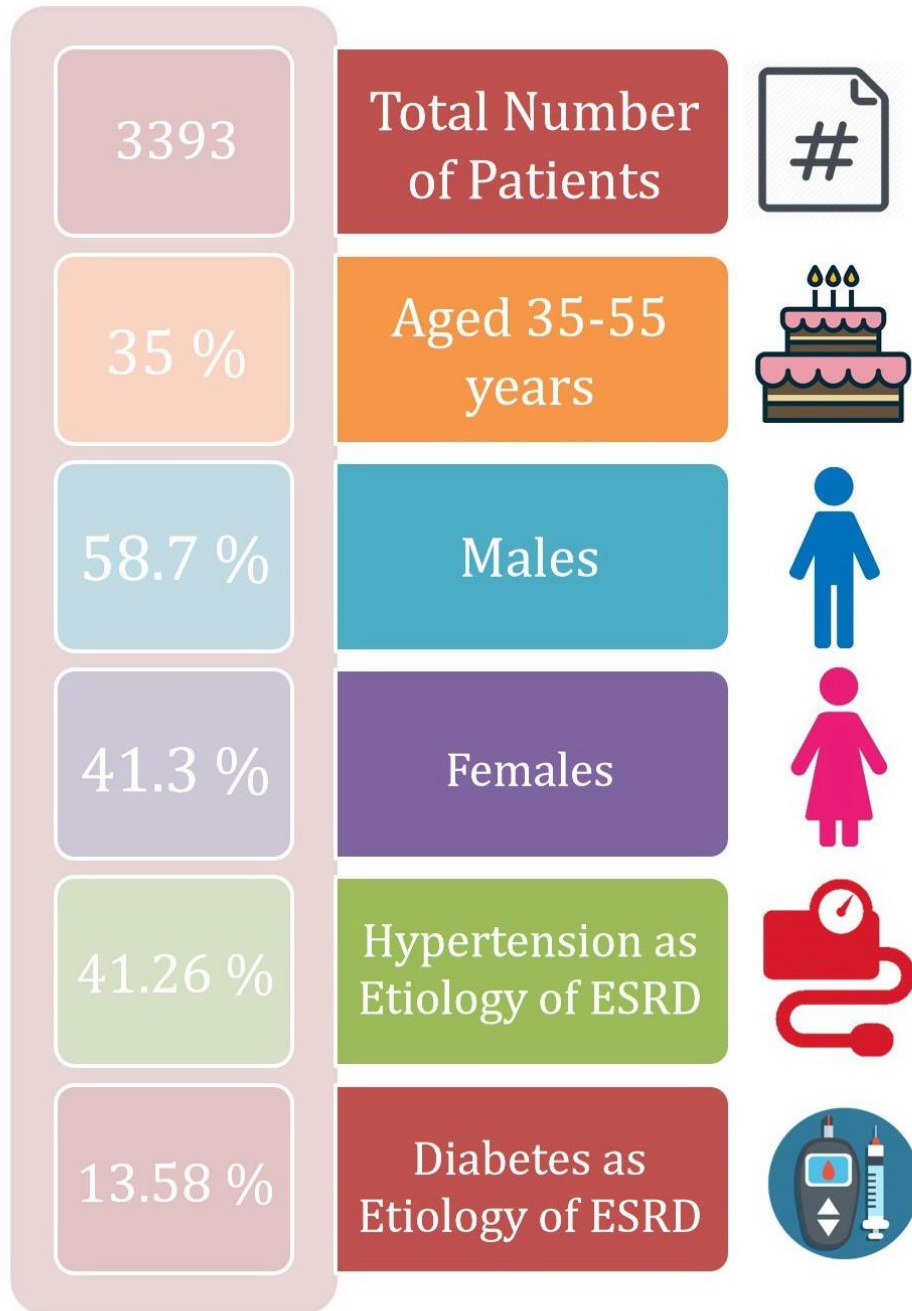
Dr. Karem Salem
(Communication Director)

ERDS Data Entry Team

Name	Hospital / Unit Name
Asmaa Shaban	Nasir Institute
Radwa Ibrahim	Assuit University Hospital & Assuit University Students Hospital
Shimaa Abdelrazek	Minia University Unit
Mohamed Elminabawy	Kasr Al Ainy Kidney Center
Tarek Eltantawy	Al Ahram Kidney Unit
Ahmed Elbasha	El-Moawasah University Hospital
Abdallah Mohamed	Benha University Unit
Rahma Soliman	Damanhour
Hamada Solaiman	Health Insurance of Fayoum, Omar Ebn Elkhatab, Tamia Hospital & Said Al Morsaleen
Ahmed Zayed	Sohag University Hospital
Sammar Ahmed	Arab Contractors Medical Center
Alaa Abdelazez	ElShefa Dialysis Unit & Alex Kidney
Mohamed El Maghawry	Zagazig University Hospitals
Eman Nagy	Mansoura Nephrology And Dialysis Unit (MNDU)
Asmaa Mounir	Tanta Educational Hospital & Tanta University Hospitals
Shimaa Marei	Bilal Ibn Rabah Ceter
Mai Elraddad	Al-Serw Dialysis Unit, Damietta Specialized Hospital & Kafr Elbateikh
Hanaa Mohamed	Alzahraa University Hospital Dialysis Unit
Samar Elshahat	Mansourah UNC Dialysis Unit
Eman Ahmed Almokadem	Zifta General Hospital Dalysis Unit
Hasan Ramadan Abdelazeem	Beni-Suef University Hospital
Reem Mohsen	Ain Shams University Dialysis Center
Emad Sarhan	Abo Seer Dialysis Unit, Samanoud Dialysis Unit & El Naasiriyya Dialysis Unit
Soaad Nafea	Ahl Alkhair Damro
Raghda Gamal	Aswan University Dialysis Center
Ahmed Ziada	Dar Alkela & Dar Elsalam
Diana Charles	Ismailia University & Suez Canal University Hospital
Abdelall Kozaa	Kafr Elzayyat General Hospital
Mahmoud Maher	El Shorouk Center for Kidney Diseases
Ahmed Rashed	Fayoum University Hospital
Dalia Younis	Mansoura Nephrology And Dialysis Unit (MNDU)
Eman Salem	Dr. Montasser Zeid Center
Ahmed Kamal	Menoufia Dialysis Unit
Sherouk Elnagar	Mansoura Nephrology And Dialysis Unit (Mndu)
Mohamed Ali Ibrahim	Menoufia University Dialysis Unit

Name	Hospital / Unit Name
Mahmoud Khalaf	Aswan University Dialysis Center
Laila Abdelnaby	Masgd El-Eman Dialysis Unit
Ayman Mohmed Abdallah	Elagmeen Dialysis Unit
Mohmed Lebda	ESNT sample Dialysis Unit
Mostafa Hasan	National Institute of Nephrology and Urology
Alyaa Ali	Aswan University Dialysis Center
Asmaa Nady Sayed	Umm El Qusur- Assuit University Hospital
Enass Elsayed	Ahmad Maher Teaching Hospital / Main Dialysis Unit
Asmaa Hamed	Aswan University Dialysis Center
Noha Nashat	El Ganzoury
Ahmed Qayed	National Institute of Nephrology and Urology
Mai Ahmed	Umm El Qusur- Assuit University Hospital
Gamal Elnagar	Tanta Specialized Center For Kidney
Hosny Abdelwahab	Aswan University Dialysis Center
Eman Ferganey	Ahmad Maher Teaching Hospital /Subsidiary Dialysis Unit
Ibrahim Elawaad	Tanah
Mona Naffad	Alexandria University Students Hospital
Mostafa Badr	Alexandria Urology Hospital
Ahmed Nassar	Kasr Alainy French Hospital
Ahmed Maged	National Institute of Nephrology and Urology
Marina Maurice	National Institute of Nephrology and Urology
Amina Elmetwally	Matrouh General Hospital
Wagbat Elabasy	Al Amrea
Mona Shaffie	Nephrology Clinic & Smouha Dialysis Unit
Nehal Kamal Rakha	Kasr Al Ainy Kidney Center
Ahmed Shepl	Enaya Dialysis Unit
Alex Kidney	Dr. Salah Naga Dialysis Center
Alstqama Asdia	Alstqama-Asdia
Ereny Aziz	Elsalam Elmohandesin
Radwa Elnahrawy	Elmarkaz Eldawly
Mohamed Mostafa	Al Gameya Al Shareia Fayoum
Mahmoud Ameen	Ahmed Maher (Gomhorya)
May Hassaballa	Arab Contractors Medical Center
Hossam Abohassan	National Institute of Nephrology and Urology
Amr Elrokh	ElMabrah Hospital Dialisis Unit
Support New Era Team	Test Private Clinic
Marwa Abdalrahman	Alexandria Petroleum Hospital

Infographic of ERDS 2020



2020 ERDS

Egyptian Renal Data System

Chapter 1: Demographic and Dependence Data

Chapter 1: Demographic and Dependence Data

Eighty dialysis units from 18 Egyptian governorates (cities) participated with their data in ERDS 2019 report with a **3393 total number of patients.**

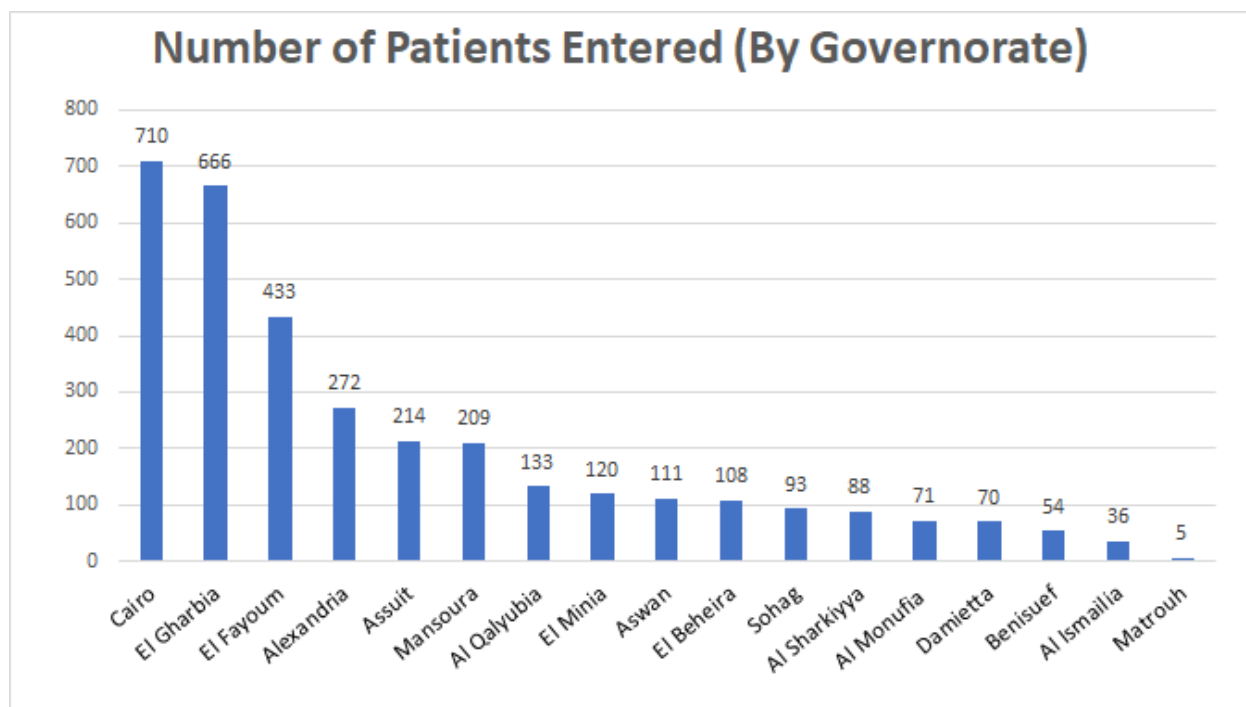


Figure 1.1 Number of patients entered by Egyptian governorates (cities) participating in ERDS 2020

Chapter 1: Demographic and Dependence Data (Continue)...

Cairo	710
Nasir Institute	201
Kasr Al Ainy Kidney Center	179
Arab Contractors Medical Center	84
Ain Shams University Dialysis Center	63
Alzahraa University Hospital Dialysis unit	55
El Shorouk Center for Kidney Diseases	31
Ahmad Maher Teaching Hospital	23
Masgd El-eman unit	21
El Ganzoury	9
Kasr Alainy French Hospital	6
National Institute of Nephrology and Urology	35
El Salam El Mohandesin	2
Ahmed Maher (Gomhorya)	1

El Gharbia	666
Kafr Higazy, Ibn Al Nafees, Al Rahma	140
Al Ahram Kidney Unit	98
Tanta University Teaching and Educational Units	95
Zifta General Hospital	82
Ahl Alkhair damro	61
ESNT sample Dialysis Unit	42
Kafr Elzayyat General Hospital	40
Samanoud Dialysis Unit	37
Dar Alkela	34
El Naasiriyya Dialysis Unit	16
Tanta Specialized Center For Kidney	14
Al Amrea	5
Enaya Dialysis Unit	2

El Fayoum	433
Tamia Hospital	128
Omar Ibn Elkhatab	97
Bilal Ibn Rabah Ceter	70
Health Insurance Of Fayoum	65
Said Al Morsaleen	33
Fayoum University Hospital	32
Al Gameya Al Shareia	8
Alexandria	272
El-Moawasah University hospital	138
Elshefa Dialysis Unit	69
Montasser Zeid Center	30
Elagmeen Dialysis Unit	20
Alexandria University Students Hospital	6
Alexandria Urology Hospital	5
Smouha Dialysis Unit	1
Abo Seer Dialysis Unit	1
Alexandria Petroleum Hospital	1
El Mabrah hospital	1

Assuit	214
Assuit University Hospital	193
Umm El-Qusur assuit university	21
Mansoura	209
Mansoura Nephrology and dialysis unit (MNDU)	106
Mansourah UNC dyalsis unit	97
Tanah	6
Al Qalyubia	133
Benha University Unit	133
El Minia	120
Minia University Unit	120
Aswan	111
Aswan University Dialysis Center	111
El Beheira	108
Damanhour Hospital	108
Sohag	93
Sohag University Hospital	93
Al Sharkiyya	88
Zagazig University Hospitals	87
Alstqama Asdia	1

Al Menoufia	71
Menoufia University	71
Damietta	70
Damietta Specialized Hospital	26
Al-Serw Dialysis Unit	19
Kafr Elbateikh	25
Benisuef	54
Benisuef University Hospital	54
Al Ismailia	36
Suez Canal University	36
Matrouh	5
Matrouh General Hospital	5

Table 1.2 Hospitals and Dialysis Units participating in ERDS 2020

Chapter 1: Demographic and Dependence Data (Continue)...

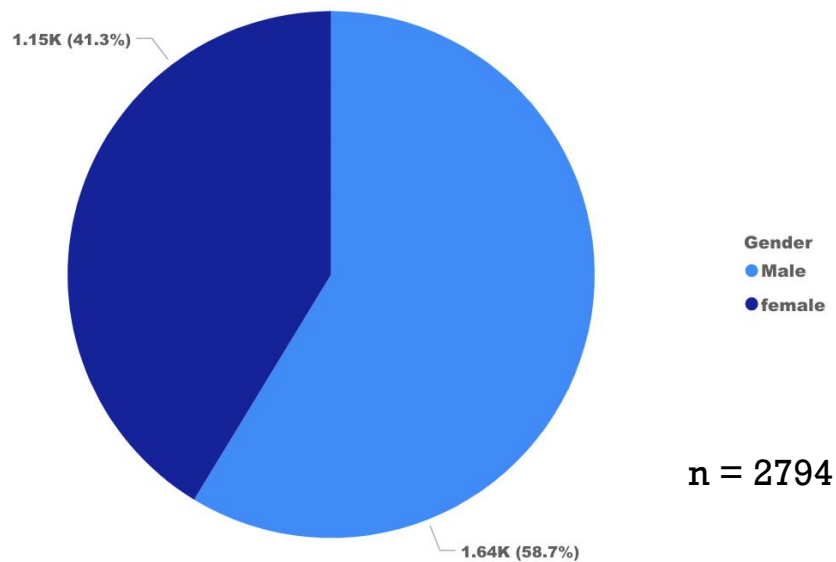


Figure 1.3 Gender percentages of patients

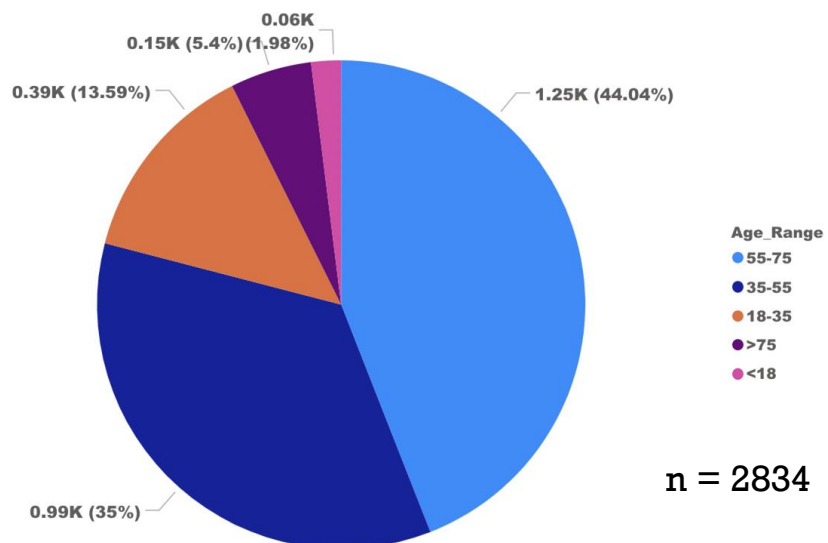


Figure 1.4 Age class percentage of patients

Chapter 1: Demographic and Dependence Data (Continue)...

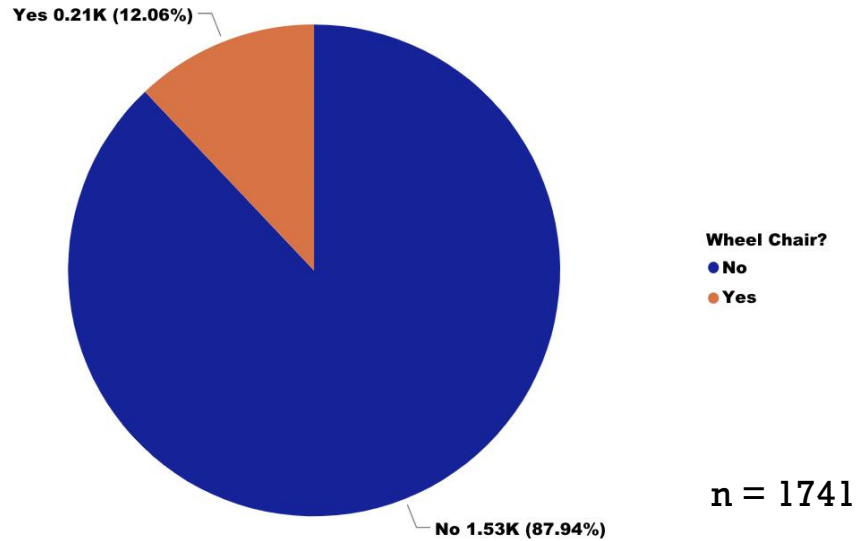


Figure 1.5 Wheel Chair Use

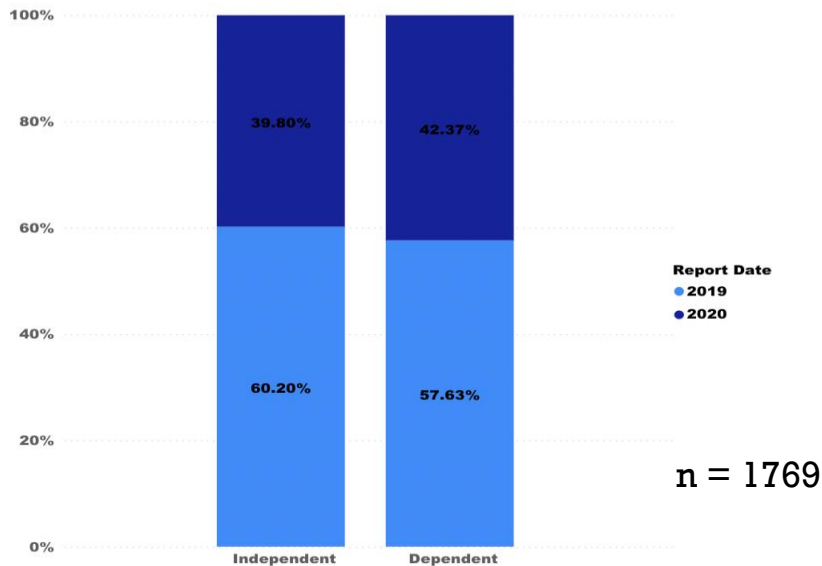


Figure 1.6 Dependence (on an assistant)

Chapter 1: Demographic and Dependence Data (Continue)...

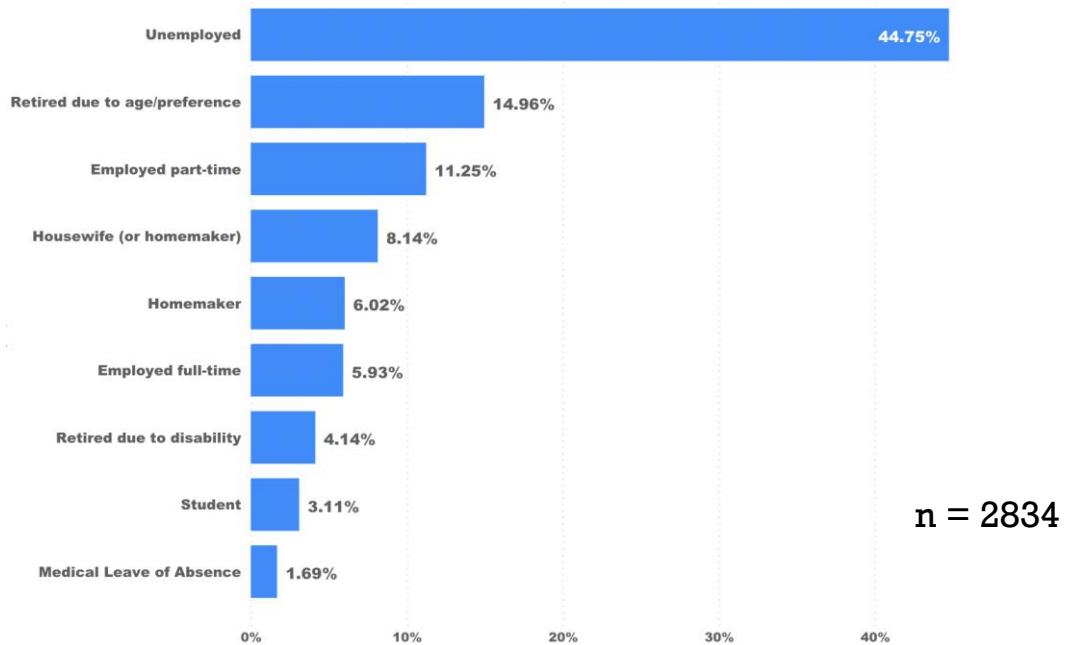


Figure 1.7 Employment Status

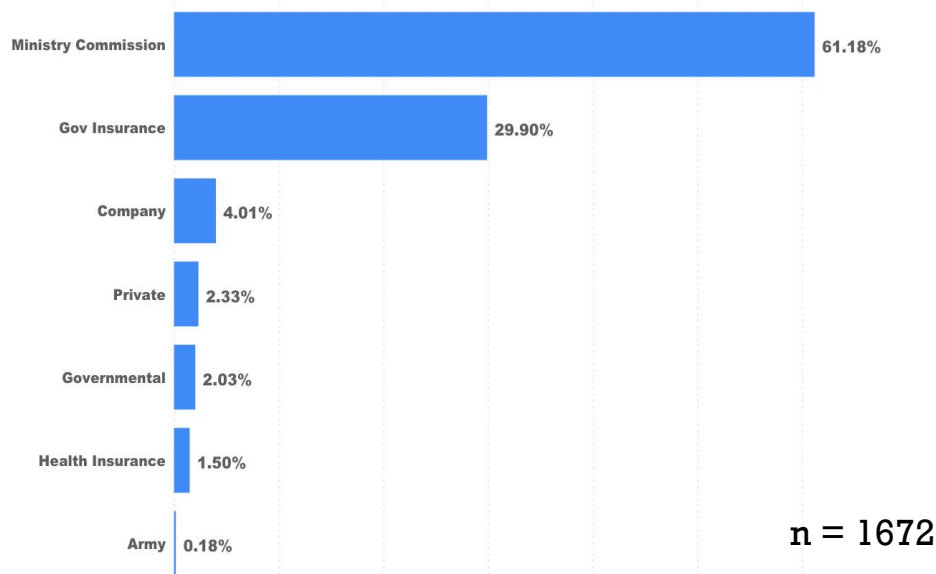


Figure 1.8 Cost Sponsorship Status

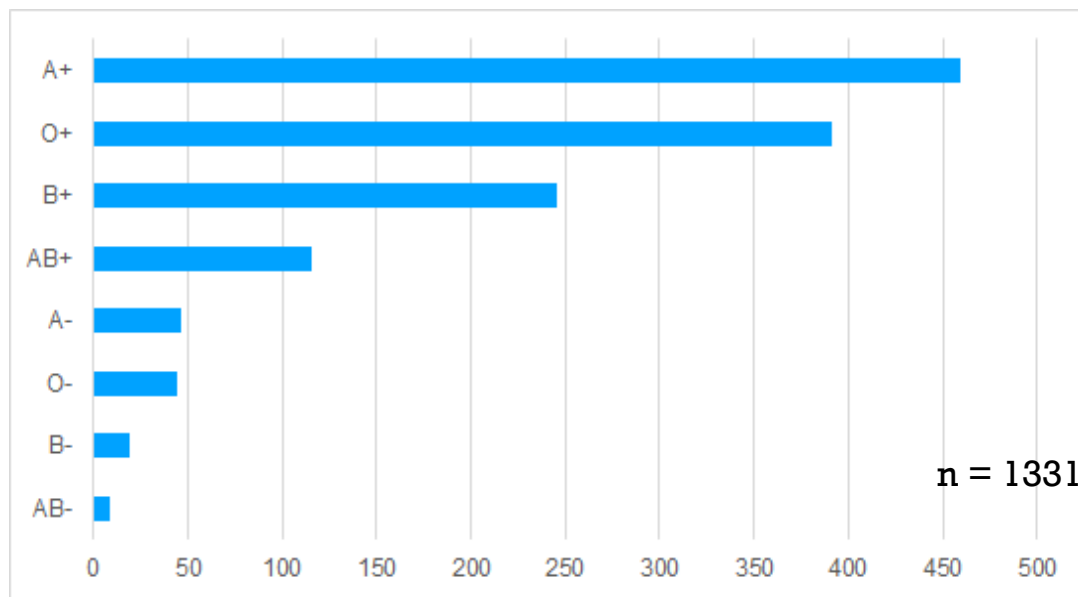


Figure 1.9 Blood group

2020 ERDS

Egyptian Renal Data System

Chapter 2: Dialysis Unit Data

Chapter 2: Dialysis Unit Data

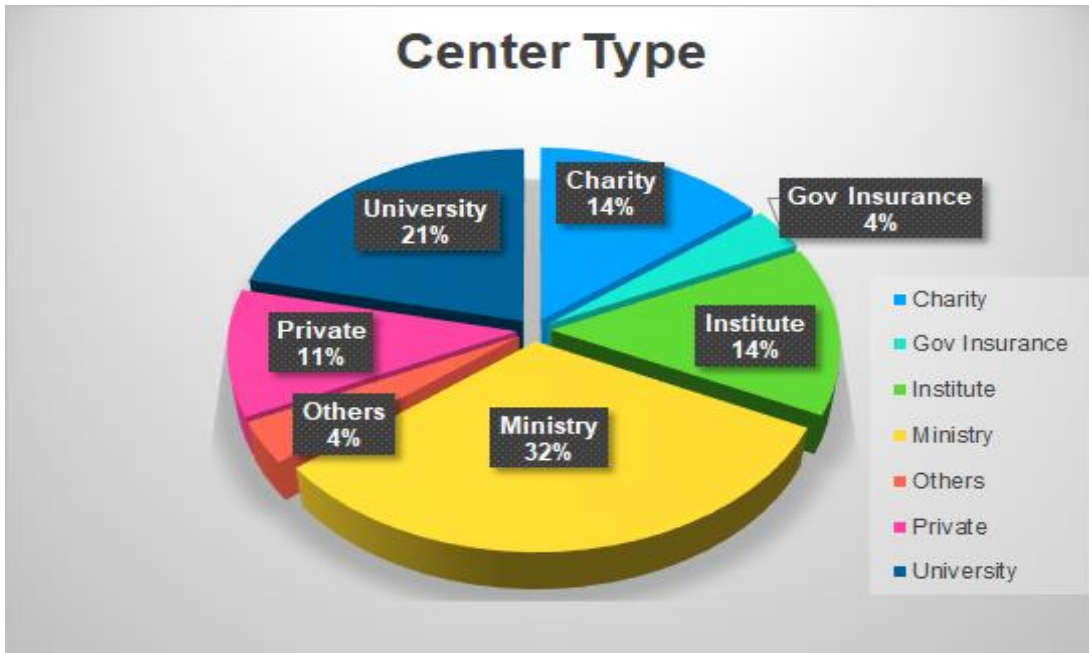


Figure 2.1 Center Type Chart

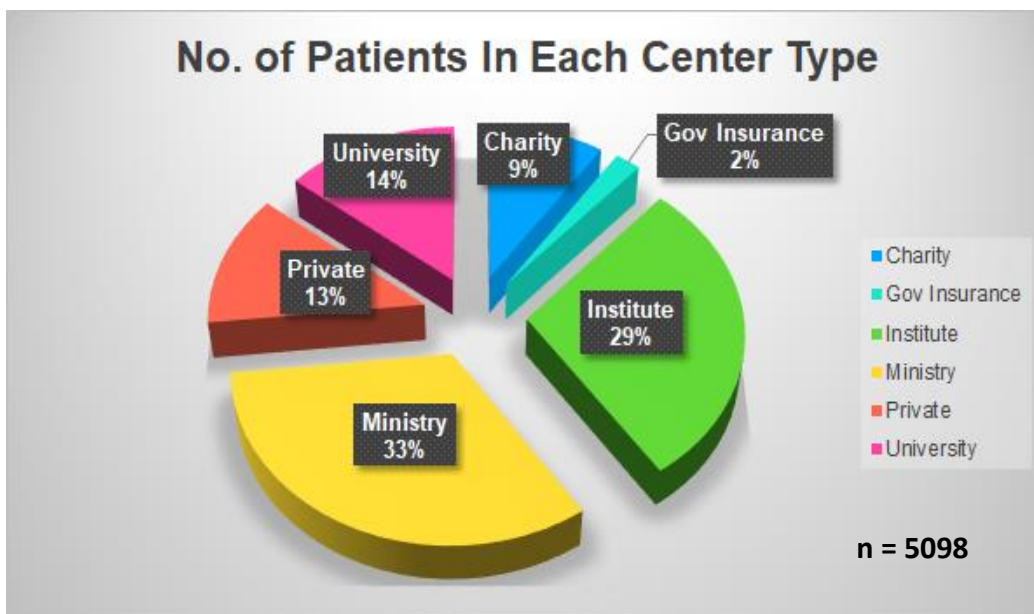


Figure 2.2 Number of Patients in Each Center Type

Chapter 2: Dialysis Unit Data (Continue)...

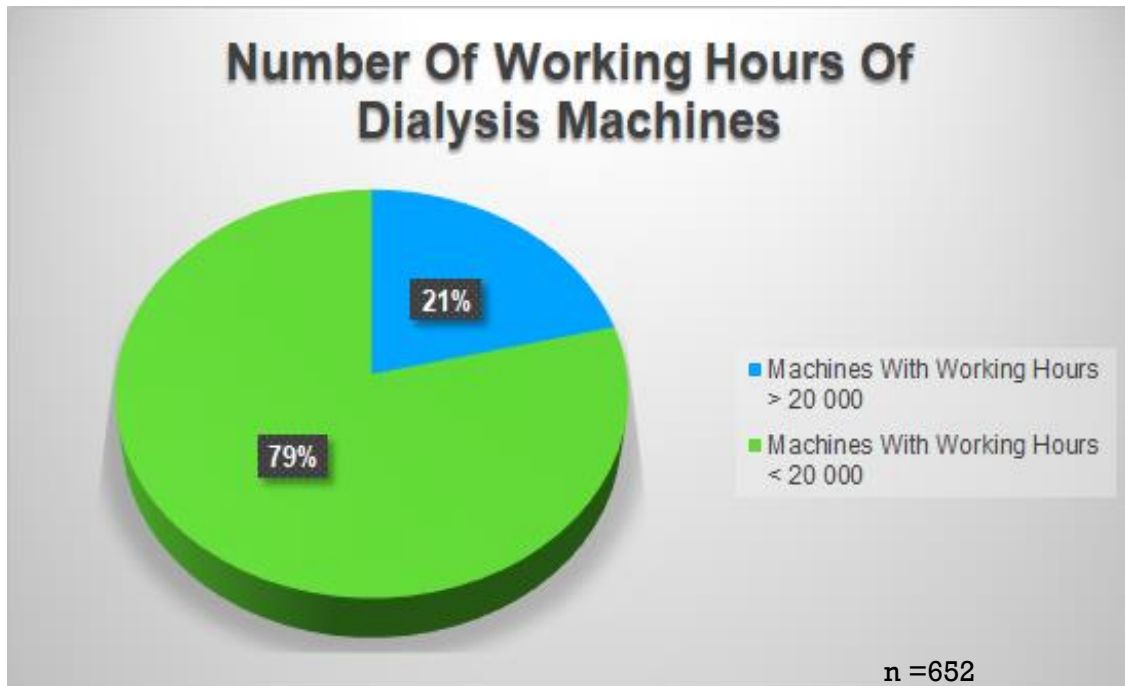


Figure 2.3 Number of Working Hours of Dialysis Machines

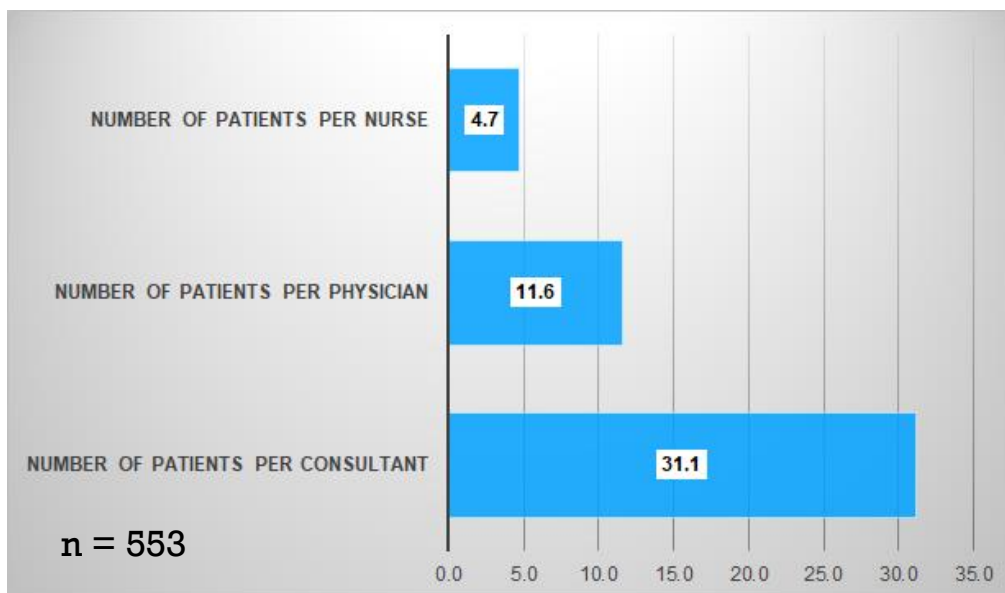


Figure 2.4 Patient to Healthcare Provider to Ratio

Chapter 2: Dialysis Unit Data (Continue)...

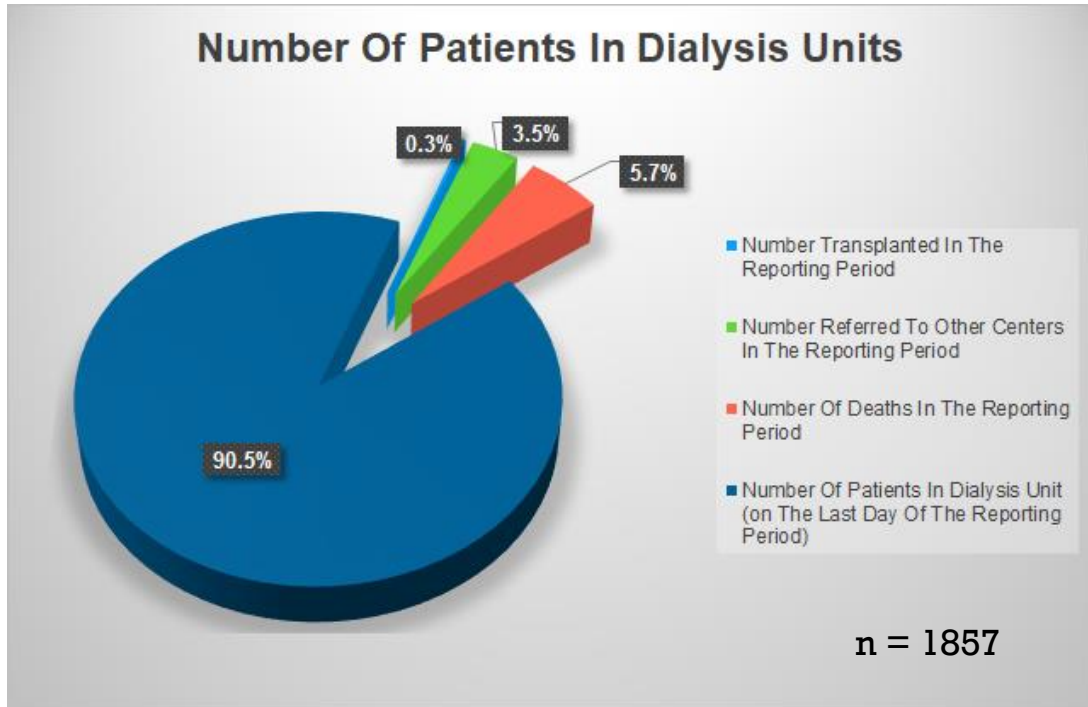


Figure 2.5 Number of Patients in Dialysis Units

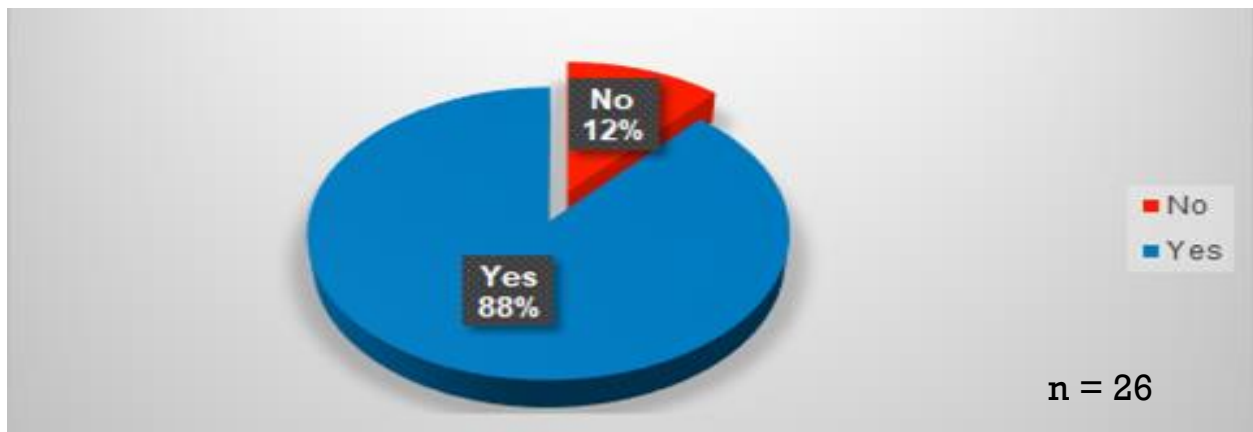


Figure 2.6 Last Water Treatment Unit Test

2020 ERDS

Egyptian Renal Data System

Chapter 3: Original Disease

Chapter 3: Original Disease

- In Egypt in 2020 hypertension is the second most common cause of ESRD, followed by diabetes mellitus, as they were in ERDS 2019.

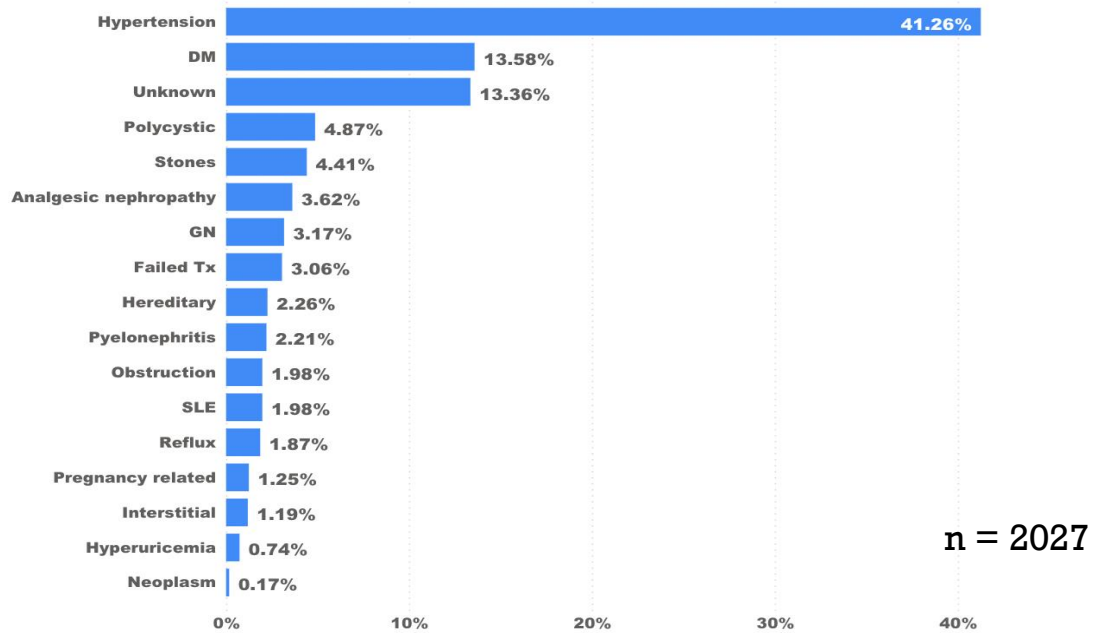


Figure 3.1 Etiology of ESRD in Egypt 2020

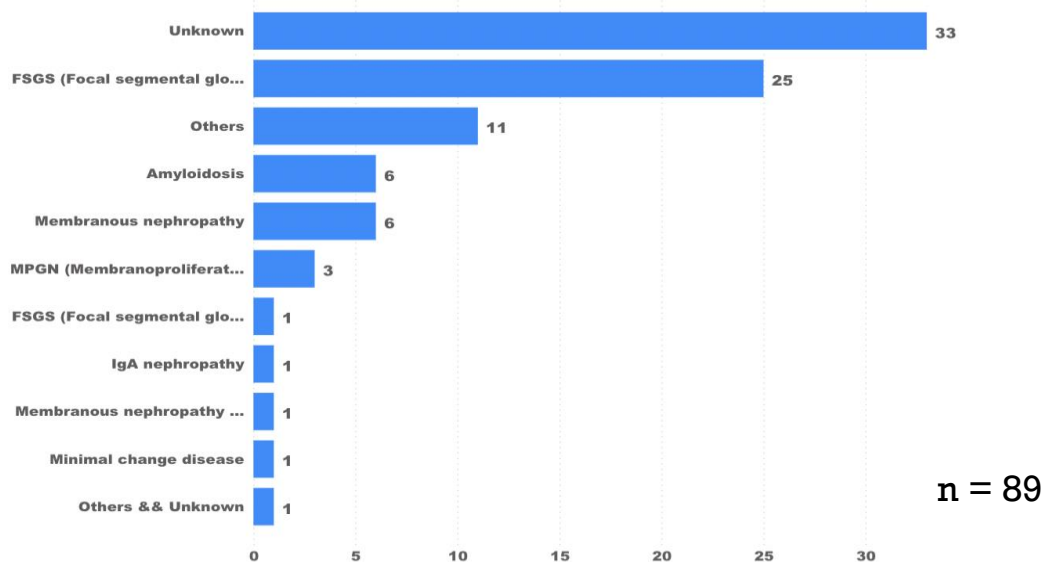


Figure 3.2 Type of GN

2020 ERDS

Egyptian Renal Data System

Chapter 4: Viral Diseases

Chapter 4: Viral Diseases

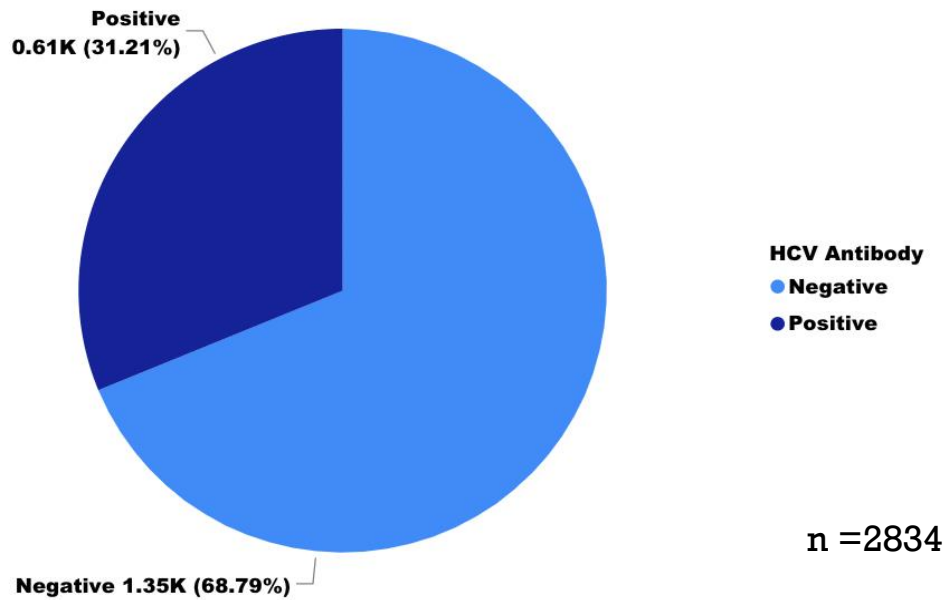


Figure 4.1 Status of HCV serology in ESRD patients

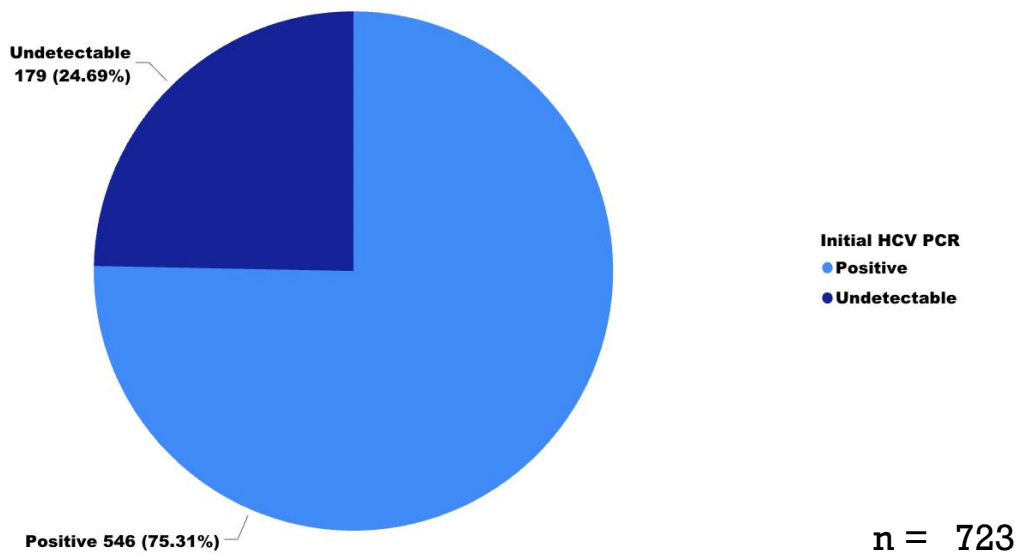


Figure 4.2 Distribution of Initial HCV PCR in HCV Ab positive patients

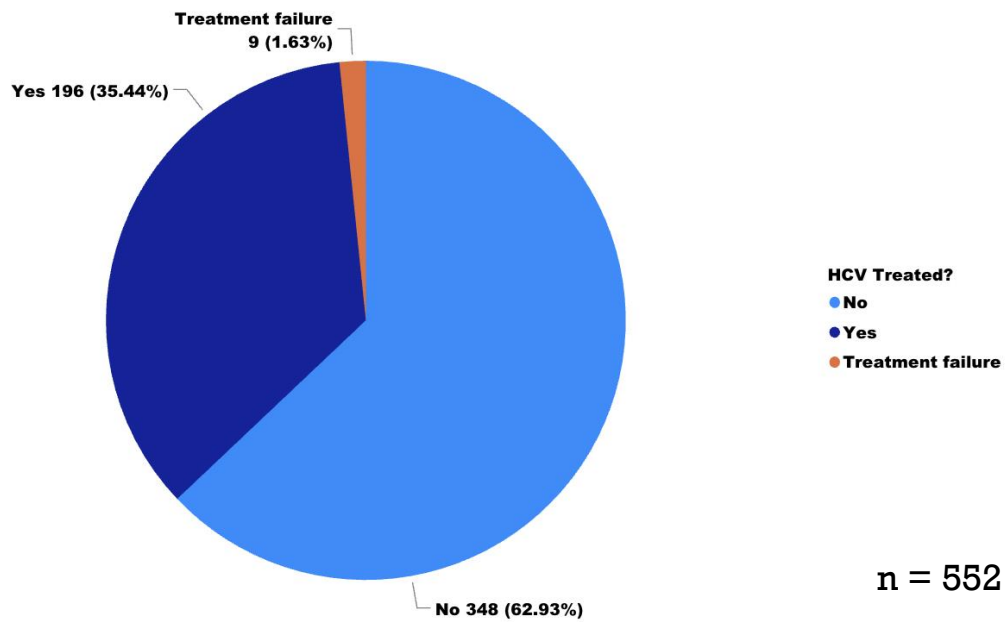


Figure 4.3 Distribution of HCV treatment scenarios in HCV Ab positive patients

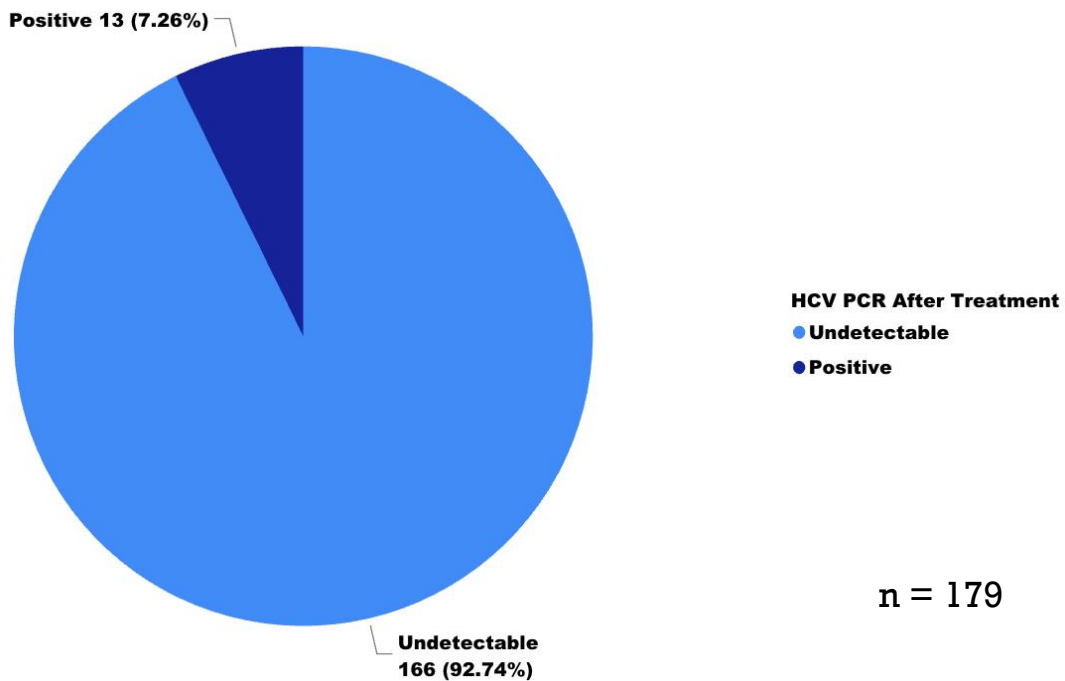


Figure 4.4 Distribution of HCV PCR after treatment of HCV PCR positive patients

Chapter 4: Viral Diseases (Continue)...

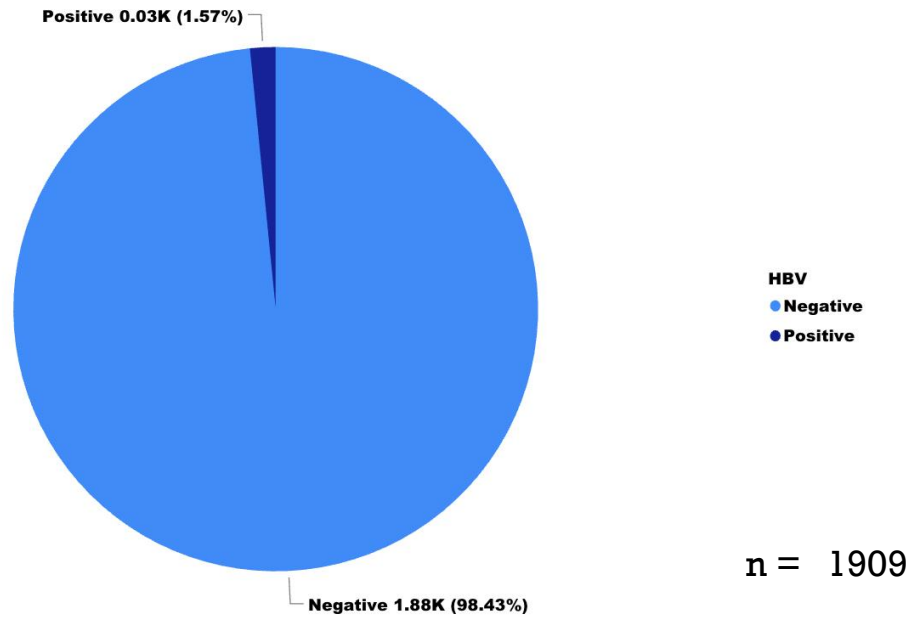


Figure 4.5 Distribution of HBV infection

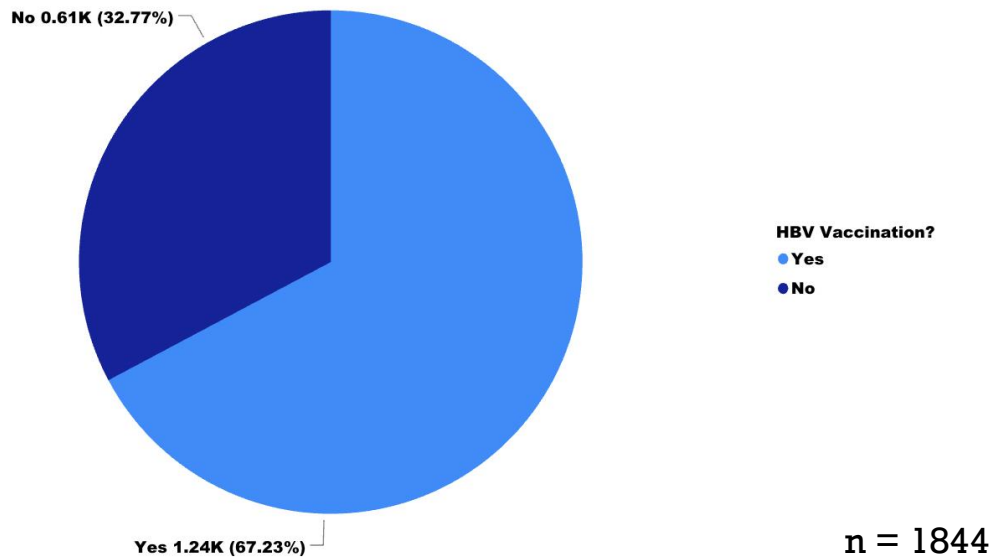


Figure 4.6 Distribution of HBV Vaccination

Chapter 4: Viral Diseases (Continue)...

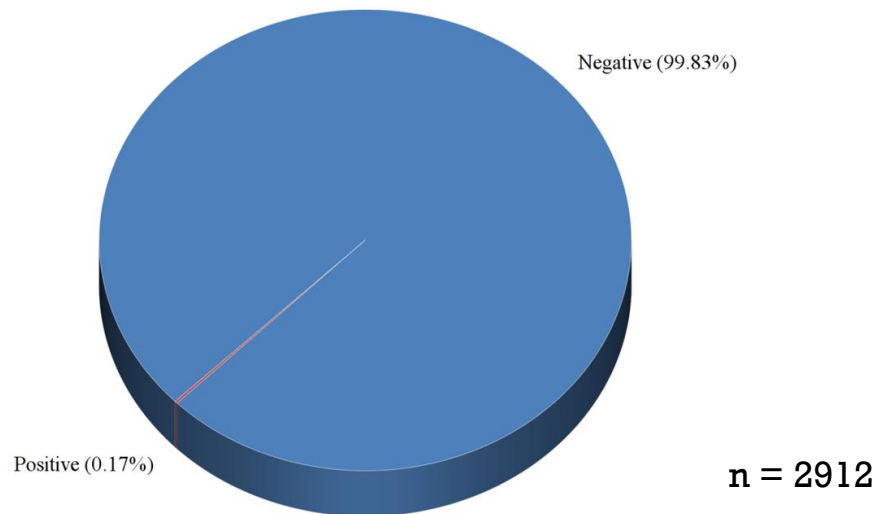


Figure 4.7 Distribution of HIV Infection

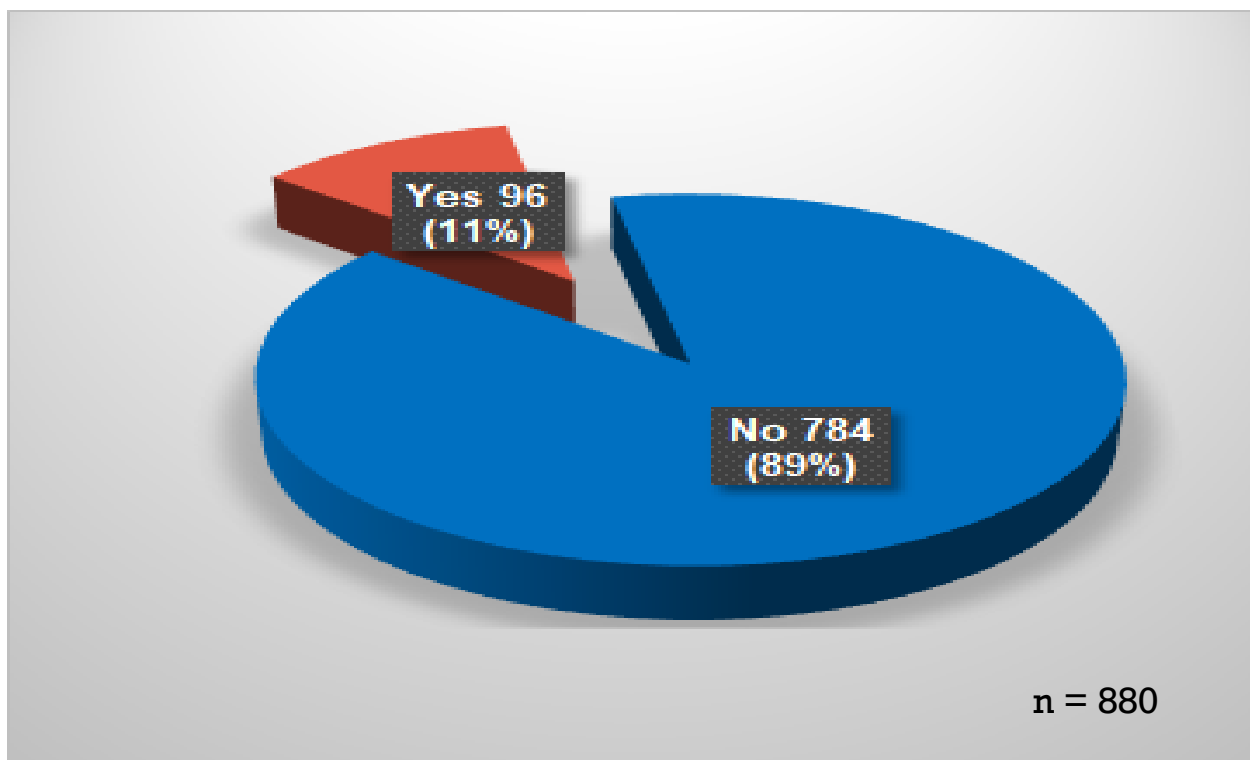


Figure 4.8 COVID-19 Diagnosed

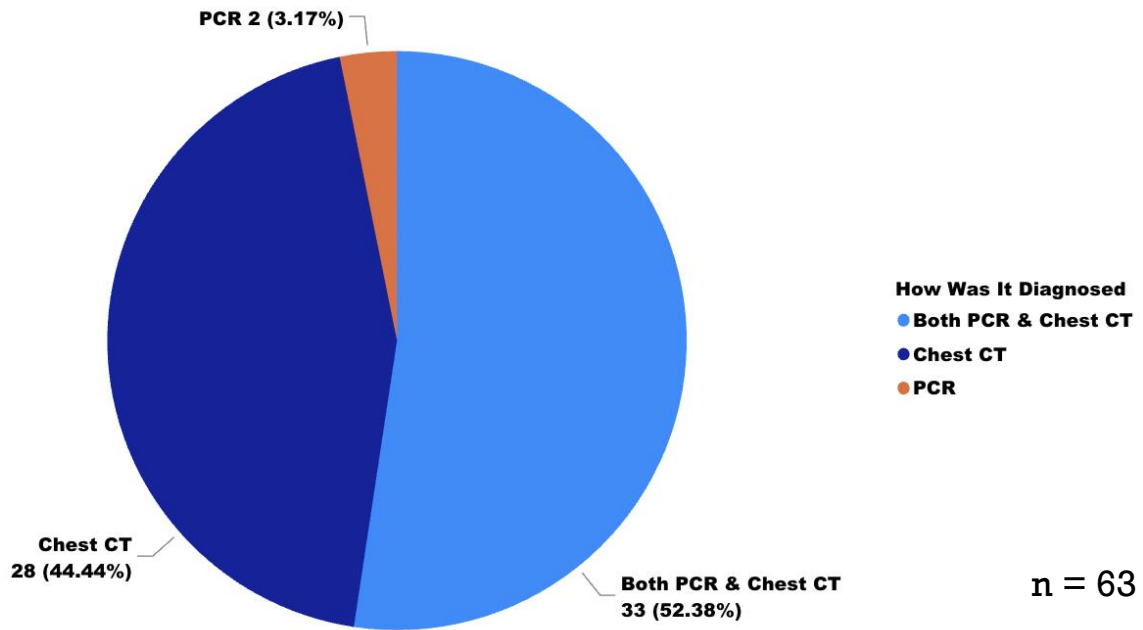


Figure 4.9 How was COVID-19 Diagnosed

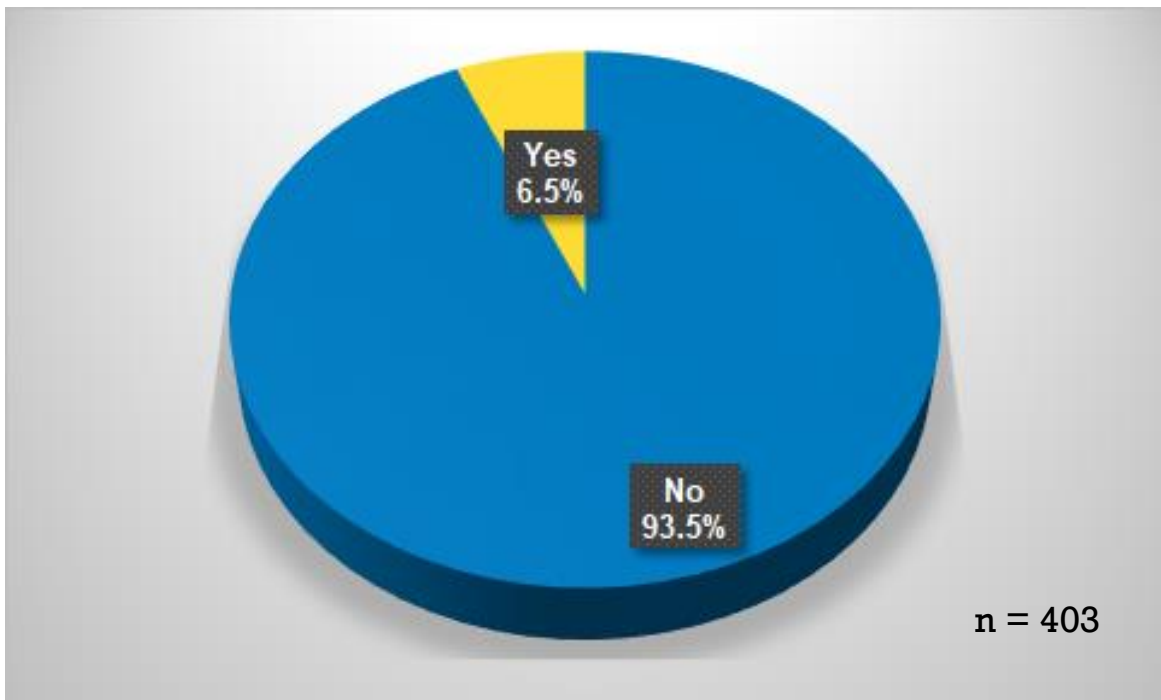


Figure 4.10 COVID-19 Vaccination

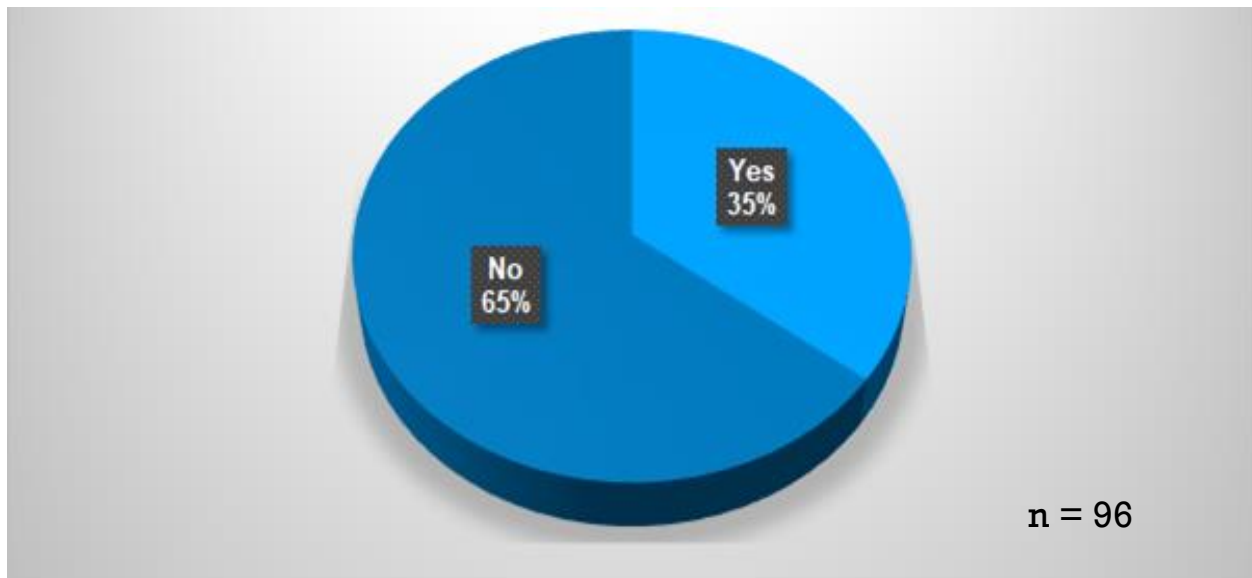


Figure 4.11 COVID 19 Mortality Compared to Diagnosed

2020 ERDS

Egyptian Renal Data System

Chapter 5: Anemia Profile

Chapter 5: Anemia Profile

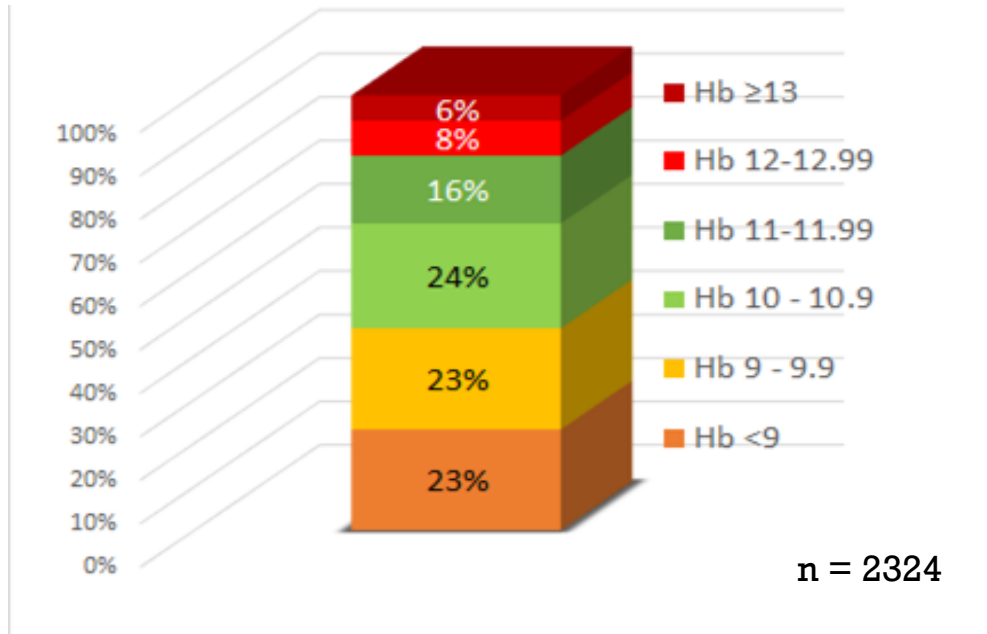


Figure 5.1 Percentage of different hemoglobin levels in ESRD patients

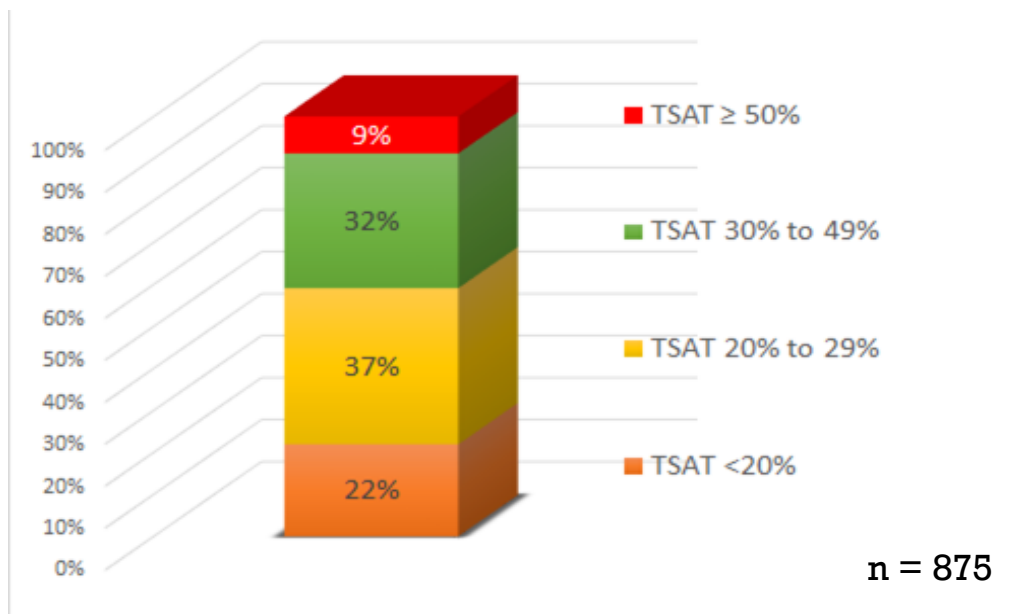


Figure 5.2 Percentage of different TSAT % in ESRD patients

Chapter 5: Anemia Profile (Continue)...

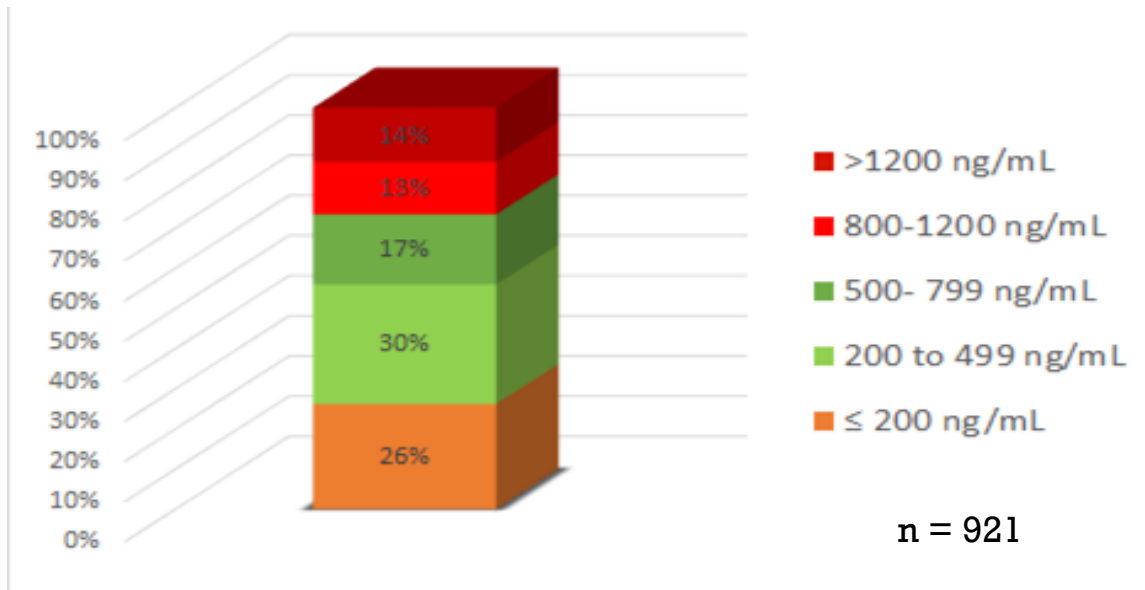


Figure 5.3 Percentage of different ferritin levels in ESRD patients

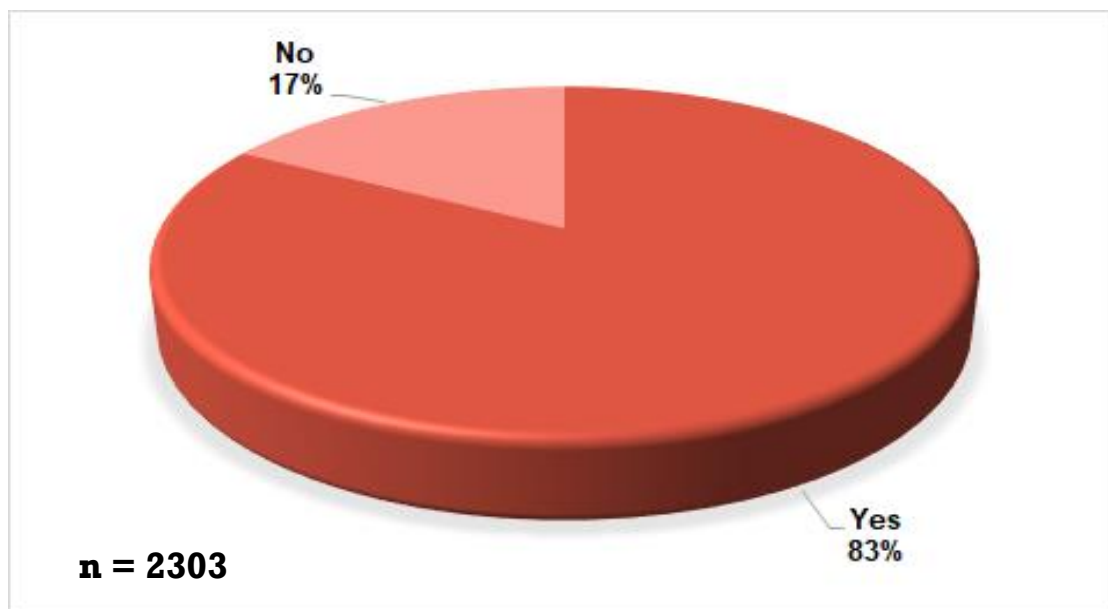


Figure 5.4 Distribution of ESA treatment

Chapter 5: Anemia Profile (Continue)...

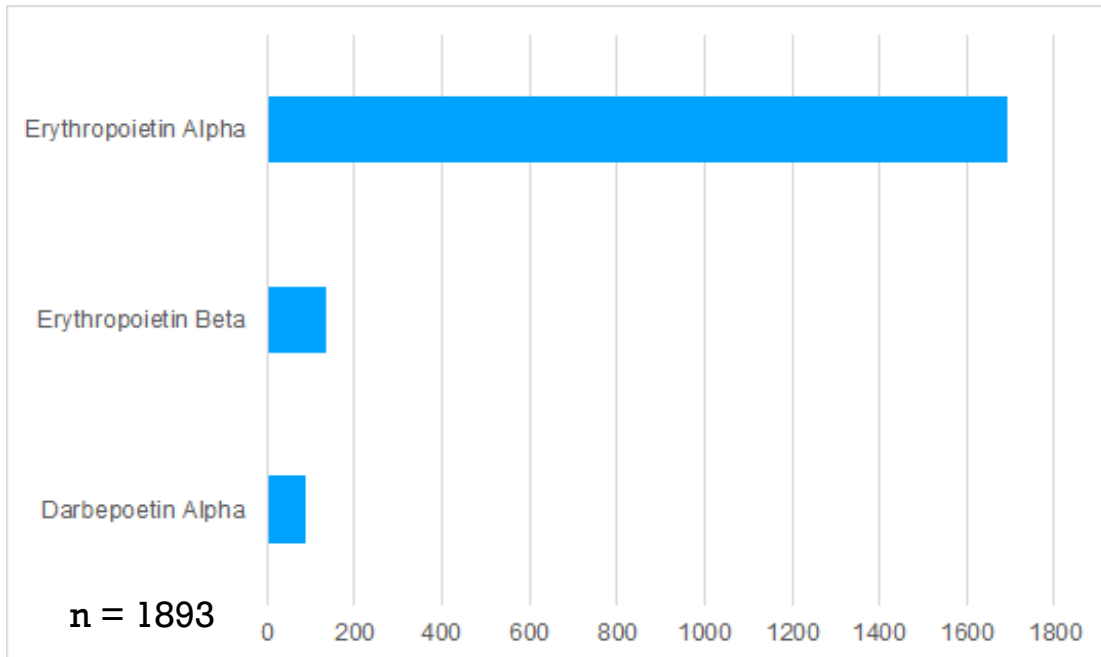


Figure 5.5 Different EPO used by ESRD patients

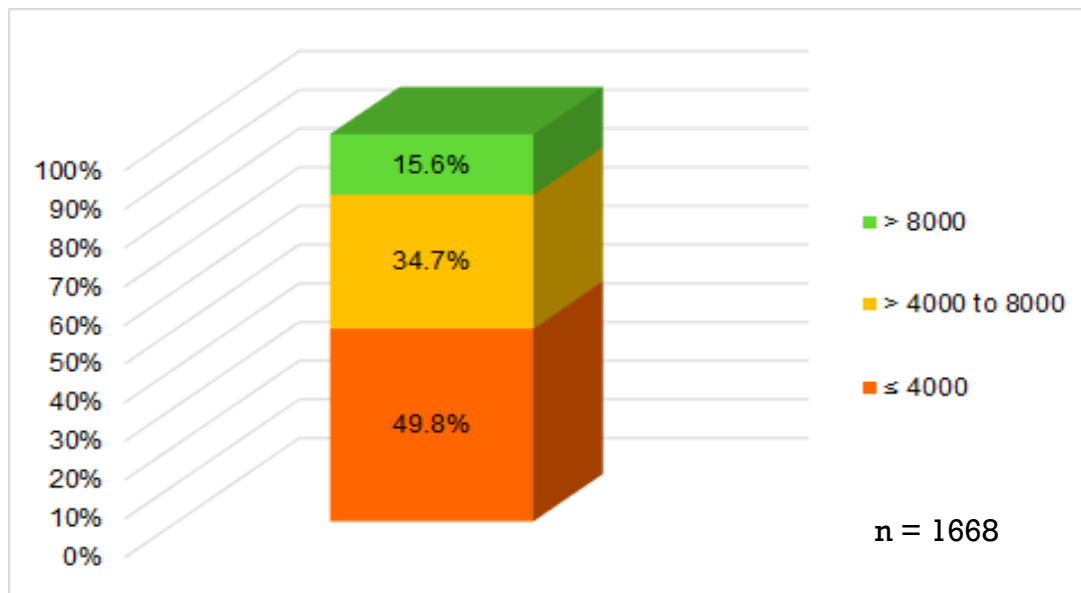


Figure 5.6 Weekly Erythropoietin Alpha dose

Chapter 5: Anemia Profile (Continue)...

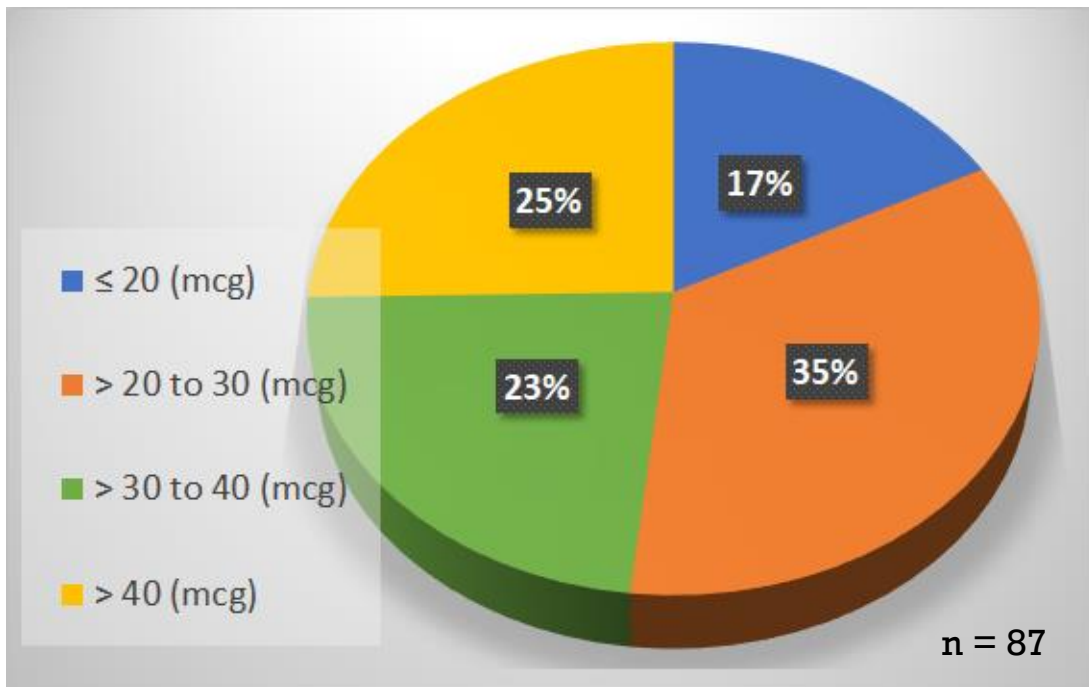


Figure 5.7 Weekly Aranesp dose

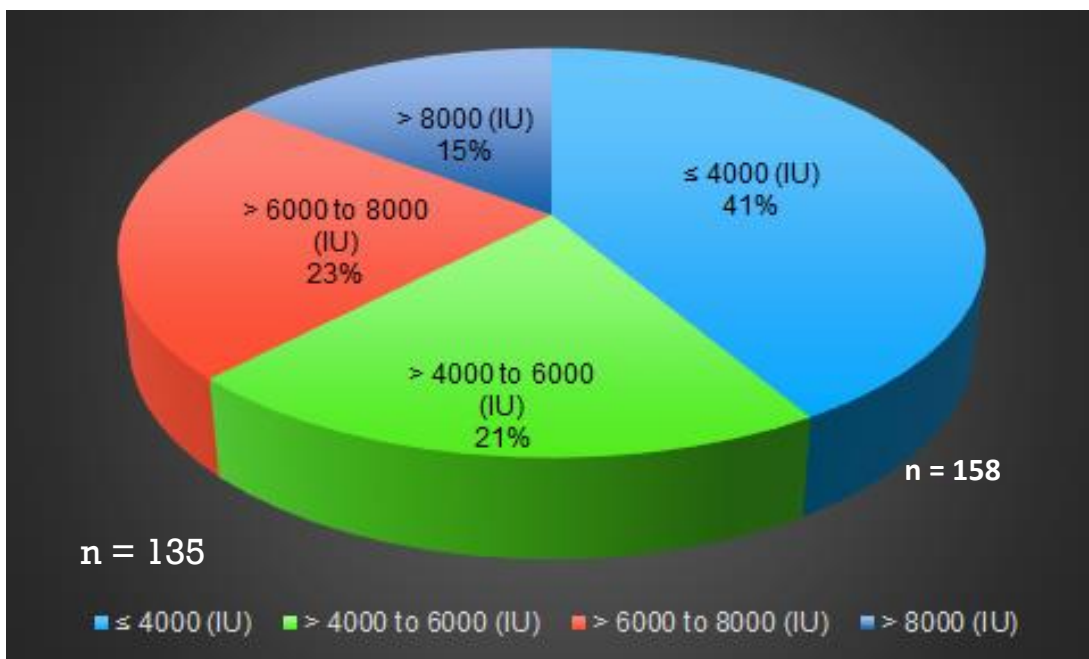


Figure 5.8 Weekly Recormon dose

Chapter 5: Anemia Profile (Continue)...

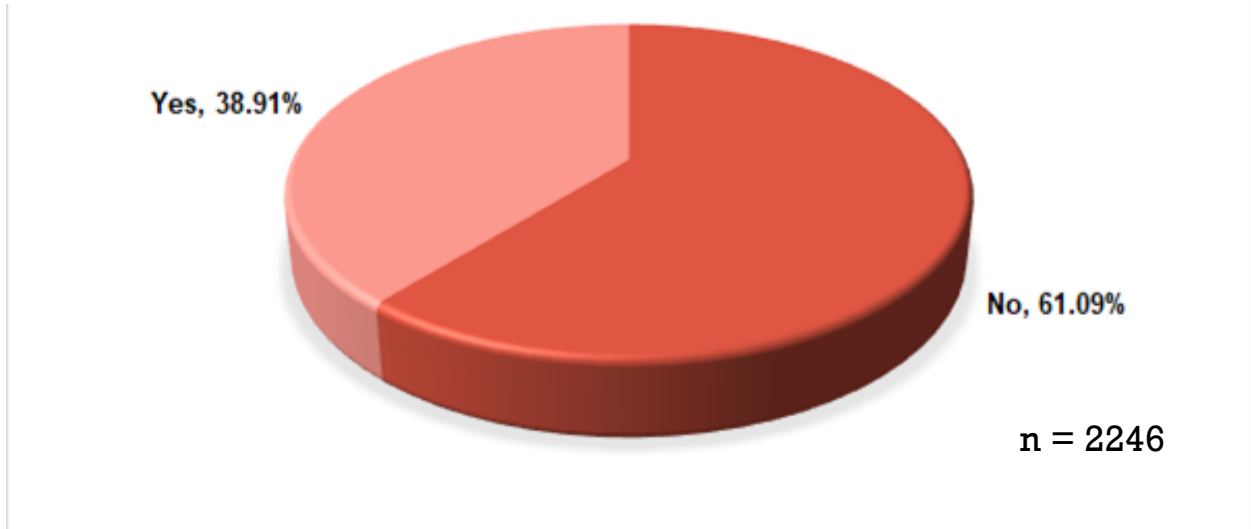


Figure 5.9 Distribution of IV iron treatment

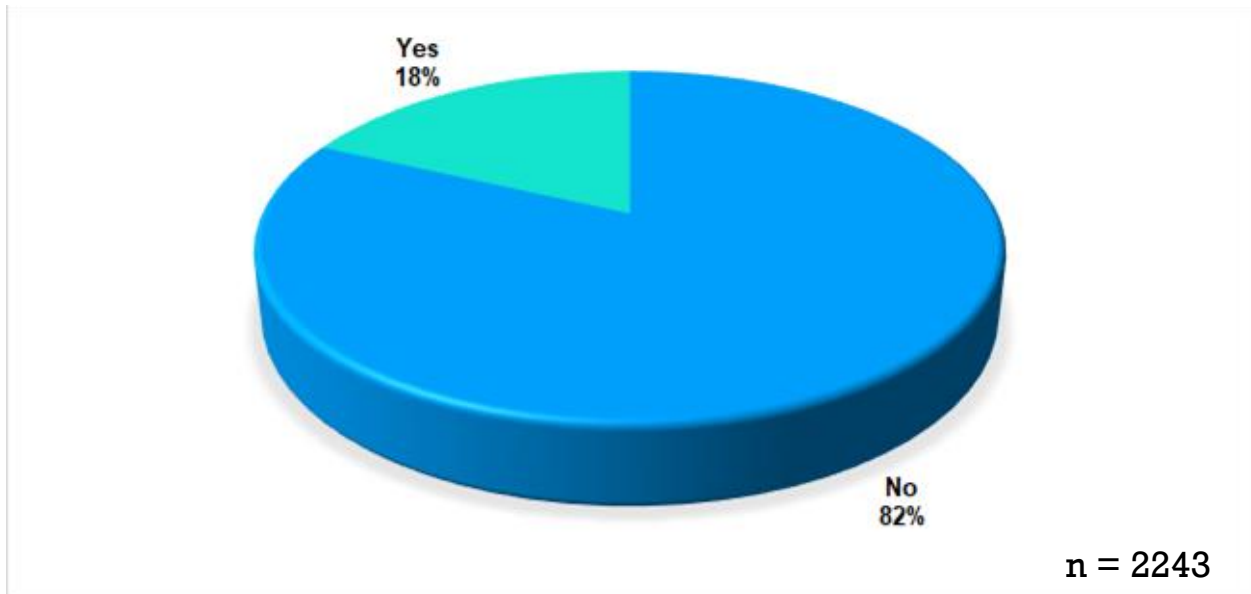


Figure 5.10 Blood Transfusion

Chapter 5: Anemia Profile (Continue)...

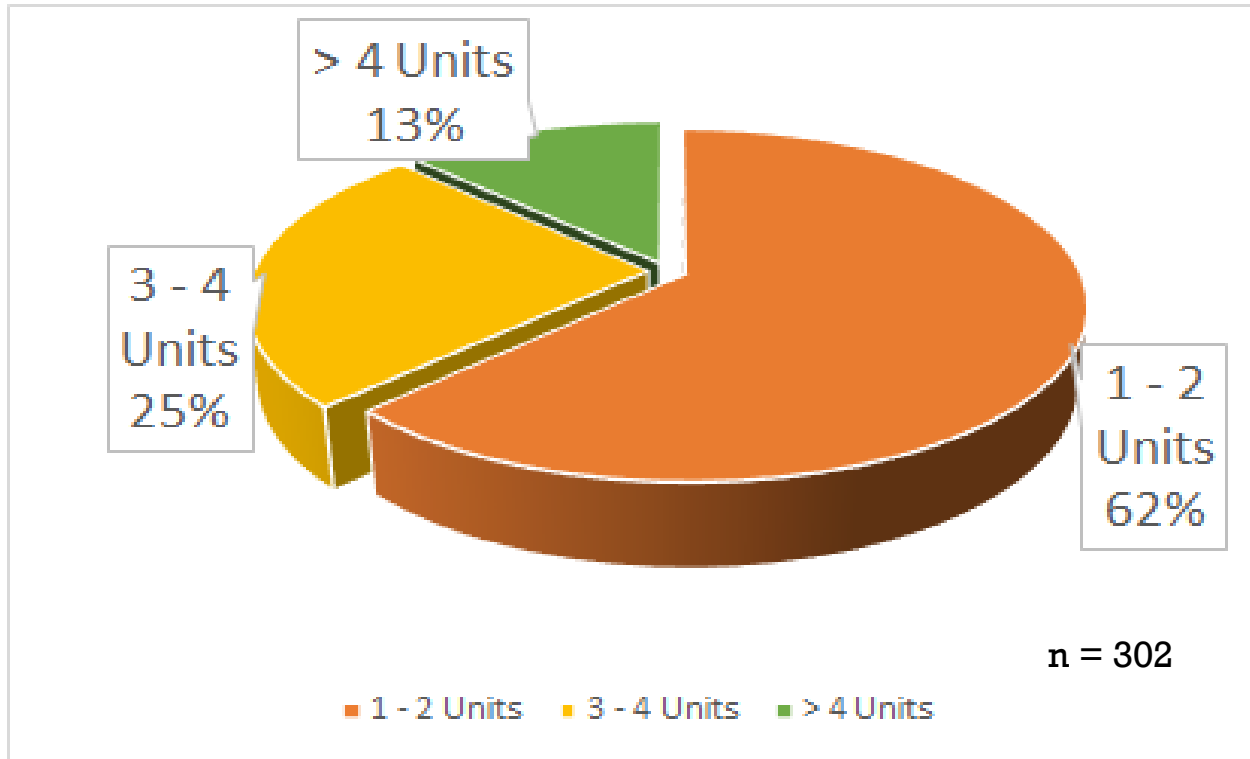


Figure 5.11 Number of Blood Transfusions

2020 ERDS

Egyptian Renal Data System

Chapter 6: Mineral and Bone Disorder (MBD)

Chapter 6: Mineral and Bone Disorder (MBD)

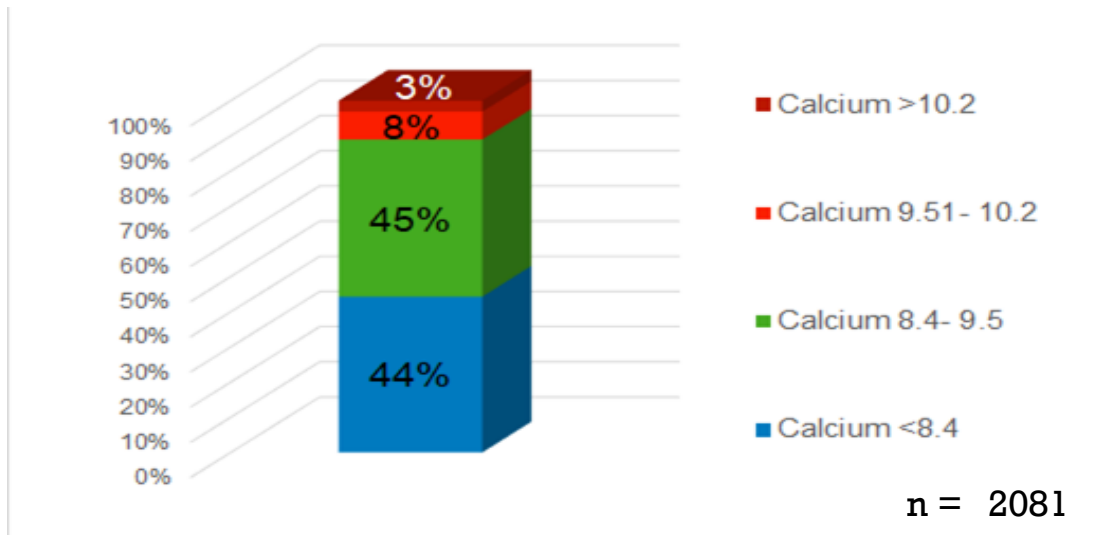


Figure 6.1 Calcium levels by categories (g/dL)

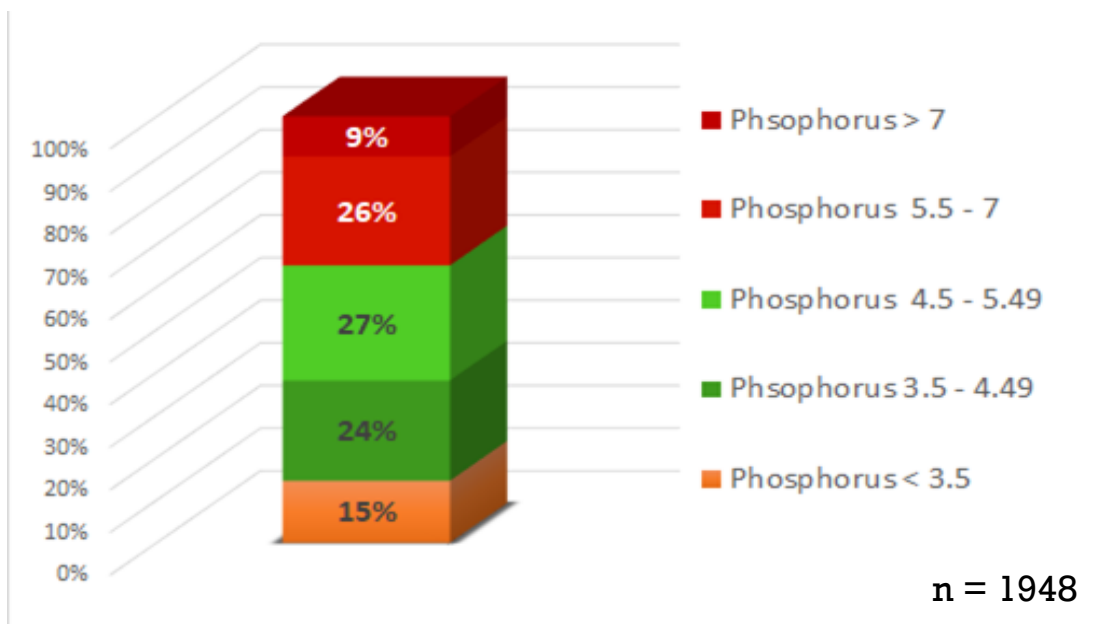


Figure 6.2 Phosphorus levels by categories (g/dL)

Chapter 6: Mineral and Bone Disorder (MBD) (Continue)...

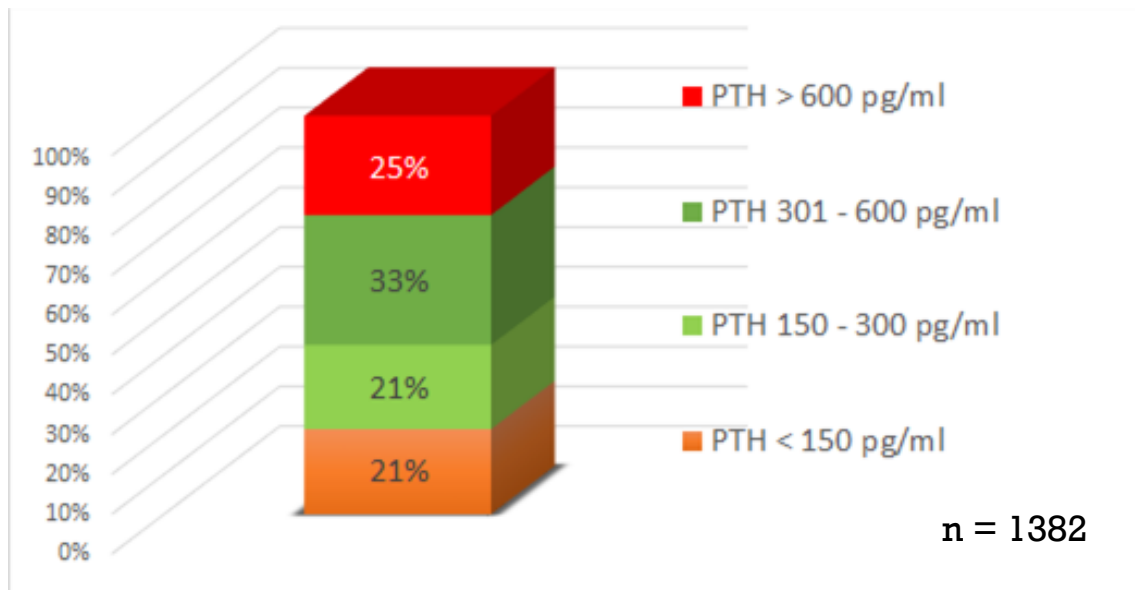


Figure 6.3 PTH levels by categories (pg/mL)

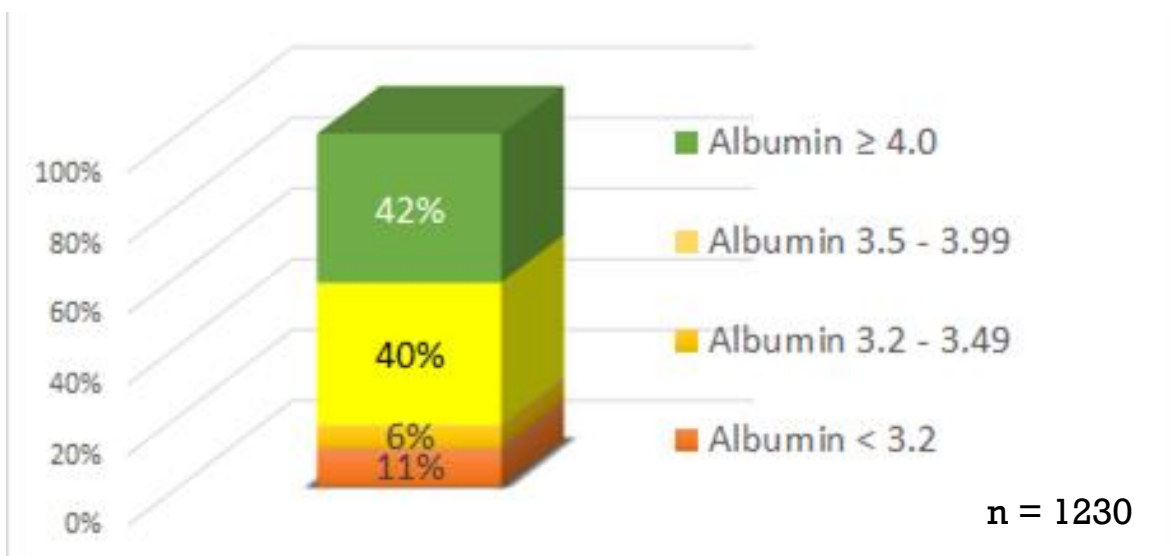


Figure 6.4 Albumin levels by categories (g/dL)

Chapter 6: Mineral and Bone Disorder (MBD) (Continue)...

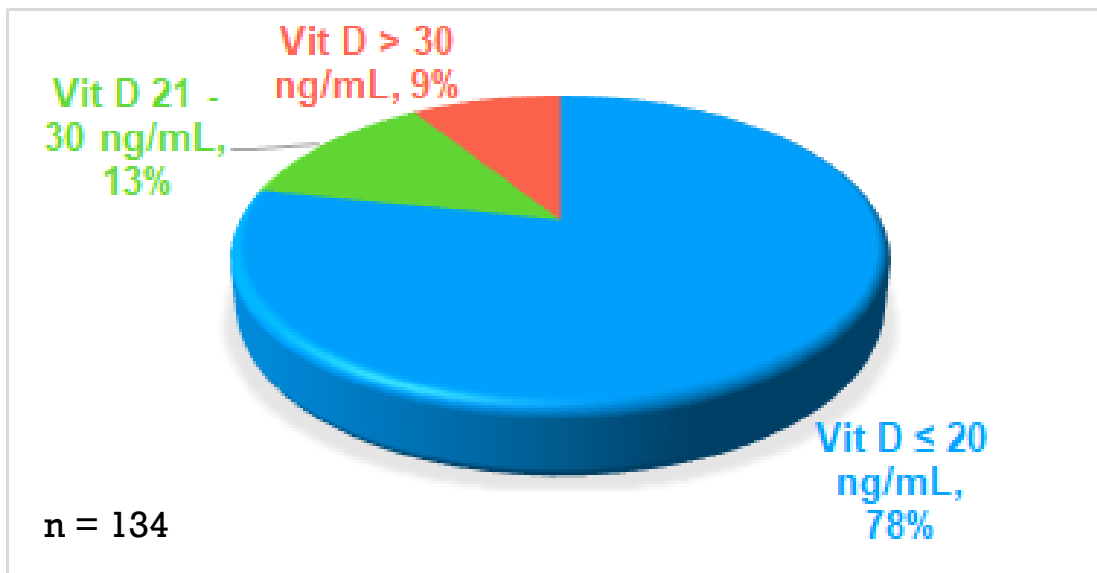


Figure 6.5 Vitamin D level categories

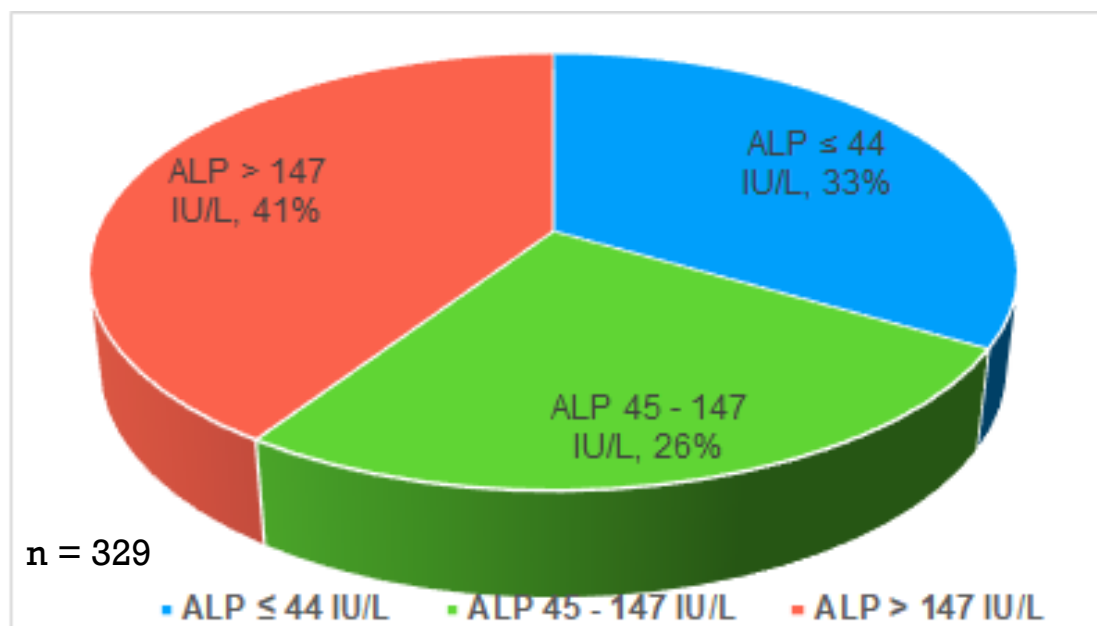


Figure 6.6 Alkaline phosphatase levels

Chapter 6: Mineral and Bone Disorder (MBD) (Continue)...

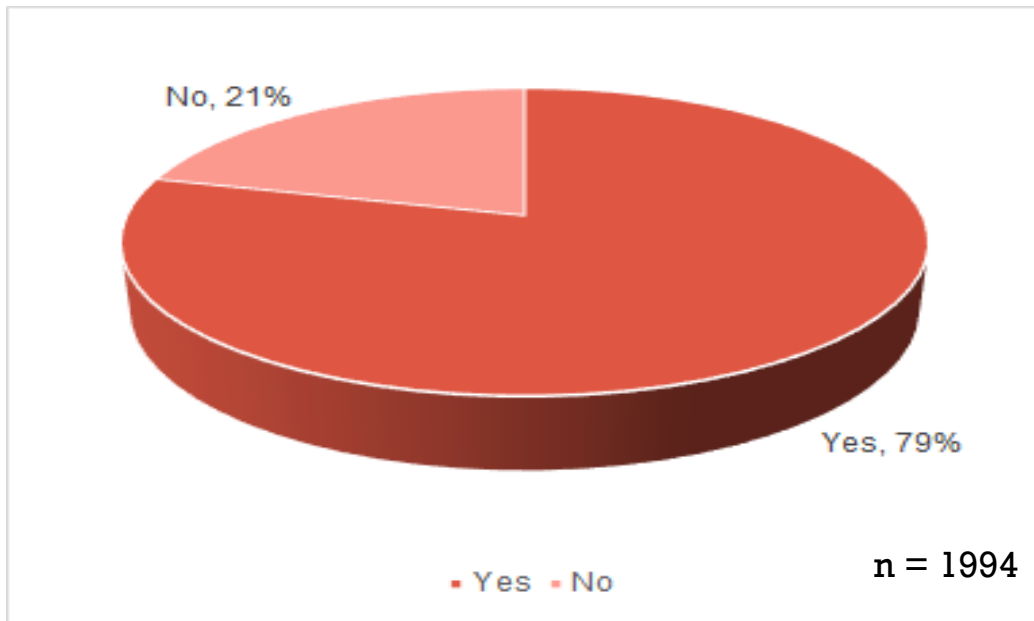


Figure 6.7 Calcium Containing Phosphate Binder use

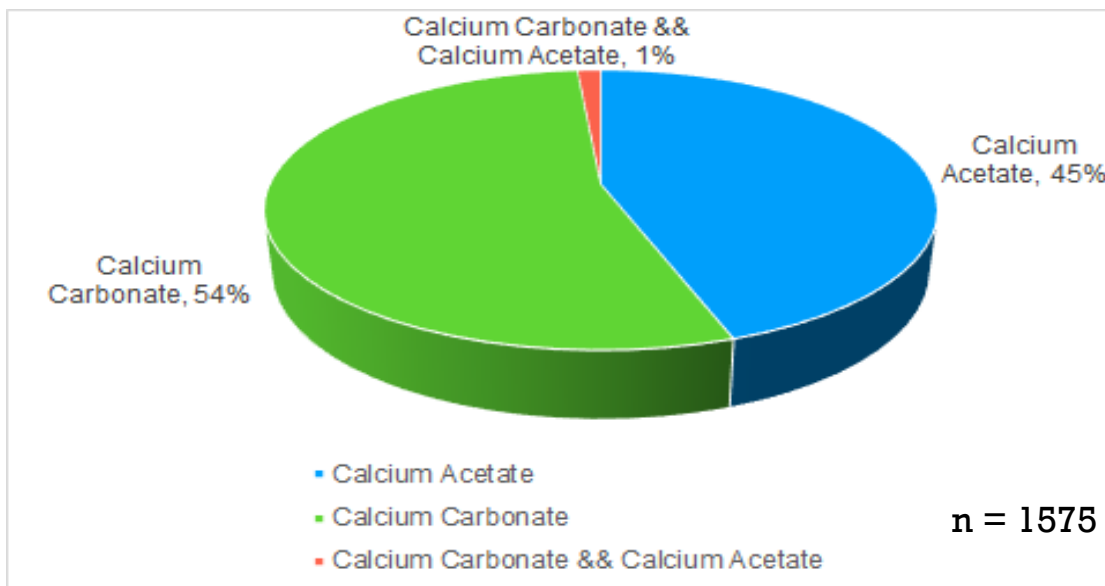


Figure 6.8 Type of Calcium Containing Phosphate Binder in patients using them

Chapter 6: Mineral and Bone Disorder (MBD) (Continue)...

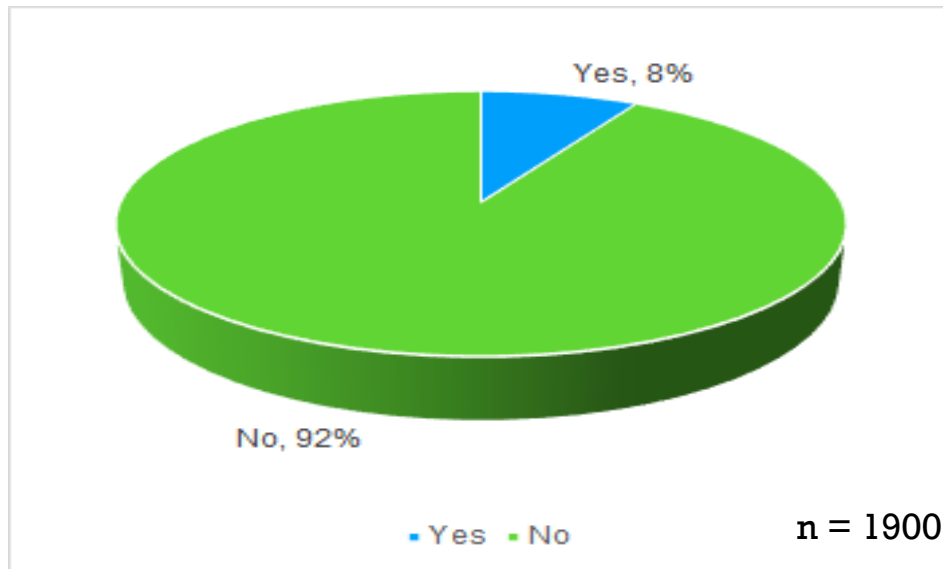


Figure 6.9 Calcium Free Phosphate Binder use

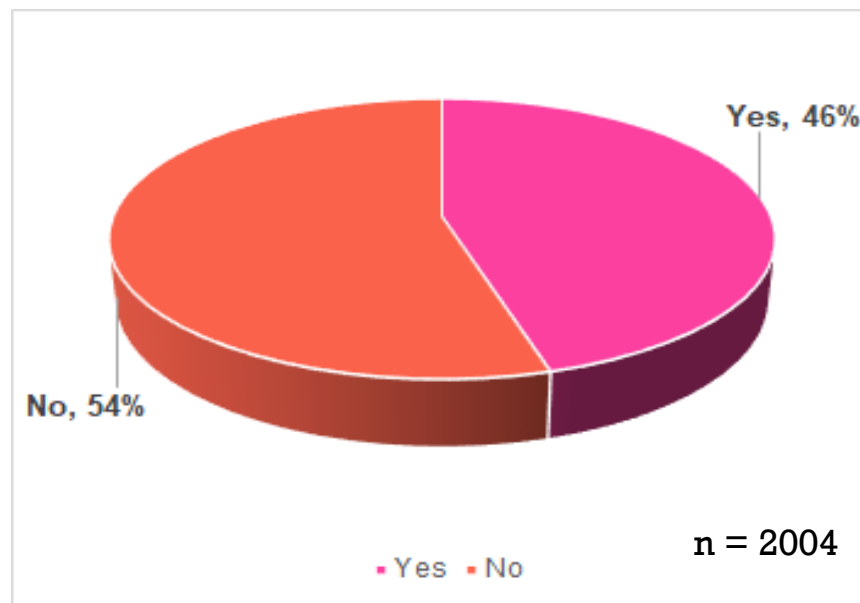


Figure 6.10 Alphacalcidol treatment

Chapter 6: Mineral and Bone Disorder (MBD) (Continue)...

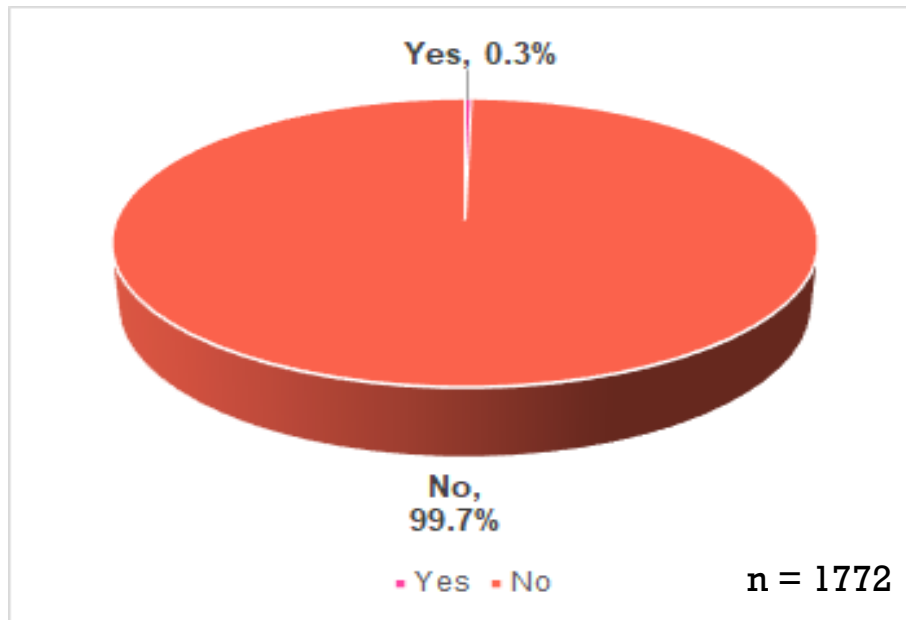


Figure 6.11 Paracalcitol treatment

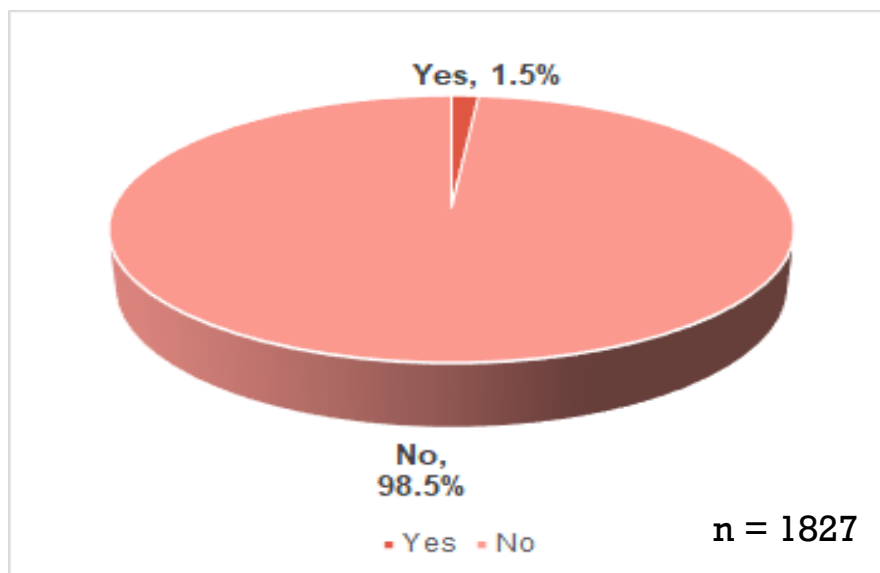


Figure 6.12 Native vitamin D treatment

Chapter 6: Mineral and Bone Disorder (MBD) (Continue)...

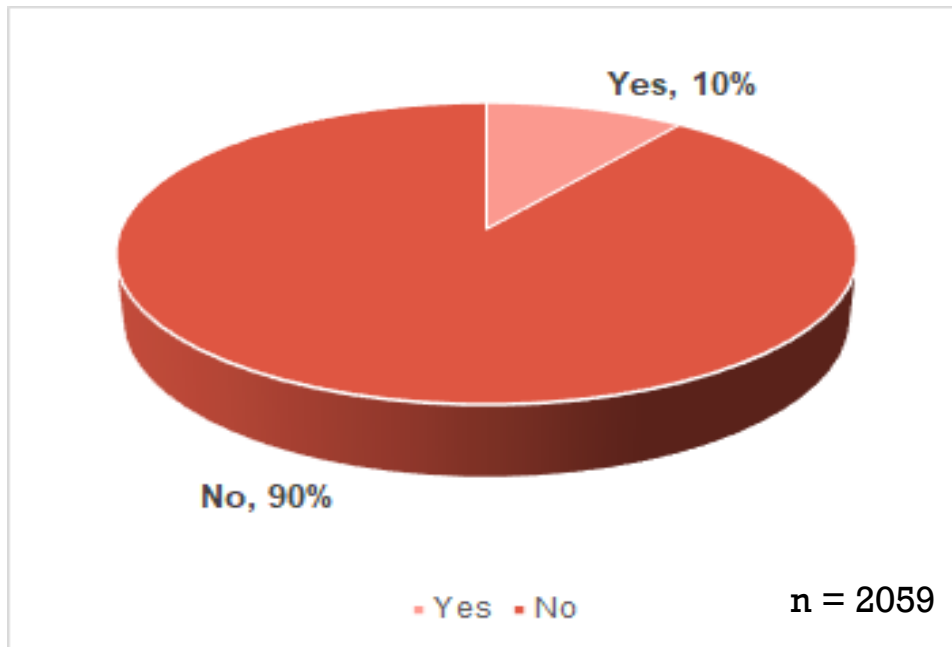


Figure 6.13 Cinacalcet treatment

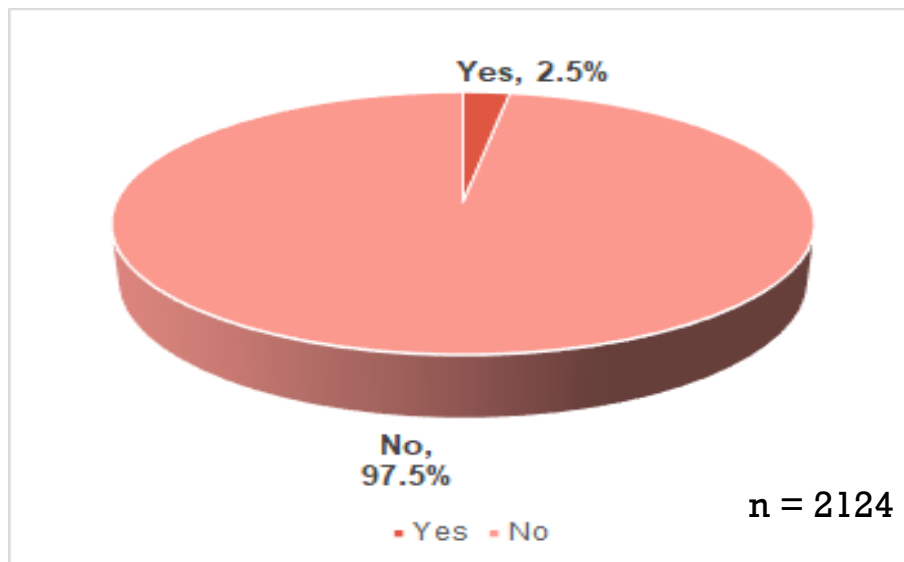


Figure 6.14 Parathyroidectomy



Chapter 7: Hypertension and Diabetes Control

Chapter 7: Hypertension and Diabetes Control

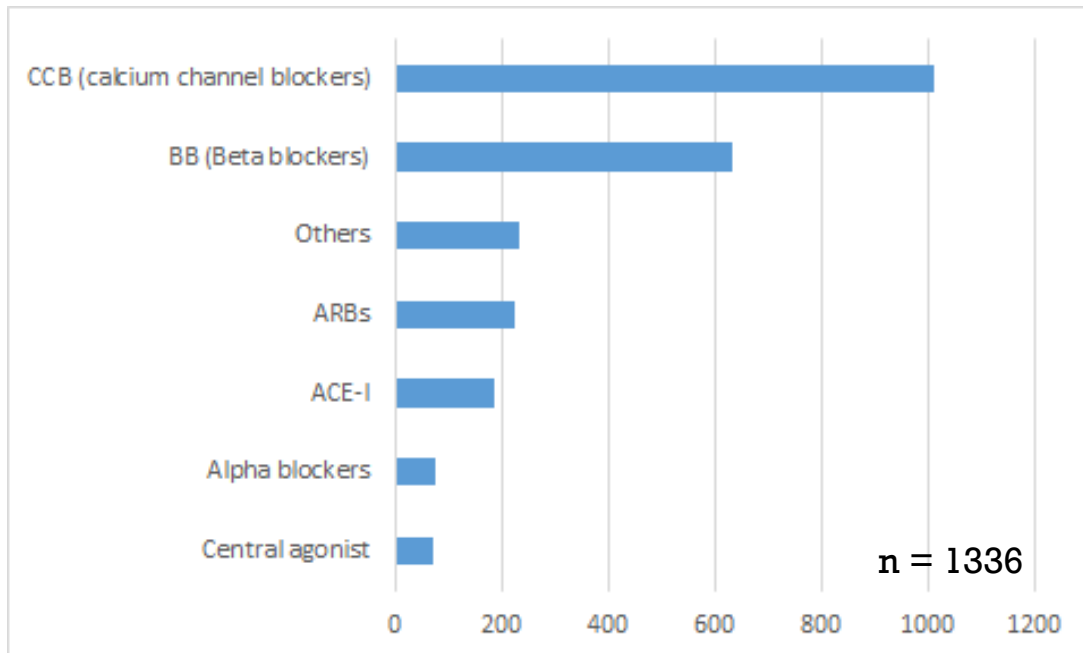


Figure 7.1 Anti-Hypertensive medications used (category)

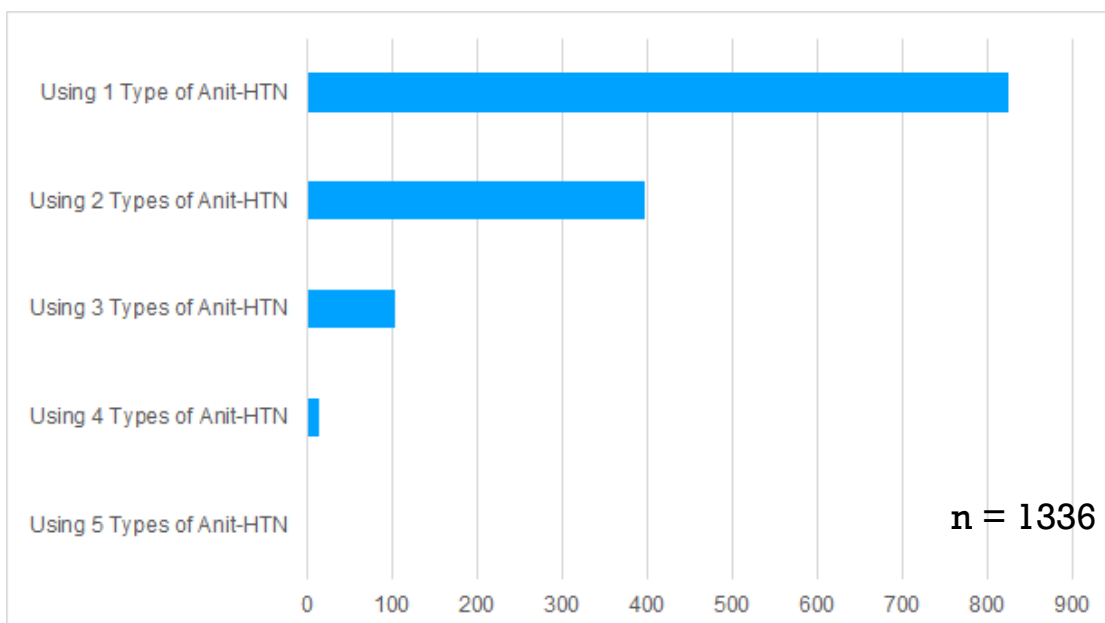


Figure 7.2 Anti-Hypertensive medications used (number per patient)

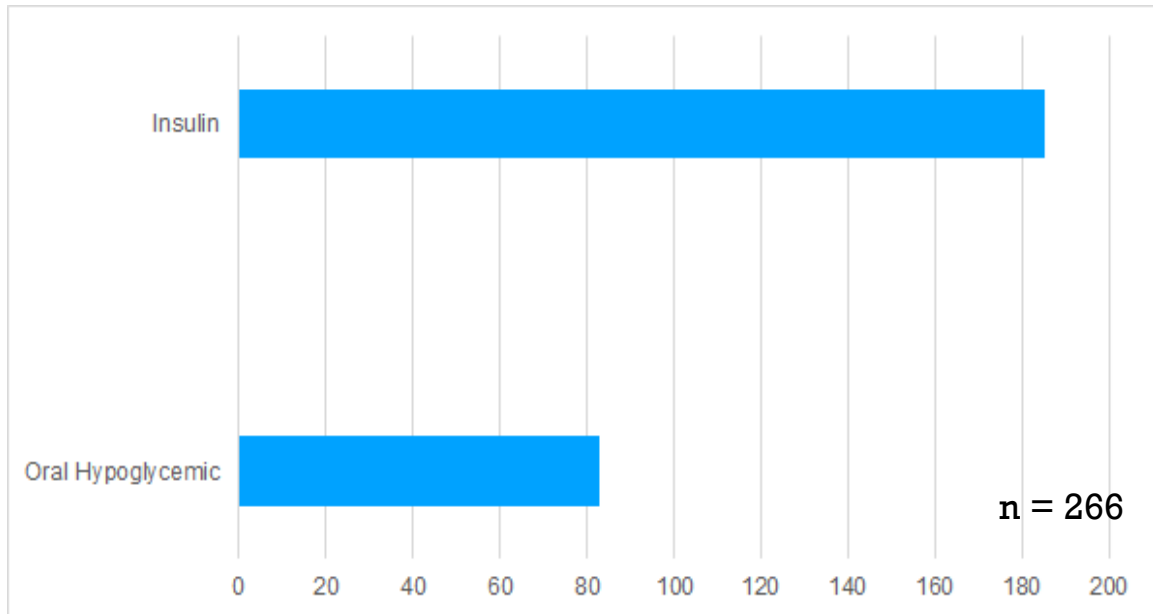


Figure 7.3 Hypoglycemic Medications Used

2020 ERDS

Egyptian Renal Data System

Chapter 8: Vascular Access

Chapter 8: Vascular Access

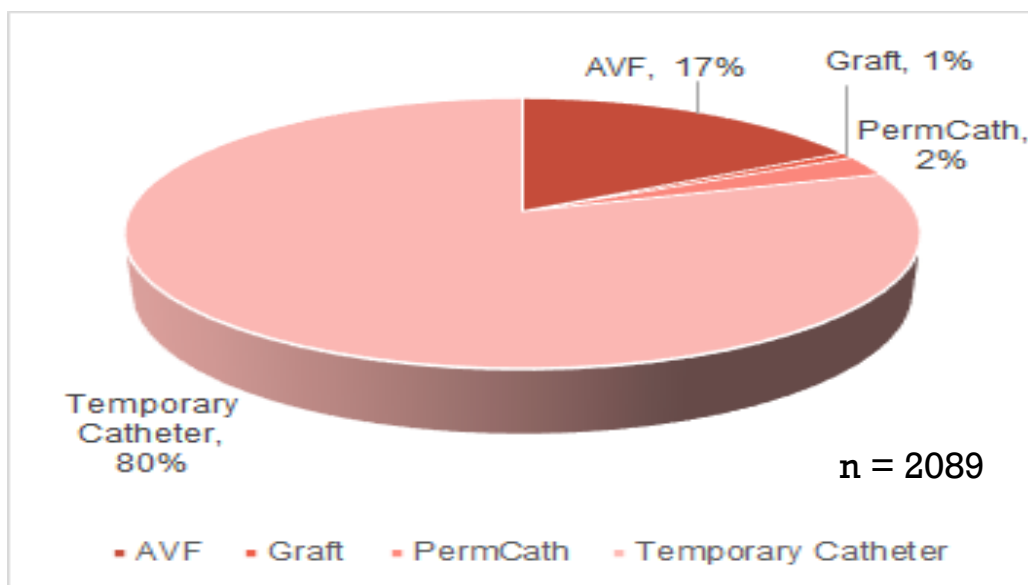


Figure 8.1 Vascular Access Type at Initiation of Hemodialysis

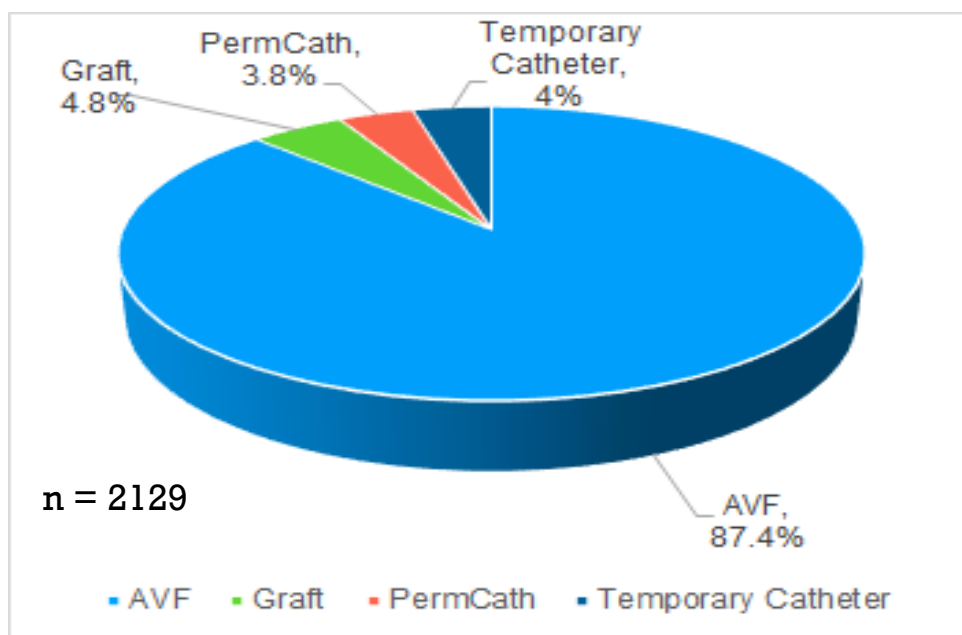


Figure 8.2 Current Vascular Access Type

Chapter 8: Vascular Access (Continue)...

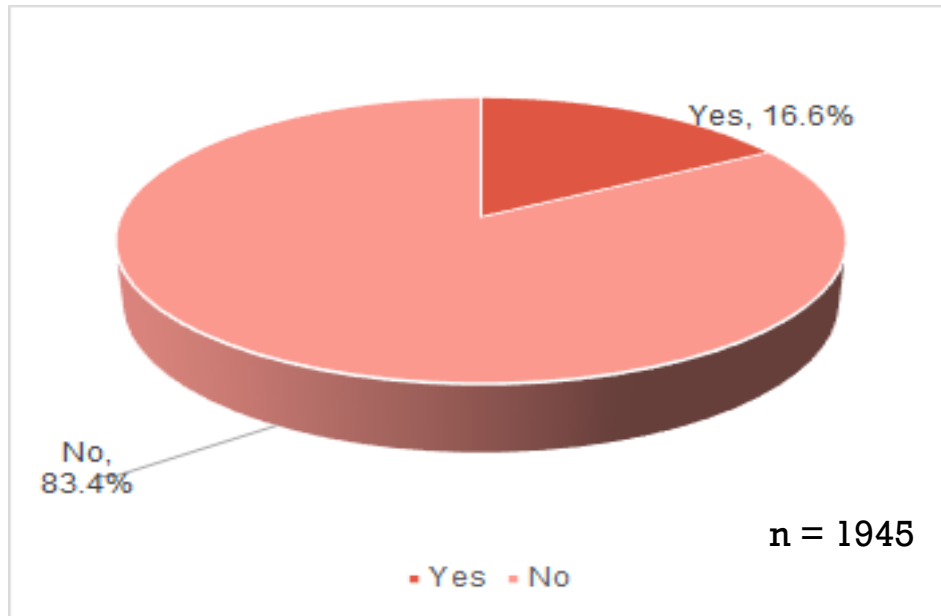


Figure 8.3 Previous Vascular Access Failure

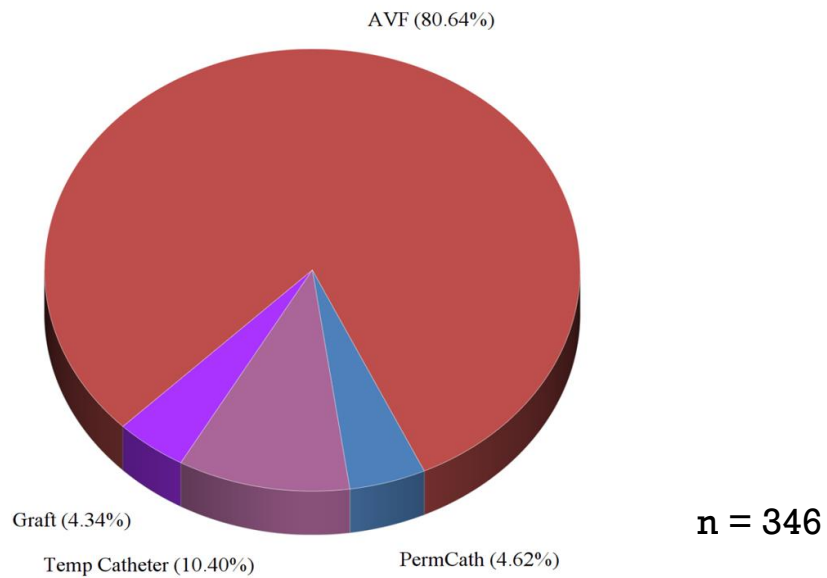


Figure 8.4 Type of Failed Vascular Access

2020 ERDS

Egyptian Renal Data System

Chapter 9: Dialysis Adequacy and Data

Chapter 9: Dialysis Adequacy and Data

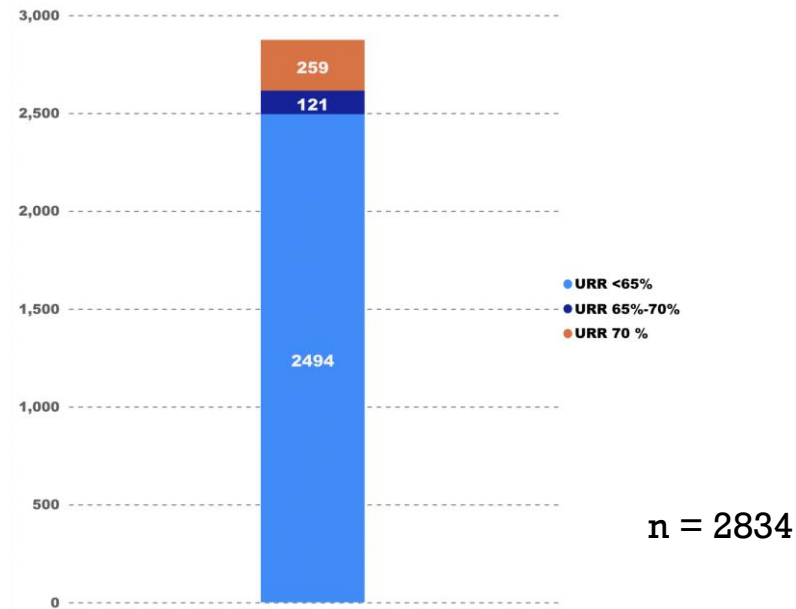


Figure 9.1 Urea reduction ratio (URR) by categories

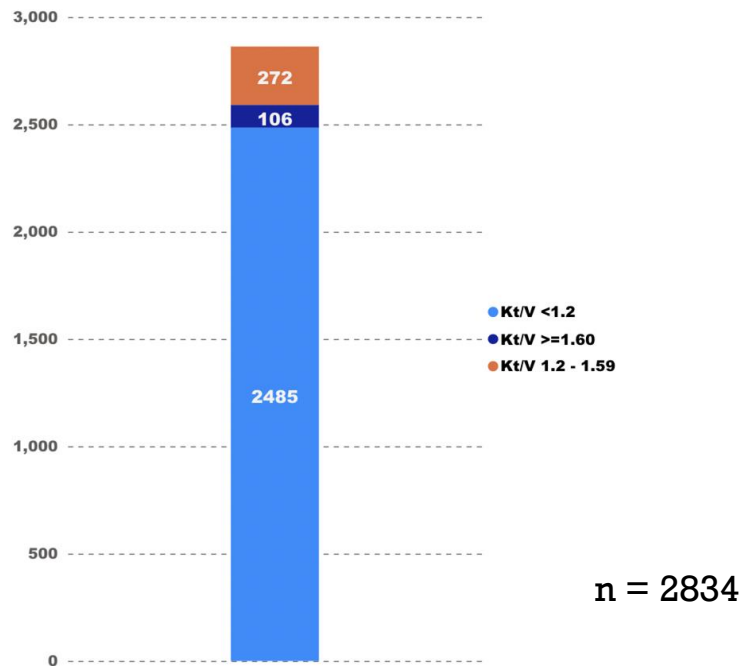


Figure 9.2 Kt/V by categories

Chapter 9: Dialysis Adequacy and Data (Continue)...

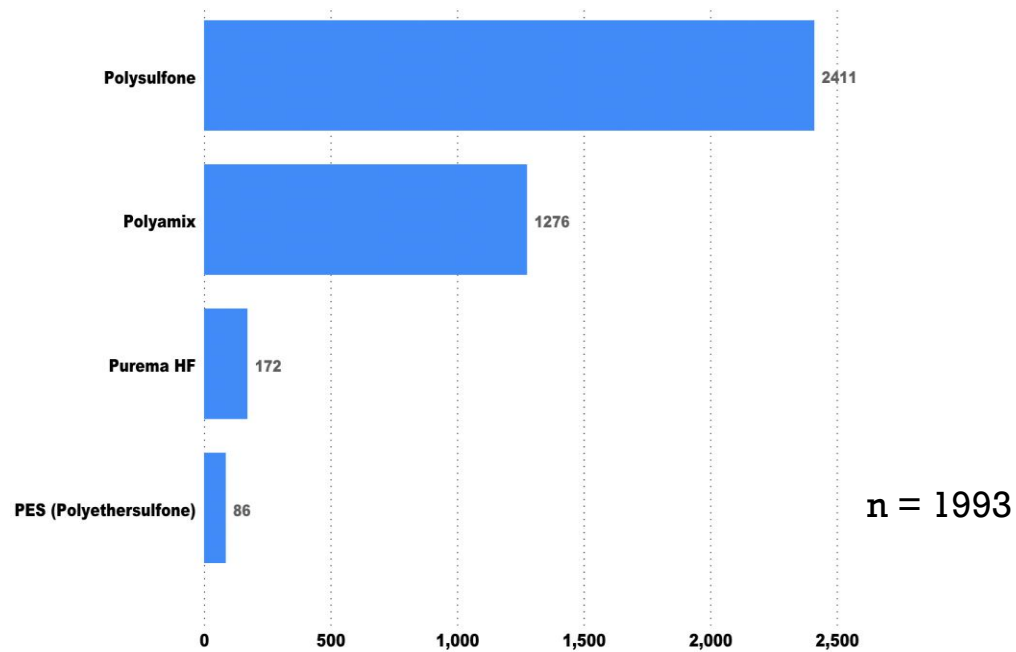


Figure 9.3 Dialyzer (Membrane Type)

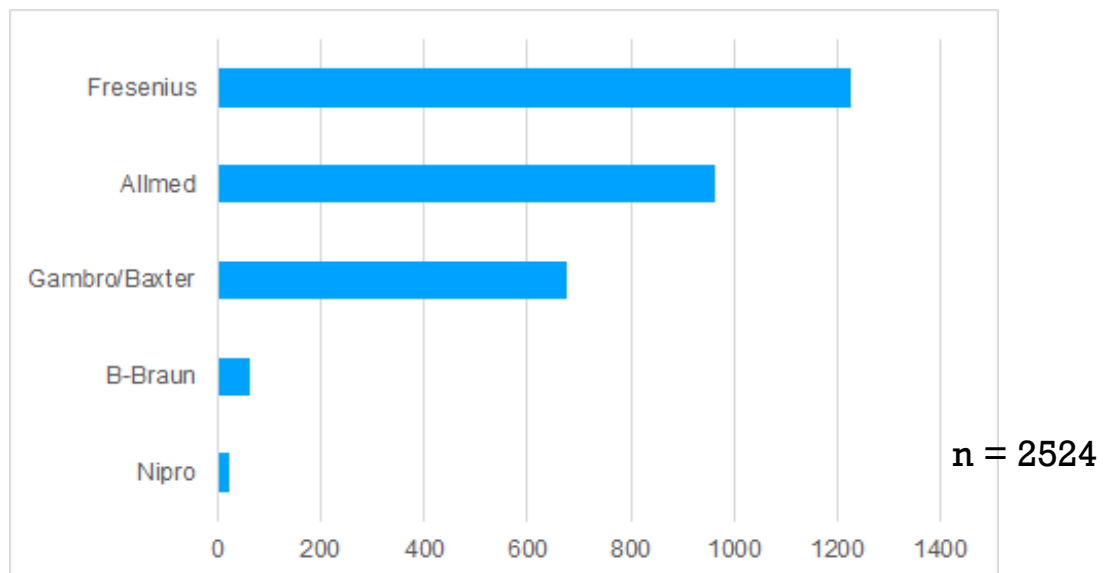


Figure 9.4 Dialyzer (Company)

Chapter 9: Dialysis Adequacy and Data (Continue)...

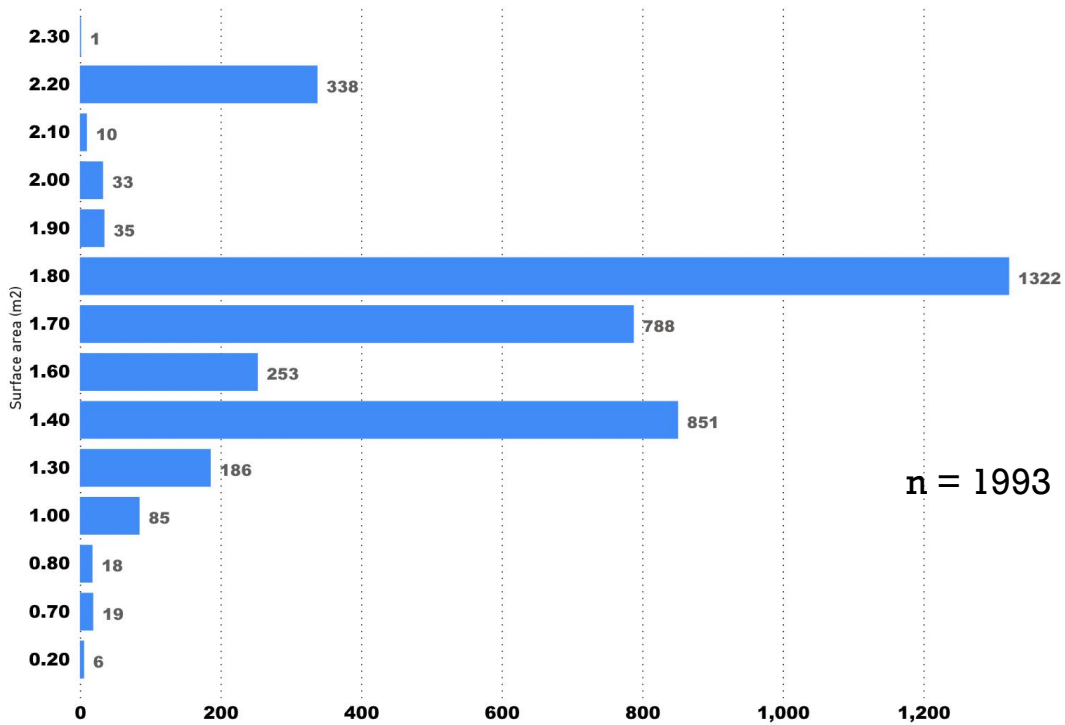


Figure 9.5 Dialyzer Surface Area (m2)

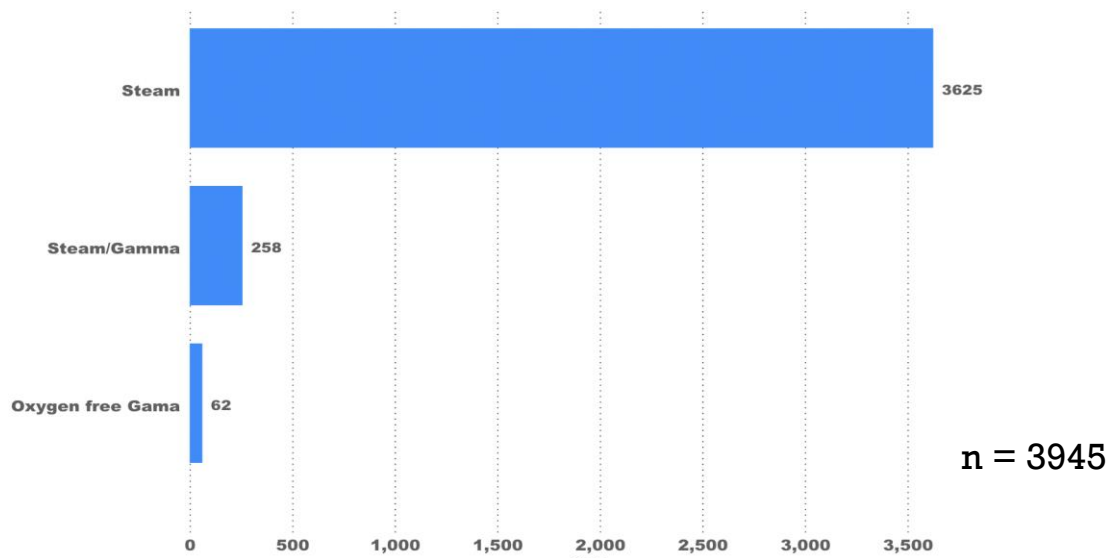


Figure 9.6 Filter Sterilization

Chapter 9: Dialysis Adequacy and Data (Continue)...

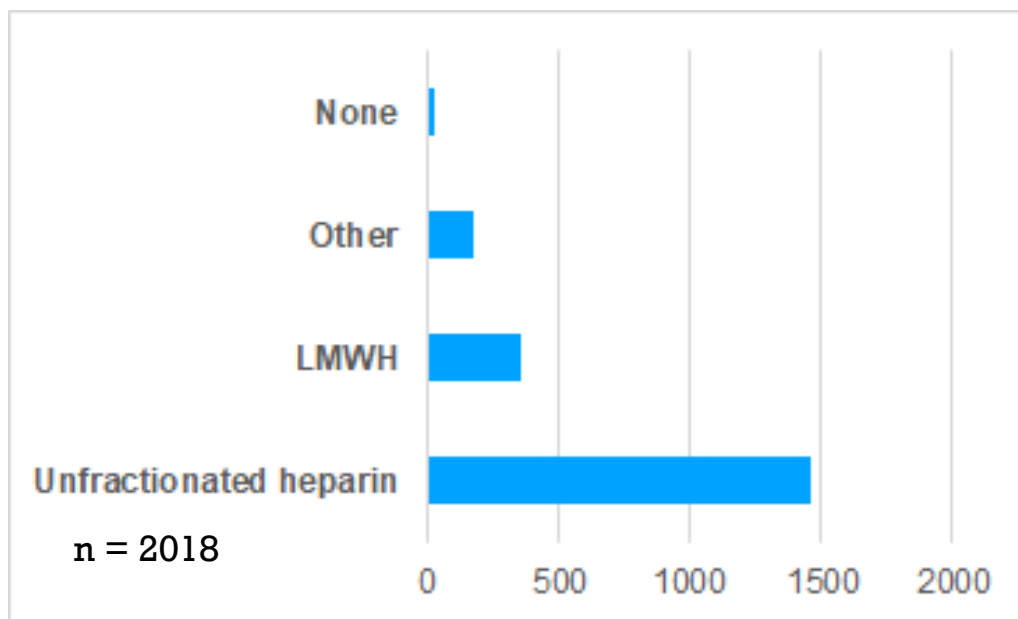


Figure 9.7 Anticoagulants Used

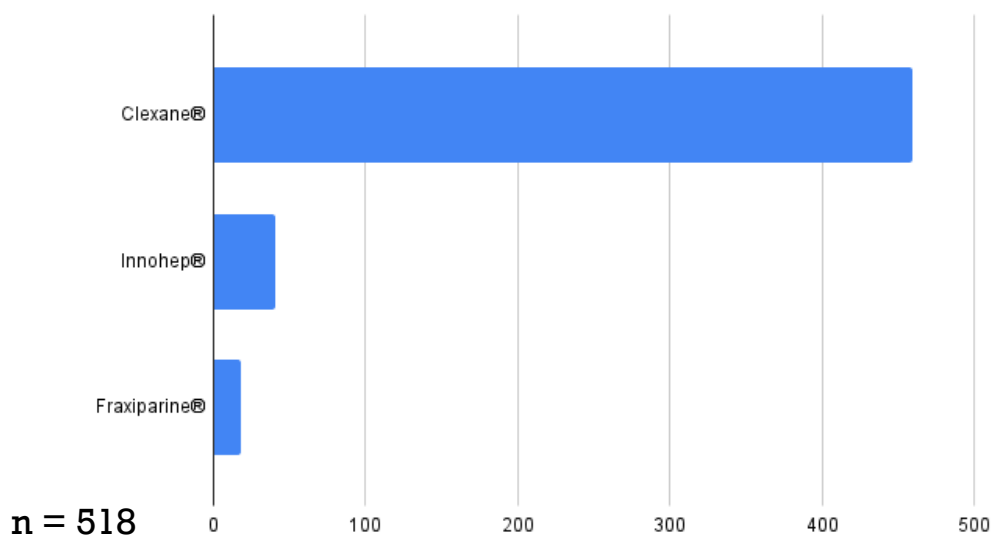


Figure 9.8 LMWH type in Patients using LMWH

Chapter 9: Dialysis Adequacy and Data (Continue)...

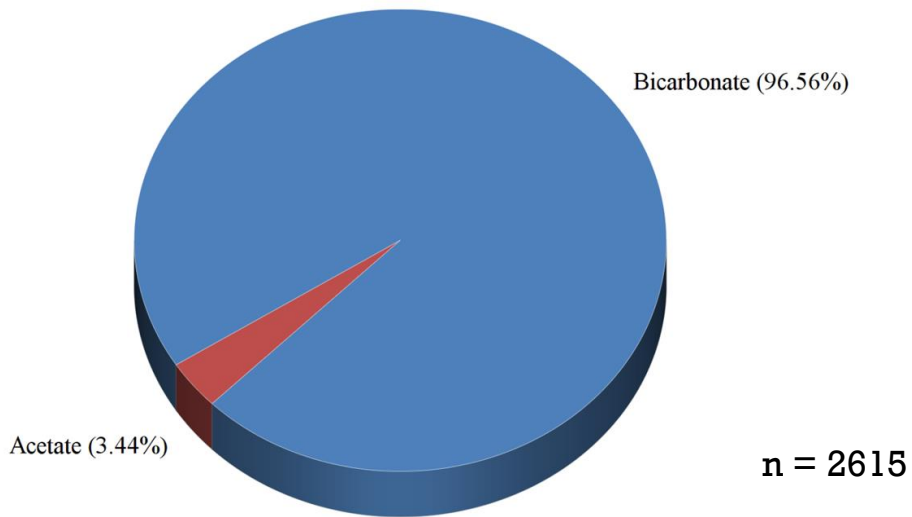


Figure 9.9 Dialysate Type

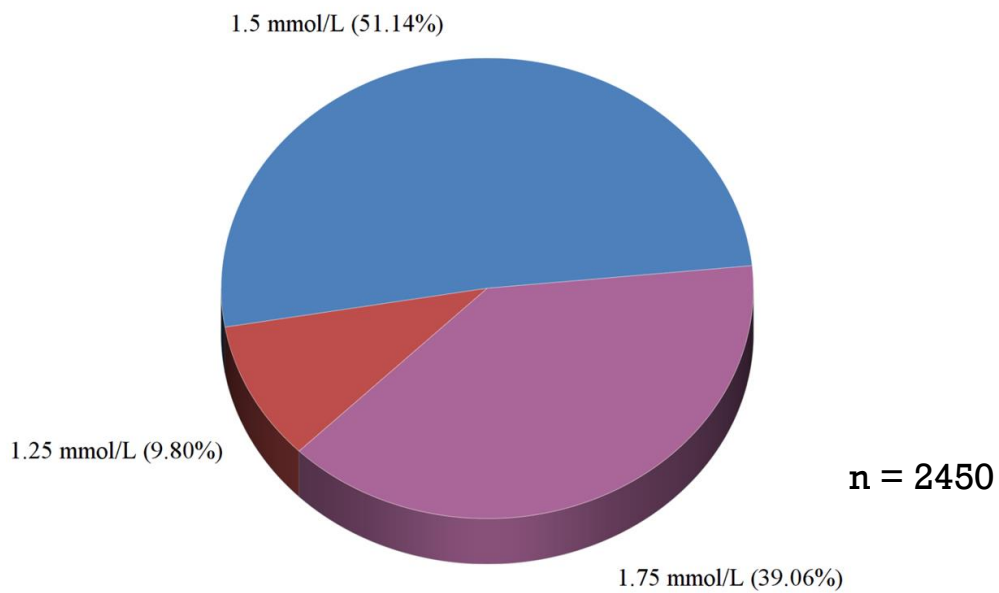


Figure 9.10 Dialysate Calcium Concentrations

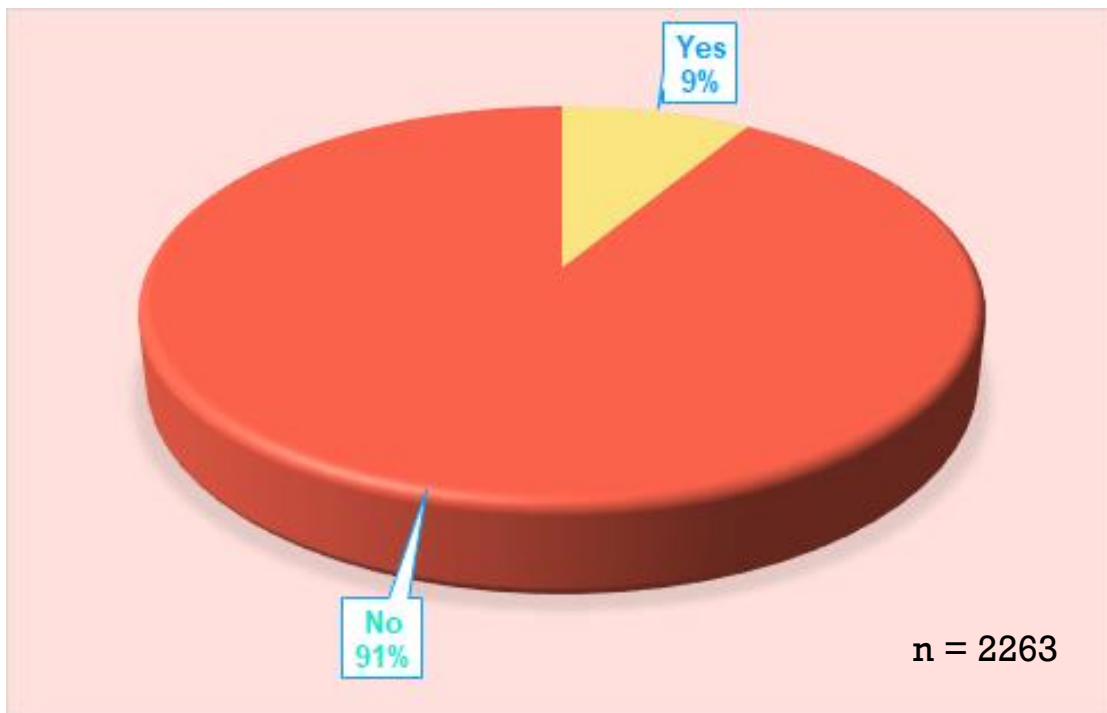


Figure 9.11 *Glucose-Containing Dialysate*

2020 ERDS

Egyptian Renal Data System

Chapter 10: Morbidity and Mortality

Chapter 10: Morbidity and Mortality

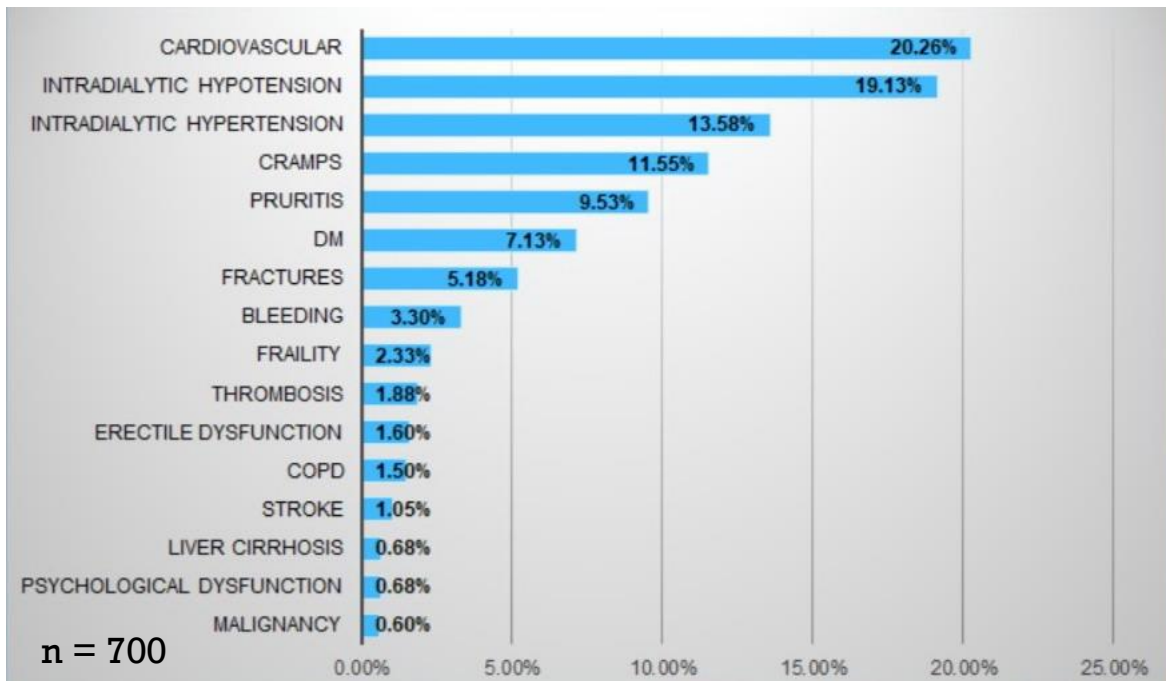


Figure 10.1 Percentage of different morbidities from total number of ESRD

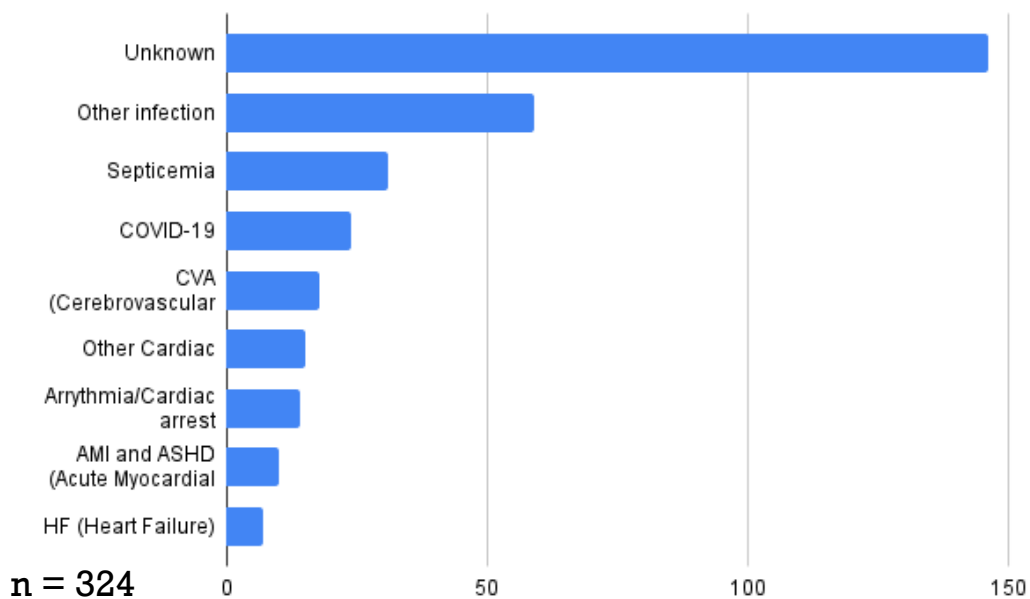


Figure 10.2 Causes of Mortality

2020 ERDS

Egyptian Renal Data System

Chapter 11: Transplantation

Chapter 11: Transplantation

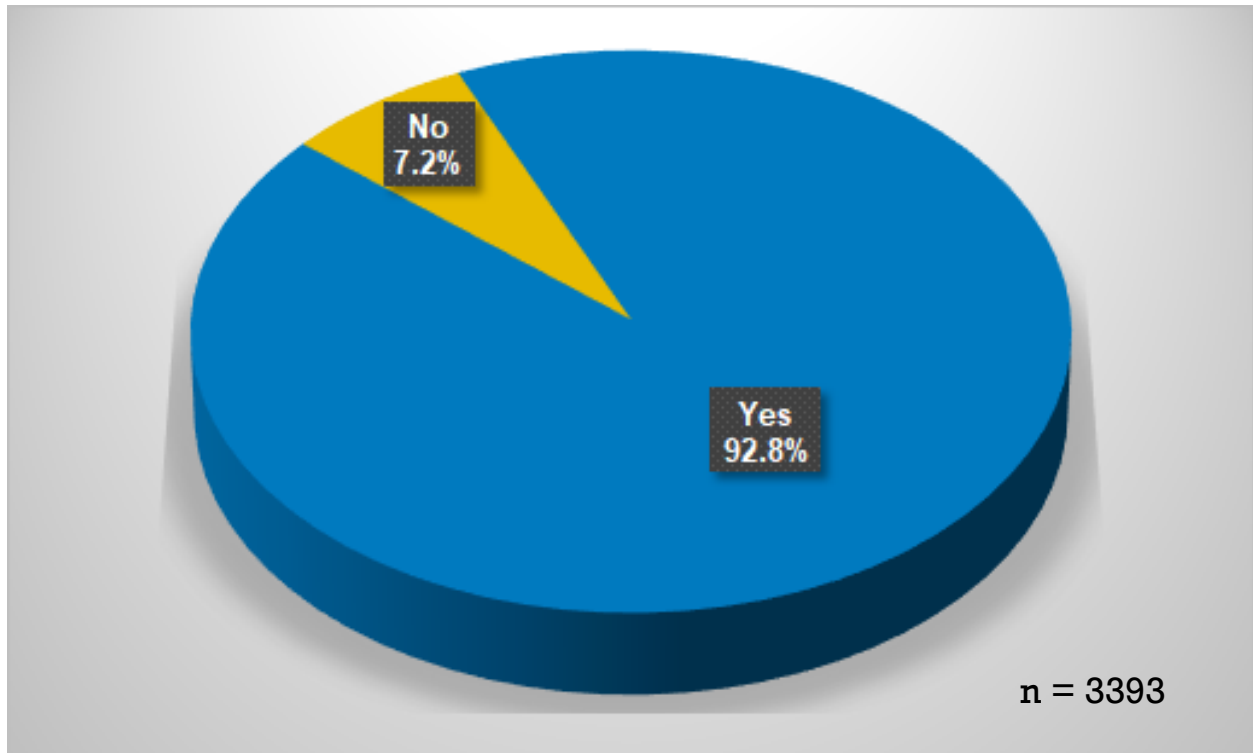


Figure 12.1 Patient Fitness for Transplantation

The electronic health record system of ERDS system is powered by Yashfii.com

The link to the ERDS system can be found at Yashfii.com/IM”