



مستشفى الملك فيصل التخصصي ومركز الأبحاث  
King Faisal Specialist Hospital & Research Centre

The 1<sup>st</sup> Accumulative Annual  
Report Of KFSH&RC HIV  
Registry  
2017 - 2022



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Annual Report prepared by the staff of the HIV Registry, Medicine Department,  
Biostatistics, Epidemiology & Scientific Computing Department  
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# Foreword

The first case of AIDS in the Kingdom of Saudi Arabia was diagnosed in 1984. In 1989-90, one of the first clinics in the Kingdom dedicated to HIV was established in King Faisal Specialist Hospital & Research Centre. It continued to be the major referral center for HIV patients until other AIDS clinics were started many years later. In Riyadh, currently, there is a wide range of public and private sector providers of HIV/AIDS care, but the region lacks an integrated, dependable data collection system for HIV.

Hence, the KFSH&RC HIV Registry was launched in May 2017. Now, it is a database of over 850 HIV patients collected over the last five years. It includes demographic and clinical data, both prospective and retrospective going back to the 1980s

A systematic and comprehensive approach to caring for patients with chronic disease has been shown to improve the quality of chronic care delivery and patient outcomes. A disease registry is one such effective clinical information system that helps physicians and other members of the care team to ensure appropriate and timely care during patient visits.

Clinicians use the registry as a working tool to support patient care. Administrators use it to understand the burden of disease and ensure adequate services. Academicians use it to support research.

Here, we proudly present the first edition of KFSH&RC HIV Registry Annual Report 2022, where highlights of the demographic and clinical data of the patients who are now actively following up here are summarized graphically.

Many thanks to each and every one of you who contributed to the success of the Registry — patients who generously agreed to share their data; the registry coordinator, clinical counselor and Biostatistics, Epidemiology & Scientific Computing (BESC) Department members who collected, analyzed and printed the data. Also, the nurses, residents, fellows and consultants who use it in their clinical practice.

This Annual Report provides the opportunity to reflect back on our work over the past years and look to the year ahead. Data is power and we believe that sharing data will ultimately improve patient care and hope you find this report helpful.

***Dr. Magid Abdel Halim Mohamed***

Principal Investigator, HIV Registry  
Head of Infectious Diseases  
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# **Acknowledgements**

I wish to thank everyone who contributed towards the King Faisal Specialist Hospital and Research Centre HIV Registry. Special thanks are due to the staff of Infectious Diseases Section of Medicine Department and the Biostatistics, Epidemiology and Scientific Computing (BESC) Department.

My profound thanks to Dr Maha AlEid and in particular to Manal Marzouqi, Acting Head of Registries Core Facility at Biostatistics, Epidemiology and Scientific Computing Department for her professional guidance and technical support for initiating this Graphic Annual Report.

I would also like to thank Rehna Ruksana , Registrar of HIV Registry and Munirah Bin Daham, Clinical counselor for their hard work and dedication.

Also, thanks to all the consultants, fellows, residents nursing staff and others at the outpatient HIV clinic for their active help. Thanks in particular, to Dr Abdulrahman AlRajhi, Consultant Infectious Diseases and Director for Academic and Training Affairs for his active guidance and mentoring in taking the HIV Registry forward.

Thanks to the Executive Director of Research Centre for patronage and continued support in terms of provision of resources at BESC Department. Special thanks are also due to Dr Edward De Vol for extending all his support towards making this Annual Report possible.

I would like to express my thanks to the Chairman, Department of Medicine for his continued support in terms of making sure that registry is being provided with all the facilities.

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## **Facts about HIV/AIDS**

- Around 40 million people have died from HIV/AIDS since the start of the epidemic.
- In 2021, 650 000 people died from HIV-related causes and 1.5 million people acquired HIV.
- There were an estimated 38.4 million people living with HIV at the end of 2021.
  
- AIDS is the number 1 killer of women under 50.
- Nearly 1,000 young women are infected with HIV every day.
- Women of all ages, races and ethnicities, and sexual orientations can get HIV.
- In the absence of any intervention, an estimated 15–30% of mothers living with HIV will transmit the infection during pregnancy and delivery. Breastfeeding increases the risk of transmission by 10–15%.
- A woman who knows about her HIV infection early in pregnancy and gets antiretroviral (ARV) medicine can lower the risk of passing HIV to her baby to less than 1%.
  
- You can get HIV from sharing needles or getting tattoos or body piercings
- You cannot get HIV from mosquitoes, shaking hands, using the toilet, from pools or coming into contact with someone's sweat or tears from their eyes.
- The only bodily fluids that are known to transmit HIV are semen, vaginal fluids, anal fluids, breastmilk, and blood (including menstrual blood).
  
- HIV is the virus that leads to AIDS. Being infected with HIV does not mean you have developed AIDS.
- You can have HIV and not feel sick. A Lot of people with HIV don't know they have it.
- HIV weakens a person's immune system by destroying important cells that fight disease and infection.
  
- People with HIV should start HIV medicine right away
- With new treatments, many people are able to live a long life with HIV.
- There is no cure for HIV infection, yet. Once people get HIV, they have it for life.
- There is no vaccine to prevent HIV, yet.



# Story of Red Ribbon

In 1988, a group called Visual AIDS was founded by arts professionals as a response to the effects of AIDS on the arts community and as a way of organizing artists, arts institutions, and arts audiences towards direct action on AIDS.

Three years later, in 1991, some of the Visual AIDS artists came together to design a visual symbol to demonstrate compassion for people living with HIV and their care givers. The artists chose to create a red ribbon to symbolize support and solidarity for people living with HIV and to remember those who have died from AIDS-related illnesses. The color red was chosen for its, "connection to blood and the idea of passion -- not only anger, but love, like a valentine," the Project founders say. The project was to become known as the Red Ribbon Project.

In a spontaneous campaign in 1991, Red Ribbon Project volunteers sent letters and red ribbons to all attendees at the Tony Awards in the United States where actor Jeremy Irons stepped out on national television with a red ribbon pinned prominently on his lapel.

The symbol came to Europe on a mass scale on Easter Monday in 1992, when more than 100,000 red ribbons were distributed during the Freddie Mercury AIDS Awareness Tribute Concert at Wembley stadium. More than one billion people in more than 70 countries worldwide watched the show on television. Throughout the nineties many celebrities wore red ribbons, encouraged by Princess Diana's high-profile support for AIDS.

<https://www.unaids.org/en/resources/presscentre/featurestories/2006/november/20061130redribbonen>

# **1. Demographic Data**

### 1.1. Gender distribution

Of the HIV patients currently registered in KFSH&RC HIV Registry and who are actively coming for follow-up in 2022, two-thirds of the total number [n=422] account for men 285[67.5%] and one-third are women 137[32.5%].

Figure 1. Distribution of patients according to gender

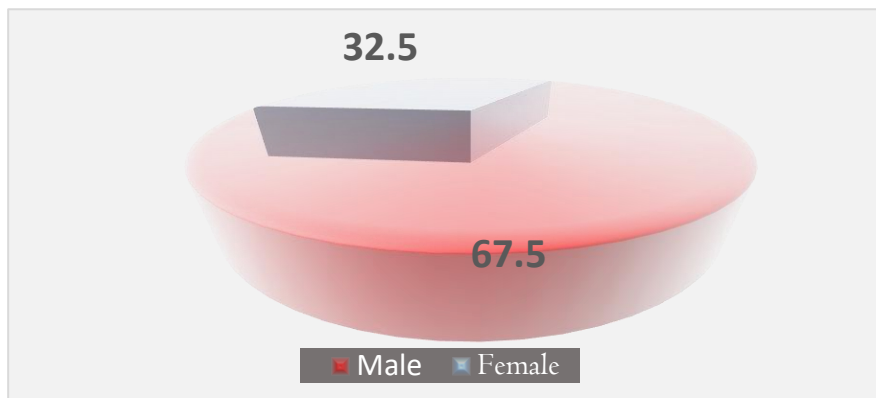


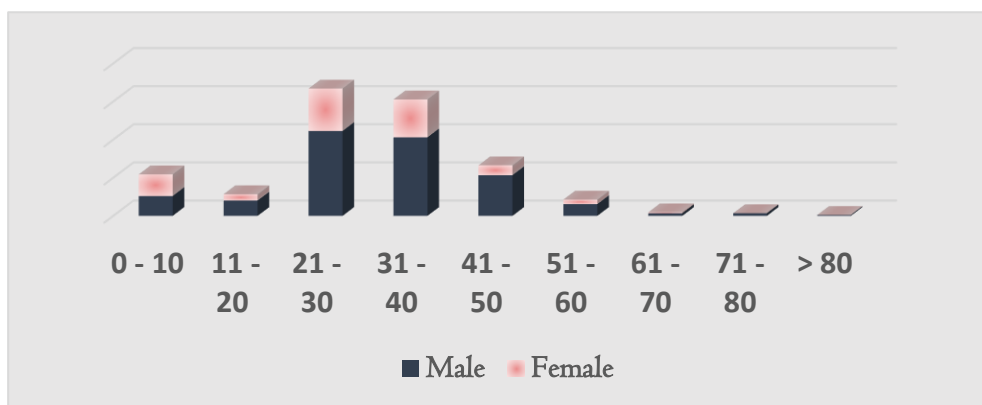
Table 1. Distribution of patients according to gender

Gender	Frequency	%
Male	285	67.5
Female	137	32.5
Total	422	100.0

## 1.2. Age at Diagnosis

Shown here is the gender distribution based on age at diagnosis, stratified into decades. Of the total number [n=422], 33.4% were in the age group of 21-30 and 30.6% were in the age group of 31-40 when first diagnosed.

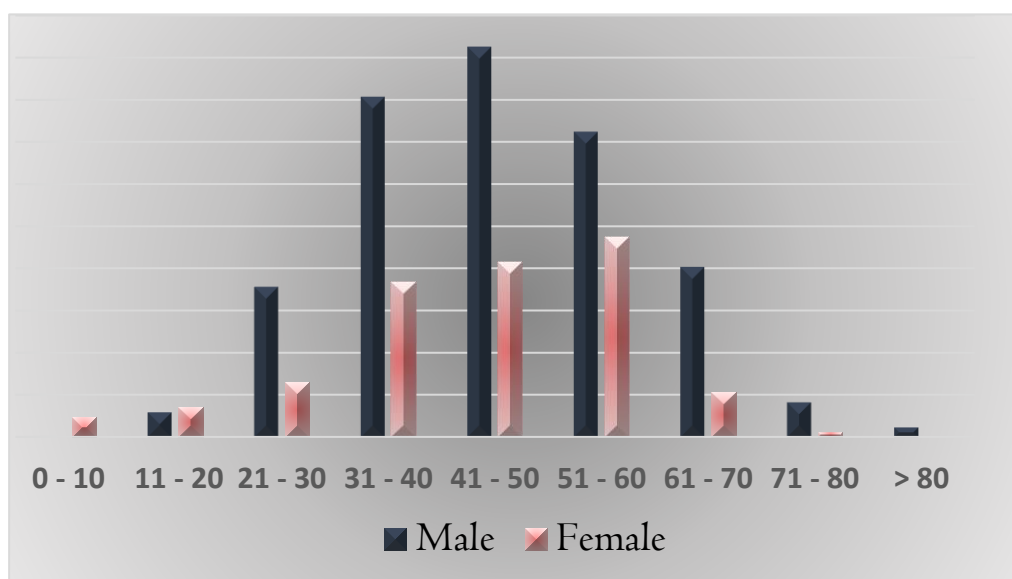
Figure 2. Age at diagnosis



## 1.3. Present Age

Here, gender distribution is calculated based on present age, stratified into decades. Currently, of the total number [n=422], 26.8% are in the 41-50 age group, 23.9% are between 51 and 60 and 23.5% are in the age group of 31-40.

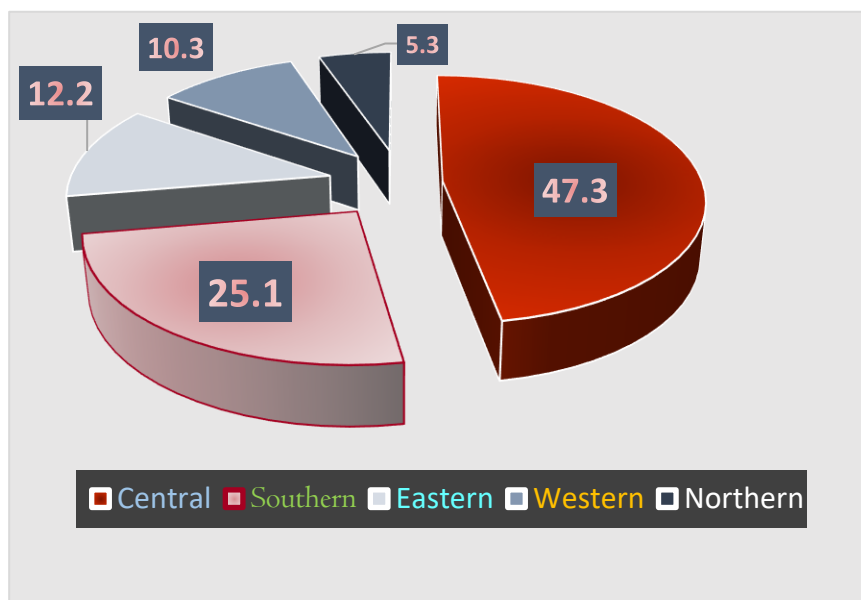
Figure 3. Present Age



#### 1.4. Geographic Region

The highest number of patients are from the central region, 198 (47.3%) followed by the southern region, 105 (25.1%) and the eastern region ranks third, 51 (12.2%).

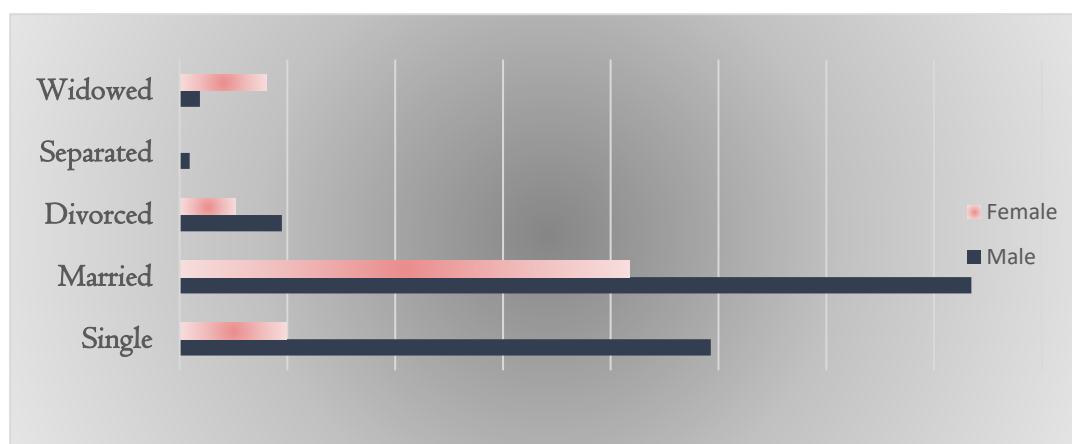
Figure 4. Geographic Region



#### 1.5. Marital Status

Given below is frequency distribution of marital status, by gender. Of the total patients [n=422], 57.6% of the patients are married at this point of time. Of the 29.6% who are single, most are male.

Figure 5. Marital Status



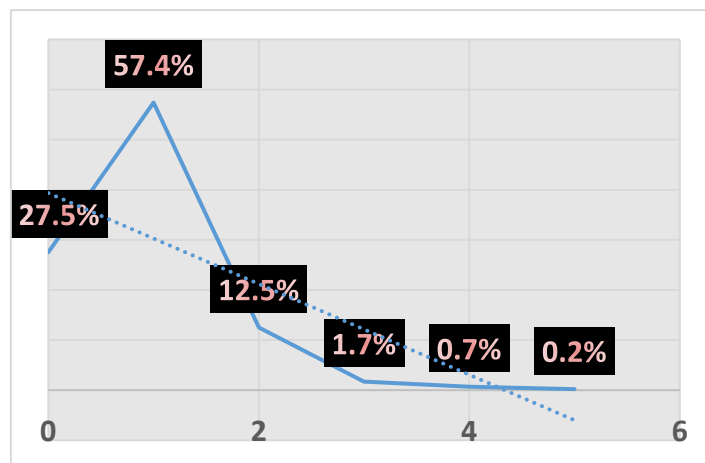
## 1.6. Number of Partners

Total number of partners that a patient married overall - it may be at the same time or one after the other. 57.4% married just once. Only 12.5% married twice.

Figure 6. Number of Partners

Number of Partners	Male	Female	Total
0	22.0%	4.5%	27.5%
1	33.6%	21.8%	57.4%
2	7.3%	4.7%	12.5%
3	0.7%	0.9%	1.7%
4	0.7%	0.0%	0.7%
5	0.2%	0.0%	0.2%
Total	66.9%	33.1%	100.0%

Table 2. Number of Partners

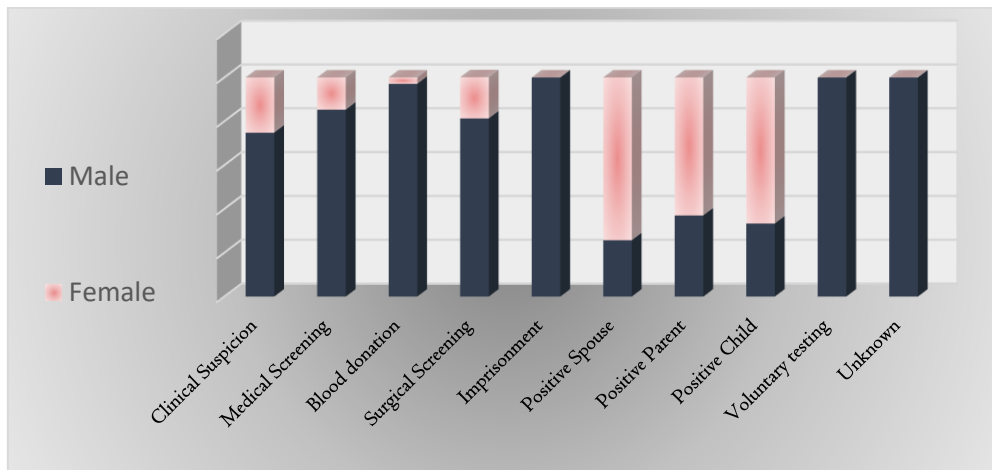


## **2. CLINICAL DATA**

## 2.1. Reason for Testing

Sometimes, diagnosis is based on either clinical suspicion or medical screening. Diagnosis of a spouse or a child leads to testing the rest of the family.

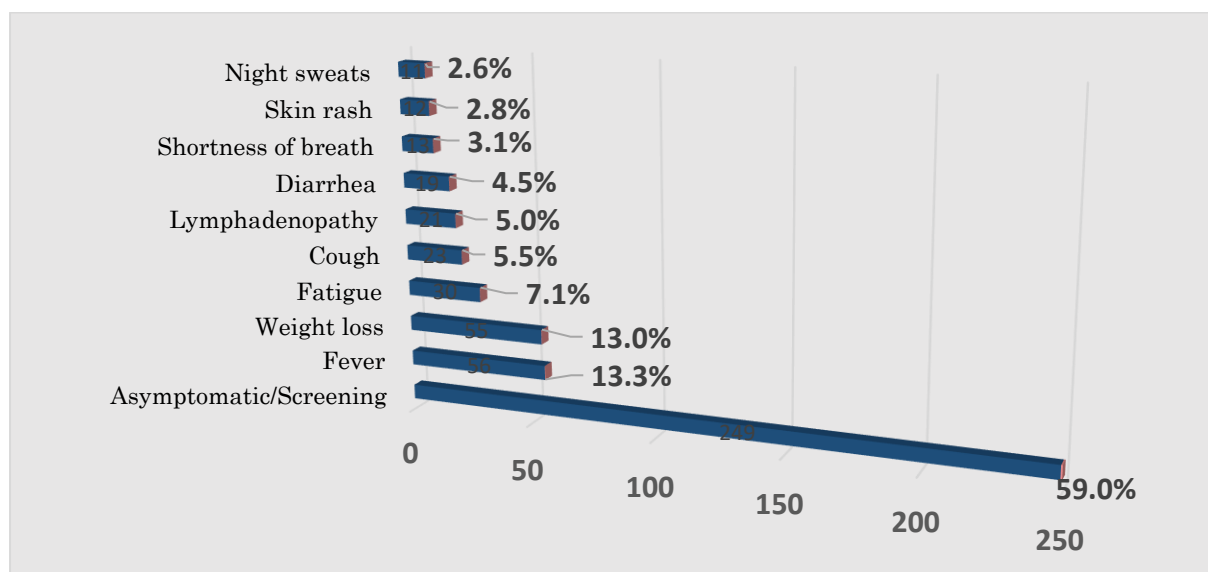
Figure 7. Reason for Testing



## 2.2. Presenting Symptoms

The majority of the patients are asymptomatic [59%] and are diagnosed through screening. Fever [13.3%] and weight loss [13%] are the most reported symptoms.

Figure 8. Presenting Symptoms

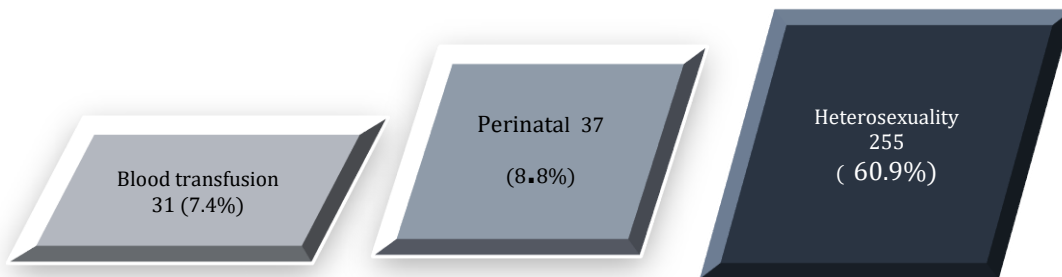
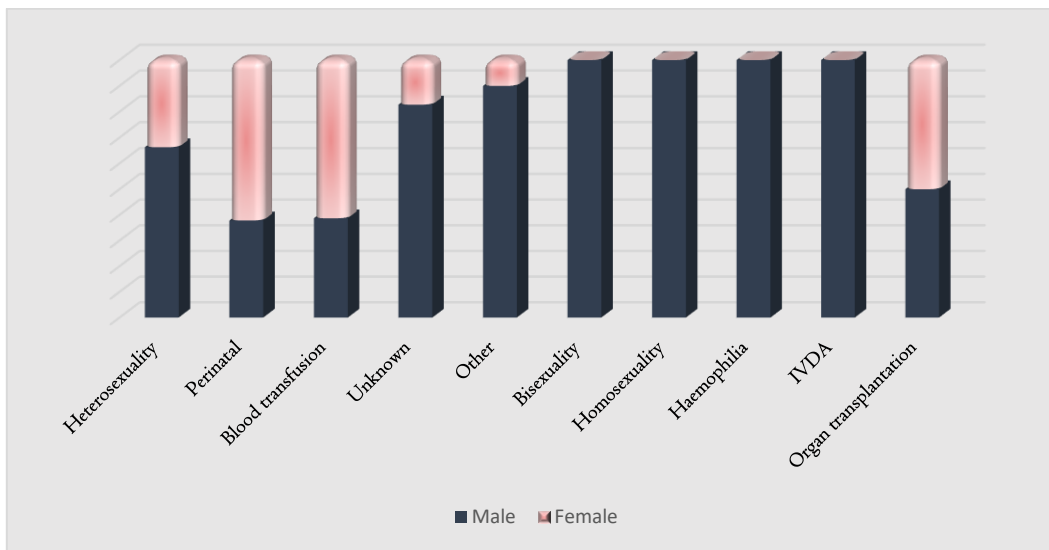




### 2.3. Risk Factor

Most common risk factor is heterosexuality accounting for 60.9% followed by perinatal, 8.8%, and blood transfusion, 7.4%.

Figure 9. Risk Factor



## 2.4. Serology

These serology are routinely done. CMV IgG Antibody, Varicella Zoster IgG Antibody and EBV markers are reactive for 91.2%, 79.6% and 67.3% of our patients. Syphilis TP antibody, Cryptococcal Antigen and Toxoplasma IgG Antibody are non-reactive for 86.5%, 80.6%, and 67.3% respectively.

Figure 10. Serology

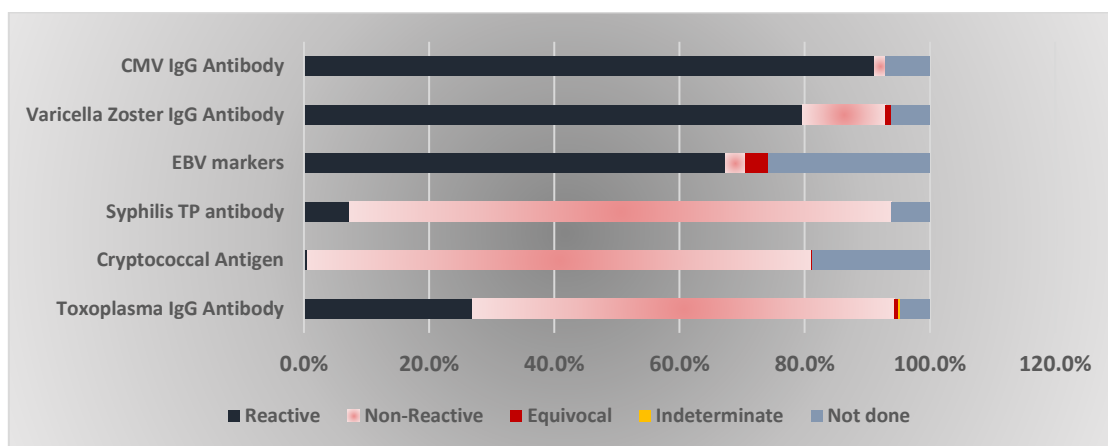


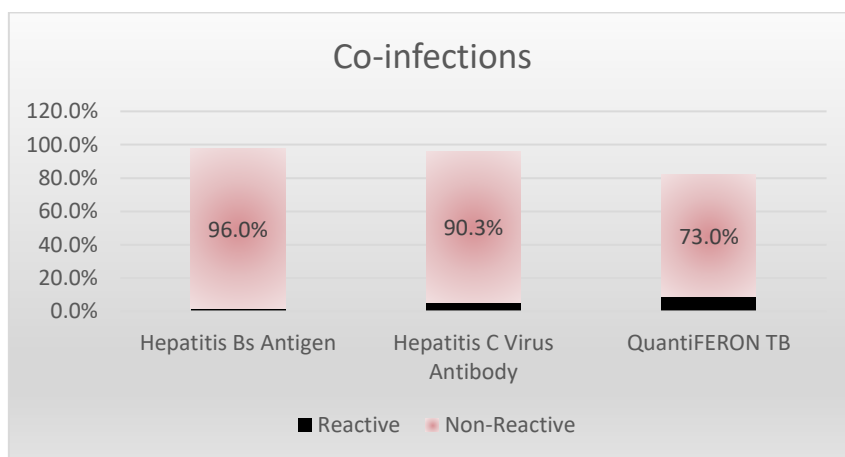
Table 3. Serology

Serology	Reactive	Non-Reactive	Equivocal	Indeterminate	Not done
<b>CMV IgG Antibody</b>	385 (91.2%)	7 (1.7%)	0 (0.0%)	0 (0.0%)	30 (7.1%)
<b>Varicella Zoster IgG Antibody</b>	336 (79.6%)	56 (13.3%)	4 (0.9%)	0 (0.0%)	26 (6.2%)
<b>EBV markers</b>	284 (67.3%)	13 (3.1%)	16 (3.8%)	0 (0.0%)	109 (25.8%)
<b>Syphilis TP antibody</b>	31 (7.3%)	365 (86.5%)	0 (0.0%)	0 (0.0%)	26 (6.2%)
<b>Cryptococcal Antigen</b>	2 (0.5%)	340 (80.6%)	1 (0.2%)	0 (0.0%)	79 (18.7%)
<b>Toxoplasma IgG Antibody</b>	114 (27.0%)	284 (67.3%)	3 (0.7%)	1 (0.2%)	20 (4.7%)

## 2.5. Co-infections

Hepatitis B, Hepatitis C and Tuberculosis are the co-infections associated with HIV. Serology was reactive for Hepatitis B for 1.7%; 5.5% were Hepatitis C reactive; 9% were reactive for QuantiFERON TB. Further tests are done to confirm the co-infection.

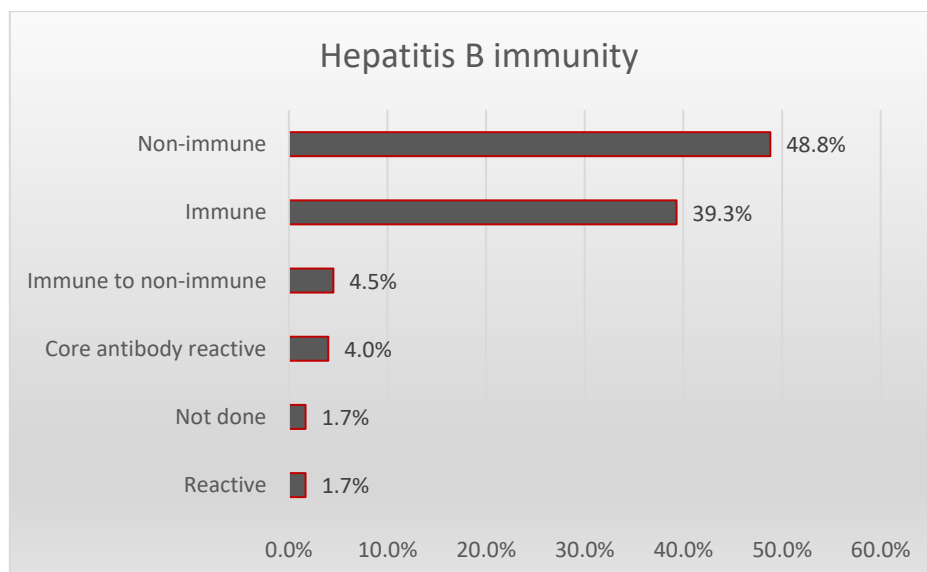
Figure 11. Co-infections



## 2.6. Hepatitis B immunity

Patients are given 3 doses of hepatitis B vaccine at 0,1,6 months for immunity, if needed or at risk. Some patients remain non-immune even after vaccination. Currently, 39.3% are immune.

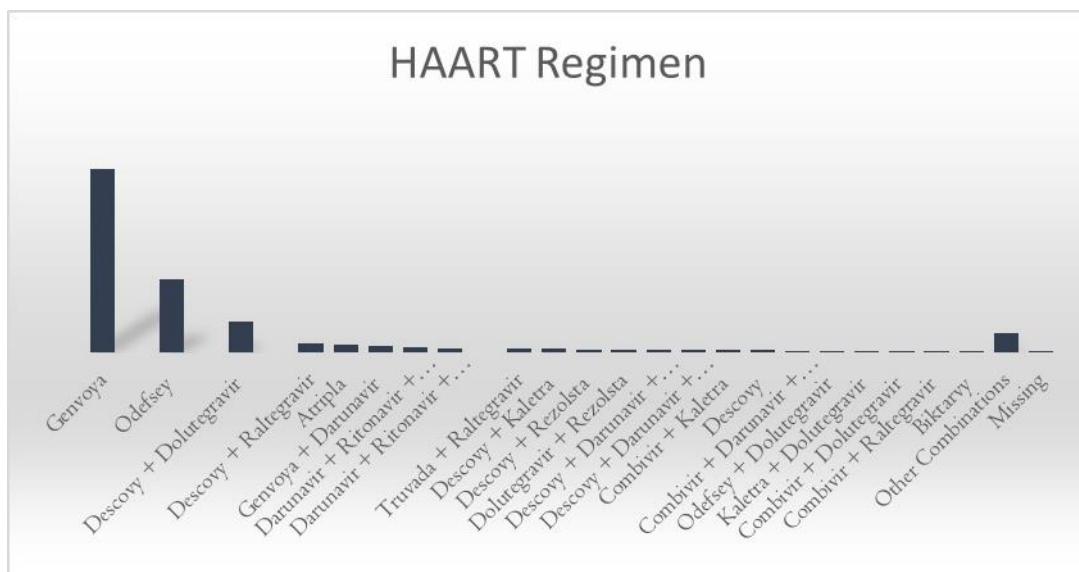
Figure 12. Hepatitis B immunity



## 2.7. Treatment

Highly active antiretroviral therapy (HAART) is a medication regimen used to manage and treat human immunodeficiency virus. It is composed of a combination of three or more drugs in different antiretroviral classes of medications. Over the years, the treatment for HIV has become more simplified with less side effects. Nowadays, just a single pill a day makes it easier for the patient to be compliant. The most prescribed is Genvoya [48.1%] which is a combination of elvitegravir, cobicistat, emtricitabine, and tenofovir alafenamide followed by Odefsey [19.2%] which is a combination of emtricitabine, rilpivirine, and tenofovir alafenamide. Besides these two, several combinations are used according to the specific need of the patient.

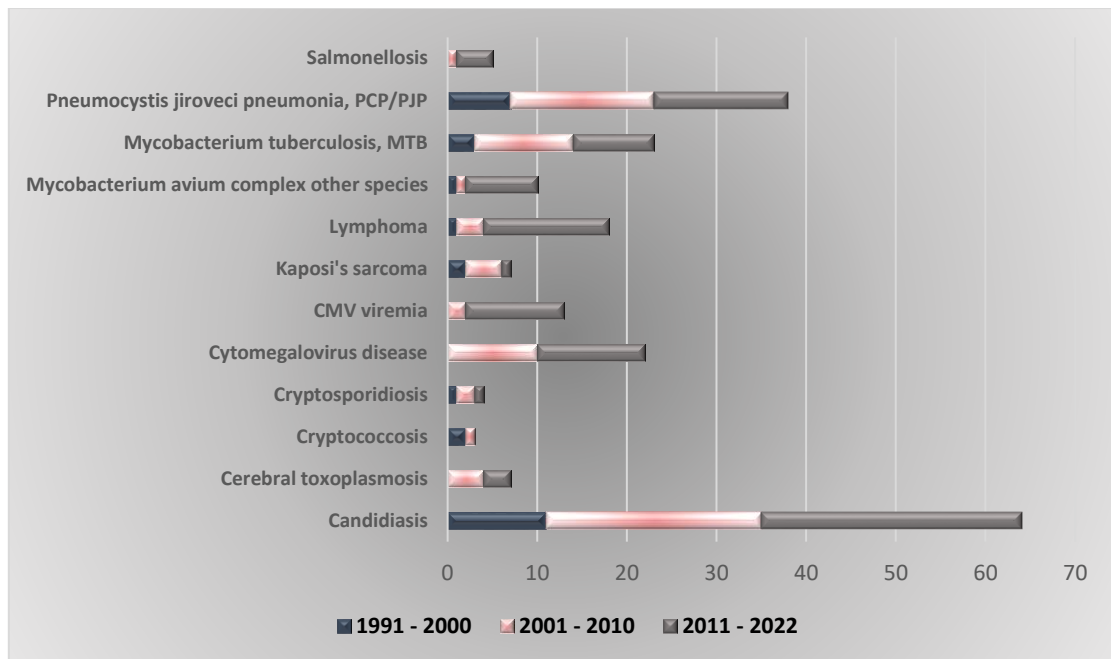
Figure 13. Treatment



## 2.8. AIDS-defining conditions

AIDS stands for Acquired Immune Deficiency Syndrome. AIDS is the most advanced stage of HIV. AIDS-defining conditions include opportunistic infections and cancers that are life-threatening in a person with HIV. They occur when the cd4 count of a patient goes below 200 or cd4 percentage below 14%. Many patients are diagnosed after they present with one or more of these conditions. Some require ICU admission or prolonged treatment, and some succumb to a combination of these conditions. But most patients survive. Given below is a comparison of their occurrence in the previous three decades in our 422 patients.

Figure 14. AIDS-defining conditions



## 2.9. Metabolic syndrome

Thanks to improvements in treatment and care, many people with HIV can now have an excellent life expectancy. The prevention and treatment of chronic diseases associated with ageing is now a priority of HIV care. Metabolic syndrome is a cluster of conditions that occur together, increasing the risk of heart disease, stroke and diabetes. These conditions include increased blood pressure, high blood sugar, excess body fat around the waist, and abnormal cholesterol or triglyceride levels.

-Hypertension

-Diabetes

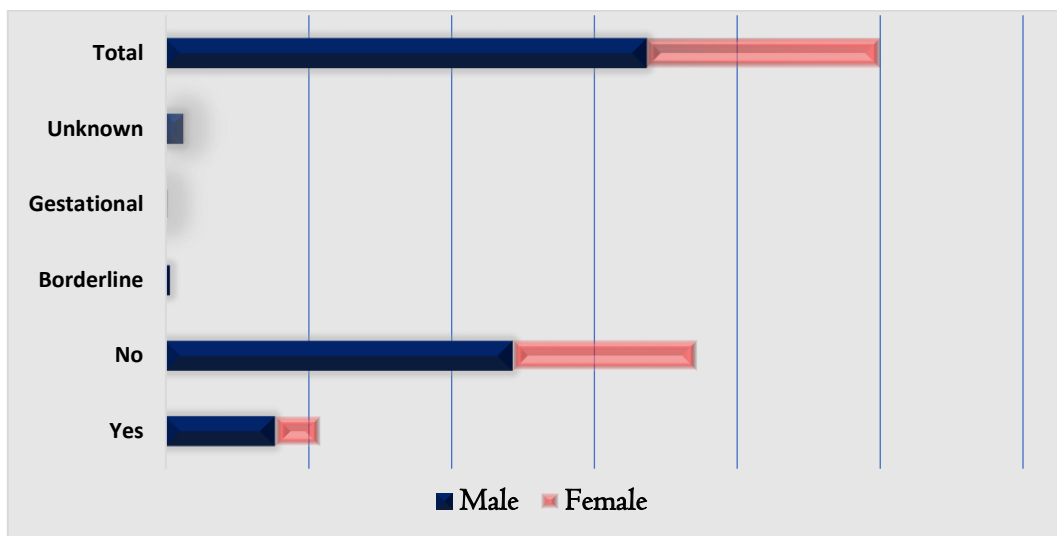
-Dyslipidemia

-Obesity

### 2.9.1. Hypertension

Cardiovascular disease is now a leading cause of serious illness and death in people with HIV. Its leading cause is hypertension, blood pressure above 140/90. The inflammation caused by HIV, the side effects of some anti-HIV drugs and lifestyle factors such as high rates of smoking mean that people with HIV may be especially vulnerable to the development of hypertension. 21.6% of patients have hypertension.

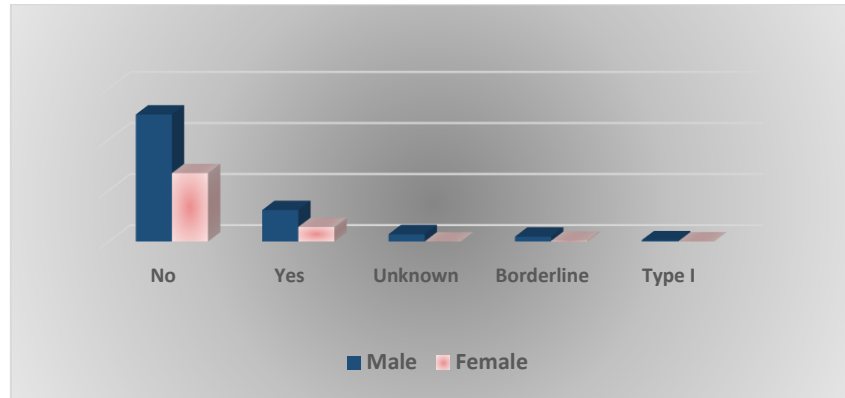
Figure 15. Hypertension



### 2.9.2. Diabetes

As HIV-positive patients live longer, their risk for developing diabetes has increased along with their lifespans. Chronic inflammation caused by HIV and HAART medication may increase the risk of developing diabetes. If left untreated or uncontrolled, high blood sugar can damage the blood vessels and organs and lead to severe complications. 18% of patients

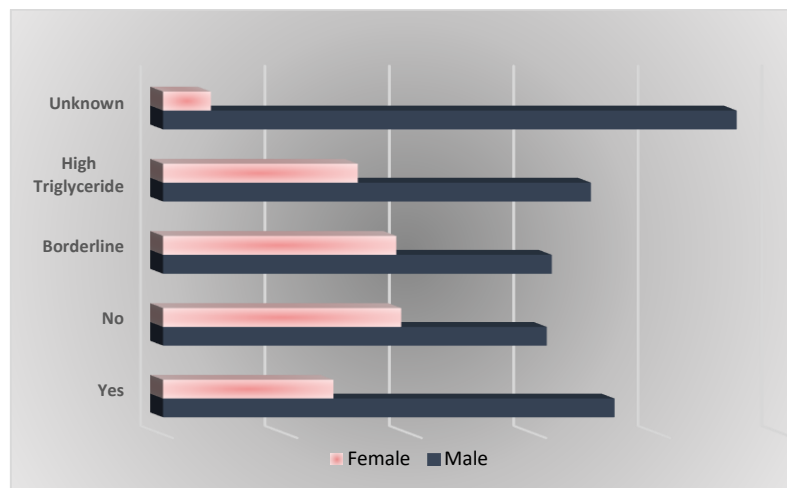
Figure 16. Diabetes



### 2.9.3. Dyslipidemia

Lipid abnormalities are common in people with human immunodeficiency virus (HIV) infection who are receiving antiretroviral therapy and can contribute to increased cardiovascular disease risk. HIV-infected children receiving antiretroviral therapy were found to have higher total cholesterol and triglycerides thus heightening cardiovascular risk among HIV patients even at a young age. 39.8% patients have dyslipidemia.

Figure 17. Dyslipidemia



### 2.9.4. Obesity

Obesity is a major concern for our patients as it increases the risk of co-morbidities, heart disease and decreases the quality of life. 35% are overweight, 29.3% are obese and 28.6% are in the normal range. More men are Class I & II obese (10.5% and 5% respectively) while more women are Class III obese (2.4%).

Figure 18. Obesity

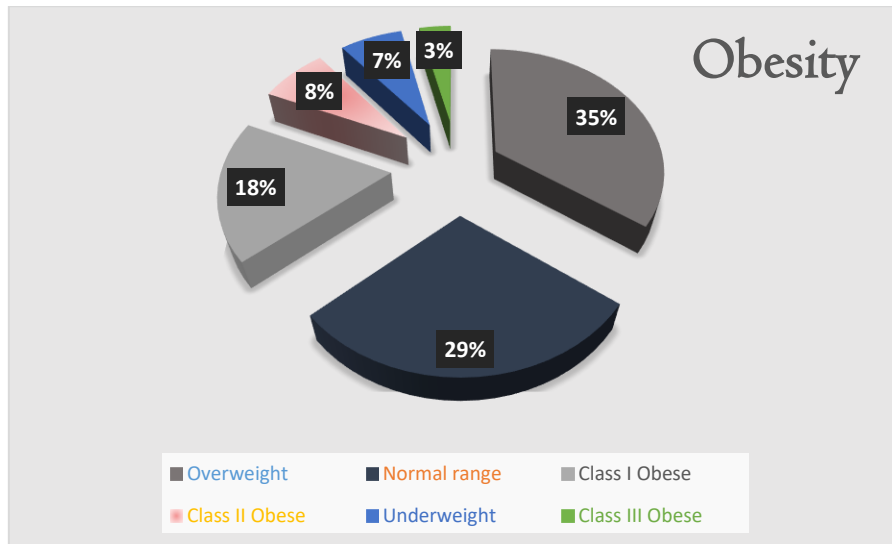
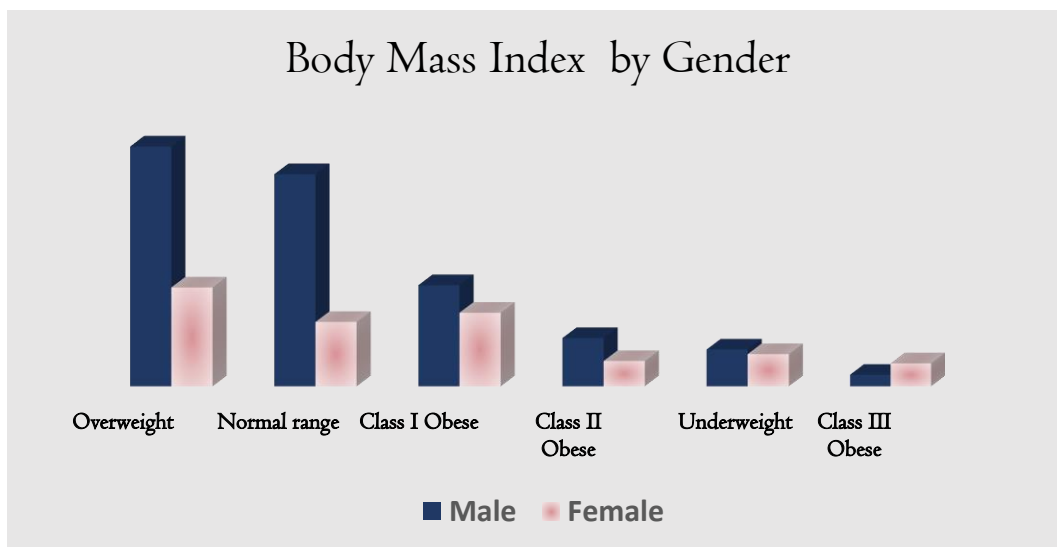


Figure 19. Body Mass Index by Gender







**Stop Stigma**

*Thank you*