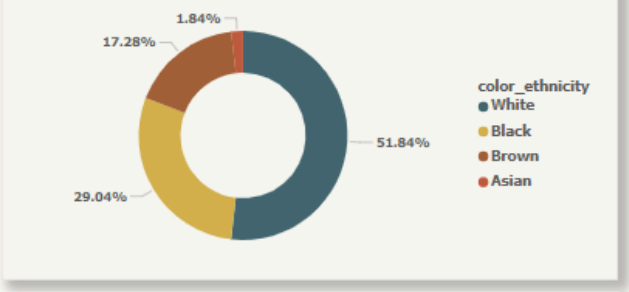
Demography Analysis

Patients Counts	Follow Up Patients	No Follow Up patients	Average Age
272	211	61	26.08

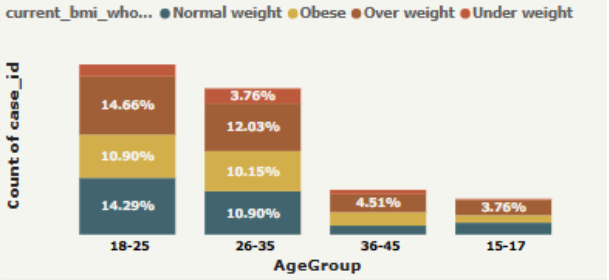
Minimum Age	Maximum Age	Substance Use
15	43	40.1%

Patients Count by Color Ethnicity



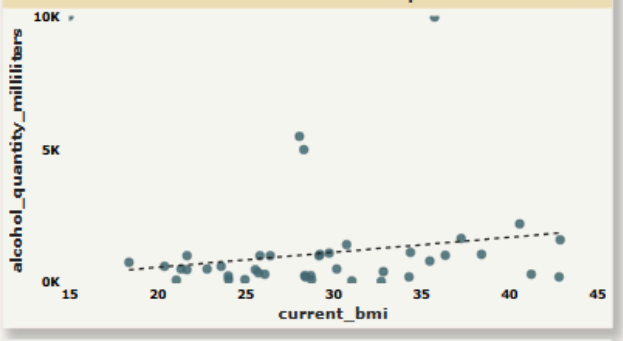
This chart illustrates % of patients distribution by their color-ethnicity. Majority of them are White followed Black population.

Patients BMI by Age Category



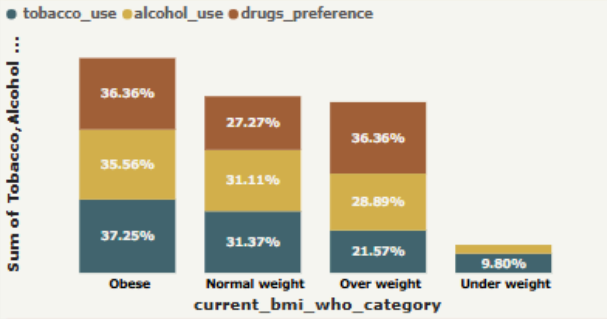
The visual shows that Higher BMI is associated with an increased risk of developing preeclampsia. The 18-25 age group shows a higher prevalence of overweight and obese individuals.

Correlation between Alcohol Consumption and BMI



In this chart, we see a slight positive correlation between alcohol consumption and BMI. People who tend to consume more alcohol have higher BMI.

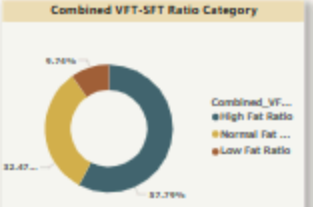
Alcohol, Tobacco and Drug Use by BMI



This chart illustrates the % of tobacco, alcohol and drug users in comparison to the BMI category. The obese category has a higher % of alcohol, drug and tobacco users.

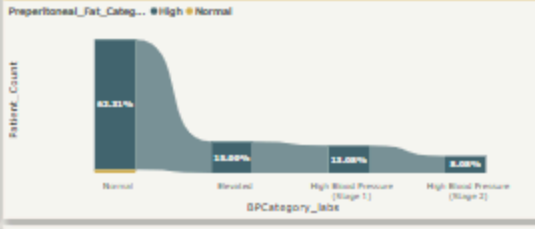
Fat Assessment Analysis

Combined VFT-SFT Ratio Category



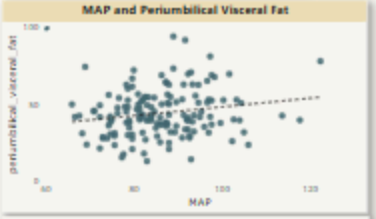
This chart illustrates the distribution of total abdominal fat (Periumbilical VFT+SFT and preperitoneal VFT+SFT) ratio categories. From this insight, we can infer that nearly 60% of patients fall into the high fat risk category which is associated with an increased risk of

Patients by BP Category and Preperitoneal Fat Category



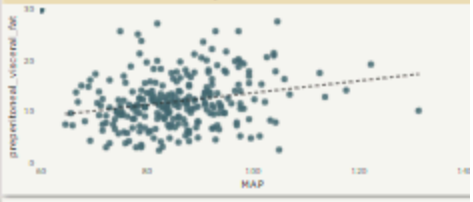
We extended our analysis to understand maternal fat distribution using preperitoneal fat, which lies between the abdominal muscles and peritoneum. To our surprise, we found more than 98% of patients are at high risk of preperitoneal fat category with very high blood pressure values such as elevated and stage 1 hypertension.

MAP and Periumbilical Visceral Fat



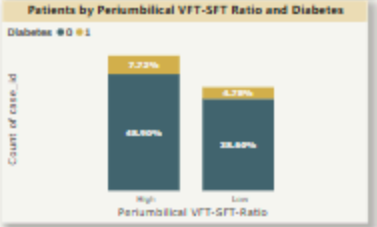
As the Periumbilical Visceral fat increases MAP also increases which shows a very strong positive correlation, which means as Periumbilical Visceral fat goes up it increases the blood pressure.

MAP and Preperitoneal Visceral Fat



As the Preperitoneal Visceral fat increases MAP also increases which means as Preperitoneal Visceral fat goes up blood pressure goes up too.

Patients by Periumbilical VFT-SFT Ratio and Diabetes

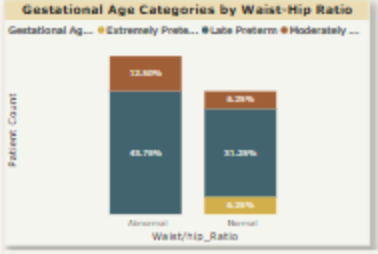


The data indicates that patients with a high Periumbilical VFT-SFT Ratio are more likely to have diabetes compared to those with a low Periumbilical VFT-SFT Ratio.

Elevated Glucose Vs VAT Thickness

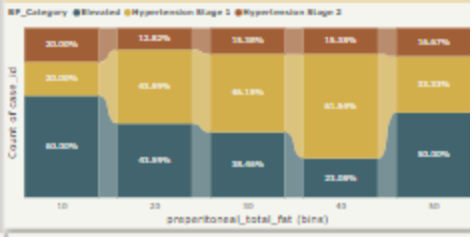
We observe that a total of 61% of patients with Elevated Glucose levels fall into Moderate to High risk categories with respect to VAT thickness, while 39% are classified as low-moderate risk.

Gestational Age Categories by Waist-Hip Ratio



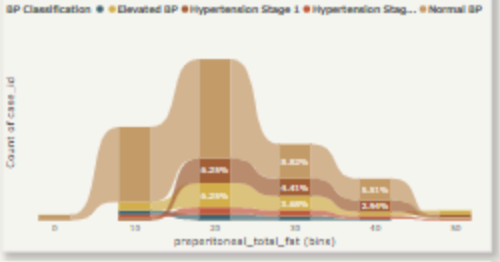
Among patients with Abnormal WHR, the % of preterm births is higher when compared to Normal WHR indicating that Abnormal WHR could be a predictor for preterm births.

Effect of Preperitoneal Fat on Blood Pressure



Increased preperitoneal fat is strongly associated with higher blood pressure severity, emphasizing the link between fat accumulation and hypertension.

Preperitoneal Total Fat and BP classification



Beyond 20 bin, as preperitoneal fat increases, cases of normal BP decreases and cases of elevated BP and hypertension begin to rise, emphasizing the risk of hypertension with increased preperitoneal fat.

Body Fat Percentage by Weight Percentile

This chart suggests that maternal body fat percentage plays a role in fetal growth, and higher maternal fat levels might lead to larger babies (LGA).

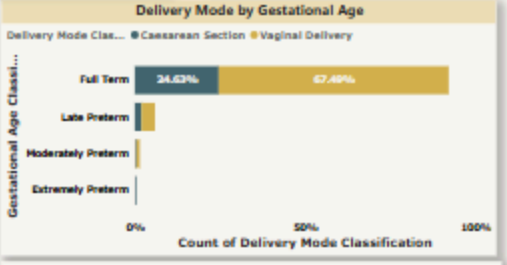
Fetal Outcomes Analysis

Newborns with Complications	Low Birth Weight	Macrosomia
27.1%	6.4%	5.9%

Delivery Modes

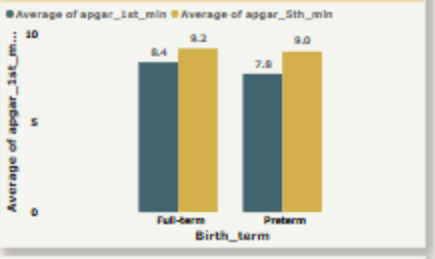
This chart shows that vaginal deliveries are more prevalent among Patients .

Delivery Mode by Gestational Age



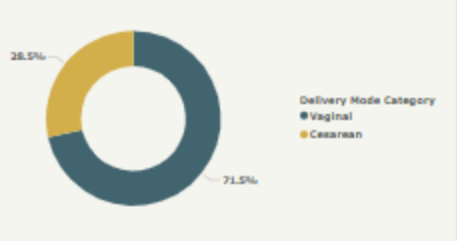
We observe that among late preterm, extremely preterm and moderately preterm newborns, c-sections become increasingly common as gestational age at birth is lowered.

Average of Apgar 1st min and Apgar 5th min by Term



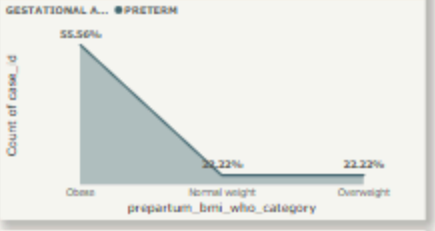
Full-term newborns have higher average Apgar scores, compared to preterm newborns (**7.8** at 1st minute, **9.0** at 5th minute). The difference indicates the challenges preterm newborns face initially but also shows improvement over time (5th-minute scores).

Preeclampsia by Delivery mode



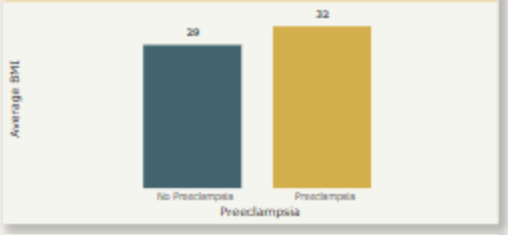
This donut chart shows the Majority of Preeclampsia Cases Result in Vaginal Deliveries. The data indicates that most preeclampsia cases (71.5%) result in vaginal deliveries rather than C-sections.

Impact of Prepartum BMI on Preterm Births



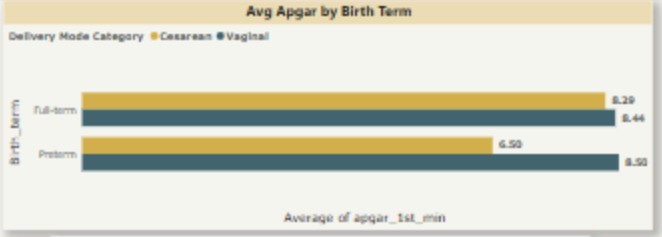
It shows there is significant correlation between Prepartum BMI and Preterm birth. From our dataset, 55.56% of preterm births are from obese mothers which indicates obesity during pregnancy is a major contributing factor to preterm births.

BMI Risk of Preeclampsia



This Chart shows that Higher BMI is associated with an increased risk of developing preeclampsia , suggesting that BMI could be a potential factor to monitor for predicting or managing preeclampsia risk.

Avg Apgar by Birth Term



Vaginal deliveries result in higher 1st-minute Apgar scores compared to Cesarean deliveries. The difference is more pronounced in preterm births than in full-term births .

Labs and Nutrition Analysis

Patients with Elevated BP

94

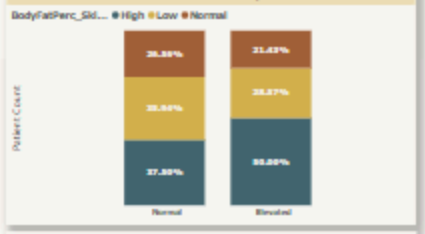
Patients with Elevated Glucose

28

Patients with Anemia

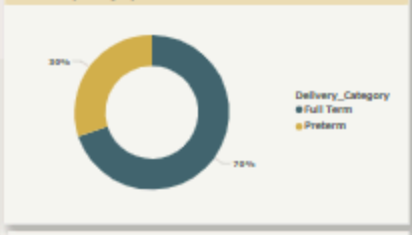
38

Glucose Levels Vs Body Fat %



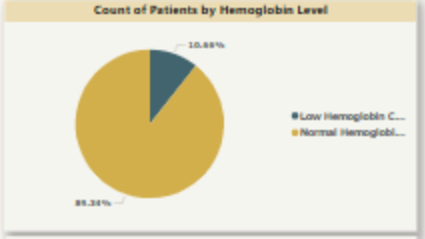
We observe a significant increase in Body Fat percentage, rising from 37% to 93% in individuals with elevated Glucose levels.

Delivery Category for Patients with Elevated Glucose Levels



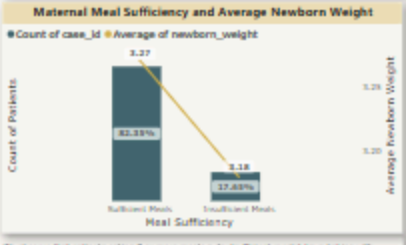
70% of cases were full-term deliveries, indicating management of pregnancy duration despite high glucose levels. 30% were preterm deliveries, reflecting the complications of high glucose levels in some patients.

Count of Patients by Hemoglobin Level



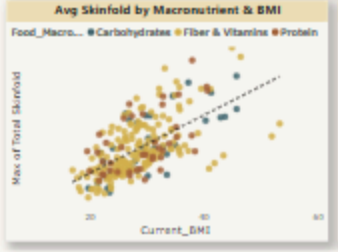
This visual highlights the hemoglobin levels in patients, categorizing them into low and normal levels.

Maternal Meal Sufficiency and Average Newborn Weight



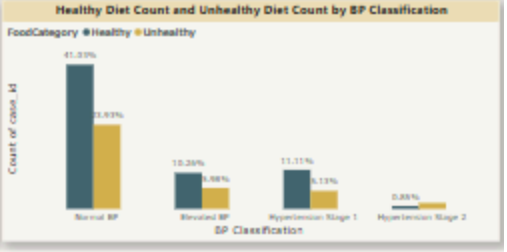
We observe that patients eating 3 or more meals a day(sufficient meals) have babies with higher average birth weight than those eating fewer than 3 meals a day (insufficient).

Avg Skinfold by Macronutrient & BMI



As BMI increases, the maximum skinfold also tends to increase, indicating a positive correlation. Macronutrient types (Carbohydrates, Fiber & Vitamins, and Protein) do not show a distinct pattern in influencing this trend.

Healthy Diet Count and Unhealthy Diet Count by BP Classification



Individuals with normal blood pressure have a significantly higher number of healthy dietary choices compared to those in Hypertension stage 2. As hypertension severity increases, there is a marked decline in healthy dietary habits and overall dietary activity.

Gestational Weight Gain by Food Habits

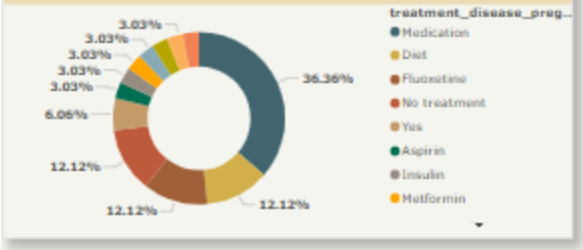
We observe that a significant percentage of patients consume unhealthy foods.

Patient History Analysis

Vaginal Delivery	C-Section Delivery	Gestational Diabetes	Chronic Diabetes
54.8%	22.1%	2.6%	6.6%

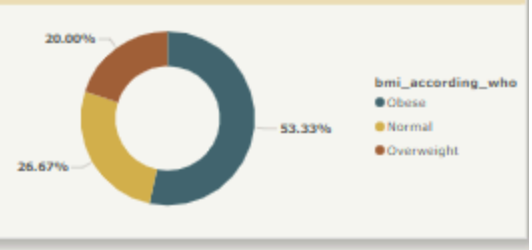
Hypertension	Preeclampsia Cases	Miscarriage Cases
8.5%	15	49

Treatment During Pregnancy



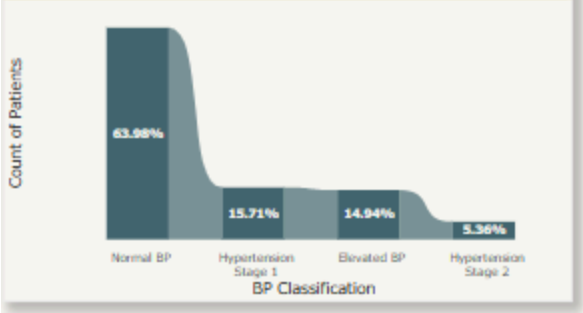
We are showing % of patients distribution by their treatment during pregnancy and major part of patients (37%) were treated with medication.

Count of Preeclampsia by BMI



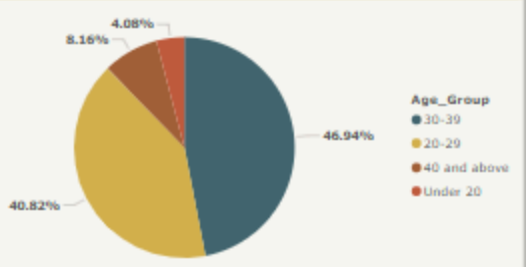
We observe that among obese and overweight patients, preeclampsia occurs more frequently than among normal weight and underweight patients.

Patients by BP Classification



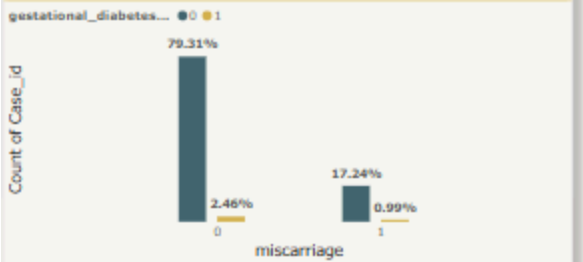
Of the patients for whom we have hypertension data, 36.01% have high blood pressure levels with 15.71% having Hypertension Stage 1 and 5.36% having Hypertension Stage 2.

Miscarriages by Age Category



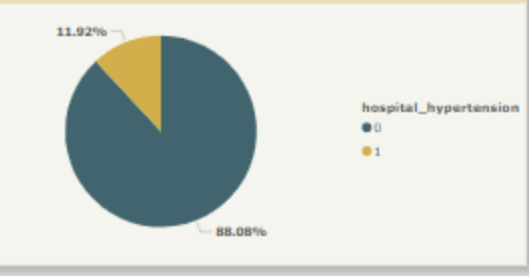
Miscarriages are most common in women aged 30-39, followed by 20-29. This highlights the need for enhanced medical care and monitoring, especially for women in their 30s.

Patients Count Analysis by Miscarriage and GDM



Gestational diabetes appears to be more prevalent in patients who have experienced miscarriages, suggesting that gestational diabetes may increase the risk of pregnancy complications, including miscarriage.

Hospital Hypertension Patient Count



11.92% are with hospital hypertension can lead to serious complications such as preeclampsia, premature birth, and maternal organ damage.