



## SUMMARY

FROM

08-05-2019

TILL

07-05-2024

# HEALTHCARE INSIGHTS INDEX

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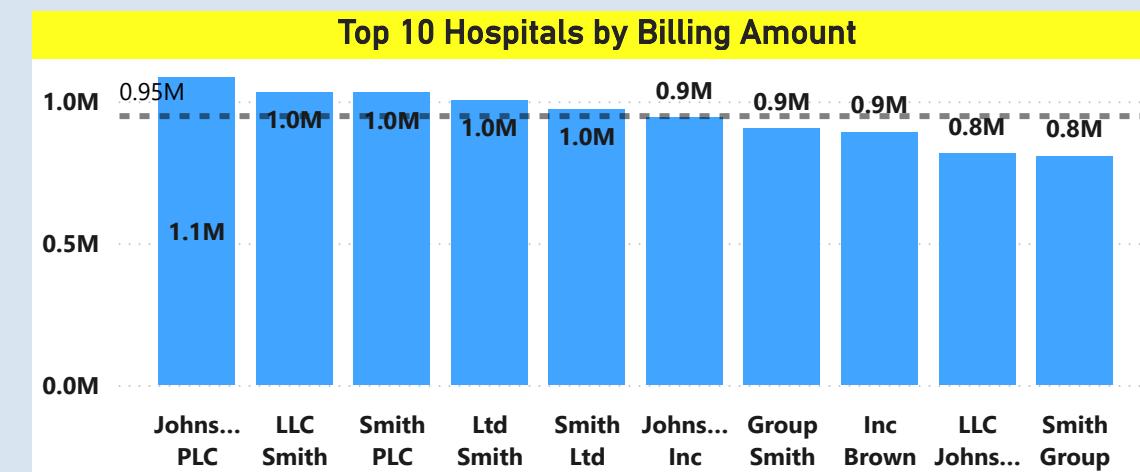
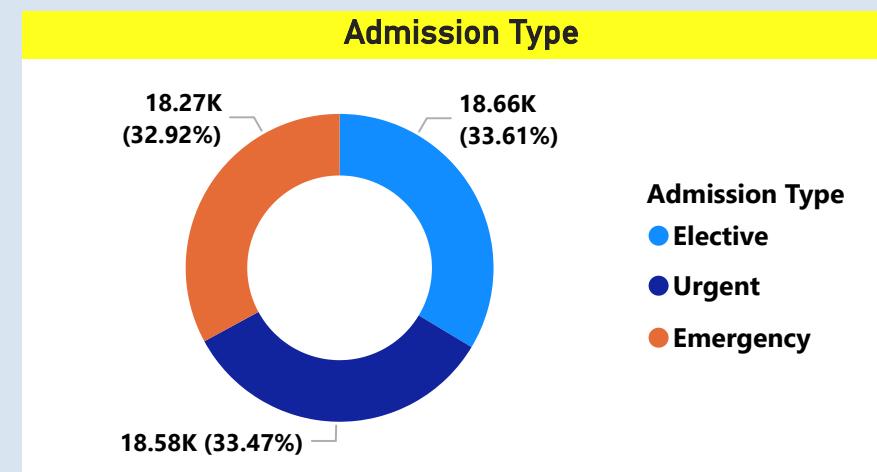
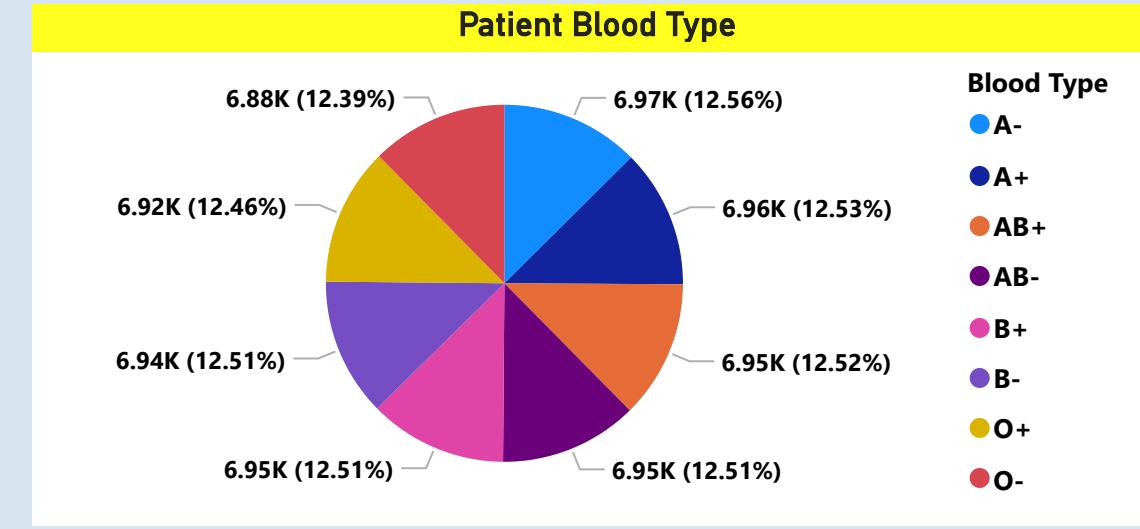
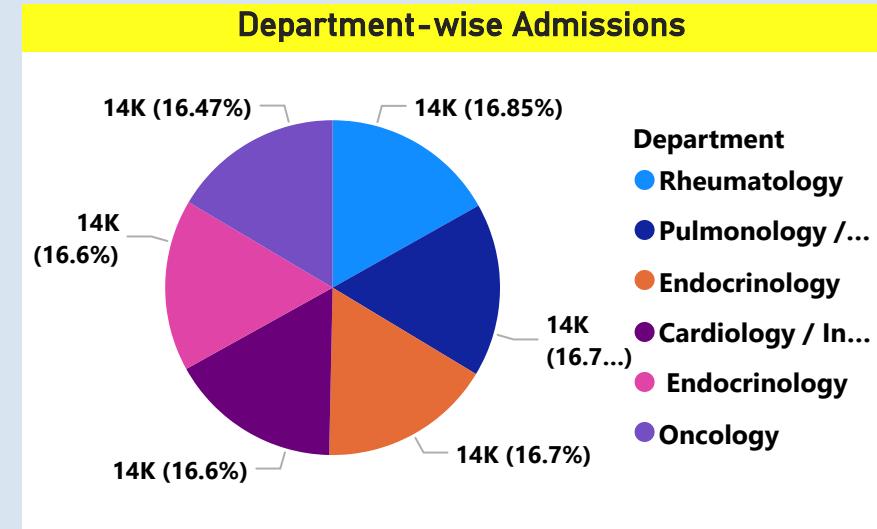
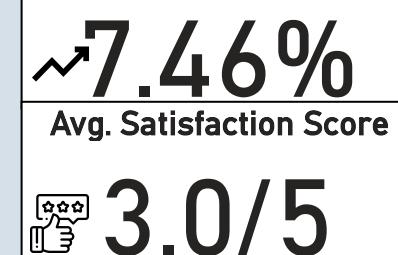
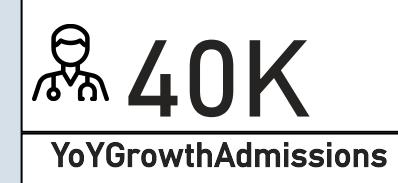
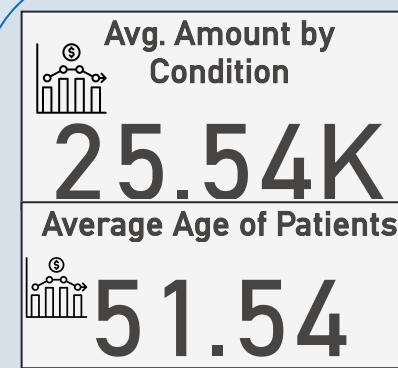
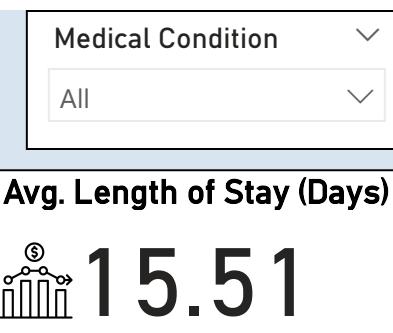
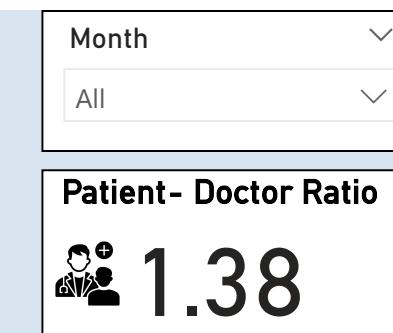
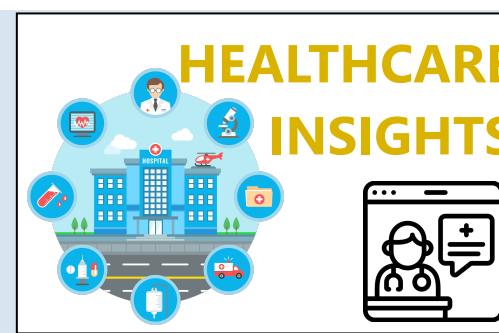
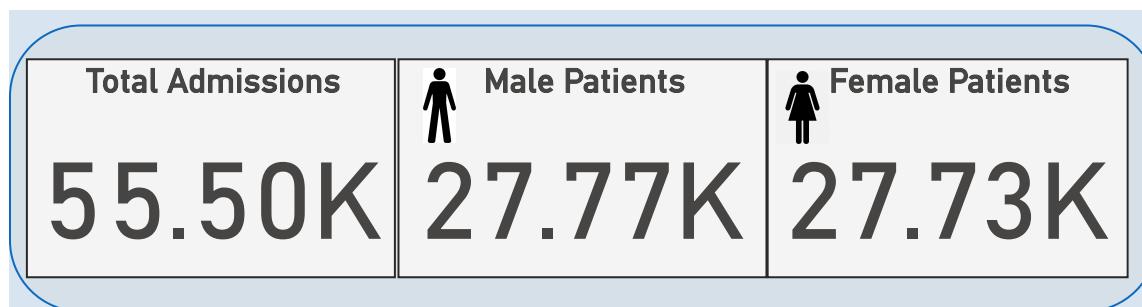
Age vs Billing Amount

Department-wise Satisfaction Score

Medication vs Medical Condition

Top 10 Hospitals - Billing & Satisfaction Score wise

Total Admissions by Doctor vs Satisfaction Score



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### Admission by Gender

Gender ● Male ● Female

30K

25K

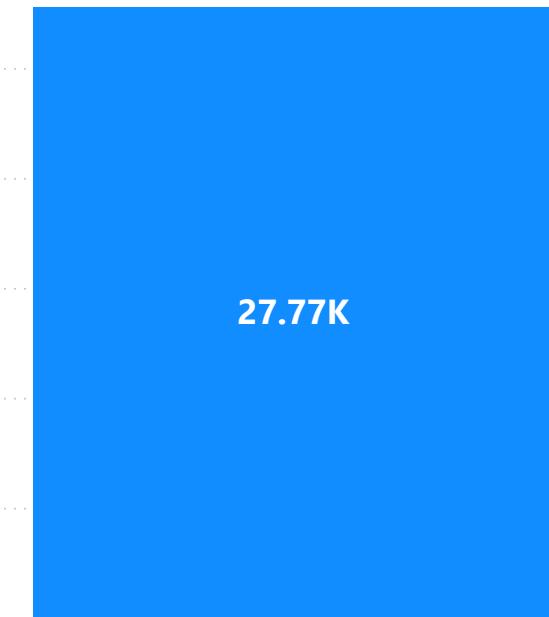
20K

15K

10K

5K

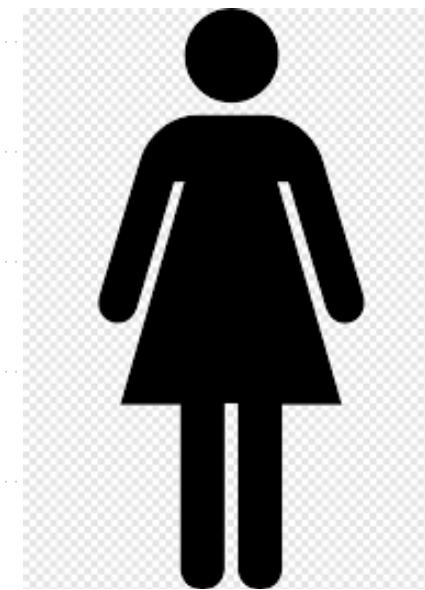
0K



Male



Female



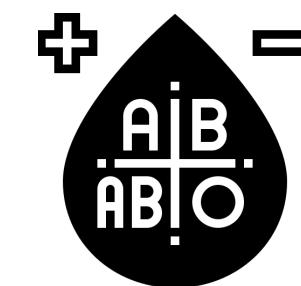
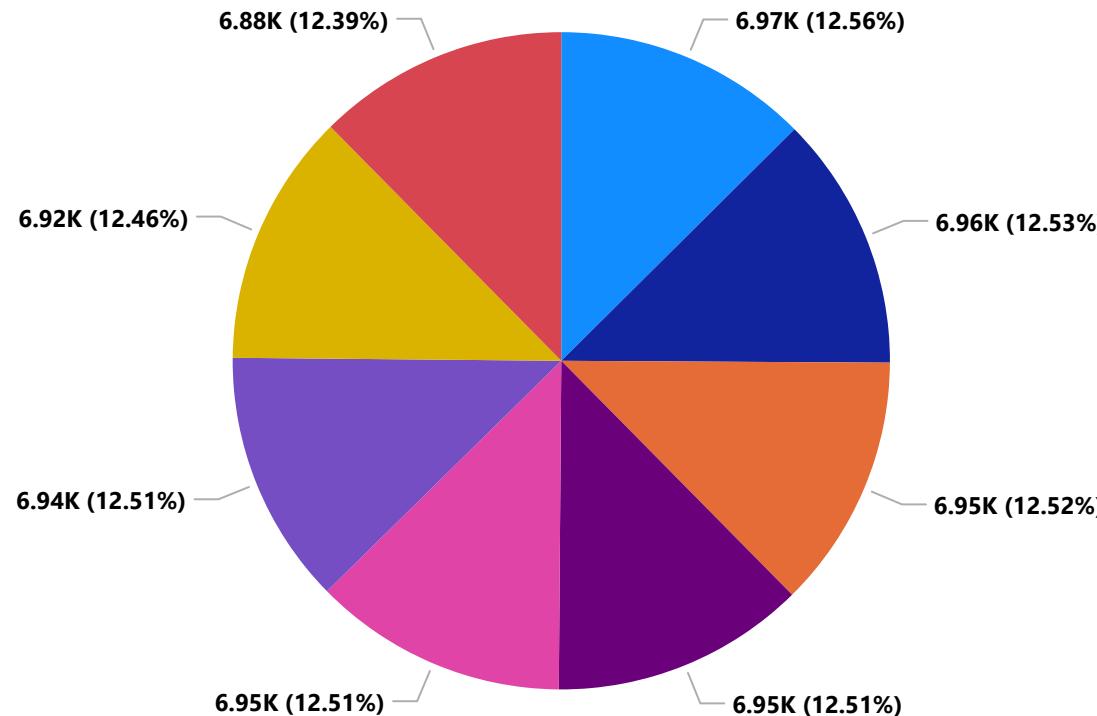
Question: Which gender had a slightly higher admission rate according to this chart?

Answer: The Male gender had a slightly higher admission rate, with 27.77K admissions compared to the Female's 27.73K.

#### Additional Comment on Chart Performance:

- The chart effectively displays a close comparison between male and female admissions, indicating that there is only a small difference in the admission numbers between genders.
- This suggests that there is nearly an equal representation of both genders in terms of admissions.

## Patient Blood-Types



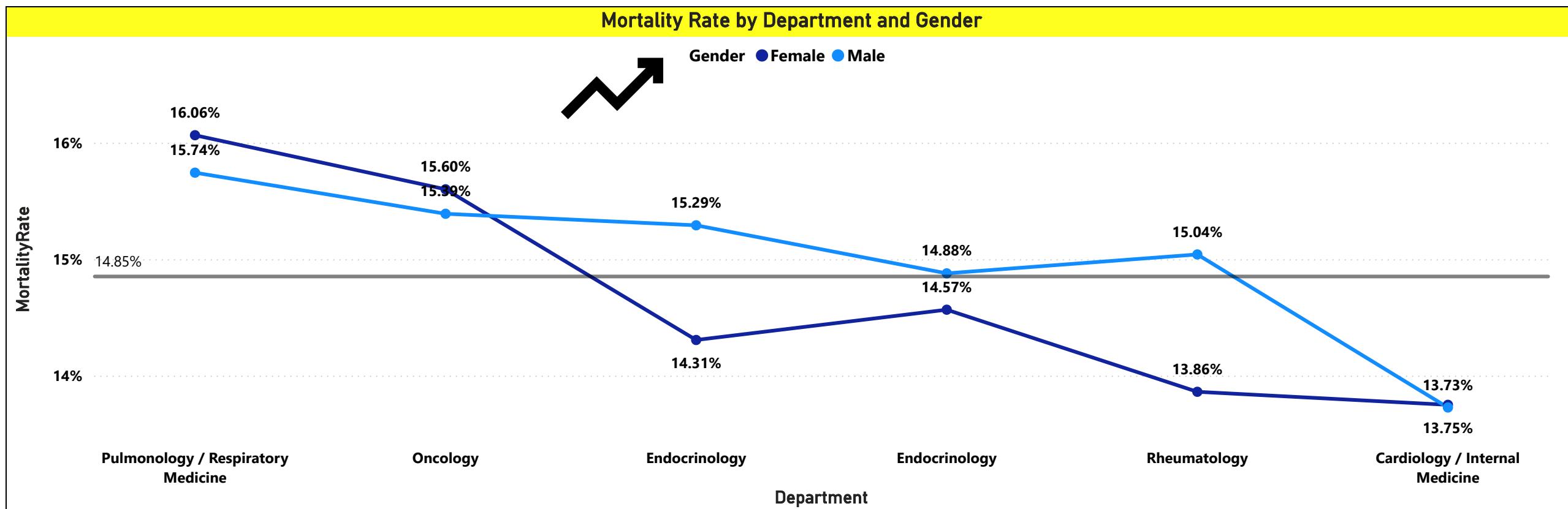
- Blood Type**
- A-
  - A+
  - AB+
  - AB-
  - B+
  - B-
  - O+
  - O-

Question: **Which blood type has the highest percentage among the patient population according to the chart?**

Answer: **Blood type A+ has the highest percentage, which is 28.5%.**

### Additional Comment on Chart Performance:

- The chart effectively represents the distribution of different blood types within a patient population in an easily interpretable visual format.
- The use of distinct colors for each blood type allows for quick identification and comparison between them.



Question: Which department has the Highest mortality rate ?

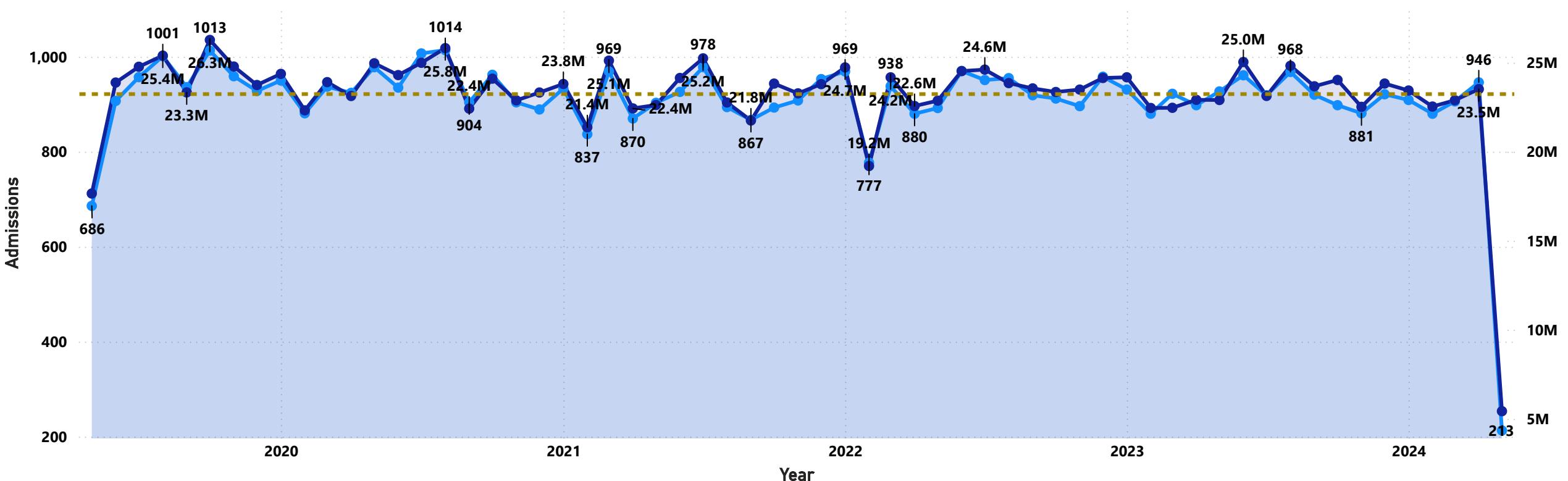
Answers: The Pulmonology/Respiratory department has the highest mortality rates for both genders (16.06% for females and 15.74% for males).

Additional Comment:

- In most departments, female mortality rates are lower than male mortality rates.
- However, Oncology and Pulmonary stands out with a significant increase in female mortality (0.32% & 0.21%), surpassing male mortality.
- The Cardiology/ Internal medicine department has the smallest gap in mortality rate between genders. For females, the mortality rate is approximately 13.75%, while for males, it is approximately 13.73%. The difference is only 0.02%.

## Admission vs Billing Amount - Month wise

● Count of Date of Admission ● Sum of Billing Amount

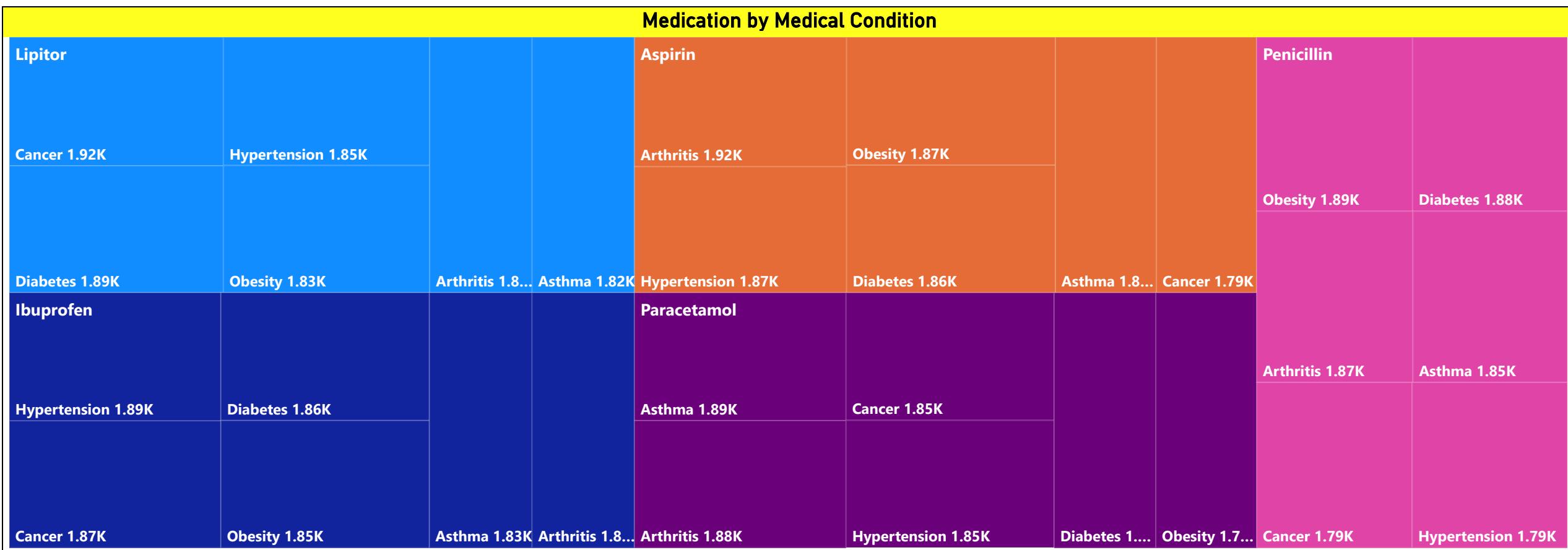


Question: During which year did the highest number of admissions occur, and what was the corresponding billing amount?

Answer: The highest number of admissions occurred in 2019 with a peak count of 1013 admissions. The corresponding billing amount was approximately 25.3M.

Additional Comment on Chart Performance:

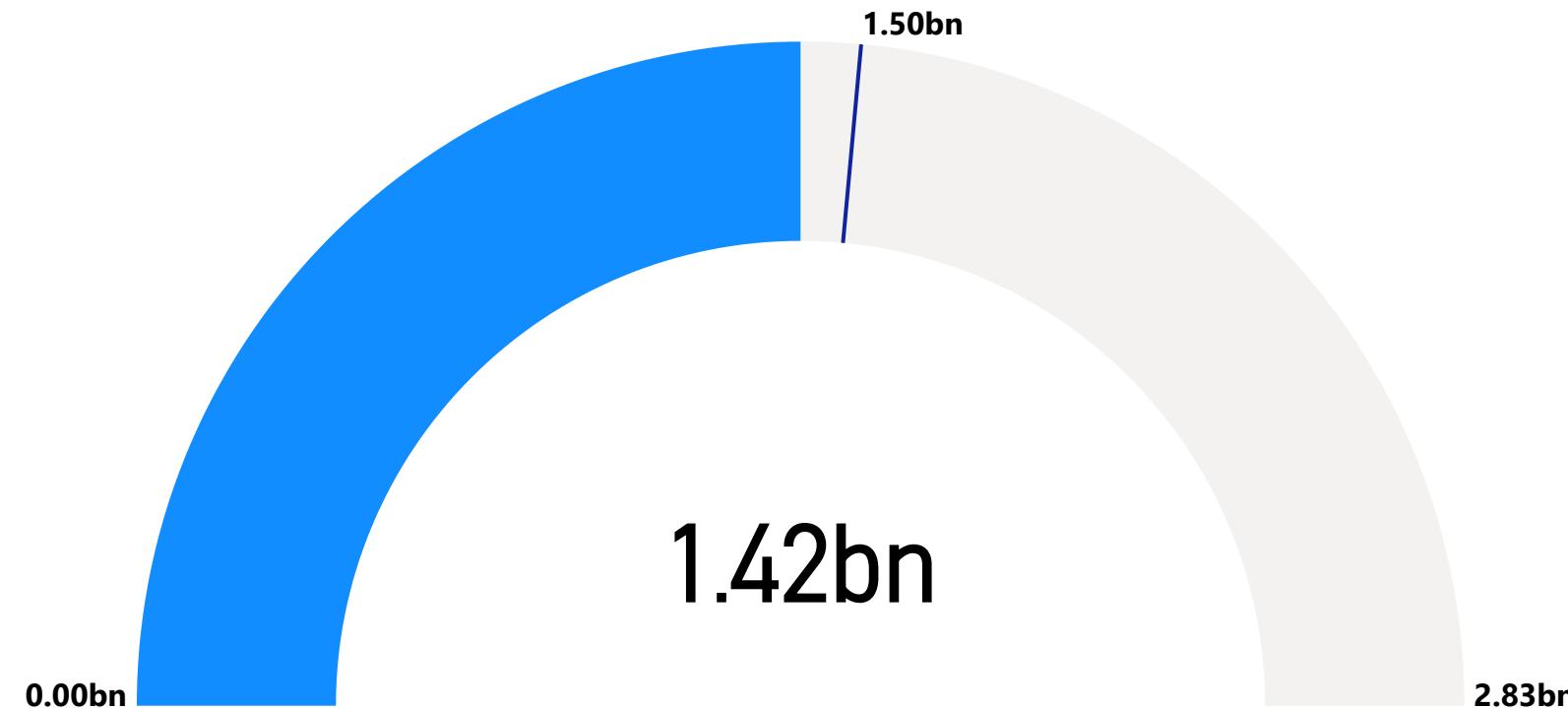
This chart effectively illustrates the monthly trend of hospital admissions against the billing amount over several years. However, the abrupt drop in both admissions and billing in 2024, particularly in the last month, might be an anomaly.



Question: **What can be inferred about the distribution of medications across different medical conditions based on the numeric values in the chart?**

Answer: **The chart indicates that the distribution of medications across different medical conditions is fairly balanced, with no single medication or condition overwhelmingly dominating the others. The numeric values for the associations between medications and conditions range from 1.70K to 1.92K. For instance, Lipitor is associated with Cancer (1.92K), Hypertension (1.85K), and Diabetes (1.89K), while Ibuprofen is linked to Hypertension (1.89K), Diabetes (1.86K), and Cancer (1.87K). This range of values suggests that while some conditions may have slightly higher associations with certain medications, the overall distribution remains fairly consistent across different medical conditions and medications.**

Billing Amount vs Target value

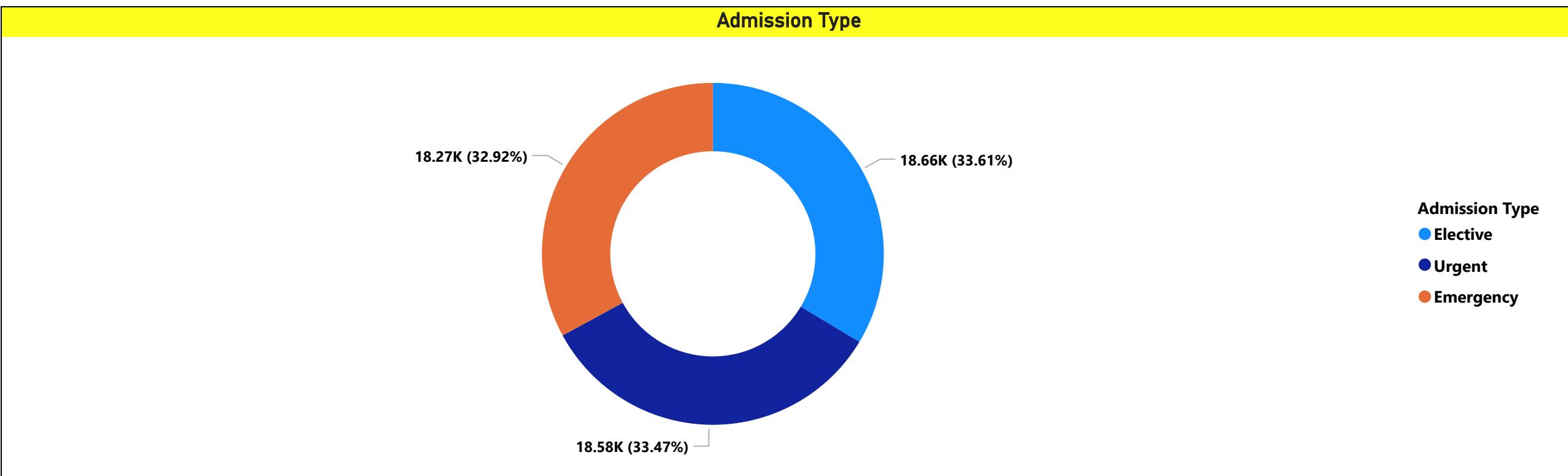


Question: **What percentage of the target billing amount has been achieved?**

Answer: **Approximately 94.67% of the target billing amount has been achieved.**

**Additional Comment on Chart Performance:**

- The performance is quite strong, with nearly 95% of the target billing amount already reached.
- This suggests effective revenue generation or cost management within the healthcare dataset to approach closely to its financial goal.
- The chart visually represents the current billing amount (1.42 billion) compared to a target value (1.50 billion).
- The blue segment represents the current billing amount, which is approximately 94.67% of the target value.
- The grey segment represents the remaining amount needed to reach the target.



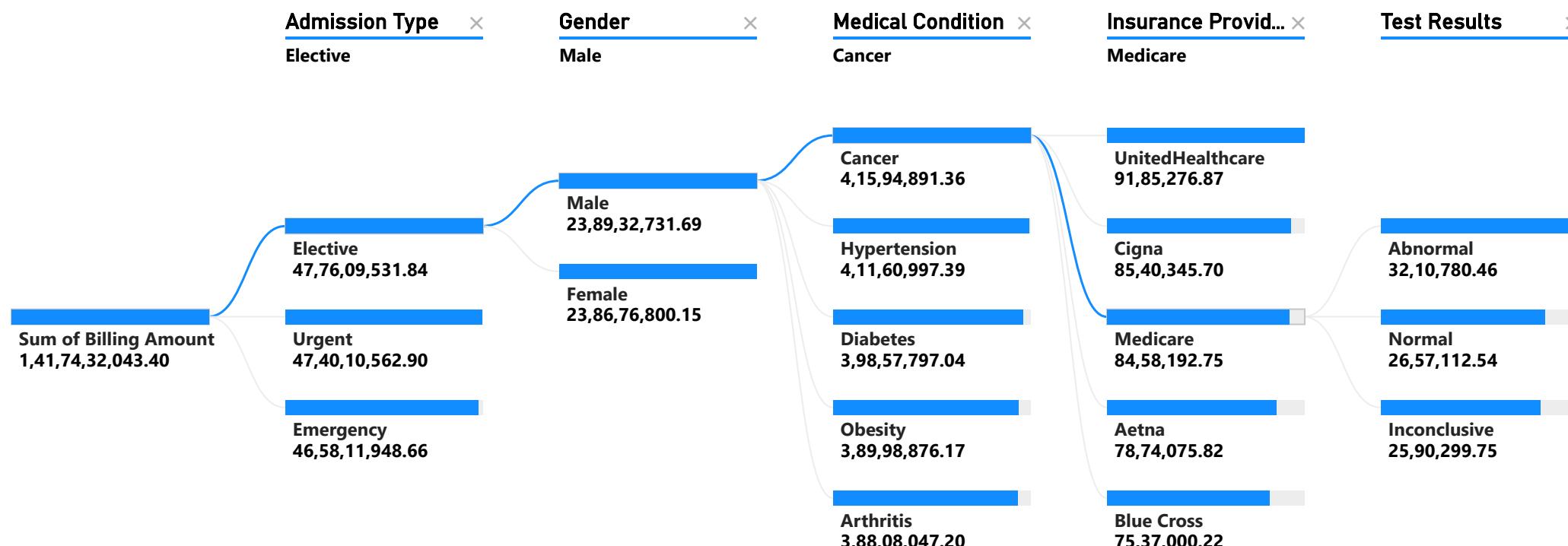
Question: **What percentage and number of admissions were elective?**

Answer: **Elective admissions were 34.37% of the total, numbering 18.5K.**

#### **Additional Comment on Chart Performance:**

- The chart effectively shows a close distribution among the three categories of admission types, with 'Elective' being slightly higher than 'Urgent' and 'Emergency'.
- Elective admissions (33.61% of the total) indicate planned procedures or treatments, which suggests good scheduling and resource allocation practices.
- The hospital maintains flexibility to accommodate almost an equal number of Urgent cases (33.47%) alongside elective procedures.
- The significant number of Emergency cases (32.92%) highlights the need for immediate attention without prior scheduling.
- This indicates a relatively balanced mix between these admission types within the dataset represented by the chart.

## Decomposition Tree

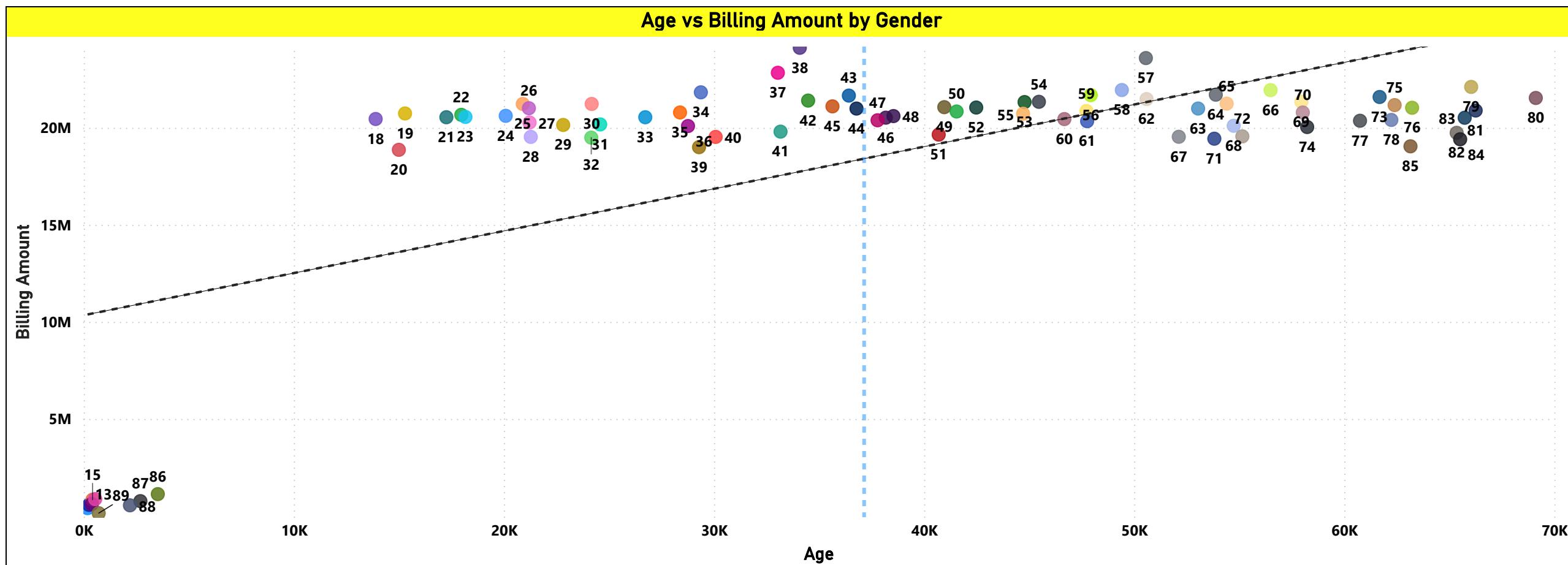


Question: What is the sum of billing amount for male patients admitted urgently with hypertension under Medicare insurance?

Answer: The sum of billing amount for male patients admitted urgently with hypertension under Medicare insurance is \$84,58,192.75.

### Additional Comment on Chart Performance:

- The flowchart provides a comprehensive breakdown of billing amounts based on various demographics (gender, admission type) and medical conditions.
- It highlights the significant impact of hypertension-related admissions on overall billing.
- Hospitals should closely monitor these patterns to optimize revenue while ensuring quality patient care.



Question: Which age group has the highest billing amount based on the chart?

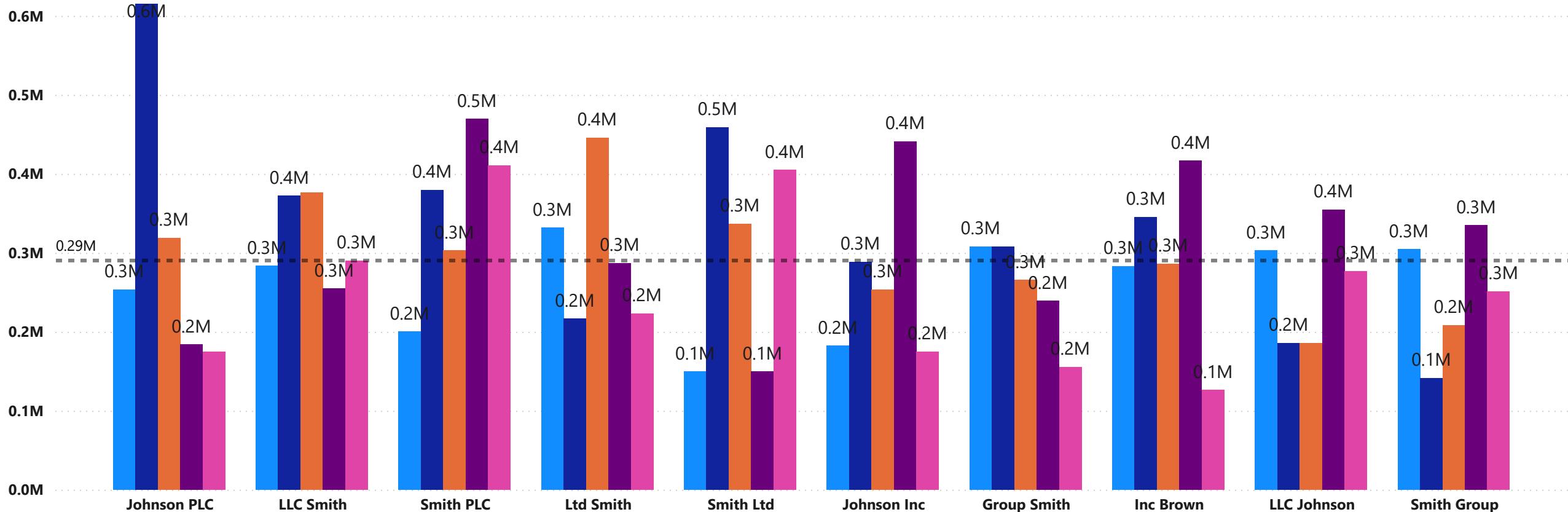
Answer: Based on the chart, the age group with the highest billing amount appears to be represented by a purple dot at approximately age 38, with a billing amount of 24 million.

Additional Comment on Chart Performance:

- The trend suggests that billing amounts tend to increase with age up until around the mid-30s to early-60s.
- After this point, there seems to be a slight decrease or leveling off in billing amounts.
- Middle-aged individuals may have higher healthcare expenses or utilize more services, leading to increased bills during this period.

## Top 10 Hospitals by Billing Amount & Satisfaction Score

Satisfaction Scores ● 1 ● 2 ● 3 ● 4 ● 5



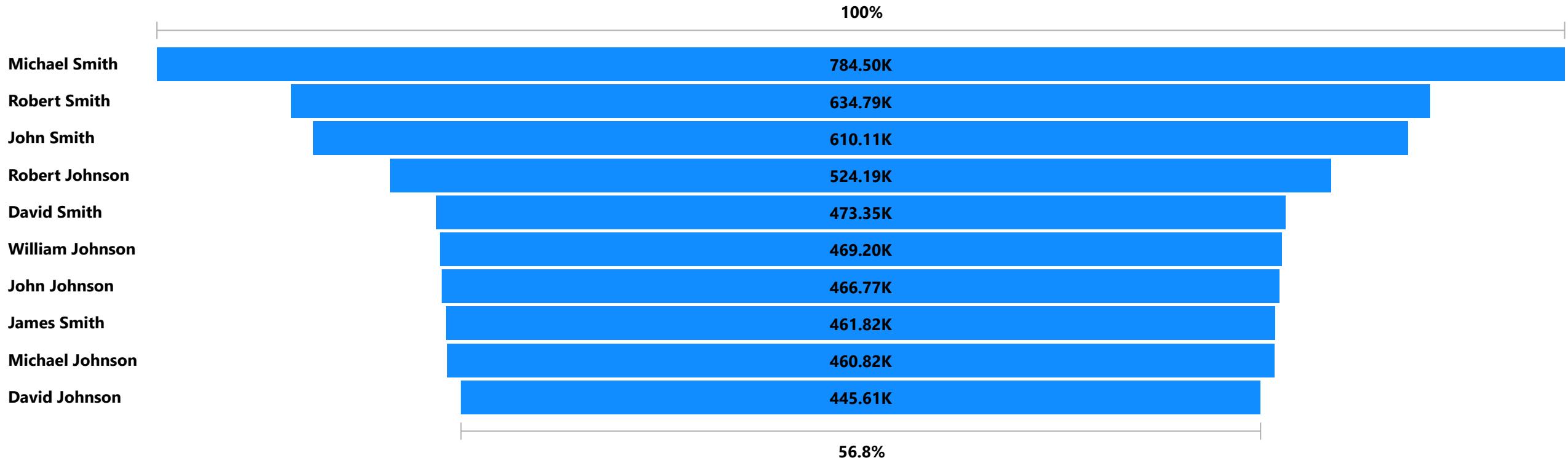
Question: Which hospital has the highest billing amount according to this chart?

Answer: Johnson PLC has the highest billing amount for satisfaction score '3', with a billing amount slightly above 0.6 million . .

Additional Comment on Hospital Performance:

- The billing amounts among these top hospitals show a relatively small range, indicating competitive performance.
- Johnson PLC and LLC Smith stand out as revenue leaders, suggesting efficient operations and patient engagement.
- Hospitals should continue optimizing billing processes while maintaining quality care to sustain their financial performance.

## Top 10 Doctors by Billing Amount



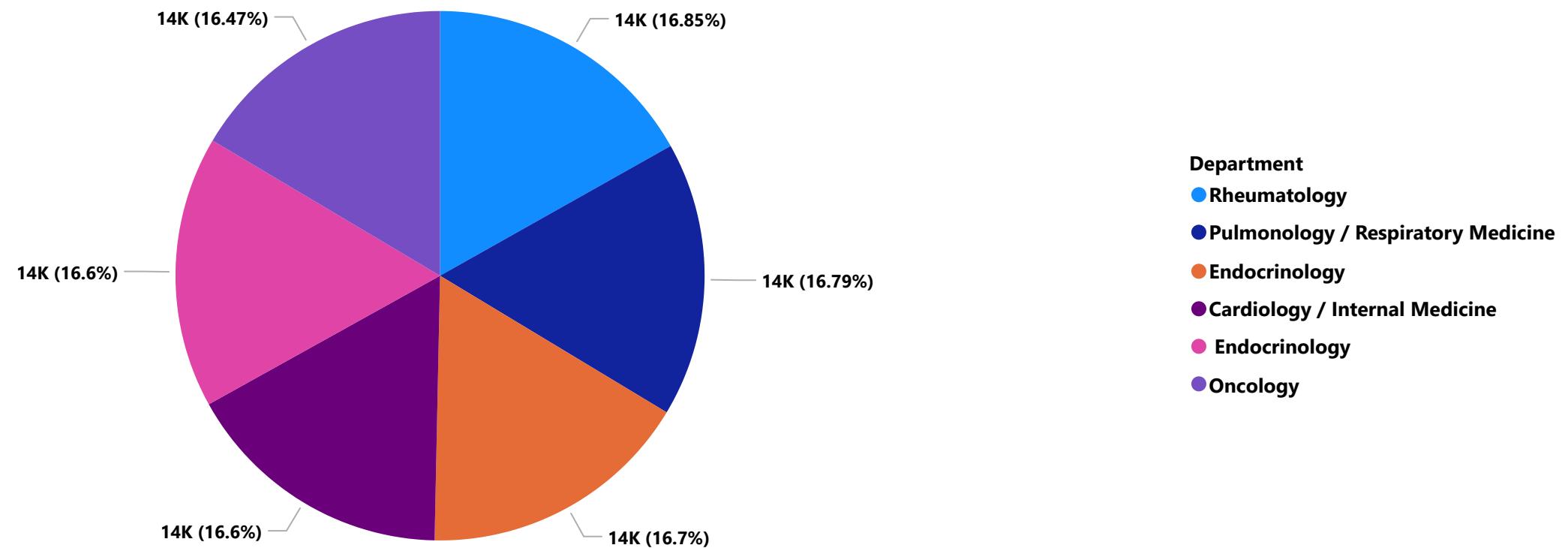
Question: Which doctor has the highest billing amount according to this chart?

Answer: Dr. Michael Smith has the highest billing amount on this chart with \$0.78M. Dr. Smith stands out with the highest billing amount. His performance suggests a significant patient load or complex cases.

Additional Comment:

- The chart effectively highlights the top-performing doctors based on billing amounts.
- It provides valuable insights for resource allocation, identifying high-revenue contributors, and optimizing healthcare services.
- The chart effectively ranks the top 10 doctors by billing amount, clearly displaying the data with horizontal bars that allow for easy comparison. The use of percentage bars, along with the actual billing amounts, provides a dual perspective, helping viewers quickly grasp the relative performance of each doctor. However, the chart could benefit from including additional context, such as the total number of cases handled by each doctor, to provide a more comprehensive understanding of the factors contributing to the billing amounts.

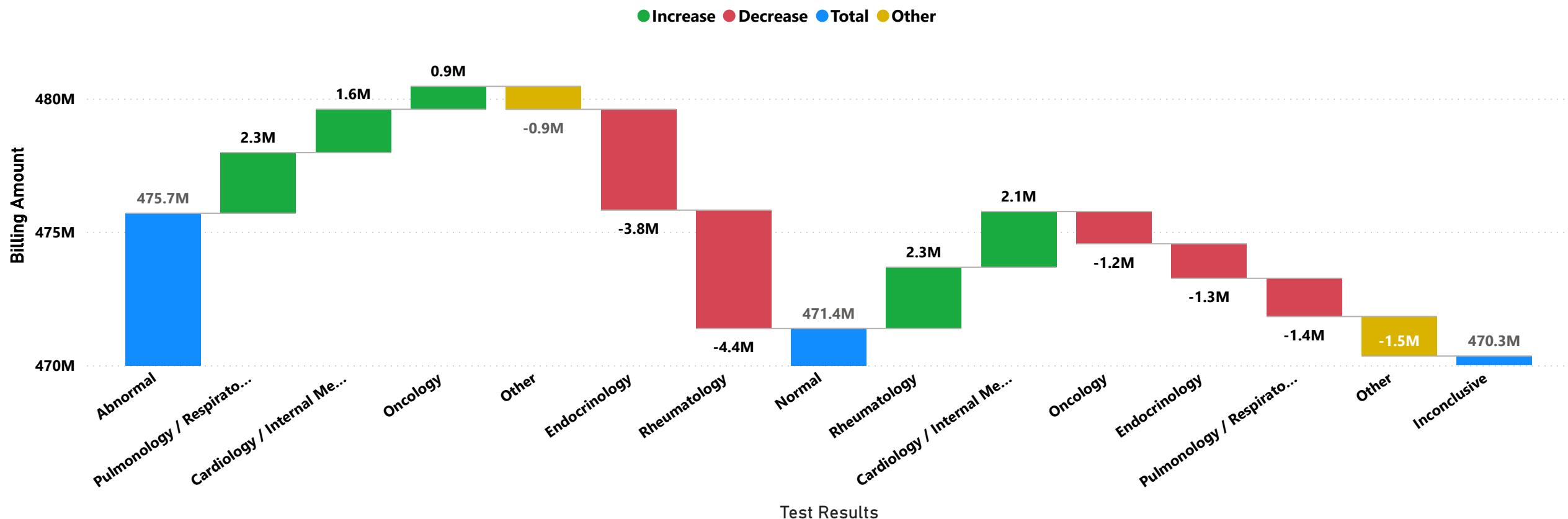
## Department-wise Admissions



Question: **Which department had the highest number of admissions, and what is the percentage?**

Answer: **The Oncology department had the highest number of admissions, accounting for approximately 16.67% (1/6th) of the total admissions.**

## Billing Amount by Test Results and Department

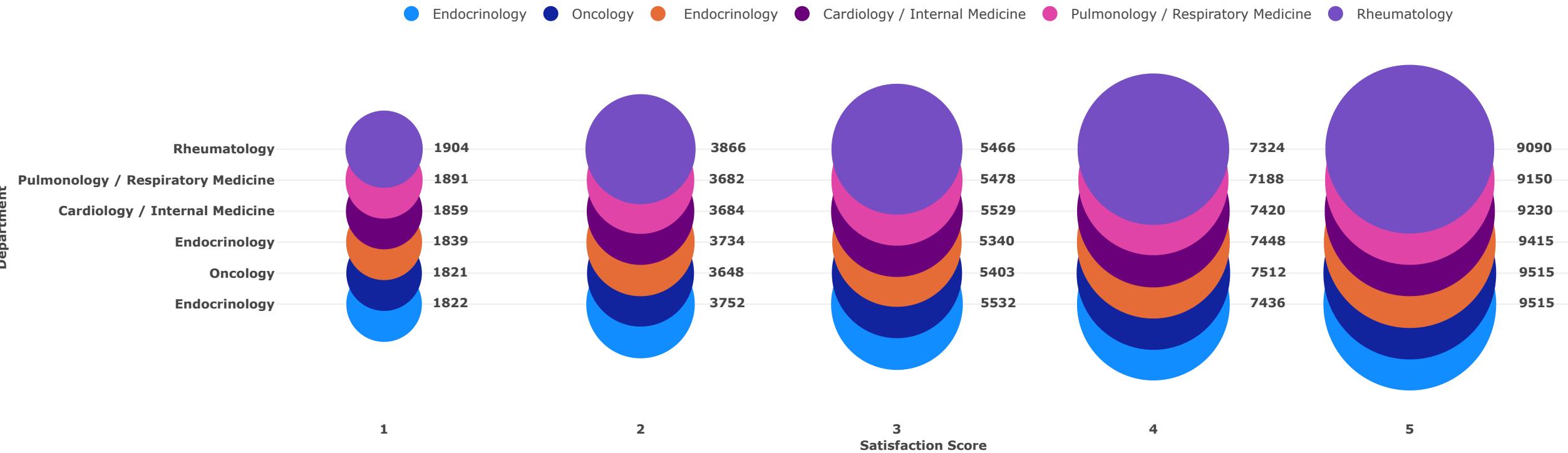
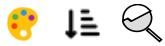


Question: What is the department that contributed the most to the increase in the total billing amount based on the test results?

Answer: The department that contributed the most to the increase in the total billing amount is Cardiology/Internal Medicine, with a contribution of \$2.3M. This is evident from the green bar representing an increase in the billing amount associated with test results in that department.

- Pulmonology / Respiratory: Although not as pronounced as Cardiology/Internal Medicine, Pulmonology/Respiratory also shows an increase in billing amount associated with test results. The blue bar represents a positive contribution, albeit smaller than Cardiology/Internal Medicine.
- Rheumatology: Rheumatology's billing amount remains relatively stable, as indicated by the grey bar. While not contributing significantly to

## Department-wise Satisfaction Score

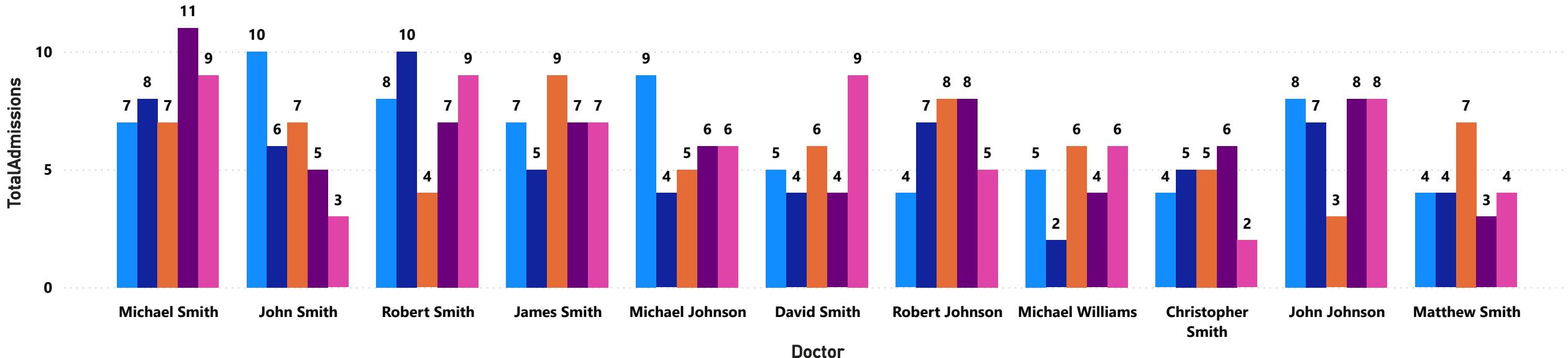


Question: Which department received the highest satisfaction score, and how does this compare across different departments?

Answer: The Endocrinology department received the highest satisfaction score of 5, with a total of 9,515 points. This score is the highest among all departments for the satisfaction score of 5. Comparatively, other departments such as Rheumatology and Oncology also received high scores at the 5th level, with scores of 9,155 and 9,515 points respectively, but for different satisfaction scores across other departments.

## Total Admissions by Doctor vs Satisfaction Score

Satisfaction Score ● 1 ● 2 ● 3 ● 4 ● 5



Question: Which doctor has the highest number of total admissions with a satisfaction score of 5?

Answer: Doctor Michael Smith has the highest number of total 9 admissions with a satisfaction score of 5, indicated by the tallest pink bar in his column handling a total of 42 cases.

### Additional Comment:

- This chart effectively displays both the total admissions and satisfaction scores for each doctor. It allows for easy comparison across different metrics.
- Michael Smith seems to be performing well in terms of admissions, especially with a satisfaction score of 4. Other doctors' performance can be assessed similarly.
- Overall, the chart provides valuable insights into patient satisfaction and doctor performance.

⬅	Department	Medical Condition	TotalAdmissions	TotalBilling	Total_Doctors	Avg.of Satisfaction Score	MortalityRate	YoYAdmissions%	%VarianceInAdm.
Oncology	Cancer	13592	34,39,07,243.53	11390	3.02	15.49%	7.32%	24.49%	
Endocrinology	Diabetes	13780	35,40,59,165.74	11519	3.02	14.72%	7.35%	24.83%	
Endocrinology	Obesity	13698	35,23,34,979.70	11445	3.01	14.80%	7.08%	24.68%	
Cardiology / Internal Medicine	Hypertension	13699	34,90,72,199.69	11410	3.00	13.74%	7.27%	24.68%	
Pulmonology / Respiratory Medicine	Asthma	13852	35,42,90,957.08	11531	2.98	15.90%	7.79%	24.96%	
Rheumatology	Arthritis	13901	35,40,46,747.63	11655	2.97	14.45%	7.75%	25.05%	
Total		55500	1,41,74,32,043.40	40341	3.00	19.95%	7.46%	100.00%	

Question: Which department has the highest total billing amount?

Answer: The Cardiology/Internal Medicine department has the highest total billing amount, totaling \$34.90 million.

Additional Comment:

While Cardiology/Internal Medicine leads in billing, it's essential to consider other factors such as patient satisfaction scores and mortality rates.

- Departments like Oncology and Pulmonology/Respiratory Medicine also play critical roles in patient care, even though their billing amounts may be lower.
- Billing vs. Patient Outcomes: While Cardiology/Internal Medicine leads in total billing, it's essential to consider other factors.
- Departments like Oncology and Pulmonology/Respiratory Medicine play critical roles in patient care, even though their billing amounts may be lower.
- Striking a balance between financial sustainability and excellent patient outcomes remains a challenge for healthcare systems.
- Mortality Rates and Satisfaction Scores :The Oncology department stands out with a high satisfaction score (3.02) and a relatively low mortality rate (2.50%).
- This suggests that despite dealing with serious conditions like cancer, patients are generally satisfied with the care provided.