

Healthcare Data Analyst Project Portfolio

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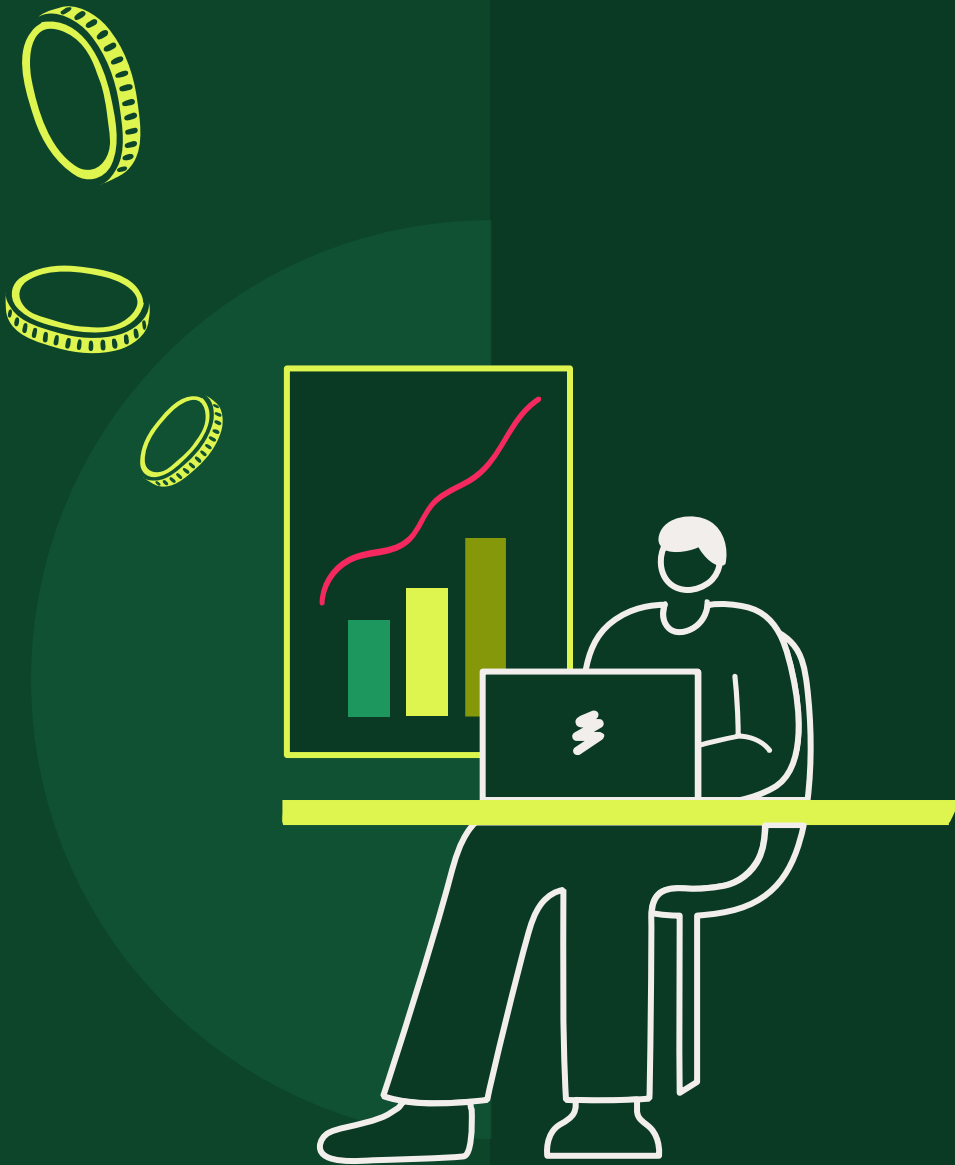


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About Me

AUGUSTINE OGBONNAH

(HEALTHCARE DATA ANALYST)

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❖ **Bachelor of Science (BSc) Finance**

University of Nigeria | Nsukka, Nigeria

❖ **Master of Business Administration (MBA)**

Abia State University | Okigwe, Nigeria

My Skills

Technical Skills

ETL (Extract, Transform, Load)
SQL & Statistical Analysis
Power BI; Tableau & Excel
Python; AI & machine Learning
Clinical Data Analytics
Healthcare Regulations & Compliance

Core Skills

Data Analysis & Interpretation
Business Intelligence Reporting
Data Visualization & Story Telling
Analytical Thinking
Problem Solving
Cross-functional Collaboration
Data Integrity & Quality Assurance
Data Modeling
Database Management
Communication Skills
Patient-Centric Care
Healthcare Operations



Professional Experiences

1. 10Alytics, United Kingdom - Healthcare Data Analyst | *Mar 2024 – Present*
2. Elevated Technologies (IT Consulting Firm)|
Business Data Analyst | Nov 2022 - Feb 2024
3. Cigna Health |Data Analyst | Feb 2021 – Oct 2022

Key Projects:

- ❖ Predictive Readmission Model
- ❖ Patient Satisfaction Improvement Initiative



Problem Statement

Tienta Medicals often face challenges in optimizing revenue streams while managing operational costs and meeting diverse patient needs. Identifying high-demand procedures, profitable specialties, and patient demographic trends can be complex without a centralized, data-driven approach.

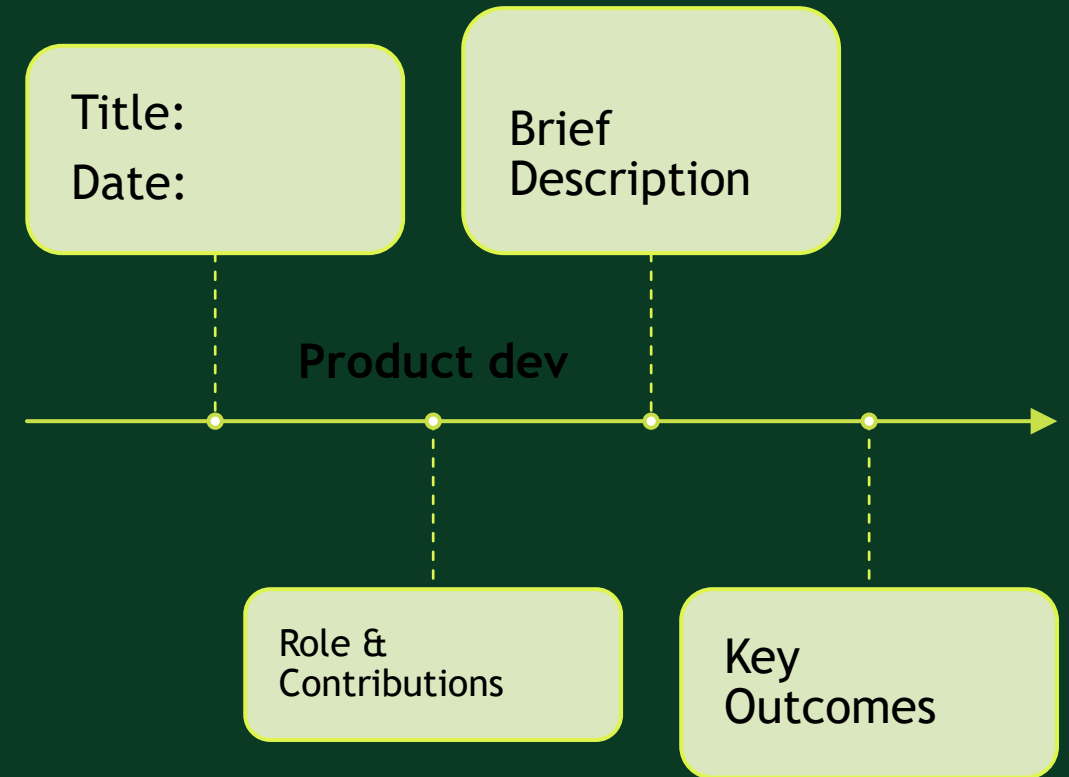
By analyzing the data, Tienta Medicals hopes to leverage actionable data-driven insights to enhance their revenue and performance.



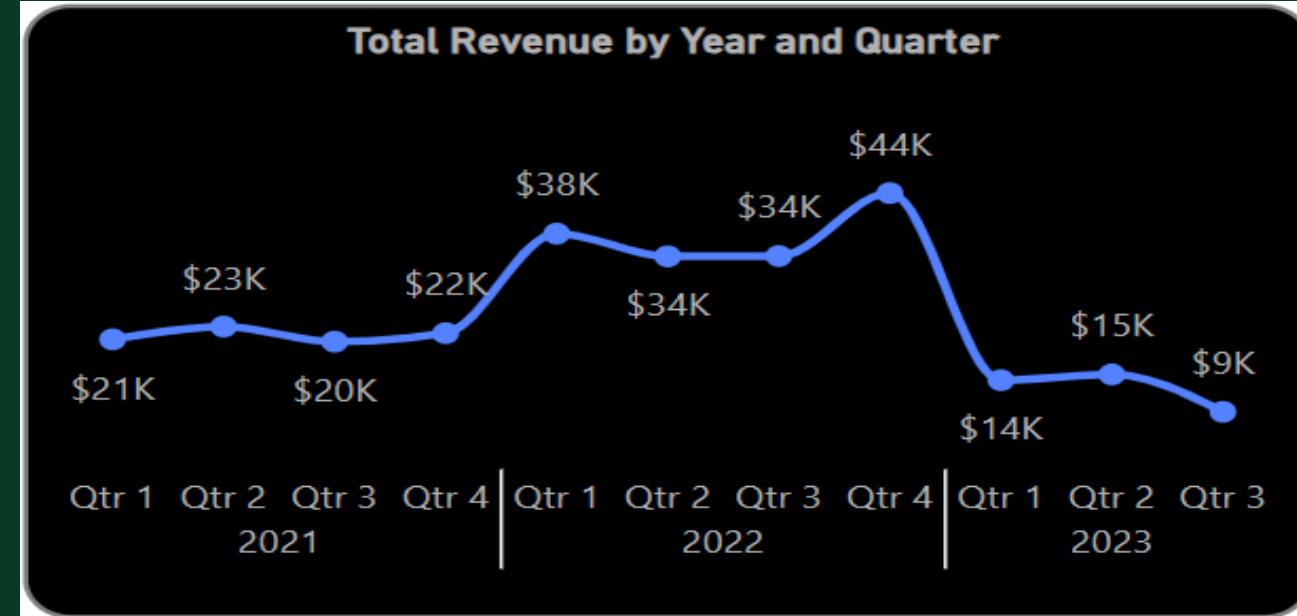
Introduction

.This analysis identifies the most profitable specialties, determine patient demographics contributing to revenue, and optimize resource allocation based on geographic and demographic trends. Such insights empower Tienta Medicals management to make data-driven decisions, enhancing profitability, improving patient care, and supporting strategic growth.

Project Details



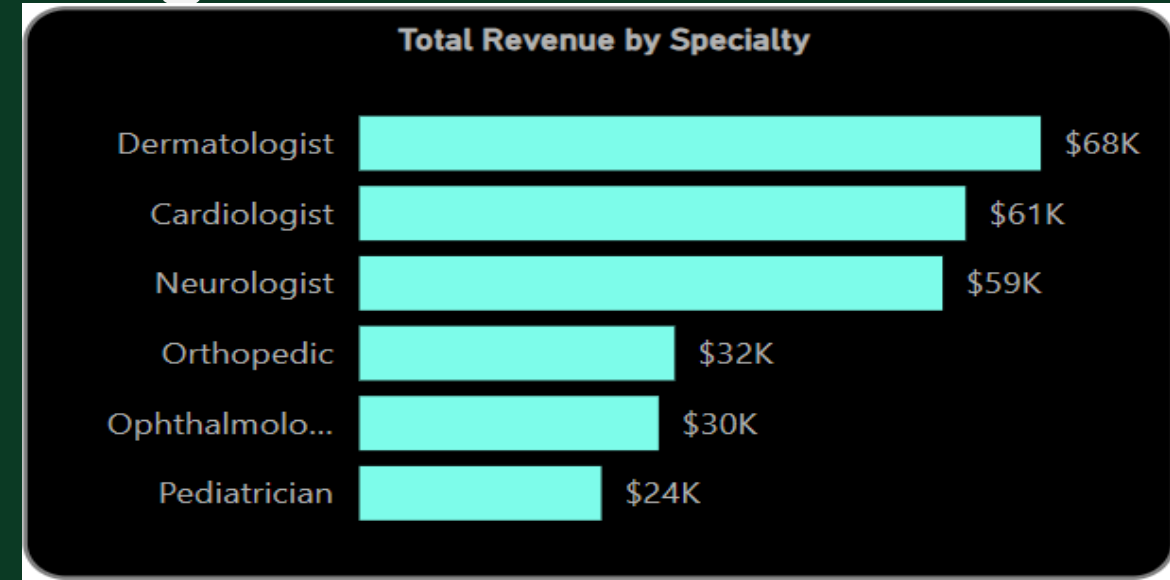
Key Insights



1. Financial Performance

Revenue and Expenses Trends: Revenue averages around \$1,189 per transaction, while expenses average approximately \$823, resulting in a positive margin for most transactions. The quarterly trends reveal periods of both higher and lower revenues, suggesting possible seasonality or peaks in specific months due to demand surges or higher volumes of procedures.

Key Insights

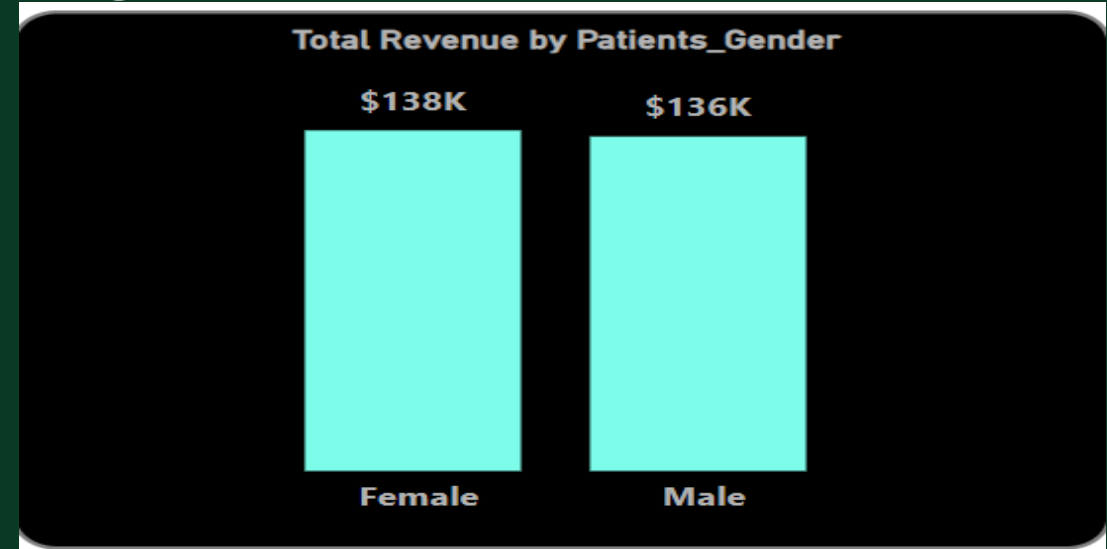


Specialty-Specific Insights

Revenue by Specialty: Specialties such as Neurology, Dermatology, and Cardiology drive significant revenue, with each demonstrating clear trends over time. Notably, Dermatology generates consistent revenue in both major locations, New York and Los Angeles, while Cardiology sees a higher concentration in New York.

Revenue per Specialty Location: Neurology in Los Angeles ranks as one of the top specialty-location combinations by revenue, suggesting either a high demand for this specialty or possibly higher-cost procedures associated with neurology. This insight can inform resource allocation for these high-demand specialties in specific geographic regions.

Key Insights

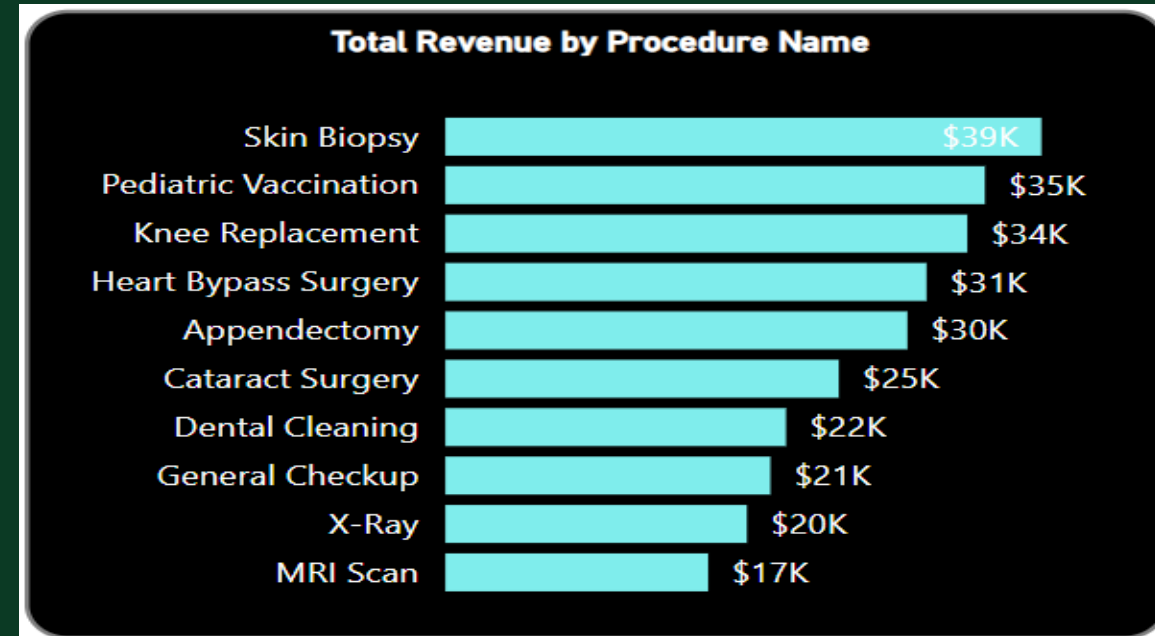


Patient Demographics and Revenue

Age-Based Trends: Patients in the age groups 19-35 and 36-50 contribute the highest revenue. The younger demographic (19-35) shows a revenue per patient of about \$2,416, while the 36-50 group contributes around \$3,305 per patient. This could indicate higher-value procedures or a higher visit frequency among these age groups.

Gender-Based Insights: Revenue trends by gender highlight that male patients contribute significantly more on average, particularly within the 19-35 age group, with a revenue per patient metric over \$5,000. This gender discrepancy in revenue could point to different treatment needs or a different distribution of high-cost procedures across genders.

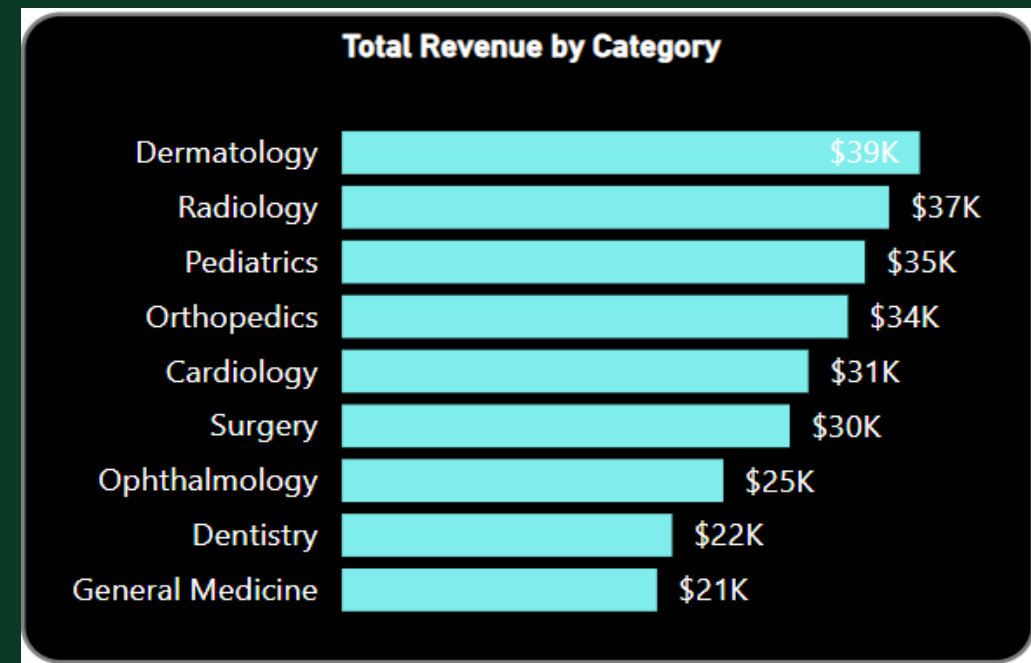
Key Insights



Common Procedures and Associated Costs

Top Procedures: Procedures such as heart bypass surgery and appendectomy are among the most frequently performed and revenue-generating procedures. Given the high frequency, these procedures might also account for a considerable portion of the revenue trends observed. The high demand for these procedures underscores the importance of resources in cardiology and surgical departments.

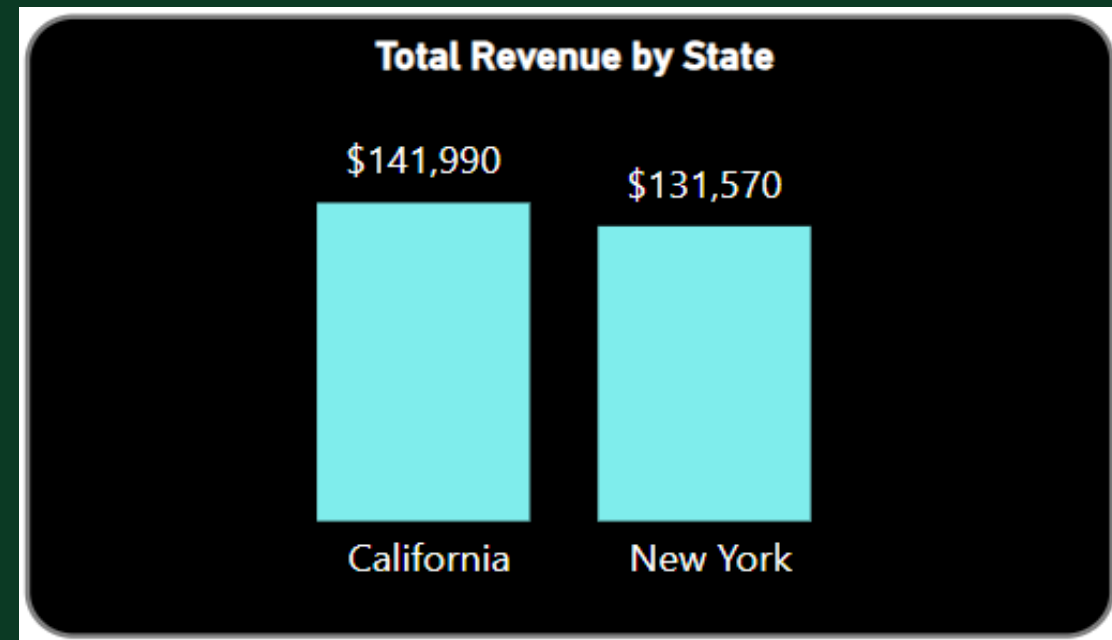
Key Insights



Common Procedures and Associated Costs

Revenue by Procedure Category: Procedures categorized under Surgery and Cardiology lead in revenue generation, suggesting that high-cost procedures within these categories might account for the observed trends. This finding can inform investment in specialized training, equipment, and marketing for these services.

Key Insights



Geographic Insights

State-Level Concentration: Transactions and associated revenues are predominantly concentrated in states like California and New York. This geographic distribution could indicate the hospital's operational footprint, patient reach, and potential market focus. Understanding this concentration can guide potential expansion or outreach strategies to other high-demand states or underserved regions.

Dashboard snapshot

TIENTA MEDICALS TRANSACTIONS ANALYSIS |REVENUE

\$274K

Total Revenue

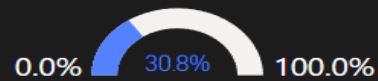
\$189K

Total Expenses

\$84K

Total Profit

Profit Margin (%)



81

No. of Doctors

86

No of Patients

Revenue

Performance

Doctors Gender

☐ Female

☐ Male

Patients Gender

☐ Female

☐ Male

State

☐ California

☐ New York

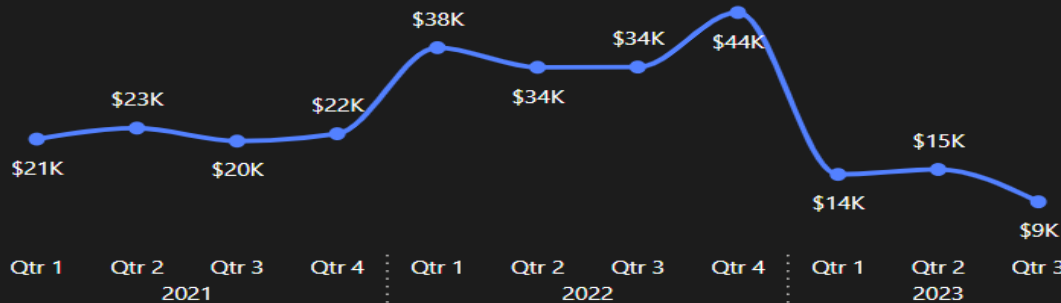
Year

☐ 2021

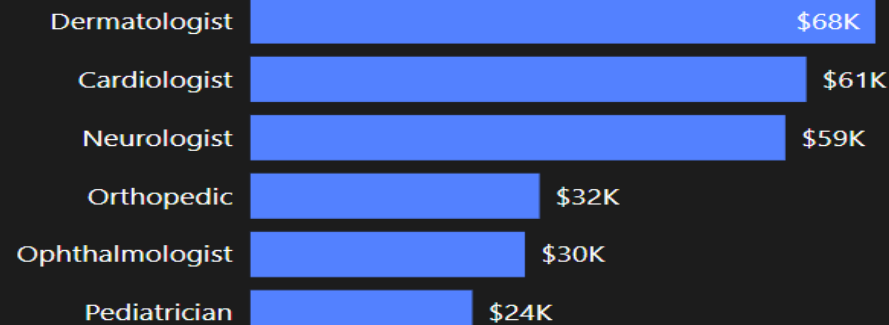
☐ 2022

☐ 2023

Total Revenue by Year and Quarter



Total Revenue by Specialty



Total Revenue by Category



Procedure Name	Total Revenue	Total Expenses	Total Profit	No. of Transactions
Appendectomy	\$29,920	\$20,590	\$9,330	24
Cataract Surgery	\$25,480	\$17,830	\$7,650	23
Dental Cleaning	\$22,060	\$15,480	\$6,580	23
General Checkup	\$21,050	\$14,770	\$6,280	23
Heart Bypass Surgery	\$31,160	\$21,230	\$9,930	23
Knee Replacement	\$33,800	\$23,280	\$10,520	23
MRI Scan	\$17,020	\$11,840	\$5,180	23
Skin Biopsy	\$38,600	\$26,480	\$12,120	23
X-Ray	\$19,530	\$13,740	\$5,790	23
Pediatric	\$34,940	\$24,180	\$10,760	22
Total	\$273,560	\$189,420	\$84,140	230

Dashboard snapshot

TIENTA MEDICALS TRANSACTION ANALYSIS | PERFORMANCE

\$274K

Total Revenue

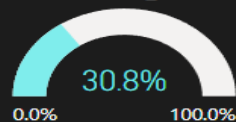
\$189K

Total Expenses

\$84K

Total Profit

Profit Margin (%)



81

No. of Doctors

86

No of Patients

Revenue

Performance

Doctors Gender

☐ Female

☐ Male

Patients Gender

☐ Female

☐ Male

State

☐ California

☐ New York

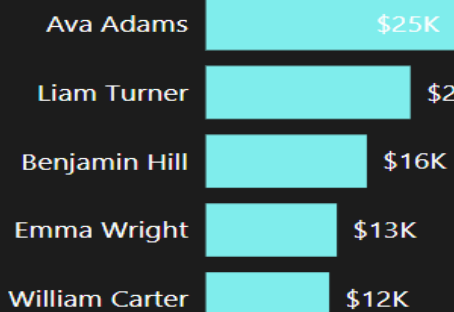
Year

☐ 2021

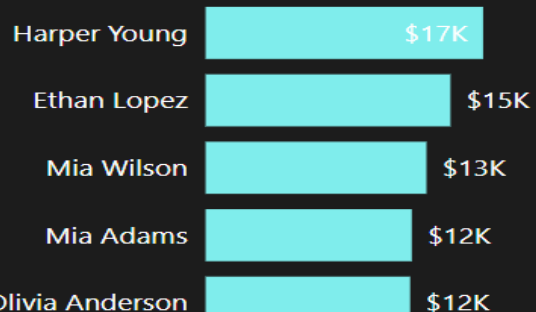
☐ 2022

☐ 2023

Top 5 Doctors by Total Revenue



Top 5 Patients by Total Revenue



Male

42

No of Doctors

Female

47

No of Patients

Female

39

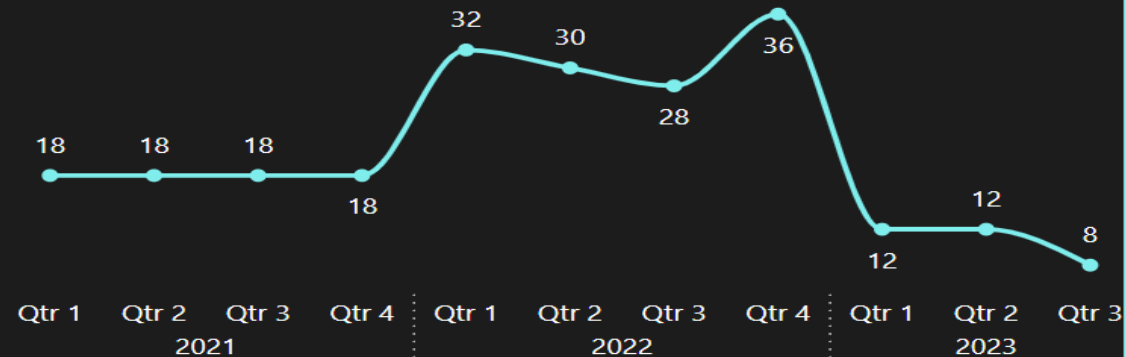
No of Doctors

Male

39

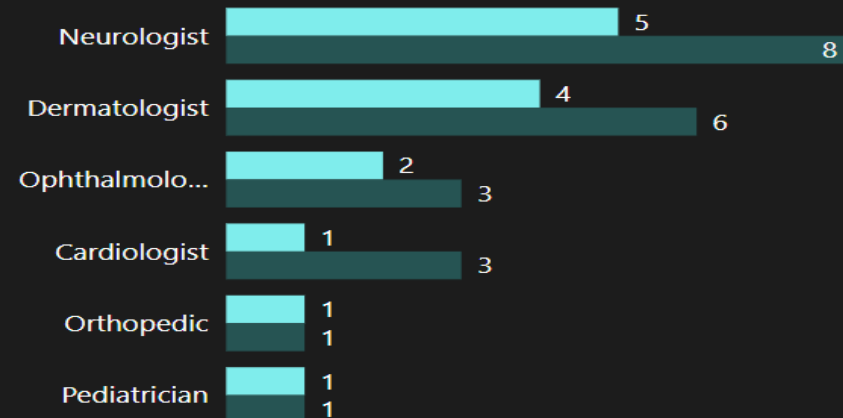
No of Patients

No of Patients Visits by Year and Quarter



No of Doctors and No of Patients by Specialty

● No of Doctors ● No of Patients



Recommendations

- **Strategic Investment in High-Demand Specialties:** Given the revenue concentration on specialties like Neurology and Cardiology, Tienta Medicals may consider channeling more resources and specialized training toward these areas, particularly in locations like Los Angeles and New York, where demand is high.

Marketing and Outreach to Key Age Groups: With significant revenue contributions from patients aged 19-50, targeted marketing and specialized services for these age groups could further drive revenue. Understanding patient needs within these demographics could help tailor healthcare packages or preventative services.



Recommendations

Enhanced Focus on Gender-Specific Treatment Needs: The higher revenue from male patients within specific age brackets suggests an opportunity to explore and address gender-specific health needs. This could include specialized services or marketing to address conditions prevalent in these demographics.

Procedure Optimization: For high-revenue procedures like heart bypass surgery and appendectomy, optimizing procedural efficiency and patient experience can be beneficial. Ensuring the availability of required resources, maintaining skilled personnel, and possibly expediting patient flow for these procedures could further enhance revenue potential.



Professional Development:

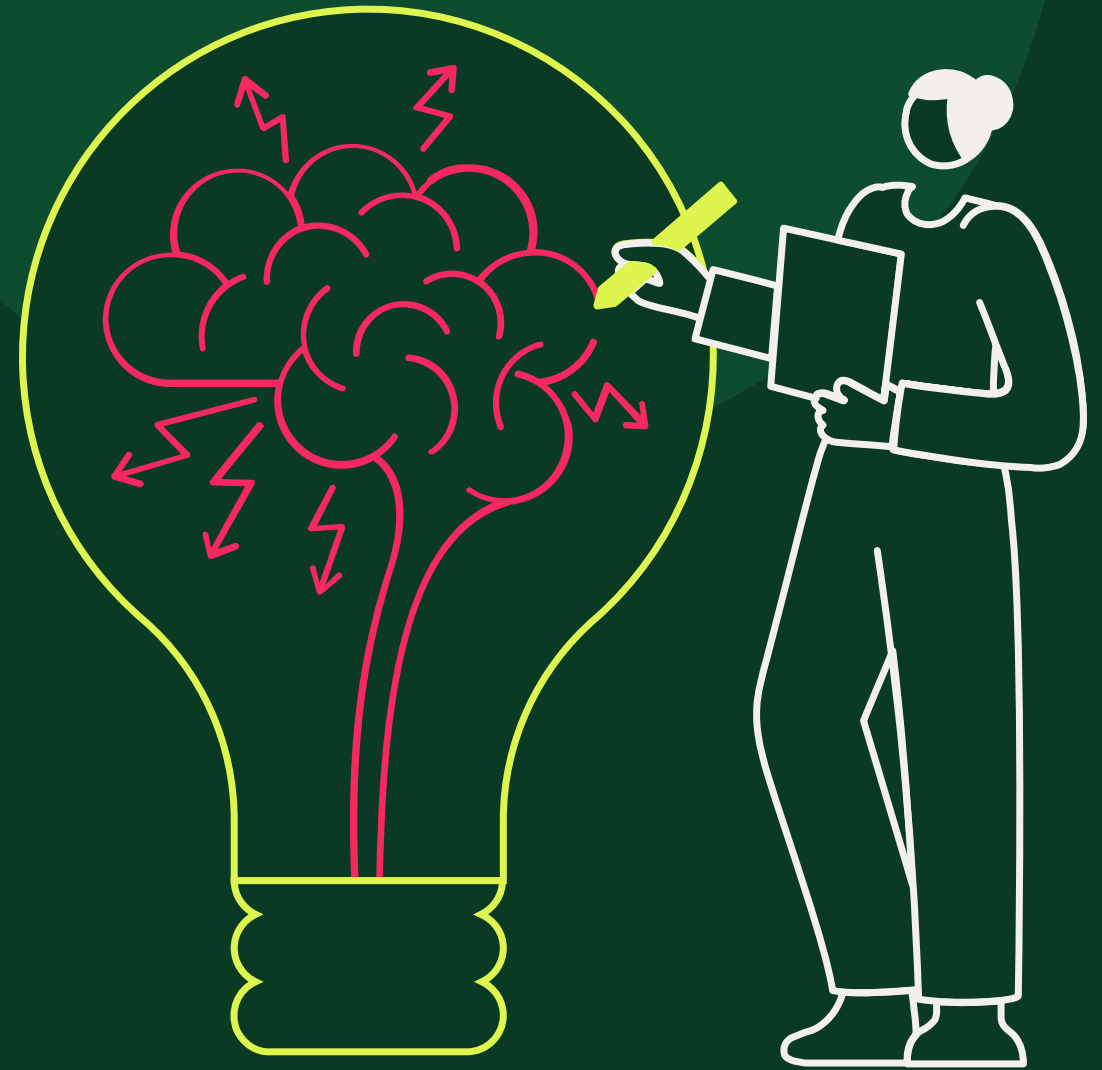
Certifications

Diploma in Data Analytics

Google Cybersecurity Certificate

Professional Scrum Master (PSM)

Professional Scrum Product Owner (PSPO)



Thank you

Augustine

