Oncology KPI Catalog

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This document lists the KPI definitions for an oncology analytics dashboard, including formulas, fields required, common slices, and suggested visualizations.

Section A — Executive MVP KPIs (Top 10)

1. Total Encounters

Definition: Count of completed encounters in the selected period.
Formula: COUNT_ROWS WHERE ENCOUNTER_STATUS = 'COMPLETED'
Fields: oncology_encounters: ENCOUNTER_ID, ENCOUNTER_STATUS, SERVICE_DATE
Slices: Date, Provider, Region, Cancer Group, Treatment Type
Suggested visualization: KPI card + line chart over time

2. Unique Patients

Definition: Distinct patients served within the selected filters.
Formula: COUNT(DISTINCT PATIENT_ID) WHERE ENCOUNTER_STATUS = 'COMPLETED'
Fields: oncology_encounters: PATIENT_ID, ENCOUNTER_STATUS; oncology_patients: demographics (optional for slicing)
Slices: Gender, Age band, Segment, Payer
Suggested visualization: KPI card + donut by patient segment

3. Gross Billed Amount (■)

Definition: Total billed amount for completed encounters.
Formula: SUM(BILLED_AMOUNT) WHERE ENCOUNTER_STATUS = 'COMPLETED'
Fields: oncology_encounters: BILLED_AMOUNT, ENCOUNTER_STATUS
Slices: Date, Provider, Cancer Group, Modality
Suggested visualization: KPI card + area chart trend

4. Average Ticket Size (■ per encounter)

Definition: Average billed amount per completed encounter.
Formula: SUM(BILLED_AMOUNT) / COUNT(ENCOUNTER_ID) WHERE ENCOUNTER_STATUS = 'COMPLETED'
Fields: oncology_encounters: BILLED_AMOUNT, ENCOUNTER_ID, ENCOUNTER_STATUS
Slices: Treatment Type, Provider, Stage
Suggested visualization: KPI card + bar by treatment type

5. Payer Mix %

Definition: Share of revenue by payer.
Formula: SUM(BILLED_AMOUNT) BY PAYER_ID / SUM(BILLED_AMOUNT) OVER ALL
Fields: oncology_patients: PAYER_ID; oncology_encounters: BILLED_AMOUNT (via join on PATIENT_ID)
Slices: Time, Provider, Cancer Group
Suggested visualization: Stacked bar (share over time) or donut

6. Payment Mode Mix %

Definition: Share of revenue by payment mode (UPI/CARD/NEFT).
Formula: SUM(BILLED_AMOUNT) BY PAYMENT_MODE / SUM(BILLED_AMOUNT) OVER ALL
Fields: oncology_encounters: PAYMENT_MODE, BILLED_AMOUNT

Slices: Time, Provider
Suggested visualization: 100% stacked bar

7. Cancer Group Case Mix

Definition: Share of encounters or revenue by cancer group and cancer name.
Formula: COUNT_ROWS or SUM(BILLED_AMOUNT) BY CANCER_GROUP/CANCER_NAME
Fields: oncology_encounters: CANCER_CODE; cancer_catalog: CANCER_GROUP, CANCER_NAME
Slices: Provider, Region, Stage
Suggested visualization: Treemap or bar chart

8. Stage Distribution

Definition: Distribution of cases across disease stages.
Formula: COUNT_ROWS BY DISEASE_STAGE
Fields: oncology_encounters: DISEASE_STAGE
Slices: Provider, Region, Cancer Group
Suggested visualization: Stacked bar

9. Modality Mix

Definition: Share of encounters by treatment type (CHEMO/RADIATION/SURGERY/IMMUNO).
Formula: COUNT_ROWS BY TREATMENT_TYPE
Fields: oncology_encounters: TREATMENT_TYPE
Slices: Time, Provider, Cancer Group
Suggested visualization: Heatmap over time or stacked bar

10. Provider Throughput & Revenue

Definition: Encounters and revenue per provider, with average ticket size.
Formula: COUNT_ROWS, SUM(BILLED_AMOUNT), AVG(BILLED_AMOUNT) GROUP BY PROVIDER
Fields: oncology_encounters: PROVIDER_ID, BILLED_AMOUNT; oncology_providers: provider attributes
Slices: Provider Type, Region, Accreditation
Suggested visualization: Top-N bar charts

Section B — Additional KPIs to Enrich the Dashboard (10)

11. Regimen Utilization

Definition: Most used regimens by cases and revenue.
Formula: COUNT_ROWS, SUM(BILLED_AMOUNT) BY REGIMEN_CODE
Fields: oncology_encounters: REGIMEN_CODE, BILLED_AMOUNT
Slices: Modality, Provider
Suggested visualization: Bar + violin (cost distribution)

12. First-Time vs Repeat Patients

Definition: Breakdown of single-visit vs multi-visit patients and repeat ratio.
Formula: Repeat Ratio = Patients with >1 encounter / Total patients
Fields: oncology_encounters: PATIENT_ID, SERVICE_DATE
Slices: Cancer Group, Segment
Suggested visualization: KPI + bar by cancer group

13. Time Between Visits (days)

Definition: Median days between consecutive visits for multi-visit patients.
Formula: MEDIAN(DIFF_DAYS(next(SERVICE_DATE), SERVICE_DATE)) BY PATIENT
Fields: oncology_encounters: PATIENT_ID, SERVICE_DATE
Slices: Modality, Provider
Suggested visualization: Box/violin plot

14. Surgical Conversion Rate

Definition: % of encounters with SURGERY among solid tumors.
Formula: COUNT(SURGERY in TREATMENT_TYPE) / COUNT(all encounters in solid tumors)
Fields: oncology_encounters: TREATMENT_TYPE, CANCER_CODE; cancer_catalog: CANCER_GROUP
Slices: Provider, Time
Suggested visualization: Line over time + bar by provider

15. Accreditation Impact

Definition: Revenue per encounter for NABH vs NA providers.
Formula: AVG(BILLED_AMOUNT) BY ACCREDITATION
Fields: oncology_encounters: BILLED_AMOUNT, PROVIDER_ID; oncology_providers: ACCREDITATION
Slices: Region, Provider Type
Suggested visualization: Side-by-side bars

16. Geography Heatmap

Definition: Encounters and revenue by provider region/state and patient origin.
Formula: COUNT_ROWS, SUM(BILLED_AMOUNT) BY REGION/STATE (provider or patient)
Fields: oncology_providers: REGION, STATE; oncology_patients: STATE; oncology_encounters: joins
Slices: Time, Cancer Group
Suggested visualization: Map/choropleth

17. Patient Segment LTV Proxy

Definition: Average revenue per patient by segment (VIP/PREMIUM/REGULAR).
Formula: SUM(BILLED_AMOUNT) / COUNT(DISTINCT PATIENT_ID) BY SEGMENT
Fields: oncology_patients: SEGMENT; oncology_encounters: BILLED_AMOUNT (join by PATIENT_ID)
Slices: Cancer Group, Provider

Suggested visualization: Bar with error bars

18. Payment Realization Risk Proxy

Definition: Compare billed distributions by payment mode to spot risk patterns.
Formula: Distribution of BILLED_AMOUNT by PAYMENT_MODE (median, IQR)
Fields: oncology_encounters: PAYMENT_MODE, BILLED_AMOUNT
Slices: Provider, Time
Suggested visualization: Box/strip plot

19. Provider Maturity Curve

Definition: Relationship between provider age (months since open) and throughput/revenue.
Formula: MONTHS_BETWEEN(TODAY, OPEN_DATE) vs COUNT_ROWS / SUM(BILLED_AMOUNT)
Fields: oncology_providers: OPEN_DATE; oncology_encounters: PROVIDER_ID, BILLED_AMOUNT
Slices: Region, Provider Type
Suggested visualization: Scatter with trendline

20. Case Complexity Index (proxy)

Definition: Numeric index mapping Stage I–IV to 1–4 and averaging by cohort.
Formula: AVG(StageScore) where StageScore = 1..4 mapped from DISEASE_STAGE
Fields: oncology_encounters: DISEASE_STAGE
Slices: Provider, Cancer Group
Suggested visualization: Bar or radar chart

Appendix — Notes

• Most formulas assume filtering to completed encounters. • Join keys: PATIENT_ID (encounters→patients), PROVIDER_ID (encounters→providers), CANCER_CODE (encounters→cancer catalog). • Suggested visualizations are indicative; use your organization's style guide.