

Key Performance Indicators

Overview- Key performance indicators aimed at enhancing oncology-specific quality of care are categorized as clinical, operational, and financial, available as data dashboards for senior leadership and clinicians to monitor performance. EMR vendors can integrate these KPIs into their systems as enhancement features. A curated list of 12 KPIs spanning across the continuum of patients' journey in the hospital. Each indicator is characterized by a detailed numerator, denominator, formula, and clear inclusion and exclusion criteria.

#	KPI	Indicator Brief	Formula	Numerator	Denominator	Inclusion Criteria	Exclusion Criteria	Dimensions
1	Demographic Information	<p>a) Age distribution: The age range of individuals diagnosed with cancer.</p> <p>b) Gender distribution: The distribution of cancer cases by gender</p> <p>c) Geographic distribution: The distribution of cancer cases by geographic location.</p>	<p>Proportion of Cases in Specific Demographic Group = (Number of Cases in Specific Group / Total Number of Cases) * 100</p>	Number of cancer cases in specific demographic categories (e.g., age groups, gender).	Total number of cancer cases	All individuals with a confirmed cancer diagnosis	None (all demographic categories are included).	Demographic- Gender/Age Category/Geographic distribution/ Co- morbidities/ Substance Abuse
2	Cancer Case Load	Number of diagnosed Cancer	(Number of P rovisionally	Number of provisionally	Total number of individuals		None	Demographic- Gender/Age

		cases within a specific timeframe.	Classified Cancer Cases / Total number of individuals screened)* 100	classified Cancer cases at first registration during a specified period	screened by the cancer department/hospital during the same period.			Category/Geographic distribution/ Co-morbidities/ Substance Abuse Disease related Factors -Stage/ Site/ Sub site
3	Cancer Surgery Load	Percentage of Cancer surgeries performed within a specific timeframe.	(Number of Cancer surgeries performed/ Total Number of Patients advised for Cancer surgery) ×100	The number of Cancer surgeries performed during a specified period	The total number of patients advised for Cancer surgery	All Cancer patients who underwent surgery	Patients not advised surgery	Demographic -Gender/Age Category/Geographic distribution/ Co-morbidities/ Substance Abuse Disease related Factors -Stage/ Site/ Sub site Treatment related -Name of the procedure/ Case Status (Minor/Elective/Emergency/Re-Exploration)
4a	Mortality Rate- In-hospital	The number of deaths in the hospital due to Cancer in a specific	Count of individuals who have died in IPD due to Cancer	The total number of deaths in IPD attributed to Cancer within a specific	The total population at risk or under consideration for Cancer mortality	All individuals within the defined population whose death	Out of hospital Deaths	Demographic -Gender/Age Category/Geographic distribution/ Co-morbidities/ Substance Abuse

		population over a defined period.		population over a defined period.	within the same defined period.	is recorded in IPD and cause of death is attributed to Cancer during the specified period.		Disease related Factors-Stage/ Site/ Sub site
4b	Mortality Rate- Out of hospital	The number of deaths out of hospital due to Cancer in a specific population over a defined period.	Count of individuals who have died out of hospital.	The total number of out of hospital deaths attributed to Cancer within a specific population over a defined period.	The total population at risk or under consideration for Cancer mortality within the same defined period.	All individuals within the defined population who have died out of hospital and the cause of death is attributed to Cancer during the specified period.	In-hospital Deaths	Demographic- Gender/Age Category/Geographic distribution/ Co-morbidities/ Substance Abuse Disease related Factors-Stage/ Site/ Sub site
5	Stage at diagnosis	Distribution of Cancer Cases by relevant Stage at Final Diagnosis	(Number of Cases at Each Stage/Total Number of Final Diagnosis)	The number of Cancer cases at each relevant stage at the	The total number of Cancer cases diagnosed during	All individuals diagnosed with Cancer	All individuals not diagnosed with Cancer	Demographic- Gender/Age Category/Geographic distribution/ Co-

			ally Diagnosed C ancer Cases)×100	time of final diagnosis	the specified period.	during the specified period.	during the specified period.	morbidities/ Substance Abuse Disease related Factors- Site/ Sub site
6	Chemotherapy completion rates	Percentage of Patients Completing Planned Course of Chemotherapy for Cancer	(Number of Patients Completing Chemotherapy/ Total number of Patients planned for Chemotherapy Treatment)×100	The number of Cancer patients who successfully complete the planned course of chemotherapy.	The total number of Cancer patients for whom chemotherapy was advised as the treatment plan during a specified period.	All Cancer patients for whom chemotherapy was part of the treatment plan. Patients who successfully completed the planned course of chemotherapy within the specified timeframe	Patients for whom the chemotherapy plan was modified due to medical reasons. Patients who opted for an alternative treatment plan after discussion with healthcare providers.	Demographic- Gender/Age Category/Geographic distribution/Co-morbidities/ Substance Abuse Disease related Factors- Stage/ Site/ Sub site Treatment related- Name of Protocol/Intent/Duration
7	Radiation therapy completion rates	Percentage of Patients Completing Prescribed Course of Radiation Therapy for	(Number of Patients Completing Radiation Therapy within planned time	The number of Cancer patients who successfully complete the prescribed	The total number of Cancer patients for whom radiation therapy was advised as the treatment plan	All Cancer patients for whom radiation therapy was part of the	Patients for whom the radiation therapy plan was modified due to	Demographic- Gender/Age Category/Geographic distribution/ Co-morbidities/ Substance Abuse

		Cancer within prescribed timeframe	/Total Number of Patients with Radiation Therapy Treatment) ×100	course of radiation therapy.	during a specified period.	treatment plan. Patients who successfully completed the prescribed course of radiation therapy within the specified timeframe	medical reasons. Patients who opted for an alternative treatment plan after discussion with healthcare providers.	Disease related Factors -Stage/ Site/ Sub site Treatment related -Type of treatment (EBRT/Brachy)/ Intent
8a	Timeliness of care	Average Time from Initial Presentation/Screening to Confirmation of Final Cancer Diagnosis	Total Time for All Cases/ Total Number of Diagnosed Cases	The total time (in days or weeks) taken from the initial presentation or screening to the confirmation of Cancer diagnosis for all diagnosed cases during a specific period	Total number of individuals screened by the cancer department/hospital during the same period.	All Final diagnosed Cancer cases. Time measured from the first presentation or screening to the confirmation of diagnosis.	Cases with longer outlier data.	Demographic -Gender/Age Category/Geographic distribution Disease related Factors -Stage/ Site/ Sub site
8b	Timeliness of care	Average Time from Diagnosis to Initiation of Definitive	Total time for all treated cases/total number of treated cases	The total time (in days or weeks) taken from the diagnosis of	The total number of Cancer cases that received definitive	All Cancer cases that received definitive treatment	Cases with missing or unreliable data regarding the	Demographic -Gender/Age Category/Geographic distribution Disease related

		Treatment for Cancer		Cancer to the initiation of the first definitive treatment (surgery, chemotherapy, or radiation therapy) for all treated cases during a specific period.	treatment during the same period.	during the specified period. Time measured from the confirmation of the diagnosis to the initiation of the first definitive treatment.	time of diagnosis or initiation of treatment. Cases where treatment initiation was delayed for reasons unrelated to the hospital's processes (e.g., patient preference, comorbidities).	Factors -Stage/ Site/ Sub site
9	Relapse after surgery	Percentage of patients with primary operable Cancer who developed first recurrence within 5 years after surgery	(Number of Patients with Recurrence/ Total Number of Patients with Primary Operable cancer Surgery) ×100	The number of patients with primary operable Cancer who developed the first recurrence within 5 years	The total number of patients with primary operable Cancer during the specified period.	All Cancer patients who underwent surgery	Patients with recurrence # Patients with incomplete or unreliable data regarding recurrence	Demographic - Gender/Age Category/Geographic distribution/ Co-morbidities/ Substance Abuse Disease related Factors -Stage/ Site/ Sub site Treatment related - Name of the procedure/ Time to relapse

10	Treatment modalities according to clinical extent of disease	<p>Surgery only: Treatment involving surgical procedures alone.</p> <p>Chemotherapy only: Treatment involving chemotherapy alone.</p> <p>Radiotherapy only: Treatment involving radiotherapy alone.</p> <p>S+R: Combined treatment involving surgery and radiotherapy.</p> <p>S+C: Combined treatment involving surgery and chemotherapy.</p> <p>R+C: Combined treatment involving radiotherapy and chemotherapy.</p> <p>S+R+C: Combined treatment</p>	Proportion of Cases by Treatment Modality (Number of Cases in Each Treatment Modality Category / Total Number of Cancer Cases) × 100	Number of Cases in each treatment modality category	Number of provisionally classified Cancer cases at first registration during a specified period	All individuals with a confirmed diagnosis of cancer. Cases with complete information on treatment modalities used	Cases with missing or incomplete information on treatment modalities	<p>Demographic- Gender/Age Category/Geographic distribution/ Co-morbidities</p> <p>Disease related Factors- Stage/ Site/ Sub site</p>
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		involving surgery, radiotherapy, and chemotherapy. Symptomatic care: Supportive care focused on managing symptoms without curative intent.						
11	Hospital Length of Stay	Average Length of Hospital Stay for Undergoing Surgery or Inpatient Treatments	Total Number of Hospitalization Days / Total Number of Cancer Patients Undergoing Surgery or Inpatient Treatment 0073	The total number of days cancer patients spend in the hospital for surgery or other inpatient treatments during a specific period.	The total number of cancer patients who underwent surgery or received inpatient treatments during the same period.	All cancer patients who underwent surgery or received inpatient treatments. The length of stay includes the entire duration of the hospitalization related to the surgery or inpatient treatment.	Hospital stays for reasons unrelated to cancer treatment (e.g., treatment of Co-Morbid conditions). Outpatient treatments or procedures that do not require an overnight stay.	Demographic- Gender/Age Category/Geographic distribution/ Co-morbidities Disease related Factors- Stage/ Site/ Sub site Treatment related- Type of treatment (Surgery/ Chemo/Radiation/Others)

12	Palliative Care Referral	Percentage of patients referred for palliative care	(Number of patients referred for palliative care/total number of patients with metastatic disease)*100	Number of patients with Metastatic disease referred for palliative care	Total number of patients with recurrent/relapsed /advanced disease	All individuals diagnosed with metastatic cancer	Specific cases where palliative care may not be appropriate or available.	Demographic- Gender/Age Category/Geographic distribution/ Co-morbidities Disease related Factors- Stage/ Site/ Sub site
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