

Supplementary File 1. Quality Measure Definitions

Type	Measure	Source	Definition	Cohort Restrictions
Pandemic-Specific Measures	Receipt of neoadjuvant chemotherapy	Scoping literature review ¹	Proportion of patients who received some systemic therapy prior to surgery	Restrict cohort to patients who received surgery for stage III colon or stage II-IV rectal
	Laparoscopic Resection	Scoping literature review ¹	Proportion of patients who had surgical resection of colon cancer for which laparoscopy was used	Restrict cohort to only those patients who had a surgical resection for colon *Exclude: patients who had biopsy only
	Short-course radiotherapy	Scoping literature review ¹	Proportion of patients who received short course radiotherapy for rectal cancer (25Gy, 5 fractions)	Restrict cohort to patients who received radiotherapy for rectal cancer
	Oral systemic therapy	Scoping literature review ¹	Proportion of patients on systemic therapy who received at least one oral anti-cancer agent	Restrict cohort to only those patients who received systemic therapy
	Single Agent Regimens	Scoping literature review ¹	Proportion of patients who received treatment with a single-agent regimen	Restrict to patients who received systemic therapy
	Treatment deferral/interruption	Scoping literature review ¹	Proportion of patients who experienced a delay or deferral of their treatment Deferral: start of a patients' treatment was pushed to a later date as per clinic note or recorded deferral Interruption: patients who are on treatment and have an administration held or delayed for any length of time as documented in their medical chart	Deferral: restrict to patients receiving treatment (surgery, systemic therapy radiotherapy) Interruption: Restrict to patients who received at least one dose of systemic therapy or radiotherapy
	Premature discontinuation	Scoping literature review ¹	Proportion of patients who stopped treatment prior to completion of their regimen	Systemic therapy: Restrict to patients who received systemic therapy Radiotherapy: Restrict to patients who received radiotherapy
	Trial Participation	Scoping literature review ¹	Proportion of patients who participated in an interventional clinical trial	All cohort
Quality Measures	Receipt of appropriate oncology consultation	ASCO Guidelines	Proportion of patients who received consultation with appropriate oncology services for disease location (radiation, surgical, medical): <ul style="list-style-type: none"> Colon: consultation with a surgical oncologist, with or without a consultation with a medical oncologist 	All patients in cohort *Stratified by location of disease (colon, rectum, anus)

			<ul style="list-style-type: none"> • Rectum: consultation with each of a surgical oncologist AND medical oncologist AND radiation oncologist • Anus: consultations with each of a medical oncologist AND radiation oncologist 	
			*higher proportion= better care	
	30-day post-surgical readmission	CSQI	Proportion of patients who had surgical resection that experienced a readmission to our hospital in the 30 days following discharge *lower proportion= better care	Restrict cohort to only those patients who had a surgical resection of their primary by a PM surgical oncologist *Exclude patients who received a biopsy only
	Unplanned acute care visit	CSQI	Proportion of patients who had an unplanned emergency department visit or hospitalization after their first consultation at PM *lower proportion= better care	All patients in cohort
	Receipt of appropriate treatment	CSQI	proportion of patients who received appropriate treatment *3 specific scenarios: <ul style="list-style-type: none"> • Colon: proportion of patients who received treatment with surgery for stage I-III disease • Rectum: proportion of patients who received treatment with systemic therapy for stage II-IV disease • Anus: proportion of patients who received concurrent chemotherapy and radiation for stage I-III disease *higher proportion= better care	Colon: Patients with stage I-III disease Rectum: Patients with stage II-IV disease Anus: Patients with stage I-III disease
	Positive margins	CSQI	Proportion of patients who have positive surgical margins *lower proportion= better care	Restrict to patients who received surgical resection
	30-day mortality	ASCO Choosing Wisely	Proportion of patients who die within 30 days of treatment *lower proportion= better care	Systemic Therapy: restrict to patients who received at least one dose of systemic therapy Surgery: Restrict to patients who received surgical resection at PM *exclude receipt of biopsy only

	Timely oncologist consultation	Health Quality Ontario	Proportion of patients that had a consultation with an oncologist within 2 weeks of referral *higher proportion= better care	Restrict to patients with a known referral date who's first consult was with medical or radiation oncology
	Upstaging	CSQI	Proportion of patients with advanced stage disease at diagnosis *lower proportion= better care	All patients in cohort who were staged at diagnosis
	Timely receipt of treatment	CSQI	Proportion of patients who initiated treatment within 60 days of the date of their diagnosis *higher proportion= better care	Restrict to patients who received systemic therapy or radiotherapy
	Diagnosed in emergency department	AHRQ	Proportion of patients who are diagnosed as a result of an emergency department visits or hospitalization *lower proportion= better care	Restrict to those patients in the cohort with a known location of diagnosis
	Pathologically confirmed disease	ASCO QOPI	Proportion of patients with a pathology report in their medical chart confirming diagnosis *higher proportion= better care	All cohort
	Receipt of treatment for advanced disease	CPAC	Proportion of patients with stage IV disease who received treatment (surgery, systemic therapy, radiotherapy) *higher proportion= better care	Restrict to patients with stage IV disease
	Receipt of a palliative care consultation	Canadian Society for Palliative Care Physicians	Proportion of patients with advanced disease who received a consultation with palliative care *higher proportion= better care	Restrict to patients with stage IV disease
	Consent to treatment	ASCO QOPI	Proportion of patients who have evidence of consent to treatment in their medical record *higher proportion= better care	Restrict to those patients who received treatment (surgery, systemic therapy, radiotherapy) *stratify by treatment modality
	Receipt of psychosocial support	ASCO QOPI	Proportion of patients who have evidence of a psychosocial consultation *higher proportion= better care	All cohort
	Receipt of pain management support	ASCO QOPI	Proportion of patients who received a consultation for pain management *higher proportion= better care	Restrict to patients with stage IV disease

AHRQ: Agency for Healthcare Research and Quality; ASCO: American Society of Clinical Oncology; CPAC: Canadian Partnership Against Cancer; CSQI: Cancer System Quality Index; QOPI: Quality Oncology Practice Initiative

Supplementary File 2. Evaluating potential associations between patient-level sociodemographic and clinical characteristics, and overall quality score by Poisson regression with score as a count, and the number of measures the patient was eligible for as an offset

Variables		Univariate- COVID			Univariate-Comparator		
		IRR	95% CI	p-value	IRR	95% CI	p-value
Age	5-years	1.06	0.97-1.18	0.24	1.00	0.98-1.02	0.78
Sex	Male	Ref	-	-	Ref	-	-
	Female	1.05	0.95-1.16	0.35	0.99	0.90-1.08	0.80
Marital Status	Married/ common law	Ref	-	-	Ref	-	-
	Divorced	0.94	0.73-1.20	0.64	1.18	0.98-1.41	0.07
	Single	1.07	0.93-1.22	0.34	0.95	0.83-1.08	0.44
	Unknown	0.99	0.86-1.13	0.88	0.98	0.86-1.12	0.80
Language	English first language	Ref	-	-	Ref	-	-
	Other	0.97	0.84-1.12	0.70	0.94	0.82-1.07	0.38
Highest Level of Education Completed	Less than high school	1.10	0.63-1.80	0.73	1.04	0.74-1.44	0.82
	High school	0.91	0.70-1.20	0.49	0.86	0.68-1.10	0.22
	College diploma/ Undergraduate degree	0.87	0.65-1.18	0.36	0.86	0.67-1.12	0.26
	Graduate degree	Ref	-	-	Ref	-	-
	Unknown	0.87	0.68-1.12	0.25	0.84	0.68-1.03	0.09
Socioeconomic Status	1- lowest	0.94	0.81-1.10	0.47	1.02	0.89-1.17	0.76
	2	0.97	0.83-1.14	0.75	0.97	0.83-1.12	0.65
	3	0.98	0.83-1.14	0.76	0.92	0.80-1.07	0.29
	4	1.03	0.88-1.22	0.69	0.98	0.85-1.13	0.81
	5- highest	Ref	-	-	Ref	-	-
	Rural	1.01	0.79-1.27	0.96	0.91	0.70-1.16	0.44
ON-MARG: Households and Dwellings	1- least marginalized	Ref	-	-	Ref	-	-
	2	0.888	0.72-1.08	0.22	0.97	0.80-1.17	0.74
	3	0.82	0.67-1.00	0.06	0.96	0.79-1.16	0.65
	4	0.93	0.79-1.11	0.42	0.94	0.79-1.11	0.45
	5- most marginalized	0.91	0.79-1.06	0.23	1.03	0.89-1.19	0.70
ON-MARG: Material Resources	1- least marginalized	Ref	-	-	Ref	-	-
	2	0.97	0.84-1.12	0.65	0.99	0.87-1.13	0.92
	3	0.89	0.76-1.05	0.18	0.98	0.85-1.12	0.74
	4	0.98	0.84-1.14	0.80	1.00	0.86-1.15	0.95
	5- most marginalized	0.92	0.78-1.08	0.30	0.98	0.84-1.13	0.75
ON-MARK: Age and Labour Force	1-least marginalized	Ref	-	-	Ref	-	-
	2	0.97	0.84-1.11	0.61	0.98	0.86-1.13	0.82

	3	0.96	0.83-1.12	0.63	1.04	0.90-1.20	0.62
	4	0.89	0.74-1.07	0.23	1.01	0.84-1.20	0.95
	5-most marginalized	0.97	0.83-1.14	0.72	1.09	0.96-1.24	0.20
ON-MARG: Racialized and Newcomer Populations	1- least marginalized	Ref	-	-	Ref	-	-
	2	1.08	0.84-1.38	0.56	1.00	0.80-1.24	0.97
	3	1.03	0.84-1.28	0.78	1.00	0.83-1.22	0.99
	4	1.07	0.88-1.31	0.53	1.03	0.86-1.24	0.76
	5- most marginalized	1.02	0.84-1.25	0.84	1.03	0.86-1.24	0.76
Primary	Colon	Ref	-	-	Ref	-	-
	Rectum	0.91	0.81-1.02	0.12	0.91	0.82-1.00	0.05
	Anus	1.13	0.95-1.32	0.15	1.10	0.92-1.31	0.27
Stage at diagnosis	I	Ref	-	-	Ref	-	-
	II	0.98	0.82-1.17	0.83	1.00	0.86-1.18	0.96
	III	0.90	0.77-1.06	0.19	1.03	0.89-1.19	0.73
	IV	0.74	0.64-0.87	<0.01	0.76	0.66-0.88	<0.01
ECOG Performance Status	0	Ref	-	-	Ref	-	-
	1	0.93	0.80-1.09	0.37	0.99	0.88-1.11	0.88
	2	0.68	0.50-0.92	0.01	0.85	0.70-1.02	0.09
	3	0.84	0.64-1.09	0.20	0.88	0.72-1.08	0.23
	4	1.05	0.41-2.15	0.91	0.97	0.35-2.10	0.95

IRR: incident rate ratio; ON-MARG: Ontario Marginalization Index; ECOG: Eastern Cooperative Oncology Group