

QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
CORE 1 Certification	Pathology report confirming malignancy*	Pathology/ hematopathology report or cytology report confirming malignancy = Null	Core patients	Pathology/hematopathology report or cytology report confirming malignancy = Yes, cytology report OR Pathology/hematopathology report or cytology report confirming malignancy = Yes, pathology/hematopathology report OR Pathology/hematopathology report or cytology report confirming malignancy = Yes, both cytology and pathology /hemato-pathology report	ASTRO/ASCO/AMA PCPI Oncology Measure #10: Pathology Report, (Adapted) https://www.acr.org/~media/ACR/Documents/P4P/PerformanceMeasures/OncologyMeasureSet.pdf http://thepcpi.site-ym.com/?page=Measures QOPI® Consensus
CORE 2 Certification	Staging documented within one month of first office visit*	(Cancer Stage Documented = Null OR Cancer Stage Documented = Documentation of cancer stage at diagnosis NOT present in medical record) AND (Most Recent Visit - First Office Visit) < 31 days) OR Patient with leukemia, myeloma, or MDS (dx. C90.00 – C95.92, D46.0-D46.9) OR First Office Visit = Null	Core patients	Cancer Stage Documented = Documentation of cancer stage at diagnosis present in medical record AND (Cancer stage documented date - First Office Visit) ≤ 31 days	NQF endorsed Measure 0386: Oncology: Cancer Stage Documented (AMA PCPI, ASCO) (Adapted) http://www.qualityforum.org/QPS/0386 ASTRO/ASCO/AMA PCPI Oncology Measure #10: Pathology Report (Adapted) https://www.acr.org/~media/ACR/Documents/P4P/PerformanceMeasures/OncologyMeasureSet.pdf http://thepcpi.site-ym.com/?page=Measures QOPI® Consensus

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Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

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CORE 3	Pain assessed by second office visit	Pain assessed first 2 office visits = Null	Core patients	Pain assessed first 2 office visits = Practitioner notation, patient had NO pain OR Pain assessed first 2 office visits = Practitioner notation, patient had pain	National Comprehensive Cancer Center (NCCN) Practice Guidelines in Oncology™. Adult Cancer Pain, V.1.2014 http://www.nccn.org/professionals/physician_gls/pdf/pain.pdf Tools: http://university.asco.org/pain-management-program
CORE 4a	Pain intensity quantified by second office visit	Specify whether pain intensity quantified, first 2 visits = Null	Core patients AND (Pain assessed first 2 office visits = Notation, patient had pain OR Pain assessed, first 2 office visits = Notation, patient had NO pain)	Specify whether pain intensity quantified, first 2 visits = Pain intensity quantified OR Pain assessed, first 2 office visits = Notation, patient had NO pain	Measure 3 NQF endorsed Measure 0384: Oncology: Pain Intensity Quantified – Medical Oncology and Radiation Oncology (AMA PCPI, ASCO) (Adapted) http://www.qualityforum.org/QPS/0384
CORE 5	Plan of care for moderate/severe pain documented	Pain assessed first 2 office visits = Null OR Plan for pain documented = Null	Core patients AND Pain assessed first 2 office visits = Practitioner notation, patient had pain AND Specify whether pain intensity quantified, first 2 visits = Pain intensity quantified AND Pain intensity = moderate or severe	Plan for pain documented, first 2 office visits = Yes	Measure 3 NQF endorsed Measure 0383: Oncology: Plan of Care for Pain – Medical Oncology and Radiation Oncology http://www.qualityforum.org/QPS/0383

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CORE 6 Certification	Pain addressed appropriately* (Defect-free measure 3, 4a, and 5)	None	Core patients	Notation, patient had no pain OR (Notation, patient had pain AND Pain intensity quantified AND Pain intensity = mild) OR (Practitioner notation, patient had pain AND Pain intensity quantified AND Pain intensity = Moderate or Severe AND Plan for pain documented=Yes)	Measures 3, 4a, 5
CORE 6a Certification	Pain assessed on either of the two most recent office visits*	None	Core patients AND Pain assessed, 2 most recent office visits is not = Null	Pain assessed, 2 most recent office visits = Notation, patient had NO pain OR Pain assessed, 2 most recent office visits = Notation, patient had pain	Measure 3
CORE 6b	Pain intensity quantified on either of the two most recent office visits	None	Core patients AND (Pain assessed, 2 most recent office visits = Notation, patient had NO pain OR Pain assessed, 2 most recent office visits = Notation, patient had pain)	Specify whether pain intensity quantified, 2 most recent office visits = Pain intensity quantified OR Pain assessed, 2 most recent office visits = Notation, patient had NO pain	Measure 4a

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CORE 6c	Plan of care for moderate/severe pain documented on either of the two most recent office visits	Pain assessed either of two most recent office visits = Null OR Plan for pain documented, two most recent office visits = Null	Core patients AND Pain assessed, 2 most recent office visits = Notation, patient had pain AND Specify whether pain intensity quantified, 2 most recent office visits = Pain intensity quantified AND ((Enter highest pain intensity, 2 most recent office visits = Moderate (4-6) OR Enter highest pain intensity, 2 most recent office visits = Severe (7-10))	Plan for pain documented, 2 most recent office visits = Yes	Measures 3, 5
CORE 6d	Pain addressed appropriately on either of the two most recent office visits (Defect-free measure 6a, 6b, and 6c)	None	Core patients AND Pain assessed either of two most recent office visits is not Null	Notation, patient had no pain 2 most recent office visits OR (Notation, patient had pain 2 most recent office visits AND Pain intensity quantified 2 most recent office visits AND Pain intensity = mild 2 most recent office visits) OR (Notation, patient had pain 2 most recent office visits AND Pain intensity quantified 2 most recent office visits AND	Measures 3, 4a, 5

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				Pain intensity = Moderate or Severe 2 most recent office visits AND Plan for pain documented= Yes, 2 most recent office visits)	
CORE 6e	Pain addressed appropriately by second office visit and during most recent office visits (Defect-free measure 6 and 6d)	None	All Core patients	((Notation, patient had no pain by 2nd office visit OR (Notation, patient had pain by 2nd office visit AND Pain intensity quantified by 2nd office visit AND Pain intensity = Mild by 2nd office visit) OR (Notation, patient had pain by 2nd office visit AND Pain intensity quantified by 2nd office visit AND Pain intensity = Moderate or Severe AND Plan for pain documented = Yes 2nd office visit)) AND (Notation, patient had no pain most recent office visit OR (Notation, patient had pain most recent office visit AND	Measures 3, 4a, 5

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				Pain intensity quantified most recent office visit AND Pain intensity = mild most recent office visit) OR (Notation, patient had pain most recent office visit AND Pain intensity quantified most recent office visit AND Pain intensity = Moderate or Severe AND Plan for pain documented most recent office visit=Yes))	
CORE 7	Effectiveness of narcotic assessed on visit following prescription	Effectiveness of narcotic assessed on visit following prescription = N/A - No second visit or narcotic not taken OR Effectiveness of narcotic assessed on visit following prescription = Null	Core patients AND Narcotic analgesic prescription written in past 6 months = Yes	Effectiveness of narcotic assessed on visit following prescription = Yes	National Comprehensive Cancer Center (NCCN) Practice Guidelines in Oncology™. Adult Cancer Pain, V.1.2014 http://www.nccn.org/professionals/p_hysician_gls/pdf/pain.pdf

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CORE 8	Constipation assessed at time of narcotic prescription or following visit	(Constipation discussed when prescription written = No AND Narcotic induced constipation assessed on visit following prescription = N/A - No second visit or narcotic not taken) OR (Constipation discussed when prescription written = Null AND Narcotic induced constipation assessed on visit following prescription = Null)	Core patients AND Narcotic analgesic prescription written in past 6 months = Yes	Constipation discussed when prescription written = Yes OR Narcotic induced constipation assessed on visit following prescription = Yes	Measure 7
CORE 9 Certification	Documented plan for chemotherapy, including doses, route, and time intervals*	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care AND Gynonc patient ≠ Yes) OR Plan documented = Null	Core Patients AND (Chemotherapy administered during initial treatment course = Chemotherapy administered OR Chemotherapy administered during initial treatment course (Breast cancer) = chemotherapy administered OR Chemotherapy administered during initial treatment course (NSCLC) = Chemotherapy administered OR (Gynonc patient = Yes AND Patient ever received chemotherapy for this diagnosis = Yes, patient has	Plan documented = Chemotherapy regimen/drugs AND Plan documented = Doses AND Plan documented = Route AND Plan documented = Time intervals	ASCO Treatment Plan and Summary Templates http://www.asco.org/practice-guidelines/cancer-care-initiatives/prevention-survivorship/survivorship-compendium NICCQ Measure G-2B1: IF a patient is treated with chemotherapy, THEN the planned dose (dose per cycle x number of cycles) should be documented in the medical oncology or integrated record. (Adapted) Results of the National Initiative for Cancer Care Quality: How Can We Improve the Quality of Cancer Care in the United States? Jennifer L. Malin, Eric C. Schneider, Arnold M. Epstein, John Adams, Ezekiel J. Emanuel, Katherine L. Kahn

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			received chemotherapy in or overseen by the reporting practice))		DOI: 10.1200/JCO.2005.03.3365 Journal of Clinical Oncology 24, no. 4 (February 2006) 626-634. http://jco.ascopubs.org/cgi/content/abstract/24/4/626 ASTRO/ASCO/AMA PCPI Oncology Measure (Adapted) https://www.acr.org/Advocacy-and-Economics/ACR-Position-Statements/Quality-Control-and-Improvement
CORE 10 Certification	Chemotherapy intent (curative vs. non-curative) documented before or within two weeks after administration*	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care AND Gynonc patient ≠ Yes) OR Documented chemotherapy intent within 60 days prior or 14 days after chemotherapy administration = Null OR Intent = No, 14 days has not passed after chemotherapy administration Exclusions: <ul style="list-style-type: none"> • Patient transfer to practice during or after initial course of treatment • Patient did not receive chemo 	Core Patients AND ((Chemotherapy administered during initial treatment course = Chemotherapy administered OR Chemotherapy administered during initial treatment course (Breast cancer) = Chemotherapy administered OR Chemotherapy administered during initial treatment course (NSCLC) = Chemotherapy administered) OR Gynonc patient = Yes AND Patient ever received chemotherapy for this diagnosis = Yes, patient has received chemotherapy in or overseen by the reporting practice))	Documented chemotherapy intent within 60 days prior or 14 days after administration of chemotherapy = Curative/adjuvant/neoadjuvant OR Documented chemotherapy intent within 60 days prior or 14 days after administration of chemotherapy = Non-curative	Institute of Medicine. Delivering High-Quality Cancer Care. 2013. http://www.iom.edu/reports/2013/delivering-high-quality-cancer-care-charting-a-new-course-for-a-system-in-crisis.aspx Tools: http://university.asco.org/chemotherapy-safety-standards

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CORE 11 Certification	Chemotherapy intent discussion with patient documented*	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care AND Gynonc patient ≠ Yes) OR Chemotherapy intent within 60 days prior or 14 days after chemotherapy administration = Null	Core Patients AND (Chemotherapy administered during initial treatment course = chemotherapy administered OR (Gynonc patient = Yes AND Patient ever received chemotherapy for this diagnosis = Yes, patient has received chemotherapy in or overseen by the reporting practice))	Chemotherapy intent discussed with patient = Yes, discussion documented	QOPI® Consensus
CORE 12	Number of chemotherapy cycles documented	Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care AND Gynonc patient ≠ Yes	Core Patients AND (Chemotherapy administered during initial treatment course = chemotherapy administered OR (Gynonc patient = Yes AND Patient ever received chemotherapy for this diagnosis = Yes, patient has received chemotherapy in or overseen by the reporting practice)) AND Documented chemotherapy intent = Curative/adjvant/neoadjuvant	Plan documented = Cycles	ASCO Treatment Plan and Summary Templates http://www.asco.org/practice-guidelines/cancer-care-initiatives/prevention-survivorship/survivorship-compendium ASTRO/ASCO/AMA PCPI Oncology Measure (Adapted) http://ascopubs.org/doi/full/10.1200/jop.0766001 http://thepcpi.site-ym.com/?page=Measures QOPI® Consensus

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Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
CORE 13	Chemotherapy planning completed appropriately (Defect-free measure 9, 10, and 12)	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care AND Gynonc not applicable)	Core Patients AND ((Chemotherapy administered during initial treatment course = Chemotherapy administered) OR Patient ever received chemotherapy = Yes, in or overseen by the practice (GYNONC))	(Plan documented: Drugs = Yes AND Dose = Yes AND Route = Yes AND Time = Yes AND Documented chemotherapy intent = Palliation) OR (Plan documented: Drugs = Yes AND Dose = Yes AND Route = Yes AND Time = Yes AND Documented chemotherapy intent = Curative/adjuvant/neoadjuvant AND Plan documented: Cycles = Yes)	ASCO Treatment Plan and Summary Templates http://www.asco.org/practice-guidelines/cancer-care-initiatives/prevention-survivorship/survivorship-compendium Measures 9, 10, and 12

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CORE 13aa	Performance status documented prior to initiating chemotherapy regimen (Test Measure)	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care AND Gynonc not applicable)	Core Patients AND Top 5 Test Core Measures AND ((Chemotherapy administered during initial treatment course = Chemotherapy administered) OR Patient ever received chemotherapy = Yes, in or overseen by the practice (GYNONC))	Performance status documented within 2 weeks of the initial chemotherapy = 0 / 100% / Normal activity OR 1 / 80-90% / Symptoms but nearly ambulatory OR 2 / 60-70% / Bed time, <50% daytime OR 3 / 40-50% / Bed time, >50% OR 4 / 10-30% / Unable to get out of bed	Lowell E. Schnipper, Thomas J. Smith, Derek Raghavan, Douglas W. Blayney, Patricia A. Ganz, Therese Marie Mulvey and Dana S. Wollins. American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology. JCO May 10, 2012 vol. 30 no. 14 1715-1724 http://jco.ascopubs.org/content/30/14/1715.full?sid=75ea12b4-ce20-4407-aa4c-c5a2adca5af5 Expert consensus.
CORE 13a1	Chemotherapy administered to patients with metastatic solid tumor with performance status of 3, 4, or undocumented (Lower Score - Better) (Top 5 measure)	Diagnosis of Malignant neoplasm of placenta/trophoblastic neoplasm, testicular carcinoma (Diagnosis codes (C58, C62.00, C62.10, C62.90, C81.00 - C86.6, C90.0 - C90.01, C90.10 - C95.92, D46.0 - D46.9, D47.1, D47.3)	Core AND Solid tumor ICD code list AND ((Intent not documented AND Stage IV at initial diagnosis or development of distant metastases = Yes) OR Intent = non-curative) AND Patient received chemotherapy for stage IV or distant metastatic disease	(Performance status documented within 2 weeks of most recent chemotherapy administration for distant metastatic disease = 3 or 4 OR Not documented) AND (Patient received chemotherapy for metastatic disease as part of IRB approved protocol = No OR Patient received chemotherapy for metastatic disease as part of IRB approved protocol = Unknown)	Lowell E. Schnipper, Thomas J. Smith, Derek Raghavan, Douglas W. Blayney, Patricia A. Ganz, Therese Marie Mulvey and Dana S. Wollins. American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology. JCO May 10, 2012 vol. 30 no. 14 1715-1724 http://jco.ascopubs.org/content/30/14/1715.full?sid=75ea12b4-ce20-4407-aa4c-c5a2adca5af5

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Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
CORE 13a1a	Chemotherapy administered to patients with metastatic solid tumor with performance status of 3 or 4 <i>(Lower Score - Better)</i> (Top 5 Measure)	Diagnosis of Malignant neoplasm of placenta/trophoblastic neoplasm, testicular carcinoma, leukemia, Hodgkin and non-Hodgkin lymphoma <i>(Diagnosis codes (C58, C62.00, C62.10, C62.90, C81.00 - C86.6, C90.0 - C90.01, C90.10 - C95.92, D46.0 - D46.9, D47.1, D47.3))</i>	Core AND Solid tumor ICD code AND Stage IV at initial diagnosis or development of distant metastases = Yes AND Patient received chemotherapy for stage IV or distant metastatic disease	Performance status documented within 2 weeks of most recent chemotherapy administration for distant metastatic disease = 3 or 4 AND Patient received chemotherapy for metastatic disease as part of IRB approved protocol = No or Unknown	American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724. http://jco.ascopubs.org/content/30/14/1715.full?sid=62928c8e-80f4-47cd-9ab8-bd60994d6de7
CORE 13a1b	Chemotherapy administered to patients with metastatic solid tumor with performance status undocumented <i>(Lower Score - Better)</i> (Top 5 Measure)	Diagnosis of Malignant neoplasm of placenta/trophoblastic neoplasm, testicular carcinoma, leukemia, Hodgkin and non-Hodgkin lymphoma <i>(Diagnoses codes C58, C62.10, C62.90, C81.00 - C86.6, C90.0 - C90.01, C90.10 - C95.92, D46.0 - D46.9, D47.1, D47.3)</i>	Core AND Solid tumor ICD code list AND Stage IV at initial diagnosis or development of distant metastases = Yes AND Patient received chemotherapy for stage IV or distant metastatic disease	Performance status undocumented within 2 weeks of most recent chemotherapy administration for distant metastatic disease = Not documented AND Patient received chemotherapy for metastatic disease as part of IRB approved protocol = No or Unknown	American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724. http://jco.ascopubs.org/content/30/14/1715.full?sid=62928c8e-80f4-47cd-9ab8-bd60994d6de7

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Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
CORE 13oc4	Documented plan for oral chemotherapy (Defect-free Measure CORE13oral4a - CORE13oral4d) (Test Measure)	Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care AND Gynonc not applicable	Core Patients AND Chemotherapy administered during initial treatment AND Route = Oral AND Opt-in for oral Test Measures	Plan documented = Anti-neoplastic regimen/drugs AND Plan documented = Doses AND Plan documented = Cycles AND Plan documented = Time intervals AND Plan documented = Schedule and start date AND Plan documented = Indications AND (Plan of anti-neoplastic provided to patient prior to start of therapy = Yes OR Plan of anti-neoplastic provided to caregiver prior to start of therapy = Yes or N/A) AND Plan of anti-neoplastic provided to practitioner(s)(PCP)within 3 months of starting therapy= Yes or N/A)	NICCQ Measure G-2B1: IF a patient is treated with chemotherapy, THEN the planned dose (dose per cycle x number of cycles) should be documented in the medical oncology or integrated record. (Adapted) http://jco.ascopubs.org/cgi/content/abstract/24/4/626 Medication errors involving oral chemotherapy Saul N. Weingart MD, PhD1,2,* ,†, Julio Toro RN, BSN3,4, Justin Spencer MPA1, Deborah Duncombe MHP1, Anne Gross MS, RN1,3,4, Sylvia Bartel RPh, MHP1, Jeremy Miransky PhD5, Ann Partridge MD, MPH1,2, Lawrence N. Shulman MD1,2, Maureen Connor RN,MPH1 http://onlinelibrary.wiley.com/doi/10.1002/cncr.25027/full Oral chemotherapy safety practices at US cancer centres: questionnaire survey. Saul N Weingart, vice president for patient safety1, Jonathan Flug, medical student2, Daniela Brouillard, administrative assistant1, Laurinda Morway, research coordinator1, Ann Partridge, staff physician, Sylvia Bartel, pharmacy director, Lawrence N Shulman, chief medical officer, Maureen Connor, vice president for quality improvement and risk management http://www.bmj.com/content/334/7590/407.abstract?searchid=1&HITS=10&hits=10&resourcetype=HWCIT&maxtoshow=&RESULTFORMAT=&FIRSTIND EX=0&fulltext=weingart

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Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
CORE 13oc4a Certification	Documented plan for oral chemotherapy: Dose*	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care and Gynonc not applicable)	Core Patients AND Chemotherapy administered during initial treatment course AND Route = Oral AND Opt-in for oral Test Measures	Plan documented = Doses	Measure 13oc4
CORE 13oc4b Certification	Documented plan for oral chemotherapy: Administration schedule (start day, days of treatment/rest and planned duration) *	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care and Gynonc not applicable)	Core Patients AND Chemotherapy administered during initial treatment AND Route = Oral AND Opt-in for oral Test Measures	Plan documented = schedule and start date AND Plan documented = time intervals AND Plan documented = cycles	Measure 13oc4
CORE 13oc4c	Documented plan for oral chemotherapy provided to patient/caregiver prior to start of therapy and practitioner(s) providing continuing care (PCP) within 3 months of starting therapy (Test Measure)	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care and Gynonc not applicable)	Core Patients AND Chemotherapy administered during initial treatment course AND Route = Oral AND Opt-in for oral Test Measures	Plan for chemotherapy provided to patient prior to start of therapy = Yes AND Plan for chemotherapy provided to caregiver prior to start of therapy = Yes or N/A AND Plan for chemotherapy provided to practitioner(s) (PCP) within 3 months of starting therapy = Yes or N/A	Measure 13oc4

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CORE 13oc4d	Documented plan for oral chemotherapy: Indications	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care and Gynonc not applicable)	Core Patients AND Chemotherapy administered during initial treatment course AND Route = Oral AND Opt-in for oral Test Measures	Plan documented = indications	Measure 13oc4
CORE 13oc5	Oral chemotherapy education provided prior to the start of therapy (Defect-free Measure 13oc5a - 13oc5c)	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care and Gynonc not applicable)	Core Patients AND Chemotherapy administered during initial treatment AND Route = Oral AND Opt-in for oral Test Measures	Patient education = management of missed doses AND Patient education = toxicities AND Patient education = when and how to contact clinic	Measure 13oc4
CORE 13oc5a	Oral chemotherapy education provided prior to the start of therapy: Missed doses	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care and Gynonc not applicable)	Core Patients AND Chemotherapy administered during initial treatment AND Route = Oral AND Opt-in for oral Test Measures	Patient education = management of missed doses	Measure 13oc4
CORE 13oc5b	Oral chemotherapy education provided prior to the start of therapy: Toxicities	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care and Gynonc not applicable)	Core Patients AND Chemotherapy administered during initial treatment AND Route = Oral AND Opt-in for oral Test Measures	Patient education = toxicities	Measure 13oc4

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CORE 13oc5c	Oral chemotherapy education provided prior to the start of therapy clinic contact instructions	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care and Gynonc not applicable)	Core Patients AND Chemotherapy administered during initial treatment course AND Route = Oral AND Opt-in for oral Test Measures	Patient education = when and how to contact clinic	Measure 13oc4
CORE 13oc6	Oral chemotherapy monitored on visit/contact following start of therapy (Defect-free Measure 13oc6a -13oc6b)	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care and Gynonc not applicable) OR Oral chemotherapy start date = Null OR Oral chemotherapy start date = No visit/contact following prescription OR Medication adherence assessed = No visit/contact following prescription	Core Patients AND Chemotherapy administered during initial treatment course AND Route = Oral AND Opt-in for oral Test Measures	Oral chemotherapy start date = Yes AND Medication adherence assessed = Notation, patient did adhere to oral chemotherapy regimen) OR (Medication adherence assessed = Notation, patient did NOT adhere to oral chemotherapy regimen AND Plan for medication adherence = Yes)	Measure 13oc4

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Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
CORE 13oc6a	Oral chemotherapy monitored on visit/contact following start of therapy: Medication adherence assessed	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care and Gynonc not applicable) OR Medication adherence assessed = No visit/contact following prescription	Core Patients AND Chemotherapy administered during initial treatment course AND Route = Oral AND Opt-in for oral Test Measures	Medication adherence assessed = Notation, patient did adhere to oral chemotherapy regimen OR Medication adherence assessed = Notation, patient did NOT adhere to oral chemotherapy regimen	Measure 13oc4
CORE 13oc6b	Oral chemotherapy monitored on visit/contact following start of therapy: Medication adherence addressed	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care and Gynonc not applicable) OR Medication adherence assessed = No visit/contact following prescription	Core Patients AND Chemotherapy administered during initial treatment course AND Route = Oral AND Opt-in for oral Test Measures AND Medication adherence assessed = Notation, patient did NOT adhere to oral chemotherapy regimen	Plan to address medication adherence = Yes	Measure 13oc4

*QOPI® Certification Measure

Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
CORE 14	Signed patient consent for chemotherapy	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care AND GynOnc patient ≠ Yes) OR Consent documentation = Null	Core Patients AND (Chemotherapy administered during initial treatment course = chemotherapy administered) OR Gynonc patient = Yes) AND Patient ever received chemotherapy for this diagnosis = Yes, patient has received chemotherapy in or overseen by the reporting practice	Consent documentation = Signed consent form in chart	QOPI® Consensus Informed Consent for Chemotherapy: ASCO Member Resources J Oncol Pract 2008 vol. 4 no. 6: 289-295 http://jop.ascopubs.org/cgi/content/full/4/6/289 Obtaining Consent for Chemotherapy. British Journal of Haematology 2006; 132(5) 552-559 http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2141.2005.05874.x/abstract Tools: http://university.asco.org/chemotherapy-safety-standards
CORE 15	Patient consent documented in practitioner note	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care AND GynOnc patient ≠ Yes) OR Consent documentation = Null	Core Patients AND (Chemotherapy administered during initial treatment course = Chemotherapy administered) OR Gynonc patient = Yes) AND Patient ever received chemotherapy for this diagnosis = Yes, patient has received chemotherapy in or overseen by the reporting practice	Consent documentation = Patient consent documented in practitioner note	Measure 14

*QOPI® Certification Measure

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
CORE 16 Certification	Patient consent for chemotherapy* (Combined measure 14 or 15)	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care and Gynonc not applicable) OR Consent documented = Null	Core Patients AND ((Chemotherapy administered during initial treatment course = Chemotherapy administered) OR Patient ever received chemotherapy = Yes, in or overseen by the practice (GYNONC*))	Consent documentation = Signed consent form in chart OR Consent documentation = Patient consent documented in practitioner note	Measure 14
CORE 17	Chemotherapy Summary completed within 3 months of chemotherapy end	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care AND Gynonc patient ≠ Yes) OR (Chemotherapy summary completed = Treatment summary NOT completed AND ((Date of abstraction - Date chemotherapy ended) < 93 days OR (Date of Death ≠ Null AND (Date of Death - Date chemotherapy ended) < 93 days) OR Chemotherapy intent = palliation)) OR	Core Patients AND (Chemotherapy administered during initial treatment course = chemotherapy administered OR (Gynonc patient = Yes AND Patient ever received chemotherapy for this diagnosis = Yes, patient has received chemotherapy in or overseen by the reporting practice)) AND (Initial chemotherapy end date = chemotherapy regimen discontinued or completed OR (Initial chemotherapy end date = Regimen ongoing AND Chemotherapy summary completed = Treatment summary completed))	Chemotherapy summary completed = Treatment summary completed AND ((Date Treatment Summary Completed ≠ Null AND Date chemotherapy ended ≠ Null AND (Date Treatment Summary Completed - Date chemotherapy ended) ≤ 93 days) OR Date chemotherapy ended = Null) <i>Note: If date treatment summary complete or chemotherapy end date are unknown - the chart is non-concordant with the Measure</i>	ASCO's Library of Treatment Plans and Summaries Expands DOI: 10.1200/JOP.0816001 Journal of Oncology Practice 4, no. 1 (January 2008) 31-36. http://ascopubs.org/doi/pdf/10.1200/JOP.0816001 Developing the ASCO Lung Cancer Treatment Plans and Summaries Journal of Oncology Practice 5, no. 3 (May 2009) 146-146. http://ascopubs.org/doi/pdf/10.1200/JOP.0936001 ASCO Treatment Plan and Summary Templates http://www.asco.org/practice-guidelines/cancer-care-initiatives/prevention-survivorship/survivorship-compendium Developing the Medical Oncology Treatment Plan and Summary http://ascopubs.org/doi/pdf/10.1200/jop.2006.2.2.95 From Cancer Patient to Cancer Survivor: Lost in Transition. Maria Hewitt, Sheldon Greenfield, and Ellen Stovall, Editors, Committee on Cancer Survivorship:

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		Reason for stopping treatment = Death			Improving Care and Quality of Life, Institute of Medicine and National Research Council. The National Academies Press 2005 http://iom.nationalacademies.org/Reports/2005/From-Cancer-Patient-to-Cancer-Survivor-Lost-in-Transition.aspx
CORE 18	Chemotherapy Summary provided to patient within 3 months of chemotherapy end	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care AND Gynonc patient ≠ Yes) OR (Treatment summary provided to patient = No AND ((Date of abstraction - Date chemotherapy ended) < 93 days OR (Date of Death ≠ Null AND (Date of Death - Date chemotherapy ended) < 93 days))) OR (Chemotherapy summary completed = Treatment summary NOT completed AND ((Date of abstraction - Date chemotherapy ended) < 93 days OR (Date of Death ≠ Null AND	Core Patients AND (Chemotherapy administered during initial treatment course = Chemotherapy administered OR (Gynonc patient = Yes AND Patient ever received chemotherapy for this diagnosis = Yes, patient has received chemotherapy in or overseen by the reporting practice)) AND (Initial chemotherapy end date = chemotherapy regimen discontinued or completed OR (Initial chemotherapy end date = Regimen is ongoing AND Chemotherapy summary completed = Treatment summary completed))	Treatment Summary Provided = Treatment summary provided to patient = Yes AND ((Date treatment summary provided to patient ≠ Null AND Date chemotherapy ended ≠ Null AND (Date treatment summary provided to patient - Date chemotherapy ended) ≤ 93 days) OR Date chemotherapy ended = Null)	Measure 17

*QOPI® Certification Measure

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QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		(Date of Death - Date chemotherapy ended) < 93 days) OR Chemotherapy intent = palliation)) OR Reason for stopping treatment = Death			
CORE 19	Chemotherapy Summary provided or communicated to practitioner(s) within 3 months of chemotherapy end	(Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care AND Gynonc patient ≠ Yes) OR Treatment summary provided or communicated to practitioner(s) = N/A OR (Treatment summary provided or communicated to practitioner(s) = No AND ((Date of abstraction - Date chemotherapy ended) < 93 days OR (Date of Death ≠ Null AND (Date of Death - Date chemotherapy ended) < 93 days))) OR (Chemotherapy summary completed = Treatment summary NOT completed	Core Patients AND (Chemotherapy administered during initial treatment course = Chemotherapy administered OR (Gynonc patient = Yes AND Patient ever received chemotherapy for this diagnosis = Yes, patient has received chemotherapy in or overseen by the reporting practice)) AND (Initial chemotherapy end = Chemotherapy regimen discontinued or completed OR (Initial chemotherapy end = Regimen is ongoing AND Chemotherapy summary completed = Treatment summary completed))	Treatment summary provided or communicated to practitioner(s) = Yes AND Date treatment summary provided or communicated to practitioner(s) ≠ Null AND Date chemotherapy ended ≠ Null AND ((Date treatment summary provided or communicated to practitioner(s) ≠ Null AND Date chemotherapy ended ≠ Null AND (Date treatment summary provided or communicated to practitioner(s) - Date chemotherapy ended) ≤ 93 days) OR Date chemotherapy ended = Null)	Measure 17

*QOPI[®] Certification Measure

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		AND ((Date of abstraction - Date chemotherapy ended) < 93 days OR (Date of Death ≠ Null AND (Date of Death - Date chemotherapy ended) < 93 days) OR Chemotherapy intent = palliation)) OR Reason for stopping treatment = Death			
CORE 20	Chemotherapy Summary process completed within 3 months of Chemotherapy end (Defect-free measure 17, 18, and 19)	Chemotherapy summary = Null OR ((Treatment summary completed = No OR Treatment summary provided to pt = No OR Treatment summary to practitioner(s) = No) AND (Date of abstraction - chemotherapy end date (Core) < 93 days OR Date of death – chemotherapy end date (Core) < 93 days) OR Chemotherapy intent = palliative)) OR Reason stopping treatment = death <i>Exclusions:</i>	Core Patients AND (Chemotherapy administered during initial treatment course = Chemotherapy administered OR (Gynonc patient = Yes AND Patient ever received chemotherapy for this diagnosis = Yes, patient has received chemotherapy in or overseen by the reporting practice)) AND (Initial chemotherapy end = chemotherapy regimen discontinued or completed OR (Initial chemotherapy end = Regimen is ongoing AND	(Treatment summary completed = Yes AND (Treatment summary date - chemotherapy end date ≤ 93 days OR Chemotherapy end date is Null) AND Treatment summary provided to patient = Yes AND (Treatment summary to patient date – chemotherapy end date (Core) ≤ 93 days) or Chemotherapy end date is Null) AND ((Treatment summary to practitioner(s) = Yes AND	QOPI® Consensus Measure 17

*QOPI® Certification Measure

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		<ul style="list-style-type: none"> • Patient transfer to practice during or after initial course of treatment • Patient did not receive chemo or chemo not complete • Patient received chemo for palliation only. • Not enough time elapsed • Patient died 	Chemotherapy summary completed = Treatment summary completed))	(Treatment summary to practitioner date – Chemotherapy end date (Core) ≤ 93 days) or Chemotherapy end date is Null) OR Treatment summary to practitioner(s)= N/A)	
CORE 21aa Certification	Smoking status/ Tobacco use documented in past year*	Date of smoking status and tobacco use assessed = Null	Core Patients AND Aged 18 or older at time of most recent visit	Smoking/Tobacco use status documented within a year (365 days) of most recent office visit = Yes	NQF endorsed Measure 0028: Preventive Care & Screening: Tobacco Use: Screening & Cessation Intervention (AMA PCPI) (Adapted) http://www.qualityforum.org/QPS/0028 AMA Physician Consortium for Physician Improvement - Preventive Care and Screening Measures (Adapted) https://www.thepcpi.org/pcpi/media/PCPI-Maintained-Measures/Preventive-Care-and-Screening-Updated-June-2016.pdf American Academy of Family Physicians (AAFP). Summary of recommendations for clinical preventive services. Leawood (KS): American Academy of Family Physicians (AAFP); 2013 July. http://www.aafp.org/patient-care/clinical-recommendations/cps.html

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
CORE 22aa	Smoking/tobacco use cessation counseling recommended to smokers/tobacco users in past year	None	Core Patients AND Aged 18 or older at time of most recent visit AND Smoking/Tobacco use status documented within a year (365 days) of most recent office visit AND Smoker, Tobacco use = Smoker or tobacco use, while under the care of the practice	Advice to quit or cessation strategies discussed or recommended within a year (365 days) of most recent visit = Yes	Measure CORE21aa Fiore MC, Jaén CR, Baker TB, et al. Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service. May 2008. http://www.ahrq.gov/professionals/clinicians-providers/guidelines-recommendations/tobacco/index.html Electronic Nicotine Delivery Systems: A Policy Statement From the American Association for Cancer Research and the American Society of Clinical Oncology http://jco.ascopubs.org/cgi/doi/10.1200/JCO.2014.59.4465
CORE 22bb	Tobacco Cessation counseling administered or patient referred in past year	None	Core Patients AND Aged 18 or older at time of most recent visit AND Smoking/Tobacco use status documented within a year (365 days) of most recent office visit AND Smoker, Tobacco use = Smoker or tobacco use, while under the care of the practice	Tobacco cessation assistance provided by the practice or patient referred in a year (365 days) or most recent office visit = Yes	Measure 21aa

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
CORE 23aa	Smoking/tobacco use cessation administered appropriately in past year (Defect-free measure 21aa, 22aa, and 22bb)	Date of smoking status and tobacco use assessed = Null	Core Patients AND Aged 18 or older at time of most recent visit	((Smoking/Tobacco use status documented within a year (365 days) of most recent office visit AND (Smoking/Tobacco status = Former smoker or tobacco use OR Never smoked or used tobacco)) OR ((Smoking/Tobacco use status documented within a year (365 days) of most recent office visit AND (Smoking/Tobacco status = Smoker or tobacco use, while under the care of the practice OR Smoker or tobacco use, while under the care of the practice: Former smoker or tobacco use)) AND Advice to quit or cessation strategies discussed or recommended within a year (365 days) of most recent visit AND Tobacco cessation assistance provided by the practice or patient referred in a year (365 days) or most recent office visit)	Measure 21aa

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Core 24 Certification	Patient emotional well-being assessed by the second office visit*	Emotional well-being assessed = Null	All Core patients	Emotional well-being assessed = Documented, patient had problems with emotional well-being OR Emotional well-being assessed = Documented, patient had NO problems with emotional well-being	American Psychosocial Society Institute of Medicine (IOM) Report – October 2007 Cancer Care for the Whole Patient: Meeting Psychosocial Health Needs http://iom.nationalacademies.org/Reports/2007/Cancer-Care-for-the-Whole-Patient-Meeting-Psychosocial-Health-Needs.aspx NCCN Clinical Practice Guidelines in Oncology™. Distress Management. V.2.2016 https://www.nccn.org/professionals/physician_gls/pdf/distress.pdf http://www.nccn.org/professionals/physician_gls/f_guidelines.asp The New Standard of Quality Cancer Care: Integrating the Psychosocial Aspects in Routine Cancer from Diagnosis Through Survivorship. The Cancer Journal. Vol 14, Issue 6, November/December 2008 http://journals.lww.com/journalppo/Abstract/2008/11000/The_New_Standard_of_Quality_Cancer_Care_.13.aspx
Core 25 Certification	Action taken to address problems with emotional well-being by the second office visit*	Emotional well-being addressed = Null	Core Patients AND Emotional well-being assessed = Documented, patient had problems with emotional well-being	Emotional well-being addressed = Yes	Measure 24

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Core 25a	Documentation of patient's advance directives by the third office visit	Patient Advance Directives, Third Office Visit = No, no third visit	Core Patients AND Age at diagnosis ≥ 18	Patient Advance Directives, Third Office Visit = Yes OR Patient Advance Directives, Third Office Visit= Patient Declined	Gilligan, Coyle et al. Patient-Clinician Communication: American Society of Clinical Oncology Consensus Guideline. Journal of Clinical Oncology 35(31): 3618-3632. http://ascopubs.org/doi/abs/10.1200/JCO.2017.75.2311 The Patient Self Determination Act, Pub. L. No. 101-508, §§ 4206 & 4751, 104 Stat. 1388 (codified at 42 USC §§ 1395cc (f), 1396a (w) (1994)). http://www.nrc-pad.org/images/stories/PDFs/fedaddirectives2a.pdf NQF endorsed Measure 0326: Advance Care Plan (National Committee for Quality Assurance) (Adapted) http://www.qualityforum.org/QPS/0326 The Joint Commission standards on advance directives. http://www.jointcommission.org/standards_information/standards.aspx
Core 25b Certification	Height, weight, and BSA documented prior to chemotherapy*	Practice Management of Initial Course of Therapy ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care OR Patients receiving topical and intravesical chemotherapy	Core Patients AND Age at diagnosis ≥ 18 AND ((Chemotherapy administered during initial treatment course = Chemotherapy administered) AND Date of Chemotherapy Started ≠ Null OR	Chemotherapy Treatment Plan = Height, Weight, and Body Surface Area	Appropriate Chemotherapy Dosing for Obese Adult Patients with Cancer: American Society of Clinical Oncology Clinical Practice Guideline DOI: 10.1200/JCO.2011.39.9436 Journal of Clinical Oncology 30, no. 13 (May 2012) 1553-1561 http://ascopubs.org/doi/abs/10.1200/JCO.2017.75.2311 Tools:

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QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			Chemotherapy = Yes, in or overseen by the practice		(Slide Set (pps), Slide Set (pdf), BSA and BMI Dosing Tool, One Page Summary, Podcast by Gary H. Lyman, MD, MPH, Podcast by Jennifer Griggs, MD, MPH, (FAQs). Information for Patients
Symptom/ Toxicity Management 26	Serotonin antagonist prescribed or administered with moderate/high emetic risk chemotherapy	Patient ever received chemotherapy for this diagnosis ≠ Yes, patient has received chemotherapy in or overseen by the reporting practice OR Serotonin antagonist type prescribed or administered = Null OR ((Serotonin antagonist type prescribed or administered ≠ prescribed or administered AND (Reason Antiemetic NOT Prescribed or Administered = Contraindication or other clinical exclusion OR Patient declined OR Null))	Core patients AND Symptom/Toxicity Module selected AND (Moderate or high risk emetic risk chemotherapy received = Yes, high emetic risk OR Moderate or high-risk emetic risk chemotherapy received = Yes, moderate emetic risk)	(Moderate or high-risk emetic risk chemotherapy received = Yes, moderate emetic risk AND (Serotonin antagonist type prescribed or administered = Palonosetron OR Serotonin antagonist type prescribed or administered = first-generation 5-HT3) OR Reason Antiemetic NOT Prescribed or Administered = Alternative treatment according to clinical trial protocol) OR (Moderate or high-risk emetic risk chemotherapy received = Yes, high emetic risk AND (Serotonin antagonist type prescribed or administered = Palonosetron OR Serotonin antagonist type prescribed or administered = first-generation 5-HT3) OR Reason Antiemetic NOT Prescribed or Administered = Alternative treatment according to clinical trial protocol)	Antiemetics: American Society of Clinical Oncology Clinical Practice Guideline Update Summary Paul J. Hesketh, Mark G. Kris, Ethan Basch, Kari Bohlke, Sally Y. Barbour, Rebecca Anne Clark-Snow, Michael A. Danso, Kristopher Dennis, L. Lee Dupuis, Stacie B. Dusetzina, Cathy Eng, Petra C. Feyer, Karin Jordan, Kimberly Noonan, Dee Sparacio, Mark R. Somerfield, and Gary H. Lyman. DOI: 10.1200/JOP.2017.026351 Journal of Oncology Practice 13, no. 12 (December 2017) 825-830 http://ascopubs.org/doi/10.1200/JCO.2017.74.4789 NCCN Clinical Practice Guidelines in Oncology™. AntiemesisV.1.2014 http://www.nccn.org/professionals/physician_gls/pdf/antiemesis.pdf NICCQ Measure G-3A2. IF a patient ever receives highly emetogenic chemotherapy THEN the patient should receive potent anti-emetic therapy (e.g. 5HT blockade). (Adapted) http://jco.ascopubs.org/cgi/content/abstract/24/4/626 Tools: Slide Set – pps Slide Set – pdf Summary of Recommendations Table

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
					Emetic Risk of Single Intravenous Antineoplastic Agents in Adults Emetic Risk of Single Oral Antineoplastic Agents in Adults Emetic Risk in Adults by Site of Radiation Therapy Patient Information
Symptom/ Toxicity Management 27 Certification	Corticosteroids and serotonin antagonist prescribed or administered with moderate/high emetic risk chemotherapy*	<p>Patient ever received chemotherapy for this diagnosis ≠ Yes, patient has received chemotherapy in or overseen by the reporting practice</p> <p>OR</p> <p>(Serotonin antagonist type prescribed or administered = Null AND Corticosteroid antagonist type prescribed or administered = Null)</p> <p>OR</p> <p>((Serotonin antagonist type prescribed or administered ≠, First Generation 5-HT3 Receptor, Other</p> <p>AND</p> <p>Reason Serotonin Antagonist NOT Prescribed or Administered = Contraindication or other clinical exclusion OR Patient declined OR Financial OR Null)</p> <p>OR</p> <p>Corticosteroid Type Prescribed ≠ dexamethasone)</p> <p>AND</p>	<p>Core patients</p> <p>AND</p> <p>Symptom/Toxicity Module selected</p> <p>AND</p> <p>(Moderate or high-risk emetic risk chemotherapy received = Yes, high emetic risk</p> <p>OR</p> <p>Moderate or high-risk emetic risk chemotherapy received = Yes, moderate emetic risk)</p>	<p>Moderate or high-risk emetic risk chemotherapy received = Yes, moderate emetic risk OR Yes, high emetic risk</p> <p>AND</p> <p>(Serotonin antagonist type prescribed or administered = Palonosetron, First Generation 5-HT3 Receptor, Other</p> <p>OR</p> <p>Reason Serotonin Antagonist NOT Prescribed or Administered = Alternative treatment according to clinical trial protocol)</p> <p>AND</p> <p>(Corticosteroid Type Prescribed = Dexamethasone</p> <p>OR</p> <p>Reason Corticosteroid NOT Prescribed or Administered = Alternative treatment according to clinical trial protocol)</p>	Measure 26

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		(Reason Corticosteroid NOT Prescribed or Administered = Contraindication or other clinical exclusion OR Patient declined OR Financial OR Null)			
Symptom/ Toxicity Management 28	NK1 Receptor Antagonist and Olanzapine prescribed or administered with high emetic risk chemotherapy	Patient ever received chemotherapy for this diagnosis ≠ Yes, patient has received chemotherapy in or overseen by the reporting practice OR Aprepitant/Fosaprepitant (Emend) or Netupitant (AKYNZEO®) or rolapitant prescribed or administered = Null OR olanzapine prescribed or administered = Null OR ((Aprepitant/Fosaprepitant (Emend) or netupitant (AKYNZEO®) or rolapitant prescribed or administered = NOT prescribed or NOT administered AND (Reason = Contraindication or other clinical exclusion OR Patient declined OR Financial reasons OR Null) OR	Core patients AND Symptom/Toxicity Module selected AND Moderate or high-risk emetic risk chemotherapy received = Yes, high emetic risk	(Moderate or high-risk emetic risk chemotherapy received = Yes, high emetic risk AND Aprepitant/Fosaprepitant (Emend) or netupitant (AKYNZEO®) prescribed or administered) AND Olanzapine prescribed or administered = Yes) OR Alternative treatment according to clinical trial protocol	Measure 26

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QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		(olanzapine prescribed or administered = NOT prescribed or NOT administered AND (Reason = Contraindication or other clinical exclusion OR Patient declined OR Financial reasons OR Null))			
Symptom/ Toxicity Management 28a	NK1 Receptor Antagonist (Aprepitant/ fosaprepitant netupitant or Olanzapine) administered for low or moderate emetic risk Cycle 1 chemotherapy (Lower Score – Better) <i>(Top 5 Test measure)</i>	Patient ever received chemotherapy for this diagnosis ≠ Yes, Patient has received chemotherapy in or overseen by the reporting practice OR Aprepitant/Fosaprepitant (Emend) or Netupitant (AKYNZEO [®]) or rolapitant administered = Null OR olanzapine administered = Null OR (Aprepitant/Fosaprepitant (Emend) or netupitant (AKYNZEO [®]) or rolapitant administered = NOT administered AND (Reason = Contraindication or other clinical exclusion OR Patient declined OR Null)) OR (olanzapine administered = NOT administered AND (Reason =	Core patients AND Symptom/Toxicity Module selected AND Top 5 Test SymptTox Selected AND Low or moderate emetic risk chemotherapy received = Yes AND Chemotherapy administered: Cycle 1 = Yes	Aprepitant/Fosaprepitant (Emend) or netupitant (AKYNZEO [®]) or rolapitant administered = Yes OR Olanzapine administered = Yes	Schnipper LE, Lyman GH, Blayney D, et al. (2013) American Society of Clinical Oncology 2013 Top 5 List in Oncology. Journal of Clinical Oncology. 31 (34), 4362-70 http://jco.ascopubs.org/content/31/34/4362.long

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		Contraindication or other clinical exclusion OR Patient declined OR Financial reasons OR Null)) OR Patient receiving treatment on clinical trial = Yes			

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Symptom/ Toxicity Management 29	Anti-emetics prescribed or administered appropriately with moderate/high emetic risk chemotherapy (Defect-free measure 27 and 28)	<p>Patient ever received chemotherapy for this diagnosis ≠ Yes, patient has received chemotherapy in or overseen by the reporting practice</p> <p>OR</p> <p>Aprepitant prescribed or administered = Null</p> <p>OR</p> <p>((Serotonin antagonist type prescribed or administered ≠ Palonosetron or first-generation 5-HT3 or other serotonin antagonist prescribed or administered</p> <p>OR</p> <p>corticosteroid type prescribed or administered ≠ dexamethasone prescribed or administered</p> <p>OR</p> <p>Aprepitant/Fosaprepitant (Emend) or netupitant (AKYNZEO®) or rolapitant prescribed or administered ≠ prescribed/administered</p> <p>OR</p> <p>olanzapine prescribed or administered = NOT prescribed or administered)</p> <p>AND</p> <p>(Reason =Contraindication or other clinical exclusion OR Patient declined OR Financial reasons OR Null))</p>	<p>Core patients</p> <p>AND</p> <p>Symptom/Toxicity Module selected</p> <p>AND</p> <p>High emetic risk chemotherapy= Yes, high emetic risk or Yes, moderate emetic risk</p>	<p>(Moderate or high-risk emetic risk chemotherapy received = Yes, moderate emetic risk</p> <p>AND</p> <p>Serotonin antagonist type prescribed or administered = first-generation 5-HT3 or other serotonin antagonist</p> <p>OR</p> <p>Alternative treatment according to clinical trial protocol)</p> <p>OR</p> <p>(Moderate or high-risk emetic risk chemotherapy received = Yes, high emetic risk</p> <p>AND</p> <p>Serotonin antagonist type prescribed or administered = first-generation 5-HT3 or other serotonin antagonist</p> <p>AND</p> <p>Corticosteroid Type prescribed or administered = Dexamethasone prescribed or administered</p> <p>AND</p> <p>Aprepitant/Fosaprepitant (Emend) or netupitant (AKYNZEO®) or rolapitant prescribed/administered)</p> <p>AND</p> <p>Olanzapine prescribed or administered = Yes</p> <p>OR</p> <p>Alternative treatment according to clinical trial protocol</p>	Measure 26

*QOPI® Certification Measure

Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Symptom/ Toxicity Management 29a	Antiemetic therapy prescribed for highly emetogenic chemotherapy risk	<p>Patient ever received chemotherapy for this diagnosis ≠ Yes, patient has received chemotherapy in or overseen by the reporting practice</p> <p>OR</p> <p>Aprepitant/Fosaprepitant or netupitant (AKYNZEO[®]) or rolapitant prescribed = Null</p> <p>OR olanzapine prescribed = Null</p> <p>OR</p> <p>((Serotonin antagonist prescribed ≠ Palonosetron, 5HT3, or other</p> <p>OR</p> <p>Corticosteroids prescribed ≠ dexamethasone</p> <p>OR</p> <p>Aprepitant/Fosaprepitant (Emend) or netupitant (AKYNZEO[®]) or rolapitant prescribed = NOT prescribed</p> <p>OR</p> <p>Olanzapine =NOT prescribed</p> <p>AND</p> <p>(Reason =Contraindication or other clinical exclusion</p> <p>OR</p> <p>Patient declined</p> <p>OR</p> <p>Financial reasons</p> <p>OR</p> <p>Null))</p>	<p>Core patients</p> <p>AND</p> <p>Symptom/Toxicity Module selected</p> <p>AND</p> <p>High emetic risk chemotherapy = Yes, high emetic risk</p>	<p>((Moderate or high-risk emetic risk chemotherapy received = Yes, high emetic risk</p> <p>AND</p> <p>(Serotonin antagonist type prescribed = first-generation 5-HT3 or other</p> <p>AND</p> <p>Corticosteroid type prescribed = Dexamethasone</p> <p>AND</p> <p>Aprepitant/Fosaprepitant (Emend) or netupitant (AKYNZEO[®]) or rolapitant prescribed = Prescribed)</p> <p>AND</p> <p>Olanzapine = prescribed</p> <p>OR</p> <p>Alternative treatment according to clinical trial protocol))</p>	Measure 26

*QOPI[®] Certification Measure

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Symptom/ Toxicity Management 29b	Antiemetic therapy administered for highly emetogenic chemotherapy risk	Patient ever received chemotherapy for this diagnosis ≠ Yes, patient has received chemotherapy in or overseen by the reporting practice OR Aprepitant/Fosaprepitant (Emend) or netupitant (AKYNZEO®) or rolapitant administered = Null OR olanzapine administered = Null OR (Serotonin antagonist administered ≠ 5HT3 or other OR Corticosteroid type administered ≠ Dexamethasone OR Aprepitant/Fosaprepitant (Emend) or netupitant (AKYNZEO®) or rolapitant administered = NOT administered OR Olanzapine = NOT administered AND (Reason = Contraindication or other clinical exclusion OR Patient declined OR Financial Reasons OR Null))	Core patients AND Symptom/Toxicity Module selected AND High emetic risk chemotherapy received = Yes, high emetic risk	Moderate or high-risk emetic risk chemotherapy received = Yes, high emetic risk AND ((Serotonin antagonist type administered = first-generation 5-HT3, or other AND Corticosteroid type administered = Dexamethasone AND Aprepitant/Fosaprepitant (Emend) or netupitant (AKYNZEO®) or rolapitant = Administered AND Olanzapine = administered) OR Alternative treatment according to clinical trial protocol)	Measure 26

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Symptom/ Toxicity Management 29c	Antiemetic therapy prescribed for moderately emetogenic chemotherapy risk	<p>Patient ever received chemotherapy for this diagnosis ≠ Yes, patient has received chemotherapy in or overseen by the reporting practice</p> <p>OR</p> <p>(Serotonin antagonist type prescribed ≠ 5HT3, other serotonin antagonist AND (Reason Serotonin Antagonist NOT Prescribed or Administered = Contraindication or other clinical exclusion</p> <p>OR</p> <p>Patient declined</p> <p>OR</p> <p>Financial reasons</p> <p>OR</p> <p>Null))</p> <p>OR</p> <p>(Corticosteroid type prescribed ≠ Dexamethasone AND (Reason Corticosteroid NOT Prescribed or Administered= Contraindication or other clinical exclusion</p> <p>OR</p> <p>Patient declined</p> <p>OR</p> <p>Financial reasons</p> <p>OR</p> <p>Null))</p>	<p>Core patients</p> <p>AND</p> <p>Symptom/Toxicity Module selected</p> <p>AND</p> <p>Moderate or high-risk emetic risk chemotherapy received = Yes, moderate emetic risk</p>	<p>Moderate or high-risk emetic risk chemotherapy received = Yes, moderate emetic risk</p> <p>AND</p> <p>Moderate or high-risk emetic risk chemotherapy received = Yes, moderate emetic risk</p> <p>AND</p> <p>(Serotonin antagonist type prescribed = Palonosetron OR first-generation 5-HT3 or other serotonin antagonist</p> <p>OR</p> <p>Reason Serotonin Antagonist NOT Prescribed or Administered = Alternative treatment according to clinical trial protocol)</p> <p>AND</p> <p>(Corticosteroid Type Prescribed = Dexamethasone</p> <p>OR</p> <p>Reason Corticosteroid NOT Prescribed or Administered= Alternative treatment according to clinical trial protocol)</p>	Measure 26

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Symptom/ Toxicity Management 29d	Antiemetic therapy administered for moderately emetogenic chemotherapy risk	Patient ever received chemotherapy for this diagnosis ≠ Yes, patient has received chemotherapy in or overseen by the reporting practice OR (Serotonin antagonist type administered = Null OR Corticosteroid antagonist type administered = Null) OR ((Serotonin antagonist type administered ≠ Palonosetron, first-generation 5-HT3 or other serotonin antagonist OR Corticosteroid Type administered ≠ Dexamethasone) AND (Reason Antiemetic NOT Prescribed or Administered = Contraindication or other clinical exclusion OR Patient declined OR Financial reasons OR Null))	Core patients AND Symptom/Toxicity Module selected AND Moderate or high-risk emetic risk chemotherapy received = Yes, moderate emetic risk	Moderate or high-risk emetic risk chemotherapy received = Yes, moderate emetic risk AND (Serotonin antagonist type administered = first-generation 5-HT3 or other serotonin antagonist) OR Reason Serotonin Antagonist NOT Prescribed or Administered = Alternative treatment according to clinical trial protocol) AND (Corticosteroid Type administered = Dexamethasone OR Reason Corticosteroid NOT Prescribed or Administered = Alternative treatment according to clinical trial protocol)	Measure 26

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Symptom/ Toxicity Management 33 Certification	Infertility risks discussed prior to chemotherapy with patients of reproductive age*	If patient of reproductive age, check all that apply = Null OR If patient of reproductive age, check all that apply = Patient declined fertility discussion OR Fertility preservation = Null	Core patients AND Symptom/Toxicity Module selected AND Patient ever received chemotherapy for this diagnosis = Yes, patient has received chemotherapy in or overseen by the reporting practice AND Fertility preservation = Patient is of reproductive age	If patient of reproductive age, check all that apply = Infertility risks associated with chemotherapy discussed	American Society of Clinical Oncology Clinical Practice Guideline Update Fertility Preservation for Patients with Cancer: Alison W. Loren, Pamela B. Mangu, Lindsay Nohr Beck, Lawrence Brennan, Anthony J. Magdalinski, Ann H. Partridge, Gwendolyn Quinn, W. Hamish Wallace, and Kutluk Oktay. DOI: 10.1200/JCO.2013.49.2678 <i>Journal of Clinical Oncology</i> 31, no. 19 (July 2013) 2500-2510. http://jco.ascopubs.org/content/early/2013/05/24/JCO.2013.49.2678.full.pdf+html Tools: Slide Set (pdf) Slide Set (pps) Patient Information: Reproductive Health Patient Information: Preserving your Fertility Before Cancer Treatment ASCO University's Focus Under Forty Course Discussing Fertility Preservation with Men (YouTube video) Discussing Fertility Preservation with Women (YouTube video)

*QOPI® Certification Measure

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Symptom/ Toxicity Management 34	Fertility preservation options discussed or referral to specialist	Fertility preservation = Patient is not of reproductive age OR Fertility preservation = Patient is of reproductive age but documented to be incapable of reproduction OR If patient of reproductive age, check all that apply = Null OR If patient of reproductive age, check all that apply = Patient declined fertility discussion	Core patients AND Symptom/Toxicity Module selected AND Patient ever received chemotherapy for this diagnosis = Yes, patient has received chemotherapy in or overseen by the reporting practice AND Fertility preservation = Patient is of reproductive age	If patient of reproductive age, check all that apply = Fertility preservation options discussed OR If patient of reproductive age, check all that apply = Referral to fertility specialist prior to treatment	Measure 33
Care at End of Life 35	Pain assessed on either of the last two visits before death	Pain assessed, last 2 office visits = Null	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment	Pain assessed, last 2 office visits = Practitioner notation, patient had NO pain OR Pain assessed, last 2 office visits = Practitioner notation, patient had pain	National Comprehensive Cancer Center (NCCN) Practice Guidelines in Oncology™. Adult Cancer Pain, V.1.2014 http://www.nccn.org/professionals/physician_gls/pdf/pain.pdf National Comprehensive Cancer Center (NCCN) Practice Guidelines in Oncology™. Palliative Care V.2.2013 http://www.nccn.org/professionals/physician_gls/pdf/palliative.pdf ASTRO/ASCO/AMA PCPI Oncology Measure (Adapted) https://www.acr.org/~media/ACR/Documents/P4P/PerformanceMeasures/OncologyMeasureSet.pdf Jacox A, Carr DB, Payne R: New clinical-practice guidelines for the management of pain in patients with cancer. N Engl J Med 330:651-655, 1994 http://www.nejm.org/doi/full/10.1056/NEJM199403033300926 Tools: http://university.asco.org/pain-management-program

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Care at End of Life 36a	Pain intensity quantified on either of the last two visits before death	Specify whether pain intensity quantified, last 2 visits = Null	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment AND (Pain assessed, last 2 office visits = Notation, patient had pain) OR Pain assessed, last 2 office visits = Notation, patient had NO pain)	Specify whether pain intensity quantified, last 2 visits = Pain intensity quantified OR Pain assessed, last 2 office visits = Notation, patient had NO pain	NQF endorsed Measure 0384: Oncology: Pain Intensity Quantified – Medical Oncology and Radiation Oncology (AMA PCPI, ASCO) (Adapted) http://www.qualityforum.org/QPS/0384
Care at End of Life 37	Plan of care for moderate/severe pain documented on either of the last two visits before death	Plan for pain documented, last 2 office visits = Null	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment AND Pain assessed, last 2 office visits = Practitioner notation, patient had pain AND Specify whether pain intensity quantified, last 2 visits = Pain intensity quantified AND Pain intensity = moderate or severe	Plan for pain documented, last 2 office visits = Yes	Measure 35

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Care at End of Life 38	Pain addressed appropriately (Defect-free measure 35, 36a, and 37)	Pain assessed, last 2 office visits = Null	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment	Pain assessed, last 2 office visits = Practitioner notation, patient had NO pain OR (Pain assessed, last 2 office visits =Practitioner notation, patient had pain AND Specify whether pain intensity quantified, last 2 visits = Pain intensity quantified AND Pain intensity = mild) OR (Pain assessed, last 2 office visits = Practitioner notation, patient had pain AND Specify whether pain intensity quantified, last 2 visits = Pain intensity quantified AND pain intensity = moderate or severe AND Plan for pain documented, last 2 office visits = Yes)	Measure 35

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Care at End of Life 39	Dyspnea assessed on either of the last two visits before death	Dyspnea assessed = Null	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment	Dyspnea assessed = Practitioner notation, patient had dyspnea OR Dyspnea assessed = Practitioner notation, patient did NOT have dyspnea	National Comprehensive Cancer Center (NCCN) Practice Guidelines in Oncology™. Palliative Care, V.2.2013 http://www.nccn.org/professionals/physician_gls/pdf/palliative.pdf Evidence-Based Interventions to Improve the Palliative Care of Pain, Dyspnea, and Depression at the End of Life: A Clinical Practice Guideline from the American College of Physicians. Amir Qaseem, MD, PhD, MHA; Vincenza Snow, MD; Paul Shekelle, MD, PhD; Donald E. Casey, Jr., MD, MPH, MBA; J. Thomas Cross, Jr., MD, MPH; Douglas K. Owens, MD, MS, for the Clinical Efficacy Assessment Subcommittee of the American College of Physicians* Annals of Internal Medicine. 15 January 2008 Volume 148 Issue 2 Pages 141-146 http://www.annals.org/cgi/content/full/148/2/141 ASTRO/ASCO/AMA PCPI Oncology Measure (Adapted) https://www.acr.org/~media/ACR/Documents/P4P/PerformanceMeasures/OncologyMeasureSet.pdf
Care at End of Life 40	Dyspnea addressed on either of the last two visits before death	Dyspnea addressed = Null	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment AND Dyspnea assessed = Practitioner notation, patient had dyspnea	Dyspnea addressed = Yes	Measure 39

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Care at End of Life 41	Dyspnea addressed appropriately (Defect-free measure 39 and 40)	None	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment	(Dyspnea assessed = Practitioner notation, patient had dyspnea AND Dyspnea addressed = Yes) OR (Dyspnea assessed = Practitioner notation, patient did NOT have dyspnea AND Dyspnea addressed = Null)	Measure 39
Care at End of Life 42	Hospice enrollment	Hospice enrollment = N/A - patient left practice/moved OR Hospice enrollment = Null <i>Exclusions: Patient left the practice/moved</i>	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment	Hospice enrollment = Enrolled	NQF endorsed Measure 0216: Proportion admitted to hospice for less than 3 days (ASCO) (Adapted) http://www.qualityforum.org/pdf/cancer/txAppA-Specifications_web.pdf Earle CC, Neville BA, Beth Landrum M, et al. Evaluating claims-based indicators of the intensity of end-of-life cancer care. Int J Qual Health Care. 2005 Jun 28 http://intqhc.oxfordjournals.org/cgi/content/full/17/6/505 Integration of Palliative Care Into Standard Oncology Care: American Society of Clinical Oncology Clinical Practice Guideline Update Betty R. Ferrell, Jennifer S. Temel, Sarah Temin, Erin R. Alesi, Tracy A. Balboni, Ethan M. Basch DOI:10.1200/JCO.2016.70.1474 Journal of Clinical Oncology 35, no. 1 (January 2017) 96-112 http://ascopubs.org/doi/full/10.1200/JCO.2016.70.1474 Slide Set – pps Slide Set – pdf Summary of Recommendations Table Patient Information Palliative Care Checklist

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Care at End of Life 43	Hospice enrollment or palliative care referral/services	(Hospice enrollment = N/A - patient left practice/moved) AND Palliative care referral = N/A, patient left practice/moved) OR (Hospice enrollment = Null AND Palliative care referral = Null)	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment	Hospice enrollment = Enrolled OR Palliative care referral = Referred to palliative care specialist/service OR Palliative care referral = Comprehensive palliative care services provided by the practice	QOPI® Consensus Measure 42
Care at End of Life 44	Hospice enrollment within 3 days of death <i>(Lower Score – Better)</i>	Date of Death Unknown = Yes OR Date of death = Null OR (Hospice enrollment date = Null AND Enrolled date unknown = Null)	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment AND Hospice enrollment = Enrolled	Hospice enrollment date ≠ Null AND Date of death – Hospice enrollment date < 4 days	QOPI® Consensus Measure 42
Care at End of Life 44a	Hospice enrollment and enrolled more than 3 days before death (Defect-free measure 42 and inverse 44)	Hospice enrollment = N/A - patient left practice/moved OR Date of Death Unknown = Yes OR Date of death = Null	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment	Hospice enrollment = Enrolled AND Hospice enrollment date ≠ Null AND Date of death - Hospice enrollment date > 3 days	QOPI® Consensus Measure 42

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Care at End of Life 45	Hospice enrollment within 7 days of death <i>(Lower Score – Better)</i>	Date of Death Unknown = Yes OR Date of death = Null OR (Hospice enrollment date = Null AND Enrolled date unknown = Null)	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment AND Hospice enrollment = Enrolled	Hospice enrollment date ≠ Null AND Date of death - Hospice enrollment date < 8 days	Measure 42
Care at End of Life 45a	Hospice enrollment and enrolled more than 7 days before death (Defect-free measure 42 and inverse of 45)	Hospice enrollment = N/A - patient left practice/moved OR Date of Death Unknown = Yes OR Date of death = Null	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment	Hospice enrollment = Enrolled AND Hospice enrollment date ≠ Null AND Date of death - Hospice enrollment date > 7 days	QOPI® Consensus Measure 42

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Care at End of Life 46	For patients not referred, hospice or palliative care discussed within the last 2 months of life	(Hospice enrollment = N/A - patient left practice/moved) AND Palliative care referral = N/A, patient left practice/moved) OR Date of Death Unknown = Yes OR Date of death = Null OR (Hospice enrollment = Documented discussion with patient, but not enrolled) AND Hospice enrollment date of discussion = Null) OR (Palliative care referral = Documented palliative care discussion with patient, but not referred) AND Palliative care referral date of discussion = Null) OR (Hospice enrollment = Null) AND Palliative care referral = Null)	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment AND Hospice enrollment ≠ Enrolled AND Palliative care referral ≠ Referred to palliative care specialist/service	(Hospice enrollment = Documented discussion with patient, but not enrolled) AND Date of death - Hospice enrollment date of discussion ≤ 62 days) OR (Palliative care referral = Documented palliative care discussion with patient, but not referred) AND (Date of death - Palliative care referral date of discussion) ≤ 62 days)	QOPI® Consensus Measure 42

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Care at End of Life 47	Hospice enrollment, palliative care referral/services, or documented discussion (Combined measure 43 or 46)	Hospice enrollment = N/A - patient left practice/moved OR Palliative care referral = N/A - patient left practice/moved	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment	Hospice enrollment = enrolled OR (Referred to palliative care specialist/service = Referred to palliative care specialist/service) OR Comprehensive palliative care services provided by practice) OR (Hospice enrollment = documented discussion with patient) AND Date of death – Hospice enrollment date of discussion ≤ 62 days) OR (Palliative care referral = documented palliative care discussion) AND Date of death – Palliative care referral date of discussion ≤ 62 days)	QOPI® Consensus Measure 42
Care at End of Life 48	Chemotherapy administered within the last 2 weeks of life (Lower Score - Better)	Date of last chemotherapy administration = Null AND Date of last chemotherapy unknown = unchecked AND No chemotherapy administration in 6 months prior to death = unchecked OR Patient with leukemia or MDS (dx. C90.00-C95.91, D46.0-D46.Z)	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment	Date of death – date of last chemo admin ≤ 14 days <i>Note: If date of last chemotherapy is unknown– the chart is non-concordant with the Measure</i>	Earle, C.C., E.R. Park, B. Lai, J.C. Weeks, J.Z. Ayanian & S. Block. Identifying potential indicators of the quality of end-of-life cancer care from administrative data. Journal of Clinical Oncology 2003; 21: 1133-1138 http://jco.ascopubs.org/content/21/6/1133.full NQF endorsed Measure #0210: Proportion receiving chemotherapy in the last 14 days of life (ASCO) http://www.qualityforum.org/QPS/0210

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
					<p>Earle, C.C., B.A. Neville, M.B. Landrum, J.M. Souza, J.C. Weeks, S.D. Block, E. Grunfeld & J.Z. Ayanian. Evaluating claims-based indicators of the intensity of end-of-life cancer care. <i>International Journal for Quality in Health Care</i>, 2005; 17(6): 505-509 http://www.ncbi.nlm.nih.gov/pubmed/15985505</p> <p>Earle, C.C., B.A. Neville, M.B. Landrum, -J.Z. Ayanian, S.D. Block and J.C. Weeks. Trends in the aggressiveness of cancer care near the end of life. <i>Journal of Clinical Oncology</i>, 2004; 22(2): 315-321 http://jco.ascopubs.org/content/22/2/315.full</p> <p>Ho, T.H., L. Barbera, R. Saskin, H. Lu, B.A. Neville & C.C. Earle. Trends in the aggressiveness of end-of-life cancer care in the universal health care system in Ontario, Canada. <i>Journal of Clinical Oncology</i>, 2011; 29(12): 1587-1591 http://www.ncbi.nlm.nih.gov/pubmed/21402603</p>

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Care at End of Life	Percentage of patients who died from cancer with at least one emergency department visit in the last 30 days of life (Lower Score – Better)	None	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment	Date of Death - Emergency department visit ≤ 30 days AND Emergency department visit ≥ 1	<p>Barbera, L., C. Taylor, et al. (2010). "Why do patients with cancer visit the emergency department near the end of life?" <i>CMAJ</i> 182(6): 563-568.</p> <p>Guadagnolo, B. A., K. P. Liao, et al. (2015). "Variation in Intensity and Costs of Care by Payer and Race for Patients Dying of Cancer in Texas: An Analysis of Registry-linked Medicaid, Medicare, and Dually Eligible Claims Data." <i>Med Care</i> 53(7): 591-598.</p> <p>Hunis, B., A. J. Alencar, et al. (2016). "Making steps to decrease emergency room visits in patients with cancer: Our experience after participating in the ASCO Quality Training Program." <i>J Clin Oncol</i> 34, 2016 (suppl 7S; abstr 51) Presented at ASCO Quality Care Symposium, February 26th, 2016, Phoenix, AZ.</p>
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Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. *JCO* May 10, 2012:1715-1724.

QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Care at End of Life 49icu	Percentage of patients who died from cancer admitted to the ICU in the last 30 days of life (Lower Score – Better)	None	EOL module selected AND Deceased = Yes, patient is deceased as a consequence of his/her cancer or cancer treatment	Date of Death - ICU admission ≤ 30 days	Zhang B, Nilsson ME, Prigerson HG. Factors important to patients' quality of life at the end of life. Arch Intern Med 2012;172:1133-1142. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3806298/ Wright AA, Keating NL, Balboni TA, et al. Place of death: correlations with quality of life of patients with cancer and predictors of bereaved caregivers' mental health. J Clin Oncol 2010; 28:4457-4464. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2988637/ Langton JM, Blanch B, Drew AK, et al. Retrospective studies of end-of-life resource utilization and costs in cancer care using health administrative data: a systematic review. Palliat Med 2014; 28:1167-1196 http://www.ncbi.nlm.nih.gov/pubmed/24866758 . Kao YH, Chiang JK. Effect of hospice care on quality indicators of end-of-life care among patients with liver cancer: a national longitudinal population based study in Taiwan 2000-2011. BMC Palliat Care 2015: 14:39. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4545784/#CR5 Barbera L, Seow H, et al. Quality of end-of-life cancer care in Canada: a retrospective four-province study using administrative health care data. Curr Oncol 2015 Oct; 22(5): 341-355. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4608400/

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Breast 49	Complete family history documented for patients with invasive breast cancer (Defect-free measure 49a - 49c)	None	Breast module selected AND Presence/Absence of first-degree relatives ≠ Null AND Presence/Absence of second-degree relatives ≠ Null AND Age of diagnosis documented ≠ Null	Presence/Absence of first-degree relatives = Yes or Documentation that family history is unobtainable AND Presence/Absence of second-degree relatives = Yes or Documentation that family history is unobtainable AND Age of diagnosis documented = Yes OR Age of diagnosis documented = No blood relatives noted with cancer OR Age of diagnosis documented = Requested but unknown by family	Breast Cancer Follow-Up and Management After Primary Treatment: American Society of Clinical Oncology Clinical Practice Guideline Update JCO, Vol 3, No 7 (March 1), 2013; pp. 961-965 http://www.instituteforquality.org/breast-cancer-follow-and-management-after-primary-treatment-american-society-clinical-oncology NCCN Practice Guidelines in Oncology – Genetic/Familial High-Risk Assessment: Breast and Ovarian. V.1.2014 http://www.nccn.org/professionals/physician_gls/PDF/genetics_screening.pdf USPSTF: Genetic risk assessment and BRCA mutation testing for breast and ovarian cancer susceptibility: Recommendation Statement. Ann Intern Med 143:355-361, 2005 http://annals.org/article.aspx?articleid=718773 American Society of Clinical Oncology policy statement update: genetic and genomic testing for cancer susceptibility. J. Clin Oncol. 2010 Feb 10; 28(5):893-901. Epub 2010 Jan 11. http://www.jco.ascopubs.org/content/28/5/893.full?sid=31799b89-cb84-4367-bbe9-893542ebbd84 Tools: Integrating Genetic Risk Assessment into Practice J Oncol Pract 2008 4: 214-219 http://jop.ascopubs.org/cgi/content/full/4/5/214 Slide Set (PDF) Summary of Recommendations Table (PDF)

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
					Patient Management and Planning Flow Sheet (PDF) Patient Management and Planning Flow Sheet (XLS) Patient Information
Breast 49a	Presence or absence of cancer in first-degree blood relatives documented	None	Breast Module selected AND Presence or absence of cancer diagnosis in first-degree relatives ≠ Null	Presence or absence of cancer diagnosis in first-degree relatives = Yes OR Presence or absence of cancer diagnosis in first-degree relatives = Documentation that family history is unobtainable	Measure 49
Breast 49b	Presence or absence of cancer in second-degree blood relatives documented	None	Breast Module selected AND Presence or absence of cancer diagnosis in second-degree relatives ≠ Null	Presence or absence of cancer diagnosis in second-degree relatives = Yes OR Presence or absence of cancer diagnosis in second-degree relatives = Documentation that family history is unobtainable	Measure 49
Breast 49c	Age at diagnosis documented for each blood relative noted with cancer	Age of diagnosis documented for all blood-relatives noted with cancer = No blood relatives noted with cancer	Breast Module selected AND Age of diagnosis documented for all blood-relatives noted with cancer ≠ Null	Age of diagnosis documented for all blood-relatives noted with cancer = Yes OR Age of diagnosis documented for all blood-relatives noted with cancer = Requested but unknown by family	Measure 49

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Breast 52	<p>Combination chemotherapy recommended within 4 months of diagnosis for women under 70 with AJCC stage IA (T1c) and IB-III ER/PR negative breast cancer</p> <p><i>Excludes malignant phyllodes, cystosarcoma phyllodes, adenoid cystic carcinoma, secretory breast carcinoma</i></p> <p><i>Accepts BRM as second agent (including Trastuzumab) for multi-agent chemotherapy</i></p>	<p>Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care</p> <p>OR</p> <p>M-Stage at breast cancer diagnosis = M1</p> <p>OR</p> <p>Diagnosis of malignant phyllodes, cystosarcoma phyllodes, adenoid cystic carcinoma, secretory breast carcinoma</p> <p>OR</p> <p>(chemotherapy recommended during initial treatment course (Breast cancer) = Multi-Agent Chemotherapy NOT recommended</p> <p>AND</p> <p>((Date of abstraction - Date of Diagnosis) < 124 days</p> <p>OR</p> <p>(Date of Death Unknown = Null</p> <p>AND</p> <p>(Date of Death - Date of Diagnosis) < 124 days)</p> <p>OR</p> <p>(First Office Visit - Date of Diagnosis) > 124 days))</p> <p>OR</p> <p>Multi-Agent Chemotherapy recommended during initial</p>	<p>Age 18-69 at diagnosis</p> <p>AND</p> <p>Breast Module selected</p> <p>AND</p> <p>((AJCC stage at breast cancer diagnosis = IIA</p> <p>OR</p> <p>AJCC stage at breast cancer diagnosis = IIB</p> <p>OR</p> <p>AJCC stage at breast cancer diagnosis = IIIA</p> <p>OR</p> <p>AJCC stage at breast cancer diagnosis = IIIB</p> <p>OR</p> <p>AJCC stage at breast cancer diagnosis = IIIC)</p> <p>OR</p> <p>((AJCC stage at breast cancer diagnosis = IA</p> <p>AND</p> <p>T-Stage at breast cancer diagnosis = T1c)</p> <p>OR</p> <p>(AJCC stage at breast cancer diagnosis = IB)</p> <p>OR</p> <p>(T-Stage at breast cancer diagnosis = T2</p> <p>OR</p> <p>T-Stage at breast cancer diagnosis = T3</p> <p>OR</p>	<p>Multi-Agent Chemotherapy recommended during initial treatment course (Breast cancer) = Multi-agent chemotherapy recommended</p> <p>AND</p> <p>Date chemotherapy was first recommended (Breast cancer) - Date of Diagnosis) ≤ 124 days</p>	<p>NQF endorsed Measure 0559: Combination chemotherapy is considered or administered within 4 months (120 days) of diagnosis for women under 70 with AJCC T1c, or Stage II or III hormone receptor negative breast cancer. (Commission on Cancer) (Adapted)</p> <p>http://www.qualityforum.org/pdf/cancer/txAppA-Specifications_web.pdf</p> <p>http://www.qualityforum.org/QPS/0559</p> <p>ASCO-NCCN Quality Measure (Adapted)</p> <p>http://www.asco.org/institute-quality/asco-nccn-quality-Measures</p> <p>NCCN Clinical Practice Guidelines in Oncology™. Breast Cancer, V.1.2014</p> <p>http://www.nccn.org/professionals/physician_gls/pdf/breast.pdf</p> <p>NICCQ Measure BR-2B4: IF a patient is newly diagnosed with stage I to III breast cancer and the tumor is 1 cm or involves the lymph nodes, THEN a physician should have a discussion with the patient regarding possible treatment with chemotherapy. (note: T1c or greater) (Adapted)</p> <p>http://jco.ascopubs.org/cgi/content/abstract/24/4/626</p>

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		treatment course (Breast cancer) = Null OR Date of Diagnosis = Null	T-Stage at breast cancer diagnosis = T4 OR T-Stage at breast cancer diagnosis = T4a OR T-Stage at breast cancer diagnosis = T4b OR T-Stage at breast cancer diagnosis = T4c OR T-Stage at breast cancer diagnosis = T4d) AND N-Stage at breast cancer diagnosis = N0) OR N-Stage at breast cancer diagnosis = N1 OR N-Stage at breast cancer diagnosis = N2 OR N-Stage at breast cancer diagnosis = N2a OR N-Stage at breast cancer diagnosis = N2b OR N-Stage at breast cancer diagnosis = N3 OR N-Stage at breast cancer diagnosis = N3a		

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			<p>OR N-Stage at breast cancer diagnosis = N3b</p> <p>OR N-Stage at breast cancer diagnosis = N3c)</p> <p>OR (T-Stage at breast cancer diagnosis = T1c</p> <p>AND N-Stage at breast cancer diagnosis = N1mi))</p> <p>AND ER status = ER negative</p> <p>AND PR status = PR negative</p>		

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Breast 52a	Complete staging for women with invasive breast cancer (cancer stage, HER2, and ER/PR status)	((Cancer Stage Documented = Null OR Cancer Stage Documented = Documentation of cancer stage at diagnosis NOT present in medical record) AND (Most Recent Visit - First Office Visit) < 31 days)) OR Patients with leukemia or MDS (C90.00-C95.92, D46.0-D46.Z) OR First Office Visit = Null OR HER 2/neu status=Null OR ER Status = Null OR PR status = Null	Breast module	Cancer Stage Documented = Documentation of cancer stage at diagnosis present in medical record AND (HER-2/neu status = HER2 positive OR HER2 negative OR Test ordered, results not yet documented OR ((Test ordered, insufficient sample for results OR HER-2 equivocal) AND (New test ordered within 10 days of report = Yes OR N/A))) AND (ER Status = ER positive OR ER negative OR Test ordered, results not yet documented OR Test ordered, insufficient sample for results) AND (PR Status = PR positive OR PR negative OR	NQF endorsed Measure 0386: Oncology: Cancer Stage Documented (AMA PCPI, ASCO) (Adapted) http://www.qualityforum.org/QPS/0386 QOPI® Consensus New CAP/ASCO Recommendations for ER/PgR and HER2 Testing in Breast Cancer Julie Katz Karp, MD http://www.cap.org/apps/docs/newspath/1103_special/her2_recommendations.pdf ASCO/CAP Guideline Recommendations for Immunohistochemical Testing of Estrogen and Progesterone Receptors in Breast Cancer DOI:10.1200/JCO.2009.25.6529 Journal of Clinical Oncology 28, no. 16 (June 2010) 2784-2795 http://jco.ascopubs.org/content/28/16/2784.full Recommendations for Human Epidermal Growth Factor Receptor 2 Testing in Breast Cancer: American Society of Clinical Oncology/College of American Pathologists Clinical Practice Guideline Update Antonio C. Wolff*, M. Elizabeth H. Hammond*, David G. Hicks*, Mitch Dowsett*, Lisa M. McShane*, Kimberly H. Allison, Donald C. Allred, John M.S. Bartlett, Michael Bilous, Patrick Fitzgibbons, Wedad Hanna, Robert B. Jenkins, Pamela B.

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
				Test ordered, results not yet documented OR Test ordered, insufficient sample for results)	Mangu, Soonmyung Paik, Edith A. Perez, Michael F. Press, Patricia A. Spears, Gail H. Vance, Giuseppe Viale, Daniel F. Hayes DOI: 10.1200/JCO.2013.50.9984 Journal of Clinical Oncology 31, no. 31 (November 2013) 3997-4013. http://ascopubs.org/doi/full/10.1200/JCO.2013.50.9984

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Breast 53 Certification	<p>Combination chemotherapy received within 4 months of diagnosis by women under 70 with AJCC stage IA (T1c) and IB to III ER/PR negative breast cancer*</p> <p><i>Excludes malignant phyllodes, cystosarcoma phyllodes, adenoid cystic carcinoma, secretory breast carcinoma</i></p> <p><i>Accepts BRM as second agent (including Trastuzumab) for multi-agent chemotherapy</i></p>	<p>Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care</p> <p>OR</p> <p>M-Stage at breast cancer diagnosis = M1</p> <p>OR</p> <p>Diagnosis of malignant phyllodes, cystosarcoma phyllodes, tubular carcinoma, mucinous carcinoma</p> <p>OR</p> <p>((Multi-agent breast chemotherapy administered = Chemotherapy NOT administered</p> <p>AND</p> <p>Abstraction date – diagnosis date < 124 days or</p> <p>Deceased date – diagnosis date < 124 days or</p> <p>Date of first visit – diagnosis date > 124 days)</p> <p>OR</p> <p>(Reason = Patient declined or Patient died or transferred or Contraindication or other clinical exclusion or Null))</p> <p><u>Exclusions:</u></p> <ul style="list-style-type: none"> • Metastatic at diagnosis • Malignant phyllodes, cystosarcoma phyllodes, 	<p>18-69 at diagnosis</p> <p>AND</p> <p>Breast module (core)</p> <p>AND</p> <p>((AJCC stage at breast cancer diagnosis = IIA -IIIC)</p> <p>OR</p> <p>(AJCC stage at breast cancer diagnosis = (IA and T-Stage at breast cancer diagnosis=T1c) or IB)</p> <p>OR</p> <p>(T-Stage at breast cancer diagnosis = T1c, T2-T4d and N-Stage at breast cancer diagnosis = N0)</p> <p>OR</p> <p>(N-Stage at breast cancer diagnosis= N1-N3c)</p> <p>OR</p> <p>(T1c and N1mi))</p> <p>AND</p> <p>(ER status = ER negative</p> <p>AND</p> <p>PR status = PR negative)</p>	<p>Chemotherapy administered during initial treatment course (Breast cancer) = Multi-agent chemotherapy administered</p> <p>AND</p> <p>Date the chemotherapy was initiated (multi-agent) - Date of Diagnosis ≤ 124 days</p> <p>OR</p> <p>Alternative treatment according to clinical trial protocol</p>	<p>NQF endorsed measure 559: C0559: Combination chemotherapy is considered or administered within 4 months (120 days) of diagnosis for women under 70 with AJCC T1c, or Stage II or III hormone receptor negative breast cancer. (Commission on Cancer)</p> <p>http://www.qualityforum.org/pdf/cancer/txAppA-Specifications_web.pdf</p> <p>ASCO-NCCN Quality Measure (Modified)</p> <p>http://www.asco.org/institute-quality/asco-nccn-quality-measures</p> <p>NCCN Clinical Practice Guidelines in Oncology™. Breast Cancer, V.1.2014</p> <p>http://www.nccn.org/professionals/physician_gls/pdf/breast.pdf</p> <p>NICCQ Measure</p> <p>BR-2B4: IF a patient is newly diagnosed with stage I to III breast cancer and the tumor is 1 cm or involves the lymph nodes, THEN a physician should have a discussion with the patient regarding possible treatment with chemotherapy. (note: T1c or greater) (Modified)</p> <p>http://jco.ascopubs.org/cgi/content/abstract/24/4/626</p>

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		tubular carcinoma, mucinous carcinoma <ul style="list-style-type: none"> • Patient transfer to practice during or after initial course • Not administered within window • Not enough time elapsed 			
Breast 54 Certification	Test for Her-2/neu overexpression or gene amplification*	HER-2/neu status = Null OR ((HER-2/neu status = Test ordered, insufficient sample for results OR HER-2/neu status = HER-2 equivocal) AND New test ordered within 10 days of report = Null) OR (HER-2/neu = Test NOT ordered/no documentation AND 31 days have not passed since first office visit)	Breast Module selected	HER-2/neu status = HER2 positive OR HER-2/neu status = HER2 negative OR HER-2/neu status = Test ordered, results not yet documented OR ((HER-2/neu status = Test ordered, insufficient sample for results OR HER-2/neu status = HER-2 equivocal) AND (New test ordered within 10 days of report = Yes OR New test ordered within 10 days of report = N/A)) AND HER-2/neu test date – first office visit date ≤ 31 days)	NQF endorsed Measure 1878: Human epidermal growth factor receptor 2 (HER2) testing in breast cancer (ASCO) http://www.qualityforum.org/QPS/1878 New CAP/ASCO Recommendations for ER/PgR and HER2 Testing in Breast Cancer Julie Katz Karp, MD http://www.cap.org/apps/docs/newspath/1103_special/her2_recommendations.pdf Tools: http://university.asco.org/quality Recommendations for Human Epidermal Growth Factor Receptor 2 Testing in Breast Cancer: American Society of Clinical Oncology/College of American Pathologists Clinical Practice Guideline Update Antonio C. Wolff*, M. Elizabeth H. Hammond*, David G. Hicks*, Mitch Dowsett*, Lisa M. McShane*, Kimberly H. Allison, Donald C. Allred, John M.S. Bartlett, Michael Bilous, Patrick Fitzgibbons, Wedad Hanna, Robert B. Jenkins, Pamela B. Mangu, Soonmyung Paik, Edith A. Perez, Michael F. Press, Patricia A.

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
					Spears, Gail H. Vance, Giuseppe Viale, Daniel F. Hayes DOI: 10.1200/JCO.2013.50.9984 Journal of Clinical Oncology 31, no. 31 (November 2013) 3997-4013. http://ascopubs.org/doi/full/10.1200/JCO.2013.50.9984
Breast 55	Trastuzumab recommended for patients with AJCC stage I (T1c) to III Her-2/neu positive breast cancer	Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care OR M-Stage at breast cancer diagnosis = M1 OR Trastuzumab (Herceptin) recommended during initial treatment course = Null	Breast Module selected AND Chemotherapy administered during initial treatment course (Breast cancer) = Multi-agent chemotherapy administered AND HER-2/neu status = HER2 positive AND ((AJCC stage at breast cancer diagnosis = IIA OR AJCC stage at breast cancer diagnosis = IIB OR AJCC stage at breast cancer diagnosis = IIIA OR AJCC stage at breast cancer diagnosis = IIIB OR AJCC stage at breast cancer diagnosis = IIIC) OR ((AJCC stage at breast cancer diagnosis = IA OR	Trastuzumab (Herceptin) recommended during initial treatment course = Trastuzumab recommended OR Alternative treatment according to clinical trial protocol	NQF endorsed Measure 1858: Trastuzumab administered to patients with AJCC stage I (T1c) – III and human epidermal growth factor receptor 2 (HER2) positive breast cancer who receive adjuvant chemotherapy (ASCO) http://www.qualityforum.org/QPS/1858 NCCN Clinical Practice Guidelines in Oncology™. Breast Cancer, V.1.2014 http://www.nccn.org/professionals/physician_gls/pdf/breast.pdf Romond EH, Perez EA, Bryant J, et al. Trastuzumab plus adjuvant chemotherapy for operable HER2-positive breast cancer. N Engl J Med. 2005 Oct 20;353 (16):1673-84. http://content.nejm.org/cgi/content/short/353/16/1673

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			AJCC stage at breast cancer diagnosis = IB) AND T-Stage at breast cancer diagnosis = T1c) OR ((T-Stage at breast cancer diagnosis = T1c OR T-Stage at breast cancer diagnosis = T2 OR T-Stage at breast cancer diagnosis = T3 OR T-Stage at breast cancer diagnosis = T4 OR T-Stage at breast cancer diagnosis = T4a OR T-Stage at breast cancer diagnosis = T4b OR T-Stage at breast cancer diagnosis = T4c OR T-Stage at breast cancer diagnosis = T4d) AND N-Stage at breast cancer diagnosis = N0) OR (N-Stage at breast cancer diagnosis = N1		

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			<p>OR N-Stage at breast cancer diagnosis = N2</p> <p>OR N-Stage at breast cancer diagnosis = N2a</p> <p>OR N-Stage at breast cancer diagnosis = N2b</p> <p>OR N-Stage at breast cancer diagnosis = N3</p> <p>OR N-Stage at breast cancer diagnosis = N3a</p> <p>OR N-Stage at breast cancer diagnosis = N3b</p> <p>OR N-Stage at breast cancer diagnosis = N3c)</p> <p>OR (T-Stage at breast cancer diagnosis = T1c</p> <p>AND N-Stage at breast cancer diagnosis = N1mi))</p>		

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Breast 56	Trastuzumab received when Her-2/neu is negative or undocumented <i>(Lower Score - Better)</i>	Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care OR Trastuzumab (Herceptin) administered during initial treatment course = Null	Breast Module selected AND (HER-2/neu status = HER2 negative OR HER-2/neu status = Test ordered, results not yet documented OR HER-2/neu status = Test NOT ordered/no documentation OR HER-2/neu status = Test ordered, insufficient sample for results)	Trastuzumab (Herceptin) administered during initial treatment course = Trastuzumab administered AND (Trastuzumab administered according to clinical trial protocol (optional) = NO OR Trastuzumab administered according to clinical trial protocol (optional) = Null)	NQF endorsed Measure 1857: Patients with breast cancer and negative or undocumented human epidermal growth factor receptor 2 (HER2) status who are spared treatment with Trastuzumab (ASCO) http://www.qualityforum.org/QPS/1857 Measure 55
Breast 56a	Trastuzumab not received when Her-2/neu is negative or undocumented	Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care OR Trastuzumab (Herceptin) administered during initial treatment course = Null	Breast Module selected AND (HER-2/neu status = HER2 negative OR HER-2/neu status = Test ordered, results not yet documented OR HER-2/neu status = Test NOT ordered/no documentation OR HER-2/neu status = Test ordered, insufficient sample for results)	Trastuzumab (Herceptin) administered during initial treatment course = Trastuzumab NOT administered OR Trastuzumab administered according to clinical trial protocol (optional) = Yes	QOPI® Consensus Measure 56

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QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Breast 57	Trastuzumab received by patients with AJCC stage IA (T1c) and IB - III Her-2/neu positive breast cancer	Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care OR M-Stage at breast cancer diagnosis = M1 OR (Trastuzumab (Herceptin) administered during initial treatment course = Trastuzumab NOT administered AND (Reason = Patient declined OR Reason = Patient died or transferred OR Reason = Contraindication or other clinical exclusion OR Reason = chemotherapy or radiation NOT complete)) OR Trastuzumab (Herceptin) administered during initial treatment course = Null OR (Trastuzumab (Herceptin) administered during initial treatment course = Trastuzumab NOT administered AND Reason = Null)	Breast Module selected AND Chemotherapy administered during initial treatment course = Chemotherapy administered AND HER-2/neu status = HER2 positive AND ((AJCC stage at breast cancer diagnosis = IIA OR AJCC stage at breast cancer diagnosis = IIB OR AJCC stage at breast cancer diagnosis = IIIA OR AJCC stage at breast cancer diagnosis = IIIB OR AJCC stage at breast cancer diagnosis = IIIC) OR ((AJCC stage at breast cancer diagnosis = IA AND T-Stage at breast cancer diagnosis = T1c) OR AJCC stage at breast cancer diagnosis = IB) OR ((T-Stage at breast cancer diagnosis = T1c OR	Trastuzumab (Herceptin) administered during initial treatment course = Trastuzumab administered OR Reason = Alternative treatment according to clinical trial protocol	Measure 55

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Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			T-Stage at breast cancer diagnosis = T2 OR T-Stage at breast cancer diagnosis = T3 OR T-Stage at breast cancer diagnosis = T4 OR T-Stage at breast cancer diagnosis = T4a OR T-Stage at breast cancer diagnosis = T4b OR T-Stage at breast cancer diagnosis = T4c OR T-Stage at breast cancer diagnosis = T4d) AND N-Stage at breast cancer diagnosis = N0) OR (N-Stage at breast cancer diagnosis = N1 OR N-Stage at breast cancer diagnosis = N2 OR N-Stage at breast cancer diagnosis = N2a OR N-Stage at breast cancer diagnosis = N2b		

*QOPI® Certification Measure

Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			<p>OR N-Stage at breast cancer diagnosis = N3</p> <p>OR N-Stage at breast cancer diagnosis = N3a</p> <p>OR N-Stage at breast cancer diagnosis = N3b</p> <p>OR N-Stage at breast cancer diagnosis = N3c)</p> <p>OR (T-Stage at breast cancer diagnosis = T1c</p> <p>AND N-Stage at breast cancer diagnosis = N1mi))</p>		
Breast 58	Tamoxifen or AI recommended within 1 year of diagnosis for patients with AJCC stage IA (T1c) and 1B - III ER or PR positive breast cancer	<p>Transfer-in Status = Patient transferred to reporting practice following completion of initial course of medical oncology treatment</p> <p>OR M-Stage at breast cancer diagnosis = M1</p> <p>OR Diagnosis of malignant phyllodes, cystosarcoma phyllodes, tubular carcinoma, mucinous carcinoma</p> <p>OR (Hormonal therapy recommendation = Hormonal therapy NOT recommended</p>	<p>Breast Module selected</p> <p>AND ((AJCC stage at breast cancer diagnosis = IIA</p> <p>OR AJCC stage at breast cancer diagnosis = IIB</p> <p>OR AJCC stage at breast cancer diagnosis = IIIA</p> <p>OR AJCC stage at breast cancer diagnosis = IIIB</p> <p>OR AJCC stage at breast cancer diagnosis = IIIC)</p> <p>OR</p>	<p>Hormonal therapy recommendation = Hormonal therapy recommendation documented</p> <p>AND Date hormonal therapy first recommended ≠ Null</p> <p>AND (Date hormonal therapy first recommended - Date of Diagnosis) ≤ 365 days</p>	<p>NQF endorsed Measure #0387: Oncology: Hormonal therapy for stage IC through IIIC, ER/PR positive breast cancer (AMA PCPI, ASCO) (Adapted) http://www.qualityforum.org/QPS/0387</p> <p>NQF endorsed Measure #0220: Adjuvant hormonal therapy (Commission on Cancer) Adapted http://www.qualityforum.org/QPS/0220 http://www.qualityforum.org/pdf/cancer/txAppA-Specifications_web.pdf</p> <p>ASTRO/ASCO/AMA PCPI Oncology Measure (Adapted)</p>

*QOPI[®] Certification Measure

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		AND ((Date of abstraction - Date of Diagnosis) < 365 days) OR (Date of Death Unknown = Null) AND (Date of Death - Date of Diagnosis) < 365 days) OR (First Office Visit - Date of Diagnosis) > 365 days)) OR Hormonal therapy recommendation = Null OR Date of Diagnosis = Null	((AJCC stage at breast cancer diagnosis = IA) OR AJCC stage at breast cancer diagnosis = IB) AND T-Stage at breast cancer diagnosis = T1c) OR ((T-Stage at breast cancer diagnosis = T1c OR T-Stage at breast cancer diagnosis = T2 OR T-Stage at breast cancer diagnosis = T3 OR T-Stage at breast cancer diagnosis = T4 OR T-Stage at breast cancer diagnosis = T4a OR T-Stage at breast cancer diagnosis = T4b OR T-Stage at breast cancer diagnosis = T4c OR T-Stage at breast cancer diagnosis = T4d) AND N-Stage at breast cancer diagnosis = N0)		https://www.acr.org/~media/ACR/Documents/P4P/PerformanceMeasures/OncologyMeasureSet.pdf ASCO-NCCN Quality Measure (Adapted) http://www.asco.org/institute-quality/asco-nccn-quality-Measures Adjuvant Endocrine Therapy for Women With Hormone Receptor–Positive Breast Cancer: American Society of Clinical Oncology Clinical Practice Guideline Update on Ovarian Suppression DOI: 10.1200/JCO.2015.65.9573 Journal of Clinical Oncology 34, no. 14 (May 2016) 1689-1701 http://ascopubs.org/doi/full/10.1200/JCO.2015.65.9573 Unabridged Guideline Slides (pps) Slides (PDF) Patient Guide Decision Aid

*QOPI® Certification Measure

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			<p>OR (N-Stage at breast cancer diagnosis = N1</p> <p>OR N-Stage at breast cancer diagnosis = N2</p> <p>OR N-Stage at breast cancer diagnosis = N2a</p> <p>OR N-Stage at breast cancer diagnosis = N2b</p> <p>OR N-Stage at breast cancer diagnosis = N3</p> <p>OR N-Stage at breast cancer diagnosis = N3a</p> <p>OR N-Stage at breast cancer diagnosis = N3b</p> <p>OR N-Stage at breast cancer diagnosis = N3c)</p> <p>OR (T-Stage at breast cancer diagnosis = T1c</p> <p>AND N-Stage at breast cancer diagnosis = N1mi))</p> <p>AND (ER status = ER positive</p> <p>OR PR status = PR positive)</p>		

*QOPI® Certification Measure

Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Breast	Tamoxifen or AI received within 1 year of diagnosis by patients with AJCC stage IA (T1c) and IB -III ER or PR positive breast cancer*	Transfer-in Status = Patient transferred to reporting practice following completion of initial course of medical oncology treatment OR M-Stage at breast cancer diagnosis = M1 OR Diagnosis of malignant phyllodes, cystosarcoma phyllodes, tubular carcinoma, mucinous carcinoma OR (Hormonal therapy administered = Treatment NOT started AND ((Date of abstraction - Date of Diagnosis) < 365 days OR (Date of Death Unknown = Null AND (Date of Death - Date of Diagnosis) < 365 days) OR (First Office Visit - Date of Diagnosis) > 365 days OR (Chemotherapy end date - Date of Diagnosis) > 365 days OR Reason = Patient declined OR Reason = Patient died or transferred	Breast Module selected AND ((AJCC stage at breast cancer diagnosis = IIA OR AJCC stage at breast cancer diagnosis = IIB OR AJCC stage at breast cancer diagnosis = IIIA OR AJCC stage at breast cancer diagnosis = IIIB OR AJCC stage at breast cancer diagnosis = IIIC) OR ((AJCC stage at breast cancer diagnosis = IA AND T-Stage at breast cancer diagnosis = T1c) OR AJCC stage at breast cancer diagnosis = IB) OR ((T-Stage at breast cancer diagnosis = T1c OR T-Stage at breast cancer diagnosis = T2 OR T-Stage at breast cancer diagnosis = T3 OR	Hormonal therapy administered = Treatment started AND Hormonal therapy Administration Start date ≠ Null AND Hormonal therapy Administration (Start date - Date of Diagnosis) ≤ 365 days) OR Reason = Alternative treatment according to clinical trial protocol	NICCQ Measure BR-2B1: If a patient newly diagnosed with stage I to III breast cancer meets the following criteria: 1. ER+ and PR+ breast cancer AND 2. Tumor size ≥ 1 cm or involved axillary lymph nodes AND 3. Was not taking Tamoxifen within 6 months before diagnosis, THEN the patient should be started on Tamoxifen 20 mg /d (Adapted) http://jco.ascopubs.org/cgi/content/abstract/24/4/626 Adjuvant Endocrine Therapy for Women With Hormone Receptor–Positive Breast Cancer: American Society of Clinical Oncology Clinical Practice Guideline Update on Ovarian Suppression DOI: 10.1200/JCO.2015.65.9573 Journal of Clinical Oncology 34, no. 14 (May 2016) 1689-1701 http://ascopubs.org/doi/full/10.1200/JCO.2015.65.9573 http://jco.ascopubs.org/content/28/23/3784.full Unabridged Guideline Slides (pps) Slides (PDF) Patient Guide Decision Aid NQF endorsed Measure: #0220: Adjuvant hormonal therapy http://www.qualityforum.org/QPS/0220
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Certification					

*QOPI® Certification Measure

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		<p>OR Reason = Contraindication or other clinical exclusion documented</p> <p>OR Reason = Chemotherapy or radiation not complete</p> <p>OR Reason = Null))</p> <p>OR Hormonal therapy administered = Null</p> <p>OR Date of Diagnosis = Null</p>	<p>T-Stage at breast cancer diagnosis = T4</p> <p>OR T-Stage at breast cancer diagnosis = T4a</p> <p>OR T-Stage at breast cancer diagnosis = T4b</p> <p>OR T-Stage at breast cancer diagnosis = T4c</p> <p>OR T-Stage at breast cancer diagnosis = T4d)</p> <p>AND N-Stage at breast cancer diagnosis = N0)</p> <p>OR (N-Stage at breast cancer diagnosis = N1</p> <p>OR N-Stage at breast cancer diagnosis = N2</p> <p>OR N-Stage at breast cancer diagnosis = N2a</p> <p>OR N-Stage at breast cancer diagnosis = N2b</p> <p>OR N-Stage at breast cancer diagnosis = N3</p> <p>OR N-Stage at breast cancer diagnosis = N3a</p>		

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			<p>OR N-Stage at breast cancer diagnosis = N3b</p> <p>OR N-Stage at breast cancer diagnosis = N3c)</p> <p>OR (T-Stage at breast cancer diagnosis = T1c</p> <p>AND N-Stage at breast cancer diagnosis = N1mi)</p> <p>AND (ER status = ER positive</p> <p>OR PR status = PR positive)</p>		
Breast 60	Tamoxifen or AI received when ER/PR status is negative or undocumented <i>(Lower Score - Better)</i>	Transfer-in Status = Patient transferred to reporting practice following completion of initial course of medical oncology treatment OR Hormonal therapy administered = Null	<p>Breast Module selected</p> <p>AND (ER status = ER negative</p> <p>OR ER status = Test ordered, results not yet documented</p> <p>OR ER status = Test NOT ordered/no documentation</p> <p>OR ER status=Test ordered, insufficient sample for results</p> <p>OR ER status = uninterpretable)</p> <p>AND (PR status = PR negative</p> <p>OR PR status = Test ordered, results not yet documented</p>	<p>Hormonal therapy administered = Treatment started</p> <p>AND (Hormonal therapy administered according to clinical trial (optional) = No</p> <p>OR Hormonal therapy administered according to clinical trial (optional) = Null)</p>	Measure 58

*QOPI® Certification Measure

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			OR PR status = Test NOT ordered/no documentation OR PR status=Test ordered, insufficient sample for results OR PR status = uninterpretable)		
Breast 61	Bone-modifying agents (IV bisphosphonates or denosumab) administered for breast cancer bone metastases	Bone modifying agents = Recommended, patient declined OR Bone modifying agents = Not recommended/ administered, contraindication or other clinical exclusion documented OR Bone modifying agents = Null	Breast Module selected AND Bone metastases = Presence of bone metastases documented	Bone modifying agents = Administered OR Bone modifying agents = Not recommended due to alternative treatment according to clinical trial protocol	American Society of Clinical Oncology Clinical Practice Guideline Update: Recommendations on the Role of Bone-Modifying Agents in Metastatic Breast Cancer DOI:10.1200/JOP.2011.000212 Journal of Oncology Practice 7, no. 2 (March 2011) 117-121 http://ascopubs.org/doi/full/10.1200/jop.2011.000212 Guideline Update Slides (in PDF format)
Breast 62	Renal function assessed prior to the first administration of IV bisphosphonates or denosumab	Creatinine assessed prior to first administration = Null	Breast Module selected AND Bone metastases = Presence of bone metastases documented AND Bone modifying agents = Administered	Creatinine assessed prior to first administration = Yes	Measure 61

*QOPI® Certification Measure

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Breast 62a1	PET, CT, or radionuclide bone scan ordered by practice within 60 days after diagnosis to stage I, IIA, or IIB breast cancer <i>(Lower Score - Better)</i> (Top 5 Measure)	None	Core AND Breast module AND ((AJCC stage at breast cancer diagnosis= IA, IB, IIA, or IIB) OR (T-Stage at breast cancer diagnosis = T0, T1, T2 and N-Stage at breast cancer diagnosis = N1) OR (T-Stage at breast cancer diagnosis = T1, T2, T3 and N-Stage at breast cancer diagnosis = N0) OR ((T0 or T1) and N1mi)) AND Later of (chart creation date or update date – diagnosis date) ≥ 60 days OR (Later of (chart creation date or update date) – diagnosis date) < 60 days AND Breast scan within 60 days = PET, CT, or Radionuclide bone scan)	Breast scan within 60 days = PET, CT or Radionuclide scan AND Received imaging as part of IRB protocol = 'No or Unknown' AND Ordered by = practice	American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724. http://jco.ascopubs.org/content/30/14/1715.full?sid=75ea12b4-ce20-4407-aa4c-c5a2adca5af5

*QOPI® Certification Measure

Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Breast 62a2	PET, CT, or radionuclide bone scan ordered outside of practice within 60 days after diagnosis to stage I, IIA, or IIB breast cancer <i>(Lower Score - Better)</i> (Top 5 Measure)	None	Core AND Breast module AND ((AJCC stage at breast cancer diagnosis = IA, IB, IIA, or IIB) OR (T-Stage at breast cancer diagnosis = T0, T1, T2 and N-Stage at breast cancer diagnosis = N1) OR (T-Stage at breast cancer diagnosis = T1, T2, T3 and N-Stage at breast cancer diagnosis = N0) OR ((T0 or T1) and N1mi)) AND Later of (chart creation date or update date – diagnosis date) ≥ 60 days OR ((Later of (chart creation date or update date) – diagnosis date) < 60 days AND Breast scan within 60 days = PET, CT, or Radionuclide bone scan)	Breast scan within 60 days = PET, CT or Radionuclide scan AND Received imaging as part of IRB protocol = No or Unknown AND Ordered by = outside of practice	American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724. http://jco.ascopubs.org/content/30/14/1715.full?sid=75ea12b4-ce20-4407-aa4c-c5a2adca5af5

*QOPI® Certification Measure

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Breast 62b1	PET, CT, or radionuclide bone scan ordered by practice between day 61 and day 365 after diagnosis of breast cancer in patients who received treatment with curative intent <i>(Lower Score - Better)</i> (Top 5 Measure)	Received imaging as part of IRB protocol = Null Exclusion <ul style="list-style-type: none"> Missing data 	Core AND Breast module AND Treatment with curative intent = Yes AND (Later of (chart creation date or update date – diagnosis date) ≥ 365 days OR ((Later of (chart creation date or update date) – diagnosis date) <365 days AND (Later of (chart creation date or update date) – diagnosis date) > 61 days) AND Breast scan between 61 days and 365 days = PET, CT, or Radionuclide bone scan))	Breast scan between 61 days and 365 days = PET, CT or Radionuclide scan AND Received imaging as part of IRB protocol = No or Unknown AND Ordered by = outside of practice	American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. Schnipper JCO May 10, 2012:1715-1724. http://jco.ascopubs.org/content/30/14/1715.full?sid=62928c8e-80f4-47cd-9ab8-bd60994d6de7
Breast 62b2	PET, CT, or radionuclide bone scan ordered outside of practice between day 61 and day 365 after diagnosis of breast cancer in patients who received treatment with curative intent <i>(Lower Score - Better)</i> (Top 5 Measure)	Received imaging as part of IRB protocol = Null Exclusions <ul style="list-style-type: none"> Missing data 	Core AND Breast module AND Treatment with curative intent = Yes AND (Later of (chart creation date or update date – diagnosis date) ≥ 365 days OR ((Later of (chart creation date or update date) – diagnosis date) < 365 days AND	Breast scan between 61 days and 365 days = PET, CT or Radionuclide scan AND Received imaging as part of IRB protocol = No or Unknown AND Ordered by = outside of practice	American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. Schnipper JCO May 10, 2012:1715-1724. http://jco.ascopubs.org/content/30/14/1715.full?sid=62928c8e-80f4-47cd-9ab8-bd60994d6de7

*QOPI® Certification Measure

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QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			Later of (chart creation date or update date) – diagnosis date) > 61 days) AND Breast scan between 61 days and 365 days = PET, CT, or Radionuclide bone scan))		
Breast 62c1	Serum tumor marker surveillance ordered by practice between 30 days and 365 days after diagnosis of breast cancer in patients who received treatment with curative intent for breast cancer (Lower Score - Better) (Top 5 Measure)	Received serum marker test as part of IRB protocol = Null <i>Exclusions</i> <ul style="list-style-type: none"> Missing data 	Core AND Breast module AND Treatment with curative intent = Yes AND ((Later of (chart creation date or update date – diagnosis date) ≥ 365 days OR (Later of (chart creation date or update date – diagnosis date) < 365 days) AND Serum tumor marker test (CEA, CA 15-3, or CA 27.29) in the time period between 365 days after diagnosis of breast cancer in patients who received treatment with curative intent for breast cancer = Yes))	Serum tumor marker test (CEA, CA 15-3, or CA 27.29) in the time period between 30 days and 365 days after diagnosis of breast cancer in patients who received treatment with curative intent for breast cancer = Yes AND Received serum marker test as part of IRB protocol = No or Unknown AND Ordered by = practice	American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724. http://ico.ascopubs.org/content/30/14/1715.full?sid=62928c8e-80f4-47cd-9ab8-bd60994d6de7

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Breast 62c2	Serum tumor marker surveillance ordered outside of practice between 30 days and 365 days after diagnosis of breast cancer in patients who received treatment with curative intent for breast cancer <i>(Lower Score - Better)</i> (Top 5 Measure)	Received serum marker test as part of IRB protocol = Null <i>Exclusion</i> <ul style="list-style-type: none"> Missing data 	Core AND Breast module AND Treatment with curative intent = Yes AND (Later of (chart creation date or update date – diagnosis date) ≥ 365 days OR (Later of (chart creation date or update date – diagnosis date) < 365 days AND Serum tumor marker test (CEA, CA 15-3, or CA 27.29) in the time period between 30 days and 365 days after diagnosis of breast cancer in patients who received treatment with curative intent for breast cancer = Yes))	Serum tumor marker test (CEA, CA 15-3, or CA 27.29) in the time period between 30 days and 365 days after diagnosis of breast cancer in patients who received treatment with curative intent for breast cancer = Yes AND Received serum marker test as part of IRB protocol = No or Unknown AND Ordered by = outside of practice	American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724. http://jco.ascopubs.org/content/30/14/1715.full?sid=62928c8e-80f4-47cd-9ab8-bd60994d6de7

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Breast 62d	GCSF administered to patients who received chemotherapy for metastatic breast cancer <i>(Lower Score - Better)</i> <i>(Measure - Top 5)</i>	None	Breast module AND (AJCC stage at breast cancer diagnosis= IV or 'AJCC stage not documented; Patient noted to have distant metastatic cancer at diagnosis) OR AJCC M-Stage = M1 OR Stage IV at initial diagnosis or development of distant metastases = Yes AND Patient received chemotherapy for metastatic disease = Yes	Patient received GCSF (Neulasta) during course of chemotherapy = Yes	American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724. http://jco.ascopubs.org/content/30/14/1715.full?sid=62928c8e-80f4-47cd-9ab8-bd60994d6de7
Colorectal 63	Complete family history documented for patients with invasive colorectal cancer <i>(Defect-free measure 63a - 63c)</i>	None	Colon/Rectal Module selected AND Presence/Absence of first-degree relatives not Null AND Presence/Absence of second-degree relatives not Null AND Age of diagnosis documented not Null	Presence/Absence of first-degree relatives = Yes OR Documentation that family history is unobtainable AND Presence/Absence of second-degree relatives = Yes OR Documentation that family history is unobtainable AND Age of diagnosis documented = Yes OR No blood relatives noted with cancer OR Requested but unknown by family	NCCN Practice Guidelines in Oncology - Colorectal Cancer Screening Guideline. V.2.2013 Stoffel EM, Limburg, PJ, Mangu PB, et al: Hereditary Colorectal Cancer Syndromes: American Society of Clinical Oncology Practice Guideline Endorsement of the Familial Risk-Colorectal Cancer: European Society for Medical Oncology Clinical Practice Guidelines. Journal of Clin Oncol; published online on December 1, 2014. http://jco.ascopubs.org/content/33/2/209.long

*QOPI® Certification Measure

Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Colorectal 63a	Presence or absence of cancer in first-degree blood relatives documented	None	Colon/Rectal Module selected AND Presence or absence of cancer diagnosis in first-degree relatives ≠ Null	Presence or absence of cancer diagnosis in first-degree relatives = Yes OR Presence or absence of cancer diagnosis in first-degree relatives = Documentation that family history is unobtainable	Measure 63
Colorectal 63b	Presence or absence of cancer in second-degree blood relatives documented	None	Colon/Rectal Module selected AND Presence or absence of cancer diagnosis in second-degree relatives ≠ Null	Presence or absence of cancer diagnosis in second-degree relatives = Yes OR Presence or absence of cancer diagnosis in second-degree relatives = Documentation that family history is unobtainable	Measure 63
Colorectal 63c	Age at diagnosis documented for each blood relative noted with cancer	Age of diagnosis documented for all blood-relatives noted with cancer = No blood relatives noted with cancer	Colon/Rectal Module selected AND Age of diagnosis documented for all blood-relatives noted with cancer ≠ Null	Age of diagnosis documented for each blood-relatives noted with cancer = Yes OR Age of diagnosis documented for each blood-relatives noted with cancer = Requested but unknown by family	Measure 63
Colorectal 65	Genetic testing addressed appropriately for patients with invasive colorectal cancer	Patient counseled/referred for counseling = Null OR (Patient counseled/referred for counseling = No AND	Colon/Rectal Module selected AND (Age of diagnosis < 50 OR Colorectal genetic risk assessment = History of another HNPCC cancer)	Patient counseled/referred for counseling = Yes AND (Patient completed genetic testing = Yes, ordered by practice AND	Measure 63

*QOPI® Certification Measure

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
	(Defect-free measure 65a - 65c)	Reason not counseled/referred = (patient declined, patient died, or patient transferred out of practice)) OR Patient completed genetic testing = Null OR (Discussion of genetic test results = No AND Reason Why no Discussion = (patient declined, patient died, or patient transferred))	OR (Age of diagnosis < 60 and colorectal genetic risk assessment = High MSI) OR Colorectal genetic risk assessment = First-degree blood relative with colorectal, ovarian, endometrial diagnosed < 50 OR Colorectal genetic risk assessment = Two or more first- or second-degree relatives with colorectal, ovarian or endometrial cancer)	Patient consent for genetic test = Yes AND Discussion of genetic test results = Yes) OR Patient completed genetic testing = (Yes, not ordered by practice or No, test is scheduled or patient referred for testing)	
Colorectal 65a	Genetic counseling, referral for counseling, or genetic testing for patients with invasive colorectal cancer with increased hereditary risk of colorectal cancer	(Counseling or referral for counseling for genetic testing = Null OR (Counseling or referral for counseling for genetic testing = No AND (Enter documented reason for NO genetic testing counseling or referral = Patient declined OR Enter documented reason for NO genetic testing counseling or referral = Patient died OR Enter documented reason for NO genetic testing counseling or referral = Patient transferred out of practice))	Colon/Rectal Module selected AND (Age of diagnosis < 50 OR Colorectal genetic risk assessment = History of another cancer consistent with HNPCC syndrome) OR (Age of diagnosis <60 AND Colorectal genetic risk assessment = High results on microsatellite instability (MSI) testing (MSI-H)) OR Colorectal genetic risk assessment = First-degree blood relative with colorectal, ovarian, or endometrial cancer diagnosed under the age of 50 years OR	Counseling or referral for counseling for genetic testing = Yes AND (Patient completed genetic testing = Yes, ordered by practice OR Patient completed genetic testing = Yes, not ordered by practice OR Patient completed genetic testing = No, test is scheduled or patient referred for testing)	Measure 63

*QOPI® Certification Measure

Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		<p>OR Patient completed genetic testing = Null</p> <p>OR (Discussion of genetic test results= Null</p> <p>OR (Reason No Discussion of genetic test results = patient declined, patient died, or patient transferred))</p>	Colorectal genetic risk assessment = Two or more related first- or second-degree blood relatives with colorectal, ovarian, or endometrial cancer)		
Colorectal 65b	Patient consent for genetic testing ordered by the practice for patients with invasive colorectal cancer	None	Colon/Rectal Module selected AND Patient completed genetic testing = Yes, ordered by practice	Patient consent for genetic test ordered by practice = Yes	Measure 63
Colorectal 65c	Patient with invasive colorectal cancer counseled, or referred for counseling, to discuss results following genetic testing	<p>Discussion of genetic test results = Null</p> <p>OR Enter documented reason for NO discussion of test results = patient declined</p> <p>OR Enter documented reason for NO discussion of test results = patient died</p> <p>OR Enter documented reason for NO discussion of test results = patient transferred out of practice</p>	Colon/Rectal Module selected AND Patient completed genetic testing = Yes, ordered by practice	Discussion of genetic test results = Yes	Measure 63

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Colorectal	CEA within 4 months of curative resection for colorectal cancer*	AJCC/Dukes' stage at colon or rectal cancer diagnosis = AJCC Stage IVA OR AJCC/Dukes' stage at colon or rectal cancer diagnosis = AJCC Stage IVB OR M-Stage at colon or rectal cancer diagnosis = M1 OR M-Stage at colon or rectal cancer diagnosis = M1a OR M-Stage at colon or rectal cancer diagnosis = M1b OR AJCC/Dukes' stage at colon or rectal cancer diagnosis = Stage group NOT documented; Patient noted to have distant metastatic disease at diagnosis OR Transfer-in Status = Patient transferred to reporting practice following completion of initial course of medical oncology treatment OR (CEA following curative resection = No AND ((Date of abstraction - Date of surgical resection) < 124 days OR (Date of Death Unknown = Null AND	Colon/Rectal Module selected AND Colon or Rectal diagnosis (not appendix cancer) AND If patient had a surgical resection: Surgical resection results = Tumor resected, clear margins	CEA following curative resection = Yes	ASCO 2006 Update of Recommendations for the Use of Tumor Markers in Gastrointestinal Cancer. Gershon Y. Locker, Stanley Hamilton, Jules Harris, John M. Jessup, Nancy Kemeny, John S. Macdonald, Mark R. Somerfield, Daniel F. Hayes, and Robert C. Bast Jr for the American Society of Clinical Oncology Tumor Markers Expert Panel. Journal of Clinical Oncology, Vol 24, No 33 (November 20), 2006: pp. 5313-5327 http://ascopubs.org/doi/full/10.1200/jco.2006.08.2644
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Certification					

*QOPI® Certification Measure

Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		(Date of Death - Date of surgical resection) < 124 days) OR (Date of first visit - Date of surgical resection) > 124 days OR (Date chemotherapy was initiated < (Date of surgical resection + 124 days) AND Chemotherapy end date > Date of surgical resection))) OR CEA following curative resection = Null			
Colorectal 67	Adjuvant chemotherapy recommended within 4 months of diagnosis for patients with AJCC stage III colon cancer	Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care OR M-Stage at colon or rectal cancer diagnosis = M1 OR M-Stage at colon or rectal cancer diagnosis = M1a OR M-Stage at colon or rectal cancer diagnosis = M1b OR (Chemotherapy recommended during initial treatment course = Chemotherapy NOT recommended AND	Age 18-79 at diagnosis AND Colon/Rectal Module selected AND Colon cancer diagnosis (not appendix cancer) AND (If patient had a surgical resection: Surgical resection results = Tumor resected, clear margins OR If patient had a surgical resection: Surgical resection results = Tumor resected, surgical margins noted as positive (R1, microscopically or macroscopically positive)) AND (AJCC/Dukes' stage at colon or rectal cancer diagnosis = AJCC Stage IIIA/Dukes' C OR	(Chemotherapy recommended during initial treatment course = Chemotherapy recommended AND Date chemotherapy was first recommended ≠ Null AND (Date chemotherapy was first recommended - Date of Diagnosis) ≤ 120 days	NQF Measure 0223: Adjuvant chemotherapy is considered or administered within 4 months (120 days) of diagnosis to patients under the age of 80 with AJCC III (lymph node positive) colon cancer (Commission on Cancer) (Adapted) http://www.qualityforum.org/QPS/0223 ASTRO/ASCO/AMA PCPI Oncology Measure (Adapted) https://www.acr.org/~media/ACR/Documents/P4P/PerformanceMeasures/OncologyMeasureSet.pdf ASCO-NCCN Quality Measure (Adapted) http://www.asco.org/institute-quality/asco-nccn-quality-Measures

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		(((Date of abstraction - Date of Diagnosis) < 120 days) OR (Date of Death Unknown = Null AND (Date of Death - Date of Diagnosis) < 120 days) OR (First Office Visit - Date of Diagnosis) > 120 days)) OR Curative chemotherapy provided = Neoadjuvant/pre-operative OR Chemotherapy recommended during initial treatment course = Null OR Date of Diagnosis = Null	AJCC/Dukes' stage at colon or rectal cancer diagnosis = AJCC Stage IIIB/Dukes' C OR AJCC/Dukes' stage at colon or rectal cancer diagnosis = AJCC Stage IIIC/Dukes' C) OR (T-Stage at colon or rectal cancer diagnosis = T1 OR T-Stage at colon or rectal cancer diagnosis = T2 OR T-Stage at colon or rectal cancer diagnosis = T3 OR T-Stage at colon or rectal cancer diagnosis = T4a OR T-Stage at colon or rectal cancer diagnosis = T4b) AND (N-Stage at colon or rectal cancer diagnosis = N1 OR N-Stage at colon or rectal cancer diagnosis = N1a OR N-Stage at colon or rectal cancer diagnosis = N1b OR N-Stage at colon or rectal cancer diagnosis = N1c OR		NQF Endorsed Quality of Cancer Measure – Commission on Cancer http://www.qualityforum.org/pdf/cancer/txAppA-Specifications_web.pdf American Society of Clinical Oncology Recommendations on Adjuvant Chemotherapy for Stage II Colon Cancer. Al B. Benson III, Deborah Schrag, Mark R. Somerfield, Alfred M. Cohen, Alvaro T. Figueredo, Patrick J. Flynn, Monika K. Krzyzanowska, Jean Maroun, Pamela McAllister, Eric Van Cutsem, Melissa Brouwers, Manya Charette, Daniel G. Haller Journal of Clinical Oncology, Vol 22, No 16 (August 15), 2004: pp. 3408-341 http://ascopubs.org/doi/full/10.1200/jco.2004.05.063 NCCN Clinical Practice Guidelines in Oncology™. Colon Cancer, V2.2016 http://www.nccn.org/

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			N-Stage at colon or rectal cancer diagnosis = N2 OR N-Stage at colon or rectal cancer diagnosis = N2a OR N-Stage at colon or rectal cancer diagnosis = N2b)		

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Colorectal	Adjuvant chemotherapy received within 4 months of diagnosis by patients with AJCC stage III colon cancer*	Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care OR M-Stage at colon or rectal cancer diagnosis = M1 OR M-Stage at colon or rectal cancer diagnosis = M1a OR M-Stage at colon or rectal cancer diagnosis = M1b OR (Chemotherapy administered during initial treatment course = Chemotherapy NOT administered AND ((Date of abstraction - Date of Diagnosis) < 124 days OR (Date of Death Unknown = Null AND (Date of Death - Date of Diagnosis) < 124 days) OR (First Office Visit - Date of Diagnosis) > 124 days OR Reason = Patient declined OR Reason = Patient died or transferred	Age 18-79 at diagnosis AND Colon/Rectal Module selected AND Colon cancer diagnosis (not appendix cancer) AND (If patient had a surgical resection: Surgical resection results = Tumor resected, clear margins OR If patient had a surgical resection: Surgical resection results = Tumor resected, surgical margins noted as positive (R1, microscopically or macroscopically positive)) AND (AJCC/Dukes' stage at colon or rectal cancer diagnosis = AJCC Stage IIIA/Dukes' C OR AJCC/Dukes' stage at colon or rectal cancer diagnosis = AJCC Stage IIIB/Dukes' C OR AJCC/Dukes' stage at colon or rectal cancer diagnosis = AJCC Stage IIIC/Dukes' C OR ((T-Stage at colon or rectal cancer diagnosis = T1 OR T-Stage at colon or rectal cancer diagnosis = T2 OR	((Chemotherapy administered during initial treatment course = chemotherapy administered AND Date chemotherapy was initiated ≠ Null AND (Date chemotherapy was initiated - Date of Diagnosis) ≤ 124 days)) OR Reason = Alternative treatment according to clinical trial protocol	NQF Measure 0385 Oncology: Chemotherapy for AJCC Stage III Colon Cancer Patients (AMA PCPI, ASCO) (Adapted) http://www.qualityforum.org/QPS/0385 NICCQ Measure: CO-2B1a: IF a patient has stage II colon cancer features that increase risk of recurrence (obstruction, perforation, or T4 lesions) or stage III colon cancer, THEN the patient should receive adjuvant chemotherapy with a regimen listed in Table A or was in a clinical trial (Adapted) http://ico.ascopubs.org/content/24/4/626.abstract

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		<p>OR Reason = Contraindication or other clinical exclusion))</p> <p>OR Curative chemotherapy provided = Neoadjuvant/pre-operative</p> <p>OR Chemotherapy administered during initial treatment course = Null</p> <p>OR Date of Diagnosis = Null</p> <p>OR (Chemotherapy administered during initial treatment course = Chemotherapy NOT administered AND Reason = Null)</p>	<p>T-Stage at colon or rectal cancer diagnosis = T3</p> <p>OR T-Stage at colon or rectal cancer diagnosis = T4a</p> <p>OR T-Stage at colon or rectal cancer diagnosis = T4b)</p> <p>AND (N-Stage at colon or rectal cancer diagnosis = N1</p> <p>OR N-Stage at colon or rectal cancer diagnosis = N1a</p> <p>OR N-Stage at colon or rectal cancer diagnosis = N1b</p> <p>OR N-Stage at colon or rectal cancer diagnosis = N1c</p> <p>OR N-Stage at colon or rectal cancer diagnosis = N2</p> <p>OR N-Stage at colon or rectal cancer diagnosis = N2a</p> <p>OR N-Stage at colon or rectal cancer diagnosis = N2b)</p>		

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Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Colorectal 70	12 or more lymph nodes examined for resected colon cancer	<p>No Nodes = Awaiting results OR AJCC/Dukes' stage at colon cancer diagnosis = AJCC Stage IVA OR AJCC/Dukes' stage at colon or rectal cancer diagnosis = AJCC Stage IVB OR M-Stage at colon or rectal cancer diagnosis = M1 OR M-Stage at colon or rectal cancer diagnosis = M1a OR M-Stage at colon or rectal cancer diagnosis = M1b OR AJCC/Dukes' stage at colon cancer diagnosis = Stage group NOT documented; Patient noted to have distant metastatic disease at diagnosis OR Transfer-in Status = Patient transferred to reporting practice following completion of initial course of medical oncology treatment</p>	<p>Colon/Rectal Module selected AND Colon cancer diagnosis (not appendix cancer) AND (If patient had a surgical resection: Surgical resection results = Tumor resected, clear margins) OR If patient had a surgical resection: Surgical resection results = Tumor resected, surgical margins noted as positive (R1, microscopically or macroscopically positive))</p>	Number of nodes examined by pathologist ≥ 12	<p>ASCO-NCCN Quality Measure http://www.asco.org/institute-quality/asco-nccn-quality-Measures</p> <p>NQF Endorsed Quality of Cancer Measure – Commission on Cancer http://www.qualityforum.org/pdf/cancer/txAppA-Specifications_web.pdf</p>

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QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Colorectal 73 Certification	Colonoscopy before or within 6 months of curative colorectal resection or completion of primary adjuvant chemotherapy*	<p>AJCC/Dukes' stage at colon or rectal cancer diagnosis = AJCC Stage IVA OR AJCC/Dukes' stage at colon or rectal cancer diagnosis = AJCC Stage IVB OR M-Stage at colon or rectal cancer diagnosis = M1 OR M-Stage at colon or rectal cancer diagnosis = M1a OR M-Stage at colon or rectal cancer diagnosis = M1b OR AJCC/Dukes' stage at colon or rectal cancer diagnosis = Stage group NOT documented; Patient noted to have distant metastatic disease at diagnosis OR (Colonoscopy, preoperatively or within 6 months of surgical resection = No complete colon examination via colonoscopy AND ((Date of abstraction - Date of surgical resection) < 186 days OR (Reason for No Colonoscopy = Patient died (before 6 months past end of adjuvant chemo) OR</p>	<p>Colon/Rectal Module selected AND Colon or Rectal Cancer (not appendix cancer) AND (If patient had a surgical resection: Surgical resection results = Tumor resected, clear margins OR If patient had a surgical resection: Surgical resection results = Tumor resected, surgical margins noted as positive (R1, microscopically or macroscopically positive))</p>	<p>Colonoscopy, preoperative, intraoperative, or within 6 months of surgical resection or completion of primary adjuvant chemotherapy = Yes, complete colon examination via colonoscopy</p>	<p>Follow-Up Care, Surveillance Protocol, and Secondary Prevention Measures for Survivors of Colorectal Cancer: American Society of Clinical Oncology Clinical Practice Guideline Endorsement Jeffrey Meyerhardt, Pamela B. Mangu, Patrick J. Flynn, Larissa Korde, Charles L. Loprinzi, Bruce D. Minsky, Nicholas J. Petrelli, Kim Ryan, Deborah H. Schrag, Sandra L. Wong, and Al B. Benson III DOI: 10.1200/JCO.2013.50.7442 Journal of Clinical Oncology 31, no. 35 (December 2013) 4465-4470 http://ascopubs.org/doi/full/10.1200/jco.2013.50.7442 NCCN Clinical Practice Guidelines in Oncology™. Colon Cancer, V.3.2015 http://www.nccn.org/professionals/p_hysician_gls/pdf/colon.pdf Guidelines for colonoscopy surveillance after cancer resection: a consensus update by the American Cancer Society and US Multi-Society Task Force on Colorectal Cancer. Rex DK, Kahi CJ, Levin B, Smith RA, Bond JH, Brooks D, Burt RW, Byers T, Fletcher RH, Hyman N, Johnson D, Kirk L, Lieberman DA, Levin TR, O'Brien MJ, Simmang C, Thorson AG, Winawer SJ. CA Cancer J Clin. 2006 May-Jun;56(3):160-7 http://www.ncbi.nlm.nih.gov/pubmed/16737948</p>

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		Patient still receiving adjuvant chemotherapy) OR (Date of Death Unknown = Null AND (Date of Death - Date of surgical resection) <186 days) OR Date of first visit – Date of surgical resection > 186			

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Colorectal 74 Certification	RAS (KRAS and NRAS) testing for patients with metastatic colorectal cancer who received anti-EGFR MoAb therapy*	KRAS gene mutation testing = Null AND NRAS gene mutation testing = Null	Colon/Rectal Module selected AND Metastases = Presence of metastatic disease documented AND Anti-EGFR monoclonal antibody therapy = Anti-EGFR monoclonal antibody therapy received	(KRAS gene mutation testing = KRAS mutation detected OR KRAS gene mutation testing = No KRAS mutation detected (wildtype)) AND (NRAS gene mutation testing = NRAS mutation detected OR NRAS gene mutation testing = No NRAS mutation detected)	American Society of Clinical Oncology Provisional Clinical Opinion: Testing for KRAS Gene Mutations in Patients with Metastatic Colorectal Carcinoma to Predict Response to Anti-Epidermal Growth Factor Receptor Monoclonal Antibody Therapy. Carmen J. Allegra, J. Milburn Jessup, Mark R. Somerfield, Stanley R. Hamilton, Elizabeth H. Hammond, Daniel F. Hayes, Pamela K. McAllister, Roscoe F. Morton, and Richard L. Schilsky http://ascopubs.org/doi/full/10.1200/jco.2009.21.9170 Allegra CJ, Schilsky RL, Rumble RB, et al: Extended RAS Gene Mutation Testing in Metastatic Colorectal Carcinoma to Predict Response to Anti-Epidermal Growth Factor Receptor Monoclonal Antibody Therapy: American Society of Clinical Oncology Provisional Clinical Opinion Update 2015. JCO.2015.63.9674; published online on October 5, 2015 http://jco.ascopubs.org/content/34/2/179
Colorectal 75	Anti-EGFR MoAb therapy received by patients with KRAS mutation (Lower Score – Better) (Top 5 Measure)	Anti-EGFR monoclonal antibody therapy = Null	Colon/Rectal Module selected AND Metastases = Presence of metastatic disease documented AND (KRAS gene mutation testing = KRAS mutation detected OR	Anti-EGFR monoclonal antibody therapy = Anti-EGFR monoclonal antibody therapy received	Measure 74 Schnipper LE, Lyman GH, Blayney D, et al. (2013) American Society of Clinical Oncology 2013 Top 5 List in Oncology. Journal of Clinical Oncology. 31 (34), 4362-70. http://jco.ascopubs.org/content/31/34/4362.long

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			NRAS gene mutation testing = NRAS mutation detected)		
Colorectal 75a	Anti-EGFR MoAb therapy not received by patients with KRAS and NRAS mutation	Anti-EGFR monoclonal antibody therapy = Null	Colon/Rectal Module selected AND Metastases = Presence of metastatic disease documented AND (KRAS gene mutation testing = KRAS mutation detected OR NRAS gene mutation testing = NRAS mutation detected)	Anti-EGFR monoclonal antibody therapy = No anti-EGFR monoclonal antibody therapy received	Measure 74

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QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Colorectal 75b	GCSF administered to patients who received chemotherapy for metastatic colon cancer <i>(Lower Score - Better)</i> <i>(Top 5 Measure)</i>	Patient received chemotherapy for Stage IV or distant metastases = Null OR Patient received Folfoxiri or Folfirinor	Colorectal module AND ICD Code for colon cancer (C18.x, C19.x and confirmation of colon cancer AND (AJCC/Dukes' stage at colon or rectal cancer diagnosis = AJCC Stage IVA OR AJCC/Dukes' stage at colon or rectal cancer diagnosis = AJCC Stage IVB) OR AJCC stage not documented) OR AJCC M-Stage = M1 OR AJCC M-Stage = M1a OR AJCC M-Stage = M1b OR Stage IV at initial diagnosis or development of distant metastases = Yes) AND Patient received chemotherapy for metastatic disease = Yes	Patient received GCSF (Neulasta) during course of chemotherapy = Yes	American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724. http://jco.ascopubs.org/content/30/14/1715.full?sid=62928c8e-80f4-47cd-9ab8-bd60994d6de7

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Colorectal	Percentage of colon cancer patients with PET or PET-CT ordered by practice after the completion of treatment with curative intent for colon cancer (Lower Score – Better) <i>(Top 5 Measure)</i>	Received PET/PET-CT as part of IRB protocol = Yes	Colorectal module AND Treatment with curative intent = Yes AND Treatment with Curative Intent = Surgical resection	PET or PET-CT = Yes AND Date of PET or PET-CT - Date of Surgical resection ≥ 1 day AND Ordered by = Practice	Schnipper LE, Lyman GH, Blayney D, et al. American Society of Clinical Oncology 2013 Top 5 List in Oncology. Journal of Clinical Oncology. 31 (34), 4362-70, 2013. http://jco.ascopubs.org/content/31/34/4362.long Meyerhardt JA, Mangu PB, Flynn PJ, et al. Follow-Up Care, Surveillance Protocol, and Secondary Prevention Measures for Survivors of Colorectal Cancer: American Society of Clinical Oncology Clinical Practice Guideline Endorsement. DOI: 10.1200/JCO.2013.50.7442 Journal of Clinical Oncology 31, no. 35 (December 2013) 4465-4470 http://ascopubs.org/doi/full/10.1200/jco.2013.50.7442 Slide Set (PDF) Slide Set (PPS) Data Supplement Patient Guide

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Colorectal	Proportion of patients with a diagnosis of colorectal cancer who had microsatellite instability (MSI) status determined by MS instability analysis or immunohistochemistry by mismatched repair proteins (MMR)	None	Colorectal module	MS instability analysis received = Yes OR Immunohistochemistry by presence of mismatched repair (MMR) proteins received = Yes	<p>Hereditary Colorectal Cancer Syndromes: American Society of Clinical Oncology Clinical Practice Guideline Endorsement of the Familial Risk–Colorectal Cancer: European Society for Medical Oncology Clinical Practice Guidelines http://ascopubs.org/doi/pdf/10.1200/JCO.2014.58.1322</p> <p>Slide Set (pps) Slide Set (pdf) Summary of Recommendations Table Patient Information: Attenuated Familial Adenomatous Polyposis (AFAP) Patient Information: Familial Adenomatous Polyposis (FAP) Patient Information: Lynch Syndrome Patient Information: MYH-Associated Polyposis</p>

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Colorectal 78	Proportion of patients with a diagnosis of non-metastatic rectal cancer who received a transrectal ultrasound or pelvic MRI to determine the stage of disease prior to initial therapy or surgery (Test Measure)	M-Stage at rectal cancer diagnosis = M1 OR M-Stage at rectal cancer diagnosis = M1a OR M-Stage at rectal cancer diagnosis = M1b OR AJCC Stage IV at Diagnosis or Developed Distant Metastases = Yes	Colorectal module AND CRC Test Measures Selected AND ICD Code for rectal cancer (C20) AND (AJCC/Dukes' stage at rectal cancer diagnosis = AJCC Stage IA/Dukes' B OR AJCC/Dukes' stage at rectal cancer diagnosis = AJCC Stage IB/Dukes' B OR (AJCC/Dukes' stage at rectal cancer diagnosis = AJCC Stage IIA/Dukes' B OR AJCC/Dukes' stage at rectal cancer diagnosis =AJCC Stage IIB/Dukes' B OR AJCC/Dukes' stage at rectal cancer diagnosis = AJCC Stage IIC/Dukes' B OR AJCC/Dukes' stage at rectal cancer diagnosis = AJCC Stage IIIA/Dukes' C OR AJCC/Dukes' stage at rectal cancer diagnosis = AJCC Stage IIIB/Dukes' C OR AJCC/Dukes' stage at rectal cancer diagnosis = AJCC Stage IIIC/Dukes' C OR ((T-Stage at rectal cancer diagnosis = T1 OR T-Stage at rectal cancer diagnosis = T2	(Transrectal ultrasound received = Yes OR Pelvic MRI received = Yes) AND (Date of Transrectal ultrasound or Pelvic MRI < (Date of Initial chemotherapy OR Date of Surgical Resection)	Rectal Cancer at the Crossroads: The Dilemma of Clinically Staged T3, N0, M0 Disease http://jco.ascopubs.org/content/26/3/350.full.pdf

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			<p>OR T-Stage at rectal cancer diagnosis = T3</p> <p>OR T-Stage at rectal cancer diagnosis = T4a</p> <p>OR T-Stage at rectal cancer diagnosis = T4b)</p> <p>AND (N-Stage at rectal cancer diagnosis = N0</p> <p>OR N-Stage at rectal cancer diagnosis = N1</p> <p>OR N-Stage at rectal cancer diagnosis = N1a</p> <p>OR N-Stage at rectal cancer diagnosis = N1b</p> <p>OR N-Stage at rectal cancer diagnosis = N1c</p> <p>OR N-Stage at rectal cancer diagnosis = N2</p> <p>OR N-Stage at rectal cancer diagnosis = N2a</p> <p>OR N-Stage at rectal cancer diagnosis = N2b))</p> <p>OR</p>		

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			((T-Stage at rectal cancer diagnosis = T3 OR T-Stage at rectal cancer diagnosis = T4a OR T-Stage at rectal cancer diagnosis = T4b) AND N-Stage at rectal cancer diagnosis = N0)		
Non-Hodgkin's Lymphoma 77	Obinutuzumab, Ofatumumab, or Rituximab administered when CD-20 antigen expression is negative or undocumented <i>(Lower Score - Better)</i>	None	NHL Module selected AND Obinutuzumab administered = Yes OR Ofatumumab administered = Yes OR Rituximab administered = Yes	(CD-20 antigen expression = CD-20 negative OR CD-20 antigen expression = Test ordered, results not yet documented OR CD-20 antigen expression = Test NOT ordered/no documentation OR CD-20 antigen expression = Test ordered, insufficient sample for results) AND (Obinutuzumab, Ofatumumab, or Rituximab administered according to clinical trial protocol = No or Null)	NCCN Clinical Practice Guidelines in Oncology™. Non-Hodgkin's Lymphoma, V.1.2014 http://www.nccn.org/professionals/physician_gls/pdf/nhl.pdf

*QOPI® Certification Measure

Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Non-Hodgkin's Lymphoma 77a	Obinutuzumab , Ofatumumab, or Rituximab not administered when CD-20 antigen expression is negative or undocumented	None	NHL Module selected AND Obinutuzumab administered = Yes OR Ofatumumab administered = Yes OR Rituximab administered = Yes	CD-20 antigen expression = CD-20 positive OR ((CD-20 antigen expression = CD-20 negative OR CD-20 antigen expression = Test ordered, results not yet documented OR CD-20 antigen expression = Test NOT ordered/no documentation OR CD-20 antigen expression = Test ordered, insufficient sample for results) AND Obinutuzumab, Ofatumumab, or Rituximab administered according to clinical trial protocol = Yes)	Measure 77
Non-Hodgkin's Lymphoma 78a	Hepatitis B virus infection test (HBsAg) and Hepatitis B core antibody (Anti-HBc infection) test within 3 months prior to initiation of obinutuzumab, ofatumumab, or rituximab for patients with NHL	None	NHL Module selected AND Obinutuzumab , ofatumumab, or rituximab administered = Yes	((Hepatitis B surface antigen expression ≠ (Test NOT ordered/no documentation or Hepatitis B surface antigen expression test ordered, insufficient sample for results) AND Anti-HBc ≠ (Test NOT ordered/no documentation or Test ordered, insufficient sample for results)) OR ((Hepatitis B surface antigen expression= (Test NOT ordered/no documentation or	ASCO Provisional Clinical Opinion: Chronic Hepatitis B Virus Infection Screening in Patients Receiving Cytotoxic Chemotherapy for Treatment of Malignant Diseases http://ascopubs.org/doi/pdf/10.1200/JCO.2010.30.0673

*QOPI® Certification Measure

Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
				Hepatitis B surface antigen expression test ordered, insufficient sample for results) AND Anti-HBc = (Test NOT ordered/no documentation or Test ordered, insufficient sample for results)) OR Obinutuzumab, Ofatumumab, or Rituximab administered according to clinical trial protocol = Yes)	

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QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Non-Hodgkin's Lymphoma 80n	Percentage of patients with PET or PET-CT ordered by practice between 3 and 12 months after completion of treatment with curative intent for diffuse large B cell lymphoma (Lower Score – Better) <i>(Top 5 Measure)</i>	Received imaging as part of IRB protocol = Yes	NHL Module AND Age at Diagnosis ≥ 18 AND ICD Code = C83.3x (ICD 10) AND Treatment Type= Chemotherapy OR Radiation AND Treatment with curative intent = Yes AND (Later of (chart creation date or update date – date of treatment with curative intent) ≥ 12 months OR (((Later of (chart creation date or update date) – date of treatment with curative intent) < 12 months AND Later of (chart creation date or update date) – date of treatment with curative intent)) > 3 months)	((Image scan= PET for Monitoring/Surveillance AND Date of Imaging Scan=between 3 and 12 months = PET) OR (Image scan= PET-CT for Monitoring/Surveillance between 3 and 12 months = PET-CT AND Indicate who ordered the imaging scan= Ordered by the Practice	Schnipper LE, Lyman GH, Blayney D, et al. American Society of Clinical Oncology 2013 Top 5 List in Oncology. Journal of Clinical Oncology. 31 (34), 4362-70, 2013 http://jco.ascopubs.org/content/31/34/4362.long Selenetz AD, Gordon LI, Abramson JS. NCCN Guidelines B Cell Lymphomas Version 2.2018. Available at: https://www.nccn.org/professionals/p_hysician_gls/pdf/b-cell.pdf Tilly H, Da Silva MG, Vitolo U, et al. Diffuse Large B Cell Lymphoma (DLBCL): ESMO Clinical Practice Guidelines for Diagnosis, Treatment and Follow-up. https://academic.oup.com/annonc/article/26/suppl_5/v116/345089/Diffuse-large-B-cell-lymphoma-DLBCL-ESMO-Clinical European Society for Medical Oncology (ESMO) Clinical Practice Guideline https://annonc.oxfordjournals.org/content/26/suppl_5/v116.full Cheson, B. D. Recommendations for Initial Evaluation, Staging, and Response Assessment of Hodgkin and Non-Hodgkin Lymphoma: The Lugano Classification. The Journal of Clinical Oncology. 32 (27) 4039-68. 20 Sept. 2014. http://jco.ascopubs.org/content/32/27/3059.long

*QOPI[®] Certification Measure

Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Non-Small Cell Lung 79	Adjuvant chemotherapy recommended for patients with AJCC Stage II or IIIA NSCLC	Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care OR M-Stage at NSCLC diagnosis = M1 OR M-Stage at NSCLC diagnosis = M1a OR M-Stage at NSCLC diagnosis = M1b OR Curative Chemotherapy provided = Neoadjuvant/pre-operative OR Neoadjuvant radiation received = Neoadjuvant radiation received OR Chemotherapy recommended during Initial treatment course (NSCLC) = Null	NSCLC Module selected AND Non-small cell cancer diagnosis AND If patient had a surgical resection: Surgical resection results = Tumor resected, clear margins AND ((AJCC stage at NSCLC diagnosis = II OR AJCC stage at NSCLC diagnosis = IIA OR AJCC stage at NSCLC diagnosis = IIB OR AJCC stage at NSCLC diagnosis = IIIA) OR ((T-Stage at NSCLC diagnosis = T1 OR T-Stage at NSCLC diagnosis = T1a OR T-Stage at NSCLC diagnosis = T1b OR T-Stage at NSCLC diagnosis = T2 OR T-Stage at NSCLC diagnosis = T2a OR T-Stage at NSCLC diagnosis = T2b OR T-Stage at NSCLC diagnosis = T3) AND (N-Stage at NSCLC diagnosis = N1 OR N-Stage at NSCLC diagnosis = N2)) OR ((T-Stage at NSCLC diagnosis = T2b	Chemotherapy recommended during initial treatment course = Chemotherapy recommended	Adjuvant Systemic Therapy and Adjuvant Radiation Therapy for Stage I to IIIA Completely Resected Non-Small-Cell Lung Cancers: American Society of Clinical Oncology/Cancer Care Ontario Clinical Practice Guideline Update Mark G. Kris, Laurie E. Gaspar, Jamie E. Chaft, Erin B. Kennedy http://ascopubs.org/doi/full/10.1200/JOP.2017.022251 Slide Set – pps Slide Set – pdf Summary of Recommendations Table Patient Information NCCN Clinical Practice Guidelines in Oncology™. Non-small Cell Lung Cancer, Version 4.2018 http://www.nccn.org/professionals/p_hysician_gls/pdf/nscl.pdf

*QOPI[®] Certification Measure

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			<p>OR T-Stage at NSCLC diagnosis = T3 OR T-Stage at NSCLC diagnosis = T4) AND N-Stage at NSCLC diagnosis = N0) OR (T-Stage at NSCLC diagnosis = T4 AND N-Stage at NSCLC diagnosis = N1))</p>		
Non-Small Cell Lung 80	Adjuvant chemotherapy received by patients with AJCC stage II or IIIA NSCLC	<p>Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care OR M-Stage at NSCLC diagnosis = M1 OR M-Stage at NSCLC diagnosis = M1a OR M-Stage at NSCLC diagnosis = M1b OR (Chemotherapy administered during initial treatment course (NSCLC) = Chemotherapy NOT administered AND (Reason = Patient declined OR Reason = Patient died or transferred</p>	<p>NSCLC Module selected AND Non-small cell cancer diagnosis AND If patient had a surgical resection: Surgical resection results = Tumor resected, clear margins AND ((AJCC stage at NSCLC diagnosis = II OR AJCC stage at NSCLC diagnosis = IIA OR AJCC stage at NSCLC diagnosis = IIB OR AJCC stage at NSCLC diagnosis = IIIA) OR ((T-Stage at NSCLC diagnosis = T1 OR T-Stage at NSCLC diagnosis = T1a OR T-Stage at NSCLC diagnosis = T1b OR T-Stage at NSCLC diagnosis = T2 OR</p>	<p>Chemotherapy administered during initial treatment course (NSCLC) = Chemotherapy administered OR (Chemotherapy administered during initial treatment course (NSCLC) = NOT administered AND Reason = Alternative treatment according to clinical trial protocol)</p>	Measure 79

*QOPI® Certification Measure

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QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		<p>OR Reason = Contraindication or other clinical exclusion))</p> <p>OR Curative chemotherapy provided = Neoadjuvant/pre-operative</p> <p>OR Neoadjuvant radiation received = Neoadjuvant radiation received</p> <p>OR Chemotherapy administered during initial treatment course (NSCLC) = Null</p> <p>OR (Chemotherapy administered during initial treatment course (NSCLC) = Chemotherapy NOT administered</p> <p>AND Reason = Null)</p>	<p>T-Stage at NSCLC diagnosis = T2a</p> <p>OR T-Stage at NSCLC diagnosis = T2b</p> <p>OR T-Stage at NSCLC diagnosis = T3)</p> <p>AND (N-Stage at NSCLC diagnosis = N1</p> <p>OR N-Stage at NSCLC diagnosis = N2))</p> <p>OR ((T-Stage at NSCLC diagnosis = T2b</p> <p>OR T-Stage at NSCLC diagnosis = T3</p> <p>OR T-Stage at NSCLC diagnosis = T4)</p> <p>AND N-Stage at NSCLC diagnosis = N0)</p> <p>OR (T-Stage at NSCLC diagnosis = T4</p> <p>AND N-Stage at NSCLC diagnosis = N1))</p>		
Non-Small Cell Lung 81	Adjuvant cisplatin-based chemotherapy received within 60 days after curative resection by patients with AJCC stage II or IIIA NSCLC	<p>Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care</p> <p>OR M-Stage at NSCLC diagnosis = M1</p> <p>OR M-Stage at NSCLC diagnosis = M1a</p> <p>OR</p>	<p>NSCLC Module selected</p> <p>AND Non-small cell cancer diagnosis</p> <p>AND If patient had a surgical resection: Surgical resection results = Tumor resected, clear margins</p> <p>AND ((AJCC stage at NSCLC diagnosis = II</p> <p>OR AJCC stage at NSCLC diagnosis = IIA</p> <p>OR AJCC stage at NSCLC diagnosis = IIB</p>	<p>(Chemotherapy administered during initial treatment course = Chemotherapy administered</p> <p>AND Select the response that describes the chemotherapy initiated/administered (NSCLC) = Chemotherapy regimen including cisplatin</p> <p>AND Date chemotherapy initiated ≠ Null</p> <p>AND</p>	Measure 79

*QOPI[®] Certification Measure

Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		<p>M-Stage at NSCLC diagnosis = M1b</p> <p>OR</p> <p>(Chemotherapy administered during initial treatment course = Chemotherapy NOT administered</p> <p>AND</p> <p>((Date of abstraction - Date of surgical resection) < 60 days</p> <p>OR</p> <p>Unknown = Null)</p> <p>AND</p> <p>(Date of Death - Date of surgical resection) < 60 days)</p> <p>OR</p> <p>(First Office Visit - Date of surgical resection) > 60 days</p> <p>OR</p> <p>Reason = Patient declined</p> <p>OR</p> <p>Reason = Patient died or transferred</p> <p>OR</p> <p>Reason = Contraindication or other clinical exclusion))</p> <p>OR</p> <p>((Chemotherapy administered during initial treatment course = Chemotherapy administered</p> <p>AND</p> <p>Select the response that describes the chemotherapy regimen initiated/ administered</p>	<p>OR</p> <p>AJCC stage at NSCLC diagnosis = IIIA)</p> <p>OR</p> <p>((T-Stage at NSCLC diagnosis = T1</p> <p>OR</p> <p>T-Stage at NSCLC diagnosis = T1a</p> <p>OR</p> <p>T-Stage at NSCLC diagnosis = T1b</p> <p>OR</p> <p>T-Stage at NSCLC diagnosis = T2</p> <p>OR</p> <p>T-Stage at NSCLC diagnosis = T2a</p> <p>OR</p> <p>T-Stage at NSCLC diagnosis = T2b</p> <p>OR</p> <p>T-Stage at NSCLC diagnosis = T3)</p> <p>AND</p> <p>(N-Stage at NSCLC diagnosis = N1</p> <p>OR</p> <p>N-Stage at NSCLC diagnosis = N2))</p> <p>OR</p> <p>((T-Stage at NSCLC diagnosis = T2b</p> <p>OR</p> <p>T-Stage at NSCLC diagnosis = T3</p> <p>OR</p> <p>T-Stage at NSCLC diagnosis = T4)</p> <p>AND</p> <p>N-Stage at NSCLC diagnosis = N0)</p> <p>OR</p> <p>(T-Stage at NSCLC diagnosis = T4</p> <p>AND</p> <p>N-Stage at NSCLC diagnosis = N1))</p>	<p>(Date chemotherapy initiated - Date of surgical resection) ≤ 60 days)</p> <p>OR</p> <p>(Reason chemotherapy NOT administered during initial treatment course = Alternative treatment according to clinical trial protocol)</p>	

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		(NSCLC) = Chemotherapy regimen NOT including cisplatin AND (Reason = Patient declined OR Reason = Patient died or transferred OR Reason = Contraindication or other clinical exclusion OR Reason = Null))) OR Curative chemotherapy provided = Neoadjuvant/pre-operative OR Neoadjuvant radiation received = Neoadjuvant radiation received OR Chemotherapy administered during initial treatment course (NSCLC) = Null OR Select the response that describes the chemotherapy initiated/administered (NSCLC) = Null OR Date of surgical resection = Null OR (Chemotherapy administered during initial treatment course (NSCLC) = Chemotherapy NOT administered AND Reason = Null)			

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Non-Small Cell Lung 82	Adjuvant chemotherapy recommended for patients with AJCC stage IA NSCLC <i>(Lower Score - Better)</i>	Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care OR M-Stage at NSCLC diagnosis = M1 OR M-Stage at NSCLC diagnosis = M1a OR M-Stage at NSCLC diagnosis = M1b OR (Chemotherapy administered during initial treatment course (NSCLC) = Chemotherapy administered AND Care on clinical trial = Patient received care on a clinical trial during initial treatment course) OR Chemotherapy recommended during initial treatment course (NSCLC) = Null	NSCLC Module selected AND Non-small cell cancer diagnosis AND If patient had a surgical resection: Surgical resection results = Tumor resected, clear margins AND ((AJCC stage at NSCLC diagnosis = IA OR ((T-Stage at NSCLC diagnosis = T1a OR T-Stage at NSCLC diagnosis = T1b) AND N-Stage at NSCLC diagnosis = N0))	Chemotherapy recommended during initial treatment course = Chemotherapy recommended	Measure 79
Non-Small Cell Lung 83	Adjuvant radiation therapy recommended for patients with AJCC stage IB or II NSCLC <i>(Lower Score - Better)</i>	Transfer-in Status ≠ Reporting practice has/had primary responsibility for the initial course of the patient's medical oncology care OR M-Stage at NSCLC diagnosis = M1 OR	NSCLC Module selected AND Non-small cell cancer diagnosis AND If patient had a surgical resection: Surgical resection results = Tumor resected, clear margins AND ((AJCC stage at NSCLC diagnosis = IB OR	Adjuvant radiation recommended or administered = Adjuvant radiation recommended by an oncologist in the practice	Measure 79

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QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		M-Stage at NSCLC diagnosis = M1a OR M-Stage at NSCLC diagnosis = M1b OR Adjuvant radiation recommended or administered = Adjuvant radiation recommended by a practitioner outside of the practice OR (Adjuvant radiation recommended or administered = Adjuvant radiation recommended by an oncologist in the practice AND Care on clinical trial = Patient received care on a clinical trial during initial treatment course) OR Adjuvant radiation recommended or administered = Null	AJCC stage at NSCLC diagnosis = IIA OR AJCC stage at NSCLC diagnosis = IIB OR ((T-Stage at NSCLC diagnosis = T2 OR T-Stage at NSCLC diagnosis = T2a OR T-Stage at NSCLC diagnosis = T2b OR T-Stage at NSCLC diagnosis = T3) AND N-Stage at NSCLC diagnosis = N0) OR ((T-Stage at NSCLC diagnosis = T1 OR T-Stage at NSCLC diagnosis = T1a OR T-Stage at NSCLC diagnosis = T1b OR T-Stage at NSCLC diagnosis = T2 OR T-Stage at NSCLC diagnosis = T2a OR T-Stage at NSCLC diagnosis = T2b) AND N-Stage at NSCLC diagnosis = N1))		

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Non-Small Cell Lung 84 Certification	Performance status documented for patients with initial AJCC stage IV or distant metastatic NSCLC*	Performance status = Null	NSCLC Module selected AND Documentation of distant metastases	Performance status ≠ Not documented	American Society of Clinical Oncology Clinical Practice Guideline Update on Chemotherapy for Stage IV Non-Small Cell Lung Cancer. Christopher G. Azzoli, Sherman Baker, Jr., Sarah Temin, William Pao, Timothy Aliff, Julie Brahmer, David H. Johnson, Janessa L. Laskin, Gregory Masters, Daniel Milton, Luke Nordquist, David G. Pfister, Steven Piantadosi, Joan H. Schiller, Reily Smith, Thomas J. Smith, John R. Strawn, David Trent, Giuseppe Giaccone DOI: 10.1200/JOP.091065 Journal of Oncology Practice 6, no. 1 (January 2010) 39-43. http://ascopubs.org/doi/full/10.1200/jop.091065 NCCN Clinical Practice Guidelines in Oncology™. Non-small Cell Lung Cancer, Version 4.2018 http://www.nccn.org/professionals/p_hysician_gls/pdf/nscl.pdf
Non-Small Cell Lung 86a	Bevacizumab received by patients with initial AJCC stage IV or distant metastatic NSCLC with squamous histology <i>(Lower Score - Better)</i>	Squamous cell histology = Null OR (Squamous histology = Yes AND Bevacizumab administered = Null)	NSCLC Module selected AND (Documentation of distant metastases) AND Squamous cell histology = Yes	Bevacizumab administered = Bevacizumab administered AND Bevacizumab administered according to clinical trial protocol = No or Unknown	Measure 84

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Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Non-Small Cell Lung 88 Certification	Patients with Stage IV NSCLC with adenocarcinoma histology with an activating EGFR mutation or ALK gene rearrangement who received first-line EGFR tyrosine kinase inhibitor or other targeted therapy*	EGFR Tyrosine Kinase Inhibitor or other targeted therapy administered = Null OR EGFR mutation = Null OR ALK gene rearrangement = Null	NSCLC Module selected AND Documentation of distant metastases AND Documentation of lung adenocarcinoma AND (EGFR mutation = EGFR M+ (positive)) OR (ALK gene rearrangement = ALK gene rearrangement detected)	AND (EGFR tyrosine kinase inhibitor or other targeted therapy administered = Erlotinib/Tarceva OR EGFR tyrosine kinase inhibitor or other targeted therapy administered = Gefitinib/Iressa or Afatinib /Gilotrif)) AND EGFR Tyrosine Kinase Inhibitor or other targeted therapy administered = Crizotinib)	American Society of Clinical Oncology Provisional Clinical Opinion: Epidermal Growth Factor Receptor (EGFR) Mutation Testing for Patients With Advanced Non–Small-Cell Lung Cancer Considering First-Line EGFR Tyrosine Kinase Inhibitor Therapy http://ascopubs.org/doi/abs/10.1200/jco.2010.31.8923?ssource=mfr&rss=1
Non-Small Cell Lung 89	Patients with Stage IV NSCLC with EGFR mutation status unknown or without an activating EGFR mutation or ALK gene rearrangement who received first-line EGFR tyrosine kinase inhibitor or ALK inhibitor (Lower Score - Better)	Doublet first-line chemotherapy = Null OR EGFR TKI first-line chemotherapy = Null OR EGFR mutation = Null OR ALK gene rearrangement = Null	NSCLC Module selected AND Documentation of distant metastases AND AND (EGFR mutation ≠ EGFR M+ (positive)) OR EGFR mutation = unknown)	EGFR Tyrosine Kinase Inhibitor or other targeted therapy administered = Erlotinib/Tarceva or Gefitinib/Iressa or Afatinib /Gilotrif) OR EGFR Tyrosine Kinase Inhibitor or other targeted therapy administered = Crizotinib)	Measure 88

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Non-Small Cell Lung 89a	GCSF administered to patients who received chemotherapy for metastatic NSCLC <i>(Lower Score - Better)</i> <i>(Top 5 Measure)</i>	None	Core AND NSCLC module AND (AJCC stage at NSCLC cancer diagnosis= IV or AJCC stage not documented; Patient noted to have distant metastatic breast cancer at diagnosis) OR AJCC M-Stage =M1 OR Stage IV at initial diagnosis or development of distant metastases = Yes AND Patient received chemotherapy for metastatic disease = Yes	Patient received GCSF (Neulasta) during course of chemotherapy = Yes	American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724. http://jco.ascopubs.org/content/30/14/1715.full?sid=62928c8e-80f4-47cd-9ab8-bd60994d6de7

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Non-Small Cell Lung 90	PET or PET-CT ordered by the practice between 0 and 12 months after treatment with curative intent for patients with Stage I or Stage II NSCLC (Lower Score – Better) <i>(Top 5 Measure)</i>	Received treatment with curative intent as part of IRB protocol = Yes	NSCLC module AND ((AJCC stage at NSCLC diagnosis = IA, IB, IIA, IIB) OR ((AJCC T-stage = T1a, T1b, T2a, T2b, T3) AND AJCC N-stage = N0) OR ((AJCC T-stage = T1a, T1b, T2a, T2b) AND AJCC N-stage = N1)) AND (((Later of (chart creation date or update date)) – date of treatment with curative intent) ≥ 365 days OR (((Later of (chart creation date or update date)) – date of treatment with curative intent) < 365 days AND ((Later of (chart creation date or update date)) – date of treatment with curative intent) > 0 days AND (NSCLC imaging = PET or PET-CT))) AND (Treatment with Curative Intent = Yes AND (Treatment Type = Surgery OR Treatment Type = Chemotherapy OR Treatment Type = Radiation))	Imaging scan = PET OR Imaging scan = PET-CT AND Date of Imaging scan ≤ 365 days after treatment for curative intent AND Ordered by = Practice	Schnipper LE, Lyman GH, Blayney D, et al. (2013) American Society of Clinical Oncology 2013 Top 5 List in Oncology. Journal of Clinical Oncology. 31 (34), 4362-70 http://jco.ascopubs.org/content/31/34/4362.long ACCP Guideline: http://publications.chestnet.org/data/Journals/CHEST/926876/chest_143_5_suppl_e437S.pdf

*QOPI® Certification Measure

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QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Non-Small Cell Lung 91	Molecular Testing for Patients with Stage IV NSCLC with Adenocarcinoma Histology (Test Measure)	None	NSCLC Module selected AND Adenocarcinoma Histology = Yes AND (AJCC stage at NSCLC diagnosis = IV OR Stage IV at initial diagnosis or development of distant metastases = Yes)	(EGFR Mutation = EGFR M+ (Positive) OR EGFR Mutation = EGFR M- (Negative) OR EGFR Mutation = Test ordered, results not yet documented OR EGFR Mutation = Test ordered, insufficient sample for results) OR (ALK gene rearrangement = ALK gene rearrangement detected OR ALK gene rearrangement = ALK gene rearrangement NOT detected OR ALK gene rearrangement = Test ordered, results not yet documented OR ALK gene rearrangement = Test ordered, insufficient sample for results) OR (ROS1 gene arrangement = ROS1-positive OR ROS1 gene arrangement = ROS1-negative OR ROS1 gene arrangement = Test ordered, results not yet documented OR ROS1 gene arrangement = Test ordered, insufficient sample for results)	Lindeman N.I., Cagle P.T, Beasley M.B, et al. Molecular Testing Guideline for Selection of Lung Cancer Patients for EGFR and ALK Tyrosine Kinase Inhibitors: Guideline from the College of American Pathologists, International Association for the Study of Lung Cancer, and Association for Molecular Pathology. http://jimd.amjpathol.org/article/S1525-1578(13)00041-X/fulltext#sec4.1.2.1 National Comprehensive Cancer Network. Non-Small Cell Lung Cancer Version 4.2018 https://www.nccn.org/professionals/p_hysician_gls/pdf/nscl.pdf

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Non-Small Cell Lung 92	Molecular Testing Turnaround Time for Patients with Stage IV NSCLC with Adenocarcinoma Histology (Test Measure)	None	NSCLC Module selected AND Adenocarcinoma Histology = Yes AND (AJCC stage at NSCLC diagnosis = IV OR Stage IV at initial diagnosis or development of distant metastases = Yes) AND (EGFR Mutation = EGFR M+ (Positive) OR EGFR Mutation = EGFR M- (Negative) OR EGFR Mutation = Test ordered, results not yet documented OR EGFR Mutation = Test ordered, insufficient sample for results) OR (ALK gene rearrangement = ALK gene rearrangement detected OR ALK gene rearrangement = ALK gene rearrangement NOT detected OR ALK gene rearrangement = Test ordered, results not yet documented OR ALK gene rearrangement = Test ordered, insufficient sample for results)	((Later of (Date EGFR, ALK and ROS1 mutation specimen ordered OR Date EGFR, ALK and ROS1 mutation specimen sent to testing laboratory)) - Date results received at practice ≤ 10 working days	Lindeman N.I., Cagle P.T, Beasley M.B, et al. Molecular Testing Guideline for Selection of Lung Cancer Patients for EGFR and ALK Tyrosine Kinase Inhibitors: Guideline from the College of American Pathologists, International Association for the Study of Lung Cancer, and Association for Molecular Pathology. <i>Journal of Molecular Diagnostics</i> . 15 (4), 415-53, 2013 http://jmd.amjpathol.org/article/S1525-1578(13)00041-X/fulltext#sec4.1.2.1

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			<p>OR (ROS1 gene arrangement = ROS1-positive OR ROS1 gene arrangement = ROS1-negative OR ROS1 gene arrangement = Test ordered, results not yet documented OR ROS1 gene arrangement = Test ordered, insufficient sample for results)</p>		
Non-Small Cell Lung 93	Concurrent Chemoradiation for Patients with a Diagnosis of Stage IIIB NSCLC <i>(Test Measure)</i>	Treatment provided on clinical trial protocol = Yes OR Performance status = 3 / 40-50% / Bed time, >50% OR Performance status = 4 / 10-30% / Unable to get out of bed OR Medical contraindication OR Superior sulcus cancers	NSCLC Module selected AND AJCC stage at NSCLC diagnosis = IIIB	First line platinum-based chemotherapy administered = Yes AND Treatment type = Radiation AND Date first line platinum-based chemotherapy administered started = Date Radiation Treatment Started AND Date first line platinum-based chemotherapy administered Ended = Date Radiation Treatment Ended	National Comprehensive Cancer Network. Non-Small Cell Lung Cancer Version 4.2018 https://www.nccn.org/store/login/login.aspx?ReturnURL=https://www.nccn.org/professionals/physician_gls/pdf/nscl.pdf

*QOPI® Certification Measure

Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Gyn Onc 90g	Operative report with documentation of residual disease within 48 hours of cytoreduction for women with invasive ovarian, fallopian tube, or peritoneal cancer	Cytoreduction = Null OR Operative note = Null OR Residual disease documented in operative note = Null OR Documented reason NO operative report or residual disease NOT documented = patient died or transferred OR Documented reason NO operative report or residual disease NOT documented = awaiting results OR Documented reason NO operative report or residual disease NOT documented = patient declined OR Surgery date = Null OR (Operative note = NO AND (Date of abstraction – surgery date) <48 hours)	Women AND ≥ 18 years AND GynOnc module AND Cytoreduction = Yes	Operative note = Yes AND Residual disease ≠ NOT documented AND ((Operative note date – surgery date) ≤ 48 hours OR (Operative Note Date = UNKNOWN AND Operative report completed within 2 days of cytoreduction = Yes))	Measures developed by Society for Gynecologic Oncology and American Society of Clinical Oncology Stuart GCE, Kitchener H, Bacon M. et al. 2010 Gynecologic Cancer InterGroup (GCIg) Consensus Statement on Clinical Trials in ovarian cancer. Int J Gynecol Cancer 2011; 21: 750-755 https://pdfs.semanticscholar.org/0fc2/Off14f6bc6490483b958f0725b53c6cb7a71.pdf Chi DS, Eisenhauer EL, Lang J et al. What is the optimal goal of primary cytoreductive surgery for bulky stage IIIC epithelial ovarian carcinoma (EOC)? Gynecologic Oncology 2006; 103: 559-564 http://www.ncbi.nlm.nih.gov/pubmed/16714056 Bristow RE, Tomacruz RS, Armstrong DK et al. Survival effect of maximal cytoreductive surgery for dire ovarian carcinoma during the platinum era: a meta-analysis. Journal of clinical oncology 2002; 20: 1248-1259 http://jco.ascopubs.org/content/20/5/1248.full?sid=e1d1bd75-68b3-4ea6-884b-2de2e63dba76 Vergote I, Trope CG, Amant F et al. Neoadjuvant chemotherapy or primary surgery in stage IIIC or IV ovarian cancer. New England Journal of Medicine 2010;363:943-953. http://www.nejm.org/doi/full/10.1056/NEJMoa0908806

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Gyn Onc	Complete staging for women with invasive stage I-IIIB ovarian, fallopian tube, or peritoneal cancer who have undergone cytoreduction	Pathology/hemato-pathology report = Null OR Complete pathology = Null OR FIGO Stage = IIIC or IV, N1 or M1 OR Enter reason all elements NOT documented = Awaiting test/staging results OR Enter reason all elements NOT documented = Patient declined OR Enter reason all elements NOT documented = Patient died or transferred OR Enter reason all elements NOT documented = Contraindication or other clinical exclusion OR Enter reason all elements NOT documented = Neoadjuvant chemotherapy or interval cytoreduction OR Enter reason all elements NOT documented = Stage IIIC or IV	Women AND ≥ 18 years AND GynOnc module AND Cytoreduction = Yes AND ((FIGO Stage = I OR FIGO Stage = IA OR FIGO Stage = IB OR FIGO Stage = IC OR FIGO Stage = II OR FIGO Stage = IIA OR FIGO Stage = IIB OR FIGO Stage = IIIC OR FIGO Stage = III OR FIGO Stage = IIIA OR FIGO Stage = IIIB) OR (T-Stage = T1-T3b AND N-Stage = N0 AND M-Stage = M0))	Pathology/hemato-pathology report or cytology report confirming malignancy = Yes, pathology/hemato-pathology report AND Complete pathology = Pelvic lymphadenectomy AND Paraaortic lymphadenectomy AND Peritoneal washings AND Omentectomy	Measures developed by Society for Gynecologic Oncology and American Society of Clinical Oncology Young, Decker, Wharton, et al. Staging laparotomy and ovarian cancer. JAMA. 1983;250:3072-76. http://jama.jamanetwork.com/article.aspx?articleid=388955 Desteli, Gultekin, Usubutun, et al. Lymph node metastasis in grossly apparent stage Ia epithelial ovarian cancer: Hacettepe experience and review of the literature. World J Surg Oncol. 2010; 8:106-111. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3002346/?tool=pubmed Trimbos, Vergote, Bolis, et al. Impact of adjuvant chemotherapy and surgical staging in early ovarian carcinoma: European Organization for Research and Treatment of Cancer – adjuvant chemotherapy in ovarian neoplasm trial. J Nat'l Cancer Inst. 2003; 95:113-125. http://jnci.oxfordjournals.org/content/95/2/113.long Timmers, Zwinderman, Coens, et al. Lymph node sampling and taking of blind biopsies are important elements of the surgical staging of early ovarian cancer. Int J Gyn Cancer. 2010; 20:1142-47. http://www.ncbi.nlm.nih.gov/pubmed/21495216 Cress, Bauer, O'Malley, et al. Surgical staging of early stage epithelial ovarian cancer: results from the CDC-

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
					<p>NPCR ovarian patterns of care study. Gynecol Oncol. 2011; 121:94-99. http://www.ncbi.nlm.nih.gov/pubmed/21256581</p> <p>Cass, Runowicz, et al. Patterns of lymph node metastasis in clinical unilateral stage I invasive epithelial ovarian carcinomas. Gynecol Oncol. 2001; 80:56-61. http://www.ncbi.nlm.nih.gov/pubmed/11136570</p>
Gyn Onc 92g	Intraperitoneal chemotherapy offered within 42 days of optimal cytoreduction to women with invasive stage III Ovarian, Fallopian tube, or Peritoneal cancer	<p>Intraperitoneal chemotherapy offered = Null</p> <p>OR</p> <p>Stage IV</p> <p>OR</p> <p>M1</p> <p>OR</p> <p>Stage I-II</p> <p>OR</p> <p>(T1-T2C and N0 and M0)</p> <p>OR</p> <p>Select documented reason chemotherapy NOT offered = Awaiting results</p> <p>OR</p> <p>Select documented reason chemotherapy NOT offered = patient declined</p> <p>OR</p> <p>Select documented reason chemotherapy NOT offered= patient died or transferred</p> <p>OR</p>	<p>Women</p> <p>AND</p> <p>≥ 18 years</p> <p>AND</p> <p>GynOnc module</p> <p>AND</p> <p>Cytoreduction = Yes</p> <p>AND</p> <p>(Residual disease= no residual disease</p> <p>OR</p> <p>Residual disease= Less than 1 CM)</p> <p>AND</p> <p>(Stage III, IIIA, IIIB, IIIC</p> <p>OR</p> <p>(T3-T3C and N0 and M0)</p> <p>OR</p> <p>(T1-T3 and N1 and M0))</p>	<p>(Intraperitoneal (IP) chemotherapy offered = IP chemotherapy offered</p> <p>AND</p> <p>(Intraperitoneal offer date – Date of cytoreduction: Surgery End Date/Time) ≤ 42 days)</p> <p>OR</p> <p>(Intraperitoneal (IP) chemotherapy offered = IP chemotherapy NOT offered</p> <p>AND</p> <p>Reason NOT offered = Alternative treatment according to clinical trial protocol)</p>	<p>Measures developed by American Society of Clinical Oncology</p> <p>Morgan RJ Jr, Alvarez RD, Armstrong DK, Boston B, et al. NCCN Clinical Practice Guidelines in Oncology: epithelial ovarian cancer. J Natl Compr Canc Netw. 2011 Jan 9(1):82-113. http://www.jnccn.org/content/9/1/82.full.pdf+html</p> <p>NCCN Guidelines Version 2.2018 Ovarian Cancer http://www.nccn.org/index.asp http://www.nccn.org/professionals/p_hysician_gls/pdf/ovarian.pdf</p> <p>Armstrong DK, Bundy B, Wenzel L, Huang HQ, Baergen R, Lele S, Copeland LJ, Walker JL, Burger RA; Gynecologic Oncology Group. Intraperitoneal cisplatin and paclitaxel in ovarian cancer. N Engl J Med. 2006 Jan 5;354(1):34-43</p>

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		Select documented reason chemotherapy NOT offered = Chemotherapy prior to cytoreduction OR Select documented reason chemotherapy NOT offered= contraindication or other clinical exclusion OR Surgery date = Null OR (Intraperitoneal (IP) chemotherapy offered = Chemotherapy NOT offered AND (Date of abstraction – surgery date) < 42 days)			http://www.nejm.org/doi/full/10.1056/NEJMoa052985
Gyn Onc 93g	Intraperitoneal chemotherapy administered within 42 days of optimal cytoreduction to women with invasive stage III ovarian, fallopian tube, or peritoneal cancer	Intraperitoneal (IP) chemotherapy administered = Null OR Stage IV OR M1 OR Stage I-II OR (T1-T2C and N0 and M0) OR Select documented reason chemotherapy NOT administered = Awaiting results OR	Women AND ≥ 18 years AND GynOnc module AND Cytoreduction = Yes AND (Residual disease= No residual disease OR Residual disease=Less than 1 CM) AND (Stage III, IIIA, IIIB, IIIC OR (T3-T3C and N0 and M0)	(Intraperitoneal (IP) chemotherapy administered = Chemotherapy administered AND (Intraperitoneal administered date – Date of cytoreduction: Surgery End Date/Time) ≤ 42 day) OR (Intraperitoneal (IP) chemotherapy administered = Chemotherapy NOT administered AND Reason NOT administered = Alternative treatment according to clinical protocol)	Measures developed by Society for Gynecologic Oncology and American Society of Clinical Oncology Measure 92g

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		Select documented reason chemotherapy NOT administered = Patient declined OR Select documented reason chemotherapy NOT administered = Chemotherapy prior to cytoreduction OR Select documented reason chemotherapy NOT administered = Patient died or transferred OR Select documented reason chemotherapy NOT administered = Contraindication or other clinical exclusion OR Surgery date = Null OR (Intraperitoneal (IP) chemotherapy administered = Chemotherapy NOT administered AND (Date of abstraction – surgery date) < 42 days)	OR (T1-T3 and N1 and M0)		

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Gyn Onc	Platin or taxane administered within 42 days following cytoreduction to women with invasive stage I (grade 3), IC-IV ovarian, fallopian tube, or primary peritoneal cancer*	(FIGO Stage IA-1B AND Tumor Grade ≠ G3: Poorly differentiated) OR Reason platin or taxane NOT administered or NOT administered within 42 days following surgery = Awaiting tests or staging OR Reason platin or taxane NOT administered or NOT administered within 42 days following surgery = patient declined OR Reason platin or taxane NOT administered or NOT administered within 42 days following surgery: = patient died or transferred OR Reason platin or taxane NOT administered or NOT administered within 42 days following surgery: = contraindication other clinical exclusion OR Date of cytoreduction: Surgery End Date/Time = Null OR (Adjuvant chemotherapy administered = No adjuvant chemotherapy	Women AND ≥ 18 years AND GynOnc module AND Cytoreduction = Yes AND ((Stage IA-1B and grade 3) OR Stage IC, II, IIA, IIB, IIC, III, IIIA, IIIB, IIIC, IV OR (T1-T1b and N0 and M0 and grade 3) OR (T1C-T3c and (N0 or N1, or M0 or M1)))	((Adjuvant chemotherapy administered = Platin OR Adjuvant chemotherapy administered = Taxane) AND (Administration date – Date of cytoreduction: Surgery End Date/Time) ≤ 42 days) OR ((Adjuvant chemotherapy administered = Platin OR Adjuvant chemotherapy administered = Taxane) AND (Administration date – Date of cytoreduction: Surgery End Date/Time) > 42 days AND Reason= Alternative treatment according to clinical trial protocol) OR ((Adjuvant chemotherapy administered = Other OR Adjuvant chemotherapy administered = Unknown OR Adjuvant chemotherapy administered = No Adjuvant chemotherapy) AND Reason platin or taxane NOT administered or NOT administered within 42 days following surgery =	Measures developed by Society for Gynecologic Oncology and American Society of Clinical Oncology. Cornelis S, Van Calster B, Amant F, et al. Role of neoadjuvant chemotherapy in the management of stage IIIC-IV ovarian cancer: survey results from the members of the European Society of Gynecological Oncology. Int J Gynecol Cancer. 2012 Mar;22(3):407-16. http://www.ncbi.nlm.nih.gov/pubmed/22367320 Perren TJ, Swart AM, Pfisterer J, et al. A phase 3 trial of bevacizumab in ovarian cancer. N Engl J Med. 2011 Dec 29;365(26):2484-96. Lai GG, Penson RT. Bevacizumab and ovarian cancer. Drugs Today (Barc). 2011 Sep;47(9):669-81. http://www.nejm.org/doi/full/10.1056/NEJMoa1103799 Morgan RJ Jr, Alvarez RD, Armstrong DK,, et al. NCCN Clinical Practice Guidelines in Oncology: epithelial ovarian cancer. J Natl Compr Canc Netw. 2011 Jan;9(1):82-113. http://www.jnccn.org/content/9/1/82.full.pdf+html NCCN Guidelines Version 2.2018 Ovarian Cancer http://www.nccn.org/professionals/p_hysician_gls/pdf/ovarian.pdf Markman M. Role of chemotherapy in epithelial ovarian cancer. Minerva Ginecol. 2011 Jun;63(3):287-97.

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		AND (Date of abstraction – Date of cytoreduction: Surgery End Date/Time) < 42 days)		Alternative treatment according to clinical trial protocol)	http://www.ncbi.nlm.nih.gov/pubmed/21654613 Pignata S, Scambia G, Ferrandina G, et al. Carboplatin plus paclitaxel versus carboplatin plus pegylated liposomal doxorubicin as first-line treatment for patients with ovarian cancer: the MITO-2 randomized phase III trial. J Clin Oncol. 2011 Sep 20;29(27):3628-35. Epub 2011 Aug 15. http://jco.ascopubs.org/content/29/27/3628.long Seamon LG, Richardson DL, Copeland LJ. Evolution of the Gynecologic Oncology Group protocols in the treatment of epithelial ovarian cancer. Clin Obstet Gynecol. 2012 Mar;55(1):131-55. http://www.ncbi.nlm.nih.gov/pubmed/22343234
Gyn Onc 95	VTE prophylaxis administered within 24 hours of cytoreduction to women with invasive ovarian, fallopian tube, or primary peritoneal cancer	VTE prophylaxis = Null OR Documented reason for NO VTE prophylaxis = Patient declined OR Documented reason for NO VTE prophylaxis = Patient died or transferred OR Documented reason for NO VTE prophylaxis = Contraindication or other clinical exclusion OR Date of cytoreduction: Surgery End Date/Time = Null OR	Women AND ≥ 18 years AND GynOnc module AND Cytoreduction = Yes	((VTE prophylaxis administered = Yes AND ((Cytoreduction incision time – VTE prophylaxis administration time) ≥ 24 hours OR (VTE prophylaxis administration time – Date of cytoreduction: Surgery End Date/Time) ≤ 24 hours)) OR (VTE prophylaxis administered = No AND Documented reason for No VTE prophylaxis administered = Alternative treatment according to clinical trial protocol)	Adapted from PQRS Measures by Society for Gynecologic Oncology and American Society of Clinical Oncology

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
		(VTE prophylaxis administered = NO AND (Date of abstraction - Date of cytoreduction: Surgery End Date/Time <24 hours))		OR (VTE prophylaxis administered = Yes AND VTE prophylaxis administration start time is UNKNOWN AND VTE prophylaxis administered within 24 hours before incision or after cytoreduction =Yes))	
Gyn Onc 96	Order for prophylactic parenteral antibiotic administration within 1-2 hours before cytoreduction for women with invasive ovarian, fallopian tube, or peritoneal cancer	Parenteral antibiotic administration = Null OR Documented reason parenteral antibiotic NOT administered = Patient died or transferred	Women AND ≥ 18 years AND GynOnc module AND ((ICD-10 = C56.9 AND Procedures during cytoreduction = hysterectomy) AND Cytoreduction = Yes	(Parenteral antibiotic administration = Fluoroquinolone or vancomycin AND (Cytoreduction start time – parenteral antibiotic start time) ≤ 120 mins.) OR (Parenteral antibiotic administration = Other parenteral antibiotic AND (Cytoreduction start time – parenteral antibiotic start time) ≤ 60 mins) OR (Parenteral antibiotic start time = UNKNOWN AND Parenteral fluoroquinolone or vancomycin administered = Yes)	Adapted from PQRS Measures by Society for Gynecologic Oncology and American Society of Clinical Oncology

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Gyn Onc 97	Order for prophylactic parenteral antibiotic discontinuation within 24 hours after cytoreduction for women with invasive ovarian, fallopian tube, or peritoneal cancer	<p>Documented reason parenteral antibiotic NOT administered = Patient died or transferred</p> <p>OR</p> <p>Documented reason parenteral antibiotic NOT administered = Contraindication or other clinical exclusion</p> <p>OR</p> <p>Date of cytoreduction: Surgery End Date/Time = Null</p> <p>OR</p> <p>(Parenteral antibiotic end time = Unknown</p> <p>AND</p> <p>(Date of abstraction - Date of cytoreduction: Surgery End Date/Time) < 24 hours)</p>	<p>Women</p> <p>AND</p> <p>≥ 18 years</p> <p>AND</p> <p>(Parenteral antibiotic administration = Fluoroquinolone or vancomycin</p> <p>OR</p> <p>Parenteral antibiotic administration = Other parenteral antibiotic)</p> <p>AND</p> <p>Ovarian, fallopian tube, primary peritoneal cancer module</p> <p>AND</p> <p>((ICD-10 = C56.9</p> <p>AND</p> <p>Procedures during cytoreduction = Hysterectomy)</p> <p>OR</p> <p>ICD-10 ≠ C56.9)</p> <p>AND</p> <p>Cytoreduction = Yes</p>	<p>Parenteral antibiotic end time - Date of cytoreduction: Surgery End Date/Time ≤ 24 hours</p> <p>OR</p> <p>(Parenteral antibiotic end time = Unknown</p> <p>AND</p> <p>Parenteral antibiotic discontinued within 24 hours of surgical end time = Yes)</p>	Adapted from PQRS Measures by Society for Gynecologic Oncology and American Society of Clinical Oncology

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Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Palliative Care 98	Pain quantified using a standardized instrument at every clinical encounter in the past 3 months for patients with advanced/metastatic colorectal, lung, and pancreatic cancer	Specify whether pain intensity quantified using standard instrument at every clinic visit occurring at least 14 days apart in past 3 months = Null	PC Applied AND Diagnosis of lung cancer OR Pancreatic cancer OR Colorectal cancer	Pain intensity quantified = yes AND Date of clinic visit at least 14 days after the previous encounter in past 3 months = Yes	American Society of Clinical Oncology Provisional Clinical Opinion: The Integration of Palliative Care into Standard Oncology Care Thomas J. Smith, Sarah Temin, Erin R. Alesi, Amy P. Abernethy, Tracy A. Balboni, Ethan M. Basch, Betty R. Ferrell, Matt Loscalzo, Diane E. Meier, Judith A. Paice, Jeffrey M. Peppercorn, Mark Somerfield, Ellen Stovall, and Jamie H. Von Roenn. JCO March 10, 2012 vol. 30 no. 8 880-887 http://jco.ascopubs.org/content/30/8/880
Palliative Care 99	Plan of care for pain when moderate/severe pain present in the past 3 months for patients with advanced/metastatic colorectal, lung, and pancreatic cancer	Plan of care for pain documented each time pain was documented as 4 or above = Null	PC Applied AND (Diagnosis of lung cancer OR Pancreatic cancer OR Colorectal cancer) AND (Highest pain intensity in the past 3 months = Moderate (4-6) OR Severe (7-10))	Plan of care for pain documented each time pain was documented as 4 or above = Yes	Measure 98

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Palliative Care 100	Constipation, fatigue, and nausea assessed at the clinic visit following a new prescription or increasing opioid regimen for patients with advanced/metastatic colorectal, lung, and pancreatic cancer	Constipation and fatigue and nausea at next clinical encounter = Null OR Constipation and fatigue and nausea at next clinical encounter = No, No second encounter	PC Applied AND Diagnosis of lung cancer OR Pancreatic cancer OR Colorectal cancer AND New opioid prescribed or dose or frequency increased within the past 3 months = Yes	Documentation of assessment for constipation AND Fatigue AND Nausea at next clinical encounter = Yes	Measure 98
Palliative Care 101	Dyspnea assessed on every clinic visit in the past 3 months for patients with advanced/metastatic colorectal, lung, and pancreatic cancer	Dyspnea assessed on every clinic visit that occurs at least 14 days apart past 3 months = Null	PC Applied AND Diagnosis of lung cancer OR Pancreatic cancer OR Colorectal cancer	Date of clinic visit at least 14 days after the previous encounter in past 3 months = Yes AND Dyspnea assessed = Notation, patient did NOT have dyspnea OR Notation, patient had dyspnea	Measure 98
Palliative Care 102	Dyspnea addressed, if present, in the past 3 months for patients with advanced/metastatic colorectal, lung, and pancreatic cancer (Test Measure)	Dyspnea addressed on every clinic visit that occurs at least 14 days apart past 3 months = Null	PC Applied AND PC Test Measures Selected AND Diagnosis of lung cancer OR Pancreatic cancer OR Colorectal cancer AND Dyspnea assessed on every clinic visit in last 3 months = Notation, patient had dyspnea	Date of clinic visit at least 14 days after the previous encounter in past 3 months = Yes AND Dyspnea addressed = Yes	Measure 98

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Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Palliative Care 103	Nausea and vomiting assessed on every clinic visit in the past 3 months for patients with advanced/metastatic colorectal, lung, and pancreatic cancer	Nausea and vomiting assessed using standard assessment scale on every clinic visit that occurs at least 14 days apart in past 3 months = Null	PC Applied AND Diagnosis of lung cancer OR Pancreatic cancer OR Colorectal cancer	Date of clinic visit at least 14 days after the previous encounter in past 3 months = Yes AND Nausea and vomiting assessed = 'Notation, patient did NOT have nausea or vomiting' OR 'Notation, patient had nausea or vomiting'	Measure 98
Palliative Care 104	Nausea and vomiting addressed, when present, in the past 3 months for patients with advanced/metastatic colorectal, lung, and pancreatic cancer <i>(Test Measure)</i>	Nausea and vomiting addressed on every clinic visit in past 3 months when nausea or vomiting was noted = Null	PC Applied AND PC Test Measures Selected AND Diagnosis of lung cancer OR Pancreatic cancer OR Colorectal cancer AND Nausea and vomiting assessed using standard assessment scale on every clinic visit in past 3 months = Notation, patient had nausea or vomiting	Nausea and vomiting addressed on every clinic visit in past 3 months when nausea or vomiting was noted = Notation, patient did NOT have nausea or vomiting OR Notation, patient had nausea or vomiting	Measure 98

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Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Palliative Care 105	Performance status assessed at every clinic visit in the past 3 months for patients with advanced/metastatic colorectal, lung, and pancreatic cancer	Performance status assessed using standard assessment scale on every clinic visit in past 3 months = Null	PC Applied AND Diagnosis of lung cancer OR Pancreatic cancer OR Colorectal cancer	Performance status assessed using standard assessment scale on every clinic visit that occurs at least 14 days apart in past 3 months = Yes	Measure 98
Palliative Care 106	Emotional well-being assessed within first 2 visits after diagnosis with advanced/metastatic colorectal, lung, and pancreatic cancer	Documentation of assessment of emotional well-being, within first 2 office visits after diagnosis of advanced/metastatic cancer = Null OR Documentation of assessment of emotional well-being, within first 2 office visits after diagnosis of advanced/metastatic cancer No, no second office visit since diagnosis of advanced/metastatic cancer	PC Applied AND Diagnosis of lung cancer OR Pancreatic cancer OR Colorectal cancer	Documentation of assessment of emotional well-being, within first 2 office visits after diagnosis of advanced/metastatic cancer = Documented, patient had problems with emotional well-being OR Documented, patient had NO problems with emotional well-being	Measure 98

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Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Palliative Care 107	Emotional well-being assessed within 2 visits of changes in clinical status for patients with advanced/metastatic colorectal, lung, and pancreatic cancer	Documentation of assessment of emotional well-being, within first 2 office visits after change in clinical status = Null OR Documentation of assessment of emotional well-being, within first 2 office visits after change in clinical status = No, no second office visit after change in clinical status	PC Applied AND Diagnosis of lung cancer OR Pancreatic cancer OR Colorectal cancer AND Patient experienced change in clinical status in past 3 months = Yes	Documentation of assessment of emotional well-being, within first 2 office visits after change in clinical status = Documented, patient had problems with emotional well-being OR Documented, patient had NO problems with emotional well-being	Measure 98
Palliative Care 108	Documented substance abuse history, including tobacco, alcohol and illicit drug use within the first 3 visits after diagnosis with advanced/metastatic colorectal, lung, and pancreatic cancer (Test Measure)	Substance abuse history, including tobacco, alcohol and illicit drug use within the first 3 visits since diagnosis of advanced/metastatic cancer = Null OR Substance abuse history, including tobacco, alcohol and illicit drug use within the first 3 visits since diagnosis of advanced/metastatic cancer = No, no third visit since diagnosis of advanced/metastatic cancer	PC Applied AND PC Test Measures Selected AND Diagnosis of lung cancer OR Pancreatic cancer OR Colorectal cancer	Substance abuse history, including tobacco, alcohol and illicit drug use (including recreational drugs) within the first 3 visits since diagnosis of advanced/metastatic cancer = Yes OR Substance abuse history, including tobacco, alcohol and illicit drug use (including recreational drugs) within the first 3 visits since diagnosis of advanced/metastatic cancer = No	Measure 98

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QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Palliative Care 109	Advance directive documentation within first 3 visits after diagnosis with advanced/metastatic colorectal, lung, and pancreatic cancer (Test Measure)	Patient Advance Directives within first 3 visits after diagnosis with advanced/metastatic cancer = Null OR Patient Advance Directives within first 3 visits after diagnosis with advanced/metastatic cancer = No, no third office visit after diagnosis with advanced/metastatic cancer	PC Applied AND PC Test Measures Selected AND Diagnosis of lung cancer OR Pancreatic cancer OR Colorectal cancer	Patient Advance Directives within first 3 visits after diagnosis with advanced/metastatic cancer = Yes	Measure 98
Palliative Care 110	Hospice recommended and no chemotherapy with performance status 3 or 4 for patients with advanced/metastatic colorectal, lung, and pancreatic cancer (Test Measure)	Care provided when PS is 3 or 4 = Null OR Hospice enrollment within 2 visits of PS 3 or 4 = Null OR Hospice enrollment within 2 visits of PS 3 or 4 = N/A - patient left practice/moved	PC Applied AND PC Test Measures Selected AND Diagnosis of lung cancer OR Pancreatic cancer OR Colorectal cancer AND Highest performance status in past 3 months = 3 or 4	(Hospice enrollment within 2 visits of PS 3 or 4 = Documented discussion with patient, but NOT enrolled) OR Hospice enrollment within 2 visits of PS 3 or 4 = Enrolled) AND (Care provided when PS is 3 or 4 = PS improved) OR Care provided when PS is 3 or 4 = Chemotherapy administered with positive (favorable) response OR Care provided when PS is 3 or 4 = Chemotherapy administered due to disease progression OR Care provided when PS is 3 or 4 = No chemotherapy or Chemotherapy discontinued within 2 visits of PS 3 or 4)	Measure 98

*QOPI[®] Certification Measure

Top 5 Test Measures and Top 5 Measures = American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.

QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Prostate 111	PET, CT, or radionuclide bone scan ordered by practice within 2 months after diagnosis to stage prostate cancer with low risk of metastases <i>(Lower Score - Better)</i> <i>(Top 5 Test Measure)</i>	None	Prostate Module AND Top 5 Test Prostate Selected AND ICD code = C61 AND Early stage, low risk of metastases = Yes AND (Later of (chart creation date or update date – diagnosis date) ≥ 2 months OR ((Later of (chart creation date or update date) – diagnosis date) < 2 months AND (Prostate scan within 2 months = PET OR Prostate scan within 2 months = CT OR Prostate scan within 2 months = Radionuclide bone scan)))	PET, CT, or radionuclide bone scan within 2 months of diagnosis = PET, CT, or Radionuclide bone scan AND (Received imaging as part of IRB approved protocol = No or Unknown) AND Ordered by = practice	American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724. http://jco.ascopubs.org/content/30/14/1715.full?sid=62928c8e-80f4-47cd-9ab8-bd60994d6de7

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Prostate 112	PET, CT, or radionuclide bone scan ordered outside of practice within 2 months after diagnosis to stage prostate cancer with low risk of metastases (Lower Score - Better) <i>(Top 5 Test Measure)</i>	None	Prostate Module AND Top 5 Test Prostate Selected AND ICD code = C61 AND Early stage, low risk of metastases = Yes AND (Later of (chart creation date or update date – diagnosis date) ≥ 2 months OR ((Later of (chart creation date or update date) – diagnosis date) < 2 months AND (Prostate scan within 2 months = PET OR Prostate scan within 2 months = CT OR Prostate scan within 2 months = Radionuclide bone scan)))	PET, CT, or radionuclide bone scan within 2 months of diagnosis = PET, CT, or Radionuclide bone scan AND (Received imaging as part of IRB approved protocol = No or Unknown) AND Ordered by = outside of practice	American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724. http://jco.ascopubs.org/content/30/14/1715.full?sid=62928c8e-80f4-47cd-9ab8-bd60994d6de7

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QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Prostate 113	Percentage of patients with a diagnosis of prostate cancer receiving androgen deprivation therapy (ADT) who received bone density testing to monitor for bone loss within one year of initiating ADT for prostate cancer (Test Measure)	None	Prostate Module AND Prostate Test Measures Selected AND ICD code = C61 AND Androgen deprivation therapy (ADT) administered = Yes	Bone density test = Yes AND Date of Bone density test - date ADT started ≤ 365 days	Al-Shamsi HO, Lau AN, Malik K, et al., The current practice of screening, prevention, and treatment of androgen-deprivation-therapy induced osteoporosis in patients with prostate cancer. J Oncology. 2012 (2012) Article ID 958596, 7 pages. doi:10.1155/2012/958596 http://www.hindawi.com/journals/jo/2012/958596/ Shahinian VB, Kuo YF, Freeman JL, Goodwin JS. Risk of fracture after androgen deprivation for prostate cancer. N Engl J Med 2005;352:154–164. http://www.nejm.org/doi/full/10.1056/NEJMoa041943 Smith MR, Boyce SP, Moynour E, et al. Risk of clinical fractures after gonadotropin-releasing hormone agonist therapy for prostate cancer. J Urol 2006; 175:136–139; discussion 139. https://www.jurology.com/article/S0022-5347(05)00033-9/pdf Smith MR, Lee WC, Brandman J, et al. Gonadotropin-releasing hormone agonists and fracture risk: a claims-based cohort study of men with nonmetastatic prostate cancer. J Clin Oncol 2005; 23:7897–7903. doi:10.1155/2012/958596 http://jco.ascopubs.org/content/23/31/7897.long National Osteoporosis Foundation Clinician’s Guide to the Prevention and Treatment of Osteoporosis Cosman, F., de Beur, S. J., LeBoff, M. S., Lewiecki, E. M., Tanner, B., Randall, S., & Lindsay, R. (2014). Clinician’s Guide to Prevention and Treatment of

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
					Osteoporosis. Osteoporosis International, 25(10), 2359–2381. http://doi.org/10.1007/s00198-014-2794-2 National Comprehensive Cancer Center (NCCN) Clinical Practice Guidelines in Oncology™. Prostate Cancer, V.3.2014 https://www.nccn.org/professionals/physician_gls/pdf/prostate.pdf
Prostate 114	Percentage of patients with a diagnosis of prostate cancer (PC) with bone metastases who have a treatment plan to address pain documented at every physician/NP/PA visit (Test Measure)	None	Prostate Module AND Prostate Test Measures Selected AND ICD code = C61 AND Diagnosis of bone metastasis = Yes AND Date bone pain first reported in PC patients = NOT Null	Treatment plan for pain documented at every visit after first report of pain = Yes AND (Treatment plan = Opioids or other pain medication OR Cancer directed therapies such as bone targeted or non-bone targeted treatments OR Radiation OR Surgery OR Psychosocial support OR Patient and/or family education on pain relief OR Reassessment of pain at next visit OR Referral to palliative care or pain specialist, or other appropriate specialist)	Measures 3, 4a, 5

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Prostate 115	Percentage of patients with a diagnosis of prostate cancer receiving abiraterone for whom the medication is appropriately administered and monitored (Test Measure)	None	Prostate Module AND Prostate Test Measures Selected AND ICD code = C61 AND Abiraterone Received = Yes	Prednisone administered at same time as abiraterone/or concurrent prescription = Yes AND Abiraterone Monitoring documented monthly = Serum Potassium AND AST AND ALT AND Bilirubin AND Blood pressure	NCCN Prostate Cancer Guideline https://www.nccn.org/professionals/p_hysician_gls/pdf/prostate.pdf https://www.zytiga.com/shared/product/zytiga/zytiga-prescribing-information.pdf
Prostate 116	Percentage of patients with metastatic, hormone-sensitive prostate cancer who are offered docetaxel chemotherapy treatment within 4 months of initiation of hormone therapy (Test Measure)	None	Prostate Module AND Prostate Test Measures Selected AND ICD code = C61 AND Diagnosed with metastatic prostate cancer = Yes AND Hormone Therapy administered = Yes	(Docetaxel chemotherapy treatment offered = Yes AND (Date of docetaxel chemotherapy treatment offered - Date of Hormone therapy started ≤ 120 days)) OR Referred to a medical oncologist = Yes	Systemic Therapy in Men with Metastatic Castration-Resistant Prostate Cancer American Society of Clinical Oncology and Cancer Care Ontario Clinical Practice Guideline http://jco.ascopubs.org/content/32/30/3436.full AUA Castration-Resistant Prostate Cancer Guideline http://www.jurology.com/article/S0022-5347(13)04327-9/pdf

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QOPI[®] 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Prostate 117	Prostate Cancer: Adjuvant Hormonal Therapy for High or Very High Risk Prostate Cancer Patients	None <i>Exceptions: Medical reason(s) (e.g., salvage therapy) or Patient declined</i>	Prostate module AND Prostate Test Measures Selected AND ICD code = C61 AND All patients, regardless of age, with a diagnosis of prostate cancer at high or very high risk of recurrence receiving external beam radiotherapy to the prostate	Adjuvant hormonal therapy (GnRH [gonadotropin-releasing hormone] agonist prescribed/administered = Yes OR Adjuvant hormonal therapy (GnRH [gonadotropin-releasing hormone] antagonist prescribed/administered = Yes	Satish K, Shelly M, Harrison C, et al. Neo-adjuvant and adjuvant hormone therapy for localised and locally advanced prostate cancer. <i>Cochrane Database Syst Rev.</i> 2006; (4): CD006019. DOI: 10.1002/14651858.CD006019.pub2. Accessed at: http://www.cochrane.org/CD006019/PROSTATE_neo-adjuvant-and-adjuvant-hormone-therapy-for-localised-and-locally-advanced-prostate-cancer Cooperberg MR, Janet Cowan, J, Broering JM, et al. High-Risk Prostate Cancer in the United States, 1990-2007. <i>World J Urol.</i> 2008; 26(3): 211-218. doi:10.1007/s00345-008-0250-7 Cooperberg MR, Broering JM, Caroll, PR. Time trends and local variation in primary treatment of localized prostate cancer. <i>J Clin Oncol.</i> 2010;28(7):1117-1123

*QOPI[®] Certification Measure

Top 5 Test Measures and Top 5 Measures = *American Society of Clinical Oncology Identifies Five Key Opportunities to Improve Care and Reduce Costs: The Top Five List for Oncology Lowell E. JCO May 10, 2012:1715-1724.*

QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Small Cell Lung 118	Prophylactic Cranial Irradiation for Patients with Limited Stage (LS) Small Cell Lung Cancer (SCLC) (Test Measure)	Performance status = 3 / 40-50% / Bed time, >50% OR Performance status = 4 / 10-30% / Unable to get out of bed OR Treatment provided on clinical trial protocol = Yes OR Contraindication or other clinical exclusion = Yes	SCLC Module selected AND LS-SCLC at diagnosis = Yes AND (AJCC stage = I OR AJCC stage = II OR AJCC stage = III) AND (AJCC T stage = TX OR AJCC T stage = T0 OR AJCC T stage = Tis OR AJCC T stage = T1 OR AJCC T stage = T2) AND (AJCC N stage = N0 OR AJCC N stage = N1mi OR AJCC N stage = N1 OR AJCC N stage = N1a OR AJCC N stage = N1b OR AJCC N stage = N1c OR AJCC N stage = N2 OR AJCC N stage = N2a	Adjuvant Prophylactic Cranial Irradiation (PCI) received = Yes	Jett JR, Schild SE, Kesler KA, et al. Treatment of Small Cell Lung Cancer: Diagnosis and Management of Lung Cancer, 3 rd ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. <i>Chest</i> . 143(5), e400S-e419S, 2013 https://journal.chestnet.org/article/S012-3692(13)60302-5/fulltext

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			<p>OR AJCC N stage = N2b</p> <p>OR AJCC N stage = N3</p> <p>OR AJCC N stage = N3a</p> <p>OR AJCC N stage = N3b</p> <p>OR AJCC N stage = N3c</p> <p>OR AJCC N stage = NX)</p> <p>AND AJCC M stage = M0</p> <p>AND (Complete response following chemoradiotherapy completion = Yes</p> <p>OR Partial response following chemoradiotherapy completion = Yes)</p>		

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Small Cell Lung 119	Overtreatment of SCLC Patients with Platinum-Based Chemotherapy (Test Measure)	Treatment provided on clinical trial protocol = Yes	SCLC Module selected AND (LS-SCLC at diagnosis = Yes AND (AJCC stage = I OR AJCC stage = II OR AJCC stage = III) AND (AJCC T stage = TX OR AJCC T stage = T0 OR AJCC T stage = Tis OR AJCC T stage = T1 OR AJCC T stage = T2) AND (AJCC N stage = N0 OR AJCC N stage = N1mi OR AJCC N stage = N1 OR AJCC N stage = N1a OR AJCC N stage = N1b OR AJCC N stage = N1c OR AJCC N stage = N2 OR AJCC N stage = N2a	First line platinum-based chemotherapy administered = Yes AND First line platinum-based chemotherapy cycles administered = > 6	Jett JR, Schild SE, Kesler KA, et al. Treatment of Small Cell Lung Cancer: Diagnosis and Management of Lung Cancer, 3 rd ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. <i>Chest</i> . 143(5), e400S-e419S, 2013. https://journal.chestnet.org/article/S0012-3692(13)60302-5/fulltext

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			<p>OR AJCC N stage = N2b OR AJCC N stage = N3 OR AJCC N stage = N3a OR AJCC N stage = N3b OR AJCC N stage = N3c OR AJCC N stage = NX) AND AJCC M stage = M0) OR (ES-SCLC at diagnosis = Yes AND AJCC stage = IV AND (AJCC T stage = TX OR AJCC T stage = T0 OR AJCC T stage = Tis OR AJCC T stage = T1 OR AJCC T stage = T2 OR AJCC T stage = T3 OR AJCC T stage = T4) AND (AJCC N stage = N1mi OR</p>		

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			AJCC N stage = N1 OR AJCC N stage = N1a OR AJCC N stage = N1b OR AJCC N stage = N1c OR AJCC N stage = N2 OR AJCC N stage = N2a OR AJCC N stage = N2b OR AJCC N stage = N3 OR AJCC N stage = N3a OR AJCC N stage = N3b OR AJCC N stage = N3c OR AJCC N stage = NX) AND (AJCC M stage = M1a OR AJCC M stage =M1b))		

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
Small Cell Lung 120	Early Thoracic Radiotherapy (TRT) for Patients with a Diagnosis of Limited Stage SCLC (Test Measure)	Performance status = 3 / 40-50% / Bed time, >50% OR Performance status = 4 / 10-30% / Unable to get out of bed OR Treatment provided on clinical trial protocol = Yes OR Contraindication or other clinical exclusion = Yes	SCLC Module selected AND (LS-SCLC at diagnosis = Yes) AND (AJCC stage = I) OR AJCC stage = II OR AJCC stage = III) AND (AJCC T stage = TX) OR AJCC T stage = T0 OR AJCC T stage = Tis OR AJCC T stage = T1 OR AJCC T stage = T2) AND (AJCC N stage = N0) OR AJCC N stage = N1mi OR AJCC N stage = N1 OR AJCC N stage = N1a OR AJCC N stage = N1b OR AJCC N stage = N1c OR AJCC N stage = N2 OR AJCC N stage = N2a	(TRT administered = Yes) AND (Current Chemotherapy cycle = 1 OR Current Chemotherapy cycle = 2)) AND Date Current Chemotherapy Cycle Started = Date Thoracic Radiotherapy (TRT) Started AND Date Current Chemotherapy Cycle Ended = Date Thoracic Radiotherapy (TRT) Ended	NCCN Guideline, Non-small Cell Lung Cancer https://www.nccn.org/store/login/login.aspx?ReturnURL=https://www.nccn.org/professionals/physician_gls/PDF/sclc.pdf

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QOPI® 2018 ROUND 2 MEASURE SPECIFICATIONS

Module Measure	Measure	Denominator Exclusion	Denominator	Numerator	Source/References
			OR AJCC N stage = N2b OR AJCC N stage = N3 OR AJCC N stage = N3a OR AJCC N stage = N3b OR AJCC N stage = N3c OR AJCC N stage = NX) AND AJCC M stage = M0)		

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