



Measure Information

This document contains the information submitted by measure developers/stewards, but is organized according to NQF's measure evaluation criteria and process. The item numbers refer to those in the submission form but may be in a slightly different order here. In general, the item numbers also reference the related criteria (e.g., item 1b.1 relates to sub criterion 1b).

Brief Measure Information

NQF #: 0670

Corresponding Measures:

De.2. Measure Title: Cardiac stress imaging not meeting appropriate use criteria: Preoperative evaluation in low risk surgery patients

Co.1.1. Measure Steward: American College of Cardiology

De.3. Brief Description of Measure: Percentage of stress SPECT MPI, stress echo, CCTA, or CMR performed in low risk surgery patients for preoperative evaluation

1b.1. Developer Rationale: Appropriate use criteria define "when to do" and "how often to do" a given procedure in the context of scientific evidence, the health care environment, the patient's profile and a physician's judgment. While practice guidelines provide a foundation for summarizing evidence-based cardiovascular care or for providing expert consensus opinions, in many areas, marked variability remains in the use of cardiovascular procedures, raising questions about over-use and under-use. Appropriate use criteria provide practical tools to measure this variability and to look at utilization patterns. The criteria are designed to examine the use of diagnostic and therapeutic procedures to support efficient use of medical resources, while also providing patients with quality, appropriate care.

A measure that reports rates of inappropriate imaging within practices would contain information regarding both cost and quality, because an inappropriate test results in both higher costs and poorer-quality care. Conversely, a reduction in this rate would simultaneously improve quality and decrease cost. Improvements in this metric should lead to consistent application of AUC and improve the efficiency of the system.

S.4. Numerator Statement: Number of stress SPECT MPI, stress echo, CCTA, or CMR performed in patients undergoing low risk surgery as a part of the preoperative evaluation

S.6. Denominator Statement: Number of stress SPECT MPI, stress echo, CCTA, and CMR performed

S.8. Denominator Exclusions: None.

De.1. Measure Type: Efficiency

S.17. Data Source: Other, Registry Data

S.20. Level of Analysis: Clinician : Group/Practice, Facility

IF Endorsement Maintenance – Original Endorsement Date: Apr 26, 2011 **Most Recent Endorsement Date:** Jun 29, 2015

IF this measure is included in a composite, NQF Composite#/title:

IF this measure is paired/grouped, NQF#/title:

De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results?

1. Evidence, Performance Gap, Priority – Importance to Measure and Report

Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-

than-optimal performance. **Measures must be judged to meet all sub criteria to pass this criterion and be evaluated against the remaining criteria.**

1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form

[NQF_evidence_attachment_Sep2017_-_670-637099381169840536.docx](#)

1a.1 For Maintenance of Endorsement: Is there new evidence about the measure since the last update/submission?

Do not remove any existing information. If there have been any changes to evidence, the Committee will consider the new evidence. Please use the most current version of the evidence attachment (v7.1). Please use red font to indicate updated evidence.

No

1b. Performance Gap

Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating:

- considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or
- Disparities in care across population groups.

1b.1. Briefly explain the rationale for this measure (e.g., how the measure will improve the quality of care, the benefits or improvements in quality envisioned by use of this measure)

If a COMPOSITE (e.g., combination of component measure scores, all-or-none, any-or-none), SKIP this question and answer the composite questions.

Appropriate use criteria define “when to do” and “how often to do” a given procedure in the context of scientific evidence, the health care environment, the patient’s profile and a physician’s judgment. While practice guidelines provide a foundation for summarizing evidence-based cardiovascular care or for providing expert consensus opinions, in many areas, marked variability remains in the use of cardiovascular procedures, raising questions about over-use and under-use. Appropriate use criteria provide practical tools to measure this variability and to look at utilization patterns. The criteria are designed to examine the use of diagnostic and therapeutic procedures to support efficient use of medical resources, while also providing patients with quality, appropriate care.

A measure that reports rates of inappropriate imaging within practices would contain information regarding both cost and quality, because an inappropriate test results in both higher costs and poorer-quality care. Conversely, a reduction in this rate would simultaneously improve quality and decrease cost. Improvements in this metric should lead to consistent application of AUC and improve the efficiency of the system.

1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis. *(This is required for maintenance of endorsement. Include mean, std dev, min, max, interquartile range, scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include.) This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.*

Hendel RC, Cerqueira M, Douglas PS. A multicenter assessment of the use of single-photon emission computed tomography myocardial perfusion imaging with appropriateness criteria. J Am Coll Cardiol. 2010 Jan 12;55(2):156-62.

These site specific performance scores were provided by a sub-analysis of the data collected for the above study. While the rates are fairly low in these sites, the additional studies in 1b.3 demonstrate a range of performance on this measure that is generally higher than these rates.

Six sites participated in this pilot study; 3 urban, 2 suburban, and 1 rural location. Practices were located in Florida, Wisconsin, Oregon, and Arizona, and the number of cardiologists at each site ranged from 7 to 20 physicians. The number of SPECT MPI patients submitted from each site varied from 328 to 1,597 patients. A total of 6,351 subjects with complete data were entered into the pilot database.

All Sites - 0.5%

Site 1 - 1.1%

Site 2 - 1.2%

Site 3 - 1.1%

Site 4 - 0.0%

1b.3. If no or limited performance data on the measure as specified is reported in 1b2, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement.

Hendel RC, Cerqueira M, Douglas PS. A multicenter assessment of the use of single-photon emission computed tomography myocardial perfusion imaging with appropriateness criteria. J Am Coll Cardiol. 2010 Jan 12;55(2):156-62.

See above.

Fonseca R, Negishi K, Otahal P, et al. Temporal Changes in Appropriateness of Cardiac Imaging. J Am Coll Cardiol. 2015 Mar 3;65(8):763-73.

Mehta R, Agarwal S, Chandra S, Ward RP, Williams KA: Evaluation of the American College of Cardiology Foundation/American Society of Nuclear Cardiology appropriateness criteria for SPECT myocardial perfusion imaging. J Nucl Cardiol. 2008;5:337–44. There were 1,623 patients (mean age 61 years ± 11, 61% males). Most common indications for SPECT were evaluation of ischemic equivalent for coronary artery disease (CAD), risk assessment post-revascularization, and preoperative evaluation for non-cardiac surgery. 10% of referrals were classified as inappropriate, 5% uncertain, and 3% unclassified. Appropriate referrals had a higher proportion of abnormal SPECT results than inappropriate referrals (40% vs 27%, OR 2.08, 95% CI 1.56-2.77, P < .001).

Ward RP, Al-Mallah MH, Grossman GB, Hansen CL, Hendel RC, Kerwin TC, McCallister BD Jr., Mehta R, Dm Polk, Tilkemeier PL, Vashist A, Williams KA, Wolinsky DG, Ficaro EP: American Society of Nuclear Cardiology: American Society of Nuclear Cardiology review of the ACCF/ASNC appropriateness criteria for single-photon emission computed tomography myocardial perfusion imaging (SPECT MPI). J Nucl Cardiol. 2007;14:e26–38.

Gibbons RJ, Miller TD, Hodge D, Urban L, Araoz PA, Pellikka P, McCully RB: Application of appropriateness criteria to stress single photon emission computed tomography sestamibi studies and stress echocardiograms in an academic medical center. J Am Coll Cardiol. 2008;51:1283–9.

The purpose of this study was to apply published appropriateness criteria for single-photon emission computed tomography (SPECT) myocardial perfusion imaging (MPI) in a single academic medical center.

The study retrospectively examined 284 patients who underwent stress SPECT MPI and 298 patients who underwent stress echocardiography before publication of the criteria. 10% of studies were for evaluation prior to low risk surgery.

Sheffield KM, McAdams PS, Benarroch-Gampel J, Goodwin JS, Boyd CA, Zhang D, Riall TS. Overuse of preoperative cardiac stress testing in medicare patients undergoing elective noncardiac surgery. Ann Surg. 2013 Jan;257(1):73-80.

In a 5% sample of Medicare claims data, 2803 patients underwent preoperative stress testing without any indications. When these results were applied to the entire Medicare population, we estimated that there are over 56,000 patients who underwent unnecessary preoperative stress testing. The rate of testing in patients without cardiac indications has increased significantly over time.

Carrier DJ, Hodge DO, Miller TD, Askew JW, Gibbons RJ. Application of appropriateness criteria to stress single photon emission computed tomography sestamibi studies: a comparison of the 2009 revised appropriateness criteria to the 2005 original criteria. Am Heart J. 2010 Aug;160(2):244-9..

An equal percentage of inappropriate studies (10.3%) were due to pre-op evaluation for low to intermediate risk non-cardiac surgery (indications 40, 41, and 42) and asymptomatic patients, less than 2 years after PCI (indication no. 59).

MedPAC Report to the Congress: Medicare and the Health Care Delivery System. Chapter 3. Measuring quality of care in Medicare.

June 2014

Rates ranged from 4.7% to 5.3% of imaging performed for evaluation prior to low risk surgery.

1b.4. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability. *(This is required for maintenance of endorsement. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included.) For measures that show high levels of performance, i.e., “topped out”, disparities data may demonstrate an opportunity for improvement/gap in care for certain sub-populations. This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.*

None

1b.5. If no or limited data on disparities from the measure as specified is reported in 1b.4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations. Not necessary if performance data provided in 1b.4

this doesn't seem to exist. seems like an opportunity.

2. Reliability and Validity—Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. **Measures must be judged to meet the sub criteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.**

2a.1. Specifications The measure is well defined and precisely specified so it can be implemented consistently within and across organizations and allows for comparability. eMeasures should be specified in the Health Quality Measures Format (HQMF) and the Quality Data Model (QDM).

De.5. Subject/Topic Area *(check all the areas that apply):*

Cardiovascular, Cardiovascular : Coronary Artery Disease

De.6. Non-Condition Specific*(check all the areas that apply):*

Safety : Overuse

De.7. Target Population Category *(Check all the populations for which the measure is specified and tested if any):*

Elderly

S.1. Measure-specific Web Page *(Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials. Do not enter a URL linking to a home page or to general information.)*

None at this time except NQF specifications page

S.2a. If this is an eMeasure, HQMF specifications must be attached. Attach the zipped output from the eMeasure authoring tool (MAT) - if the MAT was not used, contact staff. (Use the specification fields in this online form for the plain-language description of the specifications)

This is not an eMeasure Attachment:

S.2b. Data Dictionary, Code Table, or Value Sets *(and risk model codes and coefficients when applicable) must be attached. (Excel or csv file in the suggested format preferred - if not, contact staff)*

Attachment Attachment: Imaging-Efficiency-Measures-Micro-specifications_Measure_Maintenance-635231526161153276.doc

S.2c. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

No, this is not an instrument-based measure Attachment:

S.2d. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

Not an instrument-based measure

S.3.1. For maintenance of endorsement: Are there changes to the specifications since the last updates/submission. If yes, update the specifications for S1-2 and S4-22 and explain reasons for the changes in S3.2.

No

S.3.2. For maintenance of endorsement, please briefly describe any important changes to the measure specifications since last measure update and explain the reasons.

no changes to specifications.

S.4. Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome) DO NOT include the rationale for the measure.

IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Number of stress SPECT MPI, stress echo, CCTA, or CMR performed in patients undergoing low risk surgery as a part of the preoperative evaluation

S.5. Numerator Details (All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)

IF an OUTCOME MEASURE, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Patients qualify this measure if:

-an upcoming surgery is the recorded reason for the imaging test AND

-no other reason is recorded for the imaging

AND

Surgery risk is low

The following will be used to determine whether the risk of the surgery recorded is low:

Surgical Risk Categories

- Low-Risk Surgery– cardiac death or MI less than 1% including endoscopic procedures, superficial procedures, cataract surgery, breast surgery.

Surgeries meeting this definition to be included in the measure are listed by CPT 4 Codes below. While additional surgeries may fit the low risk definition, only those surgeries listed below will be considered in determining inclusion in the numerator for this measure.

Surgery/Integumentary System: Breast

19100 Biopsy of breast

19101 Biopsy of breast

19102 Bx breast percut w/image

19103 Bx breast percut w/device

Surgery/Respiratory System: Accessory Sinuses

31231 Nasal endoscopy, dx

31233 Nasal/sinus endoscopy, dx

31235 Nasal/sinus endoscopy, dx
31237 Nasal/sinus endoscopy, surg
31238 Nasal/sinus endoscopy, surg
31239 Nasal/sinus endoscopy, surg
31240 Nasal/sinus endoscopy, surg
31267 Endoscopy, maxillary sinus
31276 Sinus surgical endoscopy
31299 Sinus surgery procedure

Surgery/Respiratory System: Larynx

31505 Diagnostic laryngoscopy
31510 Laryngoscopy with biopsy
31511 Remove foreign body, larynx
31513 Injection into vocal cord
31515 Laryngoscopy for aspiration
31520 Diagnostic laryngoscopy
31525 Diagnostic laryngoscopy
31526 Diagnostic laryngoscopy
31527 Laryngoscopy for treatment
31528 Laryngoscopy and dilatation
31529 Laryngoscopy and dilatation
31530 Operative laryngoscopy
31531 Operative laryngoscopy
31535 Operative laryngoscopy
31536 Operative laryngoscopy
31540 Operative laryngoscopy
31541 Operative laryngoscopy
31560 Operative laryngoscopy
31561 Operative laryngoscopy
31570 Laryngoscopy with injection
31571 Laryngoscopy with injection
31575 Diagnostic laryngoscopy
31576 Laryngoscopy with biopsy
31577 Remove foreign body, larynx
31578 Removal of larynx lesion
31579 Diagnostic laryngoscopy

Surgery/Respiratory System: Trachea and Bronchi

31615 Visualization of windpipe
31620 Endobronchial us add-on
31622 Diagnostic bronchoscopy
31623 Dx bronchoscope/brush
31624 Dx bronchoscope/lavage
31625 Bronchoscopy with biopsy
31628 Bronchoscopy with biopsy
31629 Bronchoscopy with biopsy
31632 Bronchoscopy/lung bx, add'l
31633 Bronchoscopy/needle bx add'l
31645 Bronchoscopy, clear airways
31646 Bronchoscopy, reclear airways

Surgery/Respiratory System: Lungs and Pleura

33508 Endoscopic vein harvest
37500 Endoscopy ligate perf veins

37501 Vascular endoscopy procedure
39400 Visualization of chest

Surgery/Digestive System: Esophagus

43200 Esophagus endoscopy
43201 Esophagus endoscopy, w/submucous injection
43202 Esophagus endoscopy, biopsy
43204 Esophagus endoscopy & inject
43205 Esophagus endoscopy/ligation
43215 Esophagus endoscopy
43216 Esophagus endoscopy/lesion
43217 Esophagus endoscopy
43219 Esophagus endoscopy
43220 Esophagus endoscopy, dilation
43226 Esophagus endoscopy, dilation
43227 Esophagus endoscopy, repair
43228 Esophagus endoscopy, ablation
43231 Esoph endoscopy w/us exam
43232 Esoph endoscopy w/us fn bx
43234 Upper GI endoscopy, exam
43235 Upper GI endoscopy, diagnosis
43236 Upper GI scope w/submuc inj
43237 Endoscopic us exam, esoph
43238 Upper GI endoscopy w/us fn bx
43239 Upper GI endoscopy, biopsy
43241 Upper GI endoscopy with tube
43242 Upper GI endoscopy w/us fn bx
43243 Upper GI endoscopy & inject.
43244 Upper GI endoscopy/ligation
43246 Place gastrostomy tube
43247 Operative upper GI endoscopy
43248 Upper GI endoscopy/guidewire
43249 Esophagus endoscopy, dilation
43260 Endoscopy, bile duct/pancreas
43261 Endoscopy, bile duct/pancreas
43262 Endoscopy, bile duct/pancreas
43263 Endoscopy, bile duct/pancreas
43264 Endoscopy, bile duct/pancreas
43265 Endoscopy, bile duct/pancreas
43267 Endoscopy, bile duct/pancreas
43268 Endoscopy, bile duct/pancreas
43269 Endoscopy, bile duct/pancreas
43271 Endoscopy, bile duct/pancreas
43272 Endoscopy, bile duct/pancreas

Surgery/Digestive System: Intestines (Except Rectum)

44360 Small bowel endoscopy
44361 Small bowel endoscopy, biopsy
44363 Small bowel endoscopy
44383 Ileoscopy w/stent
44385 Endoscopy of bowel pouch
44386 Endoscopy, bowel pouch, biopsy
44388 Colon endoscopy
44389 Colonoscopy with biopsy

44390 Colonoscopy for foreign body
44391 Colonoscopy for bleeding
44392 Colonoscopy & polypectomy
44393 Colonoscopy, lesion removal
44397 Colonoscopy w stent

Surgery/Digestive System: Rectum

45300 Proctosigmoidoscopy
45303 Proctosigmoidoscopy
45305 Proctosigmoidoscopy; biopsy
45307 Proctosigmoidoscopy
45308 Proctosigmoidoscopy
45309 Proctosigmoidoscopy
45315 Proctosigmoidoscopy
45317 Proctosigmoidoscopy
45320 Proctosigmoidoscopy
45321 Proctosigmoidoscopy
45327 Proctosigmoidoscopy w/stent
45330 Sigmoidoscopy, diagnostic
45331 Sigmoidoscopy and biopsy
45332 Sigmoidoscopy
45333 Sigmoidoscopy & polypectomy
45334 Sigmoidoscopy for bleeding
45335 Sigmoidoscope w/submuc inj
45337 Sigmoidoscopy, decompression
45338 Sigmoidoscopy
45339 Sigmoidoscopy
45340 Sig w/balloon dilation
45341 Sigmoidoscopy w/ultrasound
45342 Sigmoidoscopy w/us guide bx
45345 Sigmoidoscopy w/stent
45378 Diagnostic colonoscopy
45379 Colonoscopy
45380 Colonoscopy and biopsy
45381 Colonoscope, submucous inj
45382 Colonoscopy, control bleeding
45383 Colonoscopy, lesion removal
45384 Colonoscopy
45385 Colonoscopy, lesion removal
45387 Colonoscopy w/stent
45391 Colonoscopy w/endoscope us
45392 Colonoscopy w/endoscopic fnb

Surgery/Digestive System: Anus

46600 Diagnostic anoscopy
46604 Anoscopy and dilation
46606 Anoscopy and biopsy
46608 Anoscopy; remove foreign body
46610 Anoscopy; remove lesion
46612 Anoscopy; remove lesions
46614 Anoscopy; control bleeding

Surgery/Digestive System: Biliary Tract

47561 Laparo w/cholangio/biopsy

Surgery/Digestive System: Abdomen, Peritoneum and Omentum

49322 – Laparoscopy, aspiration

Surgery/Urinary System: Kidney

50551 Kidney endoscopy

50553 Kidney endoscopy

50555 Kidney endoscopy & biopsy

50557 Kidney endoscopy & treatment

50559 Renal endoscopy; radiotracer

50561 Kidney endoscopy & treatment

• Surgery/Urinary System: Ureter

50951 Endoscopy of ureter

50953 Endoscopy of ureter

50955 Ureter endoscopy & biopsy

50970 Ureter endoscopy

50972 Ureter endoscopy & catheter

50974 Ureter endoscopy & biopsy

50976 Ureter endoscopy & treatment

50978 Ureter endoscopy & tracer

50980 Ureter endoscopy & treatment

Surgery/Urinary System: Bladder

51715 Endoscopic injection/implant

52000 Cystoscopy

52001 Cystoscopy, removal of clots

52005 Cystoscopy & ureter catheter

52007 Cystoscopy and biopsy

52010 Cystoscopy & duct catheter

52204 Cystoscopy

52282 Cystoscopy, implant stent

52327 Cystoscopy, inject material

52330 Cystoscopy and treatment

52351 Cystouretero & or pyeloscope

52352 Cystouretero w/stone remove

52353 Cystouretero w/lithotripsy

52354 Cystouretero w/biopsy

52355 Cystouretero w/excise tumor

52402 Cystourethro cut ejacul duct

Surgery/Female Genital System: Cervix Uteri

57452 Examination of vagina

57454 Vagina examination & biopsy

57455 Biopsy of cervix w/scope

57456 Endocerv curettage w/scope

57460 Cervix excision

57461 Conz of cervix w/scope, leep

Surgery/Female Genital System: Corpus Uteri

58555 Hysteroscopy, dx, sep proc

58558 Hysteroscopy, biopsy

58559 Hysteroscopy, lysis

58560 Hysteroscopy, resect septum

58562 Hysteroscopy, remove fb
58565 Hysteroscopy, sterilization

Surgery/Female Genital System: Oviduct/Ovary

58670 Laparoscopy, tubal cautery
58671 Laparoscopy, tubal block

Surgery/Eye and Ocular Adnexa: Anterior Segment

66820 Incision, secondary cataract
66821 After cataract laser surgery
66830 Removal of lens lesion
66982 Cataract surgery, complex
66983 Remove cataract, insert lens

Other Surgeries:

14301 Skin Tissue Rearrangement
21011 Exc Face Les Sc < 2 cm
21012 Exc Face Les Sc = 2 cm
21013 Exc Face Tum Deep < 2 cm
21014 Exc Face Tum Deep = 2 cm
21552 Exc Neck Les Sc = 3 cm
21554 Exc Neck Tum Deep = 5 cm
21558 Resect Neck Tum = 5 cm
21931 Exc Back Les Sc = 3 cm
21932 Exc Back Tum Deep < 5 cm
21933 Exc Back Tum Deep = 5 cm
22901 Exc Back Tum Deep = 5 cm
22902 Exc Abdomen Les Sc < 3 cm
22903 Exc Abdomen Les Sc > 3 cm
23071 Exc Shoulder Les Sc > 3 cm
23073 Exc Shoulder Tum Deep > 5 cm
24071 Exc Arm/Elbow Les Sc = 3 cm
24073 Exc Arm/Elbow Tum Deep > 5 cm
25071 Exc Forearm Les Sc > 3 cm
25073 Exc Forearm Tum Deep = 3 cm
26111 Exc Hand Les Sc > 1.5 cm
26113 Exc Hand Tum Deep > 1.5 cm
27043 Exc Hip Pelvis Les Sc > 3 CM
27045 Exc Hip/Pelvis Tum Deep > 5 CM
27337 Exc Thigh/Knee Les Sc > 3 CM
27339 Exc Thigh/Knee Tum Deep > 5 CM
27632 Exc Leg/Ankle Les Sc > 3 cm
27634 Exc Leg/Ankle Tum Deep > 5 cm
28039 Exc Foot/Toe Tum Sc > 1.5 cm
28041 Exc Foot/Toe Tum Deep > 1.5 cm
29581 Apply Multilay Compr Lower Leg
31626 Bronchoscopy w/ Markers
32552 Remove Lung Catheter
36147 Access AV Dial Grft for Eval
36148 Access AV Dial Grft for Proc
37761 Ligate Leg Veins Open
51727 Cystometrogram w/UP
51728 Cystometrogram w/VP
51729 Cystometrogram w/VP&UP

53855 Insert Prost Urethral Stent
63661 Remove Spine EI Trd Perq Aray
63662 Remove Spine EI Trd Plate
63663 Revise Spine EI Trd Perq Aray
63664 Revise Spine EI Trd Plate Revised
64490 Inj Paravert F Jnt C/T 1 LEV
64493 INJ Paravert F JNT L/S 1 LEV
0213T US Facet JT INJ CERV/T 1 LEV
0216T US Facet JT INJ LS 1 LEVEL

S.6. Denominator Statement (Brief, narrative description of the target population being measured)

Number of stress SPECT MPI, stress echo, CCTA, and CMR performed

S.7. Denominator Details (All information required to identify and calculate the target population/denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)

IF an OUTCOME MEASURE, describe how the target population is identified. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

All consecutive stress SPECT MPI, stress echocardiography, CCTA, and CMR orders

Measurement Entity: Imaging laboratory prospectively measured on test requisition forms and/or patient charts

Level of Measurement/Analysis: Imaging laboratory*

*Attribution for not appropriate use is shared between the ordering physician and imaging laboratory. In an ideal world, attribution to the ordering physician or institution, as well as the imaging laboratory, would be reflected in the reporting of these measures. However, there are numerous complexities that prevent assignment of these measures to individual ordering physicians. For example, ordering volumes from individual physicians and institutions are insufficient to make meaningful comparisons to allow such attribution. Thus, these measures will be reported at the level of the imaging laboratory. However, the extent to which the institution housing the imaging laboratory can impact these measures will be dependent upon cooperation of ordering physicians with the imaging laboratory.

S.8. Denominator Exclusions (Brief narrative description of exclusions from the target population)

None.

S.9. Denominator Exclusion Details (All information required to identify and calculate exclusions from the denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)

None.

S.10. Stratification Information (Provide all information required to stratify the measure results, if necessary, including the stratification variables, definitions, specific data collection items/responses, code/value sets, and the risk-model covariates and coefficients for the clinically-adjusted version of the measure when appropriate – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format with at S.2b.)

None

S.11. Risk Adjustment Type (Select type. Provide specifications for risk stratification in measure testing attachment)

No risk adjustment or risk stratification

If other:

S.12. Type of score:

Rate/proportion

If other:

S.13. Interpretation of Score (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)

Better quality = Lower score

S.14. Calculation Algorithm/Measure Logic (Diagram or describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period for data, aggregating data; risk adjustment; etc.)

Locate all stress SPECT MPI, stress echocardiography, CCTA, and CMR orders performed during the sampling period.

Record the total number of tests during the sampling period as the denominator.

From this sets of test orders, identify orders containing the criteria listed in the numerator

S.15. Sampling (If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)

IF an instrument-based performance measure (e.g., PRO-PM), identify whether (and how) proxy responses are allowed.

Measures are to be developed based on a sample of a full calendar year based on the following sampling methodology:

Select a starting month:

- ☐ January
- ☐ March
- ☐ May
- ☐ July
- ☐ September
- ☐ November

Begin 60 day data collection period on the 1st on the month for the selected starting month

Determine whether at least 30 stress SPECT and stress echo orders have been placed during the selected time period. If not, select another time period with a minimum number of 30 cases. If no time period includes the minimum number of cases, then the imaging laboratory does not have sufficient volume to report this measure.

Sampling is required for this measure as full year data collection does not alter performance rates for this measure and would place an additional data collection burden on laboratories. It also allows laboratories to share performance with ordering physicians more quickly than would be possible under full year calendar reporting.

S.16. Survey/Patient-reported data (If measure is based on a survey or instrument, provide instructions for data collection and guidance on minimum response rate.)

Specify calculation of response rates to be reported with performance measure results.

S.17. Data Source (Check ONLY the sources for which the measure is SPECIFIED AND TESTED).

If other, please describe in S.18.

Other, Registry Data

S.18. Data Source or Collection Instrument (Identify the specific data source/data collection instrument (e.g. name of database, clinical registry, collection instrument, etc., and describe how data are collected.)

IF instrument-based, identify the specific instrument(s) and standard methods, modes, and languages of administration.

Optimization of Patient Selection for Cardiac Imaging

S.19. Data Source or Collection Instrument (available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)

Available in attached appendix at A.1

S.20. Level of Analysis (Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)

Clinician : Group/Practice, Facility

S.21. Care Setting (Check *ONLY* the settings for which the measure is SPECIFIED AND TESTED)

Outpatient Services

If other:

S.22. COMPOSITE Performance Measure - Additional Specifications (Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)

2. Validity – See attached Measure Testing Submission Form

[nqf_testing_attachment_7.1_670_July_2018_-_updated.docx](#)

2.1 For maintenance of endorsement

Reliability testing: If testing of reliability of the measure score was not presented in prior submission(s), has reliability testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

No

2.2 For maintenance of endorsement

Has additional empirical validity testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

No

2.3 For maintenance of endorsement

Risk adjustment: For outcome, resource use, cost, and some process measures, risk-adjustment that includes social risk factors is not prohibited at present. Please update sections 1.8, 2a2, 2b1,2b4.3 and 2b5 in the Testing attachment and S.140 and S.11 in the online submission form. NOTE: These sections must be updated even if social risk factors are not included in the risk-adjustment strategy. You MUST use the most current version of the Testing Attachment (v7.1) -- older versions of the form will not have all required questions.

No - This measure is not risk-adjusted

3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

3a. Byproduct of Care Processes

For clinical measures, the required data elements are routinely generated and used during care delivery (e.g., blood pressure, lab test, diagnosis, medication order).

3a.1. Data Elements Generated as Byproduct of Care Processes.

generated by and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition, Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims), Other

If other: Decision Support Tool feeding registry

3b. Electronic Sources

The required data elements are available in electronic health records or other electronic sources. If the required data are not in electronic health records or existing electronic sources, a credible, near-term path to electronic collection is specified.

3b.1. To what extent are the specified data elements available electronically in defined fields (i.e., data elements that are needed to compute the performance measure score are in defined, computer-readable fields) Update this field for **maintenance of endorsement**.

Some data elements are in defined fields in electronic sources

3b.2. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources. For maintenance of endorsement, if this measure is not an eMeasure (eCQM), please describe any efforts to develop an eMeasure (eCQM).

Some data elements should already be a part of the electronic record (PCI history, scheduled surgery). In addition, e-ordering for diagnostic testing has been proposed for meaningful use, encouraging integration of these types of data elements. In addition, ACC is developing clinical decision support tools that can be embedded in electronic health records to capture the necessary information.

3b.3. If this is an eMeasure, provide a summary of the feasibility assessment in an attached file or make available at a measure-specific URL. Please also complete and attach the NQF Feasibility Score Card.

Attachment:

3c. Data Collection Strategy

Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, costs associated with fees/licensing of proprietary measures) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use). For eMeasures, a feasibility assessment addresses the data elements and measure logic and demonstrates the eMeasure can be implemented or feasibility concerns can be adequately addressed.

3c.1. Required for maintenance of endorsement. Describe difficulties (as a result of testing and/or operational use of the measure) regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.

IF instrument-based, consider implications for both individuals providing data (patients, service recipients, respondents) and those whose performance is being measured.

Hendel, RC; Cerqueira, M; Douglas, PS et al. "A Multicenter Assessment of the Use of Single-Photon Emission Computed Tomography Myocardial Perfusion Imaging With Appropriateness Criteria". J Am Coll Cardiol. Published online December 10, 2009.

This study demonstrated the feasibility of data collection as well as the most frequent inappropriate indications. This allowed ACC to narrow the number of indications measured for this measure set along with the associated data elements.

3c.2. Describe any fees, licensing, or other requirements to use any aspect of the measure as specified (e.g., value/code set, risk model, programming code, algorithm).

None required. Decision support tools are available to aid in data collection and are available on a per test basis.

4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

4a. Accountability and Transparency

Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at the time of initial endorsement, then a credible plan for implementation within the specified timeframes is provided.

4.1. Current and Planned Use

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement in addition to performance improvement.

Specific Plan for Use	Current Use (for current use provide URL)
	Public Reporting PQRS http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/index.html

	Payment Program Quality Payment Program https://qpp.cms.gov/mips Quality Payment Program https://qpp.cms.gov/mips Regulatory and Accreditation Programs IAC http://www.intersocietal.org/intersocietal.htm Professional Certification or Recognition Program FOCUS www.cardiosource.org/focus Quality Improvement (Internal to the specific organization) FOCUS https://www.acc.org/focus
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4a1.1 For each CURRENT use, checked above (update for maintenance of endorsement), provide:

- Name of program and sponsor
- Purpose
- Geographic area and number and percentage of accountable entities and patients included
- Level of measurement and setting

MIPS - CMS/pay for performance/national; The data collected at the lab level for this measure can be further segmented by physician to help them understand their appropriate use patterns; although small sample sizes can limit comparability for some providers

FOCUS - ACC/lab accreditation, quality improvement and utilization management/national - 25,000 cases with concentrations in DE (100% for SPECT MPI) and Western PA (10% for SPECT MPI and stress echo for cardiologists) - additional 6,000 cases

IAC - lab accreditation/national - 100% - 5% of lab tests performed on an annual basis

4a1.2. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing) what are the reasons? (e.g., Do policies or actions of the developer/steward or accountable entities restrict access to performance results or impede implementation?)
n/a

4a1.3. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement. (Credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.)
n/a

4a2.1.1. Describe how performance results, data, and assistance with interpretation have been provided to those being measured or other users during development or implementation.
How many and which types of measured entities and/or others were included? If only a sample of measured entities were included, describe the full population and how the sample was selected.
through CMS

4a2.1.2. Describe the process(es) involved, including when/how often results were provided, what data were provided, what educational/explanatory efforts were made, etc.
through CMS

4a2.2.1. Summarize the feedback on measure performance and implementation from the measured entities and others described

in 4d.1.

Describe how feedback was obtained.

through CMS

4a2.2.2. Summarize the feedback obtained from those being measured.

n/a

4a2.2.3. Summarize the feedback obtained from other users

n/a

4a2.3. Describe how the feedback described in 4a2.2.1 has been considered when developing or revising the measure specifications or implementation, including whether the measure was modified and why or why not.

n/a

Improvement

Progress toward achieving the goal of high-quality, efficient healthcare for individuals or populations is demonstrated. If not in use for performance improvement at the time of initial endorsement, then a credible rationale describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

4b1. Refer to data provided in 1b but do not repeat here. Discuss any progress on improvement (trends in performance results, number and percentage of people receiving high-quality healthcare; Geographic area and number and percentage of accountable entities and patients included.)

If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

In a cohort study of a 5% national sample of Medicare beneficiaries, annual rates of overall testing appeared to increase from 2000 to 2008 and then declined until 2016. Rates of low-value tests (preoperative stress testing and routine stress testing after coronary revascularization) appeared to have increased and then decreased.

4b2. Unintended Consequences

The benefits of the performance measure in facilitating progress toward achieving high-quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such evidence exists).

4b2.1. Please explain any unexpected findings (positive or negative) during implementation of this measure including unintended impacts on patients.

There is not an comprehensive list of surgeries that are low risk. Both a definition and example list of surgeries is provided, but clinical judgment also is needed.

4b2.2. Please explain any unexpected benefits from implementation of this measure.

5. Comparison to Related or Competing Measures

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

5. Relation to Other NQF-endorsed Measures

Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.

Yes

5.1a. List of related or competing measures (selected from NQF-endorsed measures)

0669 : Cardiac Imaging for Preoperative Risk Assessment for Non-Cardiac, Low-Risk Surgery

5.1b. If related or competing measures are not NQF endorsed please indicate measure title and steward.

5a. Harmonization of Related Measures

The measure specifications are harmonized with related measures;

OR

The differences in specifications are justified

5a.1. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s):

Are the measure specifications harmonized to the extent possible?

No

5a.2. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

[Different populations and data sources used](#)

5b. Competing Measures

The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);

OR

Multiple measures are justified.

5b.1. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):

Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)

[This measure provides an additional level of analysis that applies not only to hospitals but also outpatient physician clinics. The data source also provides a richer source of clinical information to distinguish between testing ordered for preoperative assessment and other cardiovascular causes co-existing at the same time.](#)

Appendix

A.1 Supplemental materials may be provided in an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be organized in one file with a table of contents or bookmarks. If material pertains to a specific submission form number, that should be indicated. Requested information should be provided in the submission form and required attachments. There is no guarantee that supplemental materials will be reviewed.

[Attachment Attachment: FOCUS_Data_Collection_Sheet-635249619633321013.docx](#)

Contact Information

Co.1 Measure Steward (Intellectual Property Owner): [American College of Cardiology](#)

Co.2 Point of Contact: [Amy, Dearborn, adearborn@acc.org, 202-375-6257-](#)

Co.3 Measure Developer if different from Measure Steward: [American College of Cardiology Foundation](#)

Co.4 Point of Contact: [Joseph, Allen, jallen@acc.org, 202-375-6463-](#)

Additional Information

Ad.1 Workgroup/Expert Panel involved in measure development

Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

[All individuals are volunteer members representing American College of Cardiology Foundation:](#)

[Pamela Douglas, MD, MACC](#)

[Joseph Allen, MA](#)

[Robert Hendel, MD, FACC](#)

Joseph Cacchione, MD, FACC
Manuel Cerqueira, MD, FACC
Joseph Drozda, MD, FACC
Michael Picard, MD, FACC
Martha Radford, MD, FACC
Leslee Shaw, PhD, FACC
Allen Taylor, MD, FACC

Group developed list of proposed measures, specifications, definitions, justification, etc.

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 Year the measure was first released: 2009

Ad.3 Month and Year of most recent revision: 11, 2019

Ad.4 What is your frequency for review/update of this measure? Annual

Ad.5 When is the next scheduled review/update for this measure? 11, 2019

Ad.6 Copyright statement: Copyright 2013. American College of Cardiology Foundation

Ad.7 Disclaimers: date above refers to maintenance of endorsement

Ad.8 Additional Information/Comments: date above refers to maintenance of endorsement