# NATIONAL QUALITY FORUM

**Measure Submission and Evaluation Worksheet 5.0**

This form contains the information submitted by measure developers/stewards, organized according to NQF's measure evaluation criteria and process. The evaluation criteria, evaluation guidance documents, and a blank online submission form are available on the submitting standards web page.

**NQF #:** 0377 **NQF Project:** Cancer Project

(for Endorsement Maintenance Review)
**Original Endorsement Date:** Jul 31, 2008 **Most Recent Endorsement Date:** Jul 31, 2008 **Last Updated Date:** Mar 06, 2012

## BRIEF MEASURE INFORMATION

De.1 **Measure Title:** Myelodysplastic Syndrome (MDS) and Acute Leukemias – Baseline Cytogenetic Testing Performed on Bone Marrow

Co.1.1 **Measure Steward:** American Medical Association - Physician Consortium for Performance Improvement

De.2 **Brief Description of Measure:** Percentage of patients aged 18 years and older with a diagnosis of MDS or an acute leukemia who had baseline cytogenic testing performed on bone marrow.

2a1.1 **Numerator Statement:** Patients who had baseline cytogenetic testing* performed on bone marrow

Definition: *Baseline Cytogenetic Testing- Testing that is performed at time of diagnosis or prior to initiating treatment (transfusion, growth factors, or antineoplastic therapy) for that diagnosis.

2a1.4 **Denominator Statement:** All patients aged 18 years and older with a diagnosis of MDS or an acute leukemia

2a1.8 **Denominator Exclusions:** Documentation of medical reason(s) for not performing baseline cytogenetic testing
Documentation of patient reason(s) for not performing baseline cytogenetic testing
Denominator Exclusions: Documentation of system reason(s) for not performing baseline cytogenetic testing

1.1 **Measure Type:** Process
2a1. 25-26 **Data Source:** Administrative claims, Electronic Clinical Data : Laboratory
2a1.33 **Level of Analysis:** Clinician : Group/Practice, Clinician : Individual, Clinician : Team

1.2-1.4 **Is this measure paired with another measure?** No

De.3 **If included in a composite, please identify the composite measure** (*title and NQF number if endorsed*)**:**

## STAFF NOTES (*issues or questions regarding any criteria*)

**Comments on Conditions for Consideration:**

**Is the measure untested? Yes☐ No☐ If untested, explain how it meets criteria for consideration for time-limited endorsement:**

**1a. Specific national health goal/priority identified by DHHS or NPP addressed by the measure** (*check De.5*)**:**
**5. Similar/related endorsed or submitted measures** (*check 5.1*)**:**
**Other Criteria:**

**Staff Reviewer Name(s):**

## 1. IMPACT, OPPORTUITY, EVIDENCE - IMPORTANCE TO MEASURE AND REPORT

Importance to Measure and Report is a threshold criterion that must be met in order to recommend a measure for endorsement. All three subcriteria must be met to pass this criterion. See guidance on evidence.
***Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria.***
**(evaluation criteria)**

**1a. High Impact:** H☐ M☐ L☐ I ☐
(*The measure directly addresses a specific national health goal/priority identified by DHHS or NPP, or some other high impact aspect of healthcare.*)

De.4 **Subject/Topic Areas** *(Check all the areas that apply)*: Cancer, Cancer : Hematologic
De.5 **Cross Cutting Areas** (*Check all the areas that apply*)**:**

1a.1 **Demonstrated High Impact Aspect of Healthcare:** A leading cause of morbidity/mortality, Patient/societal consequences of poor quality, Severity of illness

1a.2 **If "Other," please describe:**

1a.3 **Summary of Evidence of High Impact** *(Provide epidemiologic or resource use data)*:
Myelodysplastic syndromes (MDS) is a group of diseases for which the bone marrow does not produce sufficient healthy blood cells. Statistics show that MDS occur in 5 out of 100,000 people in the general population. However, MDS occur more greatly among people 70 years and older, occurring specifically in 22 to 45 of 100,000, with the incidence rate continuing to increase with age.

Approximately 12,330 people will be diagnosed with acute myeloid leukemia (AML) in 2010, and 8,950 patients will die from the disease. As the population ages, the incidence of AML, along with myelodysplasia, appears to be rising.

1a.4 **Citations for Evidence of High Impact cited in 1a.3:** National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology: Myelodysplastic syndromes. Version 1, 2012.

National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology: Acute Myeloid Leukemia. Version 2, 2011.

**1b. Opportunity for Improvement:** H☐ M☐ L☐ I ☐
(*There is a demonstrated performance gap - variability or overall less than optimal performance*)

1b.1 **Briefly explain the benefits (improvements in quality) envisioned by use of this measure:**
To assess patients with MDS, there is a system of stratifying the disease based on risk known as the International Prognostic Scoring System (IPSS). This stratifying system is used to help determine whether MDS is early, intermediate, or advanced. Cytogenetic testing, which measures how the DNA in the chromosomes of a patient´s blood cells has changed, is one variable included in the risk-based stratification system, and is thus helpful for predicting the likelihood of disease progression to leukemia.

In addition to establishing the type of acute leukemia, cytogenetic testing is essential to detect chromosomal abnormalities that have diagnostic, prognostic, and therapeutic significance.

By encouraging the use of cytogenetic testing in patients with MDS or AML, this measure can promote appropriate treatment and assist in assessing prognosis for these patients.

Performing cytogenetic analysis on patients with AML identifies a subgroup of patients where further molecular genetics testing is indicated.

National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology: Myelodysplastic syndromes. Version 1, 2012.

NCCN Guideline version 2.2011 Acute Myeloid Leukemia AML-A

1b.2 **Summary of Data Demonstrating Performance Gap** *(Variation or overall less than optimal performance across providers)*:

**[*For Maintenance* –** *Descriptive statistics for performance results for this measure - distribution of scores for measured entities by quartile/decile, mean, median, SD, min, max, etc.***]**
CMS Physician Quality Reporting Initiative
This measure was used in the 2007-2010 CMS Physician Quality Reporting Initiative Claims and Registry options.

There is a gap in care as shown by this 2008 data; 47.98% of patients reported on did not meet the measure.

10th percentile: 11.11%
25th percentile: 27.27%
50th percentile: 51.72%
75th percentile: 80.00%
90th percentile: 100.00%

The mean performance rate for 2009 was reported as 90.95% with a total of 1,446 eligible professionals submitting. demonstrating an opportunity for improvement. Unfortunately, data regarding the variability in performance rates across reporting eligible professionals for PQRS 2009 is not available at this time.

PQRS is a voluntary reporting program and performance rates may not be representative of all physicians treating patients with MDS.

**1b.3 Citations for Data on Performance Gap: [*For Maintenance* –** *Description of the data or sample for measure results reported in 1b.2 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included***]**
Confidential CMS PQRI 2008 and 2009 Performance Information by Measure. Jan-Sept TAP file.

**1b.4 Summary of Data on Disparities by Population Group: [*For Maintenance* –***Descriptive statistics for performance results for this measure by population group***]**
We are not aware of any publications/evidence outlining disparities in patients with Acute Leukemias and MDS recieving baseline cytogentic testing.

**1b.5 Citations for Data on Disparities Cited in 1b.4: [*For Maintenance* –** *Description of the data or sample for measure results reported in 1b.4 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included***]**

**1c. Evidence** (*Measure focus is a health outcome OR meets the criteria for quantity, quality, consistency of the body of evidence.*)
**Is the measure focus a health outcome? Yes☐ No☐ If not a health outcome, rate the body of evidence.**

**Quantity: H☐ M☐ L☐ I ☐ Quality: H☐ M☐ L☐ I ☐ Consistency: H☐ M☐ L☐ I ☐**

| Quantity | Quality | Consistency | Does the measure pass subcriterion1c? |
|---|---|---|---|
| M-H | M-H | M-H | **Yes**☐ |
| L | M-H | M | **Yes**☐ IF additional research unlikely to change conclusion that benefits to patients outweigh harms: otherwise **No**☐ |
| M-H | L | M-H | **Yes**☐ IF potential benefits to patients clearly outweigh potential harms: otherwise **No**☐ |
| L-M-H | L-M-H | L | **No** ☐ |

| **Health outcome** – rationale supports relationship to at least one healthcare structure, process, intervention, or service | **Does the measure pass subcriterion1c?** **Yes**☐ IF rationale supports relationship |
|---|---|

**1c.1 Structure-Process-Outcome Relationship** *(Briefly state the measure focus, e.g., health outcome, intermediate clinical outcome, process, structure; then identify the appropriate links, e.g., structure-process-health outcome; process- health outcome; intermediate clinical outcome-health outcome)***:**
The measure focus is patients with a diagnosis of MDS or Acute Leukemias and performance of baseline cytogenetic testing on

bone marrow.

For MDS, cytogenetic testing is an important component to calculating the International Prognostic Scoring System (IPSS) score. Cytogenetic testing should be performed on the bone marrow of patients with MDS in order to guide treatment options, determine prognosis, and determine any possible transition to leukemia.

For acute leukemias, cytogenetic testing is critical to both identify the type of acute leukemia and detect chromosomal abnormalities which contain diagnostic, prognostic, and therapeutic information.

Further molecular genetic testing is indicated when specific cytogenetic abnormalities are identified.

National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology: Myelodysplastic syndromes. Version 1, 2012.

1c.2-3 **Type of Evidence** *(Check all that apply)***:**
Clinical Practice Guideline

1c.4 **Directness of Evidence to the Specified Measure** *(State the central topic, population, and outcomes addressed in the body of evidence and identify any differences from the measure focus and measure target population)***:**
The guidelines developed by NCCN provide evidence for cytogenetic testing both patients with MDS and AML. Our measure focuses on patients with MDS and AML.

1c.5 **Quantity of Studies in the Body of Evidence** *(Total number of studies, not articles*)**:** The description of the evidence review in the guideline did not address the overall quantity of studies in the body of evidence however the AML guidelines reference 79 articles and the MDS guidelines reference 160 articles.

1c.6 **Quality of Body of Evidence** (*Summarize the certainty or confidence in the estimates of benefits and harms to patients across studies in the body of evidence resulting from study factors. Please address: a) study design/flaws; b) directness/indirectness of the evidence to this measure (e.g., interventions, comparisons, outcomes assessed, population included in the evidence); and c) imprecision/wide confidence intervals due to few patients or events*)**:** The quality of the body of evidence supporting the guideline recommendation is summarized according to the NCCN categories of evidence and consensus as being based on "lower-level evidence". Lower-level evidence is later described as evidence that may include non-randomized trials; case series; or when other data are lacking, the clinical experience of expert physicians.

1c.7 **Consistency of Results across Studies** *(Summarize the consistency of the magnitude and direction of the effect):* Although there is no explicit statement regarding the overall consistency of results across studies in the guidelines supporting the measure, the recommendation received uniform NCCN consensus that the intervention is appropriate.

1c.8 **Net Benefit** *(Provide estimates of effect for benefit/outcome; identify harms addressed and estimates of effect; and net benefit - benefit over harms)***:**
For MDS:
Cytogenetic testing is an integral component in calculating the International Prognostic Scoring System (IPSS) score. Cytogenetic testing should be performed on the bone marrow of patients with MDS in order to guide treatment options, determine prognosis, and predict the likelihood of disease evolution to leukemia.

For acute leukemias:
In addition to establishing the type of acute leukemia, In addition to defining some types of acute leukemia, cytogenetic analysis detects chromosomal abnormalities which contain diagnostic, prognostic and therapeutic significance.

1c.9 **Grading of Strength/Quality of the Body of Evidence**. Has the body of evidence been graded? Yes

1c.10 **If body of evidence graded, identify the entity that graded the evidence including balance of representation and any**

**disclosures regarding bias:** A panel of experts with members from each of the NCCN Member Institutions develops the NCCN Guidelines. Specialties that must be included on a particular panel are identified before that panel is convened but also evolve as the standard of care changes over time. This multidisciplinary representation varies from panel to panel. The NCCN Guidelines Panel Chairs are charged with ensuring that representatives of all treatment strategies are included. Many of the panels also include a patient representative, especially when issues of long-term care and patient preference are paramount in the panel´s considerations.

NCCN publishes individual disclosures of potential conflicts of interest for panel members, NCCN Guidelines staff, and NCCN senior management. Relationships disclosed include research funding, participation in advisory groups, participation in speakers' bureaus, employment, and equity or patent ownership. Beginning in 2010, the NCCN Board of Directors has directed that panel members compensation from external sources be less than published thresholds. These thresholds are <= $20,000 from a single entity and <= $50,000 in aggregate from any source.

**1c.11 System Used for Grading the Body of Evidence:** Other

**1c.12 If other, identify and describe the grading scale with definitions:** NCCN Categories of Evidence and Consensus Panel members identify the level of evidence supporting each recommendation. These categories are:

•Category 1: Based upon high-level evidence, there is uniform NCCN consensus that the intervention is appropriate.
•Category 2A: Based upon lower-level evidence, there is uniform NCCN consensus that the intervention is appropriate.
•Category 2B: Based upon lower-level evidence, there is NCCN consensus that the intervention is appropriate.
•Category 3: Based upon any level of evidence, there is major NCCN disagreement that the intervention is appropriate.

**1c.13 Grade Assigned to the Body of Evidence:** Category 2A

**1c.14 Summary of Controversy/Contradictory Evidence:** No controversy or contradictory evidence with regard to the importance of identifying normal tissue dose constraints.

**1c.15 Citations for Evidence other than Guidelines*(Guidelines addressed below)*:**

**1c.16 Quote verbatim, <u>the specific guideline recommendation</u>** *(Including guideline # and/or page #)*:
For MDS:

Bone marrow aspiration with Prussian blue stain for iron and biopst are needed to evaluate the degree of hematopoietic cell maturation abnormalities and relative proportions, percentage of marror blasts, marrow cellularity, presence or absence of ringed sideroblasts (and presence of iron per se), and fibrosis. Cytogenetics for bone marrow samples (by standard karyotyping methods) should be obtained because they are of major importance for prognosis (Category 2A).

Significant independent variables for determing outcome for both survival and AML evolution were found to be marrow blast percentage, number of cytopenias, and cytogenetic subgroup (good, intermediate, poor). The percentage of marrow blasts was divisible into four categories: 1) less than 5%, 2) 5% to 10%, 3) 11% to 20%, and 4) 21% to 30% (Category 2A).

A chromosome abnormality confirms the presence of a clonal disorder aiding the distinction between MDS and reactive causes of dysplasia, and in addition has major prognostic value. Cytogenetic analysis should therefore be performed for all patients in whom a bone marrow examination is indicated (BCSH).

For AML:

Although cytogenetic information is usually unknown when treatment is initiated in patients with de novo AML, karyotype represents the single most important prognostic factor for predicting remission rate, relapse, and overall survival. Therefore, the importance of obtaining sufficient samples of marrow or peripheral blood blasts at diagnosis for this analysis cannot be overemphasized (Category 2A Recommendation).

The importance of obtaining adequate samples on marrow or peripheral blood at diagnosis to do full karyotyping as well as FISH probes for the most common abnormalities cannot be overemphasized. In addition to basic cytogentic analysis, new molecular markers are helping to refine prognostics groups particularly in patients with a normal karyotype (Category 2A Recommendation).

**1c.17 Clinical Practice Guideline Citation:** National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology: Myelodysplastic syndromes. Version 1, 2012.

British Committee for Standards in Haematology (BCSH). Guidelines for the diagnosis and therapy of adult myelodysplastic syndromes. British Journal of Haematology. 2003; 120: 187-200

National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology: Acute myeloid leukemia. Version 2, 2012.

**1c.18 National Guideline Clearinghouse or other URL:** www.nccn.org

**1c.19 Grading of Strength of Guideline Recommendation.** Has the recommendation been graded? Yes

**1c.20 If guideline recommendation graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias:** same as in 1c.10

**1c.21 System Used for Grading the Strength of Guideline Recommendation:** Other

**1c.22 If other, identify and describe the grading scale with definitions:** same as 1c.12

**1c.23 Grade Assigned to the Recommendation:** Category 2A: Based upon lower-level evidence, there is uniform NCCN consensus that the intervention is appropriate.

**1c.24 Rationale for Using this Guideline Over Others:** It is the PCPI policy to use guidelines, which are evidence-based, applicable to physicians and other health-care providers, and developed by a national specialty organization or government agency. In addition, the PCPI has now expanded what is acceptable as the evidence base for measures to include documented quality improvement (QI) initiatives or implementation projects that have demonstrated improvement in quality of care.

**Based on the NQF descriptions for rating the evidence, what was the developer's assessment of the quantity, quality, and consistency of the body of evidence?**
**1c.25** Quantity: Moderate **1c.26** Quality: Moderate**1c.27** Consistency**:** Moderate

**Was the threshold criterion, *Importance to Measure and Report*, met?**
**(*1a & 1b must be rated moderate or high and 1c yes*) Yes☐ No☐**
**Provide rationale based on specific subcriteria:**

**For a new measure if the Committee votes NO, then STOP.**
**For a measure undergoing endorsement maintenance, if the Committee votes NO because of 1b. (no opportunity for improvement), it may be considered for continued endorsement and all criteria need to be evaluated.**

## 2. RELIABILITY & 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. **(evaluation criteria)**
Measure testing must demonstrate adequate reliability and validity in order to be recommended for endorsement. Testing may be conducted for data elements and/or the computed measure score. Testing information and results should be entered in the appropriate field. Supplemental materials may be referenced or attached in item 2.1. See guidance on measure testing.

**S.1 Measure Web Page** *(In the future, NQF will require measure stewards to provide a URL link to a web page where current detailed specifications can be obtained*). Do you have a web page where current detailed specifications for this measure can be obtained? Yes

S.2 **If yes, provide web page URL:** www.physicianconsortium.org

**2a. RELIABILITY. Precise Specifications and Reliability Testing:** H☐ M☐ L☐ I ☐

**2a1. Precise Measure Specifications.** (*The measure specifications precise and unambiguous.*)

2a1.1 **Numerator Statement** *(Brief, narrative description of the measure focus or what is being measured about the target population, e.g., cases from the target population with the target process, condition, event, or outcome)***:**
Patients who had baseline cytogenetic testing* performed on bone marrow

Definition: *Baseline Cytogenetic Testing- Testing that is performed at time of diagnosis or prior to initiating treatment (transfusion, growth factors, or antineoplastic therapy) for that diagnosis.

2a1.2 **Numerator Time Window** *(The time period in which the target process, condition, event, or outcome is eligible for inclusion)***:**
At least once during measurement period

2a1.3 **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, codes with descriptors, and/or specific data collection items/responses***:**
Definition: *Baseline Cytogenetic Testing- Testing that is performed at time of diagnosis or prior to initiating treatment (transfusion, growth factors, or antineoplastic therapy) for that diagnosis.

For EHR: especification currently under development. Data elements (using Quality Data Model) required for the measure attached.

Administrative claims.

Report the CPT Category II code: 3155F – Cytogenetic testing performed on bone marrow at time of diagnosis or prior to initiating treatment

2a1.4 **Denominator Statement** *(Brief, narrative description of the target population being measured)***:**
All patients aged 18 years and older with a diagnosis of MDS or an acute leukemia

2a1.5 **Target Population Category** *(Check all the populations for which the measure is specified and tested if any)***:** Adult/Elderly Care

2a1.6 **Denominator Time Window** *(The time period in which cases are eligible for inclusion)***:**
12 consecutive months

2a1.7 **Denominator Details** (*All information required to identify and calculate the target population/denominator such as definitions, codes with descriptors, and/or specific data collection items/responses)***:**
For EHR: especification currently under development. Data elements (using Quality Data Model) required for the measure attached.

Administrative claims data

AGE: >= 18 years and older

AND

Diagnosis: Myelodysplastic Syndrome (MDS) and Acute Leukemias

ICD-9-CM diagnosis codes: 204.00, 204.02, 205.00, 205.02, 206.00, 206.02, 207.00, 207.02, 207.20, 207.22, 208.00, 208.02, 238.72, 238.73, 238.74, 238.75

ICD-10-CM diagnosis codes: C91.00, C91.02, C92.00, C92.02, C92.40, C92.42, C92.50, C92.52, C92.60, C92.62, C92.a0, C92.a2, C93.00, C93.02, C94.00, C94.02, C94.20, C94.22, C95.00, C95.02, D46.0, D46.1, D46.20, D46.21, D46.22, D46.4, D46.9, D46.a, D46.b, D46.c, D46.z

AND

CPT codes: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245

**2a1.8 Denominator Exclusions** *(Brief narrative description of exclusions from the target population)*:
Documentation of medical reason(s) for not performing baseline cytogenetic testing
Documentation of patient reason(s) for not performing baseline cytogenetic testing
Denominator Exclusions: Documentation of system reason(s) for not performing baseline cytogenetic testing

**2a1.9 Denominator Exclusion Details** *(All information required to identify and calculate exclusions from the denominator such as definitions, codes with descriptors, and/or specific data collection items/responses)*:
The PCPI methodology uses three categories of reasons for which a patient may be excluded from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For this measure, exceptions may include medical reason, patient or system reason for not performing baseline cytogenetic testing. Where examples of exceptions are included in the measure language, these examples are coded and included in the eSpecifications. Although this methodology does not require the external reporting of more detailed exception data, the PCPI recommends that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The PCPI also advocates the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities for quality improvement. For example, it is possible for implementers to calculate the percentage of patients that physicians have identified as meeting the criteria for exception. Additional details by data source are as follows:

For EHR: especification currently under development. Data elements (using Quality Data Model) required for the measure attached.

Administrative claims:

Denominator Exceptions:
Documentation of medical reason(s) for not performing baseline cytogenetic testing on bone marrow (e.g., no liquid bone marrow or fibrotic marrow)
Append modifier to CPT Category II code: 3155F-1P

Documentation of patient reason(s) for not performing baseline cytogenetic testing on bone marrow (e.g., at time of diagnosis receiving palliative care or not receiving treatment as defined above)
Append modifier to CPT Category II code: 3155F-2P

Documentation of system reason(s) for not performing baseline cytogenetic testing on bone marrow (e.g., patient previously treated by another physician at the time of cytogenetic testing performed)
Append modifier to CPT Category II code: 3155F-3P

**2a1.10 Stratification Details/Variables** *(All information required to stratify the measure results including the stratification variables, codes with descriptors, definitions, and/or specific data collection items/responses )*:
We encourage the results of this measure to be stratified by race, ethnicity, gender, and primary language, and have included these variables as recommended data elements to be collected.

**2a1.11 Risk Adjustment Type** *(Select type. Provide specifications for risk stratification in 2a1.10 and for statistical model in 2a1.13)*: No risk adjustment or risk stratification **2a1.12 If "Other," please describe:**

**2a1.13 Statistical Risk Model and Variables** *(Name the statistical method - e.g., logistic regression and list all the risk factor*

*variables. Note - risk model development should be addressed in 2b4.)*:
No risk adjustment or risk stratification.

**2a1.14-16 Detailed Risk Model Available at Web page URL** (or attachment). Include coefficients, equations, codes with descriptors, definitions, and/or specific data collection items/responses. Attach documents only if they are not available on a webpage and keep attached file to 5 MB or less. NQF strongly prefers you make documents available at a Web page URL. Please supply login/password if needed:

**2a1.17-18. Type of Score:** Rate/proportion

**2a1.19 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 = Higher score

**2a1.20 Calculation Algorithm/Measure Logic***(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; aggregating data; risk adjustment; etc.)*:
To calculate performance rates:
1) Find the patients who meet the initial patient population (ie, the general group of patients that the performance measure is designed to address).
2) From the patients within the initial patient population criteria, find the patients who qualify for the denominator (ie, the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial patient population and denominator are identical.
3) From the patients within the denominator, find the patients who qualify for the Numerator (ie, the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator
4) From the patients who did not meet the numerator criteria, determine if the physician has documented that the patient meets any criteria for denominator exception when exceptions have been specified [e.g., medical, system or patient reason for not performing baseline cytogenetic testing). If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. --Although the exception cases are removed from the denominator population for the performance calculation, the number of patients with valid exceptions should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.

If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.

Calculation algorithm is included in data dictionary/code table attachment 2a1.30.

**2a1.21-23 Calculation Algorithm/Measure Logic Diagram URL or attachment:**
Attachment
Generic Measure Logic.pdf

**2a1.24 Sampling (Survey) Methodology.** If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate):

**2a1.25 Data Source** *(Check all the sources for which the measure is specified and tested*). If other, please describe:
Administrative claims, Electronic Clinical Data : Laboratory

**2a1.26 Data Source/Data Collection Instrument** (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.*): Not Applicable

**2a1.27-29 Data Source/data Collection Instrument Reference Web Page URL or Attachment:**

**2a1.30-32 Data Dictionary/Code Table Web Page URL or Attachment:**
Attachment
0377 Cytogenetic Testing Data Eelements_FINAL.pdf

**2a1.33 Level of Analysis** (*Check the levels of analysis for which the measure is specified and tested)*: Clinician : Group/Practice, Clinician : Individual, Clinician : Team

**2a1.34-35 Care Setting** *(Check all the settings for which the measure is specified and tested)*: Ambulatory Care : Clinic/Urgent Care, Ambulatory Care : Clinician Office, Laboratory

**2a2. Reliability Testing.** (*Reliability testing was conducted with appropriate method, scope, and adequate demonstration of reliability*.)

**2a2.1 Data/Sample** *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
PCPI Testing Project
- Two hematology practice sites representing various types, locations and sizes were identified to participate in testing the measures
- Site A was a hematology group practice with eight physicians that cared for hematology patients. Site B was a large multi-specialty group clinic with 13 physicians that cared for hematology patients.
- Site A had a document retrieval system rather than a full-fledged EHR where data was scanned in and required searching. Site B had a fully functional EHR.
- Both sites were located in urban/suburban regions
- Hematology patient visit volume was 150 per day at site A and 120-150 per day at site B.
- Both sites were instructed to select 120 patient records (20 with acute leukemias and 35 for each of the following diagnoses: MDS, multiple myeloma and CLL).
- At site A the number of patients in practice in 2009 by specialty area was as follows:
  - Myelodysplastic Syndrome (MDS): 145 patients
  - Acute Leukemias: 52 patients
- At site B the number of patients in practice in 2009 by specialty area was as follows:
  - Myelodysplastic Syndrome (MDS): 15 patients
  - Acute Leukemias: 29 patients
- For this measure, the sample size included 60 abstracted patient charts. Site B included more MDS patients in their sample because of difficulties obtaining the required number of acute leukemia patients.
- The measurement period (data collected from patients seen) was between 1/1/2009 through 12/31/2009. Due to an inability to obtain the required number of patient records for acute leukemia and MDS during the specified measurement period, site B also included patients from 2008.
- Chart auditing was performed between 5/17/2010 and 7/15/2010
- Data auditing was performed between 8/2/2010 and 9/14/2010

**2a2.2 Analytic Method** *(Describe method of reliability testing & rationale)*:
Data abstracted from patient records were used to calculate inter-rater reliability for the measure.
29 acute leukemia and 31 MDS patient records were reviewed.

Data analysis included:
- Percent agreement
- Kappa statistic to adjust for chance agreement

**2a2.3 Testing Results** *(Reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:
N, % Agreement, Kappa (95% Confidence Interval)
Overall Reliability: 60, 98.3%, 0.9138 (0.7469 – 1.0000)
Denominator Reliability: 60, 100.0%, Kappa is noncalculable*
Numerator Reliability: 60, 98.3%, 0.9138, (0.7469 – 1.0000)
Exceptions Reliability: 60, 100.0%, Kappa is noncalculable*

This measure demonstrates almost perfect reliability, as shown in results from the above analysis.

*Kappa Statistics cannot be calculated because of complete agreement. Confidence intervals cannot be calculated because to do so would involve dividing by zero which cannot be done.

**2b. VALIDITY. Validity, Testing, including all Threats to Validity: H☐ M☐ L☐ I ☐**

**2b1.1 Describe how the measure specifications** *(measure focus, target population, and exclusions)* **are consistent with the evidence cited in support of the measure focus (***criterion 1c)* **and identify any differences from the evidence:**
The evidence includes both patients with MDS and AML. The NCCN Myelodysplastic Syndrome and Acute Myeloid Leukemia guidelines were developed to provide direction in the evaluation and treatment of these disorders. The population of patients assessed by this measure meet the diagnostic criteria stated in the guidelines.

**2b2. Validity Testing.** (*Validity testing was conducted with appropriate method, scope, and adequate demonstration of validity.)*

**2b2.1 Data/Sample** *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
An expert panel was used to assess face validity of the measure. This panel consisted of the following 10 members (with specialties listed):

Steven L. Allen, MD (Co-Chair) (hematology/oncology)
William E. Golden, MD (Co-Chair) (internal medicine (IM))
Kenneth Adler, MD (hematology/IM)
Daniel Halevy, MD (nephrology)
Stuart Henochowicz, MD, MBA (IM)
Timothy Miley, MD (hematopathology)
David Morris, MD (radiation oncology)
John M. Rainey, MD (medical oncology)
Samuel M. Silver, MD, PhD (hematology/oncology)
Lawrence Solberg, Jr., MD, PhD (hematology/IM)

**2b2.2 Analytic Method** *(Describe method of validity testing and rationale; if face validity, describe systematic assessment)*:
All PCPI performance measures are assessed for content validity by expert Work Group members during the development process. Additional input on the content validity of draft measures is obtained through a 30-day public comment period and by also soliciting comments from a panel of consumer, purchaser, and patient representatives convened by the PCPI specifically for this purpose. All comments received are reviewed by the expert Work Group and the measures adjusted as needed. Other external review groups (i.e. focus groups) may be convened if there are any remaining concerns related to the content validity of the measures.

Face validity has been quantitatively assessed for this measure. Specifically, the work group members were asked to empirically assess face validity of the measure. This work group/expert panel consists of 10 members, whose specialties include oncology, hematology, internal medicine, and clinical pathology.

Face validity of the measure score as an indicator of quality was systematically assessed as follows:

After the measure was fully specified, the expert panel was asked to rate their agreement with the following statement:

The scores obtained from the measure as specified will provide an accurate reflection of quality and can be used to distinguish good and poor quality.

The survey scale is 1-5, where 1=Disagree; 3=Neither Disagree nor Agree; 5=Agree

**2b2.3 Testing Results** *(Statistical results, assessment of adequacy in the context of norms for the test conducted; if face validity, describe results of systematic assessment)*:
The results of the expert panel rating of the validity statement were as follows: N = 8; Mean rating = 4.75

Percentage in the top two categories (4 and 5): 100%

Frequency Distribution of Ratings
1 - 0
2 - 0
3 - 0
4 - 2
5 – 6

**POTENTIAL THREATS TO VALIDITY**. (*All potential threats to validity were appropriately tested with adequate results.*)

**2b3. Measure Exclusions.** (*Exclusions were supported by the clinical evidence in 1c or appropriately tested with results demonstrating the need to specify them.*)

**2b3.1 Data/Sample for analysis of exclusions** *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
PCPI Testing Project
- 60 patient records (29 Acute Leukemia and 31 Myelodysplastic Syndrome) were reviewed for this measure.
- The measurement period (data collected from patients seen) was between 1/1/2009 through 12/31/2009.
- Chart auditing was performed between 5/17/2010 and 7/15/2010.
- Data auditing was performed between 8/2/2010 and 9/14/2010.

**2b3.2 Analytic Method** (*Describe type of analysis and rationale for examining exclusions, including exclusion related to patient preference)*:
Exceptions were analyzed for frequency and variability across providers.

**2b3.3 Results** *(Provide statistical results for analysis of exclusions, e.g., frequency, variability, sensitivity analyses):*
N, % Agreement, Kappa (95% Confidence Interval)
Exceptions Reliability: 60, 100.0%, Kappa is non-calculable*

This measure demonstrates perfect reliability, as shown in the results from the above analysis.

The exception rate for this measure was 1.7%.
*Kappa Statistics cannot be calculated because of complete agreement. Confidence intervals cannot be calculated because to do so would involve dividing by zero which cannot be done.

**2b4. Risk Adjustment Strategy.** (*For outcome measures, adjustment for differences in case mix (severity) across measured entities was appropriately tested with adequate results.*)

**2b4.1 Data/Sample** *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
This measure is not risk adjusted

**2b4.2 Analytic Method (***Describe methods and rationale for development and testing of risk model or risk stratification including selection of factors/variables)*:
This measure is not risk adjusted

**2b4.3 Testing Results** *(Statistical risk model: Provide quantitative assessment of relative contribution of model risk factors; risk model performance metrics including cross-validation discrimination and calibration statistics, calibration curve and risk decile plot,*

*and assessment of adequacy in the context of norms for risk models. Risk stratification: Provide quantitative assessment of relationship of risk factors to the outcome and differences in outcomes among the strata)*:
Not Applicable

2b4.4 **If outcome or resource use measure is not risk adjusted, provide rationale and analyses to justify lack of adjustment:**

**2b5. Identification of Meaningful Differences in Performance**. (*The performance measure scores were appropriately analyzed and discriminated meaningful differences in quality.*)

2b5.1 **Data/Sample** *(Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
CMS Physician Quality Reporting Initiative:
Clinical Condition and Measure: #67
14,911 patients were reported on for the 2008 program, the most recent year for which data are available.

In 2009, the following was reported for this measure:
# Eligible Professionals: 26,875
# Professionals Reporting >=1 Valid QDC: 1,332
% Professionals Reporting >=1 Valid QDC: 4.96%
# Professionals Satisfactorily Reporting: 528
% Professionals Satisfactorily Reporting: 39.64%

2b5.2 **Analytic Method** *(Describe methods and rationale to identify statistically significant and practically/meaningfully differences in performance)*:
CMS Physician Quality Reporting Initiative:
The inter-quartile range (IQR) was calculated, which provides a measure of the dispersion of performance.

2b5.3 **Results** *(Provide measure performance results/scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*:
CMS Physician Quality Reporting Initiative
This measure was used in the 2007-2011 CMS Physician Quality Reporting Initiative claims and registry options and group reporting option available in 2011.

There is a gap in care as shown by this 2008 data, the only year for which distribution by quartile/decile is available.

47.98% of patients reported on did not meet the measure.

10th percentile: 11.11%
25th percentile: 27.27%
50th percentile: 51.72%
75th percentile: 80.00%
90th percentile: 100.00%

The inter-quartile range (IQR) provides a measure of the dispersion of performance. The IQR is 52.73, and indicates that 50% of physicians have performance on this measure ranging from 27.27% and 80.00%. A quarter of reporting physicians have performance on this measure which is greater than 80.00%, while a quarter have performance on this measure less than 27.27%.

**2b6. Comparability of Multiple Data Sources/Methods.** (*If specified for more than one data source, the various approaches result in comparable scores.*)

2b6.1 **Data/Sample** *(Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
This measure has not been compared across data sources.

2b6.2 **Analytic Method** *(Describe methods and rationale for testing comparability of scores produced by the different data sources specified in the measure)*:
This measure has not been compared across data sources.

2b6.3 **Testing Results** *(Provide statistical results, e.g., correlation statistics, comparison of rankings; assessment of adequacy in the context of norms for the test conducted)*:
This measure has not been compared across data sources.

**2c. Disparities in Care: H☐ M☐ L☐ I ☐ NA☐** (*If applicable, the measure specifications allow identification of disparities.*)

2c.1 **If measure is stratified for disparities, provide stratified results** *(Scores by stratified categories/cohorts)*: We encourage the results of this measure to be stratified by race, ethnicity, gender, and primary language, and have included these variables as recommended data elements to be collected.

2c.2 **If disparities have been reported/identified (e.g., in 1b), but measure is not specified to detect disparities, please explain:**
The PCPI advocates that performance measure data should, where possible, be stratified by race, ethnicity, and primary language to assess disparities and initiate subsequent quality improvement activities addressing identified disparities, consistent with recent national efforts to standardize the collection of race and ethnicity data. A 2008 NQF report endorsed 45 practices including stratification by the aforementioned variables.(1) A 2009 IOM report "recommends collection of the existing Office of Management and Budget (OMB) race and Hispanic ethnicity categories as well as more fine-grained categories of ethnicity(referred to as granular ethnicity and based on one's ancestry) and language need (a rating of spoken English language proficiency of less than very well and one's preferred language for health-related encounters)."(2)

References:
(1)National Quality Forum Issue Brief (No.10). Closing the Disparities Gap in Healthcare Quality with Performance Measurement and Public Reporting. Washington, DC: NQF, August 2008.

(2)Race, Ethnicity, and Language Data: Standardization for Health Care Quality Improvement. March 2010. AHRQ Publication No. 10-0058-EF. Agency for Healthcare Research and Quality, Rockville, MD. Available at: http://www.ahrq.gov/research/iomracereport. Accessed May 25, 2010.

2.1-2.3 **Supplemental Testing Methodology Information:**

**Steering Committee: Overall, was the criterion, *Scientific Acceptability of Measure Properties*, met?**
**(*Reliability and Validity must be rated moderate or high*) Yes☐ No☐**
**Provide rationale based on specific subcriteria:**

**If the Committee votes No, STOP**

## 3. USABILITY

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. **(evaluation criteria)**

C.1 **Intended Purpose/ Use** *(Check all the purposes and/or uses for which the measure is intended)*: Professional Certification or Recognition Program, Public Reporting, Quality Improvement (Internal to the specific organization)

3.1 **Current Use** *(Check all that apply; for any that are checked, provide the specific program information in the following questions)*: Public Reporting, Payment Program, Quality Improvement with Benchmarking (external benchmarking to multiple organizations), Quality Improvement (Internal to the specific organization)

**3a. Usefulness for Public Reporting: H☐ M☐ L☐ I ☐**

(*The measure is meaningful, understandable and useful for public reporting.*)

**3a.1. Use in Public Reporting - disclosure of performance results to the public at large** *(If used in a public reporting program, provide name of program(s), locations, Web page URL(s)).* If not publicly reported in a national or community program, state the reason AND plans to achieve public reporting, potential reporting programs or commitments, and timeline, e.g., within 3 years of endorsement: **[*For Maintenance* –** *If not publicly reported, describe progress made toward achieving disclosure of performance results to the public at large and expected date for public reporting; provide rationale why continued endorsement should be considered.***]**

CMS Physician Quality Reporting Initiative
This measure was used in the 2007-2011 CMS Physician Quality Reporting Initiative claims and registry options and group reporting option available in 2011.

There is a gap in care as shown by this 2008 data, the only year for which distribution by quartile/decile is available.

47.98% of patients reported on did not meet the measure.

10th percentile: 11.11%
25th percentile: 27.27%
50th percentile: 51.72%
75th percentile: 80.00%
90th percentile: 100.00%

Confidential CMS PQRI 2008 Performance Information by Measure. Jan-Sept TAP file.

The PCPI believes that the reporting of participation information is a beneficial first step on a trajectory toward the public reporting of performance results, which is appropriate since the measure has been tested and the reliability of the performance data has been validated. Continued NQF endorsement will facilitate our ongoing progress toward this public reporting objective.

**3a.2.Provide a rationale for why the measure performance results are meaningful, understandable, and useful for public reporting**. If usefulness was demonstrated (e.g., focus group, cognitive testing), describe the data, method, and results**:** The PCPI believes that the reporting of participation information is a beneficial first step on a trajectory toward the public reporting of performance results, which is appropriate since the measure has been tested and the reliability of the performance data has been validated. Continued NQF endorsement will facilitate our ongoing progress toward this public reporting objective.

**3.2 Use for other Accountability Functions (payment, certification, accreditation).** If used in a public accountability program, provide name of program(s), locations, Web page URL(s)**:** This hematology quality measures is used in the ASH Chart Abstraction tools/Performance Improvement Modules (PIMs), which is used by ASH members to complete the ABIM's Self Directed PIM for Maintenance of Certification, Part IV. The measure is used as described below:

MDS Measure 67: Percentage of patients aged 18 years and older with a diagnosis of MDS or an acute leukemia who had baseline cytogenetic testing performed on bone marrow.

MDS Chart Abstraction Tool Question 5: Did this patient´s diagnostic evaluation include cytogenetic testing on bone marrow within 12 weeks of diagnosis?

**3b. Usefulness for Quality Improvement: H☐ M☐ L☐ I ☐**
(*The measure is meaningful, understandable and useful for quality improvement.*)

**3b.1. Use in QI.** If used in quality improvement program, provide name of program(s), locations, Web page URL(s):
**[*For Maintenance* –** *If not used for QI, indicate the reasons and describe progress toward using performance results for improvement***]**.
All PCPI measures are suitable for use in quality improvement initiatives and are made freely available on the PCPI website and through the implementation efforts of medical specialty societies and other PCPI members. The PCPI strongly encourages the use of its measures in QI initiatives and seeks to provide information on such initiatives to PCPI members.

**3b.2. Provide rationale for why the measure performance results are meaningful, understandable, and useful for quality improvement.** If usefulness was demonstrated *(e.g., QI initiative),* describe the data, method and results:
The PCPI believes that the use of PCPI measures in quality improvement initiatives is a beneficial way to gather scientific data with which to improve physician performance. This is appropriate since the measure has been tested and the reliability of the performance data has been validated. NQF endorsement will facilitate our ongoing progress toward this quality improvement objective.

**Overall, to what extent was the criterion, *Usability*, met? H☐ M☐ L☐ I ☐**
**Provide rationale based on specific subcriteria:**

## 4. FEASIBILITY

Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. **(evaluation criteria)**

**4a. Data Generated as a Byproduct of Care Processes: H☐ M☐ L☐ I ☐**

**4a.1-2 How are the data elements needed to compute measure scores generated?** *(Check all that apply).*
Data used in the measure are**:**
generated by and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition

**4b. Electronic Sources: H☐ M☐ L☐ I ☐**

**4b.1 Are the data elements needed for the measure as specified available electronically** *(Elements that are needed to compute measure scores are in defined, computer-readable fields)***:** ALL data elements in electronic health records (EHRs)

**4b.2 If ALL data elements are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources:**

**4c. Susceptibility to Inaccuracies, Errors, or Unintended Consequences: H☐ M☐ L☐ I ☐**

**4c.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measurement identified during testing and/or operational use and strategies to prevent, minimize, or detect. If audited, provide results:**
We are not aware of any unintended consequences related to this measurement.

**4d. Data Collection Strategy/Implementation: H☐ M☐ L☐ I ☐**

**A.2 Please check if either of the following apply** (*regarding proprietary measures*)**:**
**4d.1 Describe what you have learned/modified 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** *(e.g., fees for use of proprietary measures)***:**
The collection, availability, timing and frequency of measure calculation posed no challenges that would warrant changes to the measure. In addition, missing data, sampling and patient confidentiality posed no significant difficulties. Challenges related to the feasibility/implementation of the measures were specific to the population.

**Overall, to what extent was the criterion, *Feasibility*, met? H☐ M☐ L☐ I ☐**
**Provide rationale based on specific subcriteria:**

## OVERALL SUITABILITY FOR ENDORSEMENT

**Does the measure meet all the NQF criteria for endorsement? Yes☐ No☐**
**Rationale:**

**If the Committee votes No, STOP.**
**If the Committee votes Yes, the final recommendation is contingent on comparison to related and competing measures.**

## 5. COMPARISON TO RELATED AND 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 before a final recommendation is made.

**5.1 If there are related measures *(either same measure focus or target population)* or competing measures *(both the same measure focus and same target population*), list the NQF # and title of all related and/or competing measures:**

**5a. Harmonization**

**5a.1 If this measure has EITHER the same measure focus OR the same target population as NQF-endorsed measure(s): Are the measure specifications completely harmonized?**

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

**5b. Competing Measure(s)**

**5b.1 If this measure has 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)*:
No related or competing measures

## CONTACT INFORMATION

**Co.1 Measure Steward (Intellectual Property Owner):** American Medical Association - Physician Consortium for Performance Improvement, 515 N State Street, Chicago, Illinois, 60614

**Co.2 Point of Contact:** Mark S., Antman, DDS, MBA, Director, Measure Development Operations Performance Improvement, mark.antman@ama-assn.org, 312-464-5056-

**Co.3 Measure Developer if different from Measure Steward:** Physician Consortium for Performance Improvement, 515 N State Street, Chicago, Illinois, 60614

**Co.4 Point of Contact:** Mark, Antman, mark.antman@ama-assn.org, 312-464-5056-

**Co.5 Submitter:** Molly, Siegel, molly.siegel@ama.assn.org, 312-464-4901-, American Medical Association - Physician Consortium for Performance Improvement

**Co.6 Additional organizations that sponsored/participated in measure development:**
The American Society of Hematology

**Co.7 Public Contact:** Mark, Antman, mark.antman@ama-assn.org, 312-464-5056-, AMA-PCPI

## ADDITIONAL INFORMATION

**Workgroup/Expert Panel involved in measure development**
**Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.**
Steven L. Allen, MD (Co-Chair) (hematology/oncology)
William E. Golden, MD (Co-Chair) (internal medicine (IM))
Kenneth Adler, MD (hematology/IM)
Daniel Halevy, MD (nephrology)
Stuart Henochowicz, MD, MBA (IM)

Timothy Miley, MD (hematopathology)
David Morris, MD (radiation oncology)
John M. Rainey, MD (medical oncology)
Samuel M. Silver, MD, PhD (hematology/oncology)
Lawrence Solberg, Jr., MD, PhD (hematology/IM)

PCPI measures are developed through cross-specialty, multi-disciplinary work groups. All medical specialties and other health care professional disciplines participating in patient care for the clinical condition or topic under study must be equal contributors to the measure development process. In addition, the PCPI strives to include on its work groups individuals representing the perspectives of patients, consumers, private health plans, and employers. This broad-based approach to measure development ensures buy-in on the measures from all stakeholders and minimizes bias toward any individual specialty or stakeholder group. All work groups have at least two co-chairs who have relevant clinical and/or measure development expertise and who are responsible for ensuring that consensus is achieved and that all perspectives are voiced.

Ad.2 **If adapted, provide title of original measure, NQF # if endorsed, and measure steward. Briefly describe the reasons for adapting the original measure and any work with the original measure steward:**

**Measure Developer/Steward Updates and Ongoing Maintenance**
Ad.3 **Year the measure was first released:** 2007
Ad.4 **Month and Year of most recent revision:** 09, 2010
Ad.5 **What is your frequency for review/update of this measure?** Coding/Specifications updates occur annually. See additional information below:
Ad.6 **When is the next scheduled review/update for this measure?** 12, 2012

Ad.7 **Copyright statement:**

Ad.8 **Disclaimers:**

Ad.9 **Additional Information/Comments:** Coding/Specifications updates occur annually. The PCPI has a formal measurement review process that stipulates regular (usually on a three-year cycle, when feasible) review of the measures. The process can also be activated if there is a major change in scientific evidence, results from testing or other issues are noted that materially affect the integrity of the measure.

**Date of Submission** (*MM/DD/YY*)**:** 10/03/2011