Measure XXXX: Colorectal Cancer Screening: Testing of all patients for potential cases of Lynch Syndrome with colorectal cancer using immunohistochemistry (IHC) or microsatellite instability (MSI) by polymerase chain reaction (PCR).

DESCRIPTION:
Percentage of patients with colorectal adenocarcinoma diagnosed on colonoscopy whose tumor has been tested for mismatch repair deficiency using immunohistochemistry (IHC) or microsatellite instability (MSI) by polymerase chain reaction (PCR).

INSTRUCTIONS: This measure is to be reported a minimum of once per reporting period for all patients with colorectal adenocarcinoma whose tumor has been tested for mismatch repair deficiency using immunohistochemistry (IHC) or microsatellite instability (MSI) by PCR. This measure is intended to reflect the quality of services provided for patients with colorectal cancer. This measure may be reported by physicians or other qualified healthcare professionals who perform the quality actions described in the measure based on the services provided and the measure-specific denominator coding. Reporting period is defined from January 1 to December 31 of the reporting year.

Measure Reporting via Registry:
ICD-10-CM diagnosis codes, CPT codes, and patient demographics are used to identify patients who are included in the measure’s denominator. The listed numerator options are used to report the numerator of the measure.

The quality-data codes listed do not need to be submitted for registry-based submissions; however, these codes may be submitted for those registries that utilize claims data.

DENOMINATOR
All patients age 18 years and older with a diagnosis of Colorectal Cancer

Denominator Criteria (Eligible Cases):
All patients age 18 and older with a diagnosis of Colorectal Cancer
AND
Diagnosis for Colorectal Cancer (ICD-10-CM): C18.0, C18.1, C18.2, C18.3, C18.4, C18.5, C18.6, C18.7, C18.8, C18.9
AND
Patient encounter during the reporting period (CPT): 44388, 45378, G0121
WITHOUT
Modifiers: 52, 53, 73, or 74

NUMERATOR:
Testing of all patients with colorectal cancer using immunohistochemistry (IHC) or microsatellite instability (MSI) polymerase chain reaction (PCR) to identify potential cases of Lynch syndrome.

Patients included in the denominator and patient encounter during the reporting period (CPT): 81301, 88341, 88342, 88344, 14989

NUMERATOR INSTRUCTIONS:
This measure is to be reported a minimum of once per reporting period for all patients with colorectal adenocarcinoma whose tumor has been tested for mismatch repair deficiency using immunohistochemistry (IHC) or microsatellite instability (MSI) by polymerase chain reaction (PCR). This measure is intended to reflect the quality of services provided for patients with colorectal cancer. This measure may be reported by physicians or other qualified healthcare professionals who perform the quality actions described in the measure based on
the services provided and the measure-specific numerator coding.

**Numerator Options:**

*Performance Met:* Patients with a diagnosis of Colorectal Cancer who had been tested with immunohistochemistry (IHC) or microsatellite instability (MSI) by polymerase chain reaction (PCR).

*Medical Performance Exclusion:* Patient's has a diagnosis of Inflammatory Bowel Disease (IBD) or has a history of familial adenomatous polyposis

*Patient Performance Exclusion:* Documentation of patient reasons patient was not tested with immunohistochemistry (IHC) or microsatellite instability (MSI) by polymerase chain reaction (PCR) (e.g. patient refused testing, cost of tests, time related to accessing testing equipment or other patient reasons).

*Performance Not Met:* Patient did NOT receive testing with immunohistochemistry (IHC) or microsatellite instability (MSI) by polymerase chain reaction (PCR) for reasons not otherwise specified.

**Rationale:**

Based on colorectal cancer incidence of 135,430 new cases in 2017 (American Cancer Society, 2017), it would be expected that about 3% or 4,063 cases would be due to Lynch syndrome. Given that Lynch syndrome is hereditary and affects a number of family members, the number of individuals with Lynch syndrome who could be identified by implementation of universal testing would be a multiple of 4,063 based on the number of family members who undergo germline testing. For example, if 3 additional family members were tested for every index subject identified, the number of individuals with Lynch syndrome identified would be up to 12,189. Identification of Lynch syndrome enables appropriate, life-saving screening as well as potentially impacting treatment options for cancer patients.

**CLINICAL RECOMMENDATION STATEMENTS:**

Lynch syndrome is the most common hereditary colorectal cancer syndrome accounting for up to 3% of all colorectal cancers. The current prevalence of Lynch syndrome is estimated at 1 in 279 (PMID: 27799157). Identification of individuals with Lynch syndrome is important for two primary reasons: 1) elevated risk of colorectal and non-colorectal cancers and 2) identification of relatives with increased cancer risks at younger ages of onset compared to the general population. A diagnosis of Lynch syndrome can impact surgical and chemotherapeutic management decisions. Adherence to regular colonoscopy guidelines for Lynch syndrome has been shown to reduce mortality from colorectal cancer. Histologic screening for Lynch syndrome can be accomplished by reflexively testing all resected colon adenocarcinomas and pre-treated rectal adenocarcinomas for mismatch repair deficiency using either IHC or MSI, so-called “universal testing”. This approach has been found to be cost effective (PMID: 21768580). Universal testing has been endorsed by a number of professional organizations including the AGA (AGA guidelines, 2015).

**References**