

Colorectal Cancer, Mutation Testing for Treatment

Policy Number: MP-088
 Last Review Date: 11/14/2019
 Effective Date: 01/01/2020

Policy

Evolent Health considers **Mutation Testing for Treatment of Colorectal Cancer (CRC) – KRAS Mutation testing** medically necessary for a diagnosis of CRC when it is used in predicting nonresponse to anti-epidermal growth factor receptor (EGFR) monoclonal antibodies (cetuximab and panitumumab) in the treatment of metastatic colorectal carcinoma from either primary tumor or metastatic tumor tissue.

Limitations

KRAS mutation testing for CRC not listed above is considered not medically necessary, and will therefore not be covered.

Background

Over 108,000 cases of colon and 40,700 cases of rectal cancer are expected to occur annually in the United States. CRC is the third leading cause of cancer-related deaths in the United States. The American Cancer Society (ACS) states that the risk of CRC increases with age, with over 90% of the diagnoses in patients over 50 years of age. The 5-year survival rate for those diagnosed with CRC is 67% over all stages; however, this drops to 12% in those with metastatic disease.

Cetuximab (Erbix; Imclone Systems/Bristol-Myers Squibb) and panitumumab (Vectibix; Amigen Inc.) are anti-EGFR monoclonal antibodies used for treatment in patients with metastatic disease. To determine benefit from this treatment, biomarkers are needed to select the potential patient population. The KRAS (v-Ki-ras2 Kirsten rat sarcoma) mutation test is to identify those individuals who are unlikely to respond to treatment with anti-EGFR monoclonal antibodies. The KRAS mutation assay detects mutations at codons 12 and 13 of the KRAS gene and these mutations have been associated with lack of response to EGFR targeted therapies.

On July 17, 2009, the Food and Drug Administration (FDA) made class labeling changes to the product labels of cetuximab (Erbix) and panitumumab (Vectibix) to indicate the drugs are now not recommended for the treatment of colorectal cancer for patients with KRAS mutation.

Codes:

CPT Codes / HCPCS Codes / ICD-10 Codes	
Code	Description
CPT Codes	

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81275	KRAS (v-Ki-ras2 Kirsten rat sarcoma viral oncogene)(e.g. carcinoma) gene analysis, variants in codons 12 and 13
CPT Codes (Medicare Only)	
81210	BRAF (v-raf murine sarcoma viral oncogene homolog B1) (eg, colon cancer), gene analysis, V600E variant
81479	Unlisted molecular pathology
ICD-10 codes covered if selection criteria are met:	
C17.0-C17.9	Malignant neoplasm of small intestine
C18.0-C18.9	Malignant neoplasm of colon
C19-C21.8	Malignant neoplasm of rectum and anus
C78.5	Secondary malignant neoplasm of large intestine and rectum
D01.0-D01.3	Carcinoma in situ of colon, rectum, and anus

Variations

Medicare (see LCD L35396):

The following testing will be covered for Medicare members for the condition of Colorectal Cancer:

- KRAS (12/13) – PRED of resistance to anti-EGFR agent (81275)
- KRAS codon 61 – PRED of resistance to anti-EGFR agent (81276)
- KRAS codon 146 – PRED of resistance to anti-EGFR agent (81276)
- NRAS – PRED of resistance to anti-EGFR agent (81311)
- BRAF – PRED of resistance to an anti-EGFR agent + DX (sporadic vs. Lynch syndrome) (81210)
- PIK3CA – PRED of resistance to an anti-EGFR agent + PROG for local recurrence (81479)
- MSI by PCR – PRED of 5-FU resistance + DX (81301)
- MLHI promoter hypermethylation – PRED of 5-FU resistance + DX (81292, 81293, 81294)

DX = Diagnosis; PROG = prognostic; and/or PRED = predictive

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