**Health Benchmarks®**

**Clinical Quality Indicator Specification 2008**

<table>
<thead>
<tr>
<th>Client</th>
<th>HEALTH BENCHMARKS, INC. STANDARD ALGORITHM Implemented for Blue Cross Blue Shield of Texas</th>
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</thead>
<tbody>
<tr>
<td>Measure Title</td>
<td>FOLLOW-UP AFTER INITIAL DIAGNOSIS AND TREATMENT OF COLORECTAL CANCER: CEA</td>
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<tr>
<td>Disease State</td>
<td>Colorectal Cancer</td>
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<td>Strength of Recommendation</td>
<td>B</td>
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<tr>
<td>Organizations Providing Recommendation</td>
<td>American Society of Clinical Oncology</td>
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<tr>
<td>Clinical Intent</td>
<td>To ensure that all eligible members with colorectal cancer who are status post colon resection receive follow up CEA test at least every 6 months to monitor for cancer reoccurrence.</td>
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<td>Physician Specialties (suggested)</td>
<td>Family Medicine, Gastroenterology, General Surgery, Geriatrics, Internal Medicine, Oncology</td>
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<td>Background</td>
<td>Disease Burden</td>
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<td>• Colorectal cancer is the third most common cancer in the United States and the second leading cause of deaths due to cancer. A person at age 50 has about a 5 percent lifetime risk of being diagnosed with colorectal cancer and a 2.5 percent chance of dying from it.[1-3]</td>
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<td>• People with a previous diagnosis of colorectal cancer experience a higher incidence of subsequent colorectal cancer than the general population. The cumulative incidence of new cancers is about 1.5 percent at five years in this group.[4]</td>
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<td>• Approximately 35-40% of patients with stage II or III colorectal cancer at time of initial diagnosis will have recurrent or metastatic disease.[5]</td>
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<td>Reason for Indicated Intervention or Treatment</td>
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<td>• Surveillance for second primary colorectal cancer aids in ensuring early removal of pre-malignant polyps and early detection of malignancy.[4]</td>
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<td>• In patients with locally recurrent or anastomotic disease, a limited number of metastases involving liver or lung, or metachronous (second primary) malignancies or polyps are potentially curable with further surgery.</td>
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<td>Evidence supporting Intervention or Treatment</td>
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| | • In a retrospective cohort study of 1,247 patients with colorectal cancer, of whom 548 had recurrent disease, patients whose recurrences were
discovered by routine surveillance testing were three times more likely to be disease-free at five years compared to those diagnosed as a result of new symptoms.[6]

- Another retrospective cohort study of 179 patients with recurrent colorectal cancer, including 137 who underwent re-operation, found that the likelihood of a complete resection was significantly higher among those whose recurrences were detected because of an asymptomatic elevation in the serum tumor marker carcinoembryonic antigen (CEA) as compared to those diagnosed with new symptoms.[7]

- In a meta-analysis of 5 trials documenting 1,342 patients after treatment for colorectal cancer, those who received intensive surveillance (four out of five trials included measurement of CEA levels) were 19% less likely to have a recurrent cancer after 5 years than those who received less intensive surveillance.[8]

- One prospective randomized controlled trial evaluating the efficacy of simple vs. intensive surveillance strategies after the curative resection of colorectal cancer found that intensive strategies had a higher overall survival rate in patients with stage II tumors (HR = 0.34; 95% CI, 0.12 to 0.98; P =0.045) and in those with rectal lesions (HR = 0.09; 95% CI, 0.01 to 0.81; P = 0.03), mainly due to higher rate of resectability for recurrent tumors.[9]

- A review of evidence found an incidence rate of 0.7% two years following cancer resection.[10]

Clinical Recommendations
- The American Society of Clinical Oncology (ASCO) recommends that Carcinoembryonic antigen (CEA) be checked every 3 months postoperatively for at least 3 years after diagnosis for patients with colon or rectal cancer, if the patient is a candidate for surgery or systemic therapy.[11]
- The ASCO advises deferring measurement of CEA levels until fluorouracil-based therapy treatment has been completed, since fluorouracil-based therapy can falsely elevate CEA levels.[11]
- The NCCN also recommends that all patients with colorectal cancer, who are candidates for further therapy, should have CEA testing done every 3 to 6 month for 2 years and then every 6 months for 5 years.[12]

Source
Health Benchmarks, Inc.

Denominator Definition
Continuously enrolled members who are status post resection of colon cancer during the one year period ending 15 months prior to the end of the measurement year.

Denominator Codes
- **Excision of a colorectal tumor**
  - CPT-4 code(s): 44110, 44111, 44139-44141, 44143-44147, 44150-44153, 44155-44158, 44160, 44204-44208, 44210-44212, 45110-45114, 45116, 45119, 45123, 45126, 45160, 45170, 45395, 45397
  - ICD-9 surgical proc code(s): 45.4x, 45.7x, 45.8, 48.35, 48.36, 48.4x, 48.5, 48.6x,
Colorectal Cancer
ICD-9 diagnosis code(s): 153.xx, 154.0, 154.1, 154.8, V10.05

Denominator Exclusion Definition
Members who were in hospice care or who received fluorouracil-based therapy (5-FU).

Denominator Exclusion Codes
Hospice Care:
ICD-9 diagnosis code(s): V66.7
CPT-4 code(s): 99376*, 99377, 99378, G0065*, G0182, G0337, Q5001-Q5009, S0271, S9126, T2042-T2046
UB revenue code(s): 0115, 0125, 0135, 0145, 0155, 0235, 0650-0652, 0655-0659
UB type of bill code(s): 81x, 82x
Place of service code(s): 34

Fluorouracil-based therapy (5-FU)
CPT code(s): J9190

Numerator Definition
Members who received a carcinoembryonic antigen (CEA) test during the 9 to 15 months after the index date.

Numerator Codes
Carcinoembryonic antigen (CEA) test
CPT-4 code(s): 82378

Physician Attribution Description
Score all physicians (in the selected specialties) who saw the member during the 9 to 15 months after the index date.

References


