CARCINOEMBRYONIC ANTIGEN (CEA)

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INSTRUCTIONS FOR USE

This Medical Policy provides assistance in interpreting UnitedHealthcare benefit plans. When deciding coverage, the enrollee specific document must be referenced. The terms of an enrollee's document (e.g., Certificate of Coverage (COC) or Summary Plan Description (SPD)) may differ greatly. In the event of a conflict, the enrollee's specific benefit document supersedes this Medical Policy. All reviewers must first identify enrollee eligibility, any federal or state regulatory requirements and the plan benefit coverage prior to use of this Medical Policy. Other Policies and Coverage Determination Guidelines may apply. UnitedHealthcare reserves the right, in its sole discretion, to modify its Policies and Guidelines as necessary. This Medical Policy is provided for informational purposes. It does not constitute medical advice.

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BACKGROUND

Carcinoembryonic antigen (CEA) is a normal cell product (protein polysaccharide) that is over-expressed in some carcinomas, primarily of the colon, rectum, breast, and lung. It is normally found in small amounts in the blood of most healthy people, but may become elevated in people who have cancer or some benign conditions. It is effective as a biochemical marker for monitoring the response of certain malignancies to therapy. CEA has a low sensitivity and specificity; therefore, it not recommended as a screening tool.

The primary use of CEA is in monitoring colorectal cancer, especially when the disease has metastasized. CEA is also used after treatment to check for recurrence of colorectal cancer. Although CEA was first identified in colon cancer, an abnormal CEA blood level is neither specific for colon cancer nor for malignancy in general.
A wide variety of other cancers can produce elevated levels of this tumor marker, including melanoma, lymphoma, and cancers of the breast, lung, pancreas, stomach, esophagus, cervix, bladder, prostate, kidney, thyroid, liver, and ovary.

Elevated CEA levels can also occur in patients with non-cancerous conditions, including inflammatory bowel disease/colitis, pancreatitis, COPD, and liver disease (hepatitis). Additionally, “healthy” smokers may also have elevated levels of CEA.

An elevated CEA before surgery may be a sign of a poorer outcome. If it is high before surgery, the CEA should go to normal levels in about 4 to 6 weeks if all of the cancer has been removed. Some post-surgical patients are followed with CEA tests every 3 to 6 months to look for cancer recurrence.

CEA is also used to follow patients who are being treated for advanced or recurrent disease. The CEA level will go down if the treatment is working and will rise if the cancer progresses.

**Colorectal Cancer**

CEA can act as a preoperative prognostic indicator in patients with known colorectal carcinoma which assist with staging and surgical treatment planning. Additionally, CEA can detect asymptomatic recurrence of colorectal cancer after surgical and/or medical treatment for the diagnosis of colorectal cancer.

The ASCO 2006 “Recommendations For The Use of Tumor Markers in Gastrointestinal Cancer” does not recommend the use of CEA as a screening test for colorectal cancer. The specificity of CEA for identifying occult colorectal cancers is high but the sensitivity is very low. Clinical evidence supports the utility of preoperative CEA levels as prognostic factors for colorectal cancer. Additionally, these recommendations state that post-operative CEA levels should be performed every 3 months for stage II and III disease for at least 3 years if the patient is a potential candidate for surgery or chemotherapy of metastatic disease.

**Breast Cancer**

The ASCO 2007 “Update of Recommendations for the use of Tumor Markers in Breast Cancer” does not recommend the use of CEA for screening, diagnosis, staging, or routine surveillance of breast cancer patients after primary therapy. The recommendations indicate that CEA can be used in conjunction with diagnostic imaging, history, and physical examination for monitoring patients with metastatic breast cancer during active therapy. Present data are insufficient to recommend use of CEA alone for monitoring response to treatment. However, in the absence of readily measurable disease, an increasing CEA may be used to indicate treatment failure. Caution should be used when interpreting a rising CEA level during the first 4-6 weeks of a new therapy, since spurious early rises may occur.

**Other Cancers Including Lung, Esophageal, Gastric, Pancreatic, and Bladder**

For lung cancer, no tumor markers have proven useful as screening tests. However, some of the tumor markers that may be elevated in lung cancer are the CEA in non-small cell lung cancer and the neuron-specific enolase
(NSE) in small cell lung cancer. Likewise, elevated CEA levels have been found to predict early recurrent disease in patients with esophageal cancer.

Similar to lung cancer, no markers have been developed for stomach (gastric) cancer. Some other digestive cancer markers may be elevated, such as CEA, CA 72-4, and/or CA 19-9. If the levels of these markers are elevated at the time of diagnosis, the levels can be followed while the cancer is being treated.

A recent study found that the levels of CEA found in a peritoneal wash are highly indicative of the risk of a cancer recurrence and survival in patients with early gastric cancer. The authors suggest that this test has clinical relevance for these patients; those with higher CEA levels may benefit from additional therapy compared to those with normal or lower CEA levels.

For pancreatic cancer, some doctors follow the level of CEA in the blood, but it may not be as helpful as the CA 19-9 level. Similarly, for advanced bladder cancer, some of the markers used for other cancers such as CEA, CA 125, CA 19-9, and TPA may be elevated and can be used to follow patients during and after treatment.

POLICY

For the following CPT code(s) in Table 1, the patient should have a diagnosis (ICD-10-CM) code(s) listed in the attached files below.

**Table 1. HCPCS Codes (Alphanumeric, CPT® AMA)**

<table>
<thead>
<tr>
<th>HCPCS Code</th>
<th>Description</th>
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<tr>
<td>82378</td>
<td>Carcinoembryonic antigen (CEA)</td>
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</table>

**ICD-10 Diagnosis Codes (Proven)**

CMP-015 CEA ICD10 v1.0
REFERENCES


POLICY HISTORY/REVISION HISTORY

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<th>Date</th>
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<tr>
<td>01/21/2017</td>
<td>Updated ICD10 codes as per CMS recommendations. Removed ICD9 code file.</td>
</tr>
<tr>
<td>10/01/2015</td>
<td>Removed ICD9 table. Embedded ICD9/ICD10 PDF files.</td>
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