Medical Coverage Policy | Radiofrequency Ablation of Hepatic Tumors

EFFECTIVE DATE: 06|0/2006
POLICY LAST UPDATED: 03/04/2014

OVERVIEW

In radiofrequency ablation (RFA), a probe is inserted into the center of a tumor and the noninsulated electrodes, which are shaped like prongs, are projected into the tumor; heat is generated locally by a high frequency, alternating current that flows from the electrodes. The local heat treats the tissue adjacent to the probe, resulting in a 3- to 5-cm sphere of dead tissue. The cells killed by RFA are not removed but are gradually replaced by fibrosis and scar tissue. If there is local recurrence, it occurs at the edge, and in some cases, may be retreated. RFA may be performed percutaneously, laparoscopically, or as an open procedure.

PRIOR AUTHORIZATION

Prior authorization is required for BlueCHiP for Medicare and recommended for Commercial Products

POLICY STATEMENT

Radiofrequency ablation of hepatic tumors is medically necessary when the medical criteria below is met.
All other indications are considered not medically necessary due to lack of peer-reviewed literature which support improved health outcomes.

MEDICAL CRITERIA

Primary hepatocellular carcinoma
Radiofrequency ablation may be considered medically necessary as a primary treatment of HCC for patients when one of the following criteria is met.

- there are no more than 3 nodules measuring 5 cm's or less, and all tumor foci can be adequately treated
- as a bridge to transplant, where the intent is to prevent further tumor growth and to maintain a patient's candidacy for liver transplant.
- not a candidates for curative resections (e.g., due to location of lesion(s) and/or comorbid conditions)

Hepatic metastases from neuroendocrine tumors
Radiofrequency ablation may be considered medically necessary when all the following criteria is met;

- not a candidates for curative resections (e.g., due to location of lesion(s) and/or comorbid conditions),
- not a candidates for liver transplantation.

Metastatic colorectal cancer
Radiofrequency ablation of metastatic colorectal cancer may be considered medically necessary when all of the following criteria are met;

- as a primary treatment of hepatic metastases of 4-5 or fewer hepatic lesions, measuring 5 cm or less in diameter from colorectal cancer in the absence of extrahepatic metastatic disease when all tumor foci can be adequately treated,
- should not be candidates for curative resections (e.g., due to location of lesion(s) and/or comorbid conditions)

BACKGROUND

Hepatic tumors can arise either as primary liver cancer (hepatocellular cancer [HCC]) or by metastasis to the liver from other tissues. Local therapy for hepatic metastasis may be indicated when there is no extrahepatic disease, which rarely occurs for patients with primary cancers other than colorectal carcinoma or certain

Hepatic tumors can arise either as primary liver cancer (hepatocellular cancer [HCC]) or by metastasis to the liver from other tissues. Local therapy for hepatic metastasis may be indicated when there is no extrahepatic disease, which rarely occurs for patients with primary cancers other than colorectal carcinoma or certain neuroendocrine malignancies. At present, surgical resection with adequate margins or liver transplantation constitutes the only treatments available with demonstrated curative potential. However, the majority of hepatic tumors are unresectable at diagnosis, due either to their anatomic location, size, number of lesions, or underlying liver reserve.

Neuroendocrine tumors are tumors of cells that possess secretory granules and originate from the neuroectoderm. Neuroendocrine cells have roles both in the endocrine system and the nervous system. They produce and secrete a variety of regulatory hormones, or neuropeptides, which include neurotransmitters and growth factors. Overproduction of the specific neuropeptides produced by the cancerous cells causes a variety of symptoms depending on the hormone produced. They are rare, with an incidence of 2-4 per 100,000 per year. Treatment of liver metastases is undertaken to prolong survival and reduce endocrine-related symptoms, as well as symptoms related to the hepatic mass.

Radiofrequency ablation (RFA) has been investigated as a treatment for unresectable hepatic tumors, both as primary treatment and as a bridge to liver transplant. In the latter setting, it is hoped that RFA will reduce the incidence of tumor progression while awaiting transplantation and thus maintain a patient's candidacy for liver transplant during the wait time for a donor organ. This issue has become less problematic with additional priority now assigned for patients with stage T2 hepatocellular cancer (HCC).

Various locoregional therapies for unresectable liver tumors have been investigated: RFA, cryosurgical ablation (cryosurgery), laser ablation, trans-hepatic artery embolization/chemoembolization (TACE), microwave coagulation, percutaneous ethanol injection, and radioembolization (Yttrium-90 microspheres).

Currently, there is less evidence available for patients treated with RFA to specifically downsize (downstage) tumors (tumors of stage greater than T2) to meet priority transplant criteria, and its use for this application is considered investigational.

The published evidence for demonstrating improved health outcomes with RFA of other hepatic metastatic tumors (e.g., breast cancer and sarcoma) is lacking. Comparative trials are needed for these malignancies that may have associated systemic disease. Use of RFA in these tumors is considered investigational under this policy; the data are insufficient to change this policy statement

COVERAGE

Benefits may vary between groups/contracts. Please refer to the appropriate Evidence of Coverage or Subscriber Agreement for the applicable surgery benefits and for limitations of benefits/coverage when services are not medically necessary.

CODING

BlueCHiP for Medicare and Commercial
The following CPT Codes are medically necessary when the medical criteria above is met:
47370
47380
47382
76940

RELATED POLICIES

None

PUBLISHED

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