

Medical Coverage Policy | Cryosurgical Ablation of Primary or Metastatic Liver Tumors



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OVERVIEW

Cryosurgical ablation involves the freezing of target tissues, most often by inserting into the tumor a probe through which coolant is circulated. Cryosurgical ablation can be performed as an open surgical technique or percutaneously or laparoscopically, typically with ultrasound guidance.

MEDICAL CRITERIA

Not applicable.

PRIOR AUTHORIZATION

Not applicable

POLICY STATEMENT

BlueCHiP for Medicare and Commercial

Cryosurgical ablation of either primary or metastatic tumors in the liver is not medically necessary as there is a lack of peer reviewed scientific evidence to support its efficacy.

COVERAGE

Benefits may vary between groups and contracts. Please refer to the appropriate Evidence of Coverage, Subscriber Agreement for applicable not medically necessary benefits/coverage.

BACKGROUND

Hepatic tumors can arise either as primary liver cancer or by metastasis to the liver from other tissues. Local therapy for hepatic metastasis is indicated only when there is no extrahepatic disease, which rarely occurs for patients with primary cancers other than colorectal carcinoma (CRC) or certain neuroendocrine malignancies. At present, surgical resection with tumor-free margins or liver transplantation represent the only treatments with curative potential. For liver metastases from CRC, postsurgical adjuvant chemotherapy has been reported to decrease recurrence rates and prolong time to recurrence. However, most hepatic tumors are unresectable at diagnosis, due either to their anatomic location, size, number of lesions, or underlying liver reserve. Combined systemic and hepatic arterial chemotherapy may increase disease-free intervals for patients with hepatic metastases from CRC but apparently is not beneficial for those with unresectable HCC.

Various locoregional therapies for unresectable liver tumors are being studied: cryosurgical ablation (cryosurgery), RFA, laser ablation, transhepatic artery embolization/ chemoembolization, microwave coagulation, and percutaneous ethanol injection. Ablation occurs in tissue that has been frozen by at least 3 mechanisms: (1) formation of ice crystals within cells, thereby disrupting membranes and interrupting cellular metabolism among other processes; (2) coagulation of blood, thereby interrupting blood flow to the tissue, in turn causing ischemia and cell death; and (3) induction of apoptosis (cell death). Recent studies report experience with cryosurgical and other ablative methods used in combination with subtotal resection and/or procedures such as transarterial chemoembolization

Most patients in published series were candidates for cryosurgery because of unresectable disease, due either to large number of metastases, inaccessible location (eg, near large vessels), or insufficient hepatic reserve to support resection. However, some of the studies included patients with resectable tumors, as well as patients with unresectable tumors. Furthermore some studies pooled results for mixed series of patients with liver

metastases from various noncolorectal cancers (eg, breast, sarcoma, ovarian, testicular, pancreatic, esophageal, head and neck), despite the differing characteristics and prognoses of these malignancies. Few controlled studies were found and most had methodologic weaknesses including lack of randomization and noncomparable groups. In 1 randomized controlled trial that compared cryosurgery with radiofrequency ablation (RFA) for hepatocellular carcinoma (HCC), rates of tumor progression, survival, and complications were comparable between groups. However, further studies are needed to confirm these results. Therefore, published outcomes of cryosurgery are inconclusive. The recent literature provides little new information on cryosurgical techniques, and interest appears to be concentrated on RFA. Thus, cryoablation for primary or metastatic liver tumors is not medically necessary

CODING

Blue CHip for Medicare and Commercial

The following codes are not medically necessary

47371 47381 47383

RELATED POLICIES

None

PUBLISHED

Provider Update, April 2015

Provider Update, August 2011

Provider Update, Dec 2010

Provider Update, May 2008

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