02-40000-22

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Reviewed: 10/22/26

Revised: 11/15/26

Subject: Cryoablation of Liver Tumors

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Position Statement	Billing/Coding	Reimbursement	Program Exceptions	Definitions	Related Guidelines
Other	References	Updates			

DESCRIPTION:

Hepatic tumors can be due to primary liver cancer or metastases to the liver from nonhepatic primary tumors. Primary liver cancer can arise from hepatocellular tissue (hepatocellular carcinoma) or intrahepatic biliary ducts (cholangiocarcinoma).

Various locoregional therapies for unresectable liver tumors have been evaluated, including cryosurgical ablation (cryosurgery). Cryosurgical 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 apoptosis; and (3) induction of apoptosis.

Summary and Analysis of Evidence: The NCCN Clinical Practice Guideline (CPG) for Hepatocellular Carcinoma (HCC) (V2.2024) states, “Locoregional therapy should be considered in patients who are not candidates for surgical curative treatments, or as a part of a strategy to bridge patients for other curative therapies. These are broadly categorized into ablation, arterially directed therapies, and radiotherapy. Multidisciplinary review is recommended.” The CPG also includes, “(a)blation alone may be curative in treating tumors less than or equal to 3 cm. In well-selected patients with small properly located tumors, ablation should be considered as definitive treatment in the context of a multidisciplinary review. Lesions 3 to 5 cm may be treated to prolong survival using arterially directed therapies, or with combination of an arterially directed therapy and ablation as long as tumor location is accessible for ablation.”

The American Association for the Study of Liver Diseases (AASLD) practice guideline (Heimbach et al, 2018) for HCC states, “(b)ecause cirrhosis is one of the primary risk factors for HCC, the selection of treatment modality depends as much on the underlying liver function and the degree of portal hypertension as on the oncologic stage of the tumor. Therefore, whereas therapeutic options are limited for patients who present with advanced liver disease and/or advanced tumor stages, multiple options exist for those presenting with well-compensated cirrhosis and smaller, potentially resectable tumors. These include ablative strategies such as radiofrequency, microwave, chemical, and cryoablation, as well as surgical resection.” The guideline further notes that ablation is the most effective treatment option for early stage HCC in candidates who are not suitable for resection or liver transplant, and that the most effective treatment is generally dependent on size and location of lesions.

Gosalia et al (2017) stated, “Hepatocellular carcinoma (HCC) is the second leading cause of cancer-related deaths worldwide. Liver transplant is considered the gold standard for curative therapy for HCC when patients are not candidates for surgical resection or ablation. Because a subset of patients with HCC have a survival rate with liver transplantation that is comparable to that of cirrhotic patients without tumors, the organ allocation system allows for increased priority for transplant in potential recipients within the Milan criteria. Treatment of HCC has rapidly evolved with interventional radiology. Percutaneous ethanol injection (PEI), radiofrequency ablation (RFA), microwave ablation (MWA), cryoablation, and TACE are the major modalities utilized to control growth of HCC lesions. Cryoablation has been less utilized as more advanced ablative techniques have emerged, but still plays a role in select patients. The technique requires laparoscopy with direct application of a cryoprobe, with either liquid nitrogen or argon gas placed on the HCC lesion. Freezing induces irreversible damage to the tissue. Typically, 2 to 3 cycles are performed in a single session, and intraoperative ultrasound is used to monitor tumor destruction in real time. Cryoablation can be used as monotherapy or as part of a multimodal treatment approach. There are no RCTs evaluating the efficacy of cryoablation compared to other ablative modalities, although retrospective trials and case series have evaluated the efficacy of cryoablation. One large series of patients receiving cryotherapy demonstrated a 39.8% 5-year survival rate, and among the subset of patients with lesions less than 5 cm, survival was 55.4%.47 The main disadvantage of cryoablation is that it is most often performed laparoscopically and may cause morbidity in patients with advanced cirrhosis. Complication rates have been reported to be upwards of 50% and include coagulopathy, cardiac arrhythmia, and liver fracture. However, percutaneous application of cryoablation may mitigate these risks. Cryoablation may have a role in special situations, such as treatment of residual disease at resection margins, but is rarely considered as a first-line therapy in the treatment of HCC.”

POSITION STATEMENT:

Cryoablation of tumors in the liver **meets the definition of medical necessity** for the treatment of primary hepatic tumors or metastatic tumors, when the following criteria are met:

- The disease is non-resectable, **OR**
- The individual is a poor candidate for surgery due to comorbid disease.

BILLING/CODING INFORMATION:

CPT Coding

47371	Laparoscopy, surgical, ablation or one or more liver tumor(s); cryosurgical
47381	Ablation, open, or one or more liver tumor(s); cryosurgical
47383	Ablation, 1 or more liver tumor(s), percutaneous, cryoablation

LOINC Codes

The following information may be required documentation to support medical necessity: physician history and physical, physician progress notes, treatment plan, radiology and/or other diagnostic studies, documentation of co-morbid disease.

Documentation Table	LOINC Codes	LOINC Time Frame Modifier Code	LOINC Time Frame Modifier Codes Narrative
Physician history and physical	28626-0	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Attending physician visit note	18733-6	18805-2	Include all data of the selected type that represents observations made six months or

			fewer before starting date of service for the claim.
Treatment plan	18776-5	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.
Radiology report	18726-0	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Diagnostic studies (non-lab)	27899-4	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.
Co-morbidities and complications	42126-3	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.

REIMBURSEMENT INFORMATION:

Refer to section entitled **POSITION STATEMENT**.

PROGRAM EXCEPTIONS:

Federal Employee Program (FEP): Follow FEP guidelines.

State Account Organization (SAO): Follow SAO guidelines.

Medicare Advantage products: No National Coverage Determination (NCD) and/or Local Coverage Determination (LCD) were found at the time of the last guideline reviewed date.

If this Medical Coverage Guideline contains a step therapy requirement, in compliance with Florida law 627.42393, members or providers may request a step therapy protocol exemption to this requirement if based on medical necessity. The process for requesting a protocol exemption can be found at Coverage Protocol Exemption Request.

DEFINITIONS:

Cryosurgical ablation: a surgical procedure where cancerous or diseased cells are destroyed using extreme cold; also called cryoablation, cryosurgery, cryotherapy.

Extra-hepatic metastases: cancer that has spread from its original location to other sites within the body, other than the liver.

Hepatic metastases: cancer that has spread from its original location in the body to the liver.

Primary hepatocellular cancer: a cancer that originates within liver cells, as opposed to having spread from other organs; malignant hepatoma.

Unresectable: a property of a tumor where it is unable to be removed surgically.

RELATED GUIDELINES:

Irreversible Electroporation (IRE), 02-40000-26
Radiofrequency and Microwave Ablation of Liver Tumors, 02-40000-23

OTHER:

None applicable.

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COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy and Coverage Committee on 10/22/26.

GUIDELINE UPDATE INFORMATION:

08/15/01	Medical Coverage Guideline reformatted.
01/01/02	HCPCS changes.
12/15/02	Annual review for investigational; no change.
11/15/03	Changed policy number from 04-77260-15 to 02-40000-22.
02/15/04	Reviewed Radiofrequency/Cryoablation of Liver Tumors MCG #02-40000-22 and separated into two different policies Radiofrequency Ablation of Liver Tumors and Cryosurgical Ablation of Liver Tumors.
03/15/05	Scheduled review; no change in coverage statement; Program Exception added for Medicare Advantage products.
02/15/06	Scheduled review; investigational status removed; coverage criteria and ICD-9 diagnosis codes added.
08/15/07	Scheduled review; reformatted guideline; updated references.
02/15/09	Scheduled review; no change in position statement.
10/15/10	Revision; related ICD-10 codes added.
02/15/11	Annual review; no change in position statement. Revised description section; added CPT code 76940; updated references; reformatted guideline.
09/15/11	Revision; formatting changes.
02/15/12	Scheduled review; no change in position statement. Revised description section and updated references.
05/11/14	Revision: Program Exceptions section updated.
01/01/15	Annual CPT/HCPCS update. Added 47383.
11/01/15	Revision: ICD-9 Codes deleted.
10/01/16	Revision: Billing/Coding Information section updated.
04/20/17	Revision: deleted code 76490 and reformatted guideline.
09/15/19	Scheduled review. Revised description and CPT coding. Maintained position statement. Updated references.
02/15/21	Scheduled review. Revised description, maintained position statement, and updated references.
10/15/22	Scheduled review. Maintained position statement and updated references.
05/25/23	Update to Program Exceptions section.
01/01/24	Position statements maintained.
09/15/24	Scheduled review. Revised description, maintained position statement, and updated references.
09/15/25	Scheduled review. Maintained position statement and updated references.
11/15/26	Review; no change to position statement. Updated references.