Medical Policy

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Title: Treatment of Liver Tumors

See also: Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors policy

Professional
Original Effective Date: July 1, 2003
Revision Date(s): May 23, 2006; September 7, 2007
Current Effective Date: March 11, 2009

Institutional
Original Effective Date: August 1, 2006
Revision Date(s): September 7, 2007
Current Effective Date: March 11, 2009

PRE-DETERMINATION of services is not required, but is highly recommended.
http://www.bcbsks.com/CustomerService/Forms/pdf/15-17_predeterm_request_frm.pdf

DESCRIPTION

Hepatic tumors can arise either as primary liver cancer or by metastasis to the liver from other tissues. 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.

Radiofrequency ablation (RFA) has been investigated as a treatment for unresectable hepatic tumors. Radiofrequency ablation involves inserting an electrode into the center of the tumor with the delivery of alternating current. Radiofrequency ablation may be performed percutaneously, laparoscopically, or as an open procedure.

Transcatheter arterial chemoembolization (TACE) of the liver is a proposed alternative to conventional systemic or intra-arterial chemotherapy, and to various nonsurgical ablative techniques, to treat resectable and nonresectable tumors. The rationale for TACE is that infusions of viscous material containing one or more antineoplastic agents may exert synergistic effects: cytotoxicity from the chemotherapy, potentiated by anoxia in the infarcted region. The beneficial effect of chemoembolization may be further potentiated by labeling the infusate with radioactive isotopes for localized radiotherapy. Another rationale is that TACE delivers effective local doses, while possibly minimizing systemic toxicities associated with oral or intravenous chemotherapy.

The TACE procedure requires placement of the hepatic artery catheter. With the patient under local anesthesia and mild sedation, a superselective catheter is inserted via the femoral artery and threaded into the hepatic artery. Angiography is then performed to

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delineate the hepatic vasculature, followed by injection of the embolic chemotherapy mixture. Typically, only 1 lobe of the liver is treated during a single session, with subsequent embolization procedures scheduled from 5 days to 6 weeks later. In addition, since the embolized vessel recanalizes, chemoembolization can be repeated as many times as necessary.

POLICY

I. Transcatheter Arterial Chemoembolization (TACE)

A. TACE is considered **medically necessary** as palliative treatment for patients with neuroendocrine tumors (i.e., carcinoid, paraganglioma, insulinoma, gastrinoma, glucagonoma, somatostatinoma, etc.) with hepatic metastases when systemic therapy has failed.

B. TACE is considered **medically necessary** for surgically unresectable primary hepatocellular carcinoma (HCC) when all of the following criteria have been met:

1. The patient has preserved liver function defined as Childs-Turcotte-Pugh class A or B, and
2. The patient has less than three (3) encapsulated nodules which are less than 4 centimeters in diameter, and
3. The patient has no evidence of extra-hepatic metastases, and
4. The patient has no evidence of severe renal function impairment, and
5. The patient has no evidence of portal hypertension

C. Transcatheter hepatic arterial chemoembolization is considered **experimental/investigational** for hepatocellular cancer as a bridge to liver transplantation.

Once a consultant approves TACE, re-treatment may occur without additional consultant review.

II. Radiofrequency Ablation (RFA)

A. RFA is considered **medically necessary** as treatment or palliation of:

1. Primary tumors - Lesion restrictions are 2-7 centimeters in diameter and no more than five (5) lesions
2. Neuroendocrine tumors - No lesion restrictions for size or number (goal is to control hormone secretions).
3. Colorectal Hepatic metastases numbering 5 or fewer and measuring 5 cm or less in diameter in the absence of extrahepatic metastatic disease if tumor foci are deemed by the attending surgeon to be technically unresectable or patients are precluded from definitive hepatic resection due to underlying condition(s) and, in either case, when all tumor foci can be adequately treated.

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B. Radiofrequency ablation for hepatic metastasis is considered **experimental / investigational** for all other indications.

Once a consultant approves RFA, re-treatment may occur without additional consultant review.

CODING

The following codes for treatment and procedures applicable to this policy are included below for informational purposes. Inclusion or exclusion of a procedure, diagnosis or device code(s) does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

CPT/HCPCS

37204	Transcatheter occlusion or embolization (e.g. for tumor destruction, to achieve hemostasis, to occlude a vascular malformation), percutaneous, and method, non-central nervous system, non-head or neck
47370	Laparoscopy, surgical, ablation of 1 or more liver tumor(s); radiofrequency
47380	Ablation, open, of 1 or more liver tumor(s); radiofrequency
47382	Ablation, one or more liver tumor(s), percutaneous, radiofrequency
75894	Transcatheter therapy, embolization, any method, radiological supervision and interpretation
76940	Ultrasound guidance for, and monitoring of, parenchymal tissue ablation
77013	Computed tomography guidance for, and monitoring of, parenchymal tissue ablation
77022	Magnetic resonance guidance for, and monitoring of, parenchymal tissue ablation

DIAGNOSIS

155.0	Malignant neoplasm of liver
197.7	Secondary malignant neoplasm; liver

REVISIONS

05-23-2006	In Description section: ▪ Second paragraph removed "Protein denaturation and coagulation is the ultimate cause of cell death." ▪ Fourth paragraph removed words "hospitalization" and "and workup to establish eligibility for chemoembolization." ▪ Fourth paragraph removed "Embolic material varies, but may include a viscous collagen agent, polyvinyl alcohol particles, or ethiodized oil".
	In Policy section: ▪ 1. D., removed words "in patients with" and both bullets, "as a bridge to liver transplantation" and "To prevent tumor progression while on the waiting list". ▪ I. D., added words "for" and "as a bridge to liver transplantation". ▪ II. A., removed words "Tumor type". ▪ II. A., 2., removed words "because they are trying" and added words "goal is".

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	▪ II. A., 2. a., removed entire statement "Retreatment requires review of medical records by BCBSKS staff (procedure usually not repeated more frequently than every four (4) weeks)". ▪ II. B., 1., removed words "Tumor type". ▪ II. B., 2., removed word "affected" and added the word "involved". ▪ II. B., 2. a., removed entire statement "Retreatment requires review of medical records by BCBSKS staff (procedure usually not repeated more frequently than every four (4) weeks)". ▪ II. C., added "(procedure is usually not repeated more frequently than every four weeks)".
	In Utilization section: ▪ Removed "NOTE: Predetermination by medical review staff and/or consultant is strongly encouraged" and added "NOTE: Professional providers are strongly encouraged to obtain predetermination from medical review staff and/or consultant."
09-07-2007	In Policy section: ▪ I. A. removed "carcinoid tumors" and added "neuroendocrine tumors (i.e., carcinoid, paraganglioma, insulinoma, gastrinoma, glucagonoma, and somatostatinoma, etc.). Removed "to control carcinoid syndrome (e.g. debilitating flushing, wheezing, and diarrhea) or." ▪ II. A., 2. removed "carcinoid" and added "neuroendocrine" ▪ II. B., 2. removed "carcinoid" and added "neuroendocrine" ▪ II. C. changed this to read "Radiofrequency ablation may be considered medically necessary as a primary treatment of hepatic metastases numbering 5 or fewer and measuring 5 cm or less in diameter for colorectal cancer in the absence of extrahepatic metastatic disease if tumor foci are deemed by the attending surgeon to be technically unresectable or patients are precluded from definitive hepatic resection due to underlying condition(s) and, in either case, when all tumor foci can be adequately treated." ▪ II. D. changed this to read "Radiofrequency ablation for hepatic metastasis is considered investigational: • for hepatic metastases from colorectal cancer that do not meet the criteria above; and • for hepatic metastases from other types of cancer." ▪ II. added E "Once a consultant approves RFA, re-treatment may occur without additional consultant review but requires review of medical records by BCBSKS staff to determine medical necessity (procedure is usually not repeated more frequently than every four weeks)."
	In "Reference" section added "10. MCOP 1075-9443; 9/5/07"
03-11-2009	In Policy section: ▪ Combined II A, II B, and II C to streamline wording and remove duplication of criteria. Revised from: II. Radiofrequency Ablation (RFA) A. RFA is considered medically necessary as treatment 1. Primary tumors - Lesion restrictions are 2-7 centimeters and no more than five (5) lesions 2. Neuroendocrine tumors - No lesion restrictions for size or number (goal is to control hormone secretions).

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	B. RFA is considered medically necessary as palliative treatment of liver tumors for pain relief or reduction of hormone secretion with 50% or less total liver involvement. 1. Primary tumor - Lesion restrictions are 2-7 centimeters and no more than five (5) lesions. 2. Neuroendocrine tumors - No lesion restrictions for size or number as long as no more than 50% of the liver is involved. C. Radiofrequency ablation may be considered medically necessary as a primary treatment of hepatic metastases numbering 5 or fewer and measuring 5 cm or less in diameter for colorectal cancer in the absence of extrahepatic metastatic disease if tumor foci are deemed by the attending surgeon to be technically unresectable or patients are precluded from definitive hepatic resection due to underlying condition(s) and, in either case, when all tumor foci can be adequately treated. to: II. Radiofrequency Ablation (RFA) A. RFA is considered medically necessary as treatment or palliation of: 1. Primary tumors - Lesion restrictions are 2-7 centimeters in diameter and no more than five (5) lesions 2. Neuroendocrine tumors - No lesion restrictions for size or number (goal is to control hormone secretions). 3. Colorectal Hepatic metastases numbering 5 or fewer and measuring 5 cm or less in diameter in the absence of extrahepatic metastatic disease if tumor foci are deemed by the attending surgeon to be technically unresectable or patients are precluded from definitive hepatic resection due to underlying condition(s) and, in either case, when all tumor foci can be adequately treated. ▪ On II D removed "for hepatic metastases from colorectal cancer that do not meet the criteria above; and for hepatic metastases from other types of cancer." and added "for all other indications."
	In Coding section: ▪ Added CPT codes: 76940, 77013, 77022.

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