

## Radiofrequency Ablation of Tumors

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### Definition

Radiofrequency ablation is a technique of heating cells using a small needle electrode placed directly into a tumor. High frequency radio waves heat the tumor and cause local necrosis. The dead cells become scar tissue and eventually shrink.

### Related Guidelines

[Cryosurgical and Radiofrequency Ablation for Renal Tumors](#)

[Selective Internal Radiation Therapy](#)

[Stereotactic Radiosurgery and Proton Beam Therapy](#)

### Guideline

Members are eligible for RFA for the following indications:

- Bone pain secondary to cancer as an interventional or palliative pain management strategy
- Distant metastatic lesions of medullary thyroid carcinoma
- Gastro-intestinal stromal tumors with limited progression in a single metastatic site
- Non-small cell lung cancer (NSCLC) — medically inoperable/member unable to tolerate surgery:
  - ✓ Treatment of stage 1A peripheral tumors (defined as  $\leq 3$  cm)
  - ✓ Symptomatic airway obstruction as a means to improve quality of life
- Osteoid osteoma — as less invasive alternative to surgical resection
- Renal tumors — small ( $\leq 4$  cm in diameter) suspected to be malignant or with malignant potential
- Symptomatic soft tissue sarcoma — disseminated metastases
- Liver tumors — medically inoperable/member unable to tolerate surgery\*
  - ✓ Primary malignancy — hepatocellular carcinoma (HCC)
  - ✓ Metastatic; site of origin/type:
    - colorectal carcinoma

- neuroendocrine
  - ocular melanoma
- ✓ Unresectable intra-hepatic cholangiocarcinoma

\*Utilization: Radiofrequency ablation may be considered medically necessary when as a sole curative treatment for lesions ≤ 3 cm or as to prolong survival when combined with arterial therapy (e.g., chemoembolization, radioembolization with yttrium -90 microspheres) for lesions 3–5 cm.

- Uterine sarcoma — resectable isolated metastases as alternative to surgical resection

### Limitations/Exclusions

Ablation requests for indications other than those listed above are case-by-case reviewed upon receipt of clinical documentation substantiating medical necessity.

Radiofrequency ablation is not considered medically necessary for benign/malignant tumors per below, as there is insufficient evidence of therapeutic value (list not meant to be all-inclusive):

- Benign thyroid nodules
- Breast tumors
- Brunner's gland hyperplasia
- Chondroblastoma
- Gallbladder cancer
- Gastro-intestinal stromal tumors; multiple metastatic sites
- Hepatic metastases from non-colonic primary cancers or those > 5 cm
- Malignant bile duct obstruction
- Pancreatic cancer

### Revision History

May 10, 2019	Added unresectable intra-hepatic cholangiocarcinoma to list of liver tumors
May 11, 2018	Clarified (for gastro-intestinal stromal tumors) that RFA is appropriate for the treatment of progression in a single metastatic site, but not in multiple metastatic sites
May 12, 2017	Removed palliative treatment of bone cancer pain from Limitations/Exclusions and added as covered indication

### Applicable Procedure Codes

20982	Ablation therapy for reduction or eradication of 1 or more bone tumors (eg, metastasis) including adjacent soft tissue when involved by tumor extension, percutaneous, including imaging guidance when performed; radiofrequency
32998	Ablation therapy for reduction or eradication of 1 or more pulmonary tumor(s) including pleura or chest wall when involved by tumor extension, percutaneous, including imaging guidance when performed, unilateral; radiofrequency
47370	Laparoscopy, surgical, ablation of one or more liver tumor(s); radiofrequency
47380	Ablation, open, of one or more liver tumor(s); radiofrequency
47382	Ablation, one or more liver tumor(s), percutaneous, radiofrequency
50542	Laparoscopy, surgical; ablation of renal mass lesion(s), including intraoperative ultrasound guidance and monitoring, when performed [when specified as radiofrequency ablation]
50592	Ablation, 1 or more renal tumor(s), percutaneous, unilateral, radiofrequency
53852	Transurethral destruction of prostate tissue; by radiofrequency thermotherapy
53854	Transurethral destruction of prostate tissue; by radiofrequency generated water vapor thermotherapy
77013	Computerized tomography guidance for; and monitoring of, parenchymal tissue ablation
77022	Magnetic resonance guidance for, and monitoring of, parenchymal tissue ablation

76940	Ultrasound guidance for, monitoring of tissue ablation
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### Applicable ICD-10 Codes

C22.0	Liver cell carcinoma
C22.2	Hepatoblastoma
C22.3	Angiosarcoma of liver
C22.7	Other specified carcinomas of liver
C22.8	Malignant neoplasm of liver, primary, unspecified as to type
C22.9	Malignant neoplasm of liver, not specified as primary or secondary
C33	Malignant neoplasm of trachea
C34.00	Malignant neoplasm of unspecified main bronchus
C34.01	Malignant neoplasm of right main bronchus
C34.02	Malignant neoplasm of left main bronchus
C34.10	Malignant neoplasm of upper lobe, unspecified bronchus or lung
C34.11	Malignant neoplasm of upper lobe, right bronchus or lung
C34.12	Malignant neoplasm of upper lobe, left bronchus or lung
C34.2	Malignant neoplasm of middle lobe, bronchus or lung
C34.30	Malignant neoplasm of lower lobe, unspecified bronchus or lung
C34.31	Malignant neoplasm of lower lobe, right bronchus or lung
C34.32	Malignant neoplasm of lower lobe, left bronchus or lung
C34.80	Malignant neoplasm of overlapping sites of unspecified bronchus and lung
C34.81	Malignant neoplasm of overlapping sites of right bronchus and lung
C34.82	Malignant neoplasm of overlapping sites of left bronchus and lung
C34.90	Malignant neoplasm of unspecified part of unspecified bronchus or lung
C34.91	Malignant neoplasm of unspecified part of right bronchus or lung
C34.92	Malignant neoplasm of unspecified part of left bronchus or lung
C49.10	Malignant neoplasm of connective and soft tissue of unspecified upper limb, including shoulder
C49.11	Malignant neoplasm of connective and soft tissue of right upper limb, including shoulder
C49.12	Malignant neoplasm of connective and soft tissue of left upper limb, including shoulder
C49.20	Malignant neoplasm of connective and soft tissue of unspecified lower limb, including hip
C49.21	Malignant neoplasm of connective and soft tissue of right lower limb, including hip
C49.22	Malignant neoplasm of connective and soft tissue of left lower limb, including hip
C49.6	Malignant neoplasm of connective and soft tissue of trunk, unspecified
C49.8	Malignant neoplasm of overlapping sites of connective and soft tissue
C49.9	Malignant neoplasm of connective and soft tissue, unspecified
C49.A0	Gastrointestinal stromal tumor, unspecified site
C49.A1	Gastrointestinal stromal tumor of esophagus
C49.A2	Gastrointestinal stromal tumor of stomach
C49.A3	Gastrointestinal stromal tumor of small intestine
C49.A4	Gastrointestinal stromal tumor of large intestine
C49.A5	Gastrointestinal stromal tumor of rectum
C49.A9	Gastrointestinal stromal tumor of other sites
C64.1	Malignant neoplasm of right kidney, except renal pelvis
C64.2	Malignant neoplasm of left kidney, except renal pelvis

C64.9	Malignant neoplasm of unspecified kidney, except renal pelvis
C78.00	Secondary malignant neoplasm of unspecified lung
C78.01	Secondary malignant neoplasm of right lung
C78.02	Secondary malignant neoplasm of left lung
C78.2	Secondary malignant neoplasm of pleura
C78.5	Secondary malignant neoplasm of large intestine and rectum
C78.7	Secondary malignant neoplasm of liver and intrahepatic bile duct
C79.51	Secondary malignant neoplasm of bone
C79.52	Secondary malignant neoplasm of bone marrow
C79.89	Secondary malignant neoplasm of other specified sites
C79.9	Secondary malignant neoplasm of unspecified site
C7B.00	Secondary carcinoid tumors, unspecified site
C7B.00	Secondary carcinoid tumors, unspecified site
C7B.01	Secondary carcinoid tumors of distant lymph nodes
C7B.02	Secondary carcinoid tumors of liver
C7B.03	Secondary carcinoid tumors of bone
C7B.04	Secondary carcinoid tumors of peritoneum
C7B.09	Secondary carcinoid tumors of other sites
C7B.1	Secondary Merkel cell carcinoma
C7B.8	Other secondary neuroendocrine tumors
D37.6	Neoplasm of uncertain behavior of liver, gallbladder and bile ducts
D41.00	Neoplasm of uncertain behavior of unspecified kidney
D41.01	Neoplasm of uncertain behavior of right kidney
D41.02	Neoplasm of uncertain behavior of left kidney
D48.1	Neoplasm of uncertain behavior of connective and other soft tissue
D49.0	Neoplasm of unspecified behavior of digestive system
D49.51	Neoplasm of unspecified behavior of kidney
D49.511	Neoplasm of unspecified behavior of right kidney
D49.512	Neoplasm of unspecified behavior of left kidney
D49.519	Neoplasm of unspecified behavior of unspecified kidney
D49.59	Neoplasm of unspecified behavior of other genitourinary organ
G89.3	Neoplasm related pain (acute) (chronic)

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