



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

Applies to all products administered or underwritten by Blue Cross and Blue Shield of Louisiana and its subsidiary, HMO Louisiana, Inc. (collectively referred to as the “Company”), unless otherwise provided in the applicable contract. Medical technology is constantly evolving, and we reserve the right to review and update Medical Policy periodically.

Note: Stereotactic Radiosurgery and Stereotactic Body Radiotherapy is addressed separately in medical policy 00045.

Note: The use of Radiofrequency Ablation (RFA) of Primary or Metastatic Liver Tumors is addressed separately in medical policy 00182.

Note: Cryosurgical Ablation of Primary or Metastatic Liver Tumors is addressed separately in medical policy 00220.

When Services Are Eligible for Coverage

Coverage for eligible medical treatments or procedures, drugs, devices or biological products may be provided only if:

- *Benefits are available in the member’s contract/certificate, and*
- *Medical necessity criteria and guidelines are met.*

Osteolytic Bone Metastases

Based on review of available data, the Company may consider radiofrequency ablation (RFA) to palliate pain in patients with osteolytic bone metastases who have failed or are poor candidates for standard treatments such as radiation or opioids to be **eligible for coverage.****

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

When Services May Be Eligible for Coverage

Coverage for eligible medical treatments or procedures, drugs, devices or biological products may be provided only if:

- *Benefits are available in the member's contract/certificate, and*
- *Medical necessity criteria and guidelines are met.*

Based on review of available data, the Company may consider radiofrequency ablation (RFA) to treat osteoid osteomas that cannot be managed successfully with medical treatment to be **eligible for coverage.****

Localized Renal Cell Carcinoma

Based on review of available data, the Company may consider radiofrequency ablation (RFA) to treat localized renal cell carcinoma (RCC) that is no more than 4 cm in size to be **eligible for coverage.****

Patient Selection Criteria

Coverage eligibility for RFA to treat localized renal cell carcinoma (RCC) that is no more than 4 cm in size will be considered when EITHER of the following is met:

- In order to preserve kidney function in patients with significantly impaired renal function (i.e., the patient has one kidney or renal insufficiency defined by a glomerular filtration rate [GFR] of less than 60 mL/min/m²); AND
- The standard surgical approach (i.e., resection of renal tissue) is likely to substantially worsen kidney function; OR
- Patient is not considered a surgical candidate.

Isolated Peripheral Non-Small Cell Lung Cancer Lesion

Based on review of available data, the Company may consider radiofrequency ablation (RFA) to treat an isolated peripheral non-small cell lung cancer (NSCLC) lesion that is no more than 3 cm in size to be **eligible for coverage.****

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

Patient Selection Criteria

Coverage eligibility for RFA to treat an isolated peripheral NSCLC lesion that is no more than 3 cm in size will be considered when ALL of the following criteria are met:

- Surgical resection or radiation treatment with curative intent is considered appropriate based on stage of disease, however, medical co-morbidity renders the individual unfit for those interventions; AND
- Tumor is located at least 1 cm from the trachea, main bronchi, esophagus, aorta, aortic arch branches, pulmonary artery and the heart.

Malignant Non-Pulmonary Tumor(s) Metastatic to the Lung

Based on review of available data, the Company may consider radiofrequency ablation (RF) to treat malignant non-pulmonary tumor(s) metastatic to the lung that are no more than 3 cm in size to be **eligible for coverage**. **

Patient Selection Criteria

Coverage eligibility for RFA to treat malignant non-pulmonary tumor(s) metastatic to the lung that are no more than 3 cm in size when ALL of the following criteria are met:

- In order to preserve lung function when surgical resection or radiation treatment is likely to substantially worsen pulmonary status; OR
- The patient is not considered a surgical candidate; AND
- There is no evidence of extrapulmonary metastases; and the tumor is located at least 1 cm from the trachea, main bronchi, esophagus, aorta, aortic arch branches, pulmonary artery and the heart; and

(See Policy Guidelines section for additional criteria.)

When Services Are Considered Investigational

Coverage is not available for investigational medical treatments or procedures, drugs, devices or biological products.

Based on review of available data, the Company considers radiofrequency ablation to be **investigational*** as a technique for ablation of:

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

- Breast tumors;
- Lung cancer not meeting the criteria above;
- Renal cell cancer not meeting criteria above;
- Osteoid osteomas that can be managed with medical treatment;
- Painful bony metastases as initial treatment; and
- All other tumors outside the liver including, but not limited to, the head and neck, thyroid, pancreas, adrenal gland, ovary, and pelvic/abdominal metastases of unspecified origin.

Policy Guidelines

The following are additional criteria developed by clinical judgment or consensus and existing guidelines for the use of radiofrequency ablation to treat metastatic tumors to the lung:

- No more than 3 tumors per lung should be ablated;
- Tumors should be amenable to complete ablation; AND
- Twelve months should elapse before a repeat ablation is considered.

Background/Overview

Radiofrequency Ablation

RFA was initially developed to treat inoperable tumors of the liver (see Medical Policy 00182). Recently, studies have reported on the use of RFA to treat other tumors. For some of these, RFA is being investigated as an alternative to surgery for operable tumors. Well-established local or systemic treatment alternatives are available for each of these malignancies. The hypothesized advantages of RFA for these cancers include improved local control and those common to any minimally invasive procedure (eg, preserving normal organ tissue, decreasing morbidity, decreasing length of hospitalization).

Goals of RFA may include (1) controlling local tumor growth and preventing recurrence; (2) palliating symptoms; and (3) extending survival duration for patients with certain tumors. The effective volume of RFA depends on the frequency and duration of applied current, local tissue characteristics, and probe configuration (eg, single vs multiple tips). RFA can be performed as an open surgical procedure, laparoscopically or percutaneously, with ultrasound or computed tomography guidance.

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

Potential complications associated with RFA include those caused by heat damage to normal tissue adjacent to the tumor (eg, intestinal damage during RFA of kidney), structural damage along the probe track (eg, pneumothorax as a consequence of procedures on the lung), and secondary tumors (if cells seed during probe removal).

FDA or Other Governmental Regulatory Approval

U.S. Food and Drug Administration (FDA)

The U.S. Food and Drug Administration (FDA) issued a statement in September 2008, concerning the regulatory status of RFA. The FDA has cleared RFA devices for the general indication of soft tissue cutting, coagulation, and ablation by thermal coagulation necrosis. Under this general indication, RFA can be used to ablate tumors, including lung tumors. Some RFA devices have been cleared for additional specific treatment indications, including partial or complete ablation of nonresectable liver lesions and palliation of pain associated with metastatic lesions involving bone. The FDA has not cleared any RFA devices for the specific treatment indication of partial or complete ablation of lung tumors, citing lack of sufficient clinical data to establish safety and effectiveness for this purpose. The FDA has received reports of death and serious injuries associated with the use of RFA devices in the treatment of lung tumors.

Rationale/Source

In radiofrequency ablation (RFA), a probe is inserted into the center of a tumor; then, prong-shaped, non-insulated electrodes are projected into the tumor. Next, heat is generated locally by an alternating, high-frequency current that travels through the electrodes. The localized heat treats the tissue adjacent to the probe, resulting in a 3 cm to 5.5 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 a local recurrence, it occurs at the edge and can sometimes be retreated. RFA may be performed percutaneously, laparoscopically, or as an open procedure.

Bone Tumors

For individuals who have painful osteolytic bone metastases who have failed or are poor candidates for standard treatments who receive RFA, the evidence includes case series. Relevant outcomes are symptoms, change in disease status, quality of life (QOL), medication use, and treatment-related morbidity. Case series have shown clinically significant pain relief and reduction in opioid use following treatment of painful osteolytic metastases. The population is comprised of patients with

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

few or no treatment options, for whom short-term pain relief is an appropriate clinical outcome. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

For individuals who have painful osteoid osteomas who receive RFA, the evidence includes numerous observational studies and a systematic review of these studies. The relevant outcomes are symptoms, change in disease status, QOL, medication use, and treatment-related morbidity. In a systematic review of thermal ablation techniques, clinical success (pain-free) was achieved in 94% to 98% of patients. Most patients (89%-96%) remained pain-free when assessed during longer-term follow-up. Although no randomized trials of RFA for osteoid osteomas have been performed, the uncontrolled studies have demonstrated RFA can provide adequate symptom relief with minimal complications, for a population for whom short-term symptom relief and avoidance of invasive procedures are appropriate clinical outcomes. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

Localized Renal Cell Carcinoma

For individuals who have localized renal cell carcinoma that is no more than 4 cm in size who receive RFA, the evidence includes a randomized controlled trial (RCT), numerous observational studies, and systematic reviews of these studies. Relevant outcomes are overall survival (OS), change in disease status, QOL, and treatment-related morbidity. A recent meta-analysis that included only an RCT and cohort studies found that RFA was as effective as nephrectomy for small renal tumors, with a reduction in complications. Another recent meta-analysis found that partial nephrectomy was superior to ablative techniques (the study included RFA but also cryoablation and microwave ablation) in overall mortality and local recurrence but not in cancer-specific mortality. It also found fewer complications and improved renal function with ablation. Although inconsistent, the evidence does suggest that, for small renal tumors, RFA may result in a similar rate of disease progression with a lower complication rate than nephrectomy. However, comparative trials are needed to determine with greater certainty the effects of these treatments in the same patient population. The evidence is insufficient to determine the effects of the technology on health outcomes.

Clinical input obtained in 2010 supported use of RFA for localized renal cell carcinoma that is no more than 4 cm in size when preservation of kidney function is necessary, and a standard surgical approach is likely to worsen kidney function substantially or when the patient is not considered a

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

surgical candidate. Thus, absent other treatment options, RFA for small renal cell tumors may be considered medically necessary.

The clinical input continues to be supported by the most recent NCCN Guidelines Kidney Cancer Version 1.2021 and the American Urological Association (2017) (see supplemental information). Both guidelines emphasize that the use of radiofrequency ablation is associated with more optimal outcomes when tumors are <3cm.

Inoperable Primary Pulmonary and Nonpulmonary Tumors

For individuals who have inoperable primary pulmonary tumors or nonpulmonary tumors metastatic to the lung who receive RFA, the evidence includes prospective observational studies and systematic reviews of these studies. The relevant outcomes are OS, change in disease status, QOL, and treatment-related morbidity. A multicenter study found that for tumors less than 3.5 cm in size, RFA can lead to a complete response in as many as 88% of patients for at least 1 year. Two-year survival rates have been reported to range from 41% to 75% in case series, with 5-year survival rates of 20% to 27%. In general, the evidence suggests that RFA results in adequate survival and tumor control in patients who are not surgical candidates, with low morbidity rates. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

Breast Tumors

For individuals who have breast tumors who receive RFA, the evidence includes observational studies and systematic reviews of these studies. The relevant outcomes are OS, change in disease status, QOL, and treatment-related morbidity. Evidence has reported varied and incomplete ablation rates with concerns about postablation tumor cell viability. Long-term improvements in health outcomes have not been demonstrated. Additionally, available studies do not permit comparisons with conventional breast-conserving procedures. Further studies, with long-term follow-up, should focus on whether RFA of the breast for small tumors can provide local control and survival rates compared with conventional breast-conserving treatment. The evidence is insufficient to determine the effects of the technology on health outcomes.

Benign Thyroid Tumors

For individuals who have benign thyroid tumors who receive RFA, the evidence includes RCTs, prospective studies, case series, and systematic reviews of these studies. The relevant outcomes are symptoms, change in disease status, QOL, medication use, and treatment-related morbidity. A

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

systematic review that included four RCTs and five observational studies found significant reductions in nodule size and withdrawal from methimazole following treatment with RFA when compared with a variety of local treatment. Reports of complications vary. The most frequent major complication in a large multicenter series of specialty centers was voice change. The evidence is insufficient to determine the effects of the technology on health outcomes.

Miscellaneous Solid Tumors

For individuals who have miscellaneous tumors (eg, head and neck, thyroid cancer, pancreas) who receive RFA, the evidence includes a few case series, prospective observational studies, and retrospective comparative studies. The relevant outcomes are OS, change in disease status, QOL, and treatment-related morbidity. There is a limited evidence base for these tumor types. Reporting on outcomes or comparisons with other treatments is limited. These studies do not permit conclusions on the health benefits of RFA. The evidence is insufficient to determine the impact of technology on health outcomes.

Supplemental Information

Clinical Input From Physician Specialty Societies and Academic Medical Centers

While the various physician specialty societies and academic medical centers may collaborate with and make recommendations during this process, through the provision of appropriate reviewers, input received does not represent an endorsement or position statement by the physician specialty societies or academic medical centers, unless otherwise noted.

2010 Input

In response to requests, input was received from 2 physician specialty societies (4 reviewers) and 2 academic medical centers (4 reviewers) while this policy was under review in 2010. Input was similar to that received in 2009, except support for the use of radiofrequency ablation (RFA) to treat lung tumors was declined (only 1 respondent indicated this was an option in tumors metastatic to lung). One respondent also indicated a potential use for adrenal tumors. Input supported RFA for localized renal cell carcinoma no more than 4 cm in size when preservation of kidney function is necessary and a standard surgical approach would likely substantially worsen kidney function or when the patient is not considered a surgical candidate.

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

2009 Input

In response to requests, input was received from 1 physician specialty society (4 reviews) and from 2 academic medical centers (3 reviews) while this policy was under review in 2009. All reviewers supported the use of RFA in the treatment of painful bone metastases that have failed standard treatment and in the treatment of osteoid osteomas. Reviewers were divided over the use of RFA for lung tumors, although several agreed that, while it may be useful in a select population of patients, it should be used in the clinical trial setting. Reviewers were also split with regard to RFA in the treatment of renal tumors, with some supporting its use in a select population of patients. With the exception of one disagreement and one nonresponse, the reviewers agreed to the investigational statement on the use of RFA in all other tumors outside the liver that are addressed in this policy.

Practice Guidelines and Position Statements

American College of Chest Physicians

The American College of Chest Physicians (2013) guidelines on the treatment of stage I and II non-small-cell lung cancer (NSCLC) have indicated RFA has been used effectively in clinical stage I NSCLC. Therefore, in medically inoperable patients, peripheral NSCLC tumors less than 3 cm may be treated with RFA. The College also collaborated with the Society of Thoracic Surgeons to develop consensus guidelines on the treatment of high-risk patients with stage I NSCLC. These 2012 consensus guidelines indicated RFA is an alternative treatment option for patients who are not surgical candidates due to severe medical comorbidity.

American Urological Association

The American Urological Association (2017) guideline on renal masses and localized renal cancer affirms that partial nephrectomy should be prioritized for management of cT1a renal masses when intervention is indicated. Thermal ablation should be considered "as an alternate approach for the management of cT1a renal masses <3 cm in size."

American Thyroid Association

The American Thyroid Association (2015) guideline on management of thyroid nodules and differentiated thyroid cancer. Patients with a benign cytology diagnosis or those very unlikely to be malignant (eg, purely cystic nodule) should undergo surveillance with the frequency determined by the level of suspicion for a missed malignancy. Medical or surgical intervention is considered if the nodules are large (>4 cm), causing compressive or structural symptoms, or if there is clinical

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

concern. Recurrent cystic thyroid nodules with benign cytology should be considered for surgical removal or percutaneous ethanol injection. For differentiated thyroid cancer, "localized treatments with thermal (radiofrequency or cryo-) ablation, ethanol ablation, or chemoembolization may be beneficial in patients with a single or a few metastases and in those with metastases at high risk of local complications."

National Comprehensive Cancer Network

The NCCN guidelines for the treatment of non-small cell lung cancer (v.6.2020) state: "For medically operable disease, resection is the preferred local treatment modality (other modalities include SABR, thermal ablation such as radiofrequency ablation and cryotherapy)."

The NCCN guidelines for thyroid carcinoma (v.2.2020) indicate that local therapies such as RFA may be considered for locoregional recurrence of thyroid carcinoma-papillary carcinoma in select patients with limited burden nodal disease. Additionally, local therapies, including RFA, can be considered in those with metastatic disease.

The NCCN guidelines (v.1.2021) for renal cancer indicate that "[t]hermal ablation (eg, cryosurgery, radiofrequency ablation) is an option for the management of patients with clinical stage T1 renal lesions. Thermal ablation is an option for masses <3 cm, but it may also be an option for larger masses in select patients. Ablation in masses >3 cm is associated with higher rates of local recurrence/persistence and complications."

The NCCN colon cancer guidelines (v.4.2020), which are currently under discussion, state that "for the local treatment of resectable metastatic disease, patients with liver or lung oligometastases can be considered for tumor ablation therapy. Evidence on the use of RFA as a reasonable treatment option for non-surgical candidates and those with recurrent disease after hepatectomy with small liver metastases that can be treated with clear margins is growing."

The NCCN guidelines for head and neck cancers (v.2.2020) and pancreatic adenocarcinoma (v.1.2020) do not mention RFA.

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

National Institute for Health and Care Excellence

The NICE guidance (2004) on osteoid osteoma indicated that "current evidence on the safety and efficacy of computed tomography (CT)-guided thermocoagulation of osteoid osteoma appears adequate to support its use...."

Updated NICE guidance (2010) on renal cancer has indicated that "evidence on the safety and efficacy of percutaneous radiofrequency ablation (RFA) ... in the short and medium term appears adequate to support the use of this procedure provided that patients are followed up in the long term."

The NICE guidance (2010) on RFA for primary and secondary lung cancers has stated: "[C]urrent evidence on the efficacy of percutaneous radiofrequency ablation (RFA) ... is adequate in terms of tumor control." The NICE also indicated RFA might "be used in patients with small, early-stage lung cancers or small numbers of lung metastases who are unsuitable for, or prefer not to undergo, surgery. It may also have a place in multi-modality treatment of more advanced primary lung cancers." The guidance warned of serious complications (eg, pneumothorax) among lung cancer patients.

The NICE guidance (2016) on benign thyroid nodules stated: "Current evidence on the safety and efficacy of ultrasound-guided percutaneous radiofrequency ablation ... is adequate to support the use of this procedure...."

U.S. Preventive Services Task Force Recommendations

Not applicable.

Medicare National Coverage

There is no national coverage determination. In the absence of a national coverage determination, coverage decisions are left to the discretion of local Medicare carriers.

Ongoing and Unpublished Clinical Trials

Some currently unpublished trials that might influence this review are listed in Table 1.

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

Table 1. Summary of Key Trials

NCT No.	Trial Name	Planned Enrollment	Completion Date
<i>Unpublished</i>			
NCT01051037	Phase II Study Evaluating Safety and Efficacy of Stereotactic Body Radiotherapy and Radiofrequency Ablation for Medically Inoperable and Recurrent Lung Tumors Near Central Airways	17	Dec 2017 (completed)

NCT: national clinical trial.

References

1. Blue Cross and Blue Shield Association, Medical Policy Reference Manual, “Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors”, 7.01.95, October 2020.
2. Goetz MP, Callstrom MR, Charboneau JW, et al. Percutaneous image-guided radiofrequency ablation of painful metastases involving bone: a multicenter study. J Clin Oncol. Jan 15 2004; 22(2): 300-6. PMID 14722039
3. Gronemeyer DH, Schirp S, Gevargez A. Image-guided radiofrequency ablation of spinal tumors: preliminary experience with an expandable array electrode. Cancer J. Jan-Feb 2002; 8(1): 33-9. PMID 11898806
4. Kojima H, Tanigawa N, Kariya S, et al. Clinical assessment of percutaneous radiofrequency ablation for painful metastatic bone tumors. Cardiovasc Intervent Radiol. Nov-Dec 2006; 29(6): 1022-6. PMID 16988875
5. Tordjman M, Perronne L, Madelin G, et al. CT-guided radiofrequency ablation for osteoid osteomas: a systematic review. Eur Radiol. Jun 09 2020. PMID 32518986
6. Lanza E, Thouvenin Y, Viala P, et al. Osteoid osteoma treated by percutaneous thermal ablation: when do we fail? A systematic review and guidelines for future reporting. Cardiovasc Intervent Radiol. Dec 2014; 37(6): 1530-9. PMID 24337349
7. Albisinni U, Facchini G, Spinnato P, et al. Spinal osteoid osteoma: efficacy and safety of radiofrequency ablation. Skeletal Radiol. Aug 2017; 46(8): 1087-1094. PMID 28497160
8. Lassalle L, Campagna R, Corcos G, et al. Therapeutic outcome of CT-guided radiofrequency ablation in patients with osteoid osteoma. Skeletal Radiol. Jul 2017; 46(7): 949-956. PMID 28429047

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

9. Rimondi E, Mavrogenis AF, Rossi G, et al. Radiofrequency ablation for non-spinal osteoid osteomas in 557 patients. *Eur Radiol.* Jan 2012; 22(1): 181-8. PMID 21842430
10. Sahin C, Oc Y, Ediz N, et al. The safety and the efficacy of computed tomography guided percutaneous radiofrequency ablation of osteoid osteoma. *Acta Orthop Traumatol Turc.* Sep 2019; 53(5): 360-365. PMID 31371131
11. Knudsen M, Riishede A, Lucke A, et al. Computed tomography-guided radiofrequency ablation is a safe and effective treatment of osteoid osteoma located outside the spine. *Dan Med J.* May 2015; 62(5). PMID 26050823
12. Rosenthal DI, Hornicek FJ, Torriani M, et al. Osteoid osteoma: percutaneous treatment with radiofrequency energy. *Radiology.* Oct 2003; 229(1): 171-5. PMID 12944597
13. Uhlig J, Strauss A, Rucker G, et al. Partial nephrectomy versus ablative techniques for small renal masses: a systematic review and network meta-analysis. *Eur Radiol.* Mar 2019; 29(3): 1293-1307. PMID 30255245
14. Katsanos K, Mailli L, Krokidis M, et al. Systematic review and meta-analysis of thermal ablation versus surgical nephrectomy for small renal tumours. *Cardiovasc Intervent Radiol.* Apr 2014; 37(2): 427-37. PMID 24482030
15. El Dib R, Touma NJ, Kapoor A. Cryoablation vs radiofrequency ablation for the treatment of renal cell carcinoma: a meta-analysis of case series studies. *BJU Int.* Aug 2012; 110(4): 510-6. PMID 22304329
16. Liu SY, Chu CM, Kong AP, et al. Radiofrequency ablation compared with laparoscopic adrenalectomy for aldosterone-producing adenoma. *Br J Surg.* Oct 2016; 103(11): 1476-86. PMID 27511444
17. Marshall HR, Shakeri S, Hosseiny M, et al. Long-Term Survival after Percutaneous Radiofrequency Ablation of Pathologically Proven Renal Cell Carcinoma in 100 Patients. *J Vasc Interv Radiol.* Jan 2020; 31(1): 15-24. PMID 31767409
18. Andrews JR, Atwell T, Schmit G, et al. Oncologic Outcomes Following Partial Nephrectomy and Percutaneous Ablation for cT1 Renal Masses. *Eur Urol.* Aug 2019; 76(2): 244-251. PMID 31060824
19. Park BK, Gong IH, Kang MY, et al. RFA versus robotic partial nephrectomy for T1a renal cell carcinoma: a propensity score-matched comparison of mid-term outcome. *Eur Radiol.* Jul 2018; 28(7): 2979-2985. PMID 29426988
20. Dai Y, Covarrubias D, Uppot R, et al. Image-Guided Percutaneous Radiofrequency Ablation of Central Renal Cell Carcinoma: Assessment of Clinical Efficacy and Safety in 31 Tumors. *J Vasc Interv Radiol.* Dec 2017; 28(12): 1643-1650. PMID 28673657

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

21. Dvorak P, Hoffmann P, Brodak M, et al. Percutaneous radiofrequency and microwave ablation in the treatment of renal tumors - 10 years of experience. *Wideochir Inne Tech Maloinwazyjne*. Dec 2017; 12(4): 394-402. PMID 29362655
22. Pantelidou M, Challacombe B, McGrath A, et al. Percutaneous Radiofrequency Ablation Versus Robotic-Assisted Partial Nephrectomy for the Treatment of Small Renal Cell Carcinoma. *Cardiovasc Intervent Radiol*. Nov 2016; 39(11): 1595-1603. PMID 27435582
23. Iannuccilli JD, Dupuy DE, Beland MD, et al. Effectiveness and safety of computed tomography-guided radiofrequency ablation of renal cancer: a 14-year single institution experience in 203 patients. *Eur Radiol*. Jun 2016; 26(6): 1656-64. PMID 26373755
24. Schlijper RC, Grutters JP, Houben R, et al. What to choose as radical local treatment for lung metastases from colo-rectal cancer: surgery or radiofrequency ablation?. *Cancer Treat Rev*. Feb 2014; 40(1): 60-7. PMID 23768754
25. Ratko TA, Vats V, Brock J, et al. Local Nonsurgical Therapies for Stage I and Symptomatic Obstructive Non- Small-Cell Lung Cancer (Comparative Effectiveness Review No. 112). Rockville, MD: Agency for Healthcare Research and Quality; 2013.
26. Bilal H, Mahmood S, Rajashanker B, et al. Is radiofrequency ablation more effective than stereotactic ablative radiotherapy in patients with early stage medically inoperable non-small cell lung cancer?. *Interact Cardiovasc Thorac Surg*. Aug 2012; 15(2): 258-65. PMID 22581864
27. Chan VO, McDermott S, Malone DE, et al. Percutaneous radiofrequency ablation of lung tumors: evaluation of the literature using evidence-based techniques. *J Thorac Imaging*. Feb 2011; 26(1): 18-26. PMID 20829720
28. Huang L, Han Y, Zhao J, et al. Is radiofrequency thermal ablation a safe and effective procedure in the treatment of pulmonary malignancies?. *Eur J Cardiothorac Surg*. Mar 2011; 39(3): 348-51. PMID 20663679
29. Zemlyak A, Moore WH, Bilfinger TV. Comparison of survival after sublobar resections and ablative therapies for stage I non-small cell lung cancer. *J Am Coll Surg*. Jul 2010; 211(1): 68-72. PMID 20610251
30. Lencioni R, Crocetti L, Cioni R, et al. Response to radiofrequency ablation of pulmonary tumours: a prospective, intention-to-treat, multicentre clinical trial (the RAPTURE study). *Lancet Oncol*. Jul 2008; 9(7): 621-8. PMID 18565793
31. Zhu JC, Yan TD, Glenn D, et al. Radiofrequency ablation of lung tumors: feasibility and safety. *Ann Thorac Surg*. Apr 2009; 87(4): 1023-8. PMID 19324122

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

32. Pennathur A, Abbas G, Gooding WE, et al. Image-guided radiofrequency ablation of lung neoplasm in 100 consecutive patients by a thoracic surgical service. *Ann Thorac Surg*. Nov 2009; 88(5): 1601-6; discussion 1607-8. PMID 19853119
33. Peek MCL, Ahmed M, Napoli A, et al. Minimally invasive ablative techniques in the treatment of breast cancer: a systematic review and meta-analysis. *Int J Hyperthermia*. Mar 2017; 33(2): 191-202. PMID 27575566
34. Zhao Z, Wu F. Minimally-invasive thermal ablation of early-stage breast cancer: a systemic review. *Eur J Surg Oncol*. Dec 2010; 36(12): 1149-55. PMID 20889281
35. Soukup B, Bismohun S, Reefy S, et al. The evolving role of radiofrequency ablation therapy of breast lesions. *Anticancer Res*. Sep 2010; 30(9): 3693-7. PMID 20944155
36. Ito T, Oura S, Nagamine S, et al. Radiofrequency Ablation of Breast Cancer: A Retrospective Study. *Clin Breast Cancer*. Aug 2018; 18(4): e495-e500. PMID 29079443
37. Li P, Xiao-Yin T, Cui D, et al. Evaluation of the safety and efficacy of percutaneous radiofrequency ablation for treating multiple breast fibroadenoma. *J Cancer Res Ther*. Dec 2016; 12(Supplement): C138-C142. PMID 28230006
38. Wilson M, Korourian S, Boneti C, et al. Long-term results of excision followed by radiofrequency ablation as the sole means of local therapy for breast cancer. *Ann Surg Oncol*. Oct 2012; 19(10): 3192-8. PMID 22911363
39. Kinoshita T, Iwamoto E, Tsuda H, et al. Radiofrequency ablation as local therapy for early breast carcinomas. *Breast Cancer*. Jan 2011; 18(1): 10-7. PMID 20072824
40. Imoto S, Wada N, Sakemura N, et al. Feasibility study on radiofrequency ablation followed by partial mastectomy for stage I breast cancer patients. *Breast*. Apr 2009; 18(2): 130-4. PMID 19324550
41. Garbay JR, Mathieu MC, Lamuraglia M, et al. Radiofrequency thermal ablation of breast cancer local recurrence: a phase II clinical trial. *Ann Surg Oncol*. Nov 2008; 15(11): 3222-6. PMID 18709415
42. Haugen BR, Alexander EK, Bible KC, et al. 2015 American Thyroid Association Management Guidelines for Adult Patients with Thyroid Nodules and Differentiated Thyroid Cancer: The American Thyroid Association Guidelines Task Force on Thyroid Nodules and Differentiated Thyroid Cancer. *Thyroid*. Jan 2016; 26(1): 1-133. PMID 26462967
43. Cho SJ, Baek JH, Chung SR, et al. Long-Term Results of Thermal Ablation of Benign Thyroid Nodules: A Systematic Review and Meta-Analysis. *Endocrinol Metab (Seoul)*. Jun 2020; 35(2): 339-350. PMID 32615718

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

44. Chen F, Tian G, Kong D, et al. Radiofrequency ablation for treatment of benign thyroid nodules: A PRISMA-compliant systematic review and meta-analysis of outcomes. *Medicine (Baltimore)*. Aug 2016; 95(34): e4659. PMID 27559968
45. Fuller CW, Nguyen SA, Lohia S, et al. Radiofrequency ablation for treatment of benign thyroid nodules: systematic review. *Laryngoscope*. Jan 2014; 124(1): 346-53. PMID 24122763
46. Kim JH, Yoo WS, Park YJ, et al. Efficacy and Safety of Radiofrequency Ablation for Treatment of Locally Recurrent Thyroid Cancers Smaller than 2 cm. *Radiology*. Sep 2015; 276(3): 909-18. PMID 25848897
47. Owen RP, Khan SA, Negassa A, et al. Radiofrequency ablation of advanced head and neck cancer. *Arch Otolaryngol Head Neck Surg*. May 2011; 137(5): 493-8. PMID 21576561
48. Brook AL, Gold MM, Miller TS, et al. CT-guided radiofrequency ablation in the palliative treatment of recurrent advanced head and neck malignancies. *J Vasc Interv Radiol*. May 2008; 19(5): 725-35. PMID 18440462
49. Owen RP, Silver CE, Ravikumar TS, et al. Techniques for radiofrequency ablation of head and neck tumors. *Arch Otolaryngol Head Neck Surg*. Jan 2004; 130(1): 52-6. PMID 14732768
50. Rey VE, Labrador R, Falcon M, et al. Transvaginal Radiofrequency Ablation of Myomas: Technique, Outcomes, and Complications. *J Laparoendosc Adv Surg Tech A*. Jan 2019; 29(1): 24-28. PMID 30198831
51. Yin G, Chen M, Yang S, et al. Treatment of uterine myomas by radiofrequency thermal ablation: a 10-year retrospective cohort study. *Reprod Sci*. May 2015; 22(5): 609-14. PMID 25355802
52. Liu B, Mo C, Wang W, et al. Treatment outcomes of percutaneous radiofrequency ablation versus adrenalectomy for adrenal metastases: a retrospective comparative study. *J Endocrinol Invest*. Sep 2020; 43(9): 1249-1257. PMID 32166699
53. Yang MH, Tyan YS, Huang YH, et al. Comparison of radiofrequency ablation versus laparoscopic adrenalectomy for benign aldosterone-producing adenoma. *Radiol Med*. Oct 2016; 121(10): 811-9. PMID 27300650
54. Hasegawa T, Takaki H, Kodama H, et al. Three-year Survival Rate after Radiofrequency Ablation for Surgically Resectable Colorectal Lung Metastases: A Prospective Multicenter Study. *Radiology*. Mar 2020; 294(3): 686-695. PMID 31934829
55. Locklin JK, Mannes A, Berger A, et al. Palliation of soft tissue cancer pain with radiofrequency ablation. *J Support Oncol*. Sep-Oct 2004; 2(5): 439-45. PMID 15524075
56. Rosenthal DI. Radiofrequency treatment. *Orthop Clin North Am*. Jul 2006; 37(3): 475-84, viii. PMID 16846772

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

57. Liapi E, Geschwind JF. Transcatheter and ablative therapeutic approaches for solid malignancies. *J Clin Oncol.* Mar 10 2007; 25(8): 978-86. PMID 17350947
58. Spiliotis JD, Datsis AC, Michalopoulos NV, et al. Radiofrequency ablation combined with palliative surgery may prolong survival of patients with advanced cancer of the pancreas. *Langenbecks Arch Surg.* Jan 2007; 392(1): 55-60. PMID 17089173
59. Zou YP, Li WM, Zheng F, et al. Intraoperative radiofrequency ablation combined with 125 iodine seed implantation for unresectable pancreatic cancer. *World J Gastroenterol.* Oct 28 2010; 16(40): 5104-10. PMID 20976848
60. Cantore M, Girelli R, Mambrini A, et al. Combined modality treatment for patients with locally advanced pancreatic adenocarcinoma. *Br J Surg.* Aug 2012; 99(8): 1083-8. PMID 22648697
61. Rombouts SJ, Vogel JA, van Santvoort HC, et al. Systematic review of innovative ablative therapies for the treatment of locally advanced pancreatic cancer. *Br J Surg.* Feb 2015; 102(3): 182-93. PMID 25524417
62. Kameyama S, Murakami H, Masuda H, et al. Minimally invasive magnetic resonance imaging-guided stereotactic radiofrequency thermocoagulation for epileptogenic hypothalamic hamartomas. *Neurosurgery.* Sep 2009; 65(3): 438-49; discussion 449. PMID 19687687
63. Vavra P, Dostalík J, Zacharoulis D, et al. Endoscopic radiofrequency ablation in colorectal cancer: initial clinical results of a new bipolar radiofrequency ablation device. *Dis Colon Rectum.* Feb 2009; 52(2): 355-8. PMID 19279436
64. Mylona S, Karagiannis G, Patsoura S, et al. Palliative treatment of rectal carcinoma recurrence using radiofrequency ablation. *Cardiovasc Intervent Radiol.* Aug 2012; 35(4): 875-82. PMID 22167304
65. Ripley RT, Gajdos C, Reppert AE, et al. Sequential radiofrequency ablation and surgical debulking for unresectable colorectal carcinoma: thermo-surgical ablation. *J Surg Oncol.* Feb 2013; 107(2): 144-7. PMID 22927225
66. Howington JA, Blum MG, Chang AC, et al. Treatment of stage I and II non-small cell lung cancer: Diagnosis and management of lung cancer, 3rd ed: American College of Chest Physicians evidence-based clinical practice guidelines. *Chest.* May 2013; 143(5 Suppl): e278S-e313S. PMID 23649443
67. Donington J, Ferguson M, Mazzone P, et al. American College of Chest Physicians and Society of Thoracic Surgeons consensus statement for evaluation and management for high-risk patients with stage I non-small cell lung cancer. *Chest.* Dec 2012; 142(6): 1620-1635. PMID 23208335
68. Campbell S, Uzzo RG, Allaf ME, et al. Renal Mass and Localized Renal Cancer: AUA Guideline. *J Urol.* Sep 2017; 198(3): 520-529. PMID 28479239

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

- 69. National Comprehensive Cancer Network (NCCN). NCCN Clinical Practice Guidelines in Oncology: Non-small cell lung cancer. Version 6.2020.
https://www.nccn.org/professionals/physician_gls/pdf/nscl.pdf. National Comprehensive Cancer Network (NCCN). NCCN Clinical Practice Guidelines in Oncology: Colon Cancer. Version 4.2020. https://www.nccn.org/professionals/physician_gls/pdf/colon.pdf.
- 70. National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines): Head and Neck Cancers. Version 2.2020.
https://www.nccn.org/professionals/physician_gls/pdf/head-and-neck.pdf.
- 71. National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines): Pancreatic Adenocarcinoma. Version 1.2020.
https://www.nccn.org/professionals/physician_gls/pdf/pancreatic.pdf.
- 72. National Institute for Health and Care Excellence (NICE). Computed tomography-guided thermocoagulation of osteoid osteoma [IPG53]. 2004; <https://www.nice.org.uk/guidance/ipg53>.
- 73. National Institute for Health and Care Excellence (NICE). Percutaneous radiofrequency ablation for primary and secondary lung cancers [IPG372]. 2010;
<https://www.nice.org.uk/guidance/ipg372>.
- 74. National Institute for Health and Care Excellence (NICE). Ultrasound-guided percutaneous radiofrequency ablation for benign thyroid nodules [IPG562]. 2016;
<https://www.nice.org.uk/guidance/IPG562/chapter/1-Recommendations>.

Policy History

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

- 07/13/2005 Medical Director review
- 07/19/2005 Medical Policy Committee review
- 08/24/2005 Managed Care Advisory Council approval
- 07/07/2006 Format revision, including addition of FDA and or other governmental regulatory approval and rationale/source. Coverage eligibility unchanged.
- 08/08/2006 Medical Director review
- 08/09/2006 Medical Policy Committee approval.
- 07/10/2007 Medical Director review
- 07/18/2007 Medical Policy Committee approval. Policy Statement added for osteoid osteoma and rationale/source updated.

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

07/02/2008	Medical Director review
07/16/2008	Medical Policy Committee approval. Coverage eligibility unchanged.
07/02/2009	Medical Director review
07/22/2009	Medical Policy Committee approval. Coverage statement added to indicate that use of radiofrequency ablation as treatment of osteoid osteomas that cannot be managed successfully with medical treatment may be considered eligible for coverage. Coverage statement added that treatment of localized renal cell carcinoma no more than 4cm in size may be considered eligible for coverage when specific criteria are met. Added that radiofrequency ablation for the treatment of osteoid osteomas that can be managed with medical treatment is considered to be investigational.
08/05/2010	Medical Policy Committee review
08/18/2010	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
08/04/2011	Medical Policy Committee review
08/17/2011	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
08/02/2012	Medical Policy Committee review
08/15/2012	Medical Policy Implementation Committee approval. Added options for primary and metastatic pulmonary tumors to be eligible for coverage with criteria.
12/12/2013	Medical Policy Committee review
12/18/2013	Medical Policy Implementation Committee approval. Reformatted investigational statement and added thyroid as investigational.
06/25/2015	Medical Policy Committee review
07/15/2015	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
06/30/2016	Medical Policy Committee review
07/20/2016	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
01/01/2017	Coding update: Removing ICD-9 Diagnosis codes
07/06/2017	Medical Policy Committee review
07/19/2017	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
01/01/2018	Coding update
07/05/2018	Medical Policy Committee review

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

- 07/11/2018 Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
- 08/31/2018 Coding update
- 07/03/2019 Medical Policy Committee review
- 07/18/2019 Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
- 11/13/2019 Coding update
- 01/14/2020 Coding update
- 07/02/2020 Medical Policy Committee review
- 07/08/2020 Medical Policy Implementation Committee approval. Added an eligible for coverage statement for RFA to treat osteoid osteomas that cannot be managed successfully with medical treatment. Added a reference to the Policy Guidelines after the eligible for coverage criteria for treatment of malignant nonpulmonary tumor(s) metastatic to the lung.
- 07/01/2021 Medical Policy Committee review
- 07/14/2021 Medical Policy Implementation Committee approval. Added pancreas to the list for radiofrequency ablation of all other tumors to be investigational. Coverage eligibility unchanged.

Next Scheduled Review Date: 07/2022

Coding

The five character codes included in the Blue Cross Blue Shield of Louisiana Medical Policy Coverage Guidelines are obtained from Current Procedural Terminology (CPT®)‡, copyright 2020 by the American Medical Association (AMA). CPT is developed by the AMA as a listing of descriptive terms and five character identifying codes and modifiers for reporting medical services and procedures performed by physician.

The responsibility for the content of Blue Cross Blue Shield of Louisiana Medical Policy Coverage Guidelines is with Blue Cross and Blue Shield of Louisiana and no endorsement by the AMA is intended or should be implied. The AMA disclaims responsibility for any consequences or liability attributable or related to any use, nonuse or interpretation of information contained in Blue Cross Blue Shield of Louisiana Medical Policy Coverage Guidelines. Fee schedules, relative value units, conversion factors and/or related components are not assigned by the AMA, are not part of CPT,

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

and the AMA is not recommending their use. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein. Any use of CPT outside of Blue Cross Blue Shield of Louisiana Medical Policy Coverage Guidelines should refer to the most current Current Procedural Terminology which contains the complete and most current listing of CPT codes and descriptive terms. Applicable FARS/DFARS apply.

CPT is a registered trademark of the American Medical Association.

Codes used to identify services associated with this policy may include (but may not be limited to) the following:

Code Type	Code
CPT	20982, 20983, 32998, 50542, 50592, 60699, 76940, 77013, 77022
HCPCS	No codes
ICD-10 Diagnosis	C34.90-C34.92, C40.00-C40.92, C50.11-C50.919, C64.1-C64.9, C65.1-C65.9, C66.1-C66.9, C68.1-C68.9, C73, D09.3, D16.00-D16.9, D34, D44.0, E04.0-E04.9

*Investigational – A medical treatment, procedure, drug, device, or biological product is Investigational if the effectiveness has not been clearly tested and it has not been incorporated into standard medical practice. Any determination we make that a medical treatment, procedure, drug, device, or biological product is Investigational will be based on a consideration of the following:

- A. Whether the medical treatment, procedure, drug, device, or biological product can be lawfully marketed without approval of the U.S. Food and Drug Administration (FDA) and whether such approval has been granted at the time the medical treatment, procedure, drug, device, or biological product is sought to be furnished; or
- B. Whether the medical treatment, procedure, drug, device, or biological product requires further studies or clinical trials to determine its maximum tolerated dose, toxicity, safety, effectiveness, or effectiveness as compared with the standard means of treatment or diagnosis, must improve health outcomes, according to the consensus of opinion among experts as shown by reliable evidence, including:
 - 1. Consultation with the Blue Cross and Blue Shield Association technology assessment program (TEC) or other nonaffiliated technology evaluation center(s);

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



Louisiana

Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors

Policy # 00175

Original Effective Date: 08/24/2005

Current Effective Date: 08/09/2021

2. Credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community; or
3. Reference to federal regulations.

****Medically Necessary (or “Medical Necessity”)** - Health care services, treatment, procedures, equipment, drugs, devices, items or supplies that a Provider, exercising prudent clinical judgment, would provide to a patient for the purpose of preventing, evaluating, diagnosing or treating an illness, injury, disease or its symptoms, and that are:

- A. In accordance with nationally accepted standards of medical practice;
- B. Clinically appropriate, in terms of type, frequency, extent, level of care, site and duration, and considered effective for the patient's illness, injury or disease; and
- C. Not primarily for the personal comfort or convenience of the patient, physician or other health care provider, and not more costly than an alternative service or sequence of services at least as likely to produce equivalent therapeutic or diagnostic results as to the diagnosis or treatment of that patient's illness, injury or disease.

For these purposes, “nationally accepted standards of medical practice” means standards that are based on credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community, Physician Specialty Society recommendations and the views of Physicians practicing in relevant clinical areas and any other relevant factors.

‡ Indicated trademarks are the registered trademarks of their respective owners.

NOTICE: If the Patient’s health insurance contract contains language that differs from the BCBSLA Medical Policy definition noted above, the definition in the health insurance contract will be relied upon for specific coverage determinations.

NOTICE: Medical Policies are scientific based opinions, provided solely for coverage and informational purposes. Medical Policies should not be construed to suggest that the Company recommends, advocates, requires, encourages, or discourages any particular treatment, procedure, or service, or any particular course of treatment, procedure, or service.

©2021 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.