



Medical Policy

Cryosurgical Ablation of Miscellaneous Solid Tumors Other Than Liver, Prostate, or Dermatologic Tumors

Table of Contents

- [Policy: Commercial](#)
- [Coding Information](#)
- [Information Pertaining to All Policies](#)
- [Policy: Medicare](#)
- [Description](#)
- [References](#)
- [Authorization Information](#)
- [Policy History](#)

Policy Number: 260

BCBSA Reference Number: 7.01.92

NCD/LCD: N/A

Related Policies

- Radiofrequency Ablation of Miscellaneous Solid Tumors Excluding Liver Tumors, #[259](#)
- Cryosurgical Ablation of Primary or Metastatic Liver Tumors, #[633](#)
- Radiofrequency Ablation of Primary or Metastatic Liver Tumors, #[286](#)
- Cryoablation of Prostate Cancer, #[149](#)

Policy

Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity Medicare HMO BlueSM and Medicare PPO BlueSM Members

Cryosurgical ablation may be considered **MEDICALLY NECESSARY** to treat localized renal cell carcinoma that is no more than 4 cm in size when either of the following criteria is met:

- Preservation of kidney function is necessary (ie, the patient has 1 kidney or renal insufficiency defined by a glomerular filtration rate [GFR] of less than 60 mL/min per m²), and standard surgical approach (ie, resection of renal tissue) is likely to worsen kidney function substantially, or
- Patient is not considered a surgical candidate.

Cryosurgical ablation may be considered **MEDICALLY NECESSARY** to treat lung cancer when either of the following criteria is met:

- The patient has early-stage non-small cell lung cancer and is a poor surgical candidate; or
- The patient requires palliation for a central airway obstructing lesion.

Cryosurgical ablation is considered **INVESTIGATIONAL** as a treatment for benign or malignant tumors of the breast, lung (other than defined above), pancreas, or bone and other solid tumors or metastases outside the liver and prostate and to treat renal cell carcinomas in patients who are surgical candidates.

Prior Authorization Information

Inpatient

- For services described in this policy, precertification/preauthorization **IS REQUIRED** for all products if the procedure is performed **inpatient**.

Outpatient

- For services described in this policy, see below for products where prior authorization **might be required** if the procedure is performed **outpatient**.

	Outpatient
Commercial Managed Care (HMO and POS)	Prior authorization is not required .
Commercial PPO and Indemnity	Prior authorization is not required .
Medicare HMO Blue SM	Prior authorization is not required .
Medicare PPO Blue SM	Prior authorization is not required .

CPT Codes / HCPCS Codes / ICD Codes

The following codes are included below for informational purposes. Inclusion or exclusion of a code 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 as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

The above **medical necessity criteria MUST be met for the following codes to be covered for Commercial Members: Managed Care (HMO and POS), PPO, Indemnity, Medicare HMO Blue and Medicare PPO Blue:**

CPT Codes

CPT codes:	Code Description
32994	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; cryoablation
50250	Ablation, open, 1 or more renal mass lesion(s), cryosurgical, including intraoperative ultrasound guidance and monitoring, if performed
50542	Laparoscopy, surgical; ablation of renal mass lesion(s), including intraoperative ultrasound guidance and monitoring, when performed
50593	Ablation, renal tumor(s), unilateral, percutaneous, cryotherapy
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

The following CPT code is considered investigational for **Commercial Members: Managed Care (HMO and POS), PPO, Indemnity, Medicare HMO Blue and Medicare PPO Blue:**

CPT Codes

CPT codes:	Code Description
19105	Ablation, cryosurgical, of fibroadenoma, including ultrasound guidance, each fibroadenoma

Description

BREAST TUMORS

Early-stage primary breast cancers are treated surgically. The selection of lumpectomy, modified radical mastectomy, or another approach is balanced against the patient's desire for breast conservation, the need for tumor-free margins in resected tissue, and the patient's age, hormone receptor status, and other factors. Adjuvant radiotherapy decreases local recurrences, particularly for those who select lumpectomy. Adjuvant hormonal therapy and/or chemotherapy are added, depending on presence and number of involved nodes, hormone receptor status, and other factors. Treatment of metastatic disease includes surgery to remove the lesion and combination chemotherapy.

Fibroadenomas are common benign tumors of the breast that can present as a palpable mass or a mammographic abnormality. These benign tumors are frequently surgically excised to rule out a malignancy.

LUNG TUMORS

Early-stage lung tumors are typically treated surgically. Patients with early-stage lung cancer who are not surgical candidates may be candidates for radiotherapy with curative intent. Cryoablation is being investigated in patients who are medically inoperable, with small primary lung cancers or lung metastases. Patients with more advanced local disease or metastatic disease may undergo chemotherapy with radiation following resection. Treatment is rarely curative; rather, it seeks to retard tumor growth or palliate symptoms.

PANCREATIC CANCER

Pancreatic cancer is a relatively rare solid tumor that occurs almost exclusively in adults, and it is largely considered incurable. Surgical resection of tumors contained entirely within the pancreas is currently the only potentially curative treatment. However, the nature of the cancer is such that few tumors are found at such an early and potentially curable stage. Patients with more advanced local disease or metastatic disease may undergo chemotherapy with radiation following resection. Treatment focuses on slowing tumor growth and palliation of symptoms.

RENAL CELL CARCINOMA

Localized renal cell carcinoma is treated with radical nephrectomy or nephron-sparing surgery. Prognosis drops precipitously if the tumor extends outside the kidney capsule because chemotherapy is relatively ineffective against metastatic renal cell carcinoma.

CRYOSURGICAL TREATMENT

Cryosurgical treatment of various tumors including malignant and benign breast disease, lung cancer, pancreatic cancer, and renal cell carcinoma has been reported in the literature. The hypothesized advantages of cryosurgery include improved local control and benefits common to any minimally invasive procedure (eg, preserving normal organ tissue, decreasing morbidity, decreasing length of hospitalization).

Summary

For individuals who have solid tumors (located in areas of the breast, lung, pancreas, kidney, or bone) who receive cryosurgical ablation, the evidence includes nonrandomized comparative studies, case series, and systematic reviews of these nonrandomized studies. Relevant outcomes are overall survival, disease-specific survival, quality of life, and treatment-related morbidity. There is a lack of randomized controlled trials and high-quality comparative studies to determine the efficacy and comparative effectiveness of cryoablation. The largest amount of evidence assesses renal cell carcinoma in select patients (ie, those with small tumors who are not surgical candidates, or those who have baseline renal insufficiency of such severity that standard surgical procedures would impair their kidney function). Cryoablation results in short-term tumor control and less morbidity than surgical resection, but long-term outcomes may be inferior to surgery. For other indications, there is less evidence, with single-arm series reporting high rates of local control. Due to the lack of prospective controlled trials, it is difficult to conclude that cryoablation improves outcomes for any indication better than alternative treatments. The evidence is insufficient to determine the effects of the technology on health outcomes.

Policy History

Date	Action
9/2018	BCBSA National medical policy review. No changes to policy statements. New references added. Background and summary clarified.
4/2018	BCBSA National medical policy review. Medically necessary policy statements for lung cancer added. Clarified coding information. Effective 4/1/2018.
1/2018	Clarified coding information.
10/2016	New references added from BCBSA National medical policy.
8/2015	New references added from BCBSA National medical policy.

9/2014	New references added from BCBSA National medical policy.
6/2014	Updated Coding section with ICD10 procedure and diagnosis codes, effective 10/2015.
10/2013	New references from BCBSA National medical policy.
11/2011-4/2012	Medical policy ICD 10 remediation: Formatting, editing and coding updates. No changes to policy statements.
10/2011	Reviewed - Medical Policy Group - GI, Nutrition, and Organ Transplantation. No changes to policy statements.
9/2011	Reviewed - Medical Policy Group - Urology, Obstetrics, and Gynecology. No changes to policy statements.
7/2011	Reviewed - Medical Policy Group - Hematology and Oncology. No changes to policy statements.
11/2010	Reviewed - Medical Policy Group - Gastroenterology, Nutrition, and Organ Transplantation. No changes to policy statements.
9/2010	Reviewed - Medical Policy Group - Hematology and Oncology. No changes to policy statements.
9/2010	Medical Policy 360, effective 9/2010, describing covered and non-covered indications.
8/2010	BCBSA National medical policy review. No changes to policy statements.
11/2009	BCBSA National medical policy review. Changes to policy statements.
11/2009	BCBSA National medical policy review. Changes to policy statements.

Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:

[Medical Policy Terms of Use](#)

[Managed Care Guidelines](#)

[Indemnity/PPO Guidelines](#)

[Clinical Exception Process](#)

[Medical Technology Assessment Guidelines](#)

References

1. Zhao Z, Wu F. Minimally-invasive thermal ablation of early-stage breast cancer: a systemic review. *Eur J Surg Oncol*. Dec 2010;36(12):1149-1155. PMID 20889281
2. Simmons RM, Ballman KV, Cox C, et al. A phase II trial exploring the success of cryoablation therapy in the treatment of invasive breast carcinoma: results from ACOSOG (Alliance) Z1072. *Ann Surg Oncol*. Aug 2016;23(8):2438-2445. PMID 27221361
3. Niu L, Mu F, Zhang C, et al. Cryotherapy protocols for metastatic breast cancer after failure of radical surgery. *Cryobiology*. Aug 2013;67(1):17-22. PMID 23619024
4. Manenti G, Perretta T, Gaspari E, et al. Percutaneous local ablation of unifocal subclinical breast cancer: clinical experience and preliminary results of cryotherapy. *Eur Radiol*. Nov 2011;21(11):2344-2353. PMID 21681574
5. Pusztaszeri M, Vlastos G, Kinkel K, et al. Histopathological study of breast cancer and normal breast tissue after magnetic resonance-guided cryotherapy ablation. *Cryobiology*. Aug 2007;55(1):44-51. PMID 17604016
6. Sabel MS, Kaufman CS, Whitworth P, et al. Cryoablation of early-stage breast cancer: work-in-progress report of a multi-institutional trial. *Ann Surg Oncol*. May 2004;11(5):542-549. PMID 15123465
7. Tanaka S. Cryosurgical treatment of advanced breast cancer. *Skin Cancer*. Jan 1995;10:9-18.
8. Pfleiderer SO, Freesmeyer MG, Marx C, et al. Cryotherapy of breast cancer under ultrasound guidance: initial results and limitations. *Eur Radiol*. Dec 2002;12(12):3009-3014. PMID 12439583
9. Suzuki Y. Cryosurgical treatment of advanced breast cancer and cryoimmunological responses. *Skin Cancer*. 1995;10:19-26. PMID
10. Morin J, Traore A, Dionne G, et al. Magnetic resonance-guided percutaneous cryosurgery of breast carcinoma: technique and early clinical results. *Can J Surg*. Oct 2004;47(5):347-351. PMID 15540687

11. Kaufman CS, Bachman B, Littrup PJ, et al. Office-based ultrasound-guided cryoablation of breast fibroadenomas. *Am J Surg*. Nov 2002;184(5):394-400. PMID 12433600
12. Kaufman CS, Littrup PJ, Freman-Gibb LA, et al. Office-based cryoablation of breast fibroadenomas: 12-month followup. *J Am Coll Surg*. Jun 2004;198(6):914-923. PMID 15194073
13. Kaufman CS, Bachman B, Littrup PJ, et al. Cryoablation treatment of benign breast lesions with 12-month follow-up. *Am J Surg*. Oct 2004;188(4):340-348. PMID 15474424
14. Littrup PJ, Freeman-Gibb L, Andea A, et al. Cryotherapy for breast fibroadenomas. *Radiology*. Jan 2005;234(1):63-72. PMID 15550369
15. Kaufman CS, Littrup PJ, Freeman-Gibb LA, et al. Office-based cryoablation of breast fibroadenomas with longterm follow-up. *Breast J*. Sep-Oct 2005;11(5):344-350. PMID 16174156
16. Nurko J, Mabry CD, Whitworth P, et al. Interim results from the FibroAdenoma Cryoablation Treatment Registry. *Am J Surg*. Oct 2005;190(4):647-651; discussion 651-642. PMID 16164941
17. Lee SH, Choi WJ, Sung SW, et al. Endoscopic cryotherapy of lung and bronchial tumors: a systematic review. *Korean J Intern Med*. Jun 2011;26(2):137-144. PMID 21716589
18. Niu L, Xu K, Mu F. Cryosurgery for lung cancer. *J Thorac Dis*. Aug 2012;4(4):408-419. PMID 22934144
19. Ratko TA, Vats V, Brock J, et al. *Local Nonsurgical Therapies for Stage I and Symptomatic Obstructive Non-Small-Cell Lung Cancer (AHRQ Comparative Effectiveness Review No. 112)*. Rockville, MD: Agency for Healthcare Research and Quality; 2013.
20. de Baere T, Tselikas L, Woodrum D, et al. Evaluating cryoablation of metastatic lung tumors in patients--safety and efficacy: the ECLIPSE Trial--interim analysis at 1 year. *J Thorac Oncol*. Oct 2015;10(10):1468-1474. PMID 26230972
21. Moore W, Talati R, Bhattacharji P, et al. Five-year survival after cryoablation of stage I non-small cell lung cancer in medically inoperable patients. *J Vasc Interv Radiol*. Mar 2015;26(3):312-319. PMID 25735518
22. Maiwand MO, Asimakopoulos G. Cryosurgery for lung cancer: clinical results and technical aspects. *Technol Cancer Res Treat*. Apr 2004;3(2):143-150. PMID 15059020
23. Asimakopoulos G, Beeson J, Evans J, et al. Cryosurgery for malignant endobronchial tumors: analysis of outcome. *Chest*. Jun 2005;127(6):2007-2014. PMID 15947313
24. Tao Z, Tang Y, Li B, et al. Safety and effectiveness of cryosurgery on advanced pancreatic cancer: a systematic review. *Pancreas*. Jul 2012;41(5):809-811. PMID 22695092
25. Keane MG, Bramis K, Pereira SP, et al. Systematic review of novel ablative methods in locally advanced pancreatic cancer. *World J Gastroenterol*. Mar 7 2014;20(9):2267-2278. PMID 24605026
26. Li J, Chen X, Yang H, et al. Tumour cryoablation combined with palliative bypass surgery in the treatment of unresectable pancreatic cancer: a retrospective study of 142 patients. *Postgrad Med J*. Feb 2011;87(1024):8995. PMID 21131612
27. Xu KC, Niu LZ, Hu YZ, et al. A pilot study on combination of cryosurgery and (125)iodine seed implantation for treatment of locally advanced pancreatic cancer. *World J Gastroenterol*. Mar 14 2008;14(10):1603-1611. PMID 18330956
28. Kovach SJ, Hendrickson RJ, Cappadona CR, et al. Cryoablation of unresectable pancreatic cancer. *Surgery*. Apr 2002;131(4):463-464. PMID 11935137
29. Pessoa RR, Autorino R, Laguna MP, et al. Laparoscopic versus percutaneous cryoablation of small renal mass: systematic review and cumulative analysis of comparative studies. *Clin Genitourin Cancer*. Oct 2017;15(5):513519 e515. PMID 28442227
30. Tang K, Yao W, Li H, et al. Laparoscopic renal cryoablation versus laparoscopic partial nephrectomy for the treatment of small renal masses: a systematic review and meta-analysis of comparative studies. *J Laparoendosc Adv Surg Tech A*. Jun 2014;24(6):403-410. PMID 24914926
31. Klatte T, Shariat SF, Remzi M. Systematic review and meta-analysis of perioperative and oncologic outcomes of laparoscopic cryoablation versus laparoscopic partial nephrectomy for the treatment of small renal tumors. *J Urol*. May 2014;191(5):1209-1217. PMID 24231845
32. Martin J, Athreya S. Meta-analysis of cryoablation versus microwave ablation for small renal masses: is there a difference in outcome? *Diagn Interv Radiol*. Nov-Dec 2013;19(6):501-507. PMID 24084196
33. 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):510-516. PMID 22304329
34. Klatte T, Grubmuller B, Waldert M, et al. Laparoscopic cryoablation versus partial nephrectomy for the treatment of small renal masses: systematic review and cumulative analysis of observational studies. *Eur Urol*. Sep 2011;60(3):435-443. PMID 21616582
35. Long CJ, Kutikov A, Canter DJ, et al. Percutaneous vs surgical cryoablation of the small renal mass: is efficacy compromised? *BJU Int*. May 2011;107(9):1376-1380. PMID 21062399

36. Van Poppel H, Becker F, Cadeddu JA, et al. Treatment of localised renal cell carcinoma. *Eur Urol.* Oct 2011;60(4):662-672. PMID 21726933
37. Nabi G, Cleves A, Shelley M. Surgical management of localised renal cell carcinoma. *Cochrane Database Syst Rev.* Mar 17 2010(3):CD006579. PMID 20238346
38. O'Malley RL, Berger AD, Kanofsky JA, et al. A matched-cohort comparison of laparoscopic cryoablation and laparoscopic partial nephrectomy for treating renal masses. *BJU Int.* Feb 2007;99(2):395-398. PMID 17092288
39. Kunath F, Schmidt S, Krabbe LM, et al. Partial nephrectomy versus radical nephrectomy for clinical localised renal masses. *Cochrane Database Syst Rev.* May 09 2017;5:CD012045. PMID 28485814
40. Kunkle DA, Uzzo RG. Cryoablation or radiofrequency ablation of the small renal mass: a meta-analysis. *Cancer.* Nov 15 2008;113(10):2671-2680. PMID 18816624
41. Matin SF, Ahrar K. Nephron-sparing probe ablative therapy: long-term outcomes. *Curr Opin Urol.* Mar 2008;18(2):150-156. PMID 18303535
42. Strom KH, Derweesh I, Stroup SP, et al. Second prize: Recurrence rates after percutaneous and laparoscopic renal cryoablation of small renal masses: does the approach make a difference? *J Endourol.* Mar 2011;25(3):371-375. PMID 21355776
43. Caputo PA, Ramirez D, Zargar H, et al. Laparoscopic cryoablation for renal cell carcinoma: 100-month oncologic outcomes. *J Urol.* Oct 2015;194(4):892-896. PMID 25912493
44. Weld KJ, Figenshau RS, Venkatesh R, et al. Laparoscopic cryoablation for small renal masses: three-year follow-up. *Urology.* Mar 2007;69(3):448-451. PMID 17382142
45. Hegarty NJ, Gill IS, Desai MM, et al. Probe-ablative nephron-sparing surgery: cryoablation versus radiofrequency ablation. *Urology.* Jul 2006;68(1 Suppl):7-13. PMID 16857454
46. Rodriguez R, Cizman Z, Hong K, et al. Prospective analysis of the safety and efficacy of percutaneous cryoablation for pT1NxMx biopsy-proven renal cell carcinoma. *Cardiovasc Intervent Radiol.* Jun 2011;34(3):573-578. PMID 20628879
47. Nguyen CT, Lane BR, Kaouk JH, et al. Surgical salvage of renal cell carcinoma recurrence after thermal ablative therapy. *J Urol.* Jul 2008;180(1):104-109; discussion 109. PMID 18485401
48. Meller I, Weinbroum A, Bickels J, et al. Fifteen years of bone tumor cryosurgery: a single-center experience of 440 procedures and long-term follow-up. *Eur J Surg Oncol.* Aug 2008;34(8):921-927. PMID 18158228
49. Callstrom MR, Dupuy DE, Solomon SB, et al. Percutaneous image-guided cryoablation of painful metastases involving bone: multicenter trial. *Cancer.* Mar 1 2013;119(5):1033-1041. PMID 23065947
50. Casalino DD, Remer EM, Bishoff JT, et al. ACR appropriateness criteria post-treatment follow-up of renal cell carcinoma. *J Am Coll Radiol.* May 2014;11(5):443-449. PMID 24793039
51. 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
52. National Comprehensive Cancer Network (NCCN). NCCN Clinical Practice Guidelines in Oncology: Kidney Cancer. Version 4.2018. http://www.nccn.org/professionals/physician_gls/pdf/kidney.pdf. Accessed June 17, 2018.
53. National Comprehensive Cancer Network (NCCN). NCCN Clinical Practice Guidelines in Oncology: Non-Small Cell Lung Cancer. Version 4.2018. http://www.nccn.org/professionals/physician_gls/pdf/nscl.pdf. Accessed June 17, 2018.