National Imaging Associates, Inc.*	
Clinical guideline: **METASTATIC DISEASE**	**Original Date: November 2013**
CPT Codes: **All Treatment Modalities**	**Last Revised Date: January 2022**
Guideline Number: NIA_CG_228	**Implementation Date: January 2023**

INDICATIONS FOR THE TREATMENT OF METASTASIS

BRAIN: For metastasis to the brain, regardless of primary site, refer to the NIA clinical guideline for Central Nervous System (CNS).

BONE: For metastasis to bone, refer to the NIA clinical guideline for bone metastases.

LUNG[1]:

- Conventional 2D and 3D-CRT treatment delivery is appropriate for all other secondary malignancies up to ten (10) to fifteen (15) fractions.
    - Treatment beyond ten fractions for 2D-3D-CRT requires physician review and a clinical rationale for additional fractions

ALL OTHER SITES: For metastasis to any other site other than brain, lung, or bone:

- Conventional 2D and 3D-CRT treatment delivery is appropriate for all other secondary malignancies up to ten (10) fractions.[2]
    - Treatment beyond ten fractions for 2D-3D-CRT requires physician review and a clinical rationale for additional fractions.

TREATMENT OPTIONS REQUIRING PHYSICIAN REVIEW

- **IMRT** is not indicated for treatment of metastasis except for limited circumstances in which radiation therapy is indicated and 3D conformal radiation therapy (3D-CRT) techniques cannot adequately deliver the radiation prescription without exceeding normal tissue radiation tolerance, the delivery is anticipated to contribute to potential late toxicity or tumor volume dose

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heterogeneity is such that unacceptable hot or cold spots are created. If IMRT is utilized, techniques to account for respiratory motion should be performed when appropriate.
    - Clinical rationale and documentation for performing IMRT rather than 2D or 3D-CRT treatment planning and delivery will need to:
        - Demonstrate how 3D-CRT isodose planning cannot produce a satisfactory treatment plan (as stated above) via the use of patient-specific dose volume histograms and isodose plans. 3D-CRT techniques such as step-and-shoot or field-in-field should be considered for the comparison.
        - Confirm the IMRT requested will be inversely planned (forward plans or 'field-in-field' plans are not considered IMRT).

- **Selective Internal Radiation Therapy (SIRT),** also known as radioembolization with microsphere brachytherapy device (RMBD) and transarterial radioembolization, uses microscopic radioactive spheres to deliver radiation to the tumor site. Treatment is delivered through catheter injection of radioactive Yttrium-90 (90Y) microspheres into the hepatic artery. [For Absolute Contraindication**†** and Relative Contraindications**‡**, please see the notes below.] Indications for SIRT include[3, 4]:
    - Unresectable metastatic liver tumors
    - Unresectable metastatic liver tumors from primary colorectal cancer
    - Unresectable primary hepatocellular carcinoma
    - Unresectable neuroendocrine tumors

†Note: Absolute Contraindication[5]
- Fulminant liver failure (absolute)

‡Note: Considerations/Relative Contraindications[5]
- The tumor burden should be liver dominant, not necessarily exclusive to the liver
- Patients should also have a performance status that will allow them to benefit from such therapy
- A life expectancy of at least 3 months
- Excessive tumor burden in the liver with greater than 50% to 70% of the parenchyma replaced by tumor
- Total bilirubin greater than 2 mg/dL (in the absence of obstructive cause), which indicates severe liver function impairment. Nonobstructive bilirubin elevations may indicate that liver metastases have caused liver impairment to the degree that risks outweigh benefits for this therapy. In contrast, patients with HCC and elevated bilirubin may be treated with radioembolization if a segmental or subsegmental infusion can be performed
- Prior radiation therapy to the liver or upper abdomen that included a significant volume of the liver

- **Oligometastatic Disease[6]**
    - Stereotactic Body Radiation Therapy (SBRT) is medically necessary for extracranial oligometastatic disease for an individual with One (1) to Five (5) metastatic lesions when the following criteria are met:

- Good performance status: ECOG less than 3 or Karnofsky Scale greater than or equal to 70% and stable systemic disease or reasonable systemic treatment options.

- All other treatment approaches require physician review with presentation of clinical rationale and documentation for the proposed treatment modality and plan.

POLICY HISTORY

Date	Summary
January 2022	• Added indications for metastasis to lung • Under "All Other Sites", added "lung" to state, "For metastasis to any other site other than brain, lung, or bone" • Under SIRT, added notes for absolute contraindication and considerations/relative contraindications • Within Oligometastatic Disease, increased the range of metastatic lesions from "One (1) to Four (4)" to "One (1) to Five (5)"
February 2021	Added**:** • Oligometastatic Disease: Stereotactic Body Radiation Therapy (SBRT) is medically necessary for extracranial oligometastatic disease for an individual with One (1) to Four (4) metastatic lesions when the following criteria are met: o Good performance status: ECOG less than 3 or Karnofsky Scale greater than or equal to 70% and stable systemic disease or reasonable systemic treatment options • Added References
February 2020	No Changes
February 2019	Added and updated references

REFERENCES

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ADDITIONAL RESOURCES

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Reviewed / Approved by NIA Clinical Guideline Committee

GENERAL INFORMATION

It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.