

ACR Appropriateness Criteria[®] Suspected Liver Metastases

Expert Panel on Gastrointestinal Imaging: *Harmeet Kaur, MD^a, Nicole M. Hindman, MD^b, Waddah B. Al-Refaie, MD^c, Hina Arif-Tiwari, MD^d, Brooks D. Cash, MD^e, Victoria Chernyak, MD, MS^f, James Farrell, MD^g, Joseph R. Grajo, MD^h, Jeanne M. Horowitz, MDⁱ, Michelle M. McNamara, MD^j, Richard B. Noto, MD^k, Aliya Qayyum, MD^l, Tasneem Lalani, MD^m, Ihab R. Kamel, MD, PhDⁿ*

Abstract

Liver metastases are the most common malignant liver tumors. The accurate and early detection and characterization of liver lesions is the key to successful treatment strategies. Increasingly, surgical resection in combination with chemotherapy is effective in significantly improving survival if all metastases are successfully resected. MRI and multiphase CT are the primary imaging modalities in the assessment of liver metastasis, with the relative preference toward multiphase CT or MRI depending upon the clinical setting (ie, surveillance or presurgical planning). The optimization of imaging parameters is a vital factor in the success of either modality. PET/CT, intraoperative ultrasound are used to supplement CT and MRI.

The American College of Radiology Appropriateness Criteria are evidence-based guidelines for specific clinical conditions that are reviewed annually by a multidisciplinary expert panel. The guideline development and revision include an extensive analysis of current medical literature from peer-reviewed journals and the application of well-established methodologies (RAND/UCLA Appropriateness Method and Grading of Recommendations Assessment, Development, and Evaluation or GRADE) to rate the appropriateness of imaging and treatment procedures for specific clinical scenarios. In those instances where evidence is lacking or equivocal, expert opinion may supplement the available evidence to recommend imaging or treatment.

Key Words: Appropriateness Criteria, Appropriate Use Criteria, AUC, liver metastasis imaging, liver metastasis surveillance, liver presurgical staging, MRI, multidetector CT, PET/CT

J Am Coll Radiol 2017;14:S314-S325. Copyright © 2017 American College of Radiology

^aPrincipal Author, University of Texas, MD Anderson Cancer Center, Houston, Texas.

^bCo-author, New York University Medical Center, New York, New York.

^cGeorgetown University Hospital, Washington, District of Columbia; American College of Surgeons.

^dUniversity of Arizona, Banner University Medical Center, Tucson, Arizona.

^eUniversity of South Alabama, Mobile, Alabama; American Gastroenterological Association.

^fMontefiore Medical Center, Bronx, New York.

^gInterventional Endoscopy and Pancreatic Diseases, New Haven, Connecticut; American Gastroenterological Association.

^hUniversity of Florida College of Medicine, Gainesville, Florida.

ⁱNorthwestern University, Chicago, Illinois.

^jUniversity of Alabama Medical Center, Birmingham, Alabama.

^kBrown University Rhode Island Hospital, Providence, Rhode Island.

^lUniversity of Texas, MD Anderson Cancer Center, Houston, Texas.

^mSpecialty Chair, Inland Imaging Associates and University of Washington, Seattle, Washington.

ⁿPanel Chair, Johns Hopkins University School of Medicine, Baltimore, Maryland.

Corresponding author: Harmeet Kaur, MD, Attn: Dept of Radiology, MD Anderson Cancer Center, 1400 Pressler St Unit 1473, Houston, TX 77036; e-mail: hkaur@mdanderson.org.

The American College of Radiology seeks and encourages collaboration with other organizations on the development of the ACR Appropriateness Criteria through society representation on expert panels. Participation by representatives from collaborating societies on the expert panel does not necessarily imply individual or society endorsement of the final document. Reprint requests to: publications@acr.org

The authors have no conflicts of interest related to the material discussed in this article.

Disclaimer: The ACR Committee on Appropriateness Criteria and its expert panels have developed criteria for determining appropriate imaging examinations for diagnosis and treatment of specified medical condition(s). These criteria are intended to guide radiologists, radiation oncologists, and referring physicians in making decisions regarding radiologic imaging and treatment. Generally, the complexity and severity of a patient's clinical condition should dictate the selection of appropriate imaging procedures or treatments. Only those examinations generally used for evaluation of the patient's condition are ranked. Other imaging studies necessary to evaluate other co-existent diseases or other medical consequences of this condition are not considered in this document. The availability of equipment or personnel may influence the selection of appropriate imaging procedures or treatments. Imaging techniques classified as investigational by the FDA have not been considered in developing these criteria; however, study of new equipment and applications should be encouraged. The ultimate decision regarding the appropriateness of any specific radiologic examination or treatment must be made by the referring physician and radiologist in light of all the circumstances presented in an individual examination.

Variant 1. Suspected liver metastases. Initial imaging test following detection of primary tumor.

| Radiologic Procedure | Rating | Comments | RRL |
|---|--------|----------|------|
| CT abdomen with IV contrast | 9 | | ⚙⚙⚙ |
| MRI abdomen without and with IV contrast | 8 | | ○ |
| CT abdomen without and with IV contrast | 5 | | ⚙⚙⚙⚙ |
| MRI abdomen without IV contrast | 5 | | ○ |
| FDG-PET/CT skull base to midhigh | 5 | | ⚙⚙⚙⚙ |
| In-111 somatostatin receptor scintigraphy | 5 | | ⚙⚙⚙⚙ |
| US abdomen | 4 | | ○ |
| CT abdomen without IV contrast | 4 | | ⚙⚙⚙ |

Note: Rating scale: 1, 2, 3 = usually not appropriate; 4, 5, 6 = may be appropriate; 7, 8, 9 = usually appropriate. FDG-PET = positron emission tomography using fluorine-18-2-fluoro-2-deoxy-D-glucose imaging; IV = intravenous; RRL = relative radiation level; US = ultrasound.

Variant 2. Suspected liver metastases. Surveillance following treatment of primary tumor.

| Radiologic Procedure | Rating | Comments | RRL |
|---|--------|----------|------|
| CT abdomen with IV contrast | 8 | | ⚙⚙⚙ |
| MRI abdomen without and with IV contrast | 6 | | ○ |
| CT abdomen without and with IV contrast | 5 | | ⚙⚙⚙⚙ |
| MRI abdomen without IV contrast | 5 | | ○ |
| FDG-PET/CT skull base to midhigh | 5 | | ⚙⚙⚙⚙ |
| In-111 somatostatin receptor scintigraphy | 5 | | ⚙⚙⚙⚙ |
| CT abdomen without IV contrast | 4 | | ⚙⚙⚙ |
| US abdomen | 4 | | ○ |

Note: Rating scale: 1, 2, 3 = usually not appropriate; 4, 5, 6 = may be appropriate; 7, 8, 9 = usually appropriate. FDG-PET = positron emission tomography using fluorine-18-2-fluoro-2-deoxy-D-glucose imaging; IV = intravenous; RRL = relative radiation level; US = ultrasound.

Variant 3. Presurgical assessment of liver metastases.

| Radiologic Procedure | Rating | Comments | RRL |
|--|--------|---|------|
| MRI abdomen without and with IV contrast | 9 | | ○ |
| CT abdomen with IV contrast | 8 | | ⚙⚙⚙ |
| US abdomen intraoperative | 8 | This procedure is complementary to MRI or CT. | ○ |
| MRI abdomen without IV contrast | 6 | | ○ |
| FDG-PET/CT skull base to midhigh | 6 | | ⚙⚙⚙⚙ |
| CT abdomen without and with IV contrast | 5 | | ⚙⚙⚙⚙ |
| CT abdomen without IV contrast | 3 | | ⚙⚙⚙ |
| US abdomen | 3 | | ○ |

Note: Rating scale: 1, 2, 3 = usually not appropriate; 4, 5, 6 = may be appropriate; 7, 8, 9 = usually appropriate. FDG-PET = positron emission tomography using fluorine-18-2-fluoro-2-deoxy-D-glucose imaging; IV = intravenous; RRL = relative radiation level; US = ultrasound.

Download English Version:

<https://daneshyari.com/en/article/5726511>

Download Persian Version:

<https://daneshyari.com/article/5726511>

[Daneshyari.com](https://daneshyari.com)