Chapter 1

What is LI-RADS®?

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What is LI-RADS®?

The Liver Imaging Reporting And Data System (LI-RADS) is:

- A comprehensive system:
  - it standardizes terminology, technique, interpretation, reporting, and data collection of liver imaging in patients at risk for or with HCC
  - It addresses the entire spectrum of lesions and pseudolesions in such patients
- A dynamic system:
  - It will expanded and refined as knowledge accrues and in response to user feedback

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LI-RADS is designed to enhance communication and to improve quality and safety

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LI-RADS is developed by a multidisciplinary, international consortium of diagnostic and interventional radiologists, hepatobiliary surgeons, hepatologists, and hepatopathologists. Contributors include academic and community physicians as well as members in training.

LI-RADS may be used for

- Clinical care
- Education
- Research

LI-RADS may be used by:

- Community and academic radiologists
- Radiologists in training
- Other health care professionals providing care to patients with liver disease
- Educators
- Researchers

LI-RADS is supported and endorsed by the American College of Radiology (ACR)

LI-RADS is consistent with and fully integrated into AASLD clinical practice guidance

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LI-RADS is consistent with NCCN guidelines

LI-RADS can be utilized by liver transplant centers in the United States. The conversion from LI-RADS categories to OPTN classes is straightforward. See *Chapter 11, page 10*.

LI-RADS® Mission, Vision, and Goals

LI-RADS mission

To standardize the terminology, technique, interpretation, reporting, and data collection of liver imaging for clinical care, education, and research in patients at high risk for or with HCC.

LI-RADS vision

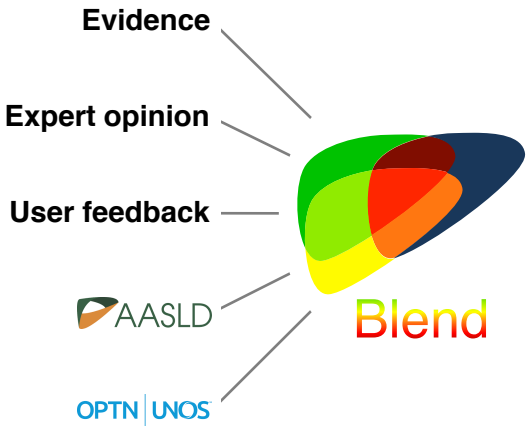
To improve the outcomes of patients with liver disease through a unified, comprehensive system for liver imaging. The initial focus of LI-RADS is on patients at high risk for or with HCC.

LI-RADS goals

- Develop and promote consistent terminology in clinical care, education, and research
- Increase the knowledge of radiologists and other specialists about imaging diseases of the liver
- Improve radiologist's diagnostic skills
- Reduce imaging interpretation variability and errors
- Promote clear communication with referring clinicians
- Enhance understanding by patients
- Facilitate quality improvement and research
- Contribute to optimal patient management

LI-RADS development

LI-RADS was developed and iteratively refined by a blend of evidence, expert opinion, a desire for congruency with other systems, and user feedback



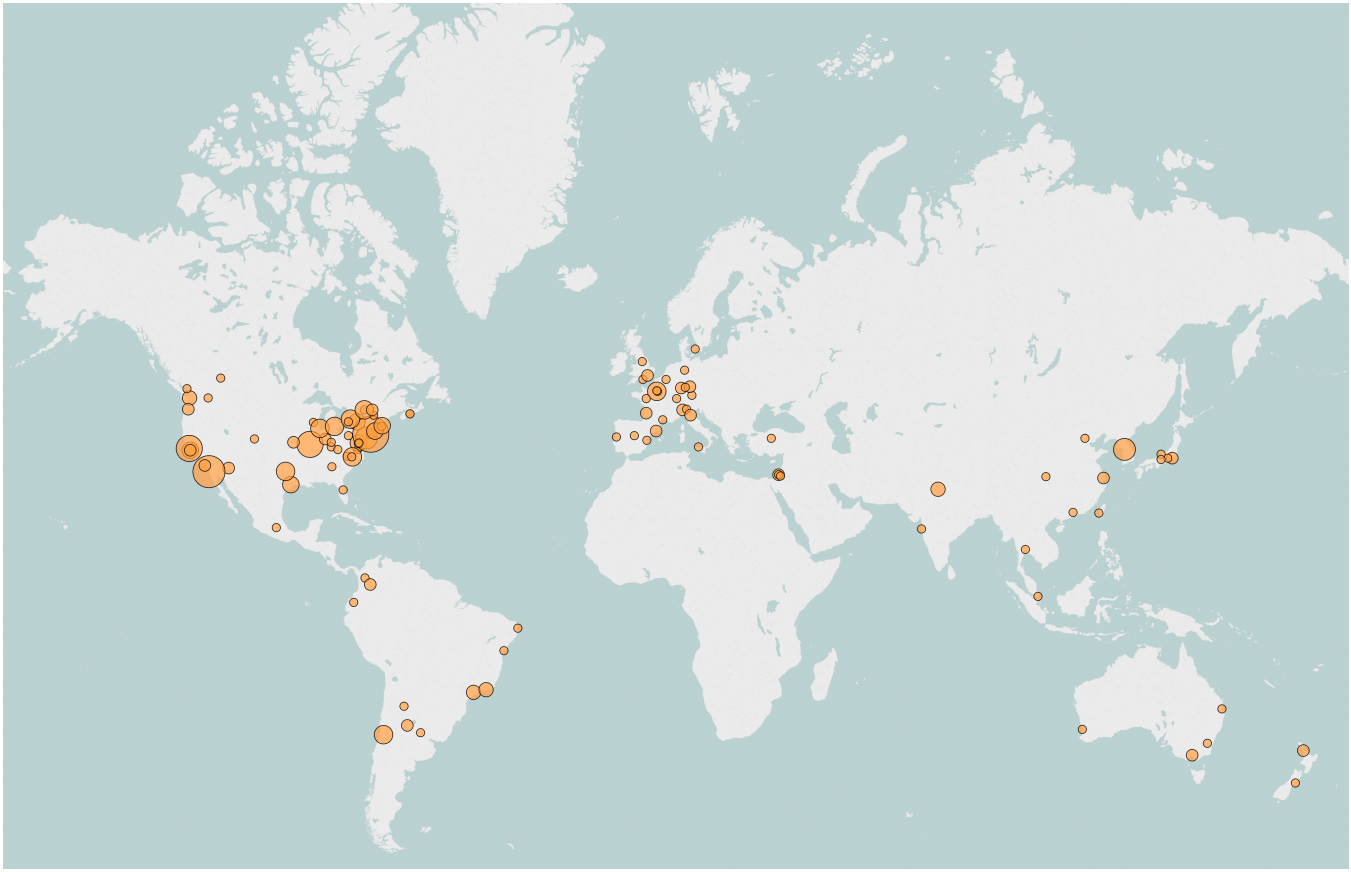
LI-RADS® History

LI-RADS was developed and refined over years by a growing consortium of contributors:

2006	Embryonic versions of LI-RADS created at Thomas Jefferson and UC San Diego, modeled after BI-RADS®	**4 contributors from 2 institutions in USA**
2008	ACR LI-RADS committee launched	
2011	v1.0 criteria & lexicon for CT, MRI-ECA	
2013	v2013: add algorithm & atlas for CT, MRI-ECA	
2014	v2014: add MRI-HBA, simplify algorithm	
2017	v2017: add US, CEUS, treatment response; further simplify algorithm	
2018	v2018: modify LR-5 criteria for concordance with AASLD; simplify threshold growth definition for concordance with AASLD and OPTN; create manual	**> 250 contributors from > 100 institutions from > 30 countries**

LI-RADS® International Consortium

The LI-RADS international consortium currently includes > 250 members from > 100 institutions from > 30 countries



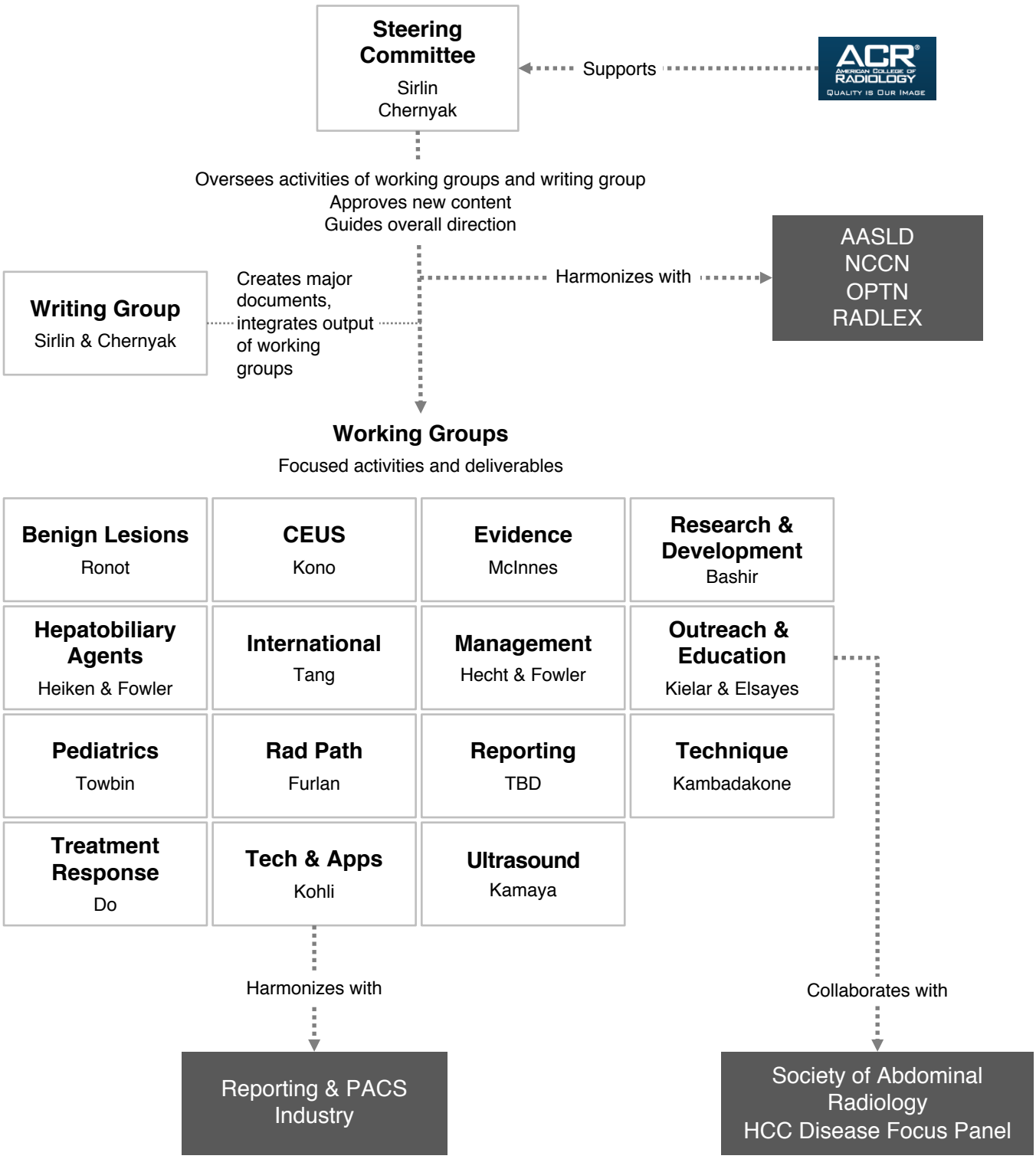
Updated November 2018

Want to join or contribute?

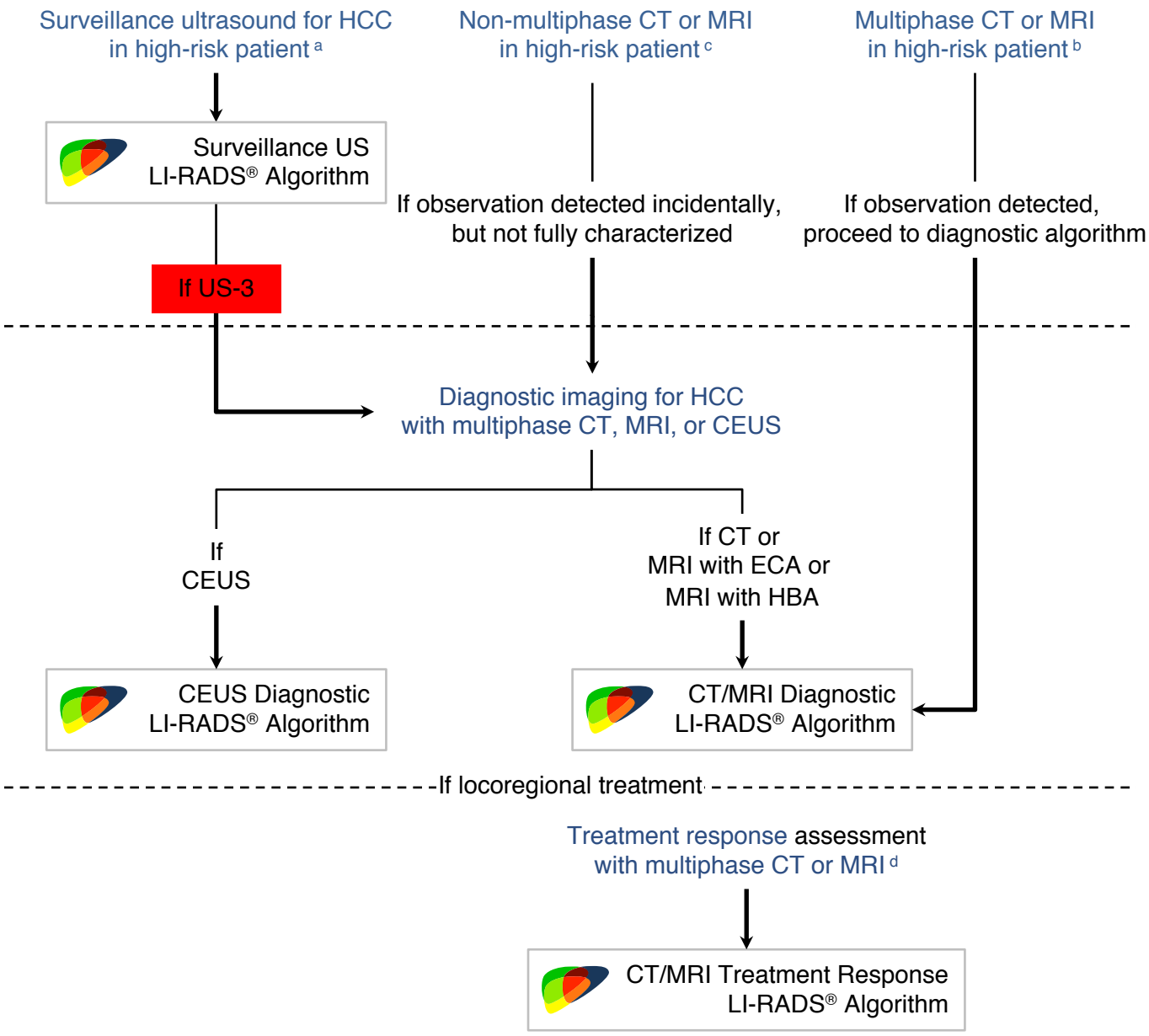
Please email *RADS@acr.org*

LI-RADS® Organization

LI-RADS is led by a Steering Committee which is supported by the ACR and oversees a writing group and various working groups



LI-RADS® Algorithms



Footnotes

a. US surveillance in high-risk patient	Most national and international clinical practice guidelines recommend US for HCC surveillance in high-risk patients.
b. Multiphase CT or MRI in high-risk patient	Some high-risk patients may undergo multiphase CT or MRI for HCC surveillance (depending on regional guidelines, institutional preferences, and other factors) or for other reasons. LI-RADS recommends neither for nor against CT or MRI for HCC surveillance.
c. Non-multiphase CT or MRI in high-risk patient	High-risk patients may have observations detected incidentally at non-multiphase imaging.
d. Treatment response assessment with CT/MRI	LI-RADS v2018 does not address treatment response with CEUS, or after systemic therapy or surgery.