Indeterminate Renal Mass

Kidney (renal) masses are sometimes unexpectedly found when imaging is done on the abdomen. Although some of these masses may be harmful, many are not problematic. Imaging tests can help figure out which masses are concerning and need follow-up. The most common imaging tests for a kidney mass include abdominal ultrasound (US) (https://www.radiologyinfo.org/en/info/abdominus) with contrast, a CT scan of the abdomen (https://www.radiologyinfo.org/en/info/abdominet) with and without intravenous (IV) contrast, or an MRI abdomen (https://www.radiologyinfo.org/en/info/mri-abdomen-pelvis) test with and without IV contrast. US uses gas-filled microbubbles for contrast. CT uses an iodinated contrast agent. MRI uses gadolinium contrast. These tests are equivalent to each other, so only one test would usually be done.

For people in whom gadolinium contrast should not be used, US with contrast, CT scan with and without iodinated IV contrast, or MRI without contrast is usually appropriate. For people in whom iodinated CT contrast agent should not be used, either MRI with and without gadolinium contrast or US with contrast is usually appropriate.

For people in whom neither gadolinium or iodinated IV contrast should be used, an ultrasound of the kidneys from the back (retroperitoneal kidney US), US abdomen with contrast, or MRI abdomen without contrast is usually appropriate. CT abdomen without contrast may also be appropriate.

For more information, see the Renal Cysts page (https://www.radiologyinfo.org/en/info/renal-cyst).

— By Raquel Weinberg, MS, and Karin Evelyn Dill, MD. This information originally appeared in the Journal of the American College of Radiology.

Disclaimer

This information is copied from the RadiologyInfo Web site (http://www.radiologyinfo.org) which is dedicated to providing the highest quality information. To ensure that, each section is reviewed by a physician with expertise in the area presented. All information contained in the Web site is further reviewed by an ACR (American College of Radiology) - RSNA (Radiological Society of North America) committee, comprising physicians with expertise in several radiologic areas.

However, it is not possible to assure that this Web site contains complete, up-to-date information on any particular subject. Therefore, ACR and RSNA make no representations or warranties about the suitability of this information for use for any particular purpose. All information is provided "as is" without express or implied warranty.

Please visit the RadiologyInfo Web site at http://www.radiologyinfo.org to view or download the latest information.

Note: Images may be shown for illustrative purposes. Do not attempt to draw conclusions or make diagnoses by comparing these images to other medical images, particularly your own. Only qualified physicians should interpret images; the radiologist is the physician expert trained in medical imaging.

Copyright

This material is copyrighted by either the Radiological Society of North America (RSNA), 820 Jorie Boulevard, Oak Brook, IL 60523-2251 or the American College of Radiology (ACR), 1891 Preston White Drive, Reston, VA 20191-4397. Commercial reproduction or multiple distribution by any traditional or electronically based reproduction/publication method is prohibited.

Copyright © 2024 Radiological Society of North America, Inc.