

Hemoptysis

Coughing up blood is a condition known as hemoptysis. Causes include acute respiratory tract infections, chronic obstructive pulmonary disease (<https://www.radiologyinfo.org/en/info/copd>) , tuberculosis, bronchiectasis (permanently damaged airways in the lung due to infection), and lung carcinomas (lung cancer (<https://www.radiologyinfo.org/en/info/lung-cancer>) or cancer that spread to the lungs). Hemoptysis is categorized as massive or nonmassive. Massive hemoptysis is life-threatening due to either asphyxiation (suffocation) or loss of blood.

With massive hemoptysis, the first course of action is to stabilize the individual. Once the individual is stabilized, arteriography bronchial with embolization, which is an imaging test that guides a catheter to block the bleeding blood vessel, is usually appropriate in combination with chest x-ray (<https://www.radiologyinfo.org/en/info/chestrad>) . CT angiography (CTA) (<https://www.radiologyinfo.org/en/info/angiact>) chest with intravenous (IV) contrast (CT scan of arteries) and CT chest (<https://www.radiologyinfo.org/en/info/chestct>) with IV are also usually appropriate. CT chest without contrast may be appropriate.

With nonmassive hemoptysis, CT chest with IV contrast, CTA chest with IV contrast, or chest x-ray is usually appropriate for initial imaging. Arteriography bronchial with embolization and CTA chest without IV contrast may be appropriate.

With recurrent hemoptysis, chest x-rays, arteriography bronchial with embolization, and CTA chest without IV contrast are usually appropriate. These procedures are complementary and are usually done together. CT chest with IV contrast may be appropriate.

— By Lauren Donnelly and Luke Ledbetter, 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 © 2026 Radiological Society of North America, Inc.