

ACR® Lung Cancer Screening CT Incidental Findings Quick Reference Guide



This Quick Guide is intended for use by Lung Cancer Screening (LCS) program coordinators and nurse navigators as they assist in the care coordination of LCS patients in collaboration with the referring providers.

- The Quick Guide lists common incidental findings on LCS CT and the typical management and/or appropriate follow-up recommendations.
- Comparison to prior exams is important to assess for stability or change.
- The guidance provided is intended to serve as a simple reference tool and does not replace the more comprehensive White Paper, ACR Appropriateness Criteria® and reference documents listed on the third page.
- The interpreting radiologist should include significant incidental findings that need attention, with recommended follow-up, in the "Impression" section of the report.
- Questions about the findings in a radiology report are best answered by the radiologist who interpreted the exam.

Legend/Abbreviations:

ASCVD = atherosclerotic cardiovascular disease
 CAC = coronary artery calcification
 CE = contrast enhanced
 CT = computed tomography
 → = action recommended, text in **Bold** type

MR = magnetic resonance imaging
 OK = typically, but not always, insignificant or benign
 US = ultrasound
 w/u: = work up with follow-up imaging
 PCP = primary care provider

Anatomic Region	Findings/Recommendations
Abdominal	
Adrenal ¹	<ul style="list-style-type: none"> • Adrenal calcification – OK. • Nodule < 10 HU (fat density), likely adenoma – OK. • Soft tissue density nodule < 1 cm – OK. • Adrenal nodule stable ≥ 1 year – OK. <p>→ Any other nodule or mass → w/u: CE Adrenal CT or MRI.</p>
Kidney ²	<ul style="list-style-type: none"> • Non-obstructing renal calculi – OK. • Simple or hyperdense/hemorrhagic cyst ("Bosniak 1 or 2") < 4 cm – OK. <p>→ Soft tissue density (or mixed density) renal mass → w/u: CT or MRI of the Kidneys without and with IV contrast.</p>
Liver ³	<ul style="list-style-type: none"> • Simple cyst – OK. • Nodule < 1 cm – OK, likely benign. <p>→ Soft tissue nodule/mass ≥ 1cm → w/u: CE Abdomen CT or MRI.</p> <p>→ Fatty liver/hepatic steatosis or cirrhosis → PCP evaluation.</p>
Pancreas ⁴	<ul style="list-style-type: none"> • Coarse calcifications – OK. <p>→ Cyst/mass → w/u: CE Abdomen CT or MRI.</p>
Musculoskeletal	
Bone Density ^{13,14,15}	<ul style="list-style-type: none"> • > 130 HU at L1 – OK. <p>→ 100 – 130 HU at L1 (Osteopenia) → consider PCP evaluation.</p> <p>→ < 100 HU at L1 (Osteoporosis) → PCP evaluation and consider DEXA.</p>
Other	<ul style="list-style-type: none"> • Degenerative disc disease – OK.

Cardiovascular	
Aorta ⁶	<ul style="list-style-type: none"> • "Ectasia of the thoracic aorta" – OK. • Mural calcification – OK. • Ascending Aorta < 42mm – OK. <p>→ Ascending Aorta ≥ 42 mm → PCP surveillance or cardiology consult for aneurysm surveillance.</p>
Cardiac/pericardium	<ul style="list-style-type: none"> • Trace/small pericardial effusion – OK. <p>→ Moderate or large pericardial effusion → discuss with PCP.</p> <p>→ Other Abnormalities (such as moderate or greater aortic valve calcification) → PCP evaluation.</p>
Coronary arteries ^{7,8}	<ul style="list-style-type: none"> • Coronary artery calcifications (CAC) typically reported as none, mild, moderate, or severe. <p>→ CAC present → PCP evaluation for ASCVD risk assessment.</p>
Main PA measurement ^{9,10}	<ul style="list-style-type: none"> • < 31 mm – OK. <p>→ 31 mm → PCP evaluation, consider Cardiology or Pulmonary consult.</p>
Breast	
	<ul style="list-style-type: none"> • Coarse calcifications – OK. • Cyst with no associated solid component – OK. <p>→ Any other nodule/mass or asymmetric density → w/u: diagnostic mammogram +/- US.</p>
Esophagus	
	<p>→ Large hiatal hernia or dilated esophagus → PCP evaluation.</p> <p>→ Focal wall thickening or mass → PCP evaluation, consider GI consult.</p>
Lung/Pleura	
Lung ¹¹	<ul style="list-style-type: none"> • Atelectasis – mild/subsegmental – OK. • Emphysema/bronchial wall thickening (Expected findings) – consider PCP evaluation; may benefit from Pulmonary consult. <p>→ Fibrotic interstitial lung disease (ILD) → recommend pulmonary consultation.</p> <p>→ Bronchiectasis/ground glass opacity/cystic lung disease/diffuse nodular disease → PCP evaluation, consider pulmonary consultation.</p>
Pleura	<p>→ New disease – effusion, thickening, mass → PCP evaluation, consider pulmonary consultation.</p>
Mediastinum	
Lymph nodes (Short axis measurement) ¹²	<ul style="list-style-type: none"> • < 15 mm – OK. <p>→ ≥ 15 mm & no explainable cause → PCP evaluation; consider pulmonary consultation. Consider follow-up CE Chest CT in 3–6 months.</p>
Other ¹²	<ul style="list-style-type: none"> • Cyst – OK. <p>→ Mass (soft tissue or mixed density) → CE Chest MRI or CT.</p>
Thyroid¹⁶	
Features	<ul style="list-style-type: none"> • Large and heterogeneous, likely goiter – probably OK; consider thyroid function testing. • Nodule < 15 mm – OK. <p>→ Nodule ≥ 15 mm or with suspicious features → w/u: thyroid US and clinical evaluation.</p>

References:

- 1) Mayo-Smith WW, Song JH, Boland GL, et al. Management of Incidental Adrenal Masses: ACR Incidental Findings Committee. *J Am Coll Radiol*. 2017 Aug;14(8):1038–1044.
- 2) Herts BR, Silverman SG, Hindman NM, et al. Management of the Incidental Renal Mass on CT: ACR Incidental Findings Committee. *J Am Coll Radiol*. 2018 Feb;15(2):264–273.
- 3) Gore RM, Pickhardt PJ, Morteale KJ, et al. Management of Incidental Liver Lesions on CT: ACR Incidental Findings Committee. *J Am Coll Radiol*. 2017 Nov;14(11):1429–1437.
- 4) Megibow AJ, Baker ME, Morgan DE, et al. Management of Incidental Pancreatic Cysts: ACR Incidental Findings Committee. *J Am Coll Radiol*. 2017 Jul;14(7):911–923.
- 5) Heller MT, Harisinghani M, Neitlich JD, Yeghiayan P, Berland LL. Managing Incidental Findings on Abdominal and Pelvic CT and MRI, Part 3: White Paper of the ACR Incidental Findings Committee II on Splenic and Nodal Findings. *J Am Coll Radiol*. 2013 Nov;10(11):833–839.
- 6) McComb BL, Munden RF, Duan F, Jain AA, Tuite C, Chiles C. Normative reference values of thoracic aortic diameter in American College of Radiology Imaging Network (ACRIN 6654) arm of National Lung Screening Trial. *Clin Imaging*. 2016;40(5):936–943.
- 7) Hecht HS, Cronin P, Blaha MJ, et al. 2016 SCCT/STR Guidelines for Coronary Artery Calcium Scoring Of Noncontrast Noncardiac Chest CT Scans: A Report Of The Society Of Cardiovascular Computed Tomography And Society Of Thoracic Radiology. *J Cardiovasc Comput Tomogr*. 2017;11(1):74–84.
- 8) Arnett DK, Blumenthal RS, Albert MA, et al. 2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease: A Report of the American College of Cardiology/ American Heart Association Task Force on Clinical Practice Guidelines. *Circulation* 2019 Sep;140(11):e596–e646.
- 9) Truong QA, Bhatia HS, Szymonifka J, et al. A four-tier classification system of pulmonary artery metrics on computed tomography for the diagnosis and prognosis of pulmonary hypertension. *J Cardiovasc Comput Tomogr*. 2018;12(1):60–66.
- 10) Truong QA, Massaro JM, Rogers IS, et al. Reference values for normal pulmonary artery dimensions by noncontrast cardiac computed tomography: the Framingham Heart Study. *Circ Cardiovasc Imaging*. 2012 Jan;5(1):147–154.
- 11) Munden RF, Black WC, Hartman TE, et al. Managing Incidental Findings on Thoracic CT: Lung Findings. A White Paper of the ACR Incidental Findings Committee. *J Am Coll Radiol*. 2021 Jul;S1546-1440(21)00376–8.
- 12) Munden RF, Carter BW, Chiles C, et al. Managing Incidental Findings on Thoracic CT: Mediastinal and Cardiovascular Findings. A White Paper of the ACR Incidental Findings Committee. *J Am Coll Radiol*. 2018 Aug;15(8):1087–1096.
- 13) Lee SJ, Pickhardt PJ. Opportunistic Screening for Osteoporosis Using Body CT Scans Obtained for Other Indications: the UW Experience. *Clinic Rev Bone Miner Metab*. 2017; 15(3):128–137.
- 14) Buckens CF, van der Graaf Y, Verkooijen HM, et al. Osteoporosis Markers on Low-Dose Lung Cancer Screening Chest Computed Tomography Scans Predict All-Cause Mortality. *Eur Radiol*. 2015 Jan;25(1):132–139.
- 15) Boutin RD, Lenchik L. Value-Added Opportunistic CT: Insights into Osteoporosis and Sarcopenia. *AJR*. 2020;215:582–594.
- 16) Hoang JK, Langer JE, Middleton WD, et al. Managing Incidental Thyroid Nodules Detected on Imaging: White Paper of The ACR Incidental Thyroid Findings Committee. *J Am Coll Radiol*. 2015 Feb;12(2):143–150.