

Supplemental Online Content

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eFigure. Procedure used to categorize each screening examination

This supplemental material has been provided by the authors to give readers additional information about their work.

eTable 1. Number of significant incidental findings (SIFs) assessed by screening result and whether SIF should be reported to the primary care provider. Participants enter the table once per time point screened. If at a single time point, they had both reportable and not-reportable SIFs, they were classified as “reportable.” Total number of SIFs was 13,728.

Time Point	POS/SIF*		NEG/SIF†		All SIFs	
	Reportable	Not Reportable	Reportable	Not Reportable‡	Reportable	Not Reportable
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
T0	2958 (93.3)	214 (6.7)	2234 (82.9)	460 (17.1)	5192 (88.5)	674 (11.5)
T1	2791 (94.6)	159 (5.4)	1240 (81.7)	277 (18.3)	4031 (90.2)	436 (9.8)
T2	1883 (94.8)	103 (5.2)	1122 (79.6)	287 (20.4)	3005 (88.5)	390 (11.5)
Total	7632 (94.1)	476 (5.9)	4596 (81.8)	1024 (18.2)	12228 (89.1)	1500 (10.9)

* POS/SIF: Positive screen/significant abnormalities

† NEG/SIF: Negative screen, significant abnormalities not suspicious for lung cancer.

‡ NEG/SIF Not Reportable column includes: 275 screens that had no comments and were therefore classified as not reportable: T0 N=112; T1 N=76; and at T2 N=87.

eTable 2. Specific SIFs by whether they were considered reportable to the referring physician for the LDCT arm of the NLST, across all three screens (T0, T1, T2) by frequency of report. This table includes all SIFs reported in the LDCT arm of the NLST. The same SIF can appear more than once per participant if detected at different time points.

			CT	
			Number of SIFs	
			N	%
Organ System		Classification		
Abdomen	Not Reportable	Hiatal hernia, diaphragmatic hernia, Bochdalek hernia	252	1.3
		Renal calculus, renal atrophy, renal asymmetry, low attenuation lesion	236	1.2
		Gallstones, cholelithiasis	224	1.1
		Adrenal thickening/prominence/enlargement/fullness and adenoma	140	0.7
		Liver lesion if < 1cm, or any size with benign features (sharp margin, < 20 HU on unenhanced CT). Include "cysts", "hypodensities", "LDL" as not actionable	126	0.6
		Splenic cysts; granulomas	90	0.4
		Fatty liver, focal fatty attenuation. Hepatic calcification	89	0.4
		Aorta described as ectatic (or dilated) or tortuous but no diameter provided	54	0.3
		Dilated esophagus, Air-fluid level in esophagus	32	0.2
		GB wall calcification including porcelain gallbladder	29	0.1
		Calcific pancreatitis, pancreatic calcification	21	0.1
		Pneumobilia	2	<0.1
		Epiphrenic or esophageal diverticulum	1	<0.1
		Prior abdominal surgery	1	<0.1
	Reportable	Renal mass	647	3.2
		Liver lesion No Size	420	2.1
		Adrenal nodule or mass and not further characterized as benign	265	1.3

		CT		
		Number of SIFs		
		N	%	
		Liver: only if suspicious feature such as irregular margins, heterogeneous density. Included if description was "possible liver lesions" without enough detail to confirm benign. Include lesions for which US or MR was recommended	143	0.7
		Renal cyst; complex renal cyst	134	0.7
		Abdominal aortic aneurysm	52	0.3
		Thickening of the distal esophagus or gastric cardia	45	0.2
		Renal contour abnormality	39	0.2
		All focal pancreatic lesions, cystic or solid	33	0.2
		Dilated renal pelvis; hydronephrosis	30	0.1
		Cirrhosis	22	0.1
		Splenomegaly	18	<0.1
		Main pancreatic duct dilation, pancreatic mass	17	<0.1
		Ascites	16	<0.1
		Abdominal mass or lymphadenopathy, requiring further follow-up	13	<0.1
		Esophageal mass	10	<0.1
		Suspected mass in GI tract	8	<0.1
		Gallbladder mass	6	<0.1
		Paraesophageal hernia	4	<0.1
		Intraabdominal lymphadenopathy	4	<0.1
		enlarged multicystic/polycystic kidneys	3	<0.1
		Hepatomegaly	3	<0.1
		GB wall thickening	1	<0.1
		Splenic mass, not calcified and not clearly a cyst, requiring further follow-up	1	<0.1
		Colonic diverticulitis	1	<0.1
Cardiovascular	Not Reportable	ASCVD NOS (no mention of CAC)	245	1.2
		Prior cardiac surgery (CAD)	136	0.7
		Small pericardial effusion	39	0.2
		Cardiomegaly	32	0.2

			CT	
			Number of SIFs	
			N	%
		Mitral valve or annulus calcification	22	0.1
		Coronary artery calcification WITH EVIDENCE of a prior CABG or stent	12	<0.1
		Pericardial cyst No Size	11	<0.1
		Congenital abnormalities such as anomalous pulmonary vein from RUL, right aortic arch; situs inversus	5	<0.1
	Reportable	Coronary artery calcification NO EVIDENCE of a prior CABG or stent	2,432	12.1
		Significant cardiovascular abnormality, not specified	904	4.5
		Aortic aneurysm	198	1.0
		Aortic valve calcification	70	0.3
		Pericardial effusion (unless specified as trace or small)	69	0.3
		Pericardial thickening if unexplained; pericardial calcification	60	0.3
		Pulmonary artery enlargement; pulmonary artery hypertension; pulmonary artery calcification; No Size	57	0.3
		Edema, heart failure	11	<0.1
		Aortic dissection, acute or chronic	6	<0.1
		Mediastinal	Not Reportable	Lymph node < 1.5 cm short axis; lymph nodes described as small
Lipoma, fatty tumor	19			<0.1
Mass that is clearly cystic (HU < 20) (presumed bronchogenic cyst or hygroma for example)	16			<0.1
Reportable	Lymph node No Size, described as enlarged, adenopathy or lymphadenopathy		110	0.5
	Mediastinal mass (if not clearly cystic)		51	0.3
	Lymph node >1.5 cm short axis without benign features; anything described as enlarged, adenopathy or lymphadenopathy		6	<0.1
	Hilum described as enlarged/large		4	<0.1
Neck and Thoracic Inlet	Not Reportable		Thyroid enlargement with no mention of nodules; goiter	152
		Thymus – residual thymic tissue, thymic hyperplasia, thymic cyst	10	<0.1
		Thyroid – nodule < 1.5 cm. Focal thyroid calcification	8	<0.1

			CT	
			Number of SIFs	
			N	%
	Reportable	Thyroid nodule	92	0.5
		Tracheal nodule, polyp or mass	38	0.2
		Thymoma, thymic mass, nodule	12	<0.1
		Neck mass, requiring further follow-up	1	<0.1
Not SIFs	Not Reportable	Not an SIF	68	0.3
		Pleural mass, not SIFs	1	<0.1
Other SIF	Not Reportable	Other SIF	1,859	9.2
Pleural	Not Reportable	Pleural plaques , calcification, thickening	109	0.5
	Reportable	Pleural effusion	21	0.1
Pulmonary	Not Reportable	Bronchiectasis	185	0.9
		Scars; localized fibrosis; rounded atelectasis	143	0.7
		Centrilobular nodules, respiratory bronchiolitis (common in smokers) (might be able to lump with Langerhans)	54	0.3
		Calcified granuloma; hamartoma	51	0.3
		Mosaic attenuation pattern	17	<0.1
		Lung cyst with benign features (cystic lesion, thin-walled lesion) i.e., no specifics as to abnormalities that might make it suspicious	15	<0.1
		Atelectasis less than segmental	5	<0.1
	Reportable	Emphysema, COPD, hyperinflation, Code 59 with no comments	8,677	43.0
		Diffuse or patchy ground glass opacification	253	1.3
		Consolidation; pneumonia	149	0.7
		Atelectasis that involves an entire segment, lobe, or lung	74	0.4
		Interstitial lung disease; UIP; IPF	71	0.4
		Suspected metastatic disease (multiple nodules)	16	<0.1
		Tree-in-bud pattern that suggests pneumonia or aspiration (different pattern of pneumonia)	1	<0.1
Lung cyst with suspicious features (nodular wall, focal wall thickening)	1	<0.1		

			CT	
			Number of SIFs	
			N	%
Thoracic, Misc, and Chest Wall	Not Reportable	Gynecomastia; breast asymmetry; implant rupture	31	0.2
		Subcutaneous nodule or cyst or fatty lesion	7	<0.1
		Vertebral compression fracture/osteopenia	3	<0.1
		Scoliosis	3	<0.1
		Breast surgery/mastectomy	3	<0.1
		Bone lesion described as diffusely sclerotic	2	<0.1
		Axillary lymph node < 2 cm	1	<0.1
		Degenerative disc disease	1	<0.1
		Healed rib fractures	1	<0.1
	Reportable	Breast – nodule, mass	161	0.8
		Axillary lymph nodes >= 2 cm or NOS	52	0.3
		Paraspinal mass	19	<0.1
		Acute fracture	10	<0.1
		Bone lesion described as lytic/expansile	5	<0.1
		Chest wall mass, requiring further follow-up	1	<0.1
Total			20,156	100.0

eTable 3. Specific SIFs considered reportable to the referring physician for the LDCT arm of the NLST, across all three screens (T0, T1, T2) by frequency of report. This table includes all SIFs reported in the LDCT arm of the NLST. Each SIF appears only once per participant.

			CT	
			Number of SIFs	
			N	%
Organ System		Classification		
Abdomen	Not Reportable	Renal calculus, renal atrophy, renal asymmetry, low attenuation lesion	200	1.3
		Hiatal hernia, diaphragmatic hernia, Bochdalek hernia	189	1.2
		Gallstones, cholelithiasis	180	1.2
		Adrenal thickening/prominence/enlargement/fullness and adenoma	133	0.9
		Liver lesion if < 1cm, or any size with benign features (sharp margin, < 20 HU on unenhanced CT). Include "cysts", "hypodensities", "LDL" as not actionable	117	0.8
		Splenic cysts; granulomas	79	0.5
		Fatty liver, focal fatty attenuation. Hepatic calcification	72	0.5
		Aorta described as ectatic (or dilated) or tortuous but no diameter provided	45	0.3
		GB wall calcification including porcelain gallbladder	26	0.2
		Dilated esophagus, Air-fluid level in esophagus	23	0.2
		Calcific pancreatitis, pancreatic calcification	18	0.1
		Pneumobilia	2	<0.1
		Epiphrenic or esophageal diverticulum	1	<0.1
		Prior abdominal surgery	1	<0.1
	Reportable	Renal mass	524	3.4
		Liver lesion No Size	352	2.3
		Adrenal nodule or mass and not further characterized as benign	220	1.4
		Liver: only if suspicious feature such as irregular margins, heterogeneous density. Included if description was "possible liver lesions" without enough detail to confirm benign. Include lesions for which US or MR was recommended	136	0.9
		Renal cyst; complex renal cyst	117	0.8
		Abdominal aortic aneurysm	43	0.3

		CT		
		Number of SIFs		
		N	%	
		Thickening of the distal esophagus or gastric cardia	42	0.3
		Renal contour abnormality	39	0.3
		Dilated renal pelvis; hydronephrosis	27	0.2
		All focal pancreatic lesions, cystic or solid	27	0.2
		Main pancreatic duct dilation, pancreatic mass	16	0.1
		Splenomegaly	15	<0.1
		Ascites	14	<0.1
		Abdominal mass or lymphadenopathy, requiring further follow-up	13	<0.1
		Cirrhosis	11	<0.1
		Esophageal mass	9	<0.1
		Suspected mass in GI tract	7	<0.1
		Paraesophageal hernia	4	<0.1
		Gallbladder mass	4	<0.1
		Intraabdominal lymphadenopathy	4	<0.1
		enlarged multicystic/polycystic kidneys	3	<0.1
		Hepatomegaly	3	<0.1
		GB wall thickening	1	<0.1
		Splenic mass, not calcified and not clearly a cyst, requiring further follow-up	1	<0.1
		Colonic diverticulitis	1	<0.1
Cardiovascular	Not Reportable	ASCVD NOS (no mention of CAC)	236	1.6
		Prior cardiac surgery (CAD)	128	0.8
		Small pericardial effusion	37	0.2
		Cardiomegaly	28	0.2
		Mitral valve or annulus calcification	16	0.1
		Coronary artery calcification WITH EVIDENCE of a prior CABG or stent	12	<0.1
		Pericardial cyst No Size	11	<0.1
		Congenital abnormalities such as anomalous pulmonary vein from RUL, right aortic arch; situs inversus	5	<0.1
	Reportable	Coronary artery calcification NO EVIDENCE of a prior CABG or stent	1,776	11.7
		Significant cardiovascular abnormality, not specified	677	4.5

			CT	
			Number of SIFs	
			N	%
		Aortic aneurysm	159	1.0
		Aortic valve calcification	62	0.4
		Pericardial thickening if unexplained; pericardial calcification	53	0.3
		Pericardial effusion (unless specified as trace or small)	50	0.3
		Pulmonary artery enlargement; pulmonary artery hypertension; pulmonary artery calcification; No Size	44	0.3
		Edema, heart failure	11	<0.1
		Aortic dissection, acute or chronic	6	<0.1
Mediastinal	Not Reportable	Lymph node < 1.5 cm short axis; lymph nodes described as small	21	0.1
		Lipoma, fatty tumor	19	0.1
		Mass that is clearly cystic (HU < 20) (presumed bronchogenic cyst or hygroma for example)	14	<0.1
	Reportable	Lymph node No Size, described as enlarged, adenopathy or lymphadenopathy	103	0.7
		Mediastinal mass (if not clearly cystic)	43	0.3
		Lymph node >1.5 cm short axis without benign features; anything described as enlarged, adenopathy or lymphadenopathy	6	<0.1
		Hilum described as enlarged/large	4	<0.1
Neck and Thoracic Inlet	Not Reportable	Thyroid enlargement with no mention of nodules; goiter	134	0.9
		Thyroid – nodule < 1.5 cm. Focal thyroid calcification	8	<0.1
		Thymus – residual thymic tissue, thymic hyperplasia, thymic cyst	8	<0.1
	Reportable	Thyroid nodule	79	0.5
		Tracheal nodule, polyp or mass	35	0.2
		Thymoma, thymic mass, nodule	12	<0.1
		Neck mass, requiring further follow-up	1	<0.1
Not SIFs	Not Reportable	Not an SIF	65	0.4
		Pleural mass, not SIFs	1	<0.1
Other SIF	Not Reportable	Other SIF	1,663	10.9
Pleural	Not Reportable	Pleural plaques, calcification, thickening	99	0.7
	Reportable	Pleural effusion	21	0.1
Pulmonary		Bronchiectasis	161	1.1

			CT	
			Number of SIFs	
			N	%
	Not Reportable	Scars; localized fibrosis; rounded atelectasis	131	0.9
		Centrilobular nodules, respiratory bronchiolitis (common in smokers) (might be able to lump with Langerhans)	51	0.3
		Calcified granuloma; hamartoma	43	0.3
		Lung cyst with benign features (cystic lesion, thin-walled lesion) i.e., no specifics as to abnormalities that might make it suspicious	15	<0.1
		Mosaic attenuation pattern	13	<0.1
		Atelectasis less than segmental	5	<0.1
	Reportable	Emphysema, COPD, hyperinflation, Code 59 with no comments	5,636	37.1
		Diffuse or patchy ground glass opacification	236	1.6
		Consolidation; pneumonia	148	1.0
		Atelectasis that involves an entire segment, lobe, or lung	74	0.5
		Interstitial lung disease; UIP; IPF	70	0.5
		Suspected metastatic disease (multiple nodules)	15	<0.1
		Tree-in-bud pattern that suggests pneumonia or aspiration (different pattern of pneumonia)	1	<0.1
		Lung cyst with suspicious features (nodular wall, focal wall thickening)	1	<0.1
	Thoracic, Misc, and Chest Wall	Not Reportable	Gynecomastia; breast asymmetry; implant rupture	27
Subcutaneous nodule or cyst or fatty lesion			7	<0.1
Scoliosis			3	<0.1
Breast surgery/mastectomy			3	<0.1
Vertebral compression fracture/osteopenia			2	<0.1
Bone lesion described as diffusely sclerotic			2	<0.1
Axillary lymph node < 2 cm			1	<0.1
Degenerative disc disease			1	<0.1
Healed rib fractures			1	<0.1
Reportable		Breast – nodule, mass	121	0.8
		Axillary lymph nodes >= 2 cm or NOS	44	0.3
		Paraspinal mass	13	<0.1
		Acute fracture	9	<0.1
		Bone lesion described as lytic/expansile	3	<0.1

		CT	
		Number of SIFs	
		N	%
	Chest wall mass, requiring further follow-up	1	<0.1
Total		15,204	100.0

eFigure. Procedure used to categorize each screening examination. Includes 75,126 screening examinations, classified as positive with significant incidental findings (POS/SIF), Negative with significant incidental findings (NEG/SIF), Positive (POS), or Negative (NEG), based on final diagnosis and abnormalities reported at that screening examination.

