

2020 Lung Cancer Screening Registry Report from the American College of Radiology

We are pleased to release the 2020 annual State Aggregate report for Lung Cancer Screening Registry. The PDF report contains the following:

1. Measures definition

2. Pre-exam measures aggregated by states

3. During-exam measures aggregated by states

4. Post-exam measures aggregated by states

Currently the Post-exam (outcome) measures provided within this report are limited to the Abnormal Interpretation Rate. Other measures such as Cancer Detection Rate or Positive Predictive Value are not available at the state aggregate level at this time. Some sites may have limited ability to fully capture outcome (tissue diagnoses) data and state performance may be misconstrued.

Aggregate measure data only reported for states where there are 5 or more sites. Less than 5 are indicated as NR (Not reported).

Measure Definitions

Appropriateness of screening by USPSTF criteria

Percent of screening population who are adults aged 55 to 80 years, have a 30 pack-year smoking history, and currently smoke or have quit within the past 15 years.

Smoking cessation offered

Percent of patients who are offered smoking cessation guidance.

Smoking cessation offered among current smokers

Percent of current smokers who are offered smoking cessation guidance.

Radiation exposure Mean CTDIvol - overall, and by BMI category

Mean Volumetrics CT Dose Index (CTDIvol) across all screening exams performed, across all screening exams performed on underweight patients (BMI<18.5), across all screening exams performed on normal weight patients (BMI of 18.5-24.9), across all screening exams performed on overweight patients (BMI of 25-29.9), and across all screening exams performed on obese patients (BMI of 30 or more).

Radiation exposure (DLP) - overall, and by BMI category

Mean Dose Length Product (DLP) across all screening exams performed, across all screening exams performed on underweight patients (BMI<18.5), across all screening exams performed on normal weight patients (BMI of 18.5-24.9), across all screening exams performed on overweight patients (BMI of 25-29.9), and across all screening exams performed on obese patients (BMI of 30 or more).

Abnormal Interpretation Rate, all exams

Percent of screening exams that have a Lung-RADS assessment of 3, 4a, 4b, or 4x (and lead to additional imaging or biopsy).

Abnormal Interpretation Rate, at baseline exam

Percent of baseline screening exams that have a Lung-RADS assessment of 3, 4a, 4b, or 4x (and lead to additional imaging or biopsy).

Abnormal Interpretation Rate, at annual exam

Percent of annual screening exams that have a Lung-RADS assessment of 3, 4a, 4b, or 4x (and lead to additional imaging or biopsy).

Lung Cancer Screening Statistics, Pre-Exam Measures – Screening Exams performed in 2020

				Appropriateness of screening by USPSTF criteria		Smoking cessation offered		Smoking cessation offered among current smokers	
Aggregation Level	Year	# Facilities	# Screening Exams	Rate	Num/Den	Rate	Num/Den	Rate	Num/Den
Alabama	2020	59	10232	92.05%	(9419/10232)	81.98%	(8388/10232)	85.43%	(5530/6473)
Alaska	2020	13	1343	94.34%	(1267/1343)	94.42%	(1268/1343)	97.32%	(725/745)
Arizona	2020	44	5303	91.48%	(4851/5303)	77.84%	(4128/5303)	83.19%	(2430/2921)
Arkansas	2020	32	4059	94.36%	(3830/4059)	75.34%	(3058/4059)	84.44%	(2242/2655)
California	2020	130	10664	77.68%	(8284/10664)	60.43%	(6444/10664)	70.44%	(3810/5409)
Colorado	2020	58	5930	82.58%	(4897/5930)	66.44%	(3940/5930)	69.98%	(2219/3171)
Connecticut	2020	46	8783	85.71%	(7528/8783)	58.07%	(5100/8783)	64.74%	(3141/4852)
Delaware	2020	14	3277	92.16%	(3020/3277)	98.87%	(3240/3277)	99.7%	(1686/1691)
District of Columbia	2020	6	662	94.11%	(623/662)	90.03%	(596/662)	94.09%	(366/389)
Florida	2020	222	28195	84.18%	(23735/28195)	68.63%	(19349/28195)	78.12%	(11081/14184)
Georgia	2020	126	17988	91.48%	(16455/17988)	72.48%	(13037/17988)	85.31%	(8748/10254)
Hawaii	2020	9	1088	96.23%	(1047/1088)	55.61%	(605/1088)	70.25%	(484/689)
Idaho	2020	23	3916	96.53%	(3780/3916)	82.66%	(3237/3916)	94.28%	(1946/2064)
Illinois	2020	131	25143	94.79%	(23834/25143)	77.1%	(19384/25143)	82.23%	(11836/14394)
Indiana	2020	115	19324	79.53%	(15369/19324)	63.01%	(12176/19324)	74.34%	(7942/10684)
Iowa	2020	78	10687	93.57%	(10000/10687)	70.37%	(7520/10687)	73.85%	(4959/6715)
Kansas	2020	50	7011	92.88%	(6512/7011)	77.46%	(5431/7011)	80.56%	(3220/3997)
Kentucky	2020	102	26484	95.66%	(25334/26484)	76.65%	(20301/26484)	81.25%	(13383/16472)
Louisiana	2020	44	5738	90.57%	(5197/5738)	87.84%	(5040/5738)	93.47%	(3435/3675)
Maine	2020	24	6826	95.81%	(6540/6826)	76.44%	(5218/6826)	81.8%	(3371/4121)
Maryland	2020	54	10478	96.86%	(10149/10478)	82.42%	(8636/10478)	89.3%	(5544/6208)
Massachusetts	2020	74	37344	95.35%	(35607/37344)	79.69%	(29759/37344)	83.76%	(17123/20444)
Michigan	2020	128	30859	94.79%	(29250/30859)	73.26%	(22608/30859)	76.32%	(14391/18856)
Minnesota	2020	95	13791	85.2%	(11750/13791)	57.57%	(7939/13791)	73.03%	(5154/7057)
Mississippi	2020	32	6154	92.51%	(5693/6154)	66.57%	(4097/6154)	76.96%	(2792/3628)

Lung Cancer Screening Statistics, Pre-Exam Measures – Screening Exams performed in 2020

				Appropriateness of screening by USPSTF criteria		Smoking cessation offered		Smoking cessation offered among current smokers	
Aggregation Level	Year	# Facilities	# Screening Exams	Rate	Num/Den	Rate	Num/Den	Rate	Num/Den
Missouri	2020	69	17768	94.93%	(16867/17768)	66.09%	(11743/17768)	73.02%	(7709/10557)
Montana	2020	16	2412	94.24%	(2273/2412)	94.28%	(2274/2412)	97.11%	(1279/1317)
Nebraska	2020	33	2805	94.19%	(2642/2805)	79.39%	(2227/2805)	89.21%	(1348/1511)
Nevada	2020	17	1712	87.09%	(1491/1712)	84.29%	(1443/1712)	92.57%	(884/955)
New Hampshire	2020	24	6061	93.63%	(5675/6061)	45.03%	(2729/6061)	50.4%	(1709/3391)
New Jersey	2020	119	9328	83%	(7742/9328)	66.6%	(6212/9328)	80.03%	(3594/4491)
New Mexico	2020	8	1142	93.96%	(1073/1142)	98.34%	(1123/1142)	99.31%	(577/581)
New York	2020	188	33797	92.56%	(31283/33797)	80.09%	(27067/33797)	84.49%	(16541/19577)
North Carolina	2020	123	32288	90.1%	(29092/32288)	82.03%	(26485/32288)	87.91%	(17278/19654)
North Dakota	2020	11	2647	92.26%	(2442/2647)	79.9%	(2115/2647)	92.35%	(1183/1281)
Ohio	2020	169	32666	93.47%	(30532/32666)	85.31%	(27866/32666)	90.8%	(17607/19392)
Oklahoma	2020	29	2630	89.05%	(2342/2630)	51.79%	(1362/2630)	56.25%	(801/1424)
Oregon	2020	49	11131	94.85%	(10558/11131)	84.52%	(9408/11131)	87.16%	(5248/6021)
Pennsylvania	2020	157	39285	93.09%	(36571/39285)	70.21%	(27582/39285)	80.35%	(18367/22858)
Rhode Island	2020	18	2586	82.83%	(2142/2586)	79.2%	(2048/2586)	87.16%	(1317/1511)
South Carolina	2020	37	12312	91.6%	(11278/12312)	73.78%	(9084/12312)	77.39%	(5381/6953)
South Dakota	2020	23	2700	98.81%	(2668/2700)	70.59%	(1906/2700)	86.92%	(1316/1514)
Tennessee	2020	98	18174	84.54%	(15364/18174)	86.18%	(15663/18174)	90.72%	(9738/10734)
Texas	2020	147	15727	82.95%	(13046/15727)	72.87%	(11461/15727)	79.41%	(7234/9110)
Utah	2020	22	700	94.43%	(661/700)	50.57%	(354/700)	63.46%	(231/364)
Vermont	2020	8	2275	96.7%	(2200/2275)	78.51%	(1786/2275)	97.73%	(1206/1234)
Virginia	2020	92	20113	95.19%	(19146/20113)	84.94%	(17084/20113)	87.64%	(10196/11634)
Washington	2020	88	14819	94.49%	(14002/14819)	76.69%	(11364/14819)	86.86%	(6800/7829)
West Virginia	2020	20	3410	94.55%	(3224/3410)	67.27%	(2294/3410)	71.85%	(1557/2167)
Wisconsin	2020	125	20589	93.79%	(19311/20589)	78.42%	(16146/20589)	82.04%	(9100/11092)

Lung Cancer Screening Statistics, Pre-Exam Measures – Screening Exams performed in 2020

				Appropriateness of screening by USPSTF criteria		Smoking cessation offered		Smoking cessation offered among current smokers	
Aggregation Level	Year	# Facilities	# Screening Exams	Rate	Num/Den	Rate	Num/Den	Rate	Num/Den
Wyoming	2020	<5	NR	NR	NR	NR	NR	NR	NR
LCSR	2020	3404	610636	91.32%	(557795/610828)	75.21%	(459416/610828)	81.87%	(285837/349145)

Lung Cancer Screening Statistics, During Exam Measures – Screening Exams performed in 2020

			CTDIvol - Mean (mGy)					DLP - Mean (mGy-cm)				
Aggregation Level	# Facilities	# Screening Exams	Overall	underweight (BMI<18.5)	normal (BMI 18.5-24.9)	overweight (BMI 25.0-29.9)	obese (BMI 30 or greater)	Overall	underweight (BMI<18.5)	normal (BMI 18.5-24.9)	overweight (BMI 25.0-29.9)	obese (BMI 30 or greater)
Alabama	59	10232	3.32	2.33	2.93	3.36	3.65	96.12	78.35	80.48	96.4	108.22
Alaska	13	1343	1.95	1	2.37	1.69	1.87	61.01	38.74	54.69	57.64	67.51
Arizona	44	5303	2.6	2.42	2.28	2.41	3.05	84.29	71.78	73.93	80.97	97.22
Arkansas	32	4059	3.17	3.31	2.59	3.35	3.63	111.54	93.84	96.96	117.88	127.77
California	130	10664	4.1	2.51	2.85	4.13	5.19	113.17	81.78	91.34	108.87	138.87
Colorado	58	5930	3.65	1.77	2.89	3.66	4.6	98.58	59.59	81.84	98.74	117.42
Connecticut	46	8783	2.75	1.56	1.83	2.61	3.51	83.37	58.54	63.64	80.33	100.92
Delaware	14	3277	2.61	1.85	2.12	2.57	2.92	95.32	69.73	78.72	90.85	109.26
District of Columbia	6	662	2.6	1.37	1.66	2.88	3.24	67.08	49.49	55.69	63.25	80.5
Florida	222	28195	2.97	2.36	2.53	2.87	3.49	92.34	64.38	76.34	90.11	110.57
Georgia	126	17988	3.63	2.74	3.11	3.29	4.33	108.6	81.57	91.12	103.02	125.57
Hawaii	9	1088	2.91	1.64	2.3	2.32	4.81	87.86	63.32	73.26	81.11	120.72
Idaho	23	3916	2.74	1.33	1.69	2.4	3.86	96.19	51.08	59.68	85.04	133.59
Illinois	131	25143	3.15	2.68	2.55	2.92	3.65	99.49	81.32	80.33	96.6	113.15
Indiana	115	19324	3.25	1.97	2.65	3.18	3.66	99.84	84.08	81.45	90.23	114.99
Iowa	78	10687	3.07	2.67	2.14	2.61	3.75	91.33	66.16	66.21	82.92	111.43
Kansas	50	7011	2.85	2.13	2.2	2.48	3.52	96.22	62.05	71.61	91.79	112.72
Kentucky	102	26484	2.83	2.51	2.2	2.44	3.43	87.18	68.58	70.51	79.79	101.94
Louisiana	44	5738	3.04	1.88	2.13	2.91	3.85	97.66	65.74	76.32	90.15	114.38
Maine	24	6826	2.92	2.56	2.21	2.91	3.45	88.87	81.95	73.85	81.32	106.02
Maryland	54	10478	3.63	2.85	3.07	3.51	4.24	99.4	79.51	83.92	93.16	117.53
Massachusetts	74	37344	4.34	2.42	3.17	4.15	5.48	93.54	64.11	71.58	88.74	113.71
Michigan	128	30859	3.14	2.14	2.46	2.92	3.74	99.37	67.84	79.74	92.92	117.27
Minnesota	95	13791	3.11	2.43	2.25	3.01	3.69	91.45	63.09	70.2	84.73	108.55
Mississippi	32	6154	3.75	4.12	3.5	3.43	4.18	85.76	65.54	71.35	80.56	98.89
Missouri	69	17768	2.71	1.85	2.17	2.6	3.2	90.45	70.35	73.81	84.34	107.19

Lung Cancer Screening Statistics, During Exam Measures – Screening Exams performed in 2020

			CTDIvol - Mean (mGy)					DLP - Mean (mGy-cm)				
Aggregation Level	# Facilities	# Screening Exams	Overall	underweight (BMI<18.5)	normal (BMI 18.5-24.9)	overweight (BMI 25.0-29.9)	obese (BMI 30 or greater)	Overall	underweight (BMI<18.5)	normal (BMI 18.5-24.9)	overweight (BMI 25.0-29.9)	obese (BMI 30 or greater)
Montana	16	2412	2.21	1.46	1.63	2.07	2.75	79.32	57.46	62.68	72.19	97.2
Nebraska	33	2805	3.03	1.99	2.28	2.81	3.6	102.26	71.92	75.4	93.13	123.26
Nevada	17	1712	2.65	1.79	2.14	2.59	3.15	89.11	72.09	76.98	87.58	100.47
New Hampshire	24	6061	2.97	1.85	2.26	2.83	3.59	94.88	66.34	75.78	89.96	111.93
New Jersey	119	9328	2.86	2.83	2.42	2.73	3.21	90.14	75.39	76.39	85.58	101.28
New Mexico	8	1142	2.27	1.89	1.84	2.13	2.96	83.62	69.23	69.41	79.14	106.39
New York	188	33797	2.97	2.58	2.26	2.76	3.66	92.35	61.01	70.71	87.27	112.54
North Carolina	123	32288	3.1	2.42	2.5	2.76	3.85	100.83	77.41	83.66	97.13	117.85
North Dakota	11	2647	2.71	1.54	1.96	2.55	3.21	85.66	52.8	61.59	76.4	104.21
Ohio	169	32666	3.36	3.34	2.74	3.18	3.89	91.93	73.65	79.1	87.64	104.46
Oklahoma	29	2630	3.23	2.16	2.63	3.02	4.24	107.52	77.19	105.88	96.92	123.95
Oregon	49	11131	2.88	1.96	2.24	2.71	3.57	100.59	65.25	76.76	94.28	126.4
Pennsylvania	157	39285	3.19	2.63	2.64	3.04	3.68	92.47	72.69	78.09	87.68	105.93
Rhode Island	18	2586	2.48	1.67	2.49	2.24	2.76	79.09	62.01	72.09	78.28	87.16
South Carolina	37	12312	2.97	2.42	2.47	2.58	3.65	91.1	64.74	70.58	81.28	107.82
South Dakota	23	2700	3.63	1.76	2.26	2.52	5.28	107.84	66.52	75.29	83.73	144.91
Tennessee	98	18174	2.96	2.17	2.46	2.82	3.46	92.76	76.87	81.63	89.22	103.55
Texas	147	15727	2.94	2.38	2.43	2.74	3.47	101.52	78.31	84.81	96.55	120.44
Utah	22	700	5.46	3.03	5.96	5.04	5.69	143.73	115.86	135.91	144.63	150.79
Vermont	8	2275	4.06	1.84	3.03	3.88	5.02	107.06	72.35	87.03	100.66	127.32
Virginia	92	20113	2.51	1.87	2.13	2.43	3.11	82.3	64	74.65	78.25	98.65
Washington	88	14819	2.71	1.75	2.2	2.53	3.27	77.75	57.74	62.29	72.78	92.78
West Virginia	20	3410	32.58	12.2	19.97	29.19	47.64	111.86	72.28	87.86	97.64	138.25
Wisconsin	125	20589	3.21	1.86	2.32	2.86	3.98	102.83	58.63	70.13	92.11	130.31
Wyoming	<5	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
LCSR	3404	610636	3.31	2.45	2.6	3.1	4.05	94.64	70.77	76.78	89.26	111.94

Lung Cancer Screening Statistics, Post-Exam Measures – Screening Exams performed in 2020

			Abnormal Interpretation Rate, baseline, annual, not indicated (%)		Abnormal Interpretation Rate, at baseline exam (%)		Abnormal Interpretation Rate, at annual exam (%)	
Aggregation Level	# Facilities	# Screening Exams	Rate	Num/Den	Rate	Num/Den	Rate	Num/Den
Alabama	59	10232	15.38%	(1574/10232)	18.09%	(929/5136)	12.69%	(636/5013)
Alaska	13	1343	13.55%	(182/1343)	17.85%	(141/790)	7.29%	(40/549)
Arizona	44	5303	16.65%	(883/5303)	18.32%	(618/3373)	13.74%	(226/1645)
Arkansas	32	4059	14.22%	(577/4059)	16.71%	(414/2477)	10.19%	(158/1550)
California	130	10664	14.62%	(1559/10664)	17.91%	(769/4293)	12.22%	(767/6276)
Colorado	58	5930	16.09%	(954/5930)	19.36%	(658/3398)	11.2%	(269/2401)
Connecticut	46	8783	13.25%	(1164/8783)	17.4%	(582/3345)	10.72%	(579/5399)
Delaware	14	3277	10.74%	(352/3277)	12.96%	(163/1258)	9.37%	(189/2018)
District of Columbia	6	662	12.39%	(82/662)	15.3%	(56/366)	8.47%	(25/295)
Florida	222	28195	14.59%	(4114/28195)	17.04%	(2498/14662)	10.91%	(1257/11523)
Georgia	126	17988	12.75%	(2294/17988)	15.46%	(1393/9013)	9.96%	(891/8950)
Hawaii	9	1088	14.34%	(156/1088)	14.55%	(104/715)	13.71%	(51/372)
Idaho	23	3916	13.02%	(510/3916)	14.95%	(302/2020)	10.96%	(207/1889)
Illinois	131	25143	14.02%	(3524/25143)	17.97%	(1922/10693)	11.01%	(1576/14316)
Indiana	115	19324	13.86%	(2678/19324)	16.6%	(1940/11690)	9.51%	(704/7404)
Iowa	78	10687	13.03%	(1393/10687)	16.83%	(822/4885)	9.31%	(472/5068)
Kansas	50	7011	14.55%	(1020/7011)	18.1%	(626/3459)	11%	(387/3517)
Kentucky	102	26484	14.26%	(3776/26484)	17.33%	(2479/14306)	10.48%	(1269/12109)
Louisiana	44	5738	13.42%	(770/5738)	14.7%	(441/3000)	11.85%	(322/2718)
Maine	24	6826	14.09%	(962/6826)	16.59%	(574/3460)	11.37%	(380/3341)
Maryland	54	10478	16.54%	(1733/10478)	20.22%	(1161/5741)	12.07%	(569/4716)
Massachusetts	74	37344	11.92%	(4452/37344)	15.17%	(1414/9319)	10.84%	(3028/27941)
Michigan	128	30859	13.17%	(4064/30859)	16.24%	(2511/15458)	10.15%	(1422/14007)
Minnesota	95	13791	10.46%	(1442/13791)	13.3%	(769/5784)	8.88%	(665/7486)

Lung Cancer Screening Statistics, Post-Exam Measures – Screening Exams performed in 2020

			Abnormal Interpretation Rate, baseline, annual, not indicated (%)		Abnormal Interpretation Rate, at baseline exam (%)		Abnormal Interpretation Rate, at annual exam (%)	
Aggregation Level	# Facilities	# Screening Exams	Rate	Num/Den	Rate	Num/Den	Rate	Num/Den
Mississippi	32	6154	14.66%	(902/6154)	18.16%	(516/2842)	11.68%	(381/3263)
Missouri	69	17768	14.47%	(2571/17768)	17.23%	(1496/8685)	11.63%	(1024/8804)
Montana	16	2412	14.43%	(348/2412)	19.38%	(217/1120)	10.11%	(130/1286)
Nebraska	33	2805	11.84%	(332/2805)	15.32%	(225/1469)	7.97%	(106/1330)
Nevada	17	1712	15.3%	(262/1712)	18.1%	(147/812)	11.56%	(52/450)
New Hampshire	24	6061	11.19%	(678/6061)	16.26%	(300/1845)	8.96%	(376/4198)
New Jersey	119	9328	14.11%	(1316/9328)	16.6%	(853/5140)	10.55%	(429/4067)
New Mexico	8	1142	14.19%	(162/1142)	17.75%	(49/276)	12.95%	(112/865)
New York	188	33797	12.41%	(4194/33797)	15.22%	(2401/15780)	9.94%	(1768/17790)
North Carolina	123	32288	13.99%	(4517/32288)	17.15%	(2648/15436)	10.97%	(1805/16461)
North Dakota	11	2647	12.88%	(341/2647)	16.56%	(215/1298)	9.13%	(118/1292)
Ohio	169	32666	13.41%	(4381/32666)	16.38%	(2609/15930)	10.41%	(1711/16436)
Oklahoma	29	2630	14.75%	(388/2630)	17.7%	(281/1588)	10.12%	(103/1018)
Oregon	49	11131	12.22%	(1360/11131)	15.9%	(748/4703)	9.47%	(583/6154)
Pennsylvania	157	39285	13.34%	(5240/39285)	17.42%	(3240/18597)	9.47%	(1808/19091)
Rhode Island	18	2586	17.9%	(463/2586)	22.31%	(230/1031)	14.99%	(233/1554)
South Carolina	37	12312	13.99%	(1723/12312)	15.85%	(957/6037)	12.15%	(754/6207)
South Dakota	23	2700	10.56%	(285/2700)	12.42%	(151/1216)	7.96%	(116/1458)
Tennessee	98	18174	13.98%	(2540/18174)	12.63%	(1413/11190)	16.13%	(1096/6793)
Texas	147	15727	15.1%	(2375/15727)	17.46%	(1690/9680)	11.07%	(591/5339)
Utah	22	700	13.29%	(93/700)	14.64%	(71/485)	10.23%	(22/215)
Vermont	8	2275	10.95%	(249/2275)	13.21%	(104/787)	9.77%	(145/1484)
Virginia	92	20113	13.06%	(2627/20113)	16.75%	(1528/9125)	9.83%	(1066/10846)
Washington	88	14819	12.19%	(1806/14819)	15.79%	(1138/7209)	8.55%	(597/6979)

Lung Cancer Screening Statistics, Post-Exam Measures – Screening Exams performed in 2020

			Abnormal Interpretation Rate, baseline, annual, not indicated (%)		Abnormal Interpretation Rate, at baseline exam (%)		Abnormal Interpretation Rate, at annual exam (%)	
Aggregation Level	# Facilities	# Screening Exams	Rate	Num/Den	Rate	Num/Den	Rate	Num/Den
West Virginia	20	3410	18.15%	(619/3410)	21.04%	(446/2120)	12.85%	(162/1261)
Wisconsin	125	20589	12.92%	(2660/20589)	15.66%	(1556/9939)	10.39%	(1088/10471)
Wyoming	<5	NR	NR	NR	NR	NR	NR	NR
LCSR	3404	610636	13.54%	(82710/610828)	16.56%	(48573/293343)	10.62%	(32470/305712)