

NLCSP Participation Model

Instructions for macro-disabled version

Notes

- The model outputs report the number of additional lung cancers expected to be diagnosed following the introduction of the national lung cancer screening program, i.e., in addition to the number of lung cancers that would have been diagnosed if the screening program had not been implemented.
- Around 15,000 people are diagnosed with lung cancer each year. In the first year of the screening program, we estimate screening will detect an additional 1500 cases (assuming 70% attendance in year 1).

Macro-disabled version

- The instructions below are for the macro-disabled version of the model.
- The input parameters and population of interest can be varied.
- The summary of the outputs will be captured in a table by year and age cohort for the population of interest.

Varying input parameters (see following slides)

INPUTS

- “Inputs Population”
- Copy & paste the jurisdiction of interest data from the relevant row into row 14
- “Inputs General”
- Distribution of screening over two years: adjust cell C15
- Uptake of screening: adjust cell C27

RESULTS

- “Tables by year cohort Base”
- ‘Live Version’ updates as variables are changed
- Copy & paste the updated cell values
- View updated results in the ‘Data with two-year distribution’ table

Inputs Population

Copy & paste data for the jurisdiction
of interest to row 14

7															
8	Population inputs (size and growth) by jurisdiction														
9	This data draws on jurisdiction population sheets (LGA, SA2)														
10															
11	Vlookup	2		4	5	60	61	62	63	64	65	66	8	7	6
12	Population					Age in 2025									
13	Jurisdiction Code	Jurisdiction Name	Jurisdiction Category	Jurisdiction State	Quintile	66-70 years	61-65 years	56-60 years	51-55 years	50 years	49 years	48 years	66-70 years	61-65 years	56-60 years
14	Australia	Australia - General Population	General		0	1,377,752	1,562,593	1,551,168	1,693,907	324,852	322,378	322,443	2.86%	← -0.38%	3.02%
15															
16	Australia	Australia - General Population	General		0	1,377,752	1,562,593	1,551,168	1,693,907	324,852	322,378	322,443	2.86%	-0.38%	3.02%
17	NSW	New South Wales	General		0	437,314	494,447	477,943	524,307	100,846	100,368	100,387	2.82%	-0.88%	3.10%
18	VIC	Victoria	General		0	341,685	386,478	392,103	427,585	82,820	82,056	82,399	3.13%	0.37%	3.24%
19	QLD	Queensland	General		0	282,392	323,561	323,315	359,216	68,298	67,606	67,234	3.00%	-0.36%	3.27%
20	SA	South Australia	General		0	106,675	117,148	113,145	116,583	21,722	21,397	21,668	1.97%	-1.27%	1.68%
21	WA	Western Australia	General		0	144,389	165,897	170,415	185,179	35,635	35,637	35,417	2.80%	0.23%	2.82%
22	TAS	Tasmania	General		0	36,216	39,424	35,540	36,316	6,589	6,502	6,264	1.69%	-3.05%	1.86%
23	NT	Northern Territory	General		0	9,508	12,446	13,912	15,822	3,070	3,107	3,130	3.64%	0.56%	2.52%
24	ACT	Australian Capital Territory	General		0	19,206	22,792	24,450	28,530	5,824	5,657	5,895	3.97%	1.23%	4.18%
25	Indig_Australia	Australia - Indigenous Population	Indigenous		0	28,971	33,323	40,215	49,009	10,188	9,782	9,489	5.60%	3.06%	2.60%
26	Indig_NSW	Indigenous - New South Wales	Indigenous		0	11,729	12,883	14,184	16,923	3,042	3,113	3,048	5.55%	-0.16%	4.35%
27	Indig_VIC	Indigenous - Victoria	Indigenous		0	2,630	2,780	3,319	3,955	735	679	684	5.34%	2.57%	4.83%
28	Indig_QLD	Indigenous - Queensland	Indigenous		0	9,131	9,920	11,531	14,133	2,674	2,642	2,624	6.08%	1.69%	5.24%
29	Indig_SA	Indigenous - South Australia	Indigenous		0	1,679	1,888	2,156	2,711	478	487	460	6.49%	-0.44%	5.42%
30	Indig_WA	Indigenous - Western Australia	Indigenous		0	3,728	4,196	5,242	6,038	1,222	1,235	1,140	6.27%	3.09%	3.13%
31	Indig_TAS	Indigenous - Tasmania	Indigenous		0	1,452	1,508	1,584	1,723	307	310	302	5.83%	-1.17%	3.75%
32	Indig_NT	Indigenous - Northern Territory	Indigenous		0	2,374	2,604	3,509	4,160	825	878	885	5.36%	2.22%	2.51%
33	Indig_ACT	Indigenous - Australian Capital Territory	Indigenous		0	281	289	370	451	90	115	116	5.34%	5.88%	1.29%
34	LGA 10050	Albury	LGA	New South Wales	3	3,455	3,628	3,273	3,428	662	662	662	2.72%	2.54%	0.38%
35	10180	Armidale	LGA	New South Wales	4	1,659	1,766	1,653	1,556	291	291	291	1.66%	1.38%	-0.44%
36	10250	Ballina	LGA	New South Wales	4	3,566	3,492	3,017	3,004	562	562	562	2.30%	1.46%	-0.22%

Inputs General

	A	B	C	D
7				
8		Population inputs (size and growth) by jurisdiction		
9		Population	See 'Inputs Population'	
10				
11		Scenario	Base	
12				
13				
14		Distribution of screening over two years		
15		Projected screening uptake in first year	70%	
16				
17				
18		Uptake rates	Proportion	
19		Risk assessment uptake rates		
20		Not eligible for screening (first year):		
21		Uptake if meets promoted criteria for risk assessment	50.00%	
22		Uptake if does not meet promoted criteria for risk assessment	0.00%	
23		Not eligible for screening (subsequent years):		
24		Uptake if meets promoted criteria for risk assessment	10.00%	
25		Uptake if does not meet promoted criteria for risk assessment	0.00%	
26		Eligible for screening:		
27		Uptake if newly eligible for screening	65.00%	
28		Uptake if previously screened	65.00%	
29		Uptake if not previously screened	65.00%	
30		Screening uptake rates (given positive risk assessment):		
31		First screening	100.00%	
32		Next screening if the person attended the previous screening	100.00%	
33		Next screening if the person did not attend the previous screening	100.00%	

Vary these parameters

Results - Tables by year cohort Base

Live version changes as Input
Population and Uptake Rate changes.
Copy the cells in the Red box.



BASE CASE

Data without two-year distribution

Screening program events (No.)	LIVE VERSION											
	2025				2026				2027			
Total Australian population					-				-			
Age Cohort	66-70	61-65	56-60	50-55	66-70	61-65	56-60	50-55	66-70	61-65	56-60	50-55
Population ageing into the program	-	-	-	-	-	-	-	326,884	-	-	-	331,520
Population with 20 pack year smoking history, not quit for more than 20 years and not risk assessed in the previous year	128,911	173,154	164,419	213,982	-	-	-	34,649	85,784	171,112	176,700	245,462
Population with 30 pack year smoking history, not quit for more than 10 years and not screened in the previous year	95,785	136,465	118,554	154,292	-	-	-	24,983	63,741	134,702	128,109	177,823
Risk assessments	78,823	107,047	99,992	130,135	-	-	-	21,072	43,636	91,197	88,130	126,270
LDCT screens performed	62,260	88,702	77,060	100,290	-	-	-	16,239	41,432	87,556	83,271	115,585
Very low risk screen result	51,900	73,942	64,237	83,601	-	-	-	13,537	21,941	46,366	44,097	66,217
Low risk screen result	5,859	8,347	7,251	9,437	-	-	-	1,528	17,528	37,042	35,229	43,482
Low to moderate risk screen result	1,569	2,235	1,942	2,527	-	-	-	409	495	1,047	996	1,600
Moderate risk screen result	1,569	2,235	1,942	2,527	-	-	-	409	495	1,047	996	1,600
High risk/suspected lung cancer screen result	521	1,261	1,367	1,779	-	-	-	288	708	1,553	1,674	2,285
Lung cancers detected	843	682	320	417	-	-	-	68	264	501	279	401
Rescreens in current year	5,852	9,375	8,688	11,307	-	-	-	1,831	2,944	6,334	6,419	9,497
Rescreens from previous year	-	-	-	-	7,642	10,888	9,459	12,310	-	-	-	1,993
Further investigations	1,560	2,222	1,930	2,512	-	-	-	407	1,034	2,185	2,078	2,886
Incidental findings	9,135	13,014	11,306	14,714	-	-	-	2,383	6,069	12,825	12,198	16,931

Results

This table assumes 100% attendance in year 1.
Paste the values of the copied data (not the formulae) from the last slide into the Red box

Data without two-year distribution

	Australia											
Screening program events (No.)	2025				2026				2027			
Total Australian population	6,510,272				-				-			
Age Cohort	66-70	61-65	56-60	50-55	66-70	61-65	56-60	50-55	66-70	61-65	56-60	50-55
Population ageing into the program	-	-	-	-	-	-	-	326,884	-	-	-	331,520
Population with 20 pack year smoking history, not quit for more than 20 years and not risk assessed in the previous year	128,911	173,154	164,419	213,982	-	-	-	34,649	85,784	171,112	176,700	245,462
Population with 30 pack year smoking history, not quit for more than 10 years and not screened in the previous year	95,785	136,465	118,554	154,292	-	-	-	24,983	63,741	134,702	128,109	177,823
Risk assessments	78,823	107,047	99,992	130,135	-	-	-	21,072	43,636	91,197	88,130	126,270
LDCT screens performed	62,260	88,702	77,060	100,290	-	-	-	16,239	41,432	87,556	83,271	115,585
Very low risk screen result	51,900	73,942	64,237	83,601	-	-	-	13,537	21,941	46,366	44,097	66,217
Low risk screen result	5,859	8,347	7,251	9,437	-	-	-	1,528	17,528	37,042	35,229	43,482
Low to moderate risk screen result	1,569	2,235	1,942	2,527	-	-	-	409	495	1,047	996	1,600
Moderate risk screen result	1,569	2,235	1,942	2,527	-	-	-	409	495	1,047	996	1,600
High risk/suspected lung cancer screen result	521	1,261	1,367	1,779	-	-	-	288	708	1,553	1,674	2,285
Lung cancers detected	843	682	320	417	-	-	-	68	264	501	279	401
Rescreens in current year	5,852	9,375	8,688	11,307	-	-	-	1,831	2,944	6,334	6,419	9,497
Rescreens from previous year	-	-	-	-	7,642	10,888	9,459	12,310	-	-	-	1,993
Further investigations	1,560	2,222	1,930	2,512	-	-	-	407	1,034	2,185	2,078	2,886
Incidental findings	9,135	13,014	11,306	14,714	-	-	-	2,383	6,069	12,825	12,198	16,931



This table distributes participation across the multiple years based on the input variable – value in C15

Data with two-year distribution

	Australia											
Screening program events (No.)	2025				2026				2027			
Total Australian population	6,510,272				-				-			
Age Cohort	66-70	61-65	56-60	50-55	66-70	61-65	56-60	50-55	66-70	61-65	56-60	50-55
Population ageing into the program	-	-	-	-	-	-	-	326,884	-	-	-	331,520
Population with 20 pack year smoking history, not quit for more than 20 years and not risk assessed in the previous year	90,238	121,208	115,093	149,787	38,673	51,946	49,326	98,843	-	-	-	-
Population with 30 pack year smoking history, not quit for more than 10 years and not screened in the previous year	67,049	95,525	82,988	108,004	28,735	40,939	35,566	71,271	-	-	-	-
Risk assessments	55,176	74,933	69,995	91,094	23,647	32,114	29,998	60,112	-	-	-	-
LDCT screens performed	43,582	62,091	53,942	70,203	18,678	26,611	23,118	46,326	-	-	-	-
Very low risk screen result	36,330	51,759	44,966	58,521	15,570	22,183	19,271	38,617	-	-	-	-
Low risk screen result	4,101	5,843	5,076	6,606	1,758	2,504	2,175	4,359	-	-	-	-
Low to moderate risk screen result	1,098	1,565	1,359	1,769	471	671	583	1,167	-	-	-	-
Moderate risk screen result	1,098	1,565	1,359	1,769	471	671	583	1,167	-	-	-	-
High risk/suspected lung cancer screen result	364	883	957	1,246	156	378	410	822	-	-	-	-
Lung cancers detected	590	477	224	292	253	205	96	193	-	-	-	-
Rescreens in current year	4,096	6,562	6,082	7,915	1,755	2,812	2,606	5,223	-	-	-	-
Rescreens from previous year	-	-	-	-	7,642	10,888	9,459	12,310	-	-	-	-
Further investigations	1,092	1,555	1,351	1,759	468	667	579	1,160	-	-	-	-
Incidental findings	6,394	9,110	7,914	10,300	2,740	3,904	3,392	6,797	-	-	-	-