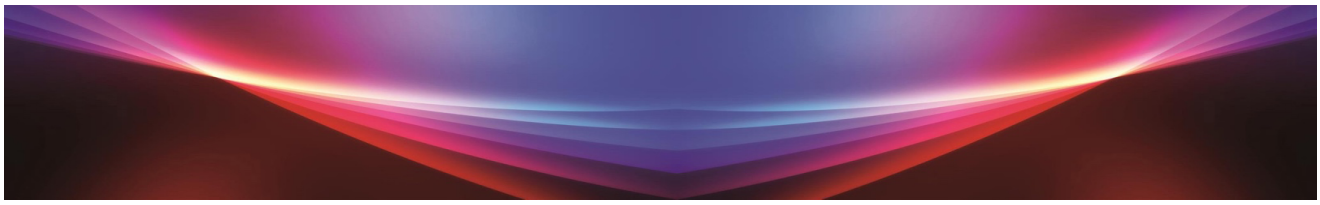

SUPPLEMENTARY MATERIAL

DOI: 10.4081/monaldi.2022.2284

Role of low dose computed tomography on lung cancer detection and mortality - an updated systematic review and meta-analysis

Sumita Agrawal[1], Akhil Dhanesh Goel[2], Nitesh Gupta[3], Ayush Lohiya[4]

[1]Pulmonary Medicine and Critical Care, Medipulse Hospital, Jodhpur

[2]Department of Community Medicine and Family Medicine, All India Institute of Medical Sciences, Jodhpur

[3]Nodal Officer COVID19 Outbreak, Department of Pulmonary, Critical Care and Sleep Medicine, Vardhman Mahavir Medical College and Safdarjung Hospital, New

[4]Kalyan Singh Super Specialty Cancer Institute, Lucknow, India

Corresponding author: Dr. Nitesh Gupta, Nodal Officer COVID19 Outbreak, Department of Pulmonary, Critical Care and Sleep Medicine, VMMC and Safdarjung Hospital, New Delhi, India. E-mail: niteshgupta2107@gmail.com

Non-commercial use only

Note: The publisher is not responsible for the content or functionality of any supporting information supplied by the authors. Any queries should be directed to the corresponding author for the article.

Supplementary Table 1: The study characteristics of 11 studies included in the review

Author/year	Name of the trial		N Screening Group	No. positive for lung cancer in screening group	Total Mortality	Lung cancer specific Mortality	N Non-Screening Group	No. positive for lung cancer in non-screening group	Total Mortality	Lung cancer specific Mortality
Mathilde M. W. Wille et al/2015	DLCST (Denmark)	LDCT vs No screening	2052	100	165	39	2052	53	163	38
Maurizio Infante et al / 2009	DANTE(Italy)	LDCT vs No screening	1276	60	180	59	1176	34	176	55
Aberle DR et al/ 2011	NLST (US)	LDCT VS Radiography	26723	649	1865	427	26733	279	1991	503
Ugo Pastorino/2019	MILD (Italy)	LDCT vs No screening	2376	98	137	40	1723	60	106	40
N. Becker et al/ 2012	LUSI	MSCT vs No screening	2029	22 (1.1%)	148	40	2023	36	150	29
Andrea Lopes Pegna et al/ 2013	ITALUNG	LDCT vs No screening	1613	67	154	43	1593	71	181	60
John Gohagan et al/ 2004	LSS	LDCT VS Radiography	1660	30	139	32	1658	7	116	26
Thierry Blanchon et al/ 2007	DEPSICAN	LDCT VS Radiography	336	8	NA	NA	285	1	NA	NA

Non-commercial use only

Author/year	Name of the trial		N Screening Group	No. positive for lung cancer in screening group	Total Mortality	Lung cancer specific Mortality	N Non-Screening Group	No. positive for lung cancer in non-screening group	Total Mortality	Lung cancer specific Mortality
Yang et al/ 2017	CHINA	LDCT vs Standard Care	3550	51	NA	NA	3167	10	NA	NA
De Konning HJ et al/2020	NELSON	LDCT vs No screening	6583	203	868	160	6612	141	860	210
J K Field et al/ 2016	UKLS	LDCT vs no screening	2028	42	NA	NA	NA	NA	NA	NA

NA – Not Available

Non-commercial use only

Supplementary Table 2a:Lung Cancer Specific Mortality

Author/year	Name of the trial	N Screening Group	Lung cancer specific Mortality	N Non-Screening Group	Lung cancer specific Mortality
Mathilde M. W. Wille et al/2015	DLCST (Denamrk)	2052	39	2052	38
Maurizio Infante et al / 2009	DANTE(Italy)	1276	59	1176	55
Aberle DR et al/ 2011	NLST (US)	26723	427	26733	503
Ugo Pastorino/2019	MILD (Italy)	2376	40	1723	40
N. Becker et al/ 2012	LUSI	2029	40	2023	29
Andrea Lopes Pegna et al/ 2013	ITALUNG	1613	43	1593	60
John Gohagan et al/ 2004	LSS	1660	32	1658	26
De Konning HJ et al/2020	NELSON	6583	160	6612	210

Non-commercial use only

Supplementary Table 2b: Lung Cancer Specific Mortality

Author/Year	Study	RR	LCI 95%	HCI 95%	Weight (%)
Mathilde M. W. Wille et al/2015	DLCST	1.03	0.66	1.60	4.30
Maurizio Infante et al / 2009	DANTE	0.99	0.69	1.42	6.55
Aberle DR et al/ 2011	NLST	0.85	0.75	0.97	51.56
Ugo Pastorino/2019	MILD	0.73	0.47	1.12	4.48
N. Becker et al/ 2012	LUSI	1.38	0.86	2.21	3.75
Andrea Lopes Pegna et al/ 2013	ITALUNG	0.71	0.48	1.04	5.67
John Gohagan et al/ 2004	LSS	1.23	0.74	2.05	3.20
De Konning HJ et al/2020	NELSON	0.77	0.62	0.94	20.49
	Pooled	0.86	0.75	0.98	100.00
	Statistics				
	I-squared	27.86	0.00	67.59	
	Cochran's Q	9.70			
	Chi2, p	0.21			

Non-commercial use only

pagepress

Supplementary Table 3a: All-cause mortality

Author/year	Name of the trial		N Screening Group	Total Mortality	N Non-Screening Group	Total Mortality
Mathilde M. W. Wille et al/2015	DLCST (Denmark)	LDCT vs No screening	2052	165	2052	163
Maurizio Infante et al / 2009	DANTE(Italy)	LDCT vs No screening	1276	180	1176	176
Aberle DR et al/ 2011	NLST (US)	LDCT VS Radiography	26723	1865	26733	1991
Ugo Pastorino/2019	MILD (Italy)	LDCT vs No screening	2376	137	1723	106
N. Becker et al/ 2012	LUSI	MSCT vs No screening	2029	148	2023	150
Andrea Lopes Pegna et al/ 2013	ITALUNG	LDCT vs No screening	1613	154	1593	181
John Gohagan et al/ 2004	LSS	LDCT VS Radiography	1660	139	1658	116
De K onning HJ et al/2020	NELSON	LDCT vs No screening	6583	868	6612	860

Non-commercial use only

Supplementary Table 3b: All-cause mortality; RR- Risk Ratio; LCI- Lowest Confidence Interval; HCI- Highest Confidence Interval

Author/Year	Study	RR	LCI 95%	HCI 95%	weight (%)
Mathilde M. W. Wille et al/2015	DLCST	1.01	0.82	1.25	4.38
Maurizio Infante et al / 2009	DANTE	0.94	0.78	1.14	5.12
Aberle DR et al/ 2011	NLST	0.94	0.88	1.00	51.04
Ugo Pastorino/2019	MILD	0.94	0.73	1.20	3.13
N. Becker et al/ 2012	LUSI	0.98	0.79	1.22	3.95
Andrea Lopes Pegna et al/ 2013	ITALUNG	0.84	0.69	1.03	4.57
John Gohagan et al/ 2004	LSS	1.20	0.94	1.52	3.37
De Konning HJ et al/2020	NELSON	1.01	0.93	1.11	24.45
	Pooled	0.96	0.92	1.01	100.00
	Statistics				
	I-squared	5.35	0	69.31	
	Cochran's Q	7.40E+00			
	Chi2, p	0.38			

Non-commercial use only

Supplementary Table 4a: lung cancer detection

Author/year	Name of the trial	N Screening Group	No. positive for lung cancer in screening group	N Non-Screening Group	No. positive for lung cancer in non-screening group
Mathilde M. W. Wille et al/2015	DLCST (Denamrk)	2052	100	2052	53
Maurizio Infante et al / 2009	DANTE(Italy)	1276	60	1176	34
Aberle DR et al/ 2011	NLST (US)	26723	649	26733	279
Ugo Pastorino/2019	MILD (Italy)	2376	98	1723	60
N. Becker et al/ 2012	LUSI	2029	22	2023	36
Andrea Lopes Pegna et al/ 2013	ITALUNG	1613	67	1593	71
John Gohagan et al/ 2004	LSS	1660	30	1658	7
Thierry Blanchon et al/ 2007	DEPSICAN	336	8	285	1
Yang et al/ 2017	CHINA	3550	51	3167	10
De Konning HJ et al/2020	NELSON	6583	203	6612	141

Non-commercial use only

Supplementary Table 4b: lung cancer detection; RR- Risk Ratio; LCI- Lowest Confidence Interval; HCI- Highest Confidence Interval

Author/year	Study	RR	LCI 95%	HCI 95%	Weight (%)
Mathilde M. W. Wille et al/2015	DLCST (Denmark)	1.89	1.36	2.62	8.05
Maurizio Infante et al / 2009	DANTE(Italy)	1.63	1.08	2.46	5.05
Aberle DR et al/ 2011	NLST (US)	2.33	2.02	2.67	44.47
Ugo Pastorino/2019	MILD (Italy)	1.18	0.86	1.62	8.68
N. Becker et al/ 2012	LUSI	0.61	0.36	1.03	3.11
Andrea Lopes Pegna et al/ 2013	ITALUNG	0.93	0.67	1.29	8.09
John Gohagan et al/ 2004	LSS	4.28	1.89	9.72	1.28
Thierry Blanchon et al/ 2007	DEPSICAN	6.79	0.85	53.93	0.20
Yang et al/ 2017	CHINA	4.55	2.31	8.95	1.89
De Konning HJ et al/2020	NELSON	1.45	1.17	1.79	19.17
	Pooled	1.76	1.14	2.72	100
	Statistics				
	I-squared	86.95	77.97	92.27	
	Cochran's Q	68.97			
	Chi2, p	2.42E-11			

Non-commercial use only