

Health-Related Quality of Life and Anxiety in the PAN-CAN Lung Cancer Screening Study

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e-Appendix 1:

Study design and population

Institutional Review Board (IRB) Approvals:

Vancouver: UBC BCCA Research Ethics Board (UBC BCCA REB) H08-01132

Calgary: Conjoint Health Research Ethics Board (CHREB) ethics ID: 21852

Hamilton: McMaster University Research Ethics Board; ID: 08-367

Toronto: University Health Network Research Ethics Board; ID: 08-0576-C

Ottawa: The Ottawa Hospital Research Ethics Board; ID 2008581-01H

Quebec: Institute Universitaire de Cardiologie et de Pneumologie; ID: CER: 20319

Halifax: Capital Health Research Ethics Board; ID: CDHA-RS/2009-097

St.John's: Eastern Health Department of Research/Knowledge transfer; ID; HIC#10.070

Supplementary Table 1 – HRQoL, and anxiety levels in participants with positive baseline LDCT.

	Baseline (n=279)	1-month post baseline CT scan Mean, change (95% CI) (n=238)	Post investigation Mean, change (95% CI) (n=168)	12-months after baseline Mean, change (95% CI) (n= 246)
EQ VAS¹	76.2	76.1, -0.21 (-2.54 to 2.13)	76.9, 0.89 (-3.28 to 5.07)	76.4, 0.19 (-1.73 to 2.11)
EQ-5D-3L index values	0.84	0.84, -0.00 (-0.03 to 0.03)	0.85, 0.00 (-0.03 to 0.04)	0.83, -0.01 (-0.05 to 0.02)
SF-12: PCS²	46.2	46.5, 0.22 (-0.83 to 1.28)	46.6, 0.45 (-0.93 to 1.83)	45.3, -0.86 (-1.90 to 1.67)
SF-12: MCS³	51.3	51.2, 0.01 (-1.66 to 1.67)	51.4, 0.54 (-2.06 to 3.15)	51.3, 0.01 (-2.30 to 2.33)
STAI-State Anxiety⁴	29.9	33.2, 3.28 (-0.42 to 6.97)	32.9, 2.42 (-1.14 to 5.99)	31.7, 1.79 (-0.62 to 4.19)

¹EQ Visual Analogue Scale “We would like to know how good or bad your health is today” (100 – best imaginable, 0 – worst imaginable).

² Physical Health Composite Scores (US population mean = 50 +/- 10), with higher score corresponding to better state.

³ Mental Health Composite Scores (US population mean = 50 +/- 10), with higher score corresponding to better state.

⁴ STAI-State score >39 considered clinically significant symptoms.

Supplementary Table 2 - Proportion of different levels of EQ-5D-3L dimensions by study visits (Total n=1237).

EQ-5D-3L Dimensions, n (%)	Baseline (n=1237)	1 month post baseline CT scan (n=953)	12 months after baseline (n=1066)
Overall score missing	9 (0.7)	12 (1.3)	16 (1.5)
Mobility			
I have no problems in walking about	918 (74.2)	705 (74.0)	782 (73.4)
I have some problems in walking about	311 (25.2)	240 (25.2)	278 (26.1)
I am confined to bed	4 (0.3)	3 (0.3)	0 (0.0)
Missing	4 (0.3)	5 (0.5)	6 (0.6)
Self-care			
I have no problems with self-care	1191 (96.2)	914 (95.9)	1018 (95.5)
I have some problems washing or dressing myself	36 (2.9)	31 (3.3)	39 (3.7)
I am unable to wash or dress myself	7 (0.6)	2 (0.2)	3 (0.3)
Missing	3 (0.3)	6 (0.6)	6 (0.6)
Usual activities			
I have no problems with performing my usual activities	930 (75.1)	710 (74.5)	785 (73.6)
I have some problems with performing my usual activities	284 (22.9)	228 (23.9)	261 (24.5)
I am unable to perform my usual activities	18 (1.5)	8 (0.8)	15 (1.4)
Missing	5 (0.5)	7 (0.7)	5 (0.5)
Pain/discomfort			
I have no pain or discomfort	575 (46.4)	471 (49.4)	498 (46.7)
I have moderate pain or discomfort	622 (50.2)	443 (46.5)	520 (48.8)
I have extreme pain or discomfort	36 (2.9)	33 (3.5)	40 (3.8)
Missing	4 (0.4)	6 (0.6)	8 (0.8)
Anxiety/depression			
I am not anxious or depressed	835 (64.4)	610 (64.0)	708 (66.4)
I am moderately anxious or depressed	375 (30.3)	307 (32.2)	332 (31.1)
I am extremely anxious or depressed	23 (1.9)	28 (2.9)	19 (1.8)
Missing	4 (0.4)	8 (0.8)	7 (0.7)

Supplementary Table 3- Proportion of different levels of SF_12 dimensions by study visits (Total n=2537).

SF_12 Dimensions	Baseline (n=1237)	1 month post baseline CT scan (n=953)	12 months after baseline (n=1066)
General health, n (%)			
Excellent	93 (7.5)	85 (8.9)	89 (8.3)
Very good	453 (36.6)	367 (38.5)	392 (36.8)
Good	532 (43.0)	381 (40.0)	450 (42.2)
Fair	138 (11.1)	105 (11.0)	108 (10.1)
Poor	18 (1.5)	12 (1.3)	20 (1.9)
Missing	3 (0.3)	3 (0.3)	7 (0.7)
Moderate activities			
Yes, limited a lot	97 (7.8)	77 (8.1)	75 (7.0)
Yes, limited a little	310 (25.0)	256 (26.9)	267 (25.0)
No, not limited at all	827 (66.8)	617 (64.7)	714 (67.0)
Missing	3 (0.3)	3 (0.3)	10 (0.9)
Climbing several flights of stairs			
Yes, limited a lot	191 (15.4)	140 (14.7)	161 (15.1)
Yes, limited a little	551 (44.5)	432 (45.3)	462 (43.3)
No, not limited at all	491 (39.7)	376 (39.5)	436 (40.9)
Missing	4 (0.3)	5 (0.5)	7 (0.7)
Accomplished less than you would like (physically)			
Yes	335 (27.1)	221 (23.2)	265 (24.9)
No	899 (72.6)	727 (76.3)	795 (74.6)
Missing	3 (0.3)	5 (0.5)	6 (0.6)
Limited in kind of activities			
Yes	299 (24.2)	221 (23.2)	265 (24.9)
No	934 (75.4)	729 (76.5)	795 (74.6)
Missing	4 (0.4)	3 (0.3)	6 (0.6)
Accomplished less than you would like (emotionally)			
Yes	251 (20.3)	212 (22.2)	222 (20.8)
No	982 (79.3)	735 (77.1)	833 (78.1)
Missing	4 (0.4)	6 (0.6)	11 (1.0)
Did not do activities as carefully as usual			
Yes	215 (17.4)	181 (19.0)	181 (17.0)
No	1018 (82.2)	764 (80.2)	875 (82.1)
Missing	4 (0.4)	8 (0.8)	10 (0.9)
Pain interferes with normal work			
Not at all	596 (48.1)	479 (50.3)	515 (48.3)
A little bit	312 (25.2)	243 (25.5)	288 (27.0)
Moderately	194 (15.7)	138 (14.5)	142 (13.3)
Quite a bit	109 (8.8)	77 (8.1)	98 (9.2)
Extremely	20 (1.6)	13 (1.4)	18 (1.7)
Missing	6 (0.5)	3 (0.3)	5 (0.5)
Felt calm and peaceful			
All of the time	87 (7.0)	73 (7.7)	84 (7.9)
Most of the time	630 (50.9)	460 (48.3)	527 (49.4)
A good bit of the time	184 (14.9)	163 (17.1)	176 (16.5)
Some of the time	214 (17.3)	171 (17.9)	164 (15.4)
A little of the time	96 (7.8)	70 (7.3)	88 (8.3)
None of the time	23 (1.9)	11 (1.2)	18 (1.7)
Missing	3 (0.3)	5 (0.5)	9 (0.8)
Have a lot of energy			
All of the time	36 (2.9)	36 (3.8)	41 (3.8)
Most of the time	416 (33.6)	317 (33.3)	375 (35.2)
A good bit of the time	263 (21.2)	206 (21.6)	213 (20.0)
Some of the time	322 (26.0)	240 (25.2)	249 (23.4)
A little of the time	156 (12.6)	116 (12.2)	145 (13.6)
None of the time	41 (3.3)	34 (3.6)	34 (3.2)
Missing	3 (0.3)	4 (0.4)	9 (0.8)
Felt downhearted and blue			
All of the time	4 (0.3)	5 (0.5)	4 (0.4)
Most of the time	37 (3.0)	37 (3.9)	34 (3.2)
A good bit of the time	79 (6.4)	51 (5.4)	76 (7.1)
Some of the time	273 (22.1)	196 (20.6)	216 (20.3)
A little of the time	480 (38.8)	399 (41.9)	414 (38.8)
None of the time	361 (29.2)	261 (27.4)	312 (29.3)
Missing	3 (0.3)	4 (0.4)	10 (0.9)
Health interferes/social activities			
All of the time	8 (0.6)	10 (1.0)	16 (1.5)
Most of the time	63 (5.1)	42 (4.4)	54 (5.1)
Some of the time	203 (16.4)	150 (15.7)	169 (15.9)
A little of the time	238 (19.2)	182 (19.1)	200 (18.8)
None of the time	722 (58.3)	565 (59.3)	617 (57.9)
Missing	3 (0.3)	4 (0.4)	10 (0.9)

Supplementary Table 4- Proportion of different levels of State anxiety dimensions by study visits (Total n=2537).

State	Baseline (n=1237)					1 month post baseline CT scan (n=953)					12 months after baseline (n=1066)				
	Not at all	Somewhat	Moderately so	Very much so	Missing	Not at all	Somewhat	Moderately so	Very much so	Missing	Not at all	Somewhat	Moderately so	Very much so	Missing
I feel calm	17 (1.4)	167 (13.5)	407 (32.9)	643 (51.9)	3 (0.3)	31 (3.3)	136 (14.3)	338 (35.5)	442 (46.4)	6 (0.6)	18 (1.7)	131 (12.3)	393 (36.9)	516 (48.4)	8 (0.8)
I feel secure	16 (1.3)	106 (8.6)	304 (24.6)	808 (65.3)	3 (0.3)	21 (2.2)	115 (12.1)	283 (29.7)	528 (55.4)	6 (0.6)	24 (2.3)	83 (7.8)	330 (31.0)	621 (58.3)	8 (0.8)
I feel tense	685 (55.3)	319 (25.8)	192 (15.5)	36 (2.9)	3 (0.3)	465 (48.8)	300 (31.5)	144 (15.1)	39 (4.1)	5 (0.5)	562 (52.7)	282 (26.5)	177 (16.6)	35 (3.3)	10 (1.0)
I feel strained	834 (67.4)	231 (18.7)	131 (10.6)	38 (3.1)	3 (0.3)	543 (57.0)	261 (27.4)	109 (11.4)	35 (3.7)	5 (0.5)	652 (61.2)	240 (22.5)	134 (12.6)	33 (3.1)	7 (0.7)
I feel at ease	41 (3.3)	154 (12.4)	361 (29.2)	678 (54.8)	3 (0.3)	45 (4.7)	154 (16.2)	289 (30.3)	460 (48.3)	5 (0.5)	27 (2.5)	170 (15.9)	323 (30.3)	538 (50.5)	8 (0.8)
I feel upset	1003 (81.0)	137 (11.1)	75 (6.1)	19 (1.5)	3 (0.3)	660 (69.3)	182 (19.1)	78 (8.2)	28 (2.9)	5 (0.5)	792 (74.3)	175 (16.4)	75 (7.0)	16 (1.5)	8 (0.8)
I am presently worrying over possible misfortunes	694 (56.1)	332 (26.8)	156 (12.6)	52 (4.2)	3 (0.3)	480 (50.4)	295 (31.0)	121 (12.7)	52 (5.5)	5 (0.5)	555 (52.1)	339 (31.8)	115 (10.8)	49 (4.6)	8 (0.8)
I feel satisfied	36 (2.9)	193 (15.6)	469 (37.9)	536 (43.3)	3 (0.3)	47 (4.9)	167 (17.5)	324 (34.0)	410 (43.0)	5 (0.5)	33 (3.1)	192 (18.0)	378 (35.5)	456 (42.8)	7 (0.7)
I feel frightened	1008 (81.4)	149 (12.0)	56 (4.5)	21 (1.7)	3 (0.3)	718 (75.3)	150 (15.7)	59 (6.2)	21 (2.2)	5 (0.5)	846 (79.4)	148 (13.9)	53 (5.0)	11 (1.0)	8 (0.8)
I feel comfortable	30 (2.4)	133 (10.7)	352 (28.4)	719 (58.1)	3 (0.3)	31 (3.3)	135 (14.2)	291 (30.5)	490 (51.4)	6 (0.6)	23 (2.2)	142 (13.3)	333 (31.2)	561 (52.6)	7 (0.7)
I feel self-confident	36 (2.9)	127 (10.3)	439 (35.5)	632 (51.1)	3 (0.3)	38 (4.0)	106 (11.1)	359 (37.7)	445 (46.7)	5 (0.5)	24 (2.3)	127 (11.9)	394 (37.0)	514 (48.2)	7 (0.7)
I feel nervous	780 (63.0)	308 (24.9)	117 (9.5)	29 (2.3)	3 (0.3)	559 (58.7)	255 (26.8)	99 (10.4)	35 (3.7)	5 (0.5)	662 (62.1)	261 (24.5)	114 (10.7)	22 (2.1)	22 (2.1)
I am jittery	968 (78.2)	174 (14.1)	73 (5.9)	18 (1.5)	4 (0.4)	692 (72.6)	152 (15.9)	77 (8.1)	27 (2.8)	5 (0.5)	811 (76.1)	155 (14.5)	77 (7.2)	15 (1.4)	8 (0.8)
I feel indecisive	846 (68.3)	269 (21.7)	97 (7.8)	22 (1.8)	3 (0.3)	557 (58.4)	246 (25.8)	113 (11.9)	32 (3.4)	5 (0.5)	662 (62.1)	256 (24.0)	100 (9.4)	39 (3.7)	9 (0.9)
I am relaxed	48 (3.9)	181 (14.6)	394 (31.8)	611 (49.4)	3 (0.3)	52 (5.5)	173 (18.2)	313 (32.8)	409 (42.9)	6 (0.6)	30 (2.8)	172 (16.1)	377 (35.4)	480 (45.0)	7 (0.7)
I feel content	48 (3.9)	161 (13.0)	436 (35.2)	589 (47.6)	3 (0.3)	52 (5.5)	147 (15.4)	339 (35.6)	410 (43.0)	5 (0.5)	37 (3.5)	151 (14.2)	408 (38.3)	463 (43.4)	7 (0.7)
I am worried	651 (52.6)	390 (31.5)	146 (11.8)	47 (3.8)	3 (0.3)	423 (44.4)	333 (34.9)	134 (14.1)	58 (6.1)	5 (0.5)	518 (48.6)	361 (33.9)	129 (12.1)	51 (4.8)	7 (0.7)
I feel confused	1075 (86.8)	112 (9.0)	32 (2.6)	12 (1.0)	6 (0.5)	755 (79.2)	135 (14.2)	40 (4.2)	18 (1.9)	5 (0.5)	887 (83.2)	99 (9.3)	50 (4.7)	20 (1.9)	10 (1.0)
I feel steady	43 (3.5)	141 (11.4)	327 (26.4)	720 (58.2)	6 (0.5)	43 (4.5)	126 (13.2)	272 (28.5)	507 (53.2)	5 (0.5)	41 (3.8)	120 (11.3)	316 (29.6)	581 (54.5)	8 (0.8)
I feel pleasant	25 (2.0)	118 (9.5)	416 (33.6)	672 (54.3)	6 (0.5)	30 (3.1)	117 (12.3)	319 (33.5)	482 (50.6)	5 (0.5)	25 (2.3)	115 (10.8)	365 (34.2)	552 (51.8)	9 (0.9)