

Appendix 3

**Adjusted analyses of the 15 scales in the questionnaire Consequences of Screening – Lung Cancer (COS-LC):
Mean differences between each pair of the diagnostic groups and the control group during five time points**

		Follow up time									
		Baseline		1 week		1 Month		6 Month		18 Month	
Scale (Range)	Comparison	Mean Δ (95% CI)	p value	Mean Δ (95% CI)	p value	Mean Δ (95% CI)	p value	Mean Δ (95% CI)	p value	Mean Δ (95% CI)	p value
1. Anxiety (0-21)	Con-Neg	-0.46 (-0.99 to 0.07)	0.0864	-0.63 (-1.20 to -0.06)	0.0317	-0.66 (-1.40 to 0.07)	0.0768	-0.58 (-1.35 to 0.19)	0.1375	-0.36 (-1.13 to 0.40)	0.3519
	Con-FP	-0.02 (-0.78 to 0.74)	0.9582	2.77 (1.63 to 3.92)	<.0001	-0.25 (-1.25 to 0.75)	0.6249	-1.20 (-2.43 to 0.04)	0.0578	-0.26 (-1.16 to 0.65)	0.5821
	Con-TP	-1.52 (-2.18 to -0.86)	<.0001	1.89 (0.01 to 3.78)	0.0487	2.72 (0.08 to 5.37)	0.0438	-0.54 (-2.30 to 1.21)	0.5426	-0.69 (-2.41 to 1.04)	0.4360
	Neg-FP	0.44 (-0.27 to 1.16)	0.2257	3.40 (2.33 to 4.48)	<.0001	0.41 (-0.48 to 1.31)	0.3649	-0.62 (-1.64 to 0.41)	0.2390	0.11 (-0.75 to 0.97)	0.8047
	Neg-TP	-1.06 (-1.68 to -0.43)	0.0010	2.52 (0.71 to 4.33)	0.0063	3.38 (0.77 to 6.00)	0.0112	0.04 (-1.66 to 1.74)	0.9666	-0.32 (-1.98 to 1.34)	0.7036
	FP-TP	-1.50 (-2.29 to -0.71)	0.0002	-0.88 (-2.95 to 1.19)	0.4043	2.97 (0.14 to 5.81)	0.0400	0.65 (-1.25 to 2.55)	0.5012	-0.43 (-2.20 to 1.34)	0.6342
No. Respondents		607		514		444		509		518	
2. Behaviour (0-21)	Con-Neg	-0.74 (-1.26 to -0.23)	0.0046	-0.58 (-1.15 to -0.01)	0.0469	-0.74 (-1.41 to -0.08)	0.0284	-0.51 (-1.27 to 0.24)	0.1838	-1.00 (-1.80 to -0.20)	0.0144
	Con-FP	-0.75 (-1.50 to 0.01)	0.0520	1.21 (0.19 to 2.23)	0.0198	-0.09 (-1.34 to 1.16)	0.8843	-0.60 (-1.72 to 0.51)	0.2873	-0.07 (-1.30 to 1.17)	0.9143
	Con-TP	-1.05 (-2.16 to 0.06)	0.0632	0.65 (-0.65 to 1.94)	0.3260	3.31 (0.50 to 6.11)	0.0209	0.03 (-1.66 to 1.73)	0.9698	-0.81 (-2.66 to 1.05)	0.3948
	Neg-FP	0.00 (-0.70 to 0.70)	0.9953	1.79 (0.84 to 2.74)	0.0002	0.65 (-0.46 to 1.76)	0.2522	-0.09 (-1.09 to 0.90)	0.8551	0.93 (-0.21 to 2.07)	0.1106
	Neg-TP	-0.31 (-1.39 to 0.78)	0.5793	1.23 (-0.02 to 2.47)	0.0544	4.05 (1.27 to 6.83)	0.0043	0.54 (-1.13 to 2.22)	0.5236	0.19 (-1.61 to 2.00)	0.8340
	FP-TP	-0.30 (-1.48 to 0.87)	0.6117	-0.56 (-2.06 to 0.94)	0.4636	3.40 (0.38 to 6.42)	0.0275	0.64 (-1.22 to 2.49)	0.5005	-0.74 (-2.80 to 1.32)	0.4834
No. Respondents		611		518		438		507		517	
3. Dejection (0-18)	Con-Neg	-0.41 (-0.92 to 0.10)	0.1142	-0.66 (-1.25 to -0.07)	0.0291	-0.55 (-1.24 to 0.13)	0.1113	-0.36 (-1.07 to 0.35)	0.3231	-0.35 (-1.04 to 0.34)	0.3216
	Con-FP	-0.41 (-1.04 to 0.22)	0.2017	2.63 (1.53 to 3.74)	<.0001	-0.09 (-1.21 to 1.04)	0.8815	-1.04 (-2.07 to 0.00)	0.0492	-0.01 (-1.04 to 1.03)	0.9903
	Con-TP	-0.89 (-1.81 to 0.02)	0.0562	2.20 (0.28 to 4.12)	0.0245	2.92 (0.57 to 5.27)	0.0147	0.16 (-1.32 to 1.64)	0.8308	-0.74 (-2.37 to 0.89)	0.3726
	Neg-FP	0.00 (-0.62 to 0.62)	0.9981	3.29 (2.27 to 4.31)	<.0001	0.47 (-0.55 to 1.49)	0.3695	-0.68 (-1.59 to 0.23)	0.1438	0.34 (-0.64 to 1.32)	0.4928
	Neg-TP	-0.48 (-1.39 to 0.43)	0.2974	2.86 (1.01 to 4.70)	0.0024	3.48 (1.15 to 5.80)	0.0034	0.52 (-0.94 to 1.98)	0.4857	-0.39 (-2.04 to 1.25)	0.6397
	FP-TP	-0.48 (-1.44 to 0.47)	0.3217	-0.43 (-2.49 to 1.63)	0.6812	3.01 (0.44 to 5.58)	0.0219	1.20 (-0.38 to 2.77)	0.1365	-0.74 (-2.55 to 1.08)	0.4270
No. Respondents		606		521		449		518		526	
4. Negative impact on sleep (0-12)	Con-Neg	-0.16 (-0.62 to 0.31)	0.5047	-0.16 (-0.65 to 0.33)	0.5191	-0.38 (-0.90 to 0.14)	0.1549	-0.06 (-0.60 to 0.48)	0.8321	-0.29 (-0.82 to 0.24)	0.2786
	Con-FP	-0.26 (-0.89 to 0.37)	0.4235	0.65 (-0.14 to 1.44)	0.1056	-0.10 (-1.01 to 0.81)	0.8308	-0.32 (-1.20 to 0.56)	0.4770	0.11 (-0.68 to 0.90)	0.7909
	Con-TP	-0.71 (-1.50 to 0.08)	0.0770	0.47 (-0.61 to 1.54)	0.3928	1.94 (0.33 to 3.55)	0.0182	-0.53 (-1.36 to 0.30)	0.2116	-0.90 (-1.96 to 0.15)	0.0938
	Neg-FP	-0.10 (-0.71 to 0.51)	0.7458	0.81 (0.07 to 1.55)	0.0314	0.28 (-0.56 to 1.12)	0.5130	-0.26 (-1.07 to 0.54)	0.5242	0.40 (-0.37 to 1.17)	0.3127
	Neg-TP	-0.55 (-1.32 to 0.21)	0.1572	0.63 (-0.40 to 1.66)	0.2303	2.32 (0.71 to 3.93)	0.0047	-0.47 (-1.24 to 0.31)	0.2356	-0.61 (-1.65 to 0.42)	0.2452
	FP-TP	-0.45 (-1.32 to 0.42)	0.3057	-0.18 (-1.38 to 1.02)	0.7662	2.04 (0.24 to 3.83)	0.0260	-0.21 (-1.25 to 0.84)	0.6968	-1.01 (-2.19 to 0.17)	0.0938
No. Respondents		612		515		444		515		524	

Follow up time

Scale (Range)	Comparison	Baseline		1 week		1 Month		6 Month		18 Month	
		Mean Δ (95% CI)	p value	Mean Δ (95% CI)	p value	Mean Δ (95% CI)	p value	Mean Δ (95% CI)	p value	Mean Δ (95% CI)	p value
5. Selfblame (0-15)	Con-Neg	-0.14 (-0.61 to 0.32)	0.5511	-0.52 (-1.25 to 0.20)	0.1589	-0.21 (-0.94 to 0.51)	0.5644	-0.13 (-0.90 to 0.64)	0.7424	0.26 (-0.63 to 1.16)	0.5642
	Con-FP	0.54 (-0.19 to 1.27)	0.1461	1.58 (0.32 to 2.83)	0.0136	2.16 (0.84 to 3.48)	0.0013	0.23 (-0.98 to 1.43)	0.7132	0.74 (-0.34 to 1.83)	0.1787
	Con-TP	-1.15 (-1.91 to -0.39)	0.0030	1.89 (0.09 to 3.70)	0.0401	1.51 (-0.23 to 3.25)	0.0895	0.31 (-1.56 to 2.18)	0.7476	1.45 (-0.74 to 3.64)	0.1930
	Neg-FP	0.68 (-0.02 to 1.38)	0.0557	2.10 (0.91 to 3.29)	0.0005	2.38 (1.05 to 3.70)	0.0004	0.36 (-0.92 to 1.63)	0.5844	0.48 (-0.67 to 1.64)	0.4145
	Neg-TP	-1.01 (-1.74 to -0.28)	0.0069	2.41 (0.67 to 4.16)	0.0067	1.72 (0.00 to 3.45)	0.0501	0.44 (-1.47 to 2.34)	0.6534	1.19 (-1.04 to 3.42)	0.2957
	FP-TP	-1.69 (-2.59 to -0.80)	0.0002	0.32 (-1.70 to 2.34)	0.7590	-0.65 (-2.66 to 1.36)	0.5249	0.08 (-2.07 to 2.23)	0.9411	0.71 (-1.65 to 3.07)	0.5559
No. Respondents		606		507		445		517		525	
6. Focus on airway symptoms (0-6)	Con-Neg	-0.07 (-0.19 to 0.05)	0.2702	-0.23 (-0.51 to 0.04)	0.0948	-0.16 (-0.45 to 0.13)	0.2807	0.00 (-0.30 to 0.30)	0.9937	-0.09 (-0.39 to 0.22)	0.5773
	Con-FP	0.19 (-0.02 to 0.39)	0.0819	0.57 (0.13 to 1.02)	0.0112	0.68 (0.13 to 1.24)	0.0160	0.23 (-0.16 to 0.63)	0.2443	0.28 (-0.15 to 0.71)	0.1951
	Con-TP	-0.19 (-0.43 to 0.04)	0.1103	0.21 (-0.51 to 0.93)	0.5650	1.60 (0.64 to 2.55)	0.0011	0.90 (0.21 to 1.58)	0.0100	0.54 (-0.45 to 1.53)	0.2861
	Neg-FP	0.25 (0.05 to 0.46)	0.0149	0.81 (0.39 to 1.22)	<.0001	0.84 (0.29 to 1.39)	0.0026	0.23 (-0.18 to 0.65)	0.2666	0.37 (-0.06 to 0.80)	0.0912
	Neg-TP	-0.12 (-0.36 to 0.11)	0.2992	0.44 (-0.26 to 1.15)	0.2139	1.76 (0.81 to 2.71)	0.0003	0.90 (0.22 to 1.58)	0.0098	0.62 (-0.38 to 1.63)	0.2213
	FP-TP	-0.38 (-0.66 to -0.09)	0.0094	-0.36 (-1.14 to 0.42)	0.3639	0.91 (-0.16 to 1.98)	0.0950	0.66 (-0.06 to 1.39)	0.0733	0.25 (-0.79 to 1.30)	0.6340
No. Respondents		613		516		447		517		527	
7. Stigmatization (0-12)	Con-Neg	-0.25 (-0.58 to 0.07)	0.1281	-0.22 (-0.71 to 0.28)	0.3872	-0.14 (-0.64 to 0.35)	0.5693	-0.30 (-0.71 to 0.10)	0.1395	0.45 (-0.05 to 0.95)	0.0753
	Con-FP	0.12 (-0.39 to 0.63)	0.6387	-0.01 (-0.69 to 0.67)	0.9761	0.82 (-0.10 to 1.73)	0.0803	0.46 (-0.49 to 1.41)	0.3393	0.64 (0.00 to 1.28)	0.0492
	Con-TP	-0.40 (-0.98 to 0.18)	0.1715	-0.37 (-1.25 to 0.51)	0.4066	0.01 (-0.83 to 0.85)	0.9841	-0.35 (-1.30 to 0.60)	0.4697	0.63 (-1.06 to 2.31)	0.4664
	Neg-FP	0.38 (-0.13 to 0.88)	0.1444	0.21 (-0.44 to 0.85)	0.5311	0.96 (0.07 to 1.85)	0.0340	0.76 (-0.17 to 1.70)	0.1082	0.19 (-0.52 to 0.90)	0.5981
	Neg-TP	-0.15 (-0.73 to 0.43)	0.6107	-0.15 (-0.95 to 0.64)	0.7021	0.15 (-0.65 to 0.95)	0.7098	-0.05 (-0.97 to 0.88)	0.9216	0.17 (-1.52 to 1.87)	0.8401
	FP-TP	-0.53 (-1.21 to 0.16)	0.1302	-0.36 (-1.32 to 0.60)	0.4614	-0.81 (-1.93 to 0.31)	0.1576	-0.81 (-2.15 to 0.53)	0.2345	-0.02 (-1.79 to 1.76)	0.9857
No. Respondents		609		505		440		511		522	
8. Introvert (0-12)	Con-Neg	-0.37 (-0.68 to -0.06)	0.0191	-0.50 (-0.89 to -0.11)	0.0117	-0.42 (-0.85 to 0.01)	0.0527	-0.22 (-0.61 to 0.18)	0.2888	-0.38 (-0.84 to 0.09)	0.1130
	Con-FP	0.22 (-0.29 to 0.73)	0.3948	0.84 (0.20 to 1.48)	0.0102	0.02 (-0.72 to 0.76)	0.9601	-0.14 (-0.71 to 0.42)	0.6160	-0.10 (-0.69 to 0.49)	0.7378
	Con-TP	-0.78 (-1.39 to -0.17)	0.0120	0.08 (-0.79 to 0.96)	0.8527	0.63 (-0.5 to 1.77)	0.2754	0.11 (-0.81 to 1.02)	0.8172	-0.31 (-1.35 to 0.72)	0.5535
	Neg-FP	0.59 (0.09 to 1.09)	0.0199	1.34 (0.74 to 1.94)	<.0001	0.44 (-0.31 to 1.20)	0.2496	0.07 (-0.49 to 0.63)	0.8031	0.28 (-0.28 to 0.83)	0.3327
	Neg-TP	-0.41 (-1.01 to 0.19)	0.1834	0.59 (-0.28 to 1.45)	0.1834	1.06 (-0.06 to 2.17)	0.0634	0.32 (-0.60 to 1.24)	0.4922	0.06 (-0.97 to 1.10)	0.9059
	FP-TP	-1.00 (-1.71 to -0.29)	0.0058	-0.76 (-1.75 to 0.23)	0.1335	0.61 (-0.74 to 1.96)	0.3741	0.25 (-0.74 to 1.25)	0.6192	-0.21 (-1.32 to 0.89)	0.7052
No. Respondents		609		508		444		513		524	

Follow up time

Scale (Range)	Comparison	Baseline		1 week		1 Month		6 Month		18 Month	
		Mean Δ (95% CI)	p value	Mean Δ (95% CI)	p value	Mean Δ (95% CI)	p value	Mean Δ (95% CI)	p value	Mean Δ (95% CI)	p value
9. Harm of smoking (0-6)	Con-Neg	-0.11 (-0.35 to 0.12)	0.3319	-0.07 (-0.39 to 0.26)	0.6823	-0.10 (-0.41 to 0.22)	0.5513	0.03 (-0.29 to 0.35)	0.8669	0.00 (-0.35 to 0.36)	0.9888
	Con-FP	-0.25 (-0.55 to 0.05)	0.1057	1.08 (0.61 to 1.56)	<.0001	1.12 (0.56 to 1.67)	<.0001	0.22 (-0.25 to 0.68)	0.3560	0.32 (-0.15 to 0.79)	0.1796
	Con-TP	-0.50 (-0.92 to -0.09)	0.0179	0.75 (-0.05 to 1.55)	0.0651	0.99 (0.14 to 1.84)	0.0225	0.32 (-0.51 to 1.14)	0.4546	0.80 (-0.26 to 1.85)	0.1376
	Neg-FP	-0.13 (-0.43 to 0.16)	0.3730	1.15 (0.70 to 1.60)	<.0001	1.21 (0.66 to 1.76)	<.0001	0.19 (-0.27 to 0.65)	0.4209	0.32 (-0.18 to 0.82)	0.2096
	Neg-TP	-0.39 (-0.81 to 0.03)	0.0665	0.82 (0.04 to 1.59)	0.0382	1.08 (0.25 to 1.92)	0.0106	0.29 (-0.53 to 1.10)	0.4892	0.79 (-0.27 to 1.86)	0.1445
	FP-TP	-0.26 (-0.70 to 0.19)	0.2612	-0.33 (-1.18 to 0.52)	0.4424	-0.13 (-1.07 to 0.82)	0.7922	0.10 (-0.80 to 0.99)	0.8317	0.47 (-0.65 to 1.60)	0.4071
No. Respondents		615		517		450		519		529	
10. Existential values (0-12)	Neg-FP	NA		NA		0.92 (0.23 to 1.61)	0.0090	0.40 (-0.54 to 1.35)	0.4043	0.11 (-0.48 to 0.70)	0.7075
	Neg-TP	NA		NA		2.10 (0.45 to 3.75)	0.0125	1.57 (0.31 to 2.83)	0.0149	0.24 (-1.01 to 1.50)	0.7031
	FP-TP	NA		NA		1.18 (-0.55 to 2.92)	0.1805	1.16 (-0.30 to 2.63)	0.1193	0.13 (-1.14 to 1.40)	0.8385
No. Respondents					262		306		307		
11. Calm/relax (0-4)	Neg-FP	NA		NA		0.46 (0.13 to 0.78)	0.0054	0.05 (-0.33 to 0.44)	0.7852	-0.03 (-0.26 to 0.21)	0.8222
	Neg-TP	NA		NA		0.82 (0.19 to 1.44)	0.0101	0.17 (-0.29 to 0.64)	0.4722	-0.01 (-0.42 to 0.40)	0.9611
	FP-TP	NA		NA		0.36 (-0.30 to 1.03)	0.2882	0.12 (-0.45 to 0.68)	0.6866	0.02 (-0.44 to 0.47)	0.9427
No. Respondents					265		310		308		
12. Social network (0-6)	Neg-FP	NA		NA		0.05 (-0.09 to 0.19)	0.4732	-0.21 (-0.36 to -0.06)	0.0075	-0.11 (-0.26 to 0.03)	0.1248
	Neg-TP	NA		NA		0.92 (0.31 to 1.54)	0.0032	0.45 (0.03 to 0.86)	0.0360	0.08 (-0.23 to 0.39)	0.6139
	FP-TP	NA		NA		0.87 (0.25 to 1.50)	0.0061	0.66 (0.24 to 1.07)	0.0022	0.19 (-0.12 to 0.51)	0.2230
No. Respondents					269		312		309		
13. Impulsivity (0-12)	Neg-FP	NA		NA		0.15 (-0.20 to 0.51)	0.3963	0.19 (-0.24 to 0.62)	0.3857	-0.06 (-0.54 to 0.41)	0.7908
	Neg-TP	NA		NA		1.76 (0.35 to 3.17)	0.0146	1.27 (-0.04 to 2.58)	0.0572	0.10 (-0.71 to 0.90)	0.8172
	FP-TP	NA		NA		1.61 (0.20 to 3.02)	0.0257	1.08 (-0.23 to 2.39)	0.1072	0.16 (-0.75 to 1.07)	0.7311
No. Respondents					265		304		307		
14. Empathy (0-6)	Neg-FP	NA		NA		0.12 (-0.19 to 0.43)	0.4394	0.02 (-0.32 to 0.35)	0.9219	0.21 (-0.17 to 0.59)	0.2719
	Neg-TP	NA		NA		0.79 (0.27 to 1.30)	0.0027	0.71 (0.17 to 1.25)	0.0094	0.29 (-0.36 to 0.94)	0.3819
	FP-TP	NA		NA		0.66 (0.11 to 1.22)	0.0191	0.69 (0.12 to 1.27)	0.0182	0.08 (-0.63 to 0.78)	0.8313
No. Respondents					266		306		308		

15. Regretful of still smoking (0-8)	Neg-FP	NA	NA	0.28 (-0.48 to 1.04)	0.4676	0.59 (0.00 to 1.18)	0.0500	0.06 (-0.54 to 0.65)	0.8475
	Neg-TP	NA	NA	0.12 (-1.17 to 1.40)	0.8575	0.74 (-0.12 to 1.59)	0.0903	-0.83 (-1.75 to 0.08)	0.0742
	FP-TP	NA	NA	-0.16 (-1.66 to 1.33)	0.8301	0.15 (-0.82 to 1.12)	0.7673	-0.89 (-1.85 to 0.07)	0.0681
No. Respondents				137		148		150	

Mean Δ = The mean difference of the outcome between the compared groups adjusted for possible confounders; The mean differences of the scales listed in the table are the differences beyond the differences that may be present at baseline (scale 1-9) or at 1 Month (scale 10-15); CI = confidence interval; p value = the statistical significant level was assessed to 0.0043 after adjusting for multiple testing with the method of Benjamini-Hochberg and significant differences between the groups are marked with yellow(1); Con = Control group; Neg = True-negative group; FP = false-positive group; TP = true-positive group; NA = Not applicable.