

Supplementary Material Table1. Serum chromium levels and the occurrence of lung cancer among smokers

Quartile	Cr level [µg/L]	Cases	Controls	OR	CI	p-value
I	0.04-0.07	18	34	1.00	-	-
II	0.08-0.10	19	33	1.17	0.47-2.91	0.74
III	0.11-0.14	33	18	3.23	1.36-7.65	<0.01
IV	0.15-0.95	36	21	3.66	1.50-8.94	<0.01

Supplementary Material Table2. Serum chromium levels and the occurrence of lung cancer among non-smokers

Quartile	Cr level [µg/L]	Cases	Controls	OR	CI	p-value
I	0.03-0.06	11	28	1.00	-	-
II	0.07-0.09	20	37	1.15	0.46-2.89	0.76
III	0.10-0.13	39	22	5.06	1.96-13.02	<0.01
IV	0.14-1.63	42	25	5.30	2.02-13.90	<0.01

Supplementary Material Table3. Lung cancer occurrence – correlation with serum Cr levels and stages.

	Quarter	Cr level (µg/L)	Case	Control	OR	95%CI	p-value
Stage							
Stage I (n=142)	I	0.03-0.07	9	27	1.00	-	-
	II	0.08-0.10	10	17	2.34	0.62-8.76	0.21
	III	0.11-0.15	30	11	8.72	2.56-29.76	<0.01
	IV	0.16-1.36	22	16	5.15	1.49-17.78	0.01
Stage II (n=80)	I	0.03-0.07	6	11	1.57	0.24-10.35	0.64
	II	0.08-0.09	6	13	1.00	-	-
	III	0.10-0.13	15	8	7.85	1.25-49.20	0.03
	IV	0.14-0.89	13	8	5.49	0.98-30.83	0.05
Stage III (n=170)	I	0.03-0.06	10	21	1.00	-	-
	II	0.07-0.09	22	27	1.71	0.69-4.27	0.25
	III	0.10-0.13	25	21	2.75	1.03-7.30	0.04
	IV	0.14-0.71	28	16	4.11	1.45-11.65	<0.01
Stage IV (n=30)	I	0.04-0.07	1	4	1.00	-	-
	II	0.08-0.10	2	6	1.00	0.06-15.99	1.00
	III	0.11-0.13	6	2	1365934879.4 3	0.00-Inf	1.00
	IV	0.14-1.63	6	3	2731869758.8 7	0.00-Inf	1.00
Stage I-II (n=222)	I	0.03-0.07	15	38	1.00	-	-
	II	0.08-0.10	21	33	1.91	0.70-5.17	0.21
	III	0.11-0.14	37	16	6.01	2.32-15.54	<0.01
	IV	0.15-1.36	38	24	5.07	1.95-13.19	<0.01
Stage III-IV (n=200)	I	0.03-0.06	11	24	1.00	-	-
	II	0.07-0.09	24	32	1.61	0.67-3.86	0.29
	III	0.10-0.13	31	25	3.05	1.22-7.63	0.02
	IV	0.14-1.63	34	19	4.68	1.73-12.68	<0.01

Supplementary Material Table4. Lung cancer occurrence – correlation with serum Cr levels and genotypes.

	Quarter	Cr level (µg/L)	Case	Control	OR	95%CI	p-value
Genotype							
<i>CAT</i> CC (n=164)	I	0.04-0.07	13	23	1.00	-	-
	II	0.08-0.09	12	21	0.97	0.34-2.72	0.95
	III	0.10-0.13	28	19	2.89	1.10-7.60	0.03
	IV	0.14-1.36	29	19	2.83	1.10-7.27	0.03
<i>CAT</i> nonCC (n=88)	I	0.04-0.07	5	16	1.00	-	-
	II	0.08-0.10	10	12	2.93	0.48-17.91	0.24
	III	0.11-0.14	13	8	8.11	1.36-48.52	0.02
	IV	0.15-0.89	16	8	9.18	1.64-51.24	0.01
<i>NQO1</i> GG (n=228)	I	0.03-0.07	20	33	1.04	0.45-2.38	0.94
	II	0.08-0.10	21	40	1.00	-	-
	III	0.11-0.14	36	20	2.90	1.38-6.08	<0.01
	IV	0.15-1.63	37	21	3.68	1.60-8.49	<0.01
<i>NQO1</i> nonGG (n=34)	I	0.04-0.06	2	4	0.75	0.05-10.40	0.83
	II	0.07-0.09	2	6	1.00	-	-
	III	0.11-0.14	6	4	2.54	0.32-19.93	0.37
	IV	0.15-0.95	7	3	5.86	0.59-58.40	0.13
<i>MT1B</i> GG (n=50)	I	0.06-0.08	6	7	1.55	0.34-7.07	0.57
	II	0.09-0.11	3	6	1.00	-	-
	III	0.12-0.16	7	6	2.58	0.46-14.63	0.28
	IV	0.17-0.75	9	6	4.00	0.57-28.26	0.16
<i>MT1B</i> nonGG (n=176)	I	0.03-0.06	8	24	1.00	-	-
	II	0.07-0.09	20	30	2.31	0.77-6.93	0.14
	III	0.10-0.14	29	20	4.76	1.60-14.12	<0.01
	IV	0.15-1.36	31	14	7.23	2.28-22.93	<0.01
<i>CRTC3</i> GG (n=128)	I	0.03-0.07	13	16	2.43	0.73-8.12	0.15
	II	0.08-0.10	10	25	1.00	-	-
	III	0.11-0.14	21	9	5.44	1.71-17.31	<0.01
	IV	0.15-0.68	20	14	3.91	1.22-12.54	0.02
<i>CRTC3</i> nonGG (n=106)	I	0.04-0.07	12	15	2.23	0.39-12.70	0.37
	II	0.08-0.09	6	13	1.00	-	-
	III	0.10-0.13	17	16	4.74	0.88-25.53	0.07
	IV	0.14-0.89	18	9	9.73	1.58-60.10	0.01
<i>GPXI</i> CC (n=110)	I	0.03-0.07	9	19	1.00	-	-
	II	0.08-0.10	8	11	1.32	0.35-5.02	0.68
	III	0.11-0.14	17	14	2.64	0.92-7.53	0.07
	IV	0.15-0.75	21	11	4.23	1.34-13.34	0.01
<i>GPXI</i> nonCC (n=122)	I	0.04-0.06	6	15	1.00	-	-
	II	0.07-0.09	11	23	1.30	0.41-4.13	0.66
	III	0.10-0.14	22	12	5.75	1.45-22.76	0.01
	IV	0.15-1.63	22	11	6.72	1.65-27.38	<0.01
<i>SOD2</i> GG	I	0.04-0.08	4	4	1.85	0.16-21.67	0.62

(n=30)	II	0.09-0.10	1	2	1.00	-	-
	III	0.11-0.17	6	5	2.35	0.16-33.69	0.53
	IV	0.18-1.63	4	4	2.09	0.09-47.20	0.64
<i>SOD2</i> nonGG (n=220)	I	0.03-0.07	15	36	1.00	-	-
	II	0.08-0.10	20	37	1.45	0.57-3.69	0.44
	III	0.11-0.14	37	17	5.79	2.23-15.05	<0.01
	IV	0.15-1.36	38	20	6.06	2.22-16.51	<0.01
<i>XRCC1</i> CC (n=336)	I	0.04-0.07	28	53	1.35	0.58-3.15	0.49
	II	0.08-0.09	20	44	1.00	-	-
	III	0.10-0.13	58	35	4.49	2.00-10.12	<0.01
	IV	0.14-0.95	62	36	4.82	2.16-10.72	<0.01
<i>ERCC2</i> TT (n=52)	I	0.03-0.06	5	8	1.28	0.22-7.29	0.78
	II	0.07-0.09	4	9	1.00	-	-
	III	0.10-0.11	6	5	2.43	0.50-11.84	0.27
	IV	0.12-0.75	11	4	12.34	1.17-130.01	0.04
<i>ERCC2</i> nonTT (n=194)	I	0.03-0.07	12	23	1.00	-	-
	II	0.08-0.10	21	30	1.42	0.54-3.74	0.48
	III	0.11-0.14	34	21	3.01	1.21-7.51	0.02
	IV	0.15-1.63	30	23	2.75	1.03-7.34	0.04
<i>ABCBI</i> CC (n=48)	I	0.03-0.06	3	6	1.00	-	-
	II	0.07-0.09	6	8	1.73	0.28-10.71	0.56
	III	0.10-0.12	5	6	2.54	0.36-17.94	0.35
	IV	0.13-0.62	10	4	4.96	0.71-34.57	0.11
<i>ABCBI</i> nonCC (n=202)	I	0.03-0.06	14	23	1.10	0.45-2.69	0.84
	II	0.07-0.09	18	35	1.00	-	-
	III	0.10-0.14	37	24	4.15	1.68-10.25	<0.01
	IV	0.15-1.63	32	19	4.81	1.83-12.64	<0.01
<i>GSTP1</i> AA (n=90)	I	0.03-0.07	10	10	3.25	0.78-13.57	0.11
	II	0.08-0.09	5	15	1.00	-	-
	III	0.10-0.13	18	9	8.85	1.72-45.57	<0.01
	IV	0.14-1.63	12	11	3.12	0.73-13.43	0.13
<i>GSTP1</i> nonAA (n=132)	I	0.03-0.07	9	22	1.00	-	-
	II	0.08-0.10	16	17	3.58	0.92-13.84	0.07
	III	0.11-0.14	20	13	6.61	1.69-25.75	<0.01
	IV	0.15-0.75	21	14	9.47	2.06-43.49	<0.01

Supplementary Material Table5. Frequency of genotype prevalence (%) in subjects under observation*.

Genotype	Number of cases with genotype/ all cases	Frequency in cases	Number of controls with genotype/ all controls	Frequency in controls	OR	95%CI	P-value
<i>CAT</i> -rs1001179 CC	123/218	56.42	133/218	61.01	1.21	0.81-1.80	0.38
<i>CAT</i> -rs1001179 nonCC	95/218	43.58	85/218	38.99			
<i>NQO1</i> -rs1800566 GG	158/218	72.48	157/218	72.02	0.98	0.63-1.52	1.00
<i>NQO1</i> -rs1800566 nonGG	60/218	27.52	61/218	27.98			
<i>MT1B</i> -rs7191779 GG	82/218	37.61	73/218	33.49	0.84	0.55-1.26	0.42
<i>MT1B</i> -rs7191779 nonGG	136/218	62.39	145/218	66.51			
<i>CRTC3</i> -rs12915189 GG	115/218	52.75	114/218	52.29	0.98	0.66-1.46	1.00
<i>CRTC3</i> -rs12915189 nonGG	103/218	47.25	104/218	47.71			
<i>GPX1</i> -rs1050450 CC	105/218	48.17	107/218	49.08	1.04	0.70-1.54	0.92
<i>GPX1</i> -rs1050450 nonCC	113/218	51.83	111/218	50.92			
<i>SOD2</i> -rs4880 GG	64/218	29.36	59/218	27.06	0.89	0.57-1.39	0.67
<i>SOD2</i> -rs4880 nonGG	154/218	70.64	159/218	72.94			
<i>XRCC1</i> -rs17997822 CC	198/218	90.83	186/218	85.32	0.59	0.31-1.10	0.10
<i>XRCC1</i> -rs1799782 nonCC	20/218	9.17	32/218	14.68			
<i>ERCC2</i> -rsrs13181 TT	68/218	31.19	79/218	36.24	0.80	0.52-1.21	0.31
<i>ERCC2</i> -rs13181 nonTT	150/218	68.81	139/218	63.76			
<i>ABCB1</i> -rs2032582 CC	73/218	33.49	68/218	31.19	0.90	0.59-1.37	0.68
<i>ABCB1</i> -rs2032582 nonCC	145/218	66.51	150/218	68.81			
<i>GSTP1</i> -rs1695 AA	99/218	45.41	98/218	44.95	0.98	0.66-1.45	1.00
<i>GSTP1</i> -rs1695 nonAA	119/218	54.59	120/218	55.05			

*No significant differences between cases and controls