Supplemental Table 5. Associations between air pollutant and liver enzyme levels in unconstrained distributed lag models[1]

	Lag day	AST			ALT			γ-GTP		
		Estimate	95% CI	*p*-value	Estimate	95% CI	*p*-value	Estimate	95% CI	*p*-value
$PM_{2.5}$	0–1	0.0251	0.0003, 0.0500	0.05	-0.0014	-0.0329, 0.0301	0.93	0.0064	-0.0355, 0.0483	0.74
	0–2	0.0462	0.0166, 0.0758	0.002	0.0204	-0.0174, 0.0581	0.29	0.0156	-0.0347, 0.0660	0.54
	0–3	0.0507	0.0201, 0.0812	0.001	0.02	-0.0190, 0.0590	0.31	0.038	-0.0137, 0.0897	0.15
	0–4	0.0491	0.0181, 0.0801	0.001	0.0189	-0.0207, 0.0584	0.35	0.0359	-0.0165, 0.0882	0.18
	0–5	0.0601	0.0241, 0.0960	0.001	0.0202	-0.0258, 0.0663	0.39	0.0313	-0.0292, 0.0919	0.31
	0–6	0.0565	0.0196, 0.0935	0.003	0.0149	-0.0330, 0.0627	0.54	0.0153	-0.0472, 0.0778	0.63
NO_2	0–1	0.0275	-0.00004, 0.0551	0.05	-0.0100	-0.0443, 0.0243	0.57	-0.0176	-0.0633, 0.0281	0.45
	0–2	0.0485	0.0159, 0.0810	0.004	0.0201	-0.0204, 0.0606	0.33	0.0025	-0.0516, 0.0566	0.93
	0–3	0.0556	0.0190, 0.0923	0.003	0.0249	-0.0207, 0.0706	0.28	0.0123	-0.0486, 0.0732	0.69
	0–4	0.0529	0.0140, 0.0918	0.008	0.0202	-0.0281, 0.0686	0.41	0.0111	-0.0535, 0.0757	0.74
	0–5	0.0528	0.0108, 0.0949	0.01	0.0038	-0.0484, 0.0561	0.88	0.0053	-0.0645, 0.0751	0.88
	0–6	0.0614	0.0175, 0.1054	0.006	0.0056	-0.0490, 0.0603	0.84	0.0043	-0.0687, 0.0774	0.91
O_3	0–1	0.0093	-0.0370, 0.0556	0.69	0.0015	-0.0565, 0.0594	0.96	0.0065	-0.0715, 0.0845	0.87
	0–2	0.0215	-0.0311, 0.0740	0.42	0.0117	-0.0540, 0.0775	0.73	0.0075	-0.0810, 0.0960	0.87
	0–3	0.0252	-0.0299, 0.0802	0.37	0.0206	-0.0484, 0.0895	0.56	0.0327	-0.0600, 0.1253	0.49
	0–4	0.0309	-0.0260, 0.0878	0.29	0.0259	-0.0454, 0.0971	0.48	0.0538	-0.0419, 0.1494	0.27
	0–5	0.0293	-0.0317, 0.0903	0.35	0.0405	-0.0357, 0.1168	0.30	0.061	-0.0414, 0.1634	0.24
	0–6	0.0266	-0.0400, 0.0932	0.43	0.0444	-0.0387, 0.1275	0.29	0.0815	-0.0304, 0.1934	0.15
CO	0–1	-0.0002	-0.0239, 0.0236	0.99	-0.0125	-0.0412, 0.0171	0.41	-0.0037	-0.0436, 0.0362	0.86
	0–2	0.0058	-0.0226, 0.0343	0.69	0.0047	-0.0308, 0.0402	0.79	-0.0153	-0.0631, 0.0325	0.53
	0–3	0.0088	-0.0259, 0.0434	0.62	0.0054	-0.0378, 0.0487	0.81	-0.0055	-0.0637, 0.0527	0.85
	0–4	0.0094	-0.0269, 0.0456	0.61	-0.0019	-0.0470, 0.0432	0.93	-0.0156	-0.0762, 0.0451	0.61
	0–5	0.0092	-0.0295, 0.0480	0.64	-0.0026	-0.0509, 0.0457	0.92	-0.0160	-0.0809, 0.0488	0.63
	0–6	0.0172	-0.0241, 0.0584	0.41	0.0099	-0.0413, 0.0611	0.70	-0.0196	-0.0887, 0.0495	0.58
SO_2	0–1	0.0106	-0.0174, 0.0386	0.46	-0.0105	-0.0453, 0.0242	0.55	-0.0188	-0.0650, 0.0275	0.43
	0–2	0.0179	-0.0131, 0.0489	0.26	0.0033	-0.0352, 0.0418	0.87	-0.0271	-0.0785, 0.0242	0.30
	0–3	0.0232	-0.0099, 0.0563	0.17	-0.0024	-0.0434, 0.0387	0.91	-0.0155	-0.0703, 0.0392	0.58
	0–4	0.0255	-0.0091, 0.0601	0.15	0.0057	-0.0372, 0.0486	0.79	-0.0063	-0.0635, 0.0509	0.83
	0–5	0.0182	-0.0194, 0.0557	0.34	-0.0158	-0.0623, 0.0307	0.50	-0.0085	-0.0707, 0.0536	0.79
	0–6	0.019	-0.0201, 0.0581	0.34	-0.0190	-0.0674, 0.0293	0.44	-0.0118	-0.0765, 0.0529	0.72

AST, aspartate aminotransferase; ALT, alanine aminotransferase; γ-GTP, γ-glutamyltranspeptidase; CI: confidence interval; $PM_{2.5}$, particulate matter ≤2.5 μm; NO_2, nitrogen dioxide; O_3, ozone; CO, carbon monoxide; SO_2, sulfur dioxide.

[1]Changes in liver enzyme levels by an interquartile range increase of air pollutants were estimated using a linear mixed model after adjusting for age, sex, smoking status, mean temperature, dew point, season, body mass index, alcohol consumption, and amount of exercise.