

Table S1. Examination of relationships between daily air pollutant levels and weather factors using Spearman analysis

Winter	NO ₂	PM ₁₀	O ₃	Temperature	Relative humidity
NO ₂	1	0.40**	-0.39**	-0.16**	0.02
PM ₁₀	0.40**	1	-0.31**	-0.15**	0.16**
O ₃	-0.39**	-0.31**	1	0.11*	-0.36**
Air temperature	-0.16**	-0.15**	0.11*	1	-0.38**
Relative humidity	0.02	0.16**	-0.36**	-0.38**	1
Spring					
NO ₂	1	0.23**	-0.37**	-0.17**	-0.03
PM ₁₀	0.23**	1	0.14**	-0.07	-0.32**
O ₃	-0.37**	0.14**	1	0.08	-0.58**
Air temperature	-0.17**	-0.07	0.08	1	-0.06
Relative humidity	-0.03	-0.32**	-0.58**	-0.06	1
Summer					
NO ₂	1	0.16**	-0.07	0.11*	-0.14**
PM ₁₀	0.16**	1	0.15**	0.46**	-0.35**
O ₃	-0.07	0.15**	1	0.43**	-0.61**
Air temperature	0.11*	0.46**	0.43**	1	-0.66**
Relative humidity	-0.14**	-0.35**	-0.61**	-0.66**	1
Fall					

NO ₂	1	0.44**	-0.39**	-0.15**	0.07
PM ₁₀	0.44**	1	-0.13**	-0.06	-0.01
O ₃	-0.39**	-0.13**	1	0.64**	-0.72**
Air temperature	-0.15**	-0.06	0.64**	1	-0.66**
Relative humidity	0.07	-0.01	-0.72**	-0.66**	1

** P < 0.01; * P < 0.05; PM₁₀: particulate matter diameter ≤10 µm; NO₂: nitrogen dioxide; O₃: ozone.

Table S2. Multivariable Poisson Regression Analysis of Brief Increments in Air Pollutant Levels ($\geq 10 \mu\text{g}/\text{m}^3$) and the Risk of STEMI Admission at Single Lag Day

	NO₂ ($\mu\text{g}/\text{m}^3$)		PM₁₀ ($\mu\text{g}/\text{m}^3$)		O₃ ($\mu\text{g}/\text{m}^3$)	
Single lag day	Odds Ratio (95% CI)	p-Value	Odds Ratio (95% CI)	p-Value	Odds Ratio (95% CI)	p-Value
All patients with STEMI						
Winter						
0	1.001 (0.997-1.006)	0.588	0.997 (0.993-1.002)	0.227	0.997 (0.993-1.001)	0.173
1	1.003 (0.999-1.008)	0.155	0.999 (0.995-1.004)	0.774	0.999 (0.995-1.003)	0.717
2	1.003 (0.998-1.007)	0.247	0.999 (0.994-1.003)	0.530	0.999 (0.995-1.003)	0.710
3	1.002 (0.998-1.007)	0.360	0.996 (0.991-1.000)	0.058	1.000 (0.996-1.005)	0.820
4	1.000 (0.995-1.005)	0.996	0.997 (0.993-1.002)	0.257	1.000 (0.996-1.004)	0.966
5	1.002 (0.998-1.006)	0.351	0.998 (0.994-1.003)	0.442	1.000 (0.996-1.004)	0.926
6	1.004 (0.999-1.008)	0.116	0.997 (0.993-1.002)	0.218	0.999 (0.995-1.003)	0.617
7	1.002 (0.998-1.007)	0.288	1.000 (0.996-1.005)	0.934	0.999 (0.995-1.003)	0.773
Spring						
0	1.006 (1.000-1.012)	0.058	0.997 (0.991-1.003)	0.320	0.997 (0.993-1.002)	0.220
1	1.005 (0.999-1.011)	0.090	0.998 (0.992-1.004)	0.487	0.997 (0.992-1.001)	0.153
2	1.007 (1.001-1.013)	0.018	0.996 (0.990-1.003)	0.289	0.999 (0.994-1.004)	0.643
3	1.008 (1.002-1.014)	0.007	0.997 (0.991-1.004)	0.418	0.999 (0.994-1.003)	0.610
4	1.005 (0.999-1.011)	0.124	0.999 (0.993-1.005)	0.757	0.997 (0.993-1.002)	0.227
5	1.004 (0.998-1.010)	0.216	0.996 (0.990-1.002)	0.189	0.996 (0.992-1.000)	0.071
6	1.007 (1.001-1.014)	0.022	0.996 (0.990-1.002)	0.229	1.000 (0.995-1.004)	0.884

7	1.008 (1.002-1.014)	0.014	0.993 (0.987-1.000)	0.058	1.000 (0.996-1.004)	0.964
Summer						
0	1.005 (0.999-1.011)	0.106	1.012 (1.005-1.019)	0.001	0.999 (0.994-1.004)	0.711
1	1.002 (0.996-1.008)	0.600	1.009 (1.001-1.016)	0.019	0.999 (0.994-1.004)	0.732
2	1.002 (0.996-1.009)	0.437	1.014 (1.006-1.022)	<0.001	1.000 (0.995-1.005)	0.872
3	1.005 (0.999-1.011)	0.093	1.011 (1.004-1.019)	0.003	1.001 (0.996-1.006)	0.594
4	1.005 (0.999-1.011)	0.095	1.005 (0.997-1.012)	0.026	1.003 (0.997-1.008)	0.329
5	1.005 (0.999-1.011)	0.075	1.008 (1.000-1.017)	0.046	1.001 (0.996-1.006)	0.653
6	1.006 (1.000-1.012)	0.052	1.010 (1.002-1.018)	0.010	0.998 (0.993-1.003)	0.434
7	1.006 (1.000-1.012)	0.038	1.017 (1.009-1.024)	<0.001	0.999 (0.995-1.004)	0.740
Fall						
0	1.001 (0.995-1.007)	0.762	1.005 (1.000-1.009)	0.038	1.000 (0.994-1.005)	0.871
1	1.001 (0.995-1.007)	0.780	1.006 (1.002-1.010)	0.003	1.001 (0.996-1.007)	0.647
2	1.001 (0.996-1.007)	0.623	1.004 (1.000-1.008)	0.033	0.997 (0.991-1.002)	0.232
3	1.001 (0.995-1.007)	0.711	1.003 (0.999-1.007)	0.129	0.998 (0.993-1.004)	0.535
4	1.000 (0.995-1.006)	0.895	1.001 (0.997-1.006)	0.476	0.998 (0.992-1.004)	0.463
5	1.002 (0.996-1.008)	0.566	1.001 (0.997-1.006)	0.563	0.998 (0.992-1.003)	0.452
6	1.005 (0.999-1.010)	0.104	0.999 (0.995-1.004)	0.800	0.999 (0.993-1.004)	0.668
7	1.003 (0.997-1.008)	0.345	1.002 (0.998-1.006)	0.351	0.998 (0.992-1.003)	0.426

An OR > 1 indicates an elevated risk, while a value < 1 suggests a decreased risk. A p-value less than 0.05 indicates a statistically significant relationship. STEMI: ST-elevation myocardial infarction; PM₁₀: particulate matter with a diameter ≤10 µm; NO₂: nitrogen dioxide; OR: odds ratio; CI: confidence interval.

Table S3. Multivariable Poisson Regression Analysis of Brief Increments in Air Pollutant Levels ($\geq 10 \mu\text{g}/\text{m}^3$) and the Risk of STEMI Admission at Cumulative Lag Day

	NO₂ ($\mu\text{g}/\text{m}^3$)		PM₁₀ ($\mu\text{g}/\text{m}^3$)		O₃ ($\mu\text{g}/\text{m}^3$)	
Cumulative Lag day	Odds Ratio (95% CI)	p-Value	Odds Ratio (95% CI)	p-Value	Odds Ratio (95% CI)	p-Value
All patients with STEMI						
Winter						
03	1.003 (0.998-1.008)	0.207	0.997 (0.992-1.002)	0.261	0.999 (0.994-1.004)	0.707
05	1.003 (0.998-1.008)	0.292	0.997 (0.991-1.002)	0.249	0.999 (0.995-1.004)	0.767
07	1.003 (0.998-1.009)	0.209	0.997 (0.991-1.003)	0.269	0.999 (0.994-1.004)	0.704
Spring						
03	1.008 (1.001-1.015)	0.018	0.997 (0.989-1.006)	0.499	0.997 (0.992-1.002)	0.273
05	1.008 (1.001-1.015)	0.031	0.997 (0.988-1.006)	0.481	0.997 (0.991-1.002)	0.213
07	1.009 (1.001-1.016)	0.019	0.995 (0.986-1.005)	0.339	0.997 (0.992-1.003)	0.340
Summer						
03	1.005 (0.998-1.012)	0.142	1.016 (1.007-1.025)	<0.001	1.001 (0.995-1.007)	0.827
05	1.006 (0.999-1.013)	0.087	1.017 (1.007-1.027)	0.001	0.999 (0.993-1.006)	0.821
07	1.007 (1.000-1.014)	0.052	1.020 (1.010-1.031)	<0.001	0.998 (0.992-1.005)	0.612
Fall						
03	1.000 (0.994-1.007)	0.894	1.006 (1.001-1.011)	0.011	0.997 (0.991-1.004)	0.439
05	1.001 (0.994-1.007)	0.865	1.005 (1.000-1.010)	0.046	0.998 (0.991-1.004)	0.475
07	1.001 (0.995-1.008)	0.688	1.005 (0.999-1.010)	0.088	0.997 (0.991-1.004)	0.431

An OR > 1 indicates an elevated risk, while a value < 1 suggests a decreased risk. A p-value less than 0.05 indicates a statistically significant relationship. STEMI: ST-elevation myocardial infarction; PM₁₀: particulate matter with a diameter $\leq 10 \mu\text{m}$; NO₂: nitrogen dioxide; OR: odds ratio; CI: confidence interval.