

Supplementary Table 1: Multivariate regression analysis of cytokine production by CD68⁺CD169⁻ macrophages.

Variable ^{a,b}	Regression Coefficient	SE	T Stat	P-value	Anova F Significance
TNF-a					1.0746E-09
Particulate	-11.465844	2.4498021	-4.6803143	1.2447E-05	
age	0.39043518	0.06778156	5.76019791	1.7456E-07	
IFN-a					7.594E-05
Particulate	-14.330825	4.14510033	-3.4572928	0.00082798	
age	0.39309388	0.12571584	3.12684451	0.00236553	
IL-6					0.000618023
Particulate	-17.290436	4.75612431	-3.6354046	0.00044251	
age	-0.2364667	0.13912545	-1.6996653	0.09233393	
Arg-1					0.1792245
Particulate	-6.3761113	4.45074987	-1.4325926	0.15564186	
age	0.16865373	0.13975143	1.20681217	0.23085236	
Abbreviations: SE, standard error; TNF-a, Tumor necrosis factor-alpha; IFN-a, interferon-alpha; IL-6, interleukin-6; Arg-1, Arginase-1					
a Frequency of TNF- α^+ , IFN- α^+ , Arg-1 ⁺ , and IL-6 ⁺ CD68 ⁺ CD169 ⁻ macrophages with or without black particulates analyzed with multivariate regression to identify particulate and/or age related effects.					
b TNF- α : Data are from 10 donors (3-4 single images for each donor); IFN- α : Data are from 15 donors (2-4 single images for each donor); IL-6: Data are from 14 donors (2-4 single images for each donor); Arg-1: 13 donors (2-4 single images for each donor).					

Supplementary Table 2: List of antibodies.

Antibodies		
Brilliant Violet 421™ Rat anti-human IL-6 Antibody (clone: MQ2-13A5)	BD Biosciences	Cat#563279
Brilliant Violet 421™ anti-human CD36 Antibody (clone: 5-271)	Biolegend	Cat#336230
PerCP/Cyanine5.5 anti-human CD36 Antibody (clone: 5-271)	Biolegend	Cat#336224
Alexa Fluor® 488 anti-human CD36 Antibody (clone: 5-271)	Biolegend	Cat# 336231
Alexa Fluor® 488 anti-human CD68 Antibody (clone: Y1/82A)	Biolegend	Cat#333812
Brilliant Violet 711™ anti-human CD11b Antibody (clone: ICRF44)	Biolegend	Cat#301344
Brilliant Violet 605™ anti-human CD163 Antibody (clone: GHI/61)	Biolegend	Cat#333616
Fixable Viability Dye eFluor™ 780	eBiosciences	Cat#65-0865-14
Alexa Fluor® 700 anti-human CD45 Antibody (clone: 2D1)	Biolegend	Cat#368514
PE Mouse Anti-Human CD11c (clone: B-ly6)	BD Biosciences	Cat#560999
BV510 Mouse Anti-Human CD11c (clone: B-ly6)	BD Horizon	Cat#563026
APC anti-human CD169 (Sialoadhesin, Siglec-1) Antibody (clone: 7-239)	Biolegend	Cat#346008
PE/Dazzle™ 594 anti-human CX3CR1 Antibody (clone: 2A9-1)	Biolegend	Cat#341624
BV786 Mouse Anti-Human HLA-DR (clone: G46-6)	BD Biosciences	Cat#564041
Brilliant Violet 650™ anti-human CD80 Antibody (clone: 2D10)	Biolegend	Cat#305227
Brilliant Violet 650™ anti-human CD86 Antibody (clone: IT2.2)	Biolegend	Cat#305428
Brilliant Violet 421™ anti-human CD209 (DC-SIGN) Antibody (clone: 9E9A8)	Biolegend	Cat#330117
Human TruStain FcX™ (Fc Receptor Blocking Solution)	Biolegend	Cat#422302
APC Mouse Anti-Human CD8	BD Biosciences	Cat#555369
Brilliant Violet 421™ anti-human CD19 Antibody (clone: SJ25C1)	Biolegend	Cat#363017
Brilliant Violet 421™ anti-human Ki-67 Antibody (clone: Ki-67)	Biolegend	Cat#350506
CD20 Monoclonal Antibody, Alexa Fluor 488 (clone: L26)	eBiosciences	Cat#53-0202-82
Alexa Fluor® 594 anti-Podoplanin/Lymphatic Endothelial Marker Antibody (clone: D2-40)	Biolegend	Cat#916608
Biotin anti-human CD3 Antibody (clone: HIT3A)	Biolegend	Cat#300304
PE/Cyanine7 anti-human CD64 Antibody (clone: 10.1)	Biolegend	Cat#305022
Brilliant Violet 421 Mouse anti-human TNF-a Antibody (clone: MAb11)	BD Biosciences	Cat#566275
Brilliant Violet 421 Mouse gG1, k Isotype (clone: X40)	BD Biosciences	Cat#562438
Brilliant Violet 421™ Rat IgG1, κ Isotype Ctrl Antibody	Biolegend	Cat#400429
Brilliant Violet 421™ Donkey anti-rabbit IgG (minimal x-reactivity) Antibody	Biolegend	Cat#406410
IFN alpha Polyclonal Antibody	Thermo Fisher	Cat#PA5-115430
ARG1 Polyclonal Antibody	Thermo Fisher	Cat# 16001-1-AP

Supplementary Table 3: List of chemicals and commercial kits.

Chemicals and Commercial kits		
RPMI 1640	Fisher scientific	Cat#MT15040CM
Percoll PLUS	Sigma-aldrich	Cat#17-5445-01
DPBS	Corning	Cat#20-030-CV
EDTA	Corning	Cat#46-034-CI
Tween 20	Sigma	Cat#11332465001
Triton X-100	Sigma	Cat#93443-500ML
16% Paraformaldehyde	Fisher	Cat#50-980-487
Sodium Periodate	Sigma	Cat#311448-5G
Shandon Immu-Mount	Fisher scientific	Cat#9990402
Normal Goat Serum	Sigma	Cat#NS02L-1ML
Disodium Phosphate (Na ₂ HPO ₄)	Sigma	Cat#255793-50G
Monosodium Phosphate (H ₂ NaO ₄ P)	Sigma	Cat#S5011-500G
L-Lysine HCl	Sigma	Cat#L5626-500G
Sucrose	Sigma	Cat# s9378-500g
Foxp3 / Transcription Factor Staining Buffer Kit	TONBO Biosciences	Cat#TNB-0607-KIT
EasySep™ Human Biotin Positive Selection Kit II	StemCell Technology	Cat#17663
Phorbol 12-myristate 13-acetate	Sigma	Cat# P8139-5MG
Fine particulate matter	Sigma	Cat# NIST2786
pHrodo™ Red <i>E. coli</i> BioParticles™ Conjugate for Phagocytosis	Thermo Fisher	Cat# P35361
Live Cell Imaging Solution	Thermo Fisher	Cat# A14291DJ
Corning™ Penicillin-Streptomycin-L-Glutamine	Fisher scientific	Cat# MT30009CI