

Supplementary Table 1. Demographic and clinical characteristics of the main study cohort.



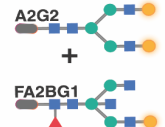


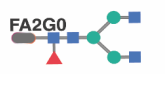

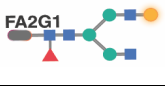

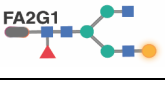

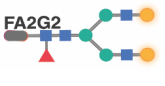

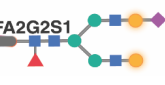

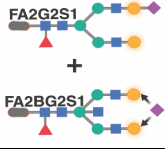

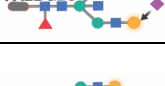



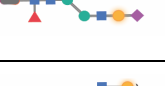


	SARS-CoV-2 Negative	SARS-CoV-2 Positive Mild (outpatients)	SARS-CoV-2 Positive Moderate (Inpatients)	SARS-CoV-2 Positive Severe (ICU)
Number (<i>n</i>)	20	20	20	20
Female, <i>n</i> (%)	10 (50)	12 (60)	11 (55)	7 (35)
Age, years, median (IQR)	55.5 (15.6)	52.5 (12.75)	58.5 (4.25)	58 (9.25)
Deceased, <i>n</i> (%)	0 (0)	0 (0)	2 (10)	6 (30)
Body mass index (BMI)				
Normal Weight (<25), %	-	6.7*	25	5
Overweight/obese (>25), %	-	93.3*	75	95
Pre-diabetes, %	-	6.7*	15	30
Diabetes Mellitus (DM), %	-	6.7*	30	55
High blood pressure, %	-	33.3*	60	60
Asthma, %	-	13.3*	15	5
Hydroxychloroquine, %	-	6.7*	40	55
Remdesivir, %	-	-	5	25
Tocilizumab, %	-	-	5	30
Chronic steroid use, %	-	-	25	5
Acute steroid use, %	-	-	15	45
Plasma IV nutrition, %	-	-	0	0
Enteral nutrition use, %	-	-	100	100
Antibiotic administration, %	-	-	60	85
Ethnicity				
African American, <i>n</i> (%)	0	0	9 (45)	7 (35)
Hispanic or Latino, <i>n</i> (%)	0	2 (10)	6 (30)	9 (45)
Caucasian, <i>n</i> (%)	3 (15)	13 (65)	4 (20)	3 (15)
Other, <i>n</i> (%)	2 (10)	1 (5)	0	1 (5)
Unknown, <i>n</i> (%)	15 (75)	4 (20)	1 (5)	0






*Based on 15 out of 20 donors with available data

Supplementary Table 2. Demographic characteristics of the validation cohort.

	SARS-CoV-2 Negative	SARS-CoV-2 Positive Mild (outpatients)	SARS-CoV-2 Positive Moderate (Inpatients)	SARS-CoV-2 Positive Severe (ICU)
Number (<i>n</i>)	- 18	- 20	- 18	- 19
Female, <i>n</i> (%)	12 (67)	9 (45)	6 (33)	5 (26)
Age, years, median (IQR)	38.5 (19.25)	60 (10.5)	64.5 (14.5)	63 (15.5)
Ethnicity	-	-	-	-
African American, <i>n</i> (%)	0 (0)	3 (15)	6 (33.3)	2 (10.5)
Hispanic or Latino, <i>n</i> (%)	1 (5.6)	6 (30)	9 (50)	11 (57.9)
Caucasian, <i>n</i> (%)	15 (83.3)	5 (25)	3 (16.7)	5 (26.3)
Other, <i>n</i> (%)	2 (11.1)	3 (15)	0 (0)	1 (5.3)
Unknown, <i>n</i> (%)	0 (0)	3 (15)	0 (0)	0 (0)

Supplementary Table 3. The structures and names of *N*-glycans identified in plasma by capillary electrophoresis.

Glycan name and structure	Group	Glycan name and structure	Group
	S2 + ST + FB + LB		G2 + GT + B + FC + LB
	G2 + GT + LB		S2 + ST + B + FC + LB
	S1 + ST + LB		G0 + FC + LB
	S1 + ST + G1 + GT + LB		G1 + GT + FC + LB
	S2 + ST + LB		G1 + GT + FC + LB
	S3 + ST + FB + HB		G2 + GT + FC + LB
	S2 + ST + G1 + GT + HB		S1 + ST + G1 + GT + FC + LB
	S3 + ST + HB		S1 + ST + G1 + GT + FC + LB
	S3 + ST + G1 + GT + HB		S1 + ST + G1 + GT + FC + LB
	S4 + ST + HB		S2 + ST + FC + LB
	G0 + B + FC + LB		S3 + ST + G1 + GT + FC + HB
	G1 + GT + B + FC + LB		LB

-  Fucose
-  *N*-acetylglucosamine
-  Mannose
-  Galactose
-  *N*-acetylneuraminic acid

These 24 glycan structures can be grouped into 15 groups: bisecting GlcNAc (B group), sialic acid (non-sialylated (S0), mono-sialylated (S1), di-sialylated (S2), tri-sialylated and (S3), tetra-sialylated (S4), and total sialylated (ST)), galactose (agalactosylated (G0), mono-galactosylated (G1), di-galactosylated (G2), and total galactosylated (GT)), core fucose (FC group), branched fucose (FB group), high branched (HB group), and low branch (LB group).

Supplementary Table 4. The structures and names of *N*-glycans identified in isolated IgG by capillary electrophoresis.

Glycan name and structure	Group	Glycan name and structure	Group
A2	S2 + ST	G0FB	G0 + F + B
A2F	S2 + ST + F	G1F [6]	G1 + GT + F
A2FB	S2 + ST + F + B	G1F [3]	G1 + GT + F
A2B	S2 + ST + B	G1FB	G1 + GT + F + B
G1FS1	S1 + ST + F	G0	G0
A1	S1 + ST	G1S1	S1 + ST
A1F	S1 + ST + F	G2	G2 + GT
A1FB	S1 + ST + F	G2F	G2 + GT + F
G0F	G0 + F	G2FB	G2 + GT + F + B
G1	G1 + GT	G1B [3]	G1 + GT + B
G0B	G0 + B	G1B [6]	G1 + GT + B

- Fucose
- N*-acetylglucosamine
- Mannose
- Galactose
- N*-acetylneuraminic acid

These 22 glycan structures were grouped into 9 groups, depending on the presence or absence of four key monosaccharides: bisecting GlcNAc (B group), sialic acid (mon-sialylated (S1), di-sialylated (S2), and total sialylated (ST)), terminal galactose (agalactosylated (G0), mono-galactosylated (G1), di-galactosylated (G2), and total galactose (GT)), and fucose (F group).

Supplementary Table 5. Lectins used for 45 lectin microarray.¹

Name	Species	Origin	Glycan specificity ²
1 LTL	<i>Lotus tetragonolobus</i>	Natural	Fuc (Le ^x , Le ^y)
2 PSA	<i>Pisum sativum</i>	Natural	α1-6Fuc up to biantenna
3 LCA	<i>Lens culinaris</i>	Natural	α1-6Fuc up to biantenna
4 UEAI	<i>Ulex europaeus</i>	Natural	α1-2Fuc
5 AOL	<i>Aspergillus oryzae</i>	Recombinant	α1-6Fuc (Core), α1-2Fuc (H), α1-3Fuc (Le ^x), α1-3Fuc (Le ^a)
6 AAL	<i>Aleuria aurantia</i>	Natural	α1-6Fuc (Core), α1-2Fuc (H), α1-3Fuc (Le ^x), α1-3Fuc (Le ^a)
7 MAL	<i>Maackia amurensis</i>	Natural	α2-3Sia
8 SNA	<i>Sambucus nigra</i>	Natural	α2-6Sia
9 SSA	<i>Sambucus sieboldiana</i>	Natural	α2-6Sia
10 TJAI	<i>Trichosanthes japonica</i>	Natural	α2-6Sia
11 PHAL	<i>Phaseolus vulgaris</i>	Natural	GlcNAcβ1-6Man (Tetraantenna)
12 ECA	<i>Erythrina cristagalli</i>	Natural	βGal
13 RCA120	<i>Ricinus communis</i>	Natural	βGal
14 PHAE	<i>Phaseolus vulgaris</i>	Natural	bisecting GlcNAc
15 DSA	<i>Datura stramonium</i>	Natural	GlcNAcβ1-6Man (Tetraantenna)
16 GSLII	<i>Griffonia simplicifolia</i>	Natural	GlcNAcβ1-4Man
17 NPA	<i>Narcissus pseudonarcissus</i>	Natural	Manα1-3Man
18 ConA	<i>Canavalia ensiformis</i>	Natural	M3, Manα1-2Manα1-3(Manα1-6)Man, GlcNAcβ1-2Manα1-3(Manα1-6)Man
19 GNA	<i>Galanthus nivalis</i>	Natural	Manα1-3Man, Manα1-6Man
20 HHL	<i>Hippeastrum hybrid</i>	Natural	Manα1-3Man, Manα1-6Man
21 ACG	<i>Agroclype cylindracea</i>	Natural	α2-3Sia
22 TxLcl	<i>Tulipa gesneriana</i>	Natural	Mannose/GalNAc
23 BPL	<i>Bauhinia purpurea alba</i>	Natural	Galβ1-3GlcNAc(GalNAc), α/βGalNAc
24 TJAI	<i>Trichosanthes japonica</i>	Natural	α1-2Fuc
25 EEL	<i>Euonymus europaeus</i>	Natural	αGal (B)
26 ABA	<i>Agaricus bisporus</i>	Natural	Galβ1-3GalNAc (T), GlcNAc
27 LEL	<i>Lycopersicon esculentum</i>	Natural	Polylactosamine, (GlcNAc) _n
28 STL	<i>Solanum tuberosum</i>	Natural	Polylactosamine, (GlcNAc) _n
29 UDA	<i>Urtica dioica</i>	Natural	(GlcNAc) _n
30 PWM	<i>Phytolacca americana</i>	Natural	(GlcNAc) _n
31 Jacalin	<i>Artocarpus integrifolia</i>	Natural	Galβ1-3GalNAc (T), GalNAcα (Tn)
32 PNA	<i>Arachis hypogaea</i>	Natural	Galβ1-3GalNAc (T)
33 WFA	<i>Wisteria floribunda</i>	Natural	Terminal GalNAc, LacDiNAc
34 ACA	<i>Amaranthus caudatus</i>	Natural	Galβ1-3GalNAc (T)
35 MPA	<i>Maclura pomifera</i>	Natural	Galβ1-3GalNAc (T), GalNAcα (Tn)
36 HPA	<i>Helix pomatia</i>	Natural	αGalNAc (A, Tn)
37 VVA	<i>Vicia villosa</i>	Natural	α,βGalNAc (A, Tn, LacDiNAc)
38 DBA	<i>Dolichos biflorus</i>	Natural	α,βGalNAc (A, Tn, LacDiNAc)
39 SBA	<i>Glycine max</i>	Natural	α,βGalNAc (A, Tn, LacDiNAc)
40 Calsepa	<i>Calystegia sepium</i>	Natural	Biantenna with bisecting GlcNAc
41 PTL I	<i>Psophocarpus tetragonolobus</i>	Natural	αGalNAc (A, Tn)
42 MAH	<i>Maackia amurensis</i>	Natural	α2-3Sia
43 WGA	<i>Triticum vulgare</i>	Natural	(GlcNAc) _n , polySia
44 GSLIA4	<i>Griffonia simplicifolia</i>	Natural	αGalNAc (A, Tn)
45 GSLIB4	<i>Griffonia simplicifolia</i>	Natural	αGal (B)

¹Abbreviations: Gal (D-galactose), GalNAc (N-acetyl-galactosamine), GlcNAc (N-acetylglucosamine), Fuc (L-fucose), Glc (D-glucose), Sia (Sialic acid), LacNAc (N-acetyl-lactosamine).

²Specificity data was obtained by frontal affinity chromatography and glycoconjugate microarray.

Supplementary Table 6. A list of plasma markers measured in this study.

Category	Marker	Name	Method of Measurement
Microbial translocation markers	Zonulin	haptoglobin 2 precursor	ELISA
	LBP	Lipopolysaccharide binding protein	ELISA
	β -D-glucan	β -D-glucan	Limulus Amebocyte Lysate (LAL) assay
	sCD14	Soulble CD14	ELISA
	sCD163	Soulble CD163	ELISA
	OCLN	Occludin	ELISA
	I-FABP	Intestinal fatty-acid binding protein	ELISA
	Reg3A	Regenerating Family Member 3 Alpha	ELISA
Inflammation and immune function markers	IL-6	Interleukin 6	Multiplex meso scale cytokine assay
	TNF- α	tumor necrosis factor alpha	Multiplex meso scale cytokine assay
	GM-CSF	Granulocyte-macrophage colony-stimulating factor	Multiplex meso scale cytokine assay
	IFN- α 2a	interferon α 2a	Multiplex meso scale cytokine assay
	IFN- β	Interferon beta	Multiplex meso scale cytokine assay
	IFN- γ	Interferon gamma	Multiplex meso scale cytokine assay
	IL-1 β	Interleukin 1 β	Multiplex meso scale cytokine assay
	IL-2	Interleukin 2	Multiplex meso scale cytokine assay
	IL-4	Interleukin 4	Multiplex meso scale cytokine assay
	IL-10	Interleukin 10	Multiplex meso scale cytokine assay
	IL-12p70	Interleukin 12 p70	Multiplex meso scale cytokine assay
	IL-12/IL-23p40	Interleukin 12 p70	Multiplex meso scale cytokine assay
	IL-13	Interleukin 13	Multiplex meso scale cytokine assay
	IL-15	Interleukin-12/interleukin 23 p40	Multiplex meso scale cytokine assay
	IL-21	Interleukin 21	Multiplex meso scale cytokine assay
	IL-22	Interleukin 22	Multiplex meso scale cytokine assay
	IL-23	Interleukin 23	Multiplex meso scale cytokine assay
	IL-33	Interleukin 33	Multiplex meso scale cytokine assay
	Fractalkine	chemokine (C-X3-C motif) ligand 1 (CX3CL1)	Multiplex meso scale cytokine assay
	IP-10	C-X-C motif chemokine ligand 10 (CXCL10)	Multiplex meso scale cytokine assay
	MCP-2	Chemokine (C-C motif) ligand 8 (CCL8)	Multiplex meso scale cytokine assay
	MIP-1 α	Macrophage inflammatory protein alpha	Multiplex meso scale cytokine assay
	SDF-1a	stromal cell-derived factor 1 (SDF1) or C-X-C motif chemokine 12 (CXCL12)	Multiplex meso scale cytokine assay
	CRP	C-reactive protein	ELISA
	d-dimer	D-dimer	ELISA
	MPO	Neutrophil myeloperoxidase	ELISA
	GDF-15	Growth/differentiation factor 15	ELISA
	C3a	Complement component 3a	ELISA
	Gal-1	Galectin-1	ELISA
	Gal-3	Galectin-3	ELISA
Gal-9	Galectin-9	ELISA	
IgG N-glycome	22 individual glycans structures categorized into 9 groups (Supplementary Table 4)		Capillary electrophoresis
IgA total glycome	Binding to 45 lectins with known glycan-binding specificity (Supplementary Table 5)		Lectin microarray
Plasma N-glycome	24 individual glycans structures categorized into 15 groups (Supplementary Table 3)		Capillary electrophoresis
Plasma total glycome	Binding to 45 lectins with known glycan-binding specificity (Supplementary Table 5)		Lectin microarray
Plasma Metabolome	278 plasma metabolites and three derivative ratios		Mass spectrometry
Plasma Lipidome	2015 plasma lipids categorized into 24 lipid classes		Mass spectrometry

Supplementary Table 7 . Top 50 metabolic pathways disrupted by severe COVID-19.

Pathway	P value	FDR	State	Z	Ratio
tRNA Charging	7.9433E-27	2.5119E-24	Activated	2.828	0.22
Superpathway of Citrulline Metabolism	3.9811E-16	7.9433E-14		1.89	0.256
Citrulline Biosynthesis	7.9433E-16	1E-13		1.134	0.333
Arginine Biosynthesis IV	3.9811E-14	3.1623E-12		0	0.333
Purine Nucleotides De Novo Biosynthesis II	6.3096E-14	3.9811E-12	Activated	2.121	0.22
Superpathway of Methionine Degradation	1.2589E-11	6.9183E-10		0	0.127
NAD biosynthesis II (from tryptophan)	3.1623E-11	1.6982E-09		0.816	0.226
Asparagine Biosynthesis I	5.0119E-11	2.3442E-09		0.447	0.625
Proline Biosynthesis II (from Arginine)	6.3096E-11	2.3988E-09		0	0.333
Phenylalanine Degradation IV (Mammalian, via Side Chain)	6.3096E-11	2.3988E-09		0.378	0.206
Purine Nucleotides Degradation II (Aerobic)	7.9433E-11	2.7542E-09			0.2
Urea Cycle	1.3804E-10	3.9811E-09			0.3
Glycolysis I	3.3884E-10	9.1201E-09			0.167
L-glutamine Biosynthesis II (tRNA-dependent)	4.4668E-10	1.0965E-08		1	0.455
Sirtuin Signaling Pathway	6.6069E-10	1.4454E-08		0.378	0.0401
Lysine Degradation V	6.166E-10	1.4454E-08		0.447	0.24
Gluconeogenesis I	7.7625E-10	1.5849E-08			0.149
Alanine Degradation III	3.7154E-09	6.4565E-08		0	0.667
Alanine Biosynthesis II	3.7154E-09	6.4565E-08		0	0.667
Arginine Degradation VI (Arginase 2 Pathway)	4.0738E-09	6.4565E-08		0	0.312
4-hydroxybenzoate Biosynthesis	4.0738E-09	6.4565E-08		0.447	0.312
NAD Biosynthesis from 2-amino-3-carboxymuconate Semialdehyde	4.0738E-09	6.4565E-08		1	0.312
Folate Polyglutamylation	7.9433E-09	1.1482E-07		-0.447	0.278
5-aminoimidazole Ribonucleotide Biosynthesis I	7.9433E-09	1.1482E-07		1.342	0.278
Glutamine Biosynthesis I	8.7096E-09	1.2023E-07		-1	0.571
Citrulline Degradation	1.7378E-08	2.2909E-07		0	0.5
(S)-reticuline Biosynthesis II	3.0903E-08	3.8019E-07		1	0.444
Glycine Degradation (Creatine Biosynthesis)	3.0903E-08	3.8019E-07		1	0.444
γ-glutamyl Cycle	3.8905E-08	4.6774E-07			0.208
4-aminobutyrate Degradation I	5.1286E-08	5.8884E-07		0	0.4
Glutathione Biosynthesis	8.1283E-08	8.9125E-07		0	0.364
Folate Transformations I	8.9125E-08	9.5499E-07			0.179
Glutamate Degradation III (via 4-aminobutyrate)	1.2023E-07	1.2589E-06			0.333
L-carnitine Biosynthesis	1.7378E-07	1.7378E-06		-1	0.308
Arginine Degradation I (Arginase Pathway)	1.7378E-07	1.7378E-06			0.308
PFKFB4 Signaling Pathway	1.9055E-07	1.8197E-06	Activated	2	0.0968
Proline Biosynthesis I	2.4547E-07	2.2909E-06		-1	0.286
Cysteine Biosynthesis III (mammalia)	3.8019E-07	3.4674E-06			0.135
Salvage Pathways of Pyrimidine Ribonucleotides	4.3652E-07	3.7154E-06		0	0.0609
Selenocysteine Biosynthesis II (Archaea and Eukaryotes)	4.3652E-07	3.7154E-06		1	0.25
Citrulline-Nitric Oxide Cycle	4.3652E-07	3.7154E-06			0.25
Phosphatidylcholine Biosynthesis I	5.7544E-07	4.5709E-06		1	0.235
CMP-N-acetylneuraminat Biosynthesis I (Eukaryotes)	5.7544E-07	4.5709E-06			0.235
Adenine and Adenosine Salvage VI	6.3096E-07	4.8978E-06			0.6
4-hydroxyphenylpyruvate Biosynthesis	6.3096E-07	4.8978E-06			0.6
TCA Cycle II (Eukaryotic)	7.4131E-07	5.4954E-06			0.119
Uridine-5'-phosphate Biosynthesis	9.3325E-07	6.4565E-06		1	0.211
Superpathway of Serine and Glycine Biosynthesis I	9.3325E-07	6.4565E-06			0.211
Sucrose Degradation V (Mammalian)	9.3325E-07	6.4565E-06			0.211

Supplementary Table 8. List of the gut-associated and gut microbiota-associated metabolites detected in our study using untargeted LC-MS/MS (50 of the 278 metabolites identified in plasma).

Name	Reference
α -Hydroxyhippuric acid	(1)
β -D-Glucopyranuronic acid	(2)
(2R)-2,3-Dihydroxypropanoic acid	(3)
16-Hydroxyhexadecanoic acid	(4)
2-Hydroxycinnamic acid	(5)
2-Hydroxyhippuric acid	(1)
2-Hydroxyvaleric acid	(6)
2,3-Dihydroxybenzoic acid	(1)
2,4-Dihydroxybenzoic acid	(7)
3-Hydroxybutyric acid	(8)
3-Indoxyl sulphate	(9)
3-methylphenylacetic acid	(7)
4-Hydroxybenzaldehyde	(7)
4-Hydroxyproline	(10)
Acetylcholine	(11)
Allantoin	(12)
Cholic acid	(13)
Choline	(14)
Citrulline	(15)
D-(-)-Mannitol	(16)
D-Glucose	(17)
Decanoic acid	(18)
Deoxycholic Acid	(19)
Glucose 6-phosphate	(20)
Glycine	(21)
Glycocholic acid	(19)
Glycoursodeoxycholic acid	(19)
Glycyl-L-leucine	(22)
Hippuric acid	(1, 7)
Indole-3-acetic acid	(23)
Indole-3-lactic acid	(23)
Indole-3-pyruvic acid	(19)
Kynurenic acid	(24)
L-Isoleucine	(23)
L-Kynurenine	(75)
L-Lactic acid	(24, 25)
L-Leucine	(24)
L-Serine	(24, 25)
L-Threonine	(25)
L-Tryptophan	(23, 24)
L-Valine	(24)
N-Acetyl-DL-tryptophan	(26)
Pentadecanoic acid	(18)
Phosphoenolpyruvic acid	(24)
Pipecolic acid	(25)
Pyruvic acid	(24)
Succinic acid	(27)
Taurochenodeoxycholic Acid	(19)
Trans-Cinnamic acid	(28)
Trimethylamine N-oxide	(29)

Supplementary Table 9. Two thousand fifteen lipids identified in this study were assigned to 24 lipid classes.

Group	Abbreviation	Class	Number of lipids
Phospholipids	CL	Cardiolipin	2
	LPA	Lysophosphatidic acid	2
	PA	Phosphatidic acid	8
	LPC	Lysophosphatidylcholine	110
	PC	Phosphatidylcholine	262
	LPE	Lysophosphatidylethanolamine	22
	PE	Phosphatidylethanolamine	139
	PG	Phosphatidylglycerol	10
	LPI	Lysophosphatidylinositol	6
	PI	Phosphatidylinositol	47
	LPS	Lysophosphatidylserine	1
PS	Phosphatidylserine	11	
Neutral lipids	ChE	Cholesterol ester	22
	DG/DAG	Diglyceride	58
	TG/TAG	Triglyceride	742
Sphingolipids	Cer	Ceramide	121
	Hex1Cer	Simple Glc series (Ceramide with 1 hexose)	21
	Hex2Cer	Simple Glc series (Ceramide with 2 hexose)	10
	Hex3Cer	Simple Glc series (Ceramide with 3 hexose)	9
	LSM	Lysosphingomyelin	1
	SM	Sphingomyelin	359
	SPH	Sphingosine	1
Other lipids	AcCa	Acyl carnitine	46
	Co	Coenzyme	5

Supplementary Table 10. Demographics, clinical data, and levels of selected measures in the moderate and severe groups of the main study cohort.

ID	Group	Age (years)	Sex	Ethnicity	Deceased	Body mass Index	Diabetes	High blood pressure	Asthma	Hydroxychloroquine	Remdesivir	Tocilizumab	Steroids	Antibiotics	IL-6 (pg/ml)	Zenoxon (ng/ml)	LBP (ng/ml)	fglucan (pg/ml)	eCD14 (ng/ml)	Ctntubulin (relative levels)	L-Mycurena/Typtophan
1	Moderate	57	Female	African American	Yes	>25	No	No	No	Yes	No	No	No	Yes	1763.257047	163.8942	5004.6	17.83	3493.879433	1621735426	0.316304883
2	Moderate	53	Male	Caucasian	No	>25	No	No	No	Yes	No	No	No	No	18.01473445	49.6164	21917.376	29.72	3455.754172	713838364.6	0.270994516
5	Moderate	58	Female	African American	No	>25	No	No	No	No	No	No	Yes	Yes	61.68376376	46.9002	16670.458	42.704	2370.889564	712152121.3	0.048167588
6	Moderate	61	Female	African American	No	>25	Pre	Yes	No	No	No	No	Yes	No	6.349896414	36.7362	32509.685	32.786	2950.155591	781957761.3	0.073713424
9	Moderate	61	Female	African American	No	>25	Pre	Yes	No	Yes	No	No	Yes	No	14.72774326	25.4352	27308.872	49.836	3870.527475	1081500040	0.100074352
10	Moderate	58	Female	Hispanic	No	>25	No	No	No	Yes	No	No	No	Yes	33.61113291	77.483	43753.549	73.084	3946.763302	650814955.9	0.253576756
12	Moderate	62	Male	Caucasian	No	>25	Pre	No	No	No	No	No	No	Yes	2.154274243	47.1282	23866.672	64.42	1687.676587	86875446.6	0.063867164
13	Moderate	56	Male	African American	No	>25	No	No	No	No	No	No	No	No	10.22549033	12.7694	22474.136	55.522	3639.788518	694690536.8	0.064552871
15	Moderate	62	Male	Caucasian	No	>25	Yes	Yes	No	No	No	No	No	No	3.10147469	0.5856	18370.92	51.33	2204.235012	23966448670	0.088245657
16	Moderate	64	Male	African American	No	>25	No	No	No	Yes	No	No	No	No	8.36509405	68.8008	32301.397	62.97	1877.933692	113050743.2	0.051193984
17	Moderate	57	Female	Caucasian	No	>25	No	Yes	Yes	No	No	No	Yes	Yes	1.901578269	0.5856	18912.9	19.88	2027.228177	78220371.7	0.05060764
26	Moderate	63	Male	Hispanic	No	>25	Yes	Yes	No	No	No	No	Yes	Yes	220.9539105	54.7636	39661.744	59.528	3385.222049	814348893.5	0.081288883
27	Moderate	57	Male	Hispanic	No	>25	Yes	Yes	No	No	No	No	Yes	Yes	1.078627252	5.9794	7832.861	39.768	1855.827767	1262606509	0.019510952
31	Moderate	59	Female	African American	Yes	>25	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	109.2382182	123.3182	65613.144	80.456	4690.125491	806015750.1	0.328378664
34	Moderate	58	Male	Hispanic	No	>25	Pre	Yes	No	No	No	No	No	Yes	4.747452725	65.789	18899.985	32.41	1954.250577	1621058972	0.360265105
36	Moderate	59	Female	Hispanic	No	>25	No	Yes	No	No	No	No	No	No	50.9140744	169.2356	39888.445	60.264	2521.605862	457648498.1	0.144641071
37	Moderate	59	Female	Hispanic	No	>25	Yes	Yes	No	Yes	No	No	Yes	Yes	13.42164849	12.3572	41379.358	55.048	3079.004266	174336612.7	0.06897164
38	Moderate	62	Male	African American	No	>25	No	No	No	No	No	No	No	No	13.99319259	89.247	19775.875	62.86	2181.267201	550382449.4	0.048178512
39	Moderate	64	Female	African American	No	>25	No	Yes	No	No	No	Yes	Yes	Yes	1.458963352	27.0292	15076.389	49.052	2102.888148	1005191769	0.145485036
40	Moderate	51	Female	Unknown	No	>25	No	No	No	No	Yes	No	No	No	1.646799114	30.3726	6096.586	35.732	1393.232256	579645991.7	0.031223194
3	Severe	59	Male	Hispanic	No	>25	No	No	No	Yes	No	No	Yes	Yes	30.1633899	58.659	45712.063	82.202	2513.57029	441228129.5	0.08464096
4	Severe	57	Female	African American	No	>25	Pre	No	No	Yes	No	Yes	Yes	Yes	619.0690777	34.6646	45438.47	52.812	3624.038942	574633636.5	0.241071742
6	Severe	63	Male	African American	No	>25	Yes	Yes	No	Yes	No	No	No	No	3.579886648	36.3104	25787.79	41.818	2430.854067	875668816.1	0.097722934
7	Severe	57	Male	African American	No	>25	Yes	Yes	No	Yes	No	Yes	Yes	Yes	616.9983792	100.6376	96150.038	101.848	4690.125491	96414095.3	0.410510182
11	Severe	63	Female	African American	Yes	>25	Yes	Yes	No	No	Yes	No	Yes	No	6.89334345	89.3092	19488.006	52.075	2315.330963	693800909.4	0.058170326
14	Severe	59	Male	Hispanic	No	>25	Pre	No	No	Yes	No	No	No	Yes	10.27789698	32.433	30034.297	70.83	2679.447992	813006537.7	0.068817304
18	Severe	54	Male	African American	No	>25	Pre	No	Yes	No	Yes	No	No	Yes	20.88384583	0.5655	25197.56	47.174	3306518939	561806052	0.11084659
19	Severe	52	Male	Hispanic	Yes	>25	Yes	Yes	No	Yes	No	Yes	Yes	Yes	118.1545736	101.7684	44794.181	60.292	4396.923347	611287349.4	0.17013349
20	Severe	53	Male	Caucasian	No	>25	Yes	No	No	Yes	No	Yes	Yes	Yes	24.14887075	185.911	50243.332	44.938	3663.26239	629935512.5	0.148346286
21	Severe	66	Female	Hispanic	No	>25	Yes	Yes	No	No	No	No	No	No	24.1418214	47.1516	38449.275	70.882	2477.845897	39329768.8	0.053024607
22	Severe	52	Male	Other	No	>25	No	Yes	No	No	No	No	Yes	Yes	71.96666096	9.0916	41002.193	39.908	3346.3174	722847555	0.081676354
23	Severe	63	Male	African American	Yes	>25	No	No	No	No	No	Yes	Yes	Yes	20.28186358	46.8406	54026.01	72.846	3758.345672	625376939.2	0.108917984
24	Severe	63	Female	Hispanic	Yes	>25	Pre	Yes	No	Yes	No	Yes	Yes	Yes	225.3700541	52.8488	63356.428	60.406	1852.145076	289965314.9	0.265125673
25	Severe	63	Female	Caucasian	Yes	>25	Yes	Yes	Yes	No	Yes	No	Yes	Yes	265.4670538	177.1618	35176.888	79.79	4690.125491	577143302.6	0.427586715
28	Severe	59	Female	Hispanic	No	>25	Pre	Yes	No	Yes	No	No	No	Yes	125.2595669	29.183	56041.668	98.72	4395.229986	368228892.3	0.205720859
29	Severe	63	Male	Caucasian	No	>25	Yes	Yes	No	No	No	Yes	No	Yes	63.18794679	70.2674	31012.407	59.864	4690.125491	1012963079	0.233697628
30	Severe	64	Male	African American	Yes	>25	Yes	Yes	No	No	No	No	Yes	Yes	11.06562902	36.173	16185.838	42.738	1515.144719	615842637.8	0.032801245
32	Severe	59	Female	Hispanic	No	>25	Pre	Yes	No	Yes	Yes	Yes	No	Yes	1.754959576	9.496	15714.848	47.298	1817.708263	1105465401	0.065271545
33	Severe	56	Male	Hispanic	No	>25	Pre	No	No	No	No	No	No	Yes	14.65192676	4.512	30376.545	45.368	2451.894146	663444317.6	0.058172219
35	Severe	51	Male	Hispanic	No	>25	Pre	No	No	No	Yes	No	No	Yes	132.1470257	67.0486	68888.297	65.182	2759.826511	292532699.6	0.231106412

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