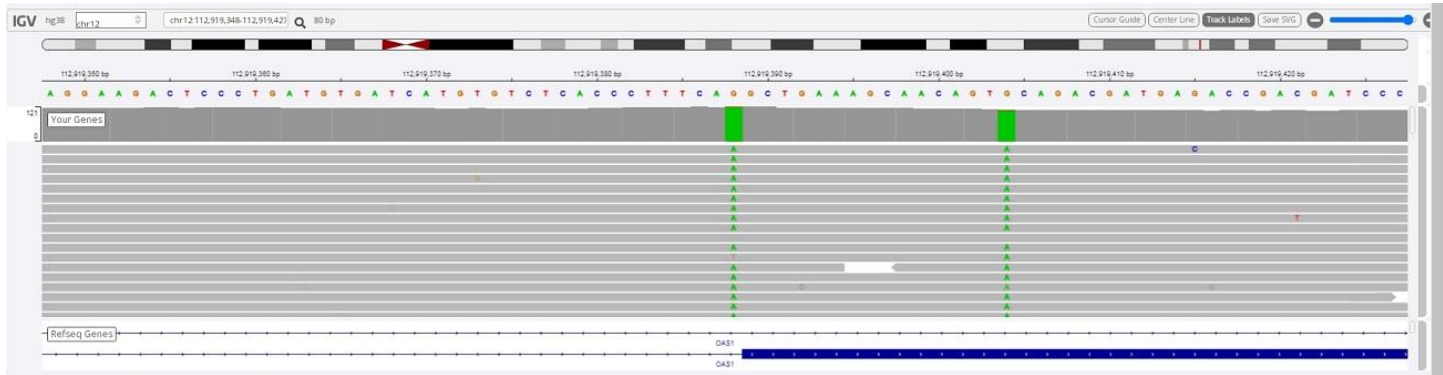


Table of Polymorphisms - Susceptibility and Severity of Spike Protein Injury (SPI)

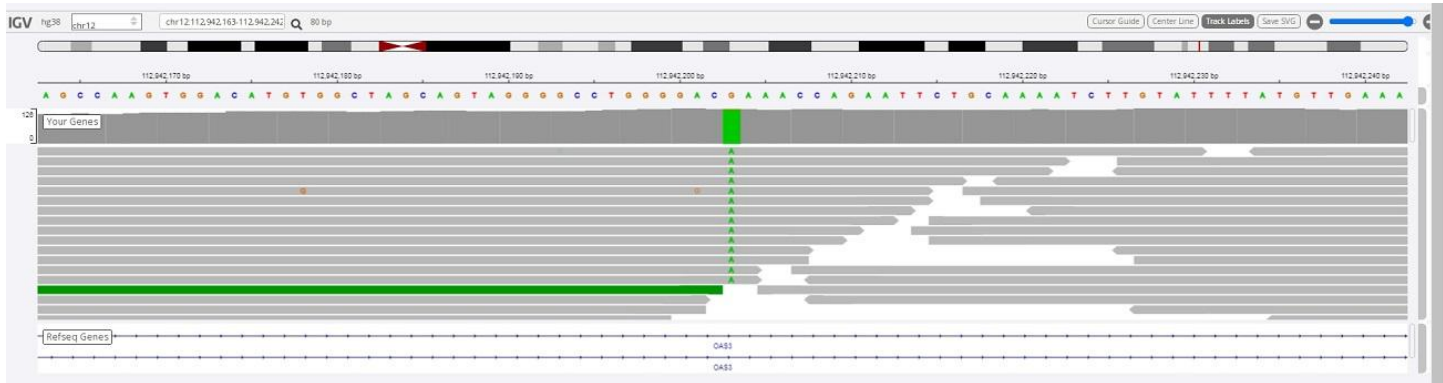
DNA Plasticity from Natural Vaccine effects on COVID-19.

Location	DNA Polymorphism	Variant	Allele Effects	SNPedia & other Articles	Outcomes
<i>OAS1</i>	G to A/A ¹	rs10774671	Blocks COVID replication	Yes. None on COVID; related to rs10752637 T-G/G Alzheimer's ↑	Associated with severity ↑
<i>OAS3</i> ; <i>OAS1</i>	G to A/A ² T to G/G ³	rs10735079; (LD) rs4766664 (LD) is Linkage	Interferon inducible genes - antiviral defense	Biorxiv - Genetic Variant protective and inherited from Neanderthals	Associated with critical illness, Blocks viral replication ↑

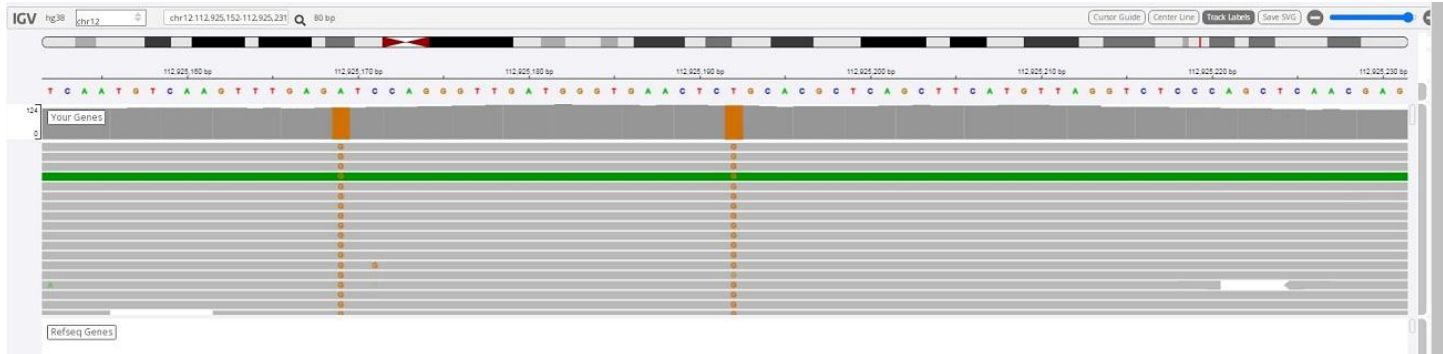
¹ rs10774671 -



² rs10775079 -

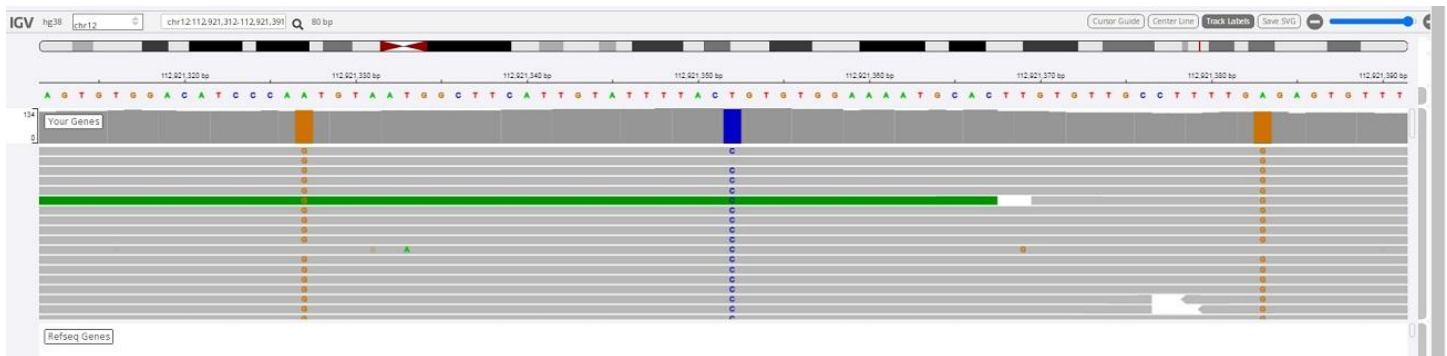


³ rs4766664 -



Location	DNA Polymorphism	Variant	Allele Effects	SNPedia & other Articles	Outcomes
<i>SLC6A20</i> , <i>LZTFL1</i> , <i>CCR9</i> , <i>FYCO1</i> , <i>CXCR6</i> and <i>XCRI</i>	T-C/C ⁴	rs4767027	Reduced COVID-19 susceptibility	Biorxiv - Genetic Variant protective and inherited from Neanderthals	Associated with critical illness - decreased hospitalization risk ↑
<i>OAS1</i>	G-A/A ⁵	rs1131454	Destroys COVID-19 RNA	Yes. Not related to COVID	Mediated decay of COVID-19 RNA; decreased viral loads ↑
<i>DPP9</i>	Normal ⁶	rs2109069	Severe COVID lung attack	GWAS - Nature, 12/11/20;	Associated with severity of spike

⁴ rs4767027 -



⁵ rs1131454 -



⁶ rs2109069 -



Location	DNA Polymorphism	Variant	Allele Effects	SNPedia & other Articles	Outcomes
				Genetic mechanisms of critical illness in SPI.	protein injury/illness ↓
<i>DPP9</i>	Normal ⁷	rs12610495; (LD) rs2109069 ⁸	Severe COVID	Map on SNPedia, GWAS too;	Ideopathic lung fibrosis, defeats antigen presentation ↓
<i>SLC6A20</i> , <i>LZTFL1</i> , <i>CCR9</i> , <i>FYCO1</i> , <i>CXCR6</i> and	Normal ⁹	rs73064425	$adjusted_risk = OR^{N/\mu}$ No where N is the number of effect alleles.	No	Associated with critical illness ↓

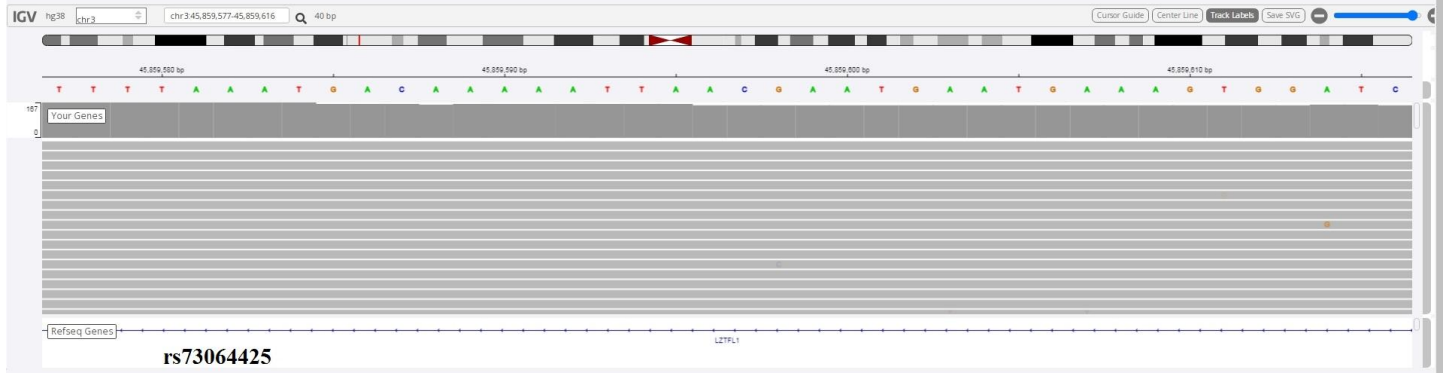
⁷ rs12610495



⁸ rs2109069 -

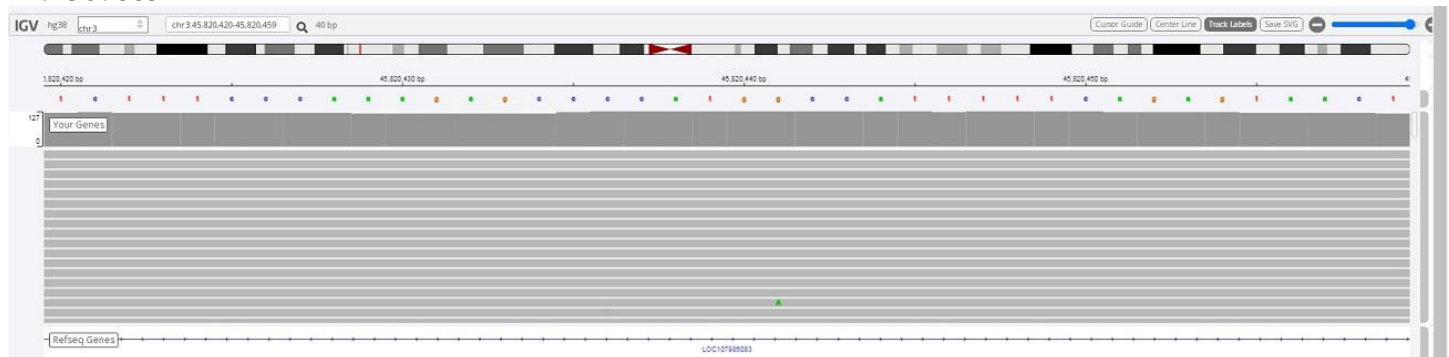


⁹ rs73064425 -

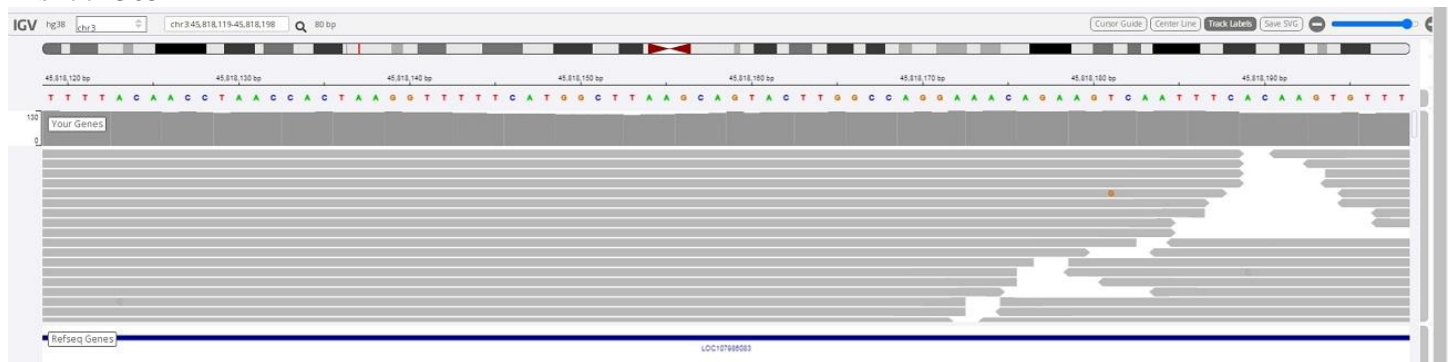


Location	DNA Polymorphism	Variant	Allele Effects	SNPedia & other Articles	Outcomes
<i>XCRI</i>					
<i>SLC6A20</i> , <i>LZTFL1</i> , <i>CCR9</i> , <i>FYCO1</i> , <i>CXCR6</i> and <i>XCRI</i>	Normal ¹⁰	rs13078854	121 negative v 1,131 severe cases.	No	Associated with severity ↓
<i>SLC6A20</i> , <i>LZTFL1</i> , <i>CCR9</i> , <i>FYCO1</i> , <i>CXCR6</i> and <i>XCRI</i>	Normal ¹¹	rs17713054	250 of 2K hospitalized	Yes - doubles risk of severe COVID (spike protein injury)	Associated with hospitalization ↓
<i>SLC6A20</i> ,	Normal ¹²	rs2271616	1,131 of 15,434	No	Associated with

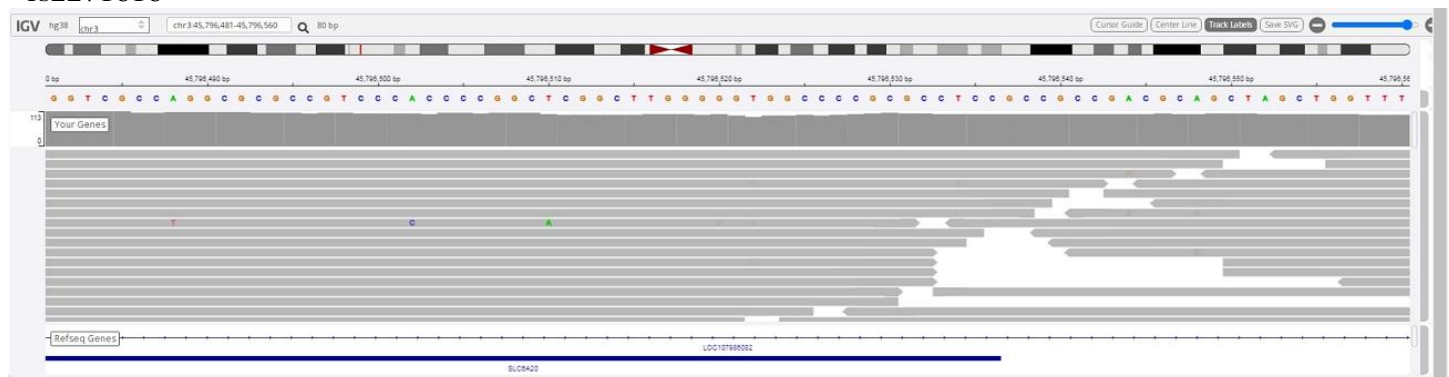
¹⁰ rs13078854 -



¹¹ rs17713054 -

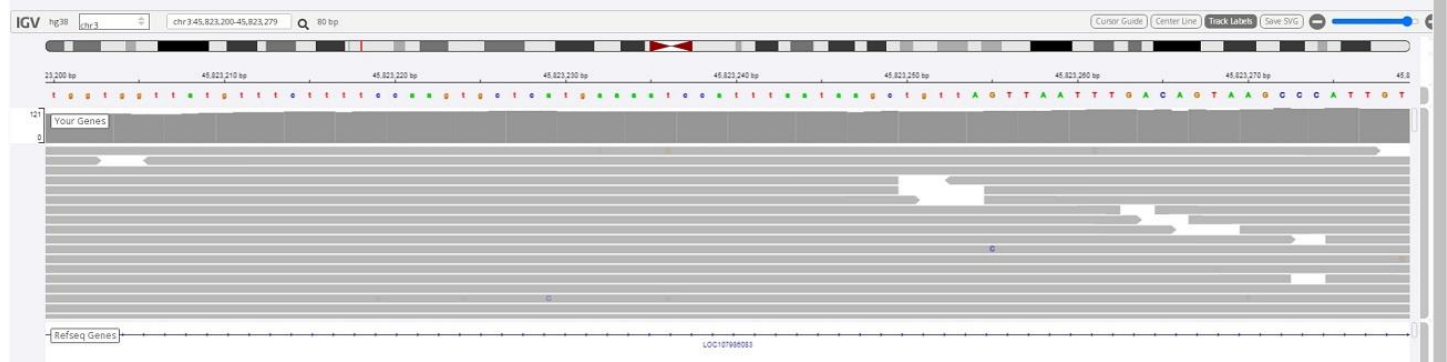


¹² rs2271616 -

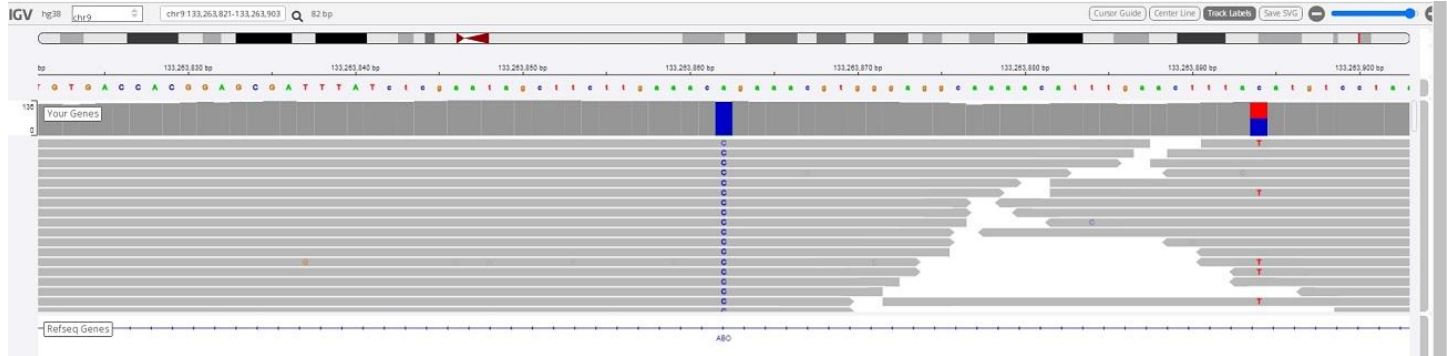


Location	DNA Polymorphism	Variant	Allele Effects	SNPedia & other Articles	Outcomes
<i>LZTFL1</i> , <i>CCR9</i> , <i>FYCO1</i> , <i>CXCR6</i> and <i>XCR1</i>			hospitalized		susceptibility ↓
<i>SLC6A20</i> , <i>LZTFL1</i> , <i>CCR9</i> , <i>FYCO1</i> , <i>CXCR6</i> and <i>XCR1</i>	Normals ¹³	rs10490770	24K hospitalized of 2M controls	Yes - higher susceptibility to respiratory failure	Associated with hospitalization ↓
<i>ABO</i>	a-CC ¹⁴	rs657152	Cross replicating associations with rs11385942	Yes - blood type specific	Blood group A associated with respiratory failure ↓
<i>ABO</i>	a-CC ¹⁵	rs657152	I am blood type O	PubMed N Engl	Blood group O

13
rs10490770 -







14
Rs657152 -



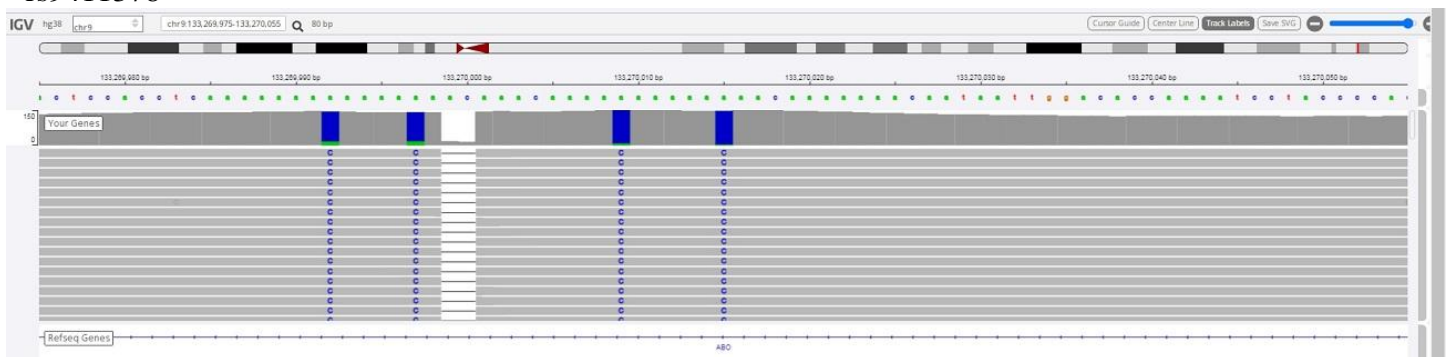
Location	DNA Polymorphism	Variant	Allele Effects	SNPedia & other Articles	Outcomes
				J Med 2020 Jun 17	associated with a protective effect ↑
<i>LZTFL1</i>	Normal	rs11385942	Bad allele	Yes - 3X respiratory failure susceptibility	Respiratory failure ↓

¹⁵ Rs657152 - Protective for blood type O

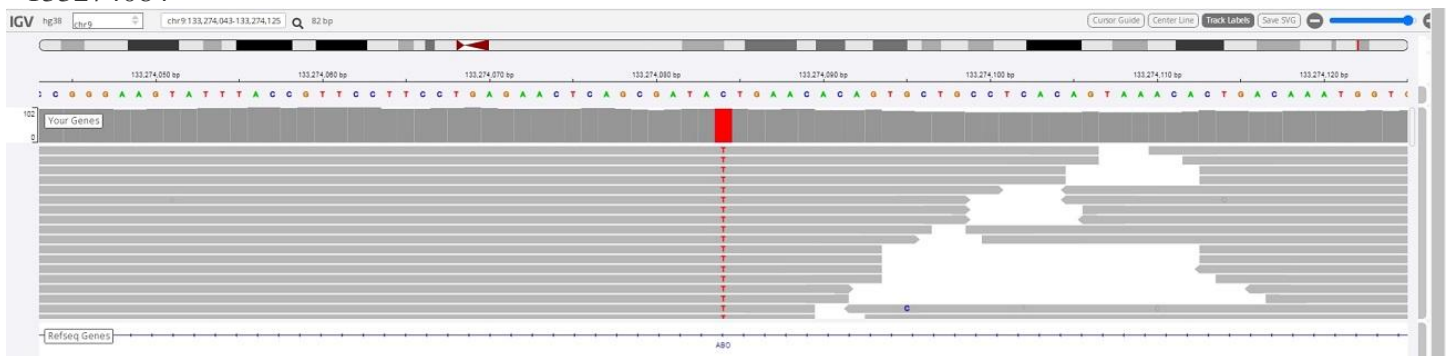
			
Anti-A	Anti-B	Anti-D	Control
Name - Nombre - Nome - Nome - Nom - Name - Név - Navn - Navn - Namn - Nimi David Merrill		Address - Dirección - Endereço - Direzione - Adresse - Adressieren - Cím - Adresse - Adresse - Adress - Osoite by name	
Born - Nacimiento - Aniversário - Nato - Date de naissance - Geboren - Született - Fødselsdato - Fødselsdato - Födelsdatum - Syntymäaika [Redacted]		Signature - Firma - Signer - Firma - Signature Unterschrift - Aláírás - Underskrift - Underskrift - Namnteckning - Allekirjoitus 16939279	
ABO O Positive	Rhesus (D) Positive	Date - Fecha - Date - Data - Date - Datum - Dátum - Dato - Dato - Datum - Päivämäärä 10/6/11	
LOT 10481 2012-12 E			
10/7/2011 8			

Location	DNA Polymorphism	Variant	Allele Effects	SNPedia & other Articles	Outcomes
<i>ABO</i>	a-CC ¹⁶	rs9411378	Good mutation - for me, with blood type O	No - GWAS located Chr9: 133270015	Blood group A associated with COVID-19 positivity ↑
<i>ABO</i>	C-TT ¹⁷	rs912805253	Bad for blood type A, protective for blood type O	European Journal of Medicine 7/20/22 Host Genomics...	Blood group O associated with protection from SPI ↑
<i>IFNAR2</i>	A-AG ¹⁸	rs2236757	Bad	Genome ucsc.edu 7 SNP associated with severe SPI	Associated with critical illness ↓
<i>SLC6A20</i>	normal ¹⁹	rs2531743	Bad	Genome Wide	Associated with

¹⁶ rs9411378 -



¹⁷ 133274084 -



¹⁸ rs2236757 -



Location	DNA Polymorphism	Variant	Allele Effects	SNPedia & other Articles	Outcomes
				Intron Variant	critical illness severity ↓
<i>ICAM5/TYK2</i>	c-TC ²³ Normal	rs1108572(7); (LD) rs74956615	Good	eBioMedicine - Host genetic factors...	Associated with critical illness ↓
<i>TYK2</i>	Normal ²⁴	rs74956615	Bad	Regeneron - Genome-wide analysis...	Associated with severity ↓
<i>HLA-G</i>	GAP Normal ²⁵	rs9380142 chr6: 29831017	Bad	Human Genomics -	Associated with critical illness ↓

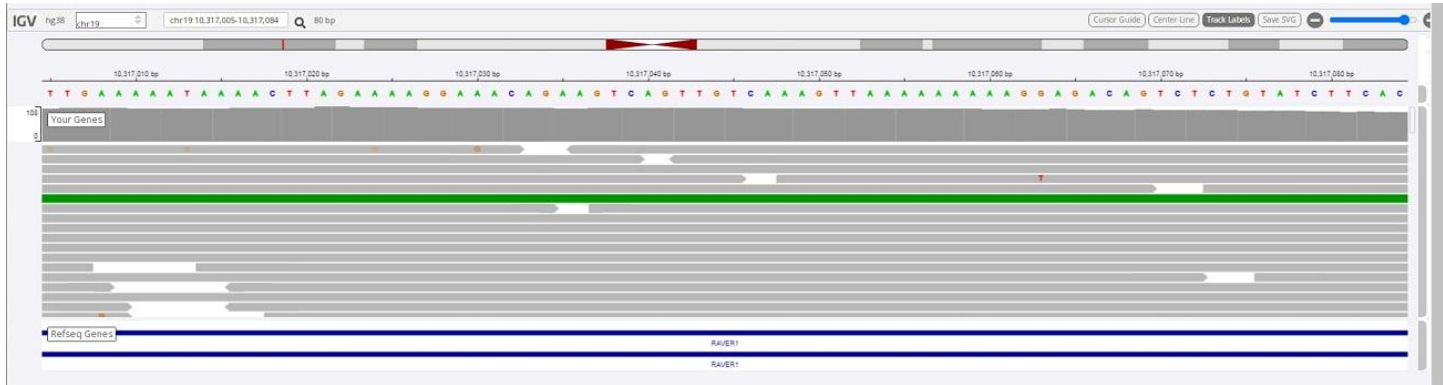
22 rs2109069 -



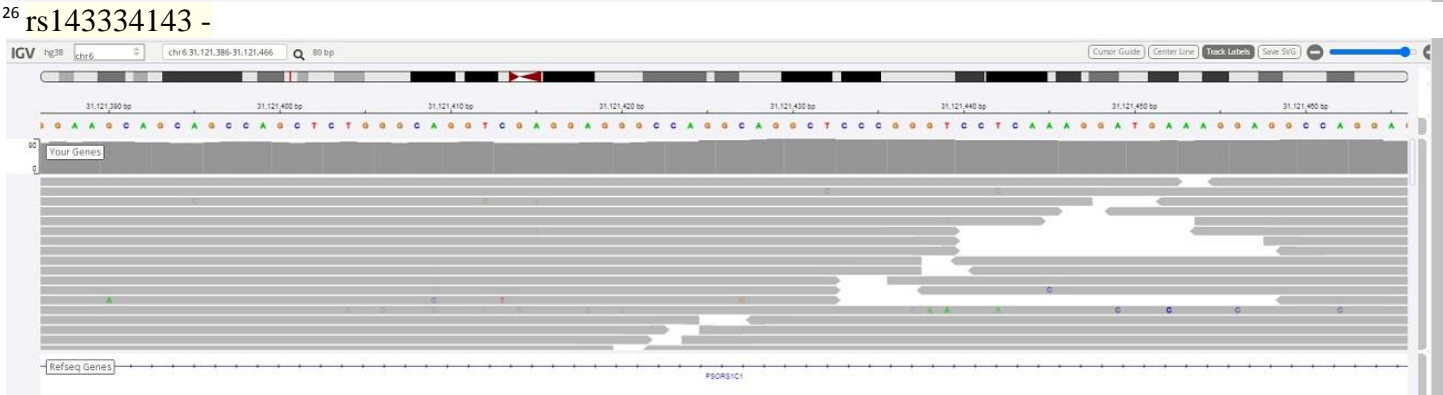
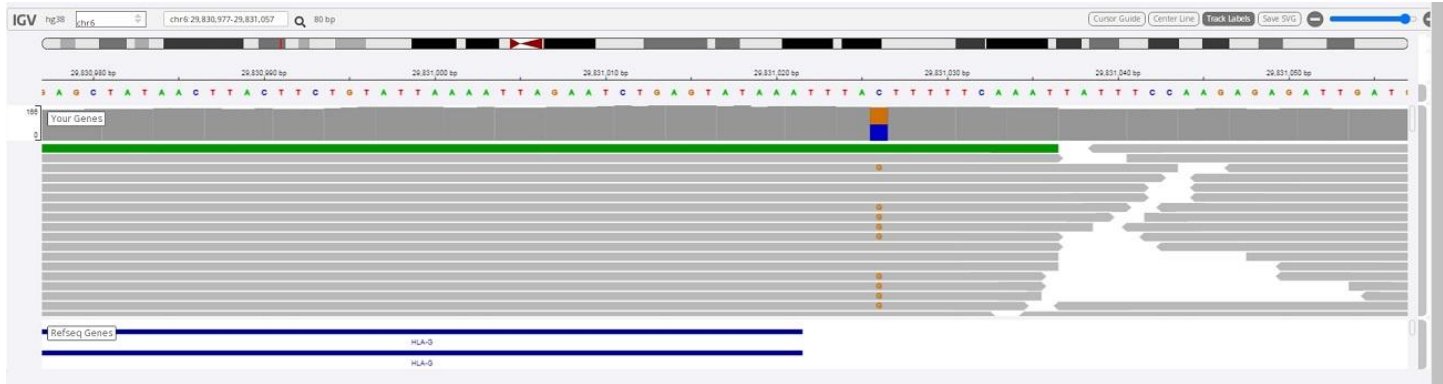
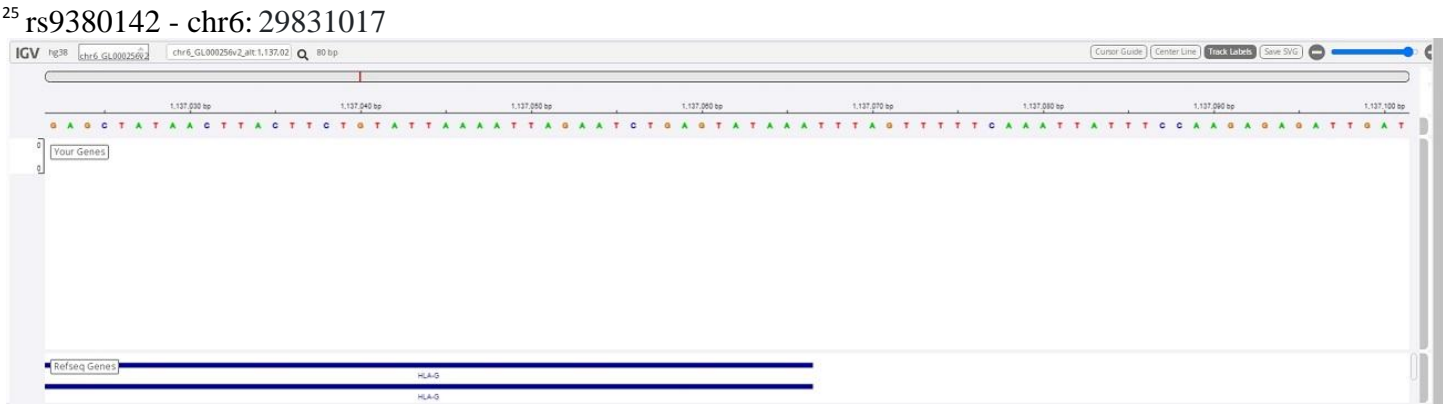
23 rs11085727 -



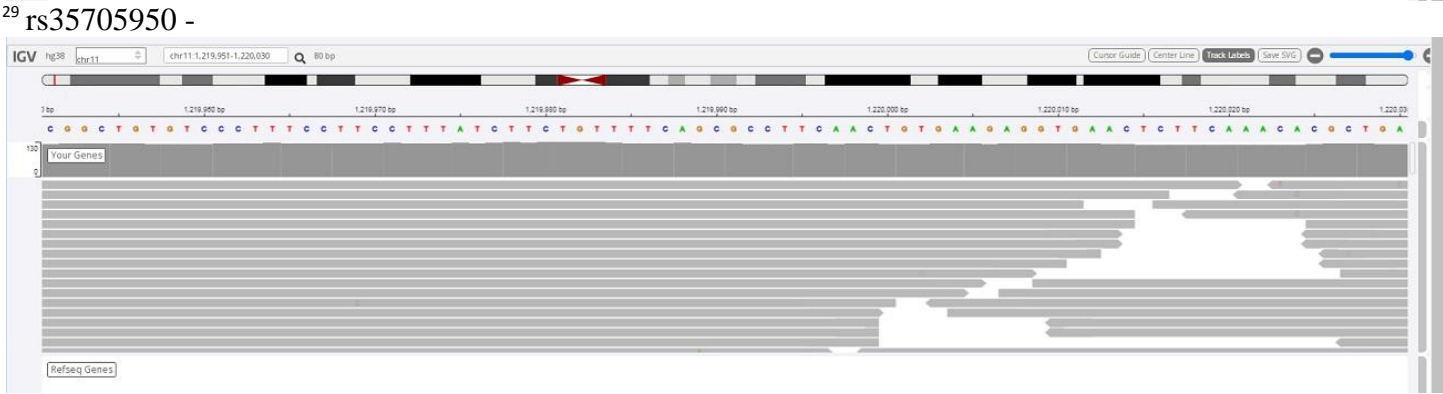
24 rs74956615 -



Location	DNA Polymorphism	Variant	Allele Effects	SNPedia & other Articles	Outcomes
<i>CCHCR1</i>	normal ²⁶	rs143334143	Bad mutation	Update on Human Genetic Susceptibility to SPI Yes - 1.9x risk for becoming critically ill	Associated with critical illness; 1.9x risk. Genome.ucsc.edu ↓ Blocks Immune Response
<i>HLA-DPBI</i>	Gap in genome ²⁷	rs2071351	Bad	Human Genomics -	



Location	DNA Polymorphism	Variant	Allele Effects	SNPedia & other Articles	Outcomes
				Update on Human Genetic Susceptibility to SPI	Pathway, susceptibility↓
ACE2	normal ²⁸	rs190509934	Good	Medrxiv.org Genome-Wide Analysis...	Associated with ACE 2 entry susceptibility - Novel Risk Variant in ACE2 ↑
MUC5B ²⁹	Normal ²⁹	rs35705950	Bad	SNPedia pneumonia and pulmonary fibrosis	Associated with severity specifically lung issues ↓



Location	DNA Polymorphism	Variant	Allele Effects	SNPedia & other Articles	Outcomes
				Replication of LZTFL1 gene region susceptibility	severity - lowest P-value ↓
NOTCH4	Normal ³⁴	rs3131294	Bad	Ncbi - Update Human Genetic Susceptibility SPI	Affects severity
OAS1	c-TT ³⁵	rs6489867	Bad	Isaric.org - Genetic Mechanisms of Critical Illness in SPI	1.3 ratio affecting severity SpringerLink - did not reach statistical significance ↓↑

