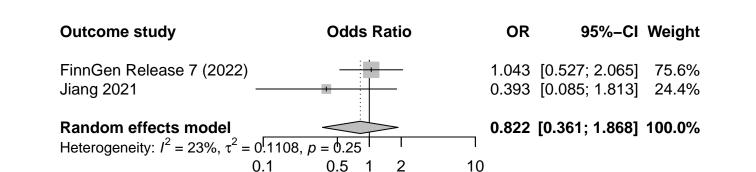
Acidaminococcaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Ode	ds Ra	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		_	-			[0.456; 1.421] [0.165; 6.026]	90.9% 9.1%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.82	0.2	0.5	1		 0.821	[0.478; 1.411]	100.0%

Actinobacteria (Class) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds R	atio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021 FinnGen Release 7 (2022)	Kurilshikov 2021		*	_ _	0.393	[0.527; 2.065] [0.085; 1.813] [0.846; 2.092]	34.0% 8.7% 57.3%
Random effects model Heterogeneity: $I^2 = 16\%$, $\tau^2 =$	0.0457, <i>p</i> = 0.31	0.1	0.5 1	> 2	1.102	[0.690; 1.758]	100.0%

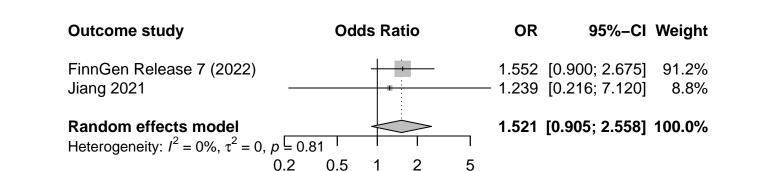
Actinobacteria (Class) on Optic nerve swelling in Kangcheng Liu 2022



Actinobacteria (Phylum) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposure study	y Odds Ratio	OR 95%-CI We	eight
FinnGen Release 7 (2022) Kurilshikov 2023 Jiang 2021 Kurilshikov 2023	·	L , ,	0.5% 1.1%
FinnGen Release 7 (2022) Goodrich 2016	i i	1.001 [0.996; 1.006] 88	8.4%
Random effects model Heterogeneity: $I^2 = 22\%$, $\tau^2 = 0.0104$, $p = 0.28$	0.2 0.5 1 2	1.051 [0.871; 1.268] 100 5	0.0%

Actinobacteria (Phylum) on Optic nerve swelling in Kangcheng Liu 2022



Actinomyces (Genus) on Optic nerve swelling in Kangcheng Liu 2022

0	utcome study	Exposure study		Odd	ds Ra	atio	OR	95%-CI	Weight
	nnGen Release 7 (2022) ang 2021	Kurilshikov 2021 Kurilshikov 2021				_		[0.732; 1.806] [0.494; 7.591]	90.2% 9.8%
	andom effects model eterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.48	0.2	0.5	1	> 2	 1.211	[0.789; 1.858]	100.0%

Actinomycetaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Expo	sure study	Odds Ratio	C	OR 95%-CI	Weight
FinnGen Release 7 (2022) Kurils Jiang 2021 Kurils	shikov 2021 shikov 2021	-		79 [0.650; 2.139] 20 [0.590; 22.199]	
Random effects model Heterogeneity: $I^2 = 25\%$, $\tau^2 = 0.154\%$	9, <i>p</i> = 0.25	0.5 1 2	1.4	70 [0.614; 3.521]	100.0%

Actinomycetales (Order) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ra	atio		OR	95%-C	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			-			[0.650; 2.139] [0.586; 22.247]	
Random effects model Heterogeneity: $I^2 = 24\%$, $\tau^2 =$	0.1505, <i>p</i> = 0.25	0.1	0.5 1) 	 10	1.464	[0.615; 3.486]	100.0%

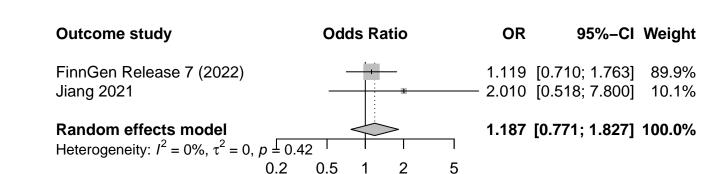
Adlercreutzia (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Ode	ds Ra	atio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			<u> </u>		[0.677; 1.666] [0.123; 1.841]	
Random effects model Heterogeneity: $I^2 = 18\%$, $\tau^2 =$	0.0568, <i>p</i> = 0.27	 0.5	1	<u>></u> 	 0.926	[0.513; 1.672]	100.0%

Akkermansia (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odd	ds Ra	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021 FinnGen Release 7 (2022)	Kurilshikov 2021			-	_ -	- 2.010	[0.710; 1.763] [0.518; 7.800] [0.907; 1.386]	2.0%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 =$	0, <i>p</i> = 0.70	0.2	0.5	1	7	 1.134	[0.937; 1.371]	100.0%

Akkermansia (Genus) on Optic nerve swelling in Kangcheng Liu 2022



Alcaligenaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021				0.632 - 5.737	[0.329; 1.215] [0.952; 34.573]	
Random effects model Heterogeneity: $I^2 = 80\%$, $\tau^2 =$	1.9572, <i>p</i> = 0.02	0.1	0.5 1 2	10	1.614	[0.190; 13.682]	100.0%

Alistipes (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds R	atio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-	_			[0.392; 1.279] [0.060; 1.778]	89.2% 10.8%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.40	0.1	0.5 1	2	 10	0.651	[0.372; 1.138]	100.0%

Allisonella (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		- 1	-		[0.757; 1.509] [0.399; 2.507]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.89	0.5	1	2	1.060	[0.767; 1.464]	100.0%

Alloprevotella (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odd	ds Ra	itio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			i i				[0.751; 1.477] [0.944; 7.298]	64.5% 35.5%
Random effects model Heterogeneity: $I^2 = 64\%$, $\tau^2 =$	0.2659, <i>p</i> = 0.10	0.2	0.5	1	2	- - 5	1.456	[0.619; 3.428]	100.0%

Alphaproteobacteria (Class) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odd	ds Ra	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		_		_		[0.630; 1.650] [0.207; 8.292]	93.6% 6.4%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, <i>p</i> = 0.80	0.2	0.5	1	> 	 1.036	[0.650; 1.651]	100.0%

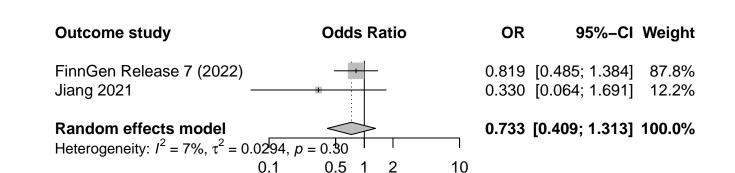
Anaerofilum (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Rati	io	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-	<u> </u>		[0.922; 1.677] [0.359; 2.237]	90.3% 9.7%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.50	0.5	1	> 7	1.204	[0.906; 1.601]	100.0%

Anaerostipes (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds R	atio		OR	95%-CI	Weight
FinnGen Release 7 (2022)	Kurilshikov 2021		-			0.819	[0.485; 1.384]	39.8%
Jiang 2021	Kurilshikov 2021		•	_		0.330	[0.064; 1.691]	9.5%
FinnGen Release 7 (2022)	Goodrich 2016		-	+		1.262	[0.901; 1.766]	50.7%
Random effects model				>		0.936	[0.542; 1.615]	100.0%
Heterogeneity: $I^2 = 49\%$, $\tau^2 =$	0.1236, p = 0.14							
	•	0.1	0.5 1	2	10			

Anaerostipes (Genus) on Optic nerve swelling in Kangcheng Liu 2022



Anaerotruncus (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds R	atio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-	_			[0.667; 1.826] [0.344; 13.575]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, <i>p</i> = 0.49	0.1	0.5 1	> 	10	1.157	[0.712; 1.880]	100.0%

Bacillales (Order) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study E	xposure study	Od	ds Ratio	•	OR	95%-CI	Weight
FinnGen Release 7 (2022) K Jiang 2021 K	Kurilshikov 2021 Kurilshikov 2021		-			[0.804; 1.384] [0.454; 4.187]	94.4% 5.6%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, μ	p = 0.65	0.5	1	¬ 2	1.071	[0.822; 1.394]	100.0%

Bacilli (Class) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exp	oosure study	Odds Ra	tio OR	95%-CI	Weight
9	ilshikov 2021 ilshikov 2021 oodrich 2016		1.360	[0.538; 1.258] [0.382; 4.835] [0.962; 1.001]	0.2% 0.0% 99.8%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0$	= 0.63	0.5 1	0.981	[0.962; 1.001]	100.0%

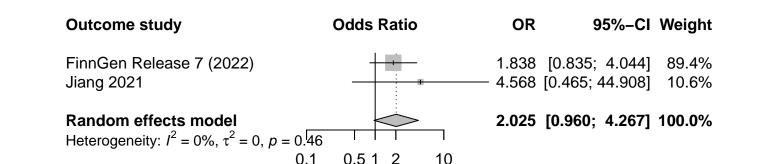
Bacilli (Class) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Odds Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021		-).538; 1.258]).382; 4.835]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0$	0.46	0.865 [0	.579; 1.294]	100.0%

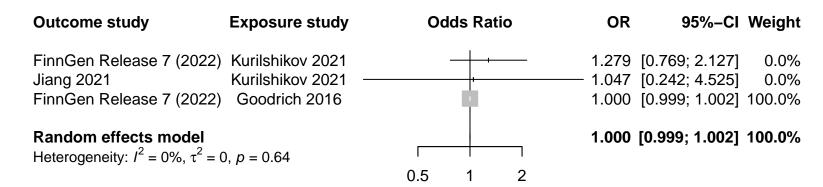
Bacteroidaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Expo	sure study	Odds Ratio	OR	95%-CI	Weight
3	shikov 2021 shikov 2021 drich 2016		4.568	[0.835; 4.044] [0.465; 44.908] [0.999; 1.002]	29.0% 5.7% 65.3%
Random effects model Heterogeneity: $I^2 = 50\%$, $\tau^2 = 0.1298$	3, <i>p</i> = 0.14	0.5 1 2	1.301	[0.735; 2.302]	100.0%

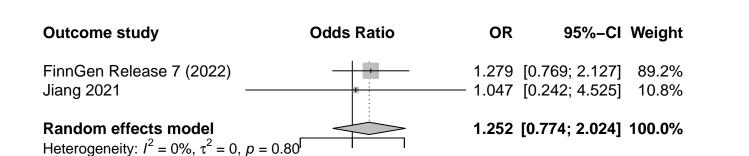
Bacteroidaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022



Bacteroidales (Order) on Optic nerve swelling in Kangcheng Liu 2022



Bacteroidales (Order) on Optic nerve swelling in Kangcheng Liu 2022

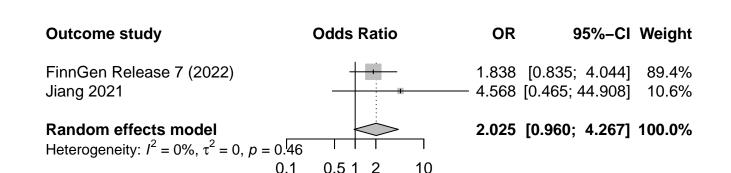


0.5

Bacteroides (Genus) on Optic nerve swelling in Kangcheng Liu 2022

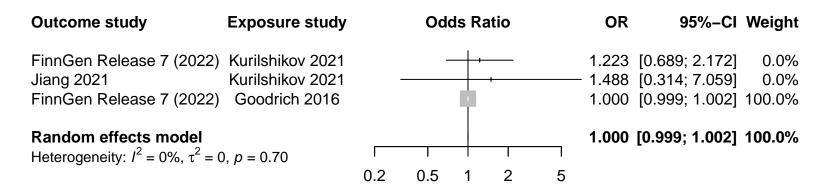
Outcome study	Exposure study		Odds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022)	Kurilshikov 2021		+:	-	1.838	[0.835; 4.044]	29.0%
Jiang 2021	Kurilshikov 2021		- :		— 4.568	[0.465; 44.908]	5.7%
FinnGen Release 7 (2022)	Goodrich 2016		中		1.000	[0.999; 1.002]	65.3%
Random effects model Heterogeneity: $I^2 = 50\%$, $\tau^2 =$	0.1298, p = 0.14				1.301	[0.735; 2.302]	100.0%
,		0.1	0.5 1 2	10			

Bacteroides (Genus) on Optic nerve swelling in Kangcheng Liu 2022

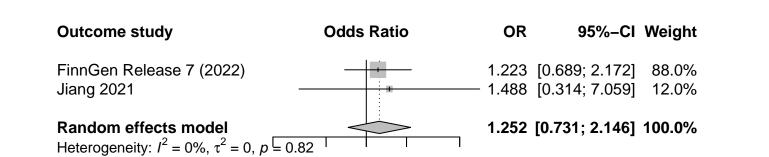


0.1

Bacteroidetes (Phylum) on Optic nerve swelling in Kangcheng Liu 2022



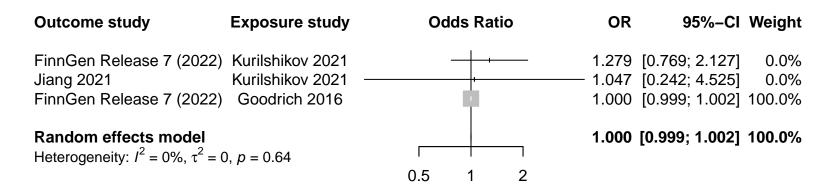
Bacteroidetes (Phylum) on Optic nerve swelling in Kangcheng Liu 2022



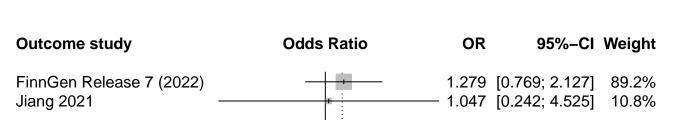
0.2

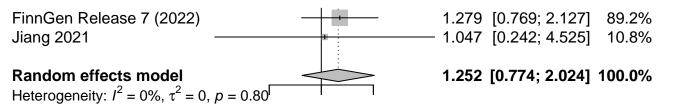
0.5

Bacteroidia (Class) on Optic nerve swelling in Kangcheng Liu 2022



Bacteroidia (Class) on Optic nerve swelling in Kangcheng Liu 2022





0.5

Barnesiella (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Od	dds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		*			[0.487; 1.301] [0.311; 4.304]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.60	0.5	1	7	0.833	[0.526; 1.321]	100.0%

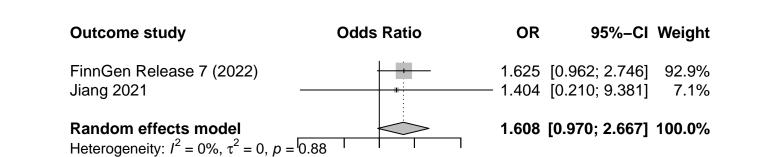
Betaproteobacteria (Class) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds R	atio		OR	95%-	CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			-			[0.442; 1.61 [0.559; 18.47	-	
Random effects model Heterogeneity: $I^2 = 49\%$, $\tau^2 =$	0.4388, <i>p</i> = 0.16	0.1	0.5 1		 10	1.274	[0.381; 4.26	3]	100.0%

Bifidobacteriaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposure stud	y Odds Ratio	OR 95%-CI Weight
FinnGen Release 7 (2022) Kurilshikov 202 Jiang 2021 Kurilshikov 202 FinnGen Release 7 (2022) Goodrich 2016	1 <u>- !</u>	1.625 [0.962; 2.746] 41.4% — 1.404 [0.210; 9.381] 3.2% 1.330 [0.846; 2.092] 55.5%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0.85$	0.2 0.5 1 2 5	1.448 [1.033; 2.028] 100.0%

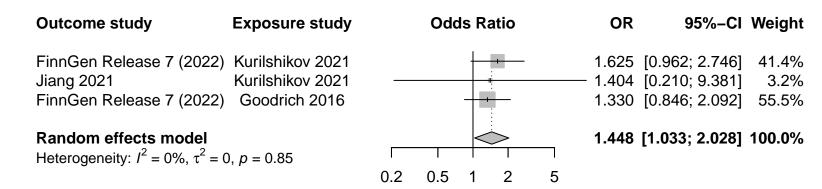
Bifidobacteriaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022



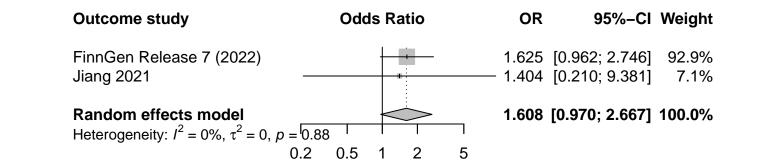
0.2

0.5

Bifidobacteriales (Order) on Optic nerve swelling in Kangcheng Liu 2022



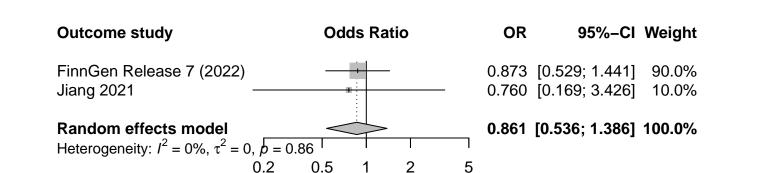
Bifidobacteriales (Order) on Optic nerve swelling in Kangcheng Liu 2022



Bifidobacterium (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposure s	study	Od	ds Ra	tio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Kurilshikov Jiang 2021 Kurilshikov FinnGen Release 7 (2022) Goodrich 2	2021 ——		*	 	_	0.760	[0.529; 1.441] [0.169; 3.426] [0.845; 2.104]	43.2% 4.8% 52.0%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0.42$	0.2	0.5	1	2		1.081	[0.778; 1.503]	100.0%

Bifidobacterium (Genus) on Optic nerve swelling in Kangcheng Liu 2022



Bilophila (Genus) on Optic nerve swelling in Kangcheng Liu 2022

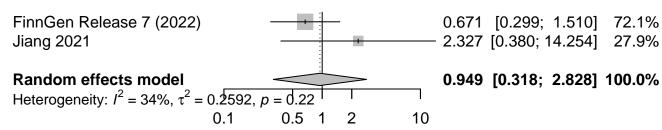
Outcome study Expo	sure study	Odds Ratio	OR	95%-CI Weight
FinnGen Release 7 (2022) Kuril Jiang 2021 Kuril	shikov 2021 shikov 2021	-	-	880; 2.608] 87.6% (16; 11.082] 12.4%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $\rho = 0$	0.49 0.1	0.5 1 2	1.621 [0.9	975; 2.695] 100.0%

Blautia (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposure study	y	Odds Ratio	OR	95%-CI Weight
FinnGen Release 7 (2022) Kurilshikov 2027 Jiang 2021 Kurilshikov 2027 FinnGen Release 7 (2022) Goodrich 2016	l		2.327 [0.3	.299; 1.510] 0.2% 380; 14.254] 0.0% .946; 1.007] 99.8%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0.43$	0.1	0.5 1 2	•	946; 1.007] 100.0%

Blautia (Genus) on Optic nerve swelling in Kangcheng Liu 2022

,	•		· ·
Outcome study	Odds Ratio	OR	95%-CI Weight
	_ 1	- -	



Burkholderiales (Order) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ra	atio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021						[0.608; 2.044] [0.580; 20.123]	
Random effects model Heterogeneity: $I^2 = 27\%$, $\tau^2 = 0$	0.1691, <i>p</i> = 0.24	0.1	0.5 1	2	 10	1.413	[0.577; 3.459]	100.0%

Butyricicoccus (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study			Odd	ls Ra	itio	OR	95%-Cl	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		_	_		-		[0.502; 1.625] [0.416; 8.148]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.38	0.2	C).5	1	> 2	 0.994	[0.575; 1.718]	100.0%

Butyricimonas (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	0	dds Rat	io	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			_		[0.676; 1.746] [0.316; 3.873]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, <i>p</i> = 0.98	0.5	1	> 7	1.089	[0.699; 1.697]	100.0%

Butyrivibrio (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	1	Odds Rati	0	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			_		[0.971; 1.546] [0.338; 1.303]	63.9% 36.1%
Random effects model Heterogeneity: $I^2 = 65\%$, $\tau^2 =$	0.1220, <i>p</i> = 0.09	0.5	1		0.982	[0.551; 1.749]	100.0%

Candidatus Soleaferrea (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odd	ds Ra	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021						[0.639; 1.430] [0.112; 1.385]	
Random effects model Heterogeneity: $I^2 = 42\%$, $\tau^2 =$	0.1674, <i>p</i> = 0.19	0.2	0.5	1	<u>-</u> 2	 0.755	[0.350; 1.630]	100.0%

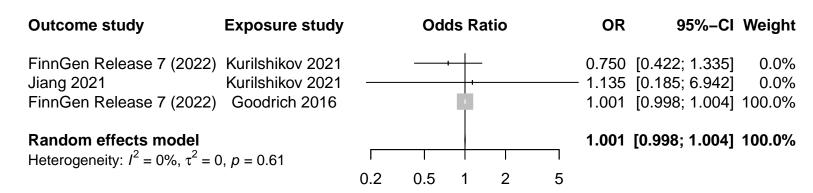
Catenibacterium (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Ode	ds Rat	io	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		_	*			[0.687; 1.528] [0.172; 4.064]	94.0% 6.0%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), p = 0.81	0.2	0.5	1	1 2	 1.012	[0.687; 1.491]	100.0%

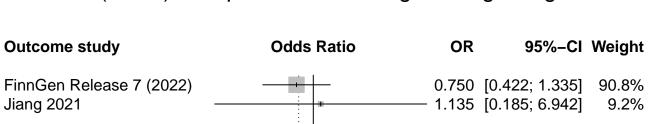
Christensenellaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

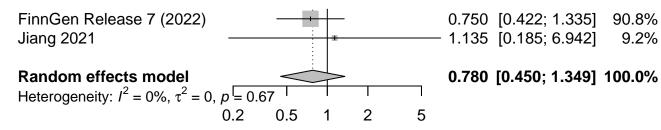
Outcome study	Exposure study		Odds R	atio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-			[0.475; 1.253] [0.078; 5.112]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.86	0.1	0.5 1	2	0.763	[0.476; 1.225]	100.0%

Clostridia (Class) on Optic nerve swelling in Kangcheng Liu 2022



Clostridia (Class) on Optic nerve swelling in Kangcheng Liu 2022

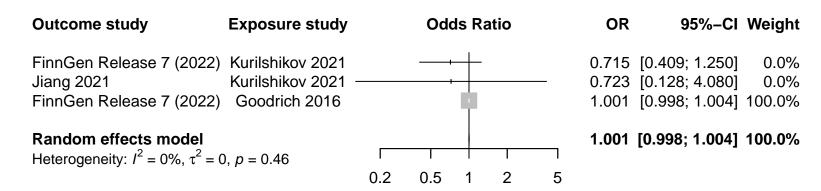




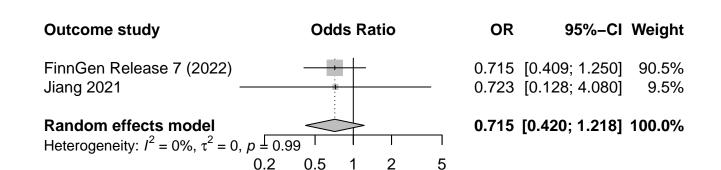
Clostridiaceae1 (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	,	Od	ds Ra	itio	OR	95%-CI	Weight
FinnGen Release 7 (202 Jiang 2021	2) Kurilshikov 2021 Kurilshikov 2021			-	_		[0.470; 1.754] [0.306; 6.200]	
Random effects model Heterogeneity: $I^2 = 0\%$, τ^2	= 0, <i>p</i> = 0.62	0.2	0.5	1	<u>></u> 2	 0.971	[0.531; 1.774]	100.0%

Clostridiales (Order) on Optic nerve swelling in Kangcheng Liu 2022



Clostridiales (Order) on Optic nerve swelling in Kangcheng Liu 2022

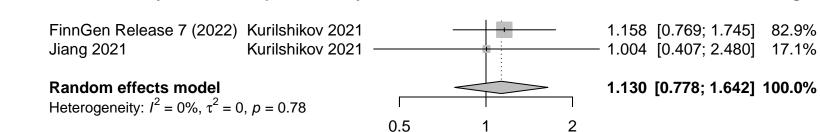


diales vadin BB60 Group (Family in Clostridiales Order) on Optic nerve swelling in Kangcheng Li

Outcome study	Exposure study	Odds Ratio	OR	95%-CI Weigh	nt
FinnGen Release 7 (2) Jiang 2021	022) Kurilshikov 2021 Kurilshikov 2021	-	-	.462; 1.095] 66.09 .589; 5.655] 34.09	
Random effects mod Heterogeneity: $I^2 = 57\%$		0.5 1 2	0.980 [0 .	.408; 2.353] 100.09	%

Outcome study Exposure study Odds Ratio OR 95%-CI Weight

dium innocuum Group (Species in Clostridium Genus) on Optic nerve swelling in Kangcheng Liu



Clostridium sensu stricto1 (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odd	ls Ra	tio	OR	95%-CI	Weight	
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		•				[0.330; 1.165] [0.117; 2.539]		
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.88	0.3	0.5	1	1	 0.609	[0.340; 1.091]	100.0%	

Collinsella (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odd	ls Ra	atio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			1			[0.416; 2.150] [0.154; 9.216]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.84	0.2	0.5	1	<u>></u>	 0.976	[0.455; 2.092]	100.0%

Coprobacter (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Odds Ra	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			-	.559; 1.174] .646; 5.497]	
Random effects model Heterogeneity: $I^2 = 53\%$, $\tau^2 =$	= 0.1893, <i>p</i> = 0.14	0.5 1	<u> </u>	1.058 [0.	.490; 2.283]	100.0%

Coprococcus1 (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odd	ds Ra	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		_				[0.475; 1.519] [0.150; 6.090]	91.0% 9.0%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.91	0.2	0.5	1	2	 0.858	[0.493; 1.494]	100.0%

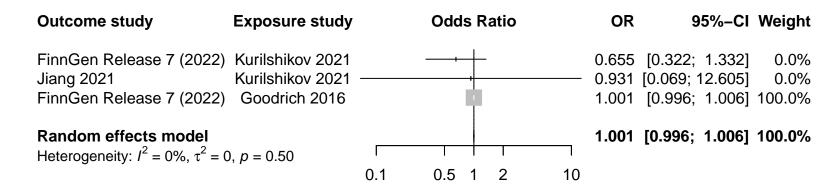
Coprococcus2 (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Od	ds Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022 Jiang 2021) Kurilshikov 2021 Kurilshikov 2021 -	_			[0.620; 2.352] [0.179; 4.303]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 =$	0, p = 0.72	2 0.5	1 2	1.152 5	[0.623; 2.129]	100.0%

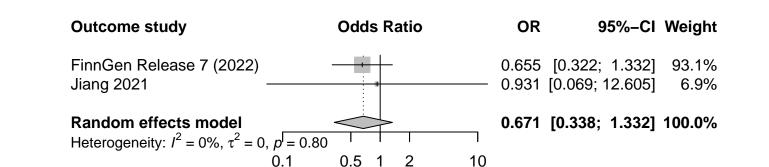
Coprococcus3 (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds R	Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021					[0.301; 2.101] [0.439; 12.588]	
Random effects model Heterogeneity: $I^2 = 17\%$, $\tau^2 =$	· •	0.1	0.5 1	2	1.092	[0.415; 2.873]	100.0%

Coriobacteriaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022



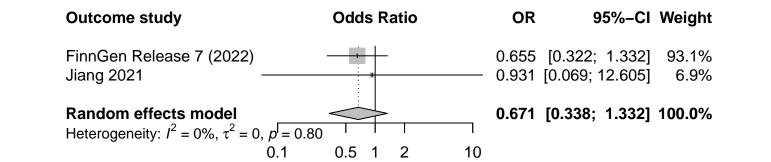
Coriobacteriaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022



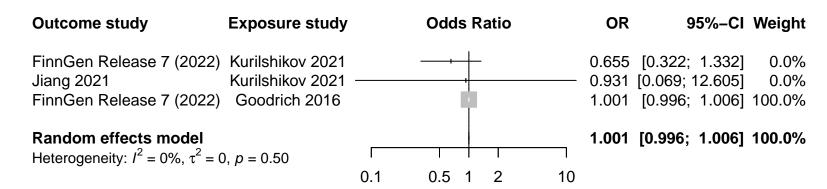
Coriobacteriales (Order) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposure stud	y Odds R	atio OR	95%-CI Weight
FinnGen Release 7 (2022) Kurilshikov 202 Jiang 2021 Kurilshikov 202 FinnGen Release 7 (2022) Goodrich 2016	1 —		[0.322; 1.332] 0.0% [0.069; 12.605] 0.0% [0.996; 1.006] 100.0%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $\rho = 0.50$	0.1 0.5 1	1.001 2 10	[0.996; 1.006] 100.0%

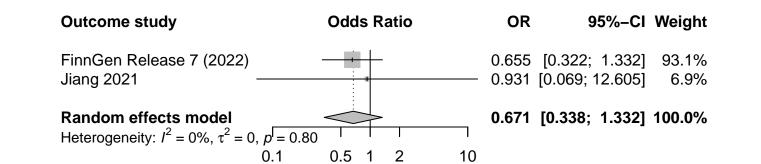
Coriobacteriales (Order) on Optic nerve swelling in Kangcheng Liu 2022



Coriobacteriia (Class) on Optic nerve swelling in Kangcheng Liu 2022



Coriobacteriia (Class) on Optic nerve swelling in Kangcheng Liu 2022



Cyanobacteria (Phylum) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odd	ds Ra	tio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021					_		[0.491; 1.218] [0.166; 3.370]	91.7% 8.3%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.97	0.2	0.5	1	2		0.771	[0.500; 1.191]	100.0%

Defluviitaleaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odd	ls Ra	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		_				[0.545; 1.260] [0.561; 6.754]	
Random effects model Heterogeneity: $I^2 = 39\%$, $\tau^2 =$	0.1405, <i>p</i> = 0.20	0.2	0.5	1	<u> </u>	 1.031	[0.497; 2.138]	100.0%

Deltaproteobacteria (Class) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds R	atio	OF	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			_		7 [0.387; 1.519] 0 [0.077; 2.067]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$,	, p = 0.47	0.1	0.5 1	2	0.69	7 [0.371; 1.310]	100.0%

Desulfovibrio (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Odds Ratio	OR	95%-CI Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-	493; 2.008] 66.1% 729; 11.462] 33.9%
Random effects model Heterogeneity: $I^2 = 45\%$, $\tau^2 =$	0.2573, <i>p</i> = 0.18	05 1 2	1.428 [0.	531; 3.842] 100.0%

Desulfovibrionaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odo	ls Ra	atio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021	-	-					[0.298; 1.182] [0.103; 3.806]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.95	0.2	0.5	1	1 2	 5	0.597	[0.314; 1.138]	100.0%

Desulfovibrionales (Order) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odd	ds Ra	tio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-	+		-		[0.356; 1.358] [0.132; 3.087]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.92	0.2	0.5	1			0.686	[0.371; 1.271]	100.0%

Dialister (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Od	ds Rati	0	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021					[0.662; 2.722] [0.305; 4.670]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.88	0.5	1	\bigcap_{2}	1.309	[0.699; 2.453]	100.0%

Dorea (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022)	Kurilshikov 2021		-		1.169	[0.642; 2.126]	36.4%
Jiang 2021	Kurilshikov 2021		-		0.231	[0.035; 1.505]	9.0%
FinnGen Release 7 (2022)	Goodrich 2016		+		1.000	[0.902; 1.109]	54.7%
Random effects model Heterogeneity: $I^2 = 23\%$, $\tau^2 =$	0 1760 n = 0 27				0.927	[0.502; 1.714]	100.0%
rieterogeneity. 7 – 23%, t –	0.1709, p = 0.27	0.1	0.5 1 2	10			

Dorea (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Odds Ratio	OR	95%-Cl Weight	t
FinnGen Release 7 (2022) Jiang 2021 ——	-	-	.642; 2.126] 65.6% .035; 1.505] 34.4%	
Random effects model		0.669 [0.	148; 3.029] 100.0%)

Random effects model

Heterogeneity:
$$I^2 = 62\%$$
, $\tau^2 = 0.8110$, $p = 0.11$

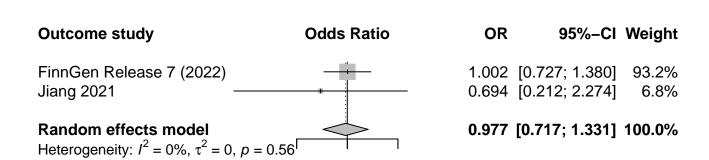
0.1

0.5
1

Eggerthella (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Oc	lds Ra	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021 FinnGen Release 7 (2022)	Kurilshikov 2021 -		į.		0.694	[0.727; 1.380] [0.212; 2.274] [0.996; 1.006]	0.0% 0.0% 100.0%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.83	0.5	1		1.001	[0.996; 1.006]	100.0%

Eggerthella (Genus) on Optic nerve swelling in Kangcheng Liu 2022



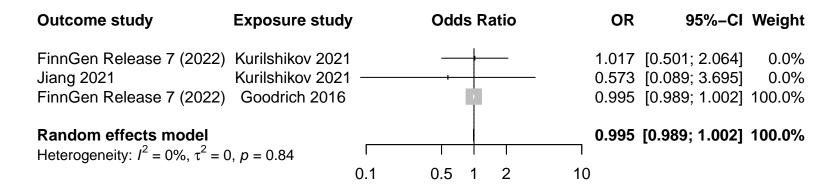
0.5

2

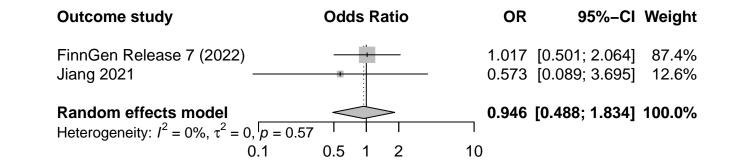
Eisenbergiella (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Odds Ratio	OR OR	95%-CI	Weight
FinnGen Release 7 (20	22) Kurilshikov 2021		0.888	[0.652; 1.210]	90.5%
Jiang 2021	Kurilshikov 2021 —	*	0.544	[0.209; 1.413]	9.5%
Random effects mode			0.848	[0.631; 1.138]	100.0%
Heterogeneity: $I^2 = 0\%$, τ^2	p = 0, p = 0.34	0.5 1	2		

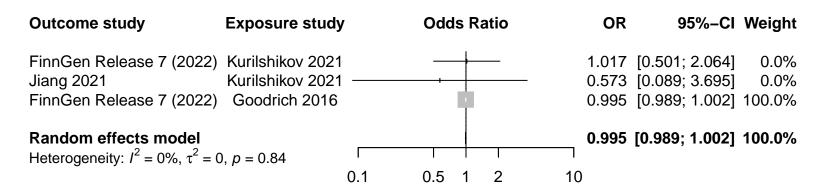
Enterobacteriaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022



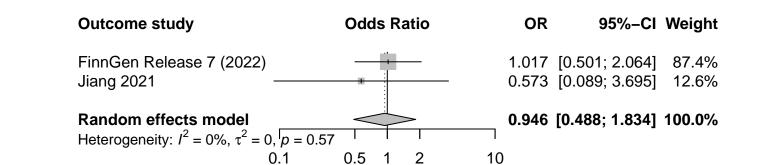
Enterobacteriaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022



Enterobacteriales (Order) on Optic nerve swelling in Kangcheng Liu 2022



Enterobacteriales (Order) on Optic nerve swelling in Kangcheng Liu 2022



Enterorhabdus (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odd	ls Ra	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021				_		[0.733; 1.955] [0.466; 6.970]	88.4% 11.6%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.58	0.2	0.5	1	> 2	 1.255	[0.792; 1.990]	100.0%

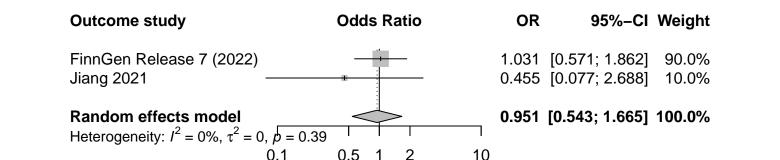
Erysipelatoclostridium (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposure study	Odds Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Kurilshikov 2021 Jiang 2021 Kurilshikov 2021 —	*		[0.635; 1.388] [0.269; 2.280]	88.2% 11.8%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0.76$	0.5 1 2	0.919	[0.637; 1.327]	100.0%

Erysipelotrichaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Odds Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021 ———	- 1		[0.571; 1.862] 5 [0.077; 2.688]	31.8% 3.5%
FinnGen Release 7 (2022)	Goodrich 2016	<u> </u>		[0.540; 1.236]	64.6%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), p = 0.63		0.862	[0.618; 1.203] 1	100.0%
	0.1	0.5 1 2	10		

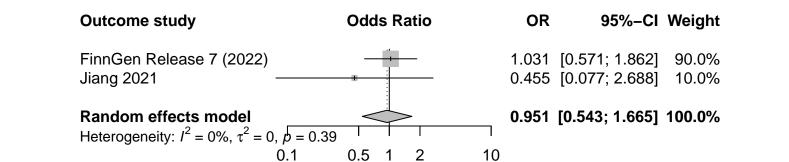
Erysipelotrichaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022



Erysipelotrichales (Order) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds R	atio	OR	95%-CI	Weight
FinnGen Release 7 (2022)	Kurilshikov 2021				1.031	I [0.571; 1.862]	31.8%
Jiang 2021	Kurilshikov 2021		•		0.455	5 [0.077; 2.688]	3.5%
FinnGen Release 7 (2022)	Goodrich 2016		-		0.817	7 [0.540; 1.236]	64.6%
Random effects model					0.862	2 [0.618; 1.203]	100.0%
Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, p = 0.63						
		0.1	0.5 1	2	10		

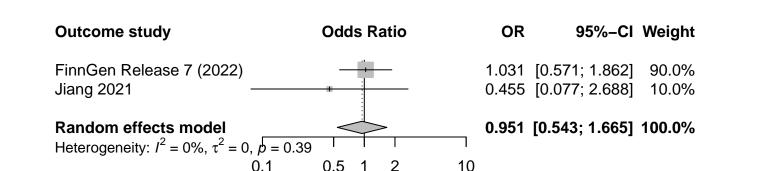
Erysipelotrichales (Order) on Optic nerve swelling in Kangcheng Liu 2022



Erysipelotrichia (Class) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds R	atio		OR	95%-CI	Weight
FinnGen Release 7 (2022)	Kurilshikov 2021					1.031	[0.571; 1.862]	31.8%
Jiang 2021	Kurilshikov 2021		*			0.455	[0.077; 2.688]	3.5%
FinnGen Release 7 (2022)	Goodrich 2016					0.817	[0.540; 1.236]	64.6%
Random effects model						0.862	[0.618; 1.203]	100.0%
Heterogeneity: $I^2 = 0\%$, $\tau^2 =$	0, p = 0.63						- , -	
		0.1	0.5 1	2	10			

Erysipelotrichia (Class) on Optic nerve swelling in Kangcheng Liu 2022



Escherichia Shigella (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposure stud	у	Odds Ratio		OR	95%-CI W	Veight
FinnGen Release 7 (2022) Kurilshikov 2023 Jiang 2021 Kurilshikov 2023		-		-	512; 1.561] 444; 27.311]	
Random effects model Heterogeneity: $I^2 = 36\%$, $\tau^2 = 0.3323$, $p = 0.21$	0.1	0.5 1 2	 10	1.211 [0.	399; 3.676] 10	00.0%

cterium brachy Group (Species in Eubacterium Genus) on Optic nerve swelling in Kangcheng Liu

Outcome study Expos	ure study Odds Ratio	OR OR	95%-CI	Weight
FinnGen Release 7 (2022) Kurilsh Jiang 2021 Kurilsh	nikov 2021 — — — — — — — — — — — — — — — — — — —		[0.592; 1.336] [0.452; 3.973]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0.4$	49 0.5 1	0.935	[0.639; 1.370]	100.0%

n coprostanoligenes Group (Species in Eubacterium Genus) on Optic nerve swelling in Kangche

Outcome study	Exposure study		Odds Ratio		UR	95%-CI	weignt
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-			[0.649; 1.815] [0.038; 0.877]	
Random effects model Heterogeneity: $I^2 = 78\%$, $\tau^2 =$	1.2320, <i>p</i> = 0.03	0.1	05.1.2	10	0.523	[0.094; 2.912]	100.0%

terium eligens Group (Species in Eubacterium Genus) on Optic nerve swelling in Kangcheng Liu

C	Outcome study	Exposure study		Odds Rati	0	OR	95%-CI	Weight
	FinnGen Release 7 (2022) Iiang 2021	Kurilshikov 2021 Kurilshikov 2021			<u> </u>		[0.498; 3.086] [0.048; 3.743]	
	Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), p = 0.37	0.1	0.5 1 2	10	1.056	[0.456; 2.450]	100.0%

rium fissicatena Group (Species in Eubacterium Genus) on Optic nerve swelling in Kangcheng I

Odds Ratio

OR.

95%_CL Weight

Outcome study	Exposure study		Odds Italio	OIX	33 /0-CI	weigni
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021				[0.750; 1.396] [0.414; 2.849]	90.6% 9.4%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.91	0.5	1	 1.029	[0.765; 1.383]	100.0%

Evnosura study

cterium hallii Group (Species in Eubacterium Genus) on Optic nerve swelling in Kangcheng Liu

Odde Patio

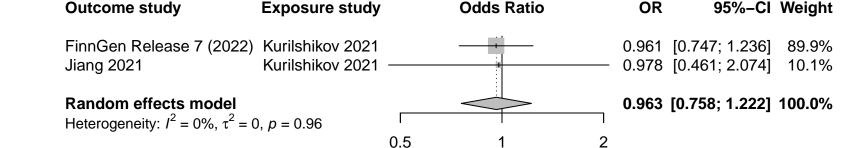
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95% CI Woight

Outcome study	Exposure study		Ouus Ralio		UK	95%-CI	weigni
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		7 -			[0.555; 1.296] [2.252; 30.952]	
Random effects model Heterogeneity: $I^2 = 91\%$, $\tau^2 =$	2.3680, <i>p</i> < 0.01				2.438	[0.261; 22.779]	100.0%
		0.1	0.5 1 2	10			

Evacuro etudy

erium nodatum Group (Species in Eubacterium Genus) on Optic nerve swelling in Kangcheng Li



um oxidoreducens Group (Species in Eubacterium Genus) on Optic nerve swelling in Kangchen

Outcome study	Exposure stud	У	Od	ds Ra	tio	OR	95%-CI	Weight	
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 202 Kurilshikov 202			1			[0.514; 3.251] [0.309; 5.301]	70.4% 29.6%	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.99	Г				1.289	[0.595; 2.794]	100.0%	
		0.2	0.5	1	2	5			

terium rectale Group (Species in Eubacterium Genus) on Optic nerve swelling in Kangcheng Liu

Odde Patio

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05% CI Woight

`	Outcome study	Exposure study		Ouus R	alio		UK	93 /0-CI	weignt
ı	FinnGen Release 7 (2022)	Kurilshikov 2021		-			0.469	[0.245; 0.900]	90.3%
•	Jiang 2021	Kurilshikov 2021		•			0.354	[0.048; 2.589]	9.7%
	Random effects model	0.70			1		0.456	[0.246; 0.848]	100.0%
ı	Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, p = 0.79	0.1	0.5 1	2	10			

Evacuro etudy

ium ruminantium Group (Species in Eubacterium Genus) on Optic nerve swelling in Kangcheng

Outcome study	Exposure study	0	dds Ratio	C)R	95%-CI \	Weight	
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021					[0.913; 1.565] [0.560; 3.078]	90.9% 9.1%	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.84	0.5	1	1.20	06	[0.933; 1.559] 1	100.0%	

rium ventriosum Group (Species in Eubacterium Genus) on Optic nerve swelling in Kangcheng I

Outcome study	Exposure study		Od	ds Ra	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			-	-		[0.458; 1.381] [0.343; 5.767]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.46	0.2	—————————————————————————————————————	1	1	 0.857	[0.513; 1.434]	100.0%

ium xylanophilum Group (Species in Eubacterium Genus) on Optic nerve swelling in Kangcheng

Odde Patio

 \triangle D

05% CI Woight

Outcome study	Exposure study		Ouc	ıs Ka	iliO	UK	95%-CI	weight	
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-				[0.459; 1.314] [0.125; 5.439]	92.8% 7.2%	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.95	0.2	0.5	1	7	 0.780	[0.470; 1.295]	100.0%	

Evacuro etudy

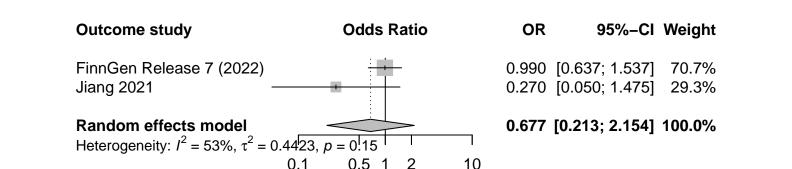
Euryarchaeota (Phylum) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		*			[0.602; 1.316] [0.325; 1.687]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.69	0.5	1	7	0.860	[0.604; 1.225]	100.0%

Faecalibacterium (Genus) on Optic nerve swelling in Kangcheng Liu 2022

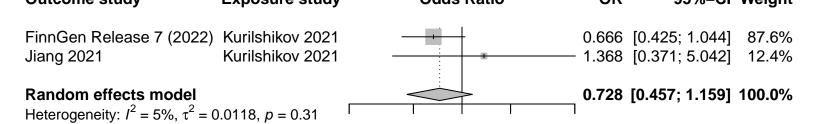
Outcome study	Exposure study		Odds Rat	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022)			-			[0.637; 1.537]	
Jiang 2021	Kurilshikov 2021		•		0.270	[0.050; 1.475]	4.8%
FinnGen Release 7 (2022)	Goodrich 2016				1.001	[0.897; 1.116]	60.4%
Random effects model	0.0044				0.936	[0.636; 1.378]	100.0%
Heterogeneity: $I^2 = 12\%$, $\tau^2 =$	0.0614, p = 0.32	•		'			
		0.1	0.5 1 2	2 10			

Faecalibacterium (Genus) on Optic nerve swelling in Kangcheng Liu 2022



Outcome study Exposure study Odds Ratio OR 95%–CI Weight

CS020 Group (Genus in Lachnospiraceae Family) on Optic nerve swelling in Kangcheng Liu 202

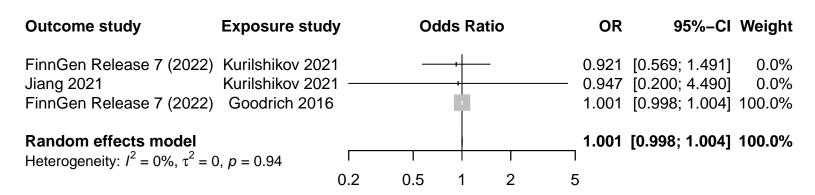


0.5

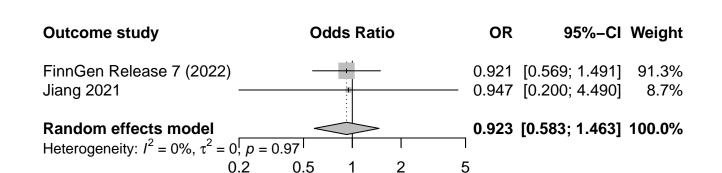
5

0.2

Firmicutes (Phylum) on Optic nerve swelling in Kangcheng Liu 2022



Firmicutes (Phylum) on Optic nerve swelling in Kangcheng Liu 2022



Flavonifractor (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Odd	ds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021 ——		-			[0.493; 1.694] [0.009; 4.247]	96.1% 3.9%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), p = 0.34	0.1	1	10	0.861	[0.470; 1.577]	100.0%

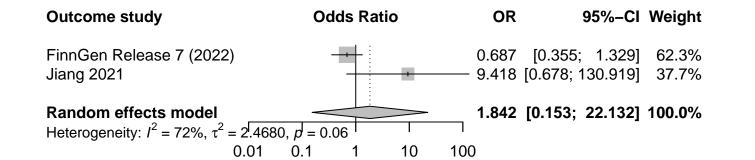
Fusicatenibacter (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outo	come study	Exposure study		Odd	ls Ra	atio	OR	95%-CI	Weight
	Gen Release 7 (2022) g 2021	Kurilshikov 2021 Kurilshikov 2021						[0.441; 1.159] [0.569; 9.245]	
	dom effects model rogeneity: $I^2 = 58\%$, $\tau^2 =$	0.3958, <i>p</i> = 0.12	0.2	0.5	1		 1.057	[0.359; 3.111]	100.0%

Gammaproteobacteria (Class) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		0	dds Rat	io	Ol	₹ :	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021 FinnGen Release 7 (2022)	Kurilshikov 2021			-		0.68 9.41 0.99	8 [0.678; 1	1.329] 30.919] 1.013]	
Random effects model Heterogeneity: $I^2 = 50\%$, $\tau^2 = 10\%$	= 0.8132, <i>p</i> = 0.13	0.01	0.1	1	10	1.18	1 [0.357;	3.899]	100.0%

Gammaproteobacteria (Class) on Optic nerve swelling in Kangcheng Liu 2022



Gastranaerophilales (Order) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odd	ls Ra	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		_	+			[0.559; 1.168] [0.568; 6.631]	
Random effects model Heterogeneity: $I^2 = 44\%$, $\tau^2 =$	0.1696, <i>p</i> = 0.18	0.2	0.5	1	2	 1.021	[0.478; 2.182]	100.0%

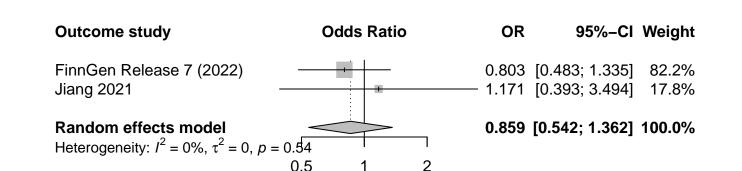
Gordonibacter (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-			[0.830; 1.412] [0.374; 1.884]	90.2% 9.8%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.56	0.5	1	7	1.056	[0.820; 1.359]	100.0%

Haemophilus (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposure stu	dy Odds Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Kurilshikov 20. Jiang 2021 Kurilshikov 20. FinnGen Release 7 (2022) Goodrich 201	21	1.171	[0.483; 1.335] [0.393; 3.494] [0.926; 1.078]	2.2% 0.5% 97.3%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0.68$	0.5 1 2	0.995	[0.923; 1.073]	100.0%

Haemophilus (Genus) on Optic nerve swelling in Kangcheng Liu 2022



Holdemanella (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Odds Ratio	OR	95%-CI Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021 —	*	-	(0.588; 1.124] 93.3% (0.191; 2.168] 6.7%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 =$	0, p = 0.72	0.5 1 2	0.800 [0.585; 1.095] 100.0%

Holdemania (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Oc	lds Rat	io	OR	95%-CI	Weight
FinnGen Release 7 (2022)	Kurilshikov 2021			_	1.108	[0.776; 1.582]	53.3%
Jiang 2021	Kurilshikov 2021			_	0.589	[0.212; 1.633]	6.8%
FinnGen Release 7 (2022)	Goodrich 2016				0.817	[0.540; 1.236]	39.9%
Random effects model Heterogeneity: $I^2 = 3\%$, $\tau^2 = 0$	0.0019, p = 0.36			\neg	0.940	[0.719; 1.227]	100.0%
	, ,,	0.5	1	2			

Holdemania (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Odds Ratio	OR	95%-Cl Weight
FinnGen Release 7 (2022) Jiang 2021	-	-	.776; 1.582] 79.8% .212; 1.633] 20.2%
Random effects model Heterogeneity: $I^2 = 24\%$, $\tau^2 = 0.04$	76, $p = 0.25$ 0.5 1 2	0.975 [0	.593; 1.603] 100.0%

Howardella (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	C	odds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021	_	•	_		[0.602; 1.077] [0.329; 1.656]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.84	0.5	1	7	0.797	[0.607; 1.048]	100.0%

Hungatella (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Expos	sure study	Odds Ratio	OR	95%-CI Weight
FinnGen Release 7 (2022) Kurilsl Jiang 2021 Kurilsl	hikov 2021 hikov 2021 ——		-	376; 0.836] 95.7% 091; 4.008] 4.3%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0$.	94 0.1	0.5 1 2	0.562 [0.3	380; 0.832] 100.0%

Intestinibacter (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Oc	lds Rati	io	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-	-		[0.946; 2.460] [0.309; 4.626]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, p = 0.74	0.5	1	2	1.485	[0.946; 2.330]	100.0%

Intestinimonas (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Od	lds Ratio	•	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021					[0.705; 1.569] [0.462; 3.855]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.68	0.5	1	7	1.083	[0.745; 1.575]	100.0%

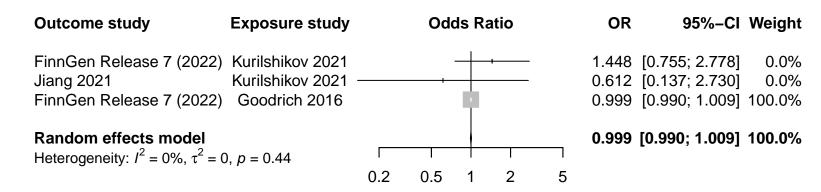
Lachnoclostridium (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposure study	Odds Ratio	OR 95%-CI Weight
FinnGen Release 7 (2022) Kurilshikov 2021 Jiang 2021 Kurilshikov 2021	-	0.712 [0.402; 1.260] 62.7% - 4.082 [0.664; 25.113] 37.3%
Random effects model Heterogeneity: $I^2 = 69\%$, $\tau^2 = 1.0536$, $p = 0.07$	0.1 0.5 1 2 10	1.366 [0.261; 7.152] 100.0%

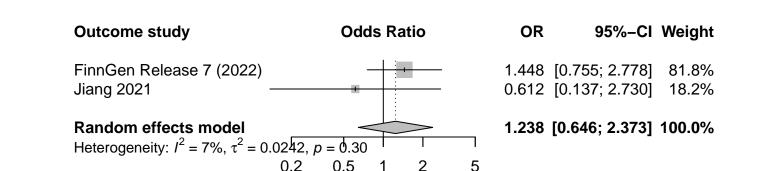
Lachnospira (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021					[0.522; 2.358] 0.108; 17.117]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.88	0.1	0.5 1 2	10	1.128 [[0.547; 2.323]	100.0%

Lachnospiraceae (Family) on Optic nerve swelling in Kangcheng Liu 2022



Lachnospiraceae (Family) on Optic nerve swelling in Kangcheng Liu 2022



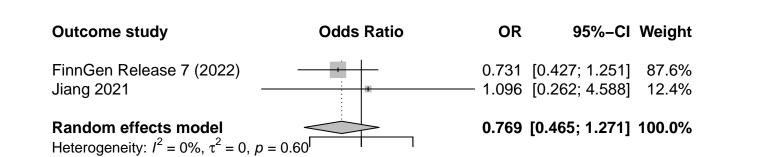
Lactobacillaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odd	ds Ra	tio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		_			-		[0.419; 1.433] [0.142; 3.076]	86.2% 13.8%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.85	0.2	0.5	1			0.758	[0.429; 1.342]	100.0%

Lactobacillales (Order) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study E	xposure study	Oc	lds Rat	tio	OR	95%-CI	Weight
3	Kurilshikov 2021 Kurilshikov 2021 Goodrich 2016		† 		1.096	[0.427; 1.251] [0.262; 4.588] [0.971; 0.991]	0.0% 0.0% 100.0%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, μ	p = 0.56	0.5	1		0.981	[0.971; 0.991]	100.0%

Lactobacillales (Order) on Optic nerve swelling in Kangcheng Liu 2022



0.5

Lactobacillus (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odd	ls Ra	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-		_		[0.364; 1.086] [0.158; 1.814]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.81	0.2	0.5	1	2	 0.612	[0.372; 1.008]	100.0%

Lactococcus (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ratio	0	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		*			[0.790; 1.431] [0.368; 2.379]	90.8% 9.2%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.80	0.5	1	2	1.051	[0.791; 1.395]	100.0%

Lentisphaerae (Phylum) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	(Odds Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		*		[0.722; 1.343] [0.340; 2.316]	90.5% 9.5%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.84	0.5	1	 0.975	[0.725; 1.310]	100.0%

Lentisphaeria (Class) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	•	Odds Ratio)	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-			[0.713; 1.384] [0.316; 2.403]	90.4% 9.6%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.81	0.5	1		0.981	[0.716; 1.344]	100.0%

Marvinbryantia (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odd	ls Ra	atio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			•	-			[0.520; 1.560] [0.107; 6.242]	93.2% 6.8%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, <i>p</i> = 0.93	0.2	0.5	1	- 2	 5	0.895	[0.527; 1.521]	100.0%

Melainabacteria (Phylum) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Ode	ds Rat	io	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021	_	+			[0.509; 1.022] [0.542; 4.924]	
Random effects model Heterogeneity: $I^2 = 48\%$, $\tau^2 =$	0.1602, <i>p</i> = 0.17	0.5	1	<u> </u>	0.912	[0.442; 1.883]	100.0%

Methanobacteria (Class) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds	Ratio)	OR	9	5%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			-			[0.652; [0.254;	-	69.0% 31.0%
Random effects model Heterogeneity: $I^2 = 38\%$, $\tau^2 =$	0.0579, <i>p</i> = 0.20	0.5	1	>		0.800	[0.485;	1.320]	100.0%

Methanobacteriaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	0	dds Ratio	0	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021					[0.652; 1.382] [0.254; 1.176]	
Random effects model Heterogeneity: $I^2 = 38\%$, $\tau^2 =$	0.0579, <i>p</i> = 0.20	0.5	1	7	0.800	[0.485; 1.320]	100.0%

Methanobacteriales (Order) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposure study	Odds Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Kurilshikov 2021		0.949	[0.652; 1.382]	69.0%
Jiang 2021 Kurilshikov 2021 -		0.546	[0.254; 1.176]	31.0%
Random effects model		0.800	[0.485; 1.320]	100.0%
Heterogeneity: $I^2 = 38\%$, $\tau^2 = 0.0579$, $p = 0.20$				
	05 1 2			

Methanobrevibacter (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Od	ds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021 —	_	+			[0.626; 1.560] [0.232; 4.109]	90.8% 9.2%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.99	0.5	1	¬ 2	0.987	[0.639; 1.525]	100.0%

Mollicutes (Class) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		*			[0.750; 1.856] [0.059; 2.566]	
Random effects model Heterogeneity: $I^2 = 20\%$, $\tau^2 =$	0.1245, <i>p</i> = 0.26	0.1	0.5 1 2	10	1.005	[0.468; 2.158]	100.0%

MollicutesRF9 (Order) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	(Odds R	atio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021	-		_		[0.767; 1.843] [0.070; 0.862]	57.2% 42.8%
Random effects model Heterogeneity: $I^2 = 81\%$, $\tau^2 =$	1.0137, <i>p</i> = 0.02	0.1	05 1	2 10	0.606	[0.131; 2.797]	100.0%

NB1n (Order) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Od	ds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021	_	+			[0.674; 1.201] [0.660; 3.513]	
Random effects model Heterogeneity: $I^2 = 26\%$, $\tau^2 =$	0.0365, <i>p</i> = 0.24	0.5	1	. 7	1.005	[0.660; 1.530]	100.0%

C2004 Group (Genus in Lachnospiraceae Family) on Optic nerve swelling in Kangcheng Liu 202

Outcome study	Exposure study		Odd	ds Ra	itio		OR	95%-CI	Weight	
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021							[0.658; 1.359] [0.152; 1.370]		
Random effects model Heterogeneity: $I^2 = 34\%$, $\tau^2 =$	0.0911, <i>p</i> = 0.22		<u> </u>				0.796	[0.434; 1.461]	100.0%	
		0.2	0.5	1	2	5				

D3007 Group (Genus in Lachnospiraceae Family) on Optic nerve swelling in Kangcheng Liu 202

OEO/ OI Wainba

Outcome study Exposure study	Odds Ratio	OR	95%-Ci weight
FinnGen Release 7 (2022) Kurilshikov 2021 Jiang 2021 Kurilshikov 2021		-	0.552; 4.224] 89.9% 183; 79.635] 10.1%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $\rho = 0.58$	0.1 0.51 2 10	1.675 [0	.638; 4.395] 100.0%

Negativicutes (Class) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		*			[0.621; 1.971] [0.041; 2.485]	
Random effects model Heterogeneity: $I^2 = 23\%$, $\tau^2 =$	0.1790, $p = 0.25$	0.1	0.5 1 2	 10	0.893	[0.356; 2.239]	100.0%

Outcome study Exposure study Odds Ratio OR 95%-CI Weight 1.337 [0.901; 1.986] FinnGen Release 7 (2022) Kurilshikov 2021 90.6% **Jiang 2021** Kurilshikov 2021

0.5

(4A136 Group (Genus in Lachnospiraceae Family) on Optic nerve swelling in Kangcheng Liu 20

Random effects model

Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $\rho = 0.42$

9.4%

1.272 [0.873; 1.854] 100.0%

Outcome study Exposure study Odds Ratio OR 95%-CI Weight FinnGen Release 7 (2022) Kurilshikov 2021 1.054 [0.659; 1.688] 92.8%

0.2

4A214 Group (Genus in Ruminococcaceae Family) on Optic nerve swelling in Kangcheng Liu 20

Jiang 2021

Random effects model

Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $\rho = 0.83$

Kurilshikov 2021

0.5

1.040 [0.661; 1.637] 100.0%

0.873 [0.161; 4.742]

7.2%

Odoribacter (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Od	ds Ra	tio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			+			1.011 20.200	[0.553; 1.850] [1.880; 217.068]	
Random effects model Heterogeneity: $I^2 = 83\%$, $\tau^2 =$	• •	0.01	0.1	1	10	100	3.594	[0.198; 65.307]	100.0%

Olsenella (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-		[0.632; 1.347] [0.443; 2.439]	83.6% 16.4%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.80	0.5	1	 0.941	[0.666; 1.329]	100.0%

Oscillibacter (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Odds Ratio	OR	95%-CI Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021	+	-	664; 1.399] 66.3% (93; 13.156] 33.7%
Random effects model Heterogeneity: $I^2 = 62\%$, $\tau^2 =$	0.4565, <i>p</i> = 0.10 0.1	0.5 1 2	1.449 [0. 4	473; 4.441] 100.0%

Oscillospira (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Odds Ra	tio OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021	-		[0.539; 1.480] [0.200; 4.785]	90.8% 9.2%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.91	0.5 1	0.901	[0.557; 1.457]	100.0%

Oxalobacter (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study E	xposure study	0	dds Rati	0	OR	95%-CI	Weight
FinnGen Release 7 (2022) K Jiang 2021 K	Kurilshikov 2021 Kurilshikov 2021			_		[0.713; 1.615] [0.529; 3.293]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, μ	p = 0.68	0.5	1	> 	1.111	[0.765; 1.613]	100.0%

Oxalobacteraceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Od	lds Rati	io	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021	-	-			[0.573; 1.185] [0.675; 3.673]	
Random effects model Heterogeneity: $I^2 = 47\%$, $\tau^2 =$	0.0987, <i>p</i> = 0.17	0.5	1	<u> </u>	1.012	[0.561; 1.827]	100.0%

Parabacteroides (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021	-	-			[0.238; 1.077] [0.194; 25.642]	82.0% 18.0%
Random effects model Heterogeneity: $I^2 = 23\%$, $\tau^2 =$	0.2478, <i>p</i> = 0.26	0.1	0.5 1 2	 10	0.661	[0.216; 2.020]	100.0%

Paraprevotella (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Ode	ds Ra	itio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			+				[0.721; 1.335] [0.970; 6.551]	
Random effects model Heterogeneity: $I^2 = 71\%$, $\tau^2 =$	= 0.3141, <i>p</i> = 0.07	0.2	0.5	1	1 2	<u>-</u>	1.405	[0.572; 3.448]	100.0%

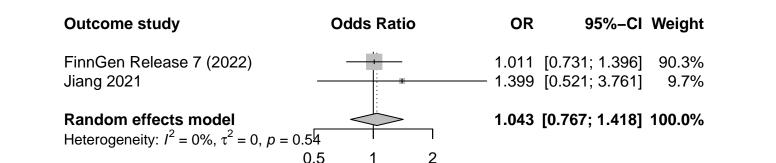
Parasutterella (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposure stud	y Odds Ratio	OR 95%-CI Weigh
FinnGen Release 7 (2022) Kurilshikov 202 Jiang 2021 Kurilshikov 202		1.248 [0.826; 1.884] 87.5% ————————————————————————————————————
Random effects model Heterogeneity: $I^2 = 7\%$, $\tau^2 = 0.0159$, $p = 0.30$	0.2 0.5 1 2	1.361 [0.868; 2.133] 100.0% 5

Pasteurellaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	0	dds Rati	0	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021 FinnGen Release 7 (2022)	Kurilshikov 2021				— 1.399	[0.731; 1.396] [0.521; 3.761] [0.926; 1.078]	5.2% 0.6% 94.2%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.80	0.5	1		1.002	[0.930; 1.078]	100.0%

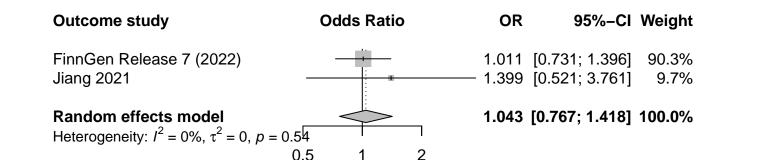
Pasteurellaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022



Pasteurellales (Order) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	0	dds Rati	io	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021 FinnGen Release 7 (2022)	Kurilshikov 2021		-		— 1.399	[0.731; 1.396] [0.521; 3.761] [0.926; 1.078]	5.2% 0.6% 94.2%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.80	0.5	1		1.002	[0.930; 1.078]	100.0%

Pasteurellales (Order) on Optic nerve swelling in Kangcheng Liu 2022



Peptococcaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Ode	ds Ra	ntio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			-	-			[1.275; 3.018] [0.149; 2.690]	
Random effects model Heterogeneity: $I^2 = 54\%$, $\tau^2 =$	0.3430, <i>p</i> = 0.14	0.2	0.5	1	7	- - 5	1.388	[0.500; 3.855]	100.0%

Peptococcus (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	C	dds Rat	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021					[0.616; 1.113] [0.274; 1.714]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.70	0.5	1	7	0.814	[0.614; 1.078]	100.0%

Peptostreptococcaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odd	ls Ra	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		_				[0.514; 1.358] [0.507; 6.512]	
Random effects model Heterogeneity: $I^2 = 20\%$, $\tau^2 = 0$	0.0593, <i>p</i> = 0.26	0.2	0.5	1	> 	 0.976	[0.531; 1.794]	100.0%

Phascolarctobacterium (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Expo	sure study	Odd	ls Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Kurils Jiang 2021 Kurils	shikov 2021 shikov 2021 ——		+			[0.484; 1.326] [0.244; 3.671]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0$).82	0.5	1	\neg	0.817	[0.509; 1.311]	100.0%

Porphyromonadaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ra	atio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-	-		[0.627; 3.725] [0.081; 5.182]	84.5% 15.5%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.46	0.1	0.5 1) 2	1.338	[0.590; 3.034]	100.0%

Prevotella7 (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-		[0.818; 1.353] [0.441; 2.658]	92.7% 7.3%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.95	0.5	1	 1.054	[0.827; 1.343]	100.0%

Prevotella9 (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Od	ds Rat	io	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			+	_		[0.810; 1.866] [0.190; 2.884]	91.4% 8.6%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	• •).2	0.5	1	> 	1.177	[0.789; 1.754]	100.0%

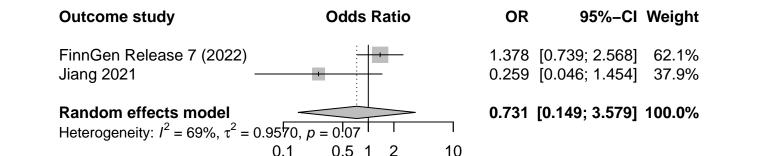
Prevotellaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study E	exposure study	Od	lds Rati	0	OR	95%-CI	Weight
FinnGen Release 7 (2022) K Jiang 2021 K	Kurilshikov 2021 Kurilshikov 2021		-	<u> </u>		[0.939; 2.161] [0.358; 4.272]	89.8% 10.2%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, I	p = 0.83	0.5	1	2	1.404	[0.946; 2.085]	100.0%

Proteobacteria (Phylum) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022)	Kurilshikov 2021		-		1.378	[0.739; 2.568]	36.6%
Jiang 2021	Kurilshikov 2021		•		0.259	[0.046; 1.454]	13.0%
FinnGen Release 7 (2022)	Goodrich 2016		•		0.996	[0.978; 1.013]	50.4%
Random effects model					0.942	[0.458; 1.936]	100.0%
Heterogeneity: $I^2 = 41\%$, $\tau^2 =$	0.2680, p = 0.18						
5 ,	•	0.1	0.5 1 2	10			

Proteobacteria (Phylum) on Optic nerve swelling in Kangcheng Liu 2022



R7 Group (Genus in Christensenellaceae Family) on Optic nerve swelling in Kangcheng Liu 2022

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Outcome study	Exposure study		Odds Ratio		UR	95%-CI	weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021	-	-			[0.485; 1.900] [0.211; 24.858]	92.4% 7.6%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.49	0.1	0.5 1 2	 10	1.026	[0.532; 1.977]	100.0%

Exposure study

Outcome study

Outcome study Exposure study Odds Ratio OR 95%-CI Weight

RC9 Gut Group (Genus in Rikenellaceae Family) on Optic nerve swelling in Kangcheng Liu 2022

_	-				_
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021				1.129 [0.878; 1.452] 80.7% —— 1.918 [0.819; 4.494] 19.3%
Random effects model Heterogeneity: $I^2 = 27\%$, $\tau^2 =$	0.0379, <i>p</i> = 0.24	0.5	1	<u>></u>	1.251 [0.830; 1.885] 100.0%
		0.5	ı	_	

Rhodospirillaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	O	dds Ratio	0	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021 -		*	-		[0.717; 1.564] [0.248; 3.435]	91.9% 8.1%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.84	0.5	1		1.047	[0.720; 1.522]	100.0%

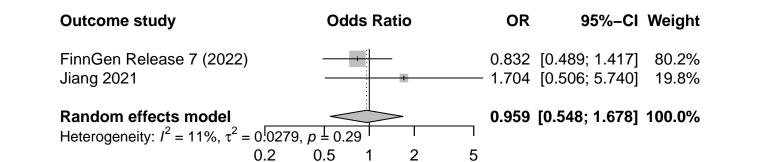
Rhodospirillales (Order) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Odds Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			[0.657; 1.593] [0.261; 4.996]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.89	0.5 1 2	1.033	[0.676; 1.578]	100.0%

Rikenellaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	•	Od	ds Ra	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021 FinnGen Release 7 (2022)	Kurilshikov 2021 Kurilshikov 2021 Goodrich 2016			+		 1.704	[0.489; 1.417] [0.506; 5.740] [0.966; 1.094]	1.3% 0.3% 98.4%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, <i>p</i> = 0.53	0.2	0.5	1	2	 1.027	[0.965; 1.092]	100.0%

Rikenellaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022



Romboutsia (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	C	dds Ra	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021 -		-			[0.777; 1.923] [0.183; 2.256]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	• •	2 0.5	1	>	1.135	[0.741; 1.738]	100.0%

Roseburia (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposure study	Odds Ratio	OR 95%-CI Weight
FinnGen Release 7 (2022) Kurilshikov 2021 Jiang 2021 Kurilshikov 2021 FinnGen Release 7 (2022) Goodrich 2016		0.929 [0.535; 1.615] 41.3% - 3.138 [0.655; 15.023] 5.9% 1.139 [0.707; 1.834] 52.8%
Random effects model Heterogeneity: $I^2 = 5\%$, $\tau^2 = 0.0143$, $p = 0.35$	0.1 0.5 1 2 10	1.139 [0.707; 1.834] 52.8% 1.112 [0.756; 1.635] 100.0%

Roseburia (Genus) on Optic nerve swelling in Kangcheng Liu 2022

			_
Outcome study	Odds Ratio	OR	95%–CI Weight
FinnGen Release 7 (2022) Jiang 2021	-	-	535; 1.615] 68.9% 555; 15.023] 31.1%

1.357 [0.450; 4.095] 100.0%

Random effects model
Heterogeneity:
$$I^2 = 52\%$$
, $\tau^2 = 0.3815$, $p = 0.15$

Ruminiclostridium5 (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposur	e study	Odds I	Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Kurilshiko Jiang 2021 Kurilshiko		-			[0.265; 1.089] [0.098; 5.226]	88.8% 11.2%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0.79$	0.1	0.5 1	2	0.555 [0.285; 1.079]	100.0%

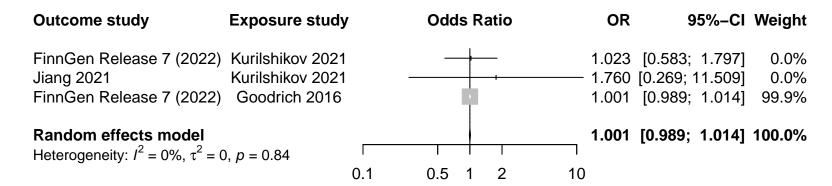
Ruminiclostridium6 (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Odds I	Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-		[0.758; 1.901] [0.334; 3.364]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.84	0.5 1	2	1.180	[0.770; 1.809]	100.0%

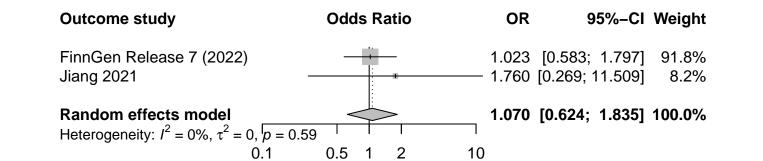
Ruminiclostridium9 (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposure study	dy	Odds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Kurilshikov 202 Jiang 2021 Kurilshikov 202				-	.354; 1.389] 101; 17.372]	93.4% 6.6%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $\rho = 0.64$	0.1	0.5 1 2	10	0.731 [0.	378; 1.416]	100.0%

Ruminococcaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022



Ruminococcaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022



Ruminococcus (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Odds Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022)		 		[0.994; 1.040]	18.8%
FinnGen Release 7 (2022)	Goodrich 2016		1.005	[0.994; 1.016]	81.2%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 =$	0, <i>p</i> = 0.36		1.007	[0.997; 1.017]	100.0%
		4			

ccus gauvreauii Group (Species in Ruminococcus Genus) on Optic nerve swelling in Kangchen

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Outcome study	Exposure study		Odds Ra	atio	OR	95%-CI	weignt	
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		*	- 		[0.510; 1.458] [0.093; 2.212]	90.1% 9.9%	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, <i>p</i> = 0.45			I	0.809	[0.491; 1.332]	100.0%	
-		0.1	0.5 1	2 1	10			

coccus gnavus Group (Species in Ruminococcus Genus) on Optic nerve swelling in Kangcheng

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Outcome study	Exposure study	O.	ius Ratio	UK	95%-CI	weight	
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021				[0.736; 1.457] [0.599; 4.328]		
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.41	0.5	1 2	1.086	[0.786; 1.499]	100.0%	

Evaceuro etudy

Outcome study

coccus torques Group (Species in Ruminococcus Genus) on Optic nerve swelling in Kangcheng

Outcome study	Exposure study	Odds Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021 —			[0.289; 1.455] [0.094; 11.645]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$) n 0.71		0.681	[0.316; 1.464]	100.0%

0.1 0.5 1 2 10

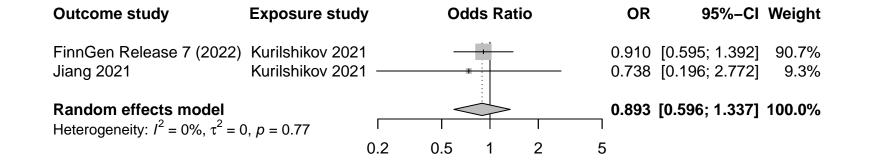
Ruminococcus1 (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposure stu	ıdy Odd	ds Ratio C	95%-CI	Weight
FinnGen Release 7 (2022) Kurilshikov 20 Jiang 2021 Kurilshikov 20		T T	96 [0.534; 1.505] 27 [0.403; 10.197]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0.35$	0.1 0.5	0.96 1 2 10	67 [0.591; 1.584]	100.0%

Ruminococcus2 (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Ode	ds Ra	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-				[0.595; 1.457] [0.162; 2.692]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.65	0.2	0.5	1		 0.902	[0.589; 1.382]	100.0%

S24_7 Group (Family in Bacteroidales Order) on Optic nerve swelling in Kangcheng Liu 2022



Selenomonadales (Order) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021	_	-			[0.621; 1.971] [0.041; 2.485]	
Random effects model Heterogeneity: $I^2 = 23\%$, $\tau^2 =$	0.1790, <i>p</i> = 0.25	0.1	0.5 1 2	10	0.893	[0.356; 2.239]	100.0%

Sellimonas (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Odds Rat	tio OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021	*		[0.651; 1.575] [0.220; 3.264]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.81	0.5 1	0.995	[0.654; 1.514]	100.0%

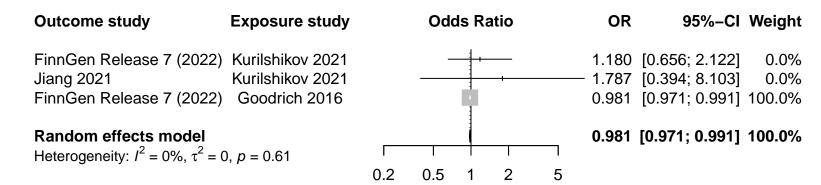
Senegalimassilia (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Odds Ratio	OR	95%-CI Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021 ——		-	327; 1.554] 89.5% 099; 9.460] 10.5%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, p = 0.80	0.5 1 2	0.736 [0.3	352; 1.539] 100.0%

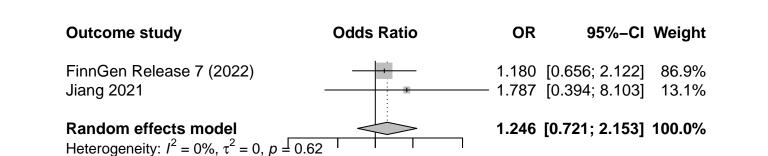
Slackia (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ra	itio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		+				[0.655; 1.627] [1.264; 23.199]	
Random effects model Heterogeneity: $I^2 = 78\%$, $\tau^2 =$	1.0710, <i>p</i> = 0.03	0.1	0.5 1	: 	- 10	2.035	[0.412; 10.054]	100.0%

Streptococcaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022



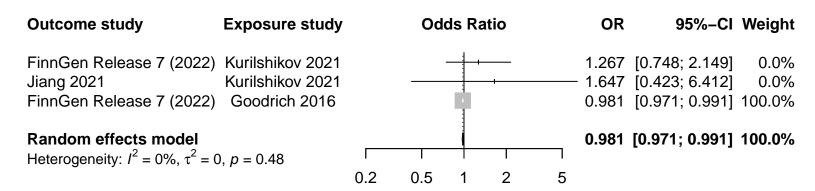
Streptococcaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022



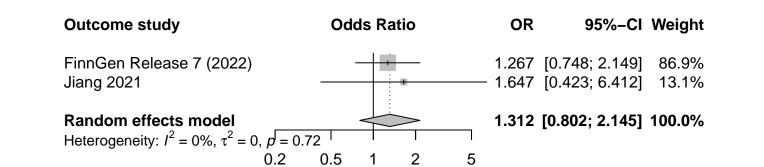
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Streptococcus (Genus) on Optic nerve swelling in Kangcheng Liu 2022



Streptococcus (Genus) on Optic nerve swelling in Kangcheng Liu 2022



Subdoligranulum (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		+	1		[0.568; 1.574] [0.660; 31.472]	
Random effects model Heterogeneity: $I^2 = 58\%$, $\tau^2 =$	0.7176, <i>p</i> = 0.12	0.1	0.5 1 2	- 10	1.557	[0.371; 6.539]	100.0%

Sutterella (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study E	Exposure study		Odds R	atio		OR	95%-CI	Weight
FinnGen Release 7 (2022) H Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		Ť	-	-		[0.612; 1.566] [1.035; 17.872]	
Random effects model Heterogeneity: $I^2 = 73\%$, $\tau^2 = 0$	0.8019, <i>p</i> = 0.05	0.1	0.5 1	: 	10	1.750	[0.425; 7.212]	100.0%

Tenericutes (Phylum) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		* +			[0.750; 1.856] [0.059; 2.566]	
Random effects model Heterogeneity: $I^2 = 20\%$, $\tau^2 =$	0.1245, <i>p</i> = 0.26	0.1	0.5 1 2	10	1.005	[0.468; 2.158]	100.0%

Terrisporobacter (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds R	atio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		#	-			[0.808; 2.585] [0.661; 14.921]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.36	0.1	0.5 1	: 	10	1.589	[0.921; 2.740]	100.0%

Turicibacter (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Exposure study	Odds Ratio	OR	95%-CI	Weight
Kurilshikov 2021 Kurilshikov 2021 —	*			
0.0017, <i>p</i> = 0.32	0.5 1 2	1.240	[0.827; 1.860]	100.0%
	2) Kurilshikov 2021	2) Kurilshikov 2021 Kurilshikov 2021	2) Kurilshikov 2021 1.333 Kurilshikov 2021 1.240 : 0.0017, p = 0.32	2) Kurilshikov 2021 Kurilshikov 2021 1.333 [0.874; 2.033] 0.687 [0.202; 2.336] 1.240 [0.827; 1.860]

Tyzzerella3 (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Od	lds Rat	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		+			[0.791; 1.420] [0.887; 4.640]	
Random effects model Heterogeneity: $I^2 = 52\%$, $\tau^2 =$	0.1106, <i>p</i> = 0.15	0.5	1	\sum_{2}	1.300	[0.720; 2.349]	100.0%

Outcome study Exposure study Odds Ratio OR 95%-CI Weight

10.0%

CG001 Group (Genus in Lachnospiraceae Family) on Optic nerve swelling in Kangcheng Liu 202

FinnGen Release 7 (2022) Kurilshikov 2021 0.941 [0.646; 1.371] 90.0% **Jiang 2021** Kurilshikov 2021 0.888 [0.287; 2.749] Random effects model 0.936 [0.655; 1.337] 100.0% Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $\rho = 0.92$ 0.5 2

CG002 Group (Genus in Ruminococcaceae Family) on Optic nerve swelling in Kangcheng Liu 20

Outcome study	Exposure study		Odds R	atio		OR	95%-CI	Weight	
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			-			[0.917; 2.094] [0.074; 0.801]		
Random effects model Heterogeneity: $I^2 = 86\%$, $\tau^2 =$: 1.3016, <i>p</i> < 0.01	0.1	0.5 1		10	0.638	[0.118; 3.466]	100.0%	

Outcome study Exposure study Odds Ratio OR 95%–CI Weight
FinnGen Release 7 (2022) Kurilshikov 2021 1.247 [0.829; 1.876] 92.0%

G003 Group (Genus in Erysipelotrichaceae Family) on Optic nerve swelling in Kangcheng Liu 20

Jiang 2021 Kurilshikov 2021

Random effects model

Heterogeneity:
$$I^2 = 0\%$$
, $\tau^2 = 0$, $p = 0.63$

0.872 [0.218; 3.486] 8.0% 1.212 [0.819; 1.793] 100.0%

CG003 Group (Genus in Ruminococcaceae Family) on Optic nerve swelling in Kangcheng Liu 20

Outcome study	Exposure study	y	Odds Ratio	OR	95%-CI	Weight	
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2027 Kurilshikov 2027		*		[0.387; 1.055] [0.098; 1.754]		
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.58	Г		0.610	[0.380; 0.979]	100.0%	
		0.1	0.5 1 2	10			

Outcome study Exposure study Odds Ratio OR 95%-CI Weight FinnGen Release 7 (2022) Kurilshikov 2021 1.007 [0.590; 1.717] 89.2%

Kurilshikov 2021

CG004 Group (Genus in Lachnospiraceae Family) on Optic nerve swelling in Kangcheng Liu 202



Jiang 2021

Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $\rho = 0.98$

0.5

1.009 [0.610; 1.671] 100.0%

1.030 [0.222; 4.779] 10.8%

CG004 Group (Genus in Ruminococcaceae Family) on Optic nerve swelling in Kangcheng Liu 20

Outcome study	Exposure study		Oda	s Ka	tio		UR	95%-CI	weignt	
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-	-	<u>—</u>			[0.736; 2.410] [0.126; 2.753]		
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.33		<u> </u>		<u>></u>	<u></u>	1.199	[0.690; 2.086]	100.0%	
		0.2	0.5	1	2	5				

GO05 Group (Genus in Ruminococcaceae Family) on Optic nerve swelling in Kangcheng Liu 20

Outcome study Exposur	e study (Odds Ratio	OR	95%-CI V	Veight
FinnGen Release 7 (2022) Kurilshik Jiang 2021 Kurilshik		-	-	748; 1.862] 360; 9.272]	92.7% 7.3%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0.61$	0.2 0	0.5 1 2 5	1.219 [0.	786; 1.890] 1	00.0%

Odds Ratio Outcome study Exposure study OR 95%-CI Weight FinnGen Release 7 (2022) Kurilshikov 2021 0.950 [0.665; 1.356] 92.8% **Jiang 2021** Kurilshikov 2021 7.2% 1.244 [0.347; 4.460]

CG008 Group (Genus in Lachnospiraceae Family) on Optic nerve swelling in Kangcheng Liu 202

Random effects model

Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $\rho = 0.69$

0.968 [0.687; 1.365] 100.0%

CG009 Group (Genus in Ruminococcaceae Family) on Optic nerve swelling in Kangcheng Liu 20

Outcome study	Exposure study	Odd	ls Ratio	OR	95%–CI Wei	ght
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021 —			-	, _	1% 9%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.95	0.5	1 2	0.812 [0.	585; 1.126] 100.	0%

Outcome study Exposure study Odds Ratio OR 95%-CI Weight FinnGen Release 7 (2022) Kurilshikov 2021 1.705 [1.027; 2.830] 90.8%

0.2

CG010 Group (Genus in Lachnospiraceae Family) on Optic nerve swelling in Kangcheng Liu 202

Random effects model

Jiang 2021

Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $\rho = 0.88$

Kurilshikov 2021

0.5

5

1.685 [1.039; 2.731] 100.0%

[0.305; 7.395]

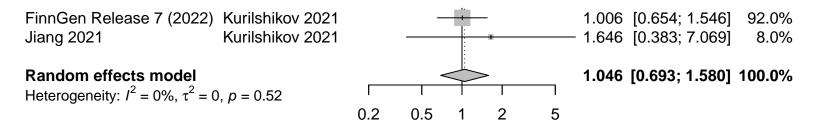
9.2%

CG010 Group (Genus in Ruminococcaceae Family) on Optic nerve swelling in Kangcheng Liu 20

Outcome study	Exposure study	Odo	is Rat	10		OR	95%-CI	Weight	
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021	 -	+				[0.315; 1.560] [0.143; 5.492]		
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.82	 0.5	\	T	_	0.728	[0.350; 1.515]	100.0%	

Outcome study Exposure study Odds Ratio OR 95%-CI Weight

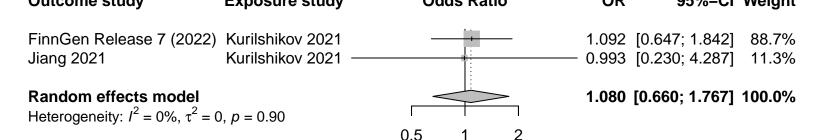
CG011 Group (Genus in Defluviitaleaceae Family) on Optic nerve swelling in Kangcheng Liu 202



CG011 Group (Genus in Ruminococcaceae Family) on Optic nerve swelling in Kangcheng Liu 20

Outcome study	Exposure study	O	ads Ratio)	OR	95%-CI	weignt	
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021	_	-			[0.556; 1.284] [0.521; 3.868]		
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.35	0.5	1		0.913	[0.620; 1.343]	100.0%	

CG013 Group (Genus in Ruminococcaceae Family) on Optic nerve swelling in Kangcheng Liu 20 Outcome study Exposure study Odds Ratio OR 95%-CI Weight



CG014 Group (Genus in Ruminococcaceae Family) on Optic nerve swelling in Kangcheng Liu 20

Evacuro etudy

Outcome study

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05% CI Woight

Outcome study	Exposure study		Ouus Ralio		UK	93 /0-CI	weignt
FinnGen Release 7 (2022)	Kurilshikov 2021				0.748	[0.482; 1.161]	94.1%
Jiang 2021	Kurilshikov 2021		•		0.319	[0.055; 1.853]	5.9%
Random effects model					0.711	[0.465; 1.090]	100.0%
Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	p = 0.36	0.1	0.5 1 2	10			

Veillonella (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposure study		Odds Ratio		OR	95%-CI	Weight
FinnGen Release 7 (2022) Kurilshikov 2021 Jiang 2021 Kurilshikov 2021 FinnGen Release 7 (2022) Goodrich 2016	-			- 1.946 [0.2	403; 1.435] 208; 18.174] 985; 1.008]	0.0% 0.0% 100.0%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0.59$	0.1	0.5 1 2	10	0.997 [0.9	985; 1.008]	100.0%

Veillonella (Genus) on Optic nerve swelling in Kangcheng Liu 2022

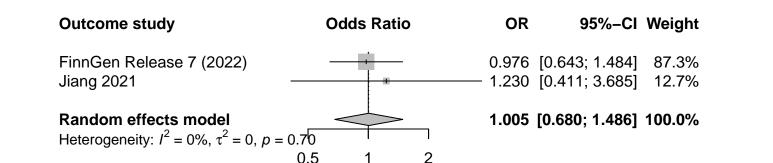
Outcome study	Odds Ratio	OR 95%-CI Weight
FinnGen Release 7 (2022) Jiang 2021	*	0.760 [0.403; 1.435] 92.5% — 1.946 [0.208; 18.174] 7.5%

FinnGen Release 7 (2022) 0.760 [0.403; 1.435] 92.5% Jiang 2021 1.946 [0.208; 18.174] 7.5% Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $\rho = 0.43$ 0.1 0.5 1 2 10

Veillonellaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposu	re study Odds Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Kurilshik Jiang 2021 Kurilshik FinnGen Release 7 (2022) Goodric	xov 2021+	1.230	[0.643; 1.484] [0.411; 3.685] [0.985; 1.008]	0.1% 0.0% 99.9%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0.93$	0.5	0.997	[0.985; 1.008]	100.0%

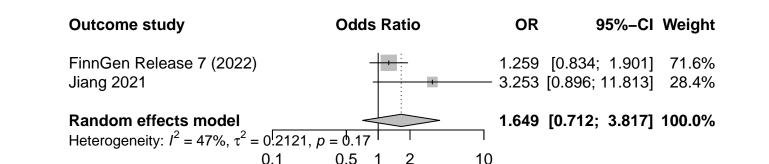
Veillonellaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022



Verrucomicrobia (Phylum) on Optic nerve swelling in Kangcheng Liu 2022

FinnGen Release 7 (2022) Kurilshikov 2021	hikov 2021 1 259 I0 834:	4 0041	
Jiang 2021 Kurilshikov 2021 + 3.253 [0.896; 11.813]		-	37.6% 8.1%
	<u>1 </u>	-	54.3%
Random effects model Heterogeneity: $I^2 = 26\%$, $\tau^2 = 0.0618$, $p = 0.26$		1.888]	100.0%

Verrucomicrobia (Phylum) on Optic nerve swelling in Kangcheng Liu 2022



Verrucomicrobiaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

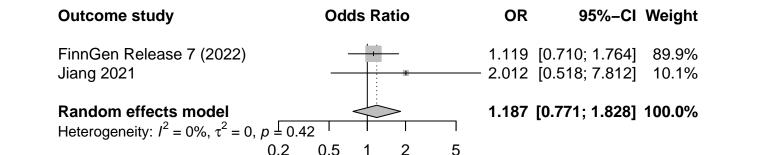
Outcome study	Exposure study	Odds Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021 FinnGen Release 7 (2022)	Kurilshikov 2021		2.012	[0.710; 1.764] [0.518; 7.812] [0.907; 1.386]	2.0%
Random effects model	_		1.134	[0.937; 1.371]	100.0%

0.5

0.2

Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, p = 0.70

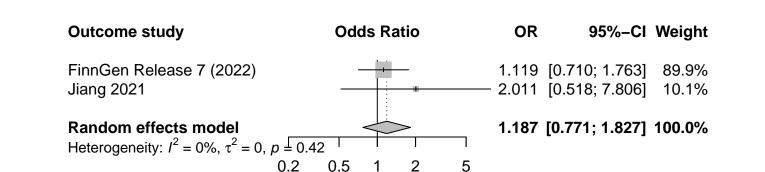
Verrucomicrobiaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022



Verrucomicrobiae (Class) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study Exposure	study Odd	ls Ratio	OR	95%–CI Weigh	t
FinnGen Release 7 (2022) Kurilshikov		*	-	710; 1.763] 17.5%	
Jiang 2021 Kurilshiko	/ 2021	 	—— 2.011 [0.	518; 7.806] 2.0%	6
FinnGen Release 7 (2022) Goodrich	2016		1.121 [0.	907; 1.386] 80.6%	6
Random effects model		\Diamond	1.134 [0.9	937; 1.371] 100.0%	6
Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $\rho = 0.70$			7 -	· •	
	0.2 0.5	1 2	5		

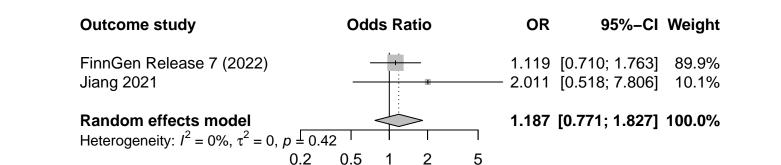
Verrucomicrobiae (Class) on Optic nerve swelling in Kangcheng Liu 2022



Verrucomicrobiales (Order) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odo	ls Ra	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021 FinnGen Release 7 (2022)	Kurilshikov 2021		_	-		- 2.011	[0.710; 1.763] [0.518; 7.806] [0.907; 1.386]	17.5% 2.0% 80.6%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 =$	0, <i>p</i> = 0.70	0.2	0.5	1	7	 1.134	[0.937; 1.371]	100.0%

Verrucomicrobiales (Order) on Optic nerve swelling in Kangcheng Liu 2022



Victivallaceae (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	C	odds Ratio	•	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021					[0.760; 1.218] [0.284; 1.227]	
Random effects model Heterogeneity: $I^2 = 36\%$, $\tau^2 =$	0.0425, <i>p</i> = 0.21	0.5	1		0.857	[0.569; 1.288]	100.0%

Victivallales (Order) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Rat	tio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		*			[0.713; 1.384] [0.316; 2.403]	90.4% 9.6%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.81	0.5	1	2	0.981	[0.716; 1.344]	100.0%

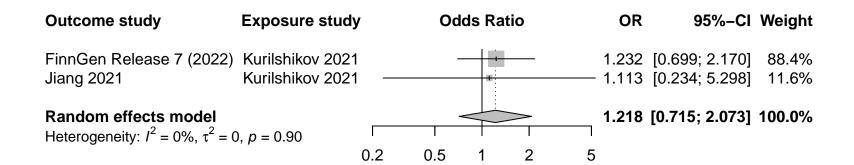
Victivallis (Genus) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds Ratio)	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		*			[0.674; 1.287] [0.355; 1.845]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$), <i>p</i> = 0.76	0.5	1	7	0.914	[0.677; 1.235]	100.0%

XI (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Od	ds Rat	io	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021	-	+ + + + + + + + + + + + + + + + + + + +			[0.716; 1.262] [0.839; 4.759]	
Random effects model Heterogeneity: $I^2 = 61\%$, $\tau^2 =$: 0.1675, <i>p</i> = 0.11	0.5	1	$\overline{}$	1.225	[0.614; 2.444]	100.0%

XII UCG001 Group (Genus in Family) on Optic nerve swelling in Kangcheng Liu 2022



XIII (Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study	Odd	s Ratio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021		-		[0.363; 2.382] [0.144; 11.045]	
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	p, p = 0.80	1 0.5	1 2	0.976	[0.412; 2.312]	100.0%

XIII AD3011 Group (Genus in Family) on Optic nerve swelling in Kangcheng Liu 2022

Outcome study	Exposure study		Odds R	atio	OR	95%-CI	Weight
FinnGen Release 7 (2022) Jiang 2021	Kurilshikov 2021 Kurilshikov 2021			<u> </u>		[0.670; 1.966] [0.100; 2.864]	90.7% 9.3%
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$	0, <i>p</i> = 0.40	0.2	0.5 1	>	 1.069	[0.640; 1.784]	100.0%