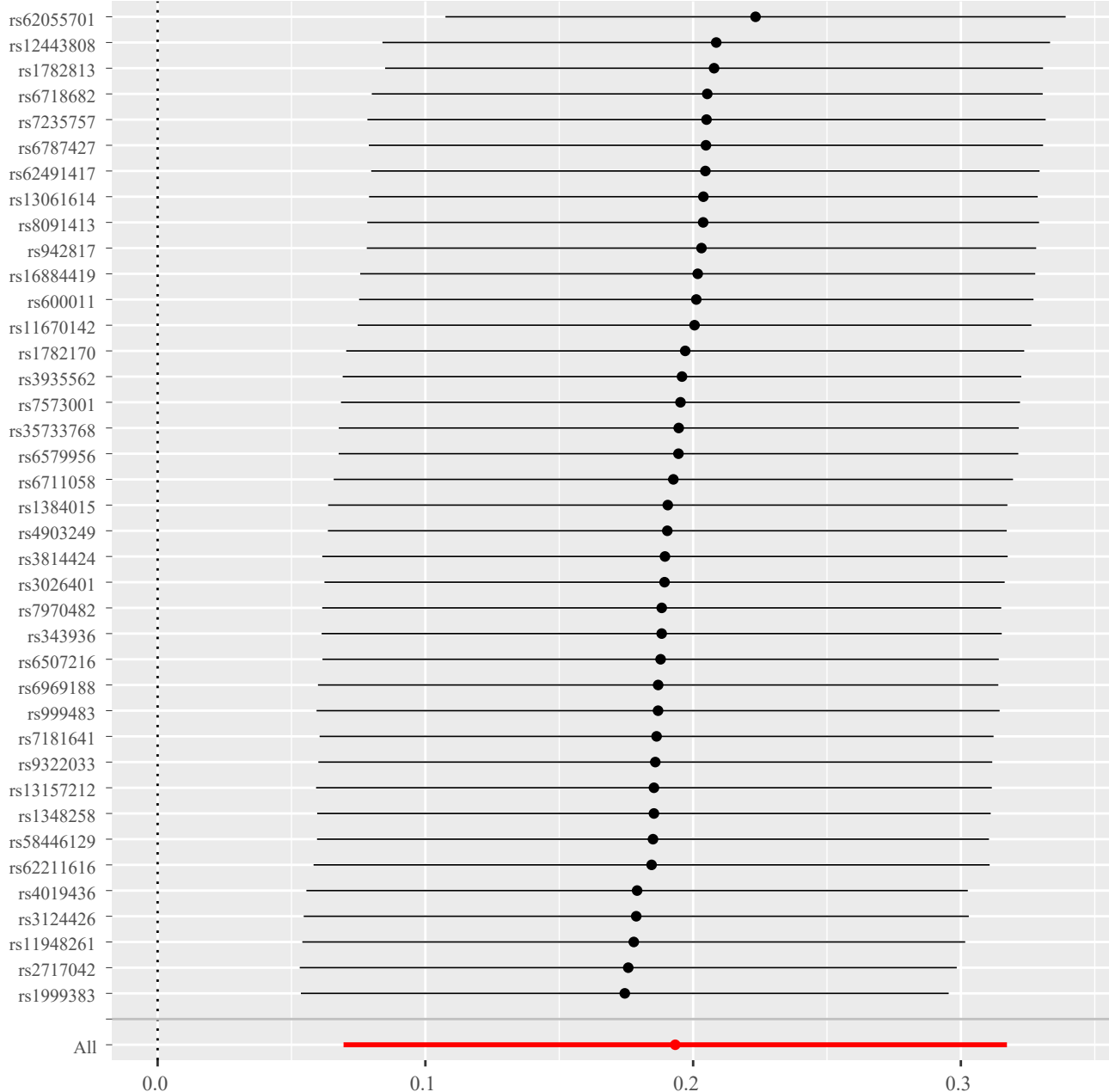
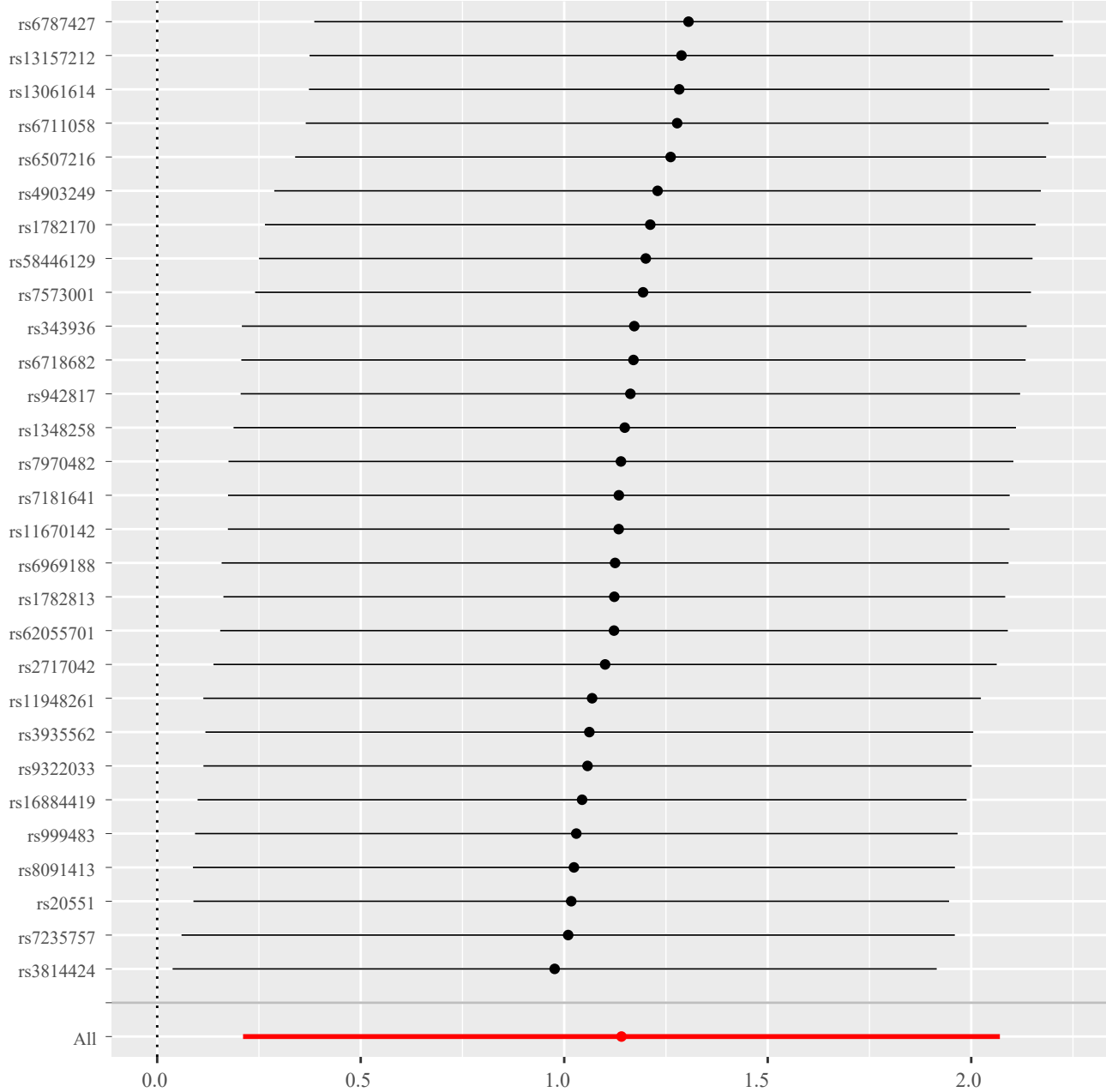


Supplementary Figure 1.1 MR leave-one-out sensitivity analysis for 'Smoking status || id:ebi-a-GCST90029014' on 'bipolar disorder || id:ieu-b-41'



Supplementary Figure 1.2 MR leave-one-out sensitivity analysis for 'Irritability || id:ukb-b-13745' on 'Smoking status || id:ebi-a-GCST90029014'



Supplementary Figure 1.3 MR leave-one-out sensitivity analysis for 'Irritability || id:ukb-b-13745' on 'bipolar disorder || id:ieu-b-41'

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SNP	effect_allele.exposure	other_allele.exposure	effect_allele.outcome	other_allele.outcome	beta.exposure	beta.outcome	eaf.exposure	eaf.outcome	remove	palindromic	ambiguous	id.outcome	chr	pos	se.outcome	samplesize.outcome	pval.outcome	outcome	originalname.outcome	outcome.deprecated	mr_keep.outcome	data_source.outcome	pval.exposure	pos.exposure	chr.exposure	se.exposure	samplesize.exposure	id.exposure	exposure	mr_keep.exposure	pval_origin.exposure	data_source.exposure	action	mr_keep	units.outcome	units.exposure	rsq.exposure	effective_n.exposure	rsq.outcome	effective_n.outcome	steiger_dir	steiger_pval	R2	F	FMean	F_pow_beta_se	
rs11670142	G	T	G	T	0.00537733	0.007397	0.394986	0.395213	FALSE	FALSE	FALSE	ieu-b-41	19	49650471	0.0137			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	3.50E-08	49650471	19	0.000975364		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			6.87E-05	442169	5.64E-06	51710	TRUE	0.203022598	1.38E-05	6.110866984	7.710421139	30.39484512
rs11948261	A	T	A	T	0.00749452	0.022202	0.214042	0.211181	FALSE	TRUE	FALSE	ieu-b-41	5	107753691	0.0164			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	1.20E-10	107753691	5	0.00116477		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			9.36E-05	442169	3.54E-05	51710	TRUE	0.423141094	1.89E-05	8.356232499	7.710421139	41.40066272
rs13061614	C	T	C	T	0.0055326	-0.019303	0.408832	0.390213	FALSE	FALSE	FALSE	ieu-b-41	3	35694457	0.0137			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	1.20E-08	35694457	3	0.00097168		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			7.33E-05	442169	3.84E-05	51710	TRUE	0.610633664	1.48E-05	6.542399988	7.710421139	32.41992585
rs13157212	C	A	C	A	-0.00864971	0.027001	0.134613	0.133361	FALSE	FALSE	FALSE	ieu-b-41	5	46055494	0.0202			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	6.40E-10	46055494	5	0.00139966		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			8.64E-05	442169	3.46E-05	51710	TRUE	0.462445402	1.74E-05	7.707692093	7.710421139	38.19073278
rs1348258	A	G	A	G	-0.00568548	-0.005002	0.634266	0.648394	FALSE	FALSE	FALSE	ieu-b-41	15	87980070		14		bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	1.00E-08	87980070	15	0.000992822		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			7.42E-05	442169	2.47E-06	51710	TRUE	0.129808094	1.50E-05	6.631226703	7.710421139	32.79378069
rs16884419	A	G	A	G	0.00691058	0.025902	0.237483	0.244755	FALSE	FALSE	FALSE	ieu-b-41	8	89579649	0.0156			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	7.40E-10	89579649	8	0.00112244		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			8.57E-05	442169	5.33E-05	51710	TRUE	0.673705243	1.73E-05	7.647771244	7.710421139	37.90554347
rs1782170	C	A	C	A	0.00596707	-0.007998	0.724225	0.732606	FALSE	FALSE	FALSE	ieu-b-41	14	41674903	0.0153			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	2.50E-08	41674903	14	0.0010713		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			7.02E-05	442169	5.28E-06	51710	TRUE	0.191003347	1.42E-05	6.288878009	7.710421139	31.02416171
rs1782813	C	T	C	T	0.00723743	0.012397	0.834799	0.833574	FALSE	FALSE	FALSE	ieu-b-41	1	98499843	0.0179			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	1.70E-08	98499843	1	0.00128238		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			7.20E-05	442169	9.28E-06	51710	TRUE	0.241673888	1.44E-05	6.3883094	7.710421139	31.85189536
rs20551	G	A	G	A	0.00631102	0.029903	0.288044	0.284542	FALSE	FALSE	FALSE	ieu-b-41	22	41548008	0.0148			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	2.10E-09	41548008	22	0.00105324		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			8.12E-05	442169	7.89E-05	51710	TRUE	0.978410037	1.63E-05	7.223281129	7.710421139	35.90413136
rs2717042	A	C	A	C	0.00630191	0.013597	0.625849	0.626181	FALSE	FALSE	FALSE	ieu-b-41	2	58177082	0.0138			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	1.60E-10	58177082	2	0.000985371		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			9.25E-05	442169	1.88E-05	51710	TRUE	0.255509801	1.86E-05	8.22404099	7.710421139	40.90202783
rs343936	C	T	C	T	-0.00831085	-0.003095	0.167482		167	FALSE	FALSE	ieu-b-41	2	44992550	0.0179			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	9.00E-11	44992550	2	0.00128194		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			9.50E-05	442169	5.78E-07	51710	TRUE	0.053104619	1.93E-05	8.516817599	7.710421139	42.02962257
rs3814424	T	C	T	C	0.0100905	0.039403	0.157588	0.160755	FALSE	FALSE	FALSE	ieu-b-41	5	87968953	0.0182			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	1.30E-14	87968953	5	0.00130881		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			0.000134409	442169	9.06E-05	51710	TRUE	0.655545382	2.70E-05	11.95366623	7.710421139	59.43909171
rs3935562	A	G	A	G	0.00525339	0.020596	0.490421	0.491181	FALSE	FALSE	FALSE	ieu-b-41	9	121275721	0.0135			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	3.70E-08	121275721	9	0.000954195		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			6.85E-05	442169	4.50E-05	51710	TRUE	0.735455201	1.38E-05	6.099330689	7.710421139	30.31133142
rs4903249	T	C	T	C	0.00539923	-0.009303	0.489003	0.495394	FALSE	FALSE	FALSE	ieu-b-41	14	75083881	0.0133			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	1.40E-08	75083881	14	0.000952656		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			7.26E-05	442169	9.46E-06	51710	TRUE	0.241203676	1.46E-05	6.441932654	7.710421139	32.12117639
rs58446129	T	C	T	C	0.00746415	-0.007397	0.146099		149	FALSE	FALSE	ieu-b-41	13	66582410	0.0193			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	3.20E-08	66582410	13	0.00134995		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			6.91E-05	442169	3.02E-06	48569	TRUE	0.168943772	1.39E-05	6.146640911	7.710421139	30.57210556
rs62055701	A	G	A	G	0.00797808	0.012304	0.222601	0.214181	FALSE	FALSE	FALSE	ieu-b-41	17	43758787	0.0163			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	3.60E-12	43758787	17	0.00114749		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			0.000109311	442169	1.10E-05	51710	TRUE	0.124689677	2.20E-05	9.740780394	7.710421139	48.33914391
rs6507216	T	G	T	G	0.00561016	-0.016404	0.34275	0.339394	FALSE	FALSE	FALSE	ieu-b-41	18	35195719	0.0141			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	2.40E-08	35195719	18	0.00100569		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			7.04E-05	442169	2.62E-05	51710	TRUE	0.481322094	1.42E-05	6.270194809	7.710421139	31.11875628
rs6711058	A	G	A	G	0.00605901	-0.020499	0.735317	0.729819	FALSE	FALSE	FALSE	ieu-b-41	2	205116051	0.0151			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	3.20E-08	205116051	2	0.00109579		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			6.91E-05	442169	3.56E-05	51710	TRUE	0.613835914	1.43E-05	6.318682338	7.710421139	30.57374739
rs6718682	T	C	T	C	-0.00692323	-0.002704	0.275458	0.264213	FALSE	FALSE	FALSE	ieu-b-41	2	122663627	0.0152			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	9.70E-11	122663627	2	0.00106988		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			9.47E-05	442169	6.12E-07	51710	TRUE	0.054170829	1.91E-05	8.459819691	7.710421139	41.87428277
rs6787427	C	T	C	T	0.00743874	-0.019096	0.260485	0.257426	FALSE	FALSE	FALSE	ieu-b-41	3	85556518	0.0154			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	6.40E-12	85556518	3	0.00108276		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			0.000106734	442169	2.97E-05	51710	TRUE	0.293876968	2.13E-05	9.426108743	7.710421139	47.19916896
rs6969188	A	G	A	G	0.0065984	0.009901	0.450912	0.430213	FALSE	FALSE	FALSE	ieu-b-41	7	114160742	0.0138			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	6.70E-12	114160742	7	0.000961371		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			0.000106528	442169	9.95E-06	51710	TRUE	0.123091852	2.16E-05	9.533156229	7.710421139	47.10806263
rs7181641	G	A	G	A	0.00741224	0.010101	0.147497		149	FALSE	FALSE	ieu-b-41	15	61744669	0.0189			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	4.20E-08	61744669	15	0.00135225		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			6.79E-05	442169	5.52E-06	51710	TRUE	0.204831826	1.38E-05	6.109425483	7.710421139	30.04588256
rs7235757	A	G	A	G	0.00789323	0.027099	0.312851	0.306542	FALSE	FALSE	FALSE	ieu-b-41	18	53067954	0.0145			bipolar disorder    id:ieu-b-41	bipolar disorder	bipolar disorder	TRUE	MedicineITLab	2.40E-14	53067954	18	0.00103515		442169	ukb-b-13745	Irritability    id:ukb-b-13745	TRUE	reported	igd	2	TRUE			0.00013148	442169	6.							