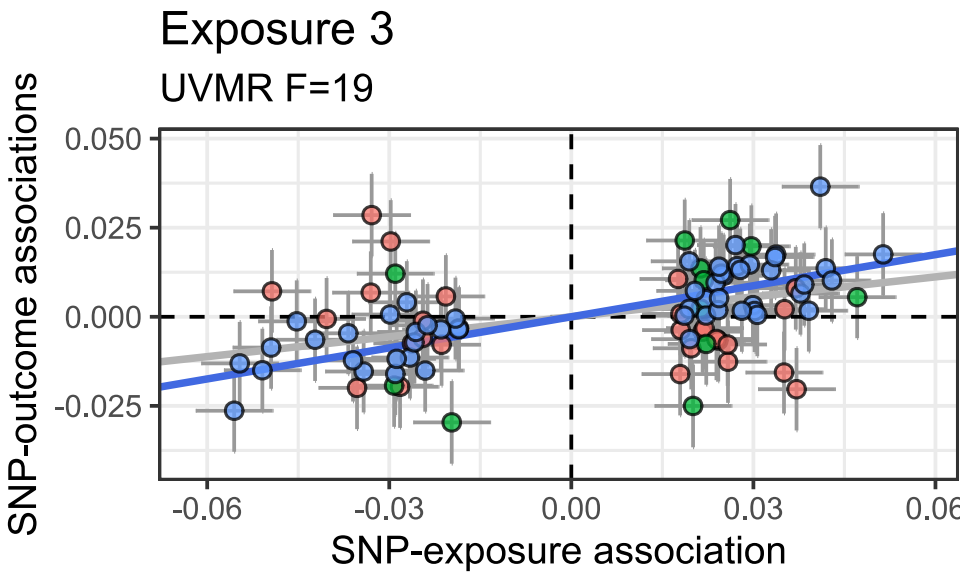
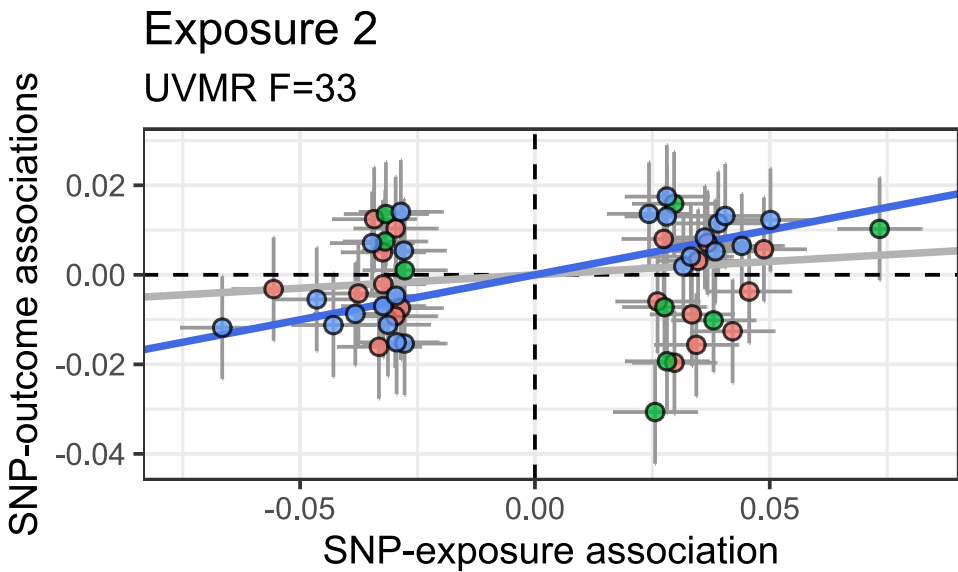
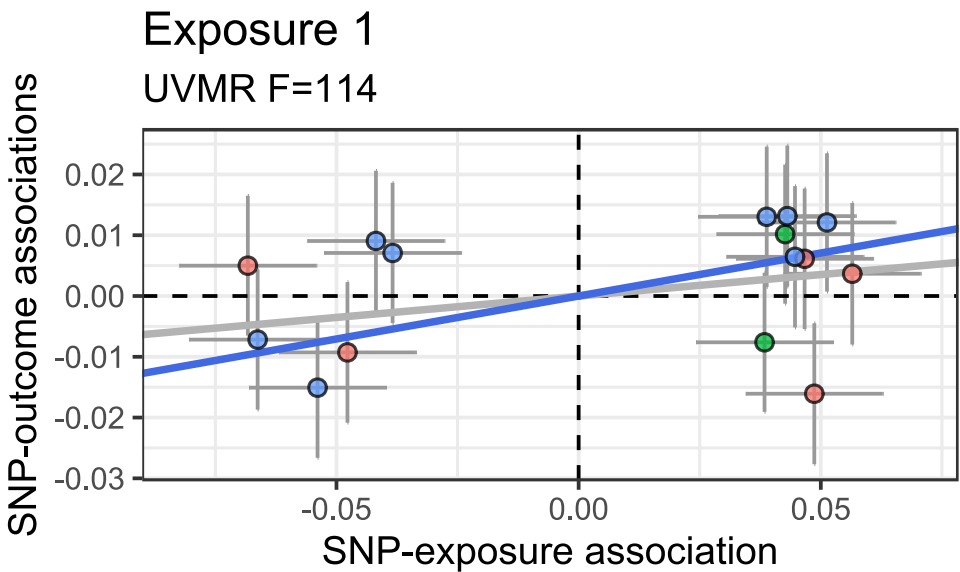
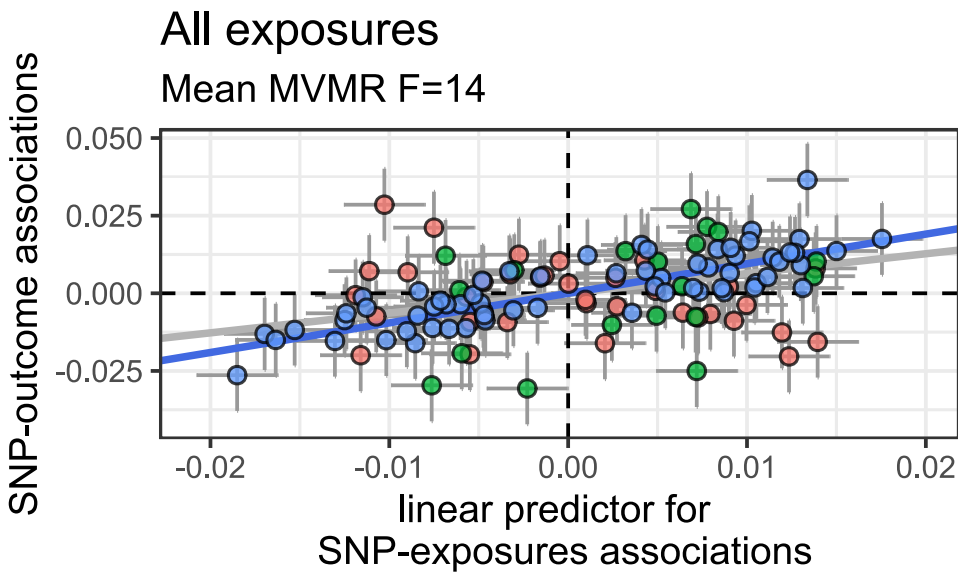


IV type   ● CHP   ● UHP   ● valid



```
set.seed(74667)
library(MendelianRandomization)
library(simmer)
params=list(
  sample_size_Xs=c(2e4,5e4,1e5),
  sample_size_Y=3e4,
  LD_causal_SNP='ar1(0.5)', ...)
data=generate_summary(params)
obj=mr_mvinput(
  bx=data$bx, by=data$by,
  bxse=data$bxse, byse=data$byse,
  correlation=data$LDhatMatrix)
plot_simdata(data,params)
mr_mvivw(obj)
mr_mvmedian(obj)
RhoME=data$RhoME[c(2:4,1),c(2:4,1)]
mr_mvcML(obj,n=2e4,rho_mat=RhoME)
```

### MVMR Results

*Exposure*

		1	2	3
IVW	Estimate	-0.305	0.014	0.202
	P-value	0.436	0.755	4.4E-7
MR Median	Estimate	0.017	0.142	0.198
	P-value	0.646	1.7E-5	6.1E-10
MR CML	Estimate	-0.017	0.103	0.215
	P-value	0.722	0.013	7.4E-13