

# Characterization of missingness in untargeted MS-based metabolomics data sets and evaluation of missing data handling strategies

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## Supporting Information File S6: Metabolite-SNP associations beeswarm plots

The residuals of the linear regression model

$$metabolite \sim \beta_0 + \beta_1 \times age + \beta_2 \times sex + \epsilon$$

are plotted as circles and represent the (normalized and scaled) metabolite value for each study participant, corrected for the effects of age and sex. The study participants are grouped by the genotype of the tested SNP. In each group, the residuals are shown for the un-imputed KORA F4 data set (CCA; left) and the imputed data set (right). Red circles indicate values that are present in the imputed data set only. Boxplots display the distribution of the residuals in each group (left: CCA, right: imputed). The lines represent the regression coefficient estimates of the linear model

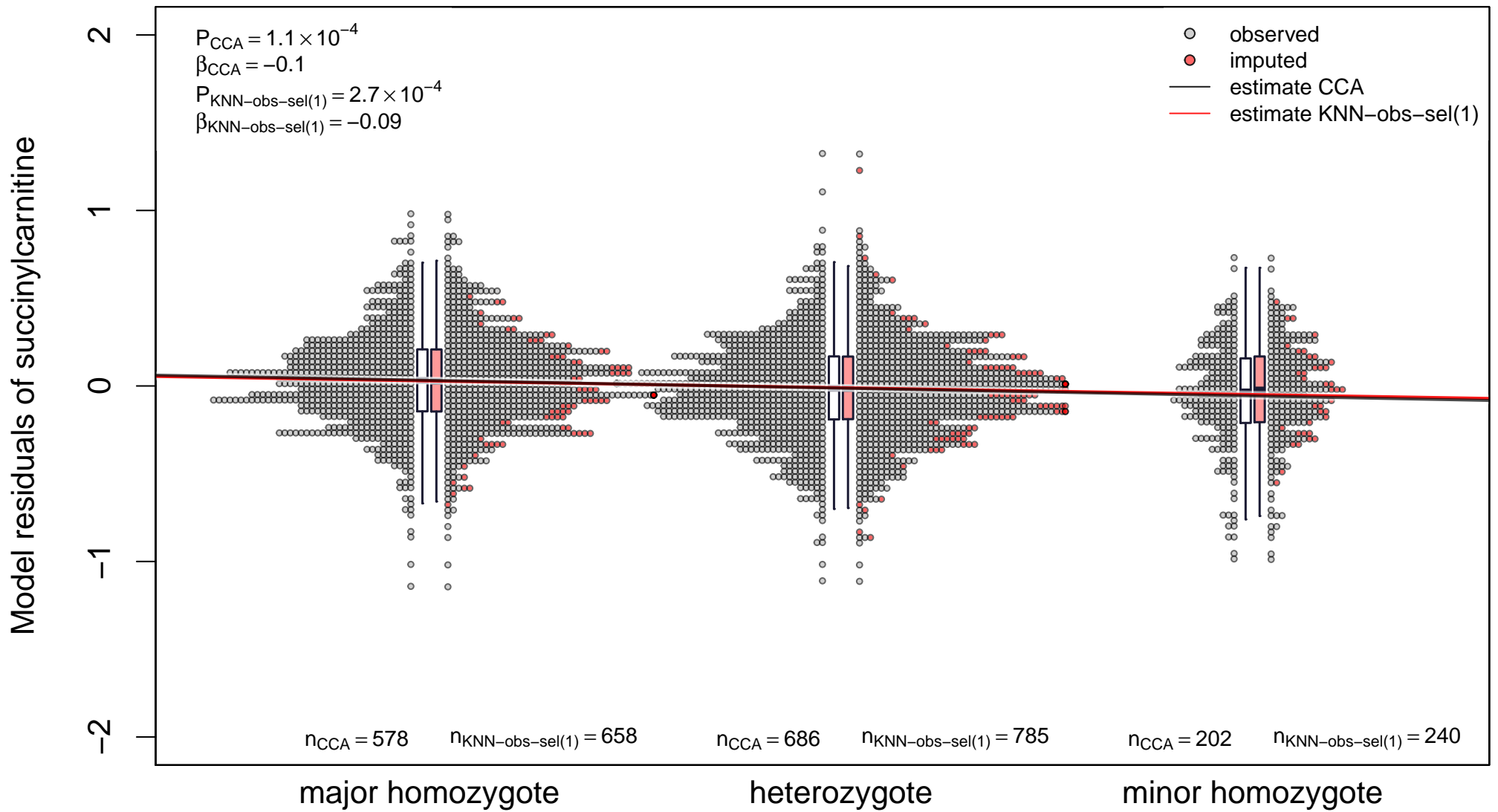
$$residuals \sim \beta_0 + \beta_1 \times SNP + \epsilon$$

for the CCA data set (black) and the imputed data set (red). The values for  $\beta$  and  $P$  shown in the top left corner are the standardized estimate and the corresponding p-value for  $SNP$  of the linear regression model

$$metabolite \sim \beta_0 + \beta_1 \times SNP + \beta_2 \times age + \beta_3 \times sex + \epsilon$$

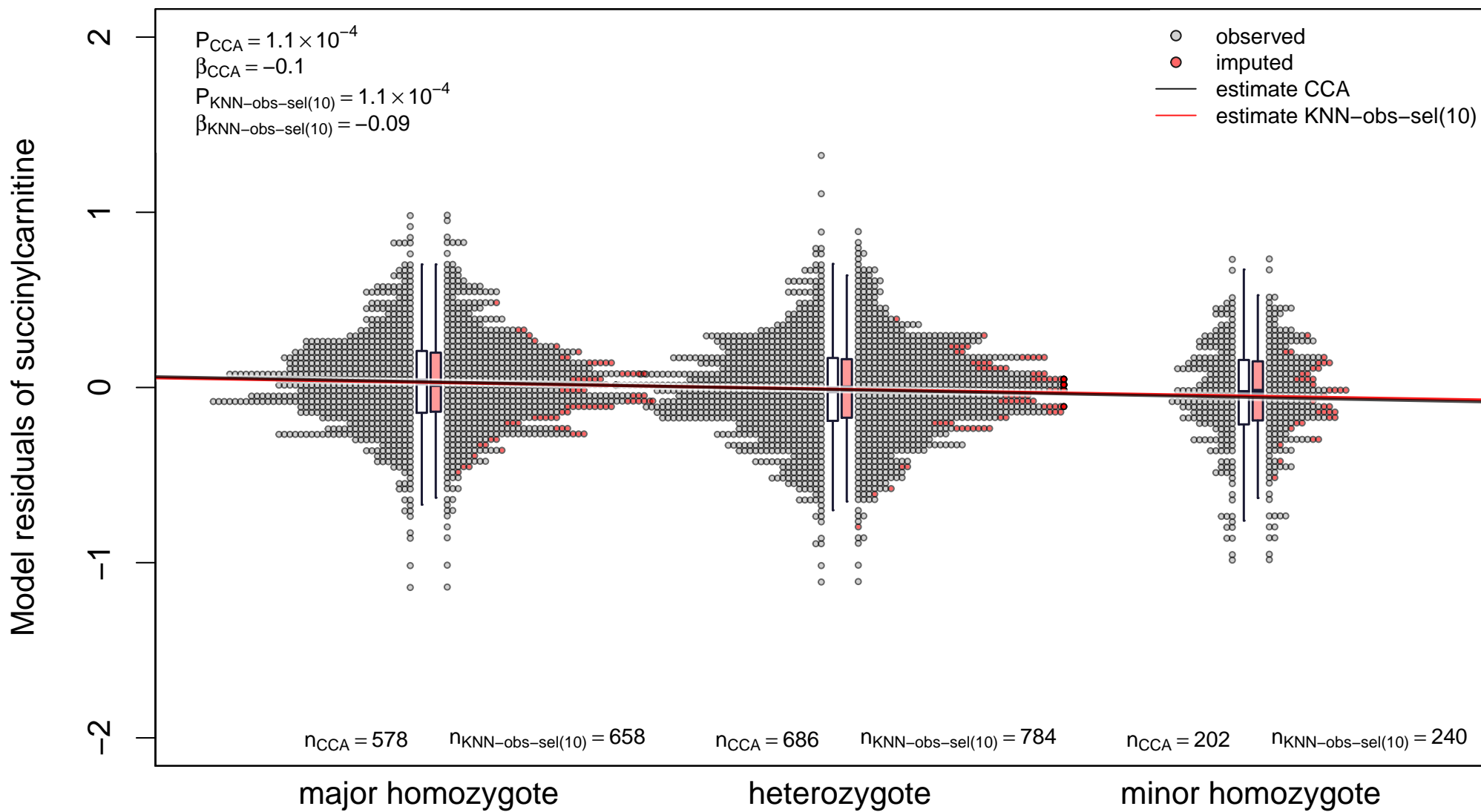
when using the CCA data set and the imputed data set, respectively (S7 File).

# KNN-obs-sel(1)



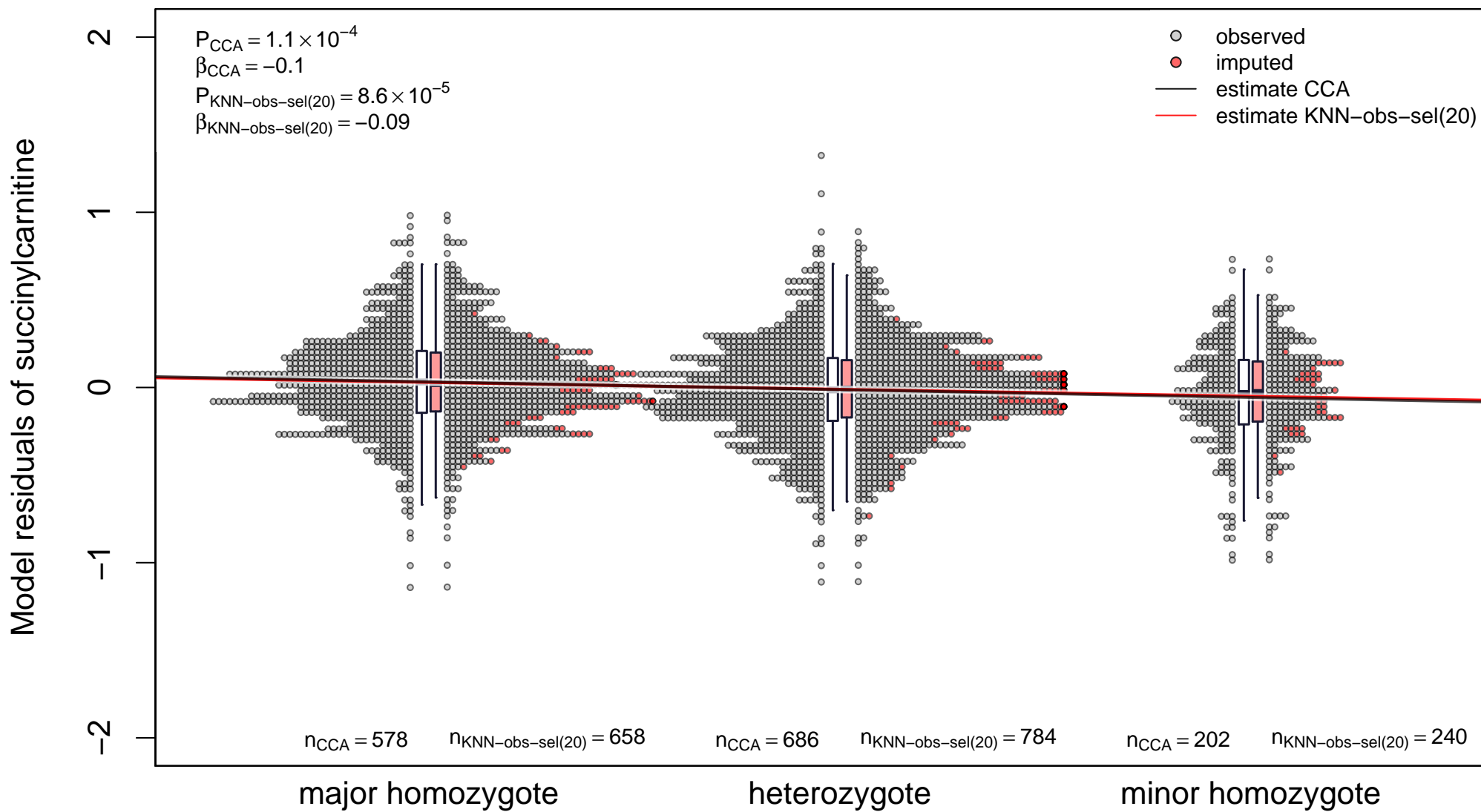


# KNN-obs-sel(10)



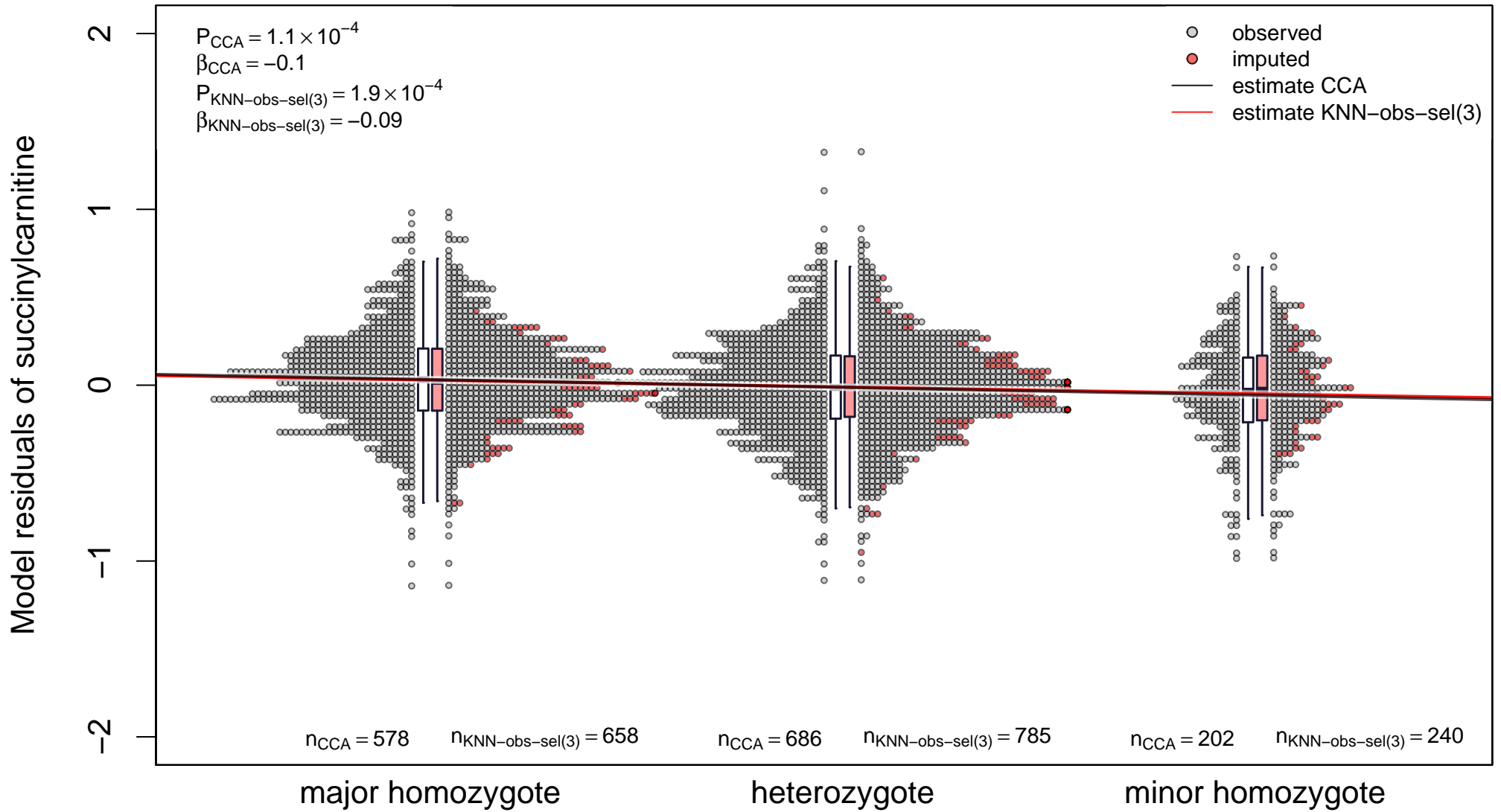
Genotype of SNP rs10988217 (CRAT)

# KNN-obs-sel(20)



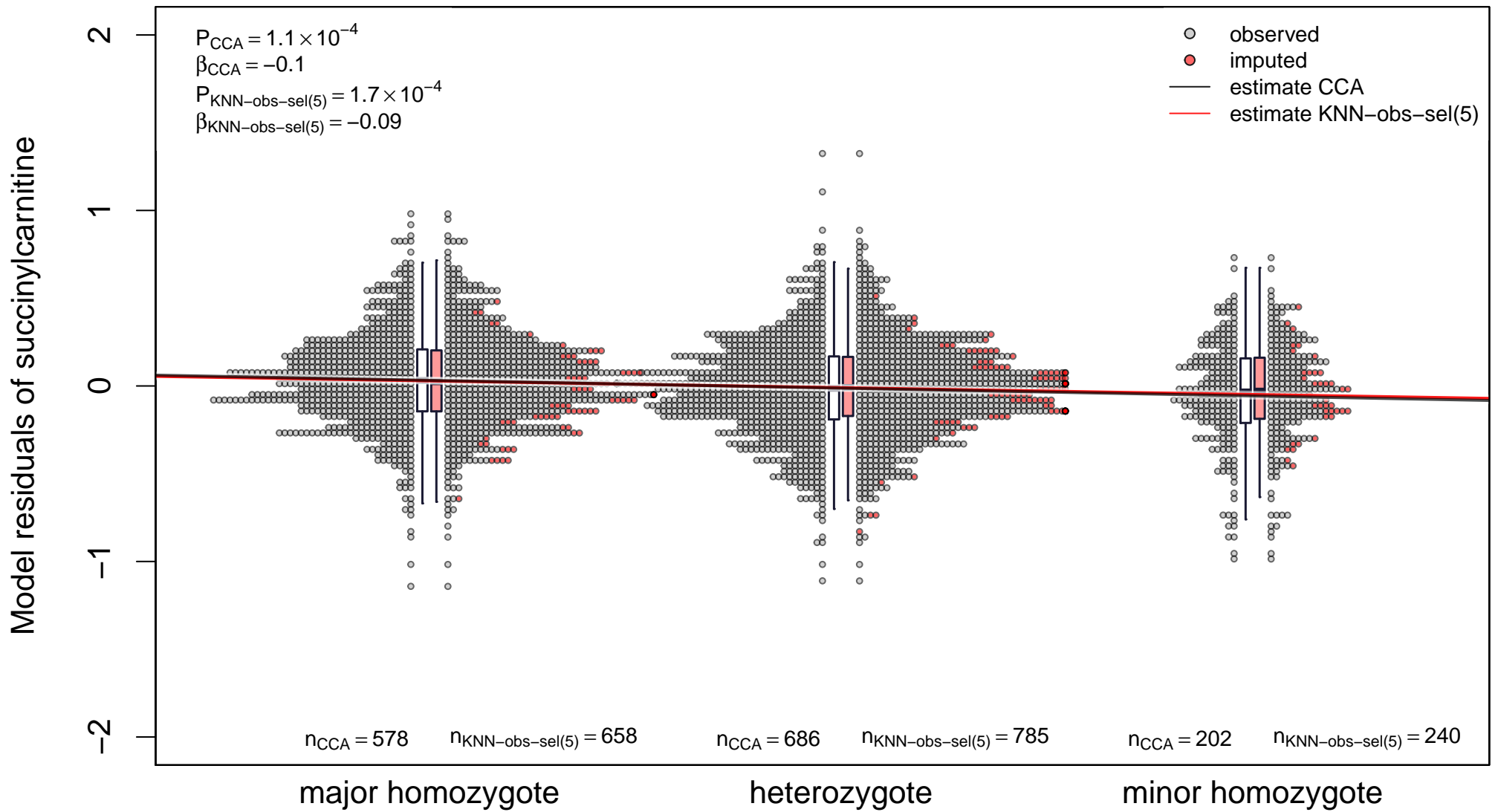
Genotype of SNP rs10988217 (CRAT)

# KNN-obs-sel(3)



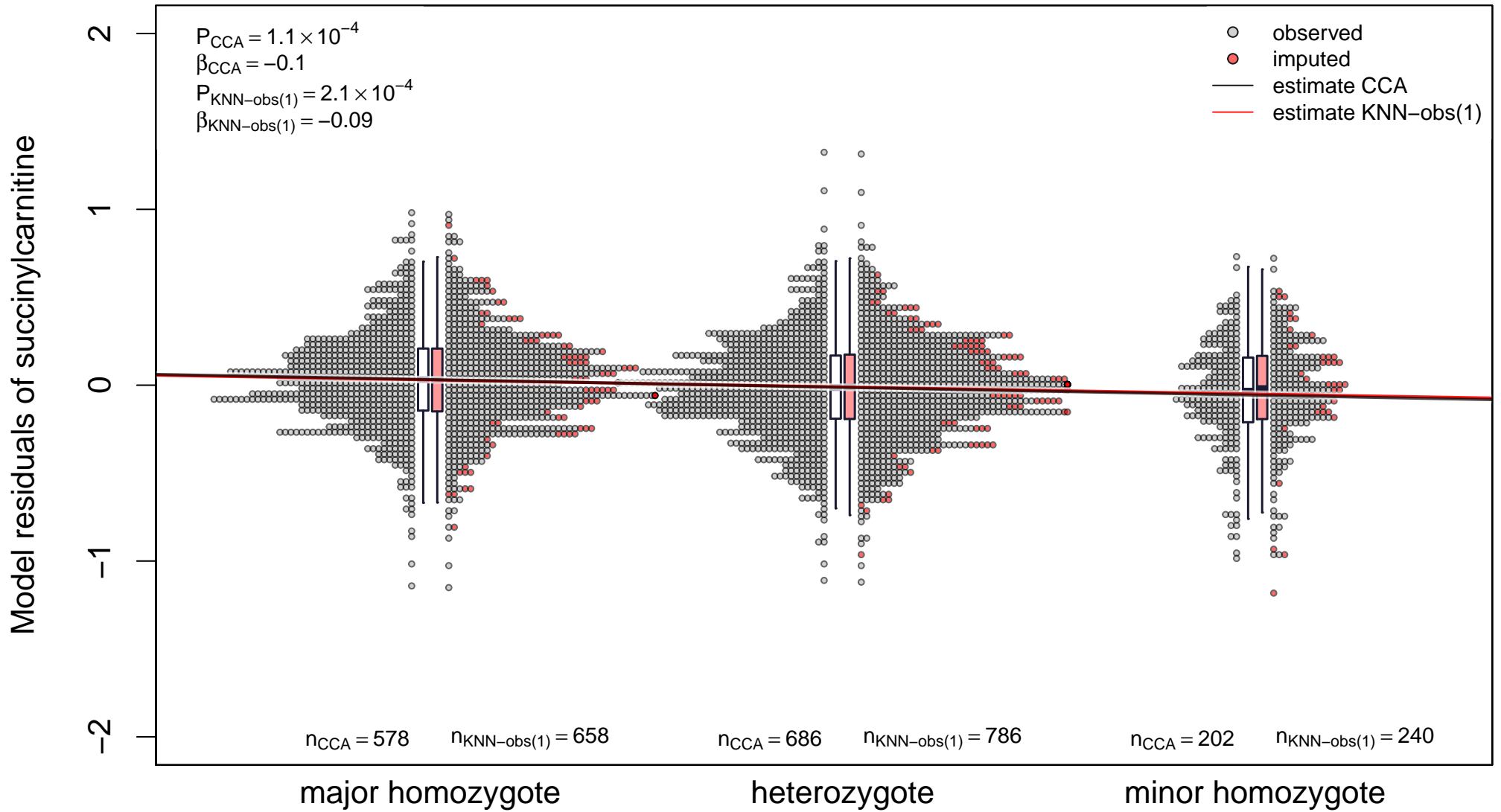
Genotype of SNP rs10988217 (CRAT)

# KNN-obs-sel(5)



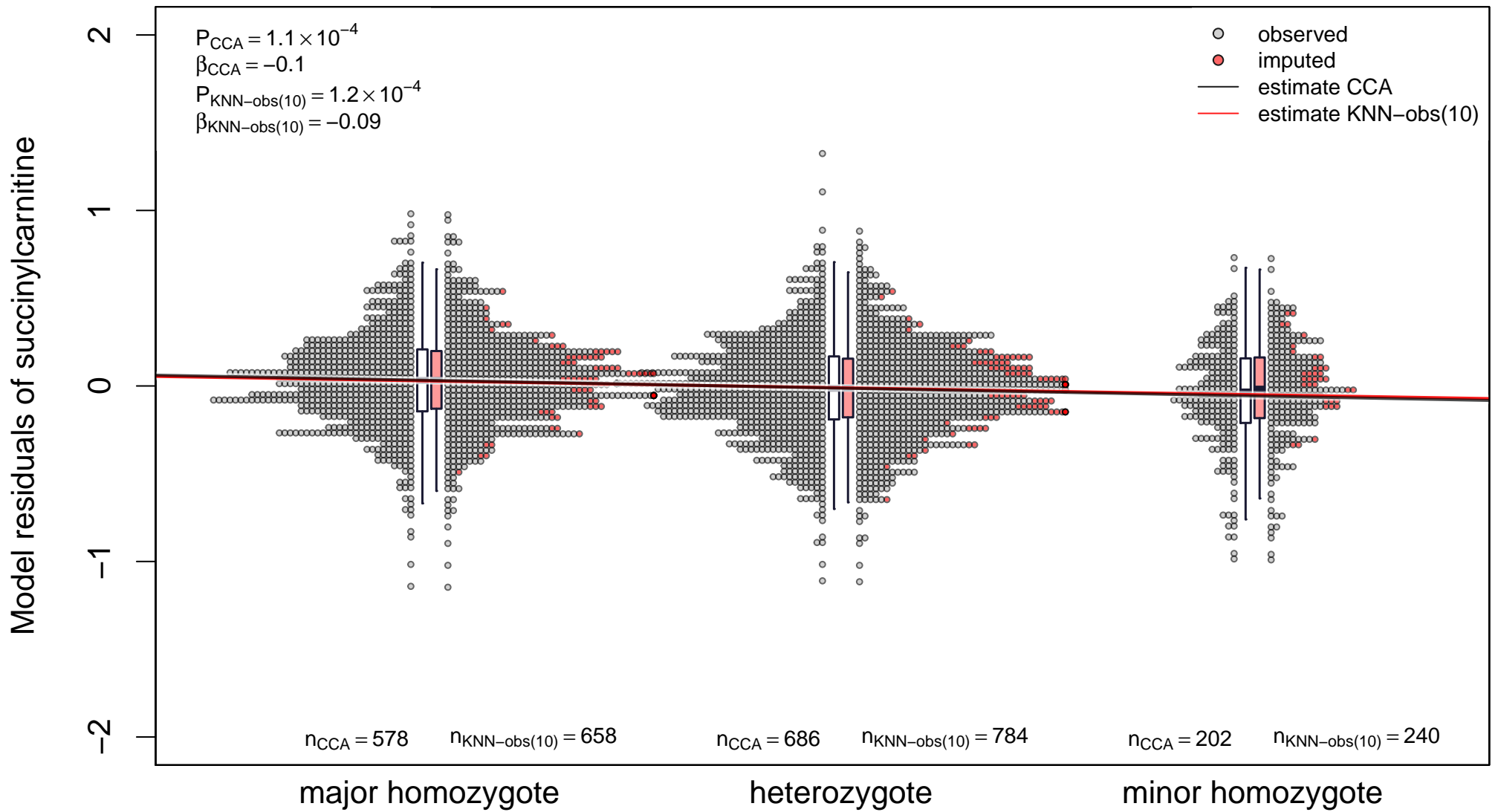
Genotype of SNP rs10988217 (CRAT)

# KNN-obs(1)



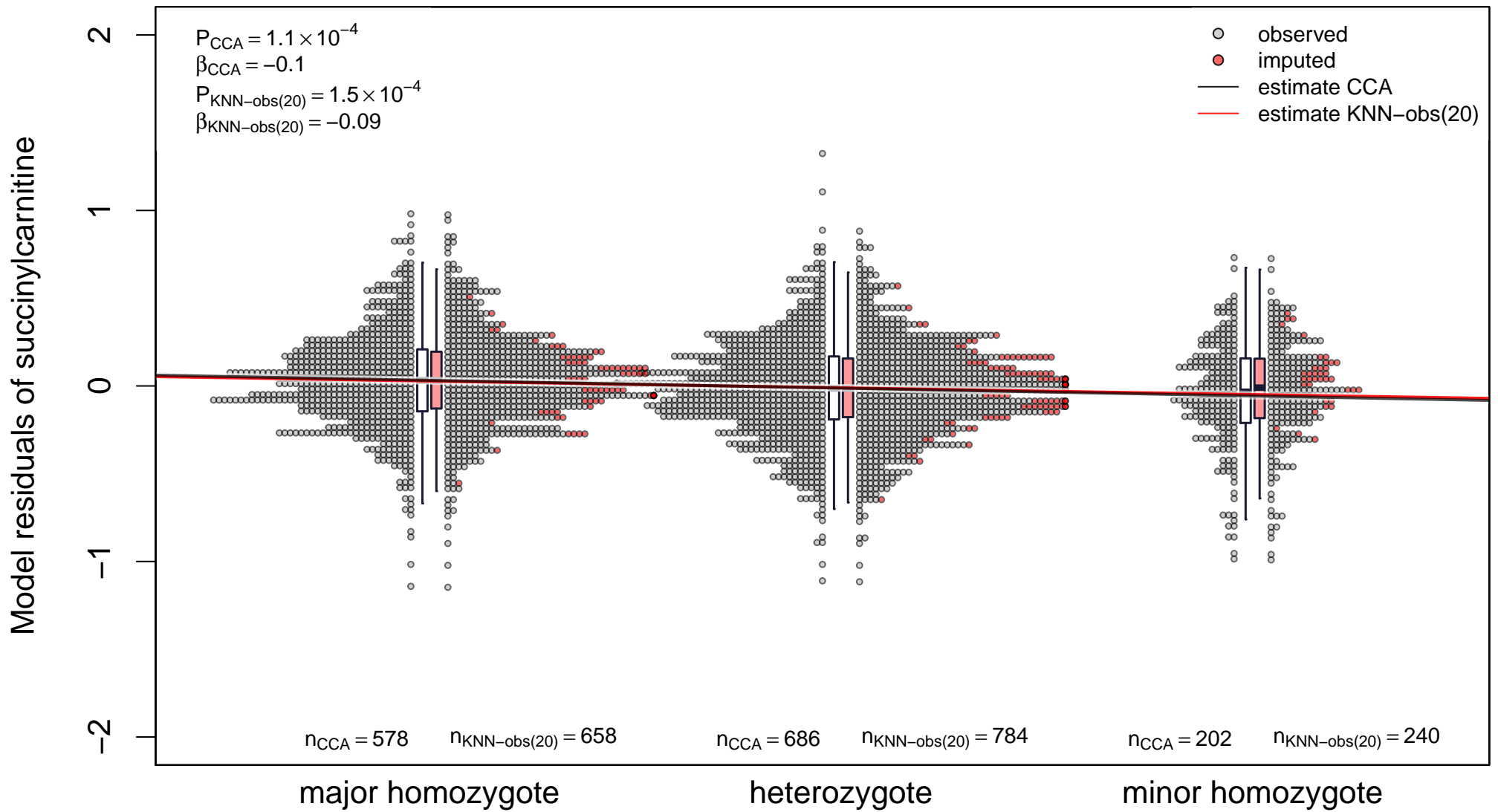
Genotype of SNP rs10988217 (CRAT)

# KNN-obs(10)



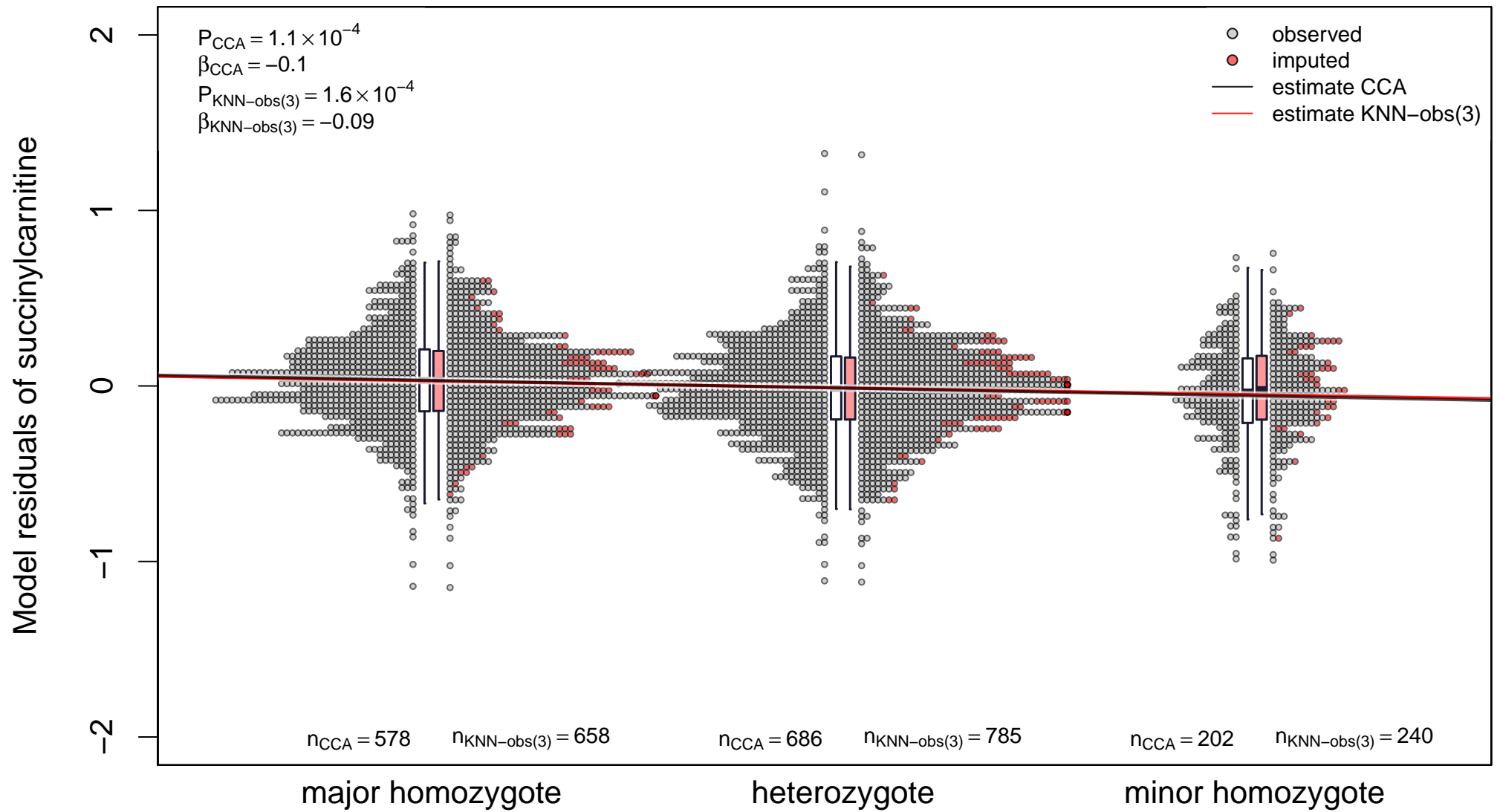
Genotype of SNP rs10988217 (CRAT)

# KNN-obs(20)



Genotype of SNP rs10988217 (CRAT)

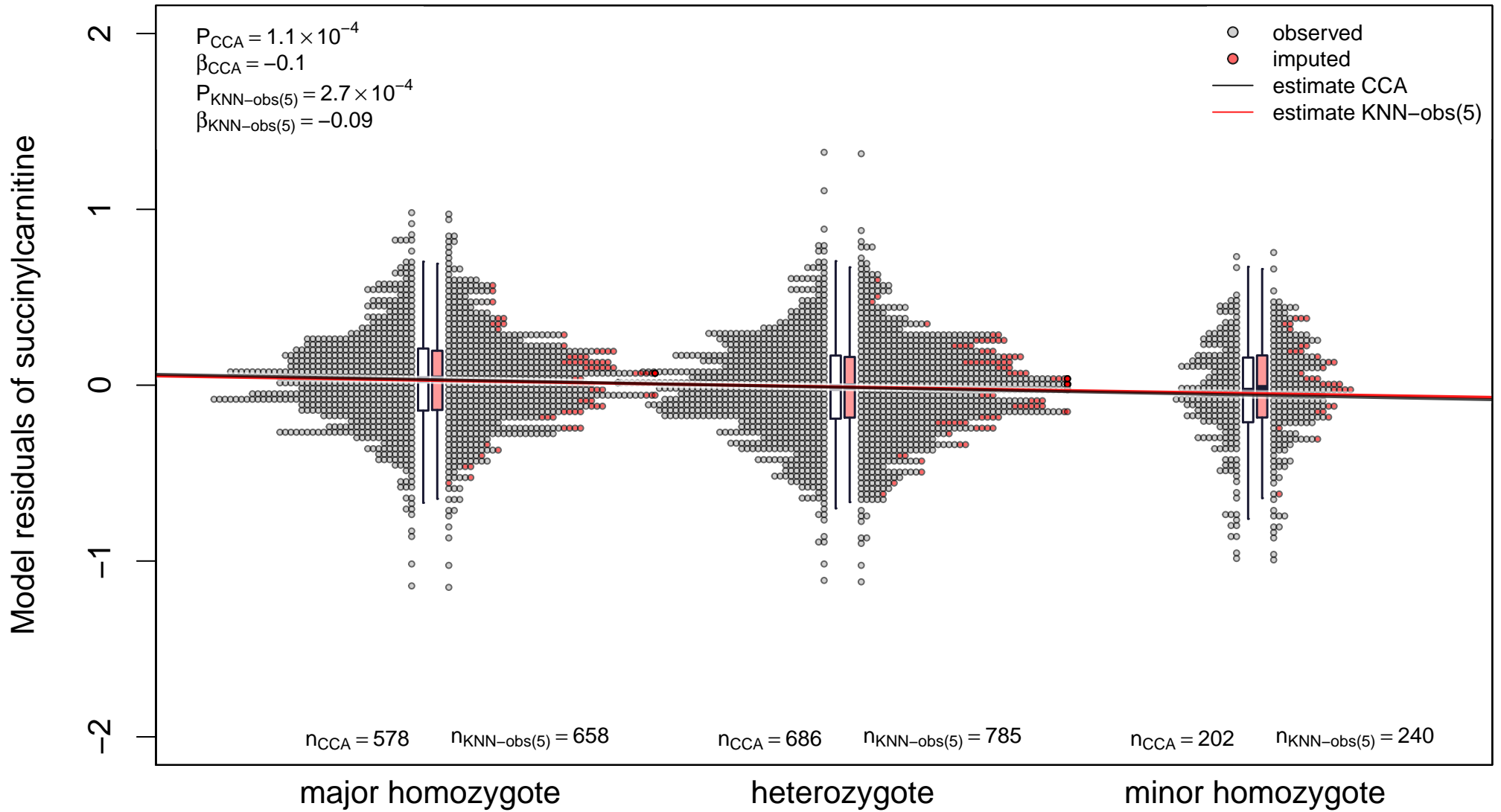
# KNN-obs(3)



Genotype of SNP rs10988217 (CRAT)

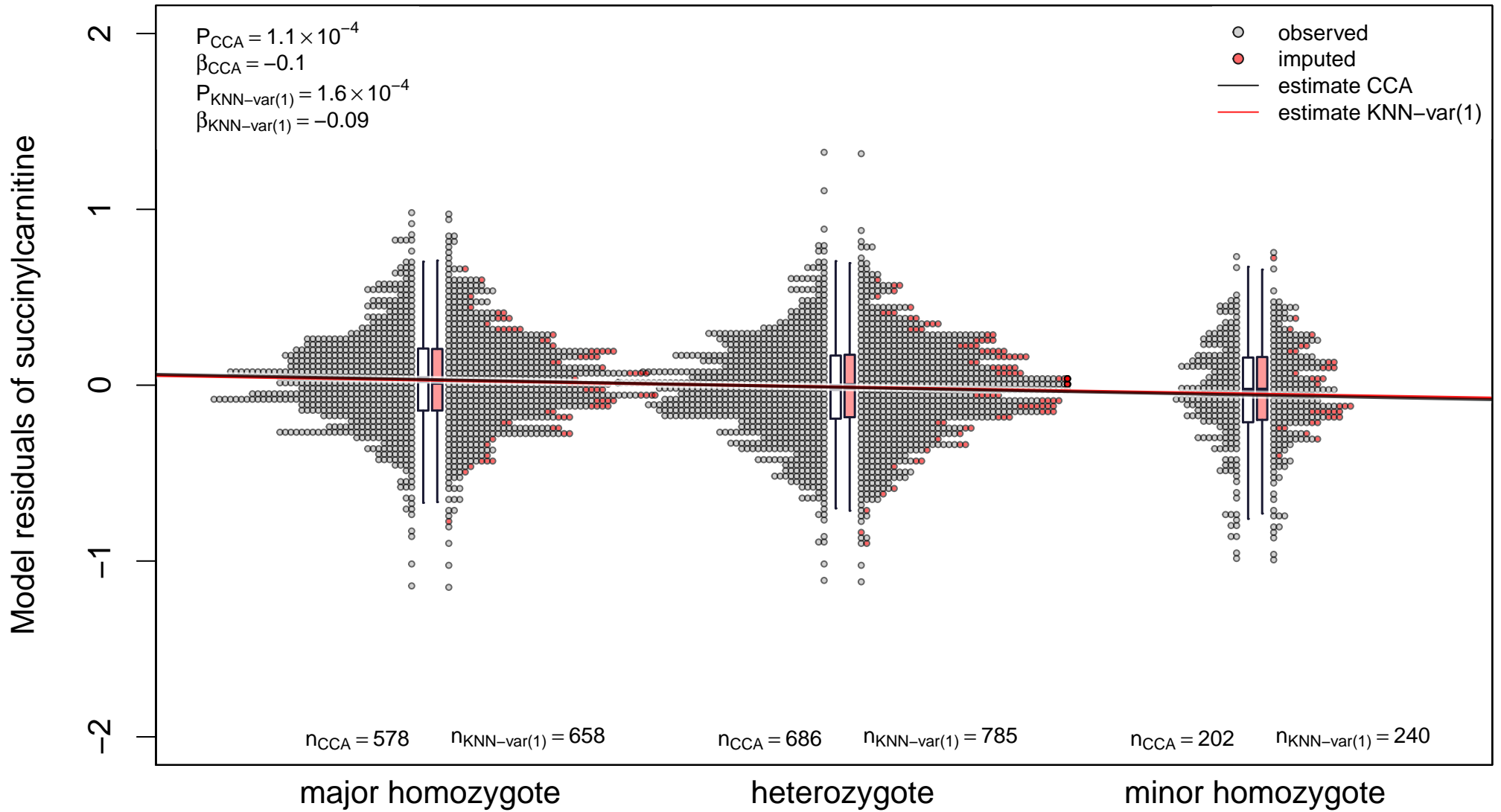


# KNN-obs(5)



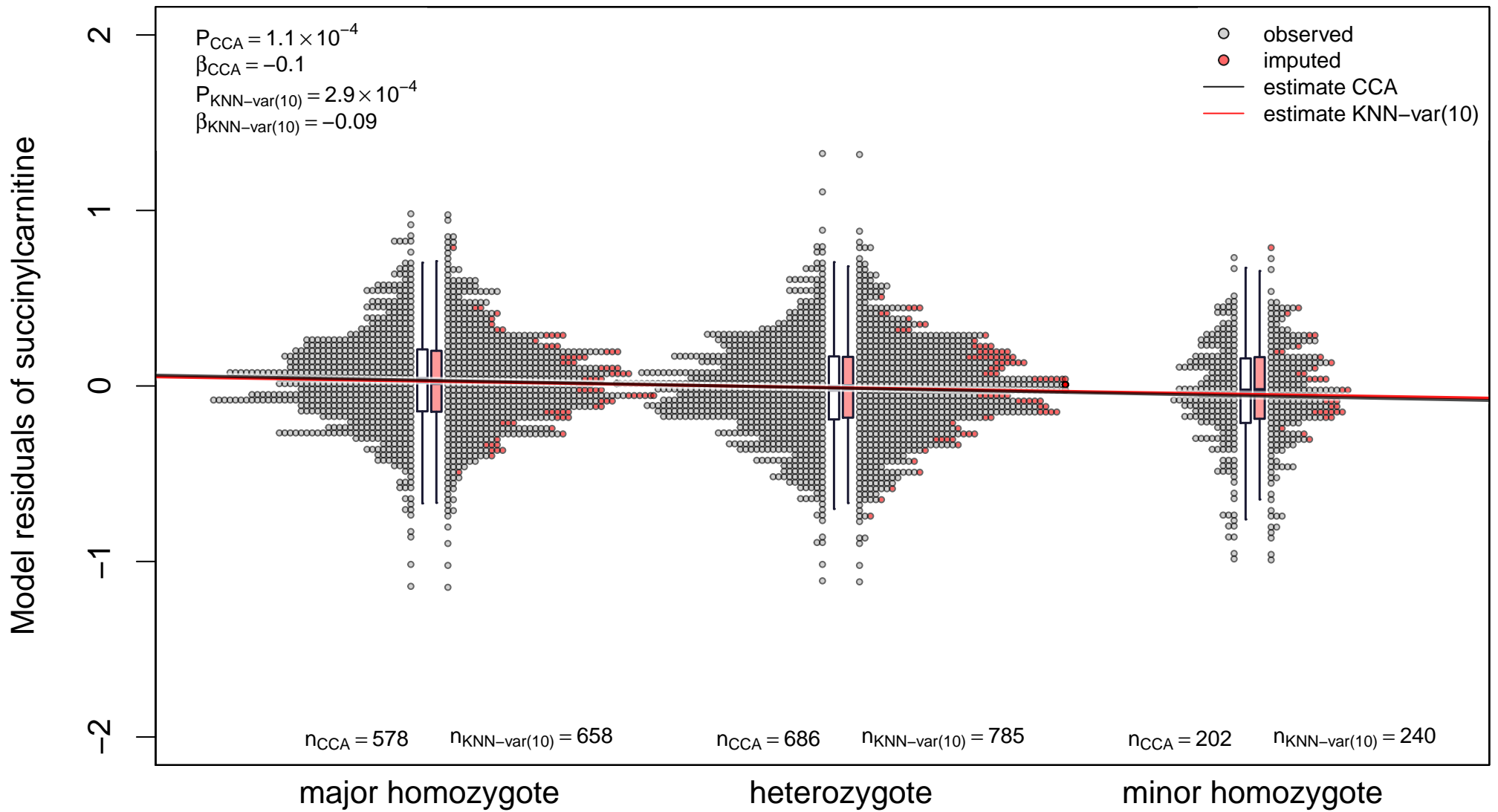
Genotype of SNP rs10988217 (CRAT)

# KNN-var(1)



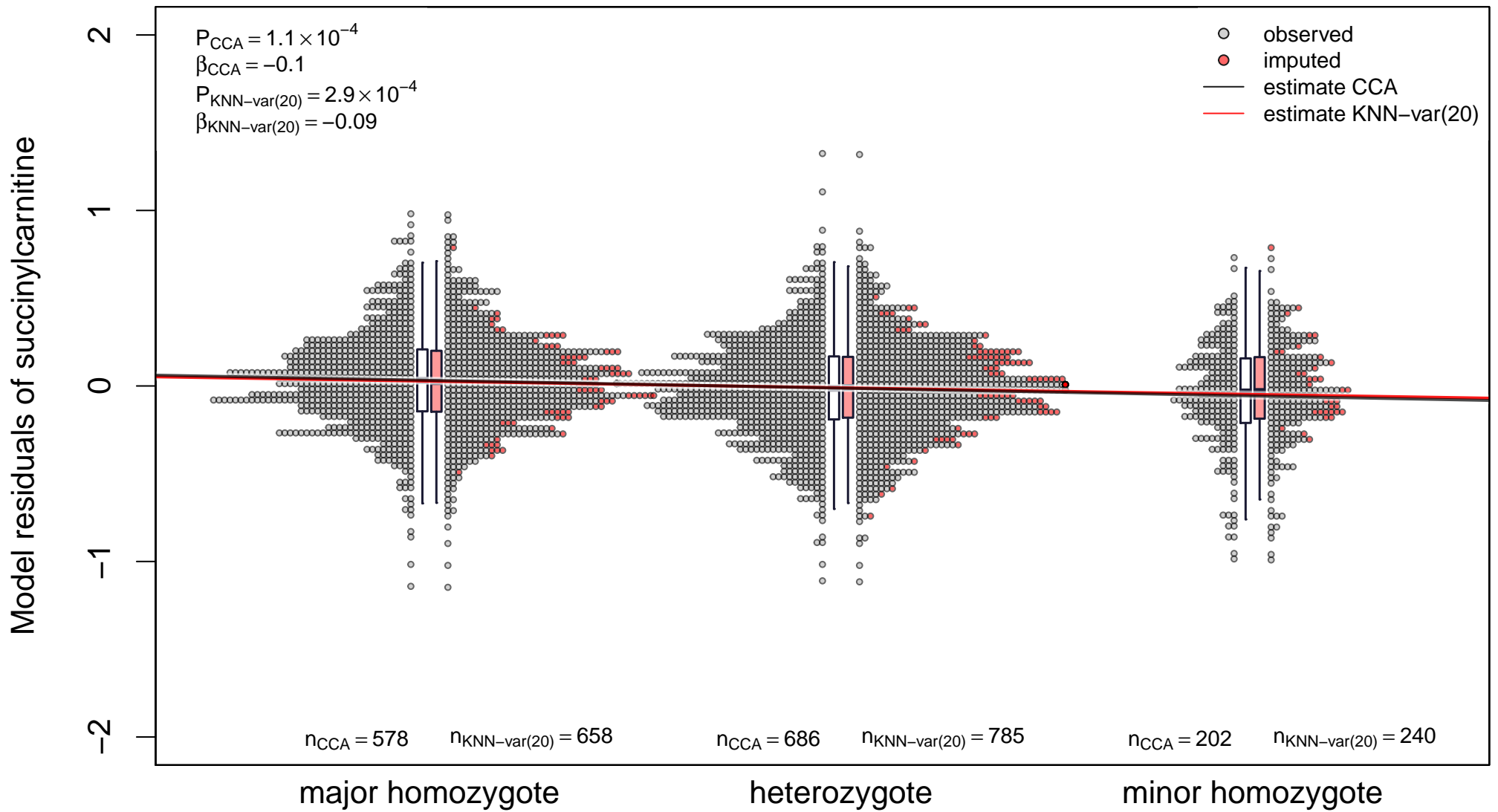
Genotype of SNP rs10988217 (CRAT)

# KNN-var(10)



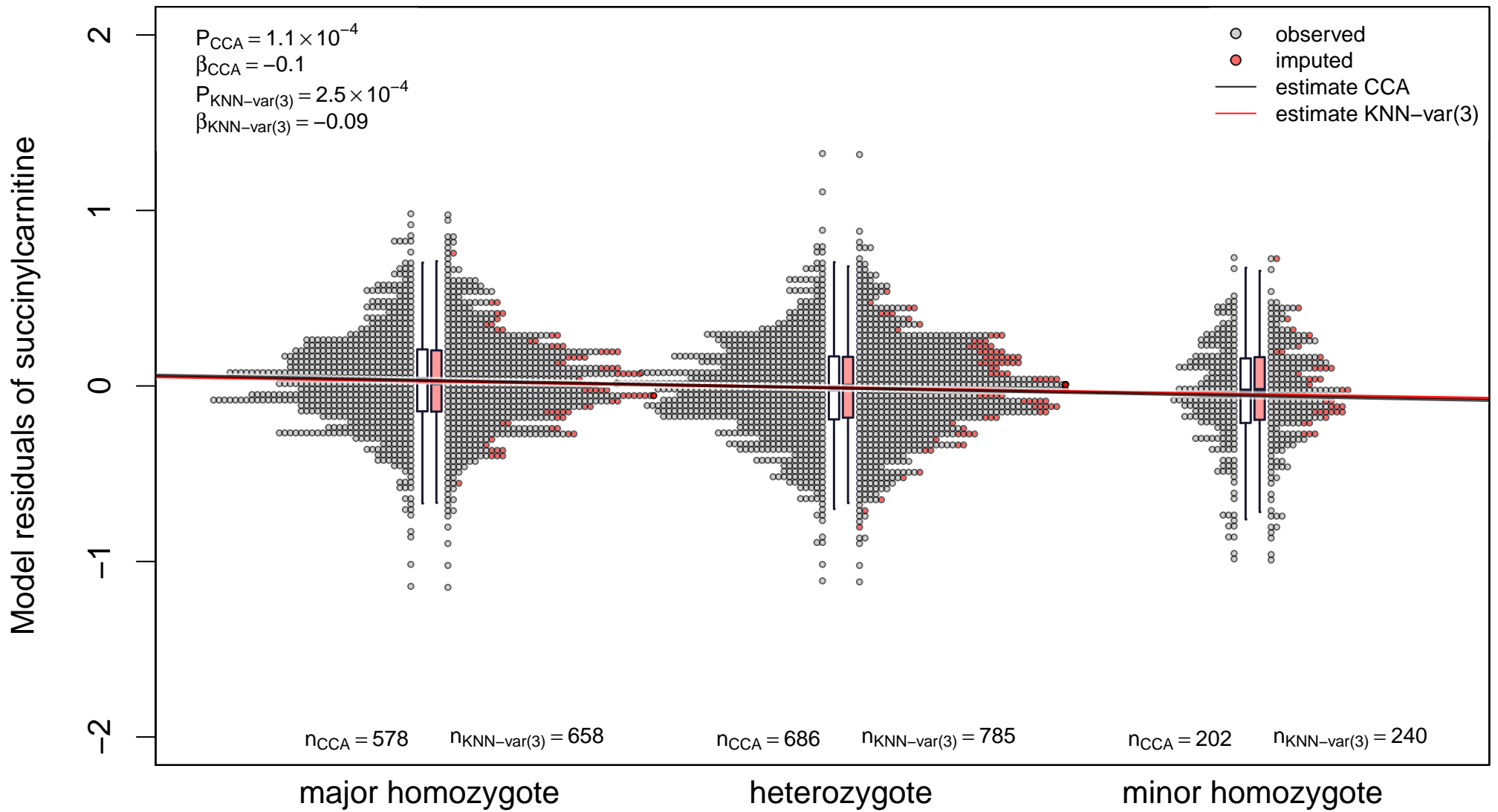
Genotype of SNP rs10988217 (CRAT)

# KNN-var(20)



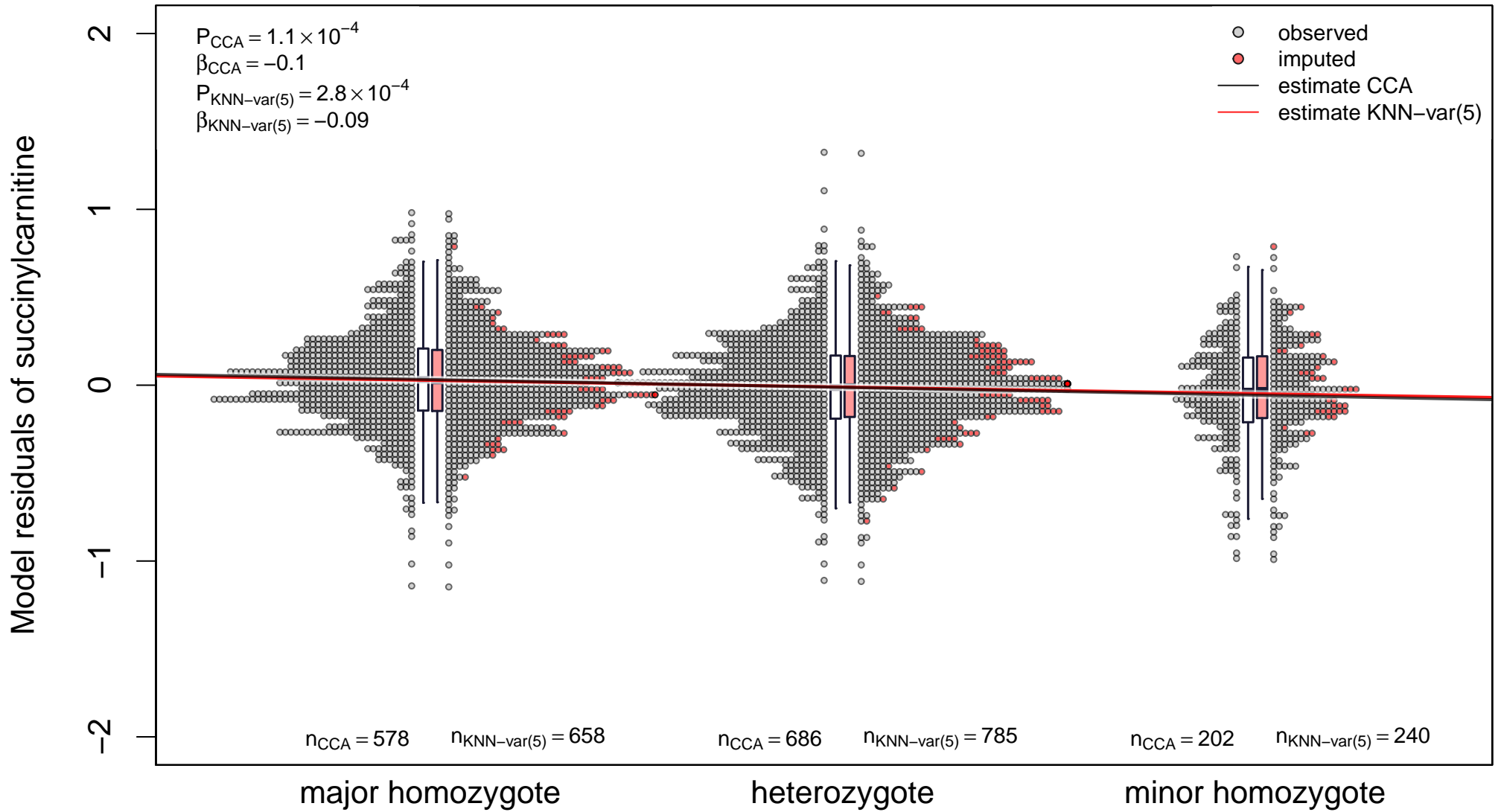
Genotype of SNP rs10988217 (CRAT)

# KNN-var(3)



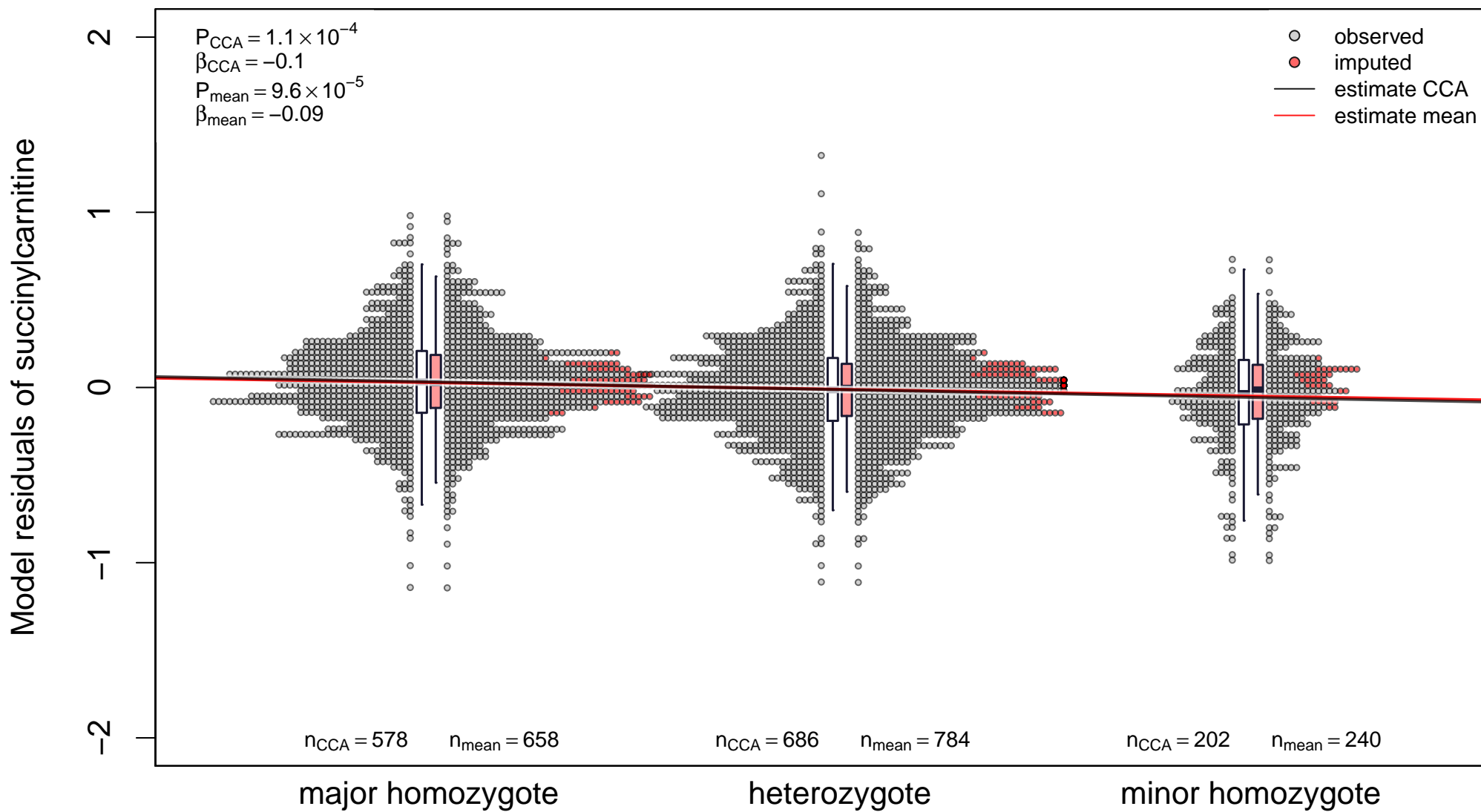
Genotype of SNP rs10988217 (CRAT)

# KNN-var(5)



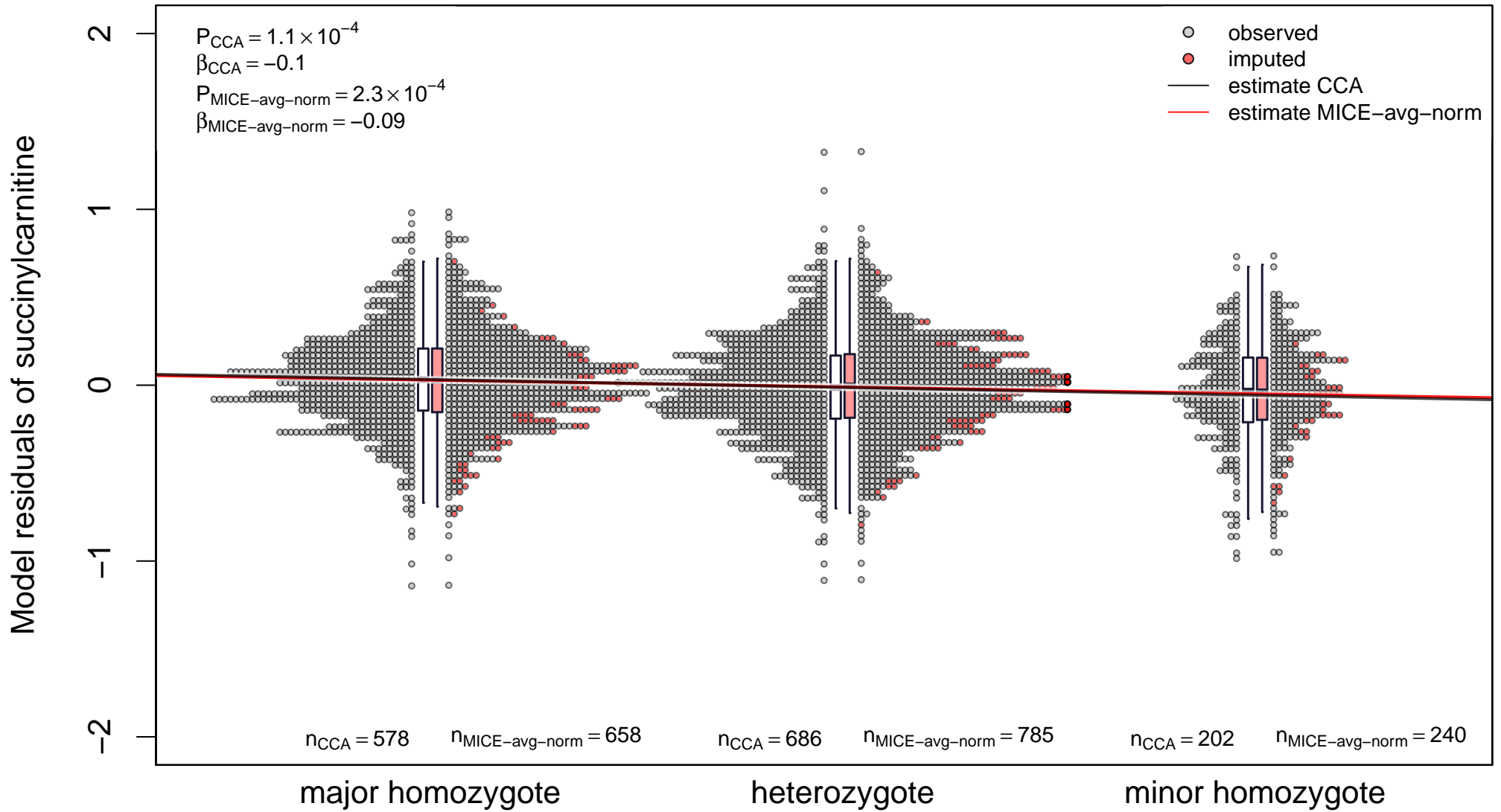
Genotype of SNP rs10988217 (CRAT)

# mean



Genotype of SNP rs10988217 (CRAT)

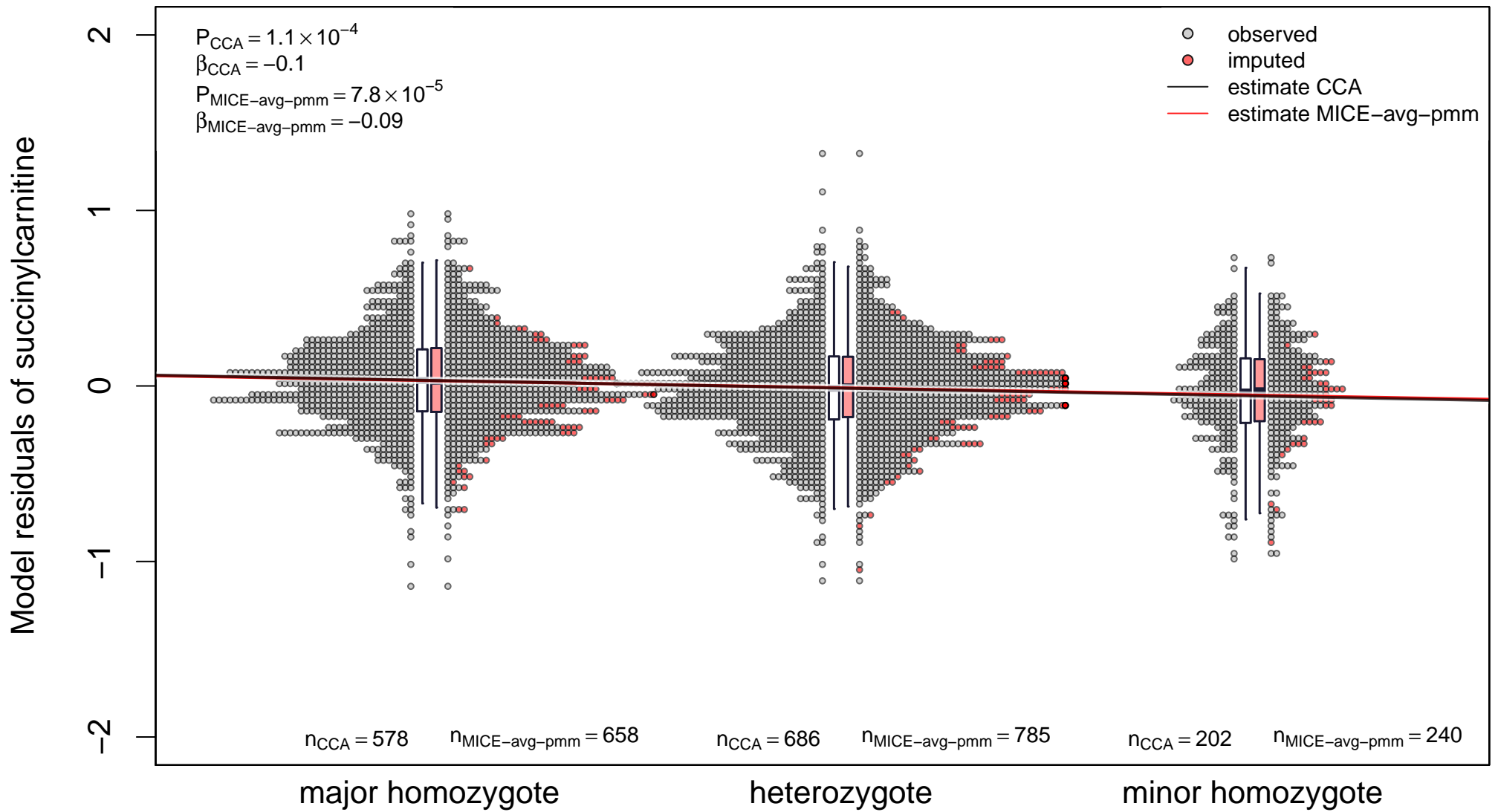
# MICE-avg-norm



Genotype of SNP rs10988217 (CRAT)

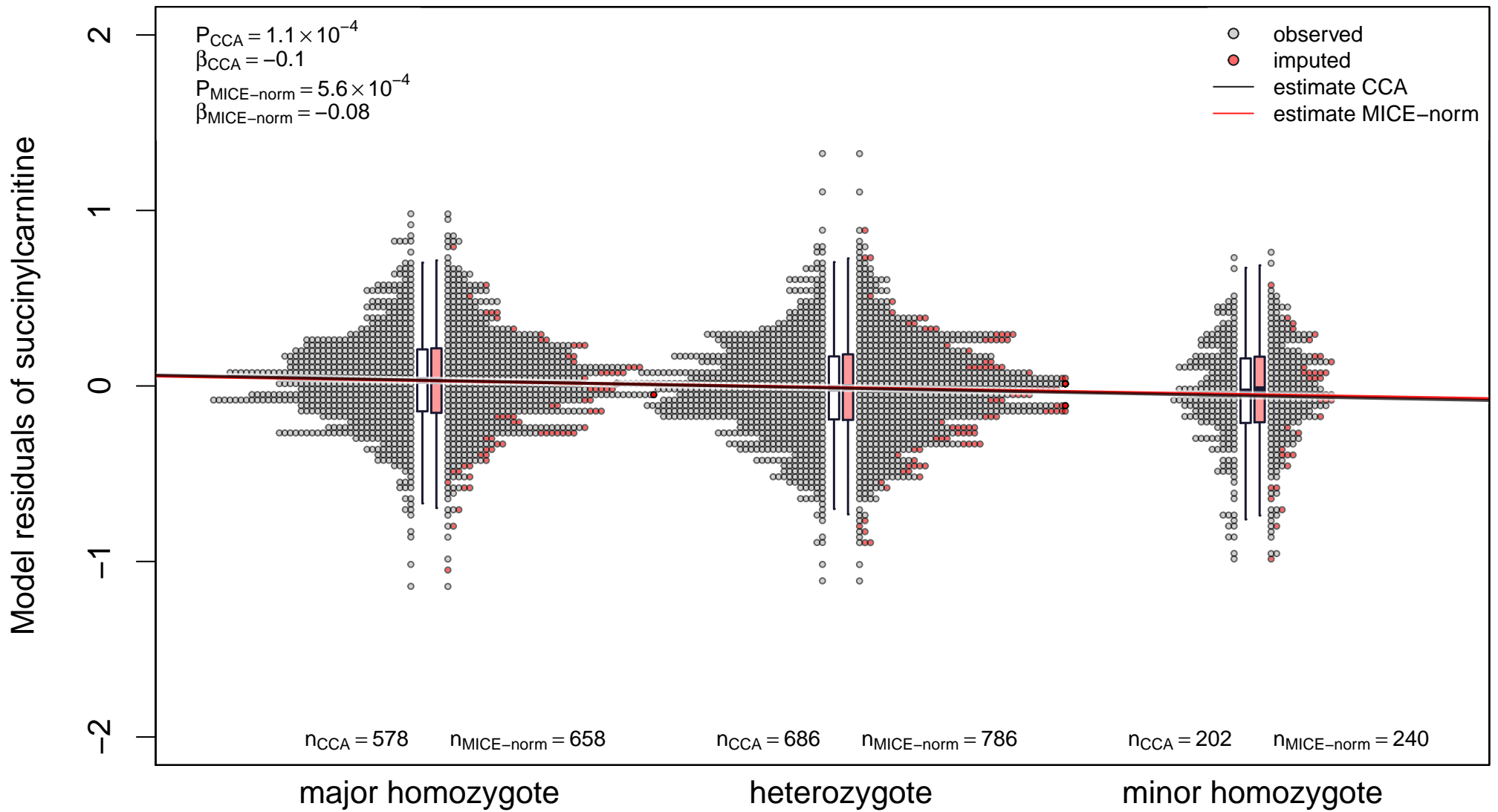


# MICE-avg-pmm



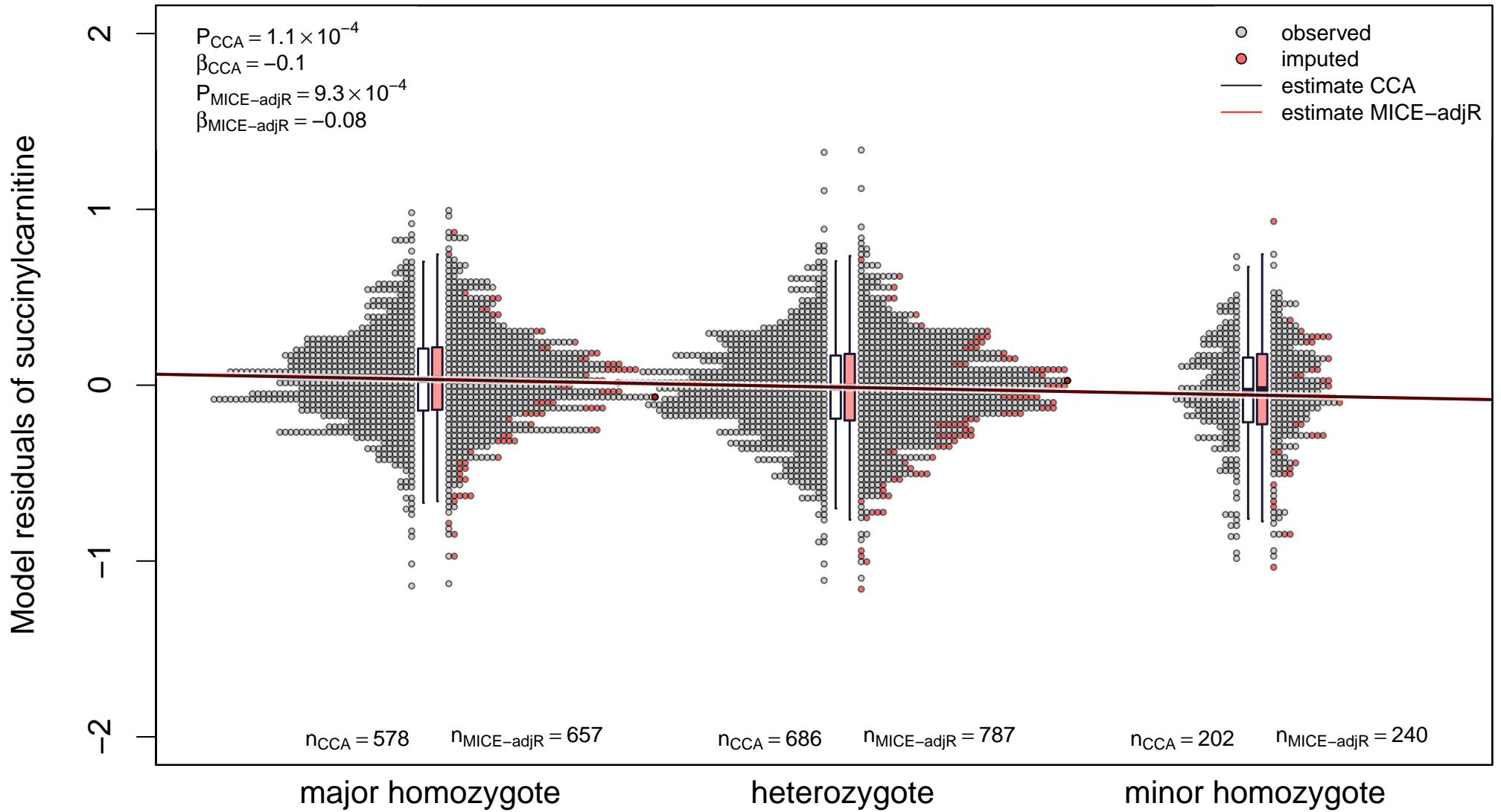
Genotype of SNP rs10988217 (CRAT)

# MICE-norm

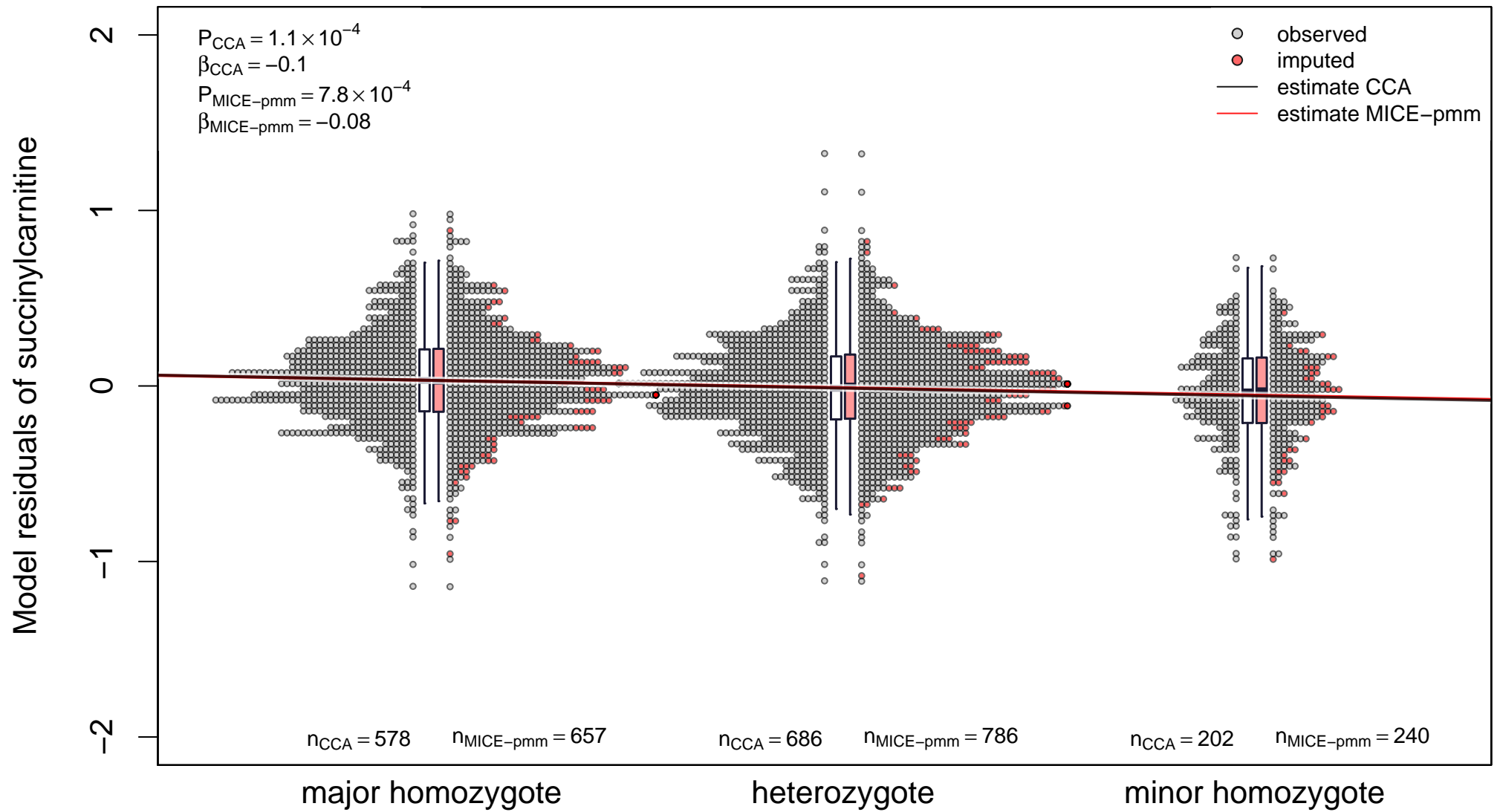


Genotype of SNP rs10988217 (CRAT)

# MICE-adjR

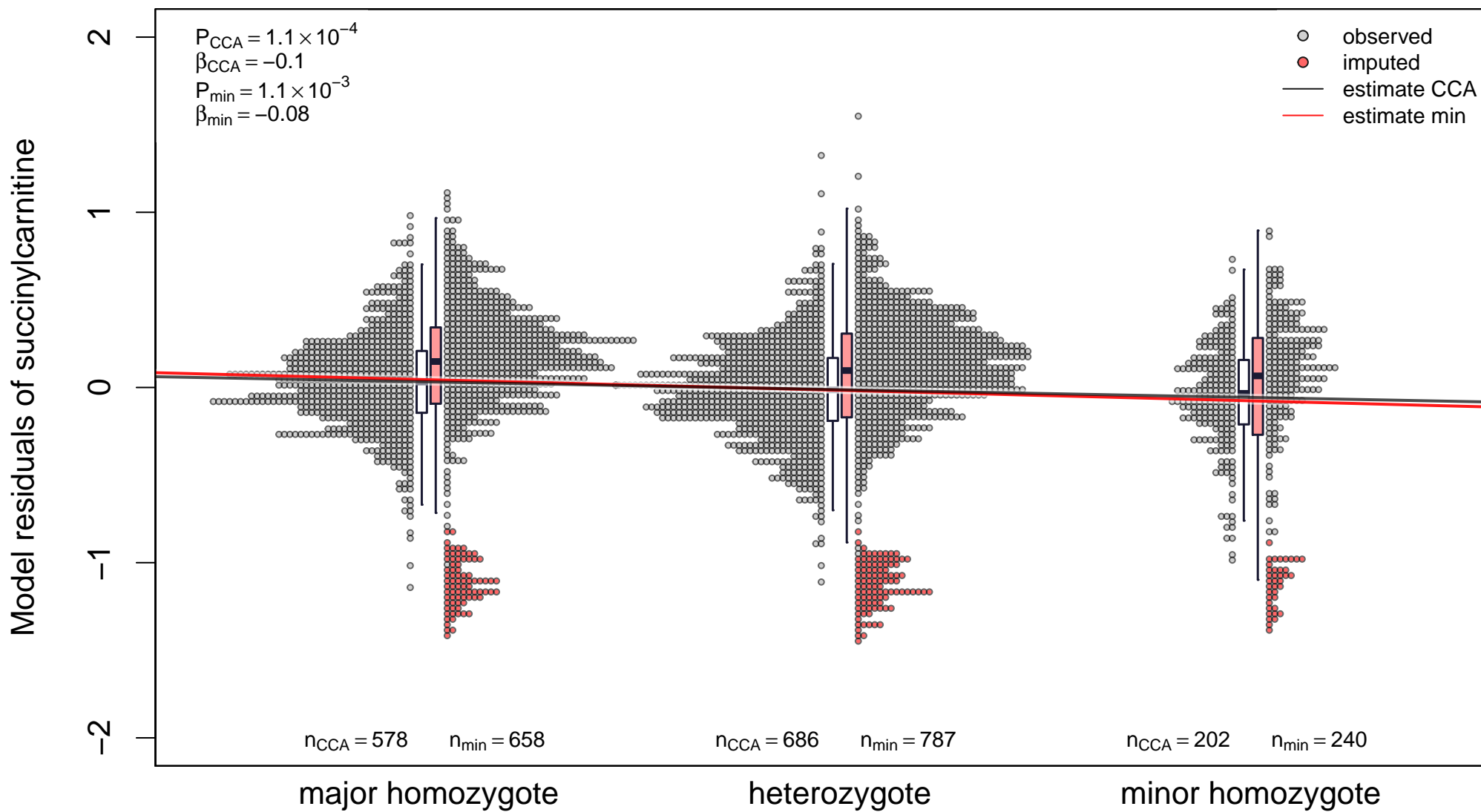


# MICE-pmm

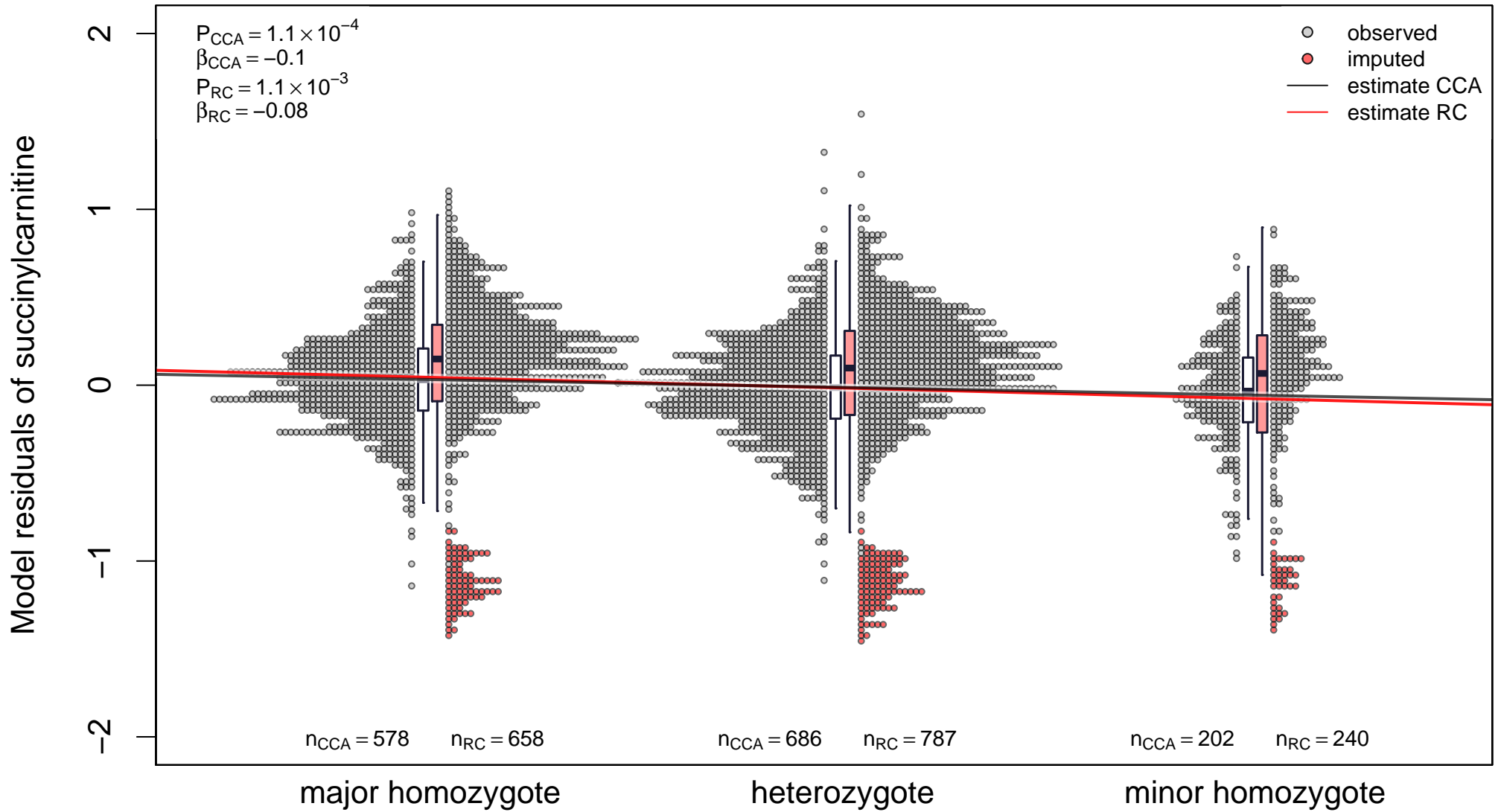


Genotype of SNP rs10988217 (CRAT)

min

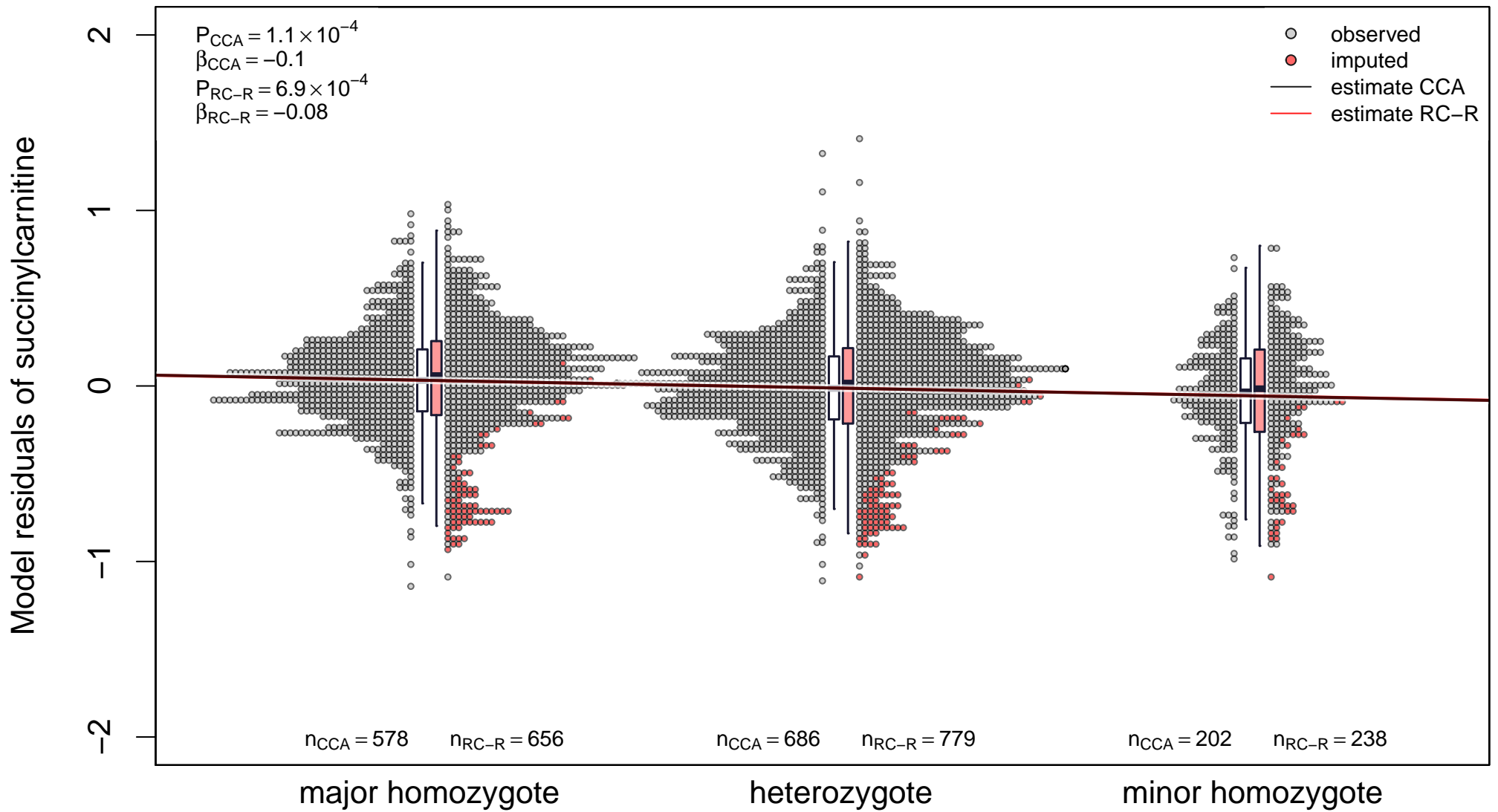


# RC



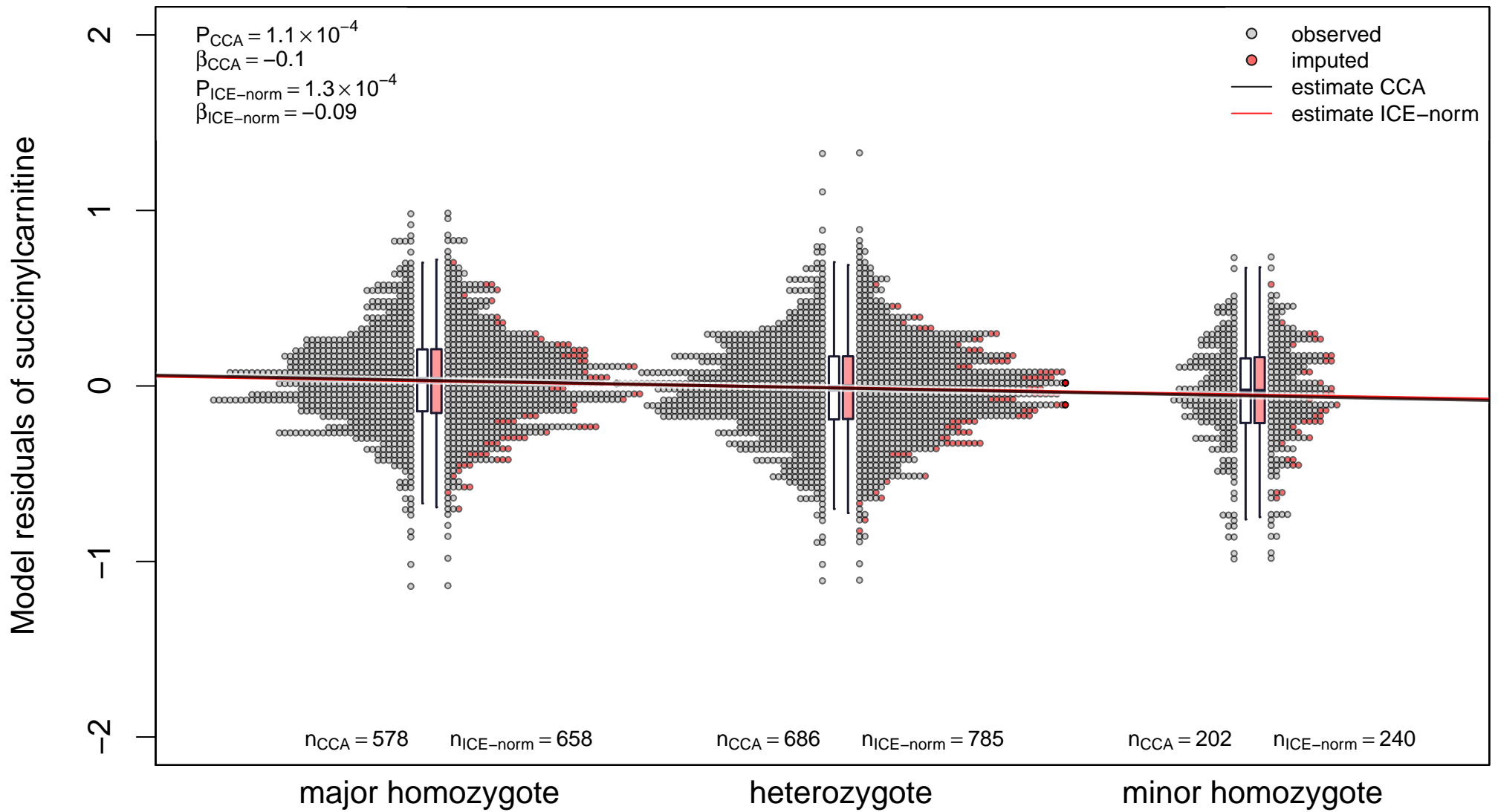
Genotype of SNP rs10988217 (CRAT)

# RC-R



Genotype of SNP rs10988217 (CRAT)

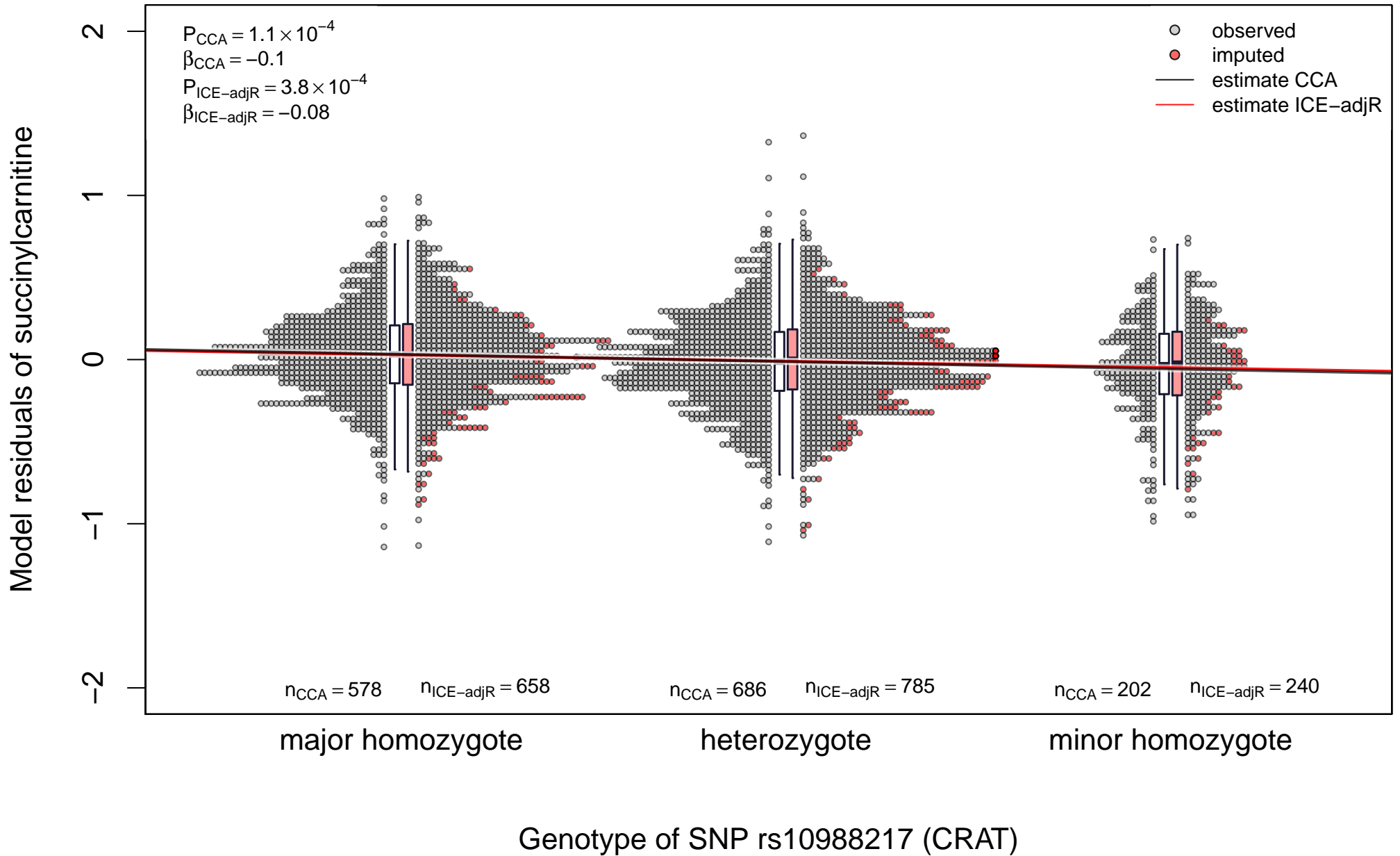
# ICE-norm



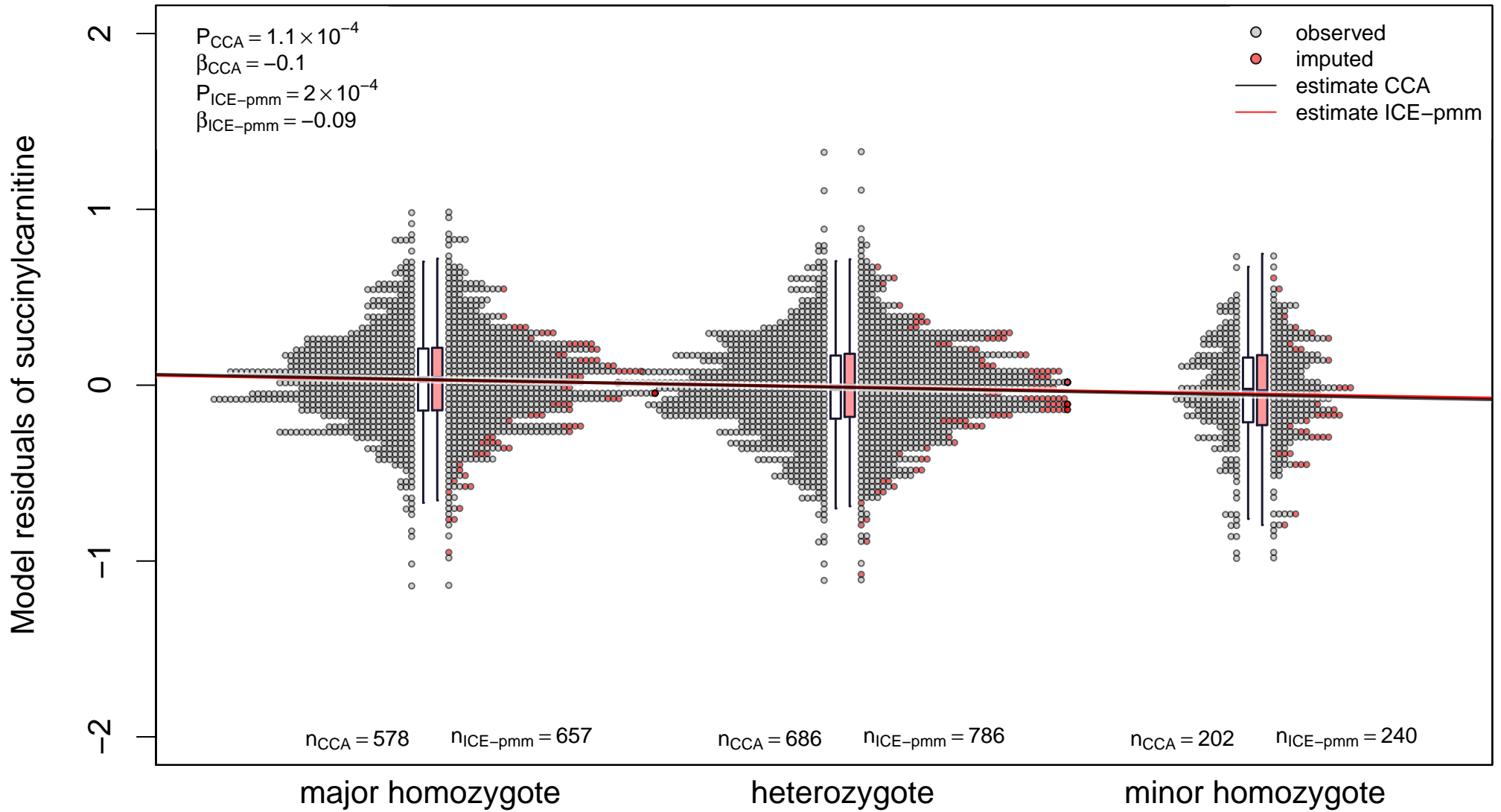
Genotype of SNP rs10988217 (CRAT)



# ICE-adjR

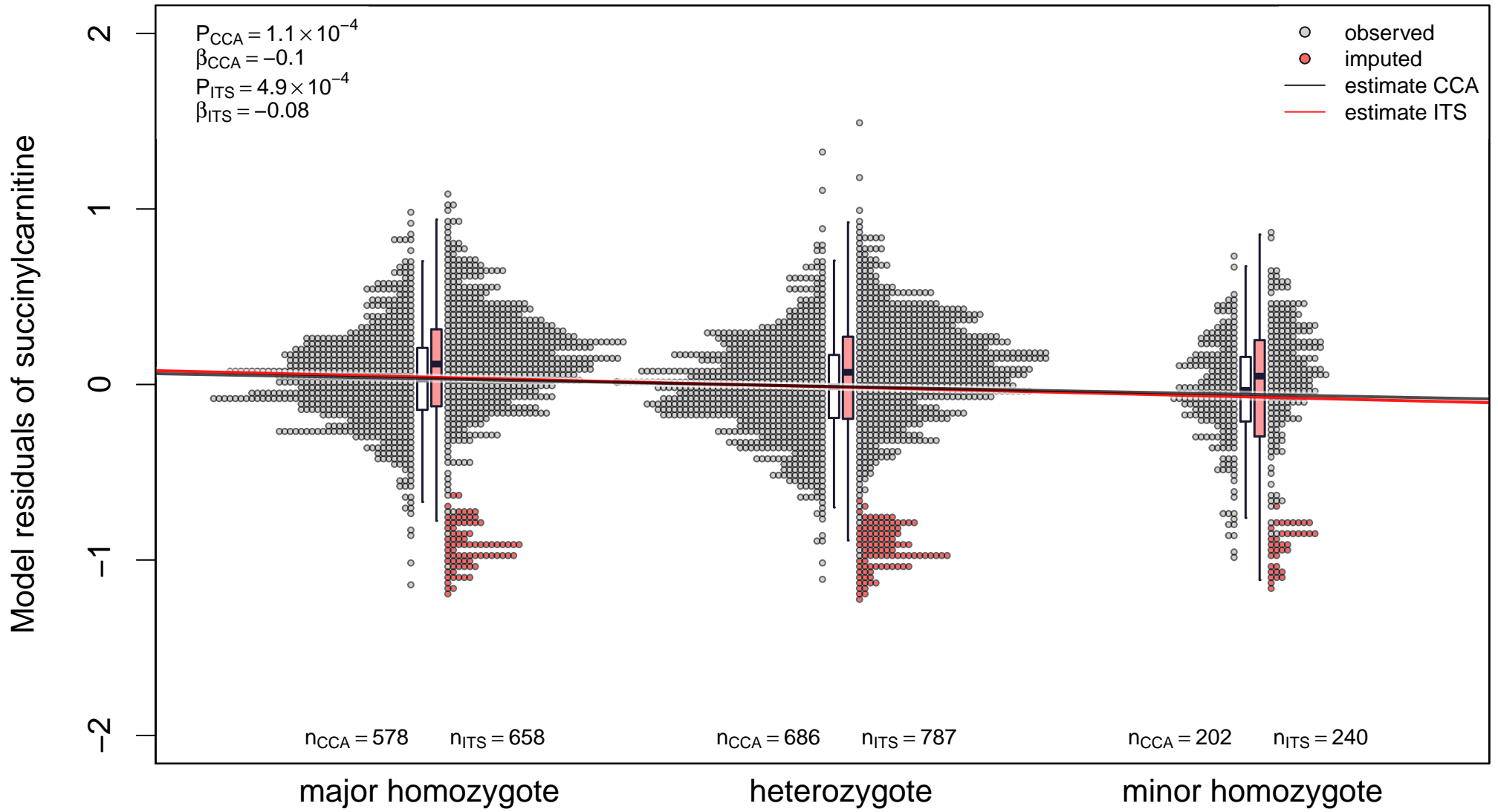


# ICE-pmm



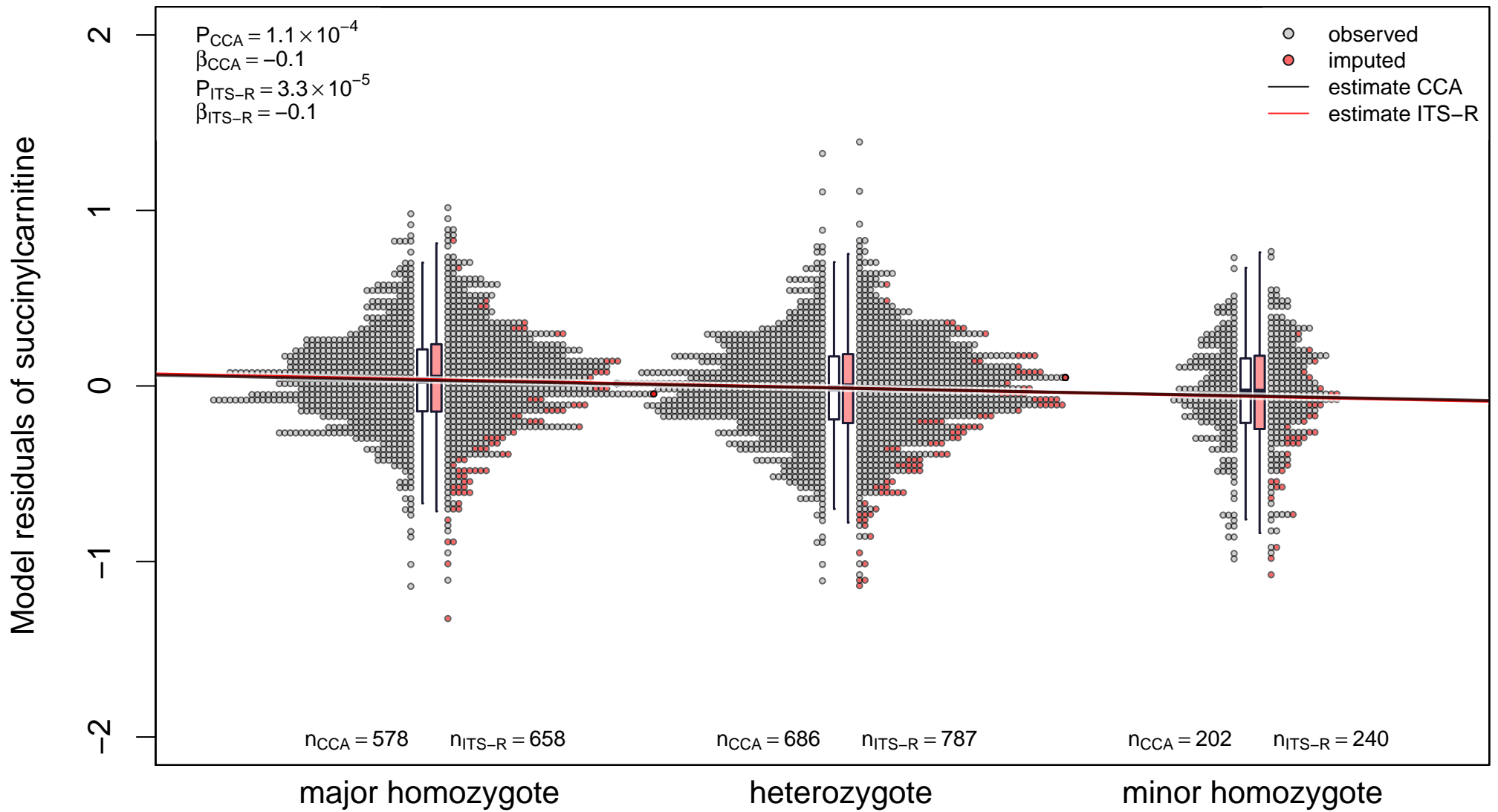
Genotype of SNP rs10988217 (CRAT)

# ITS



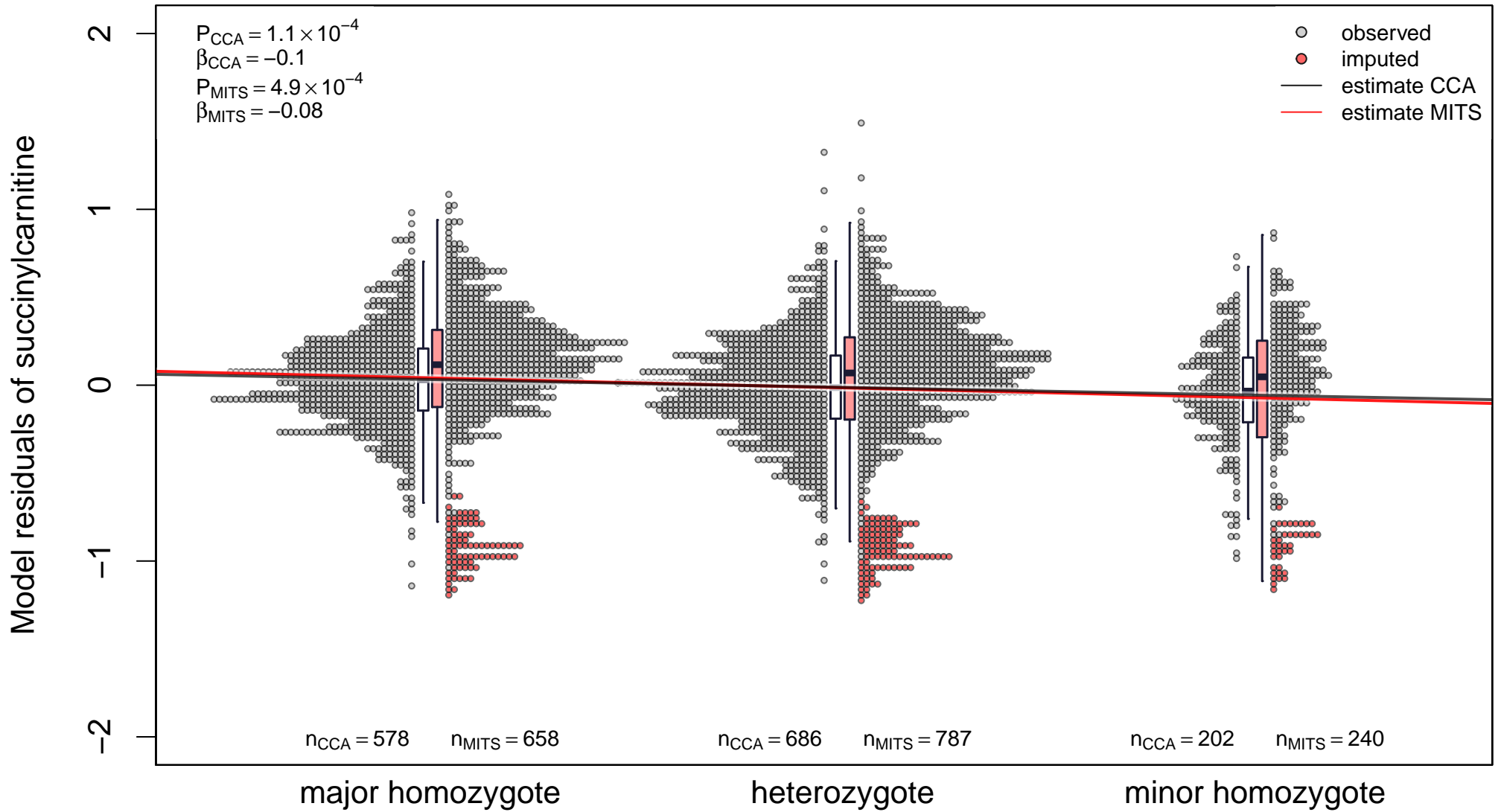
Genotype of SNP rs10988217 (CRAT)

# ITS-R



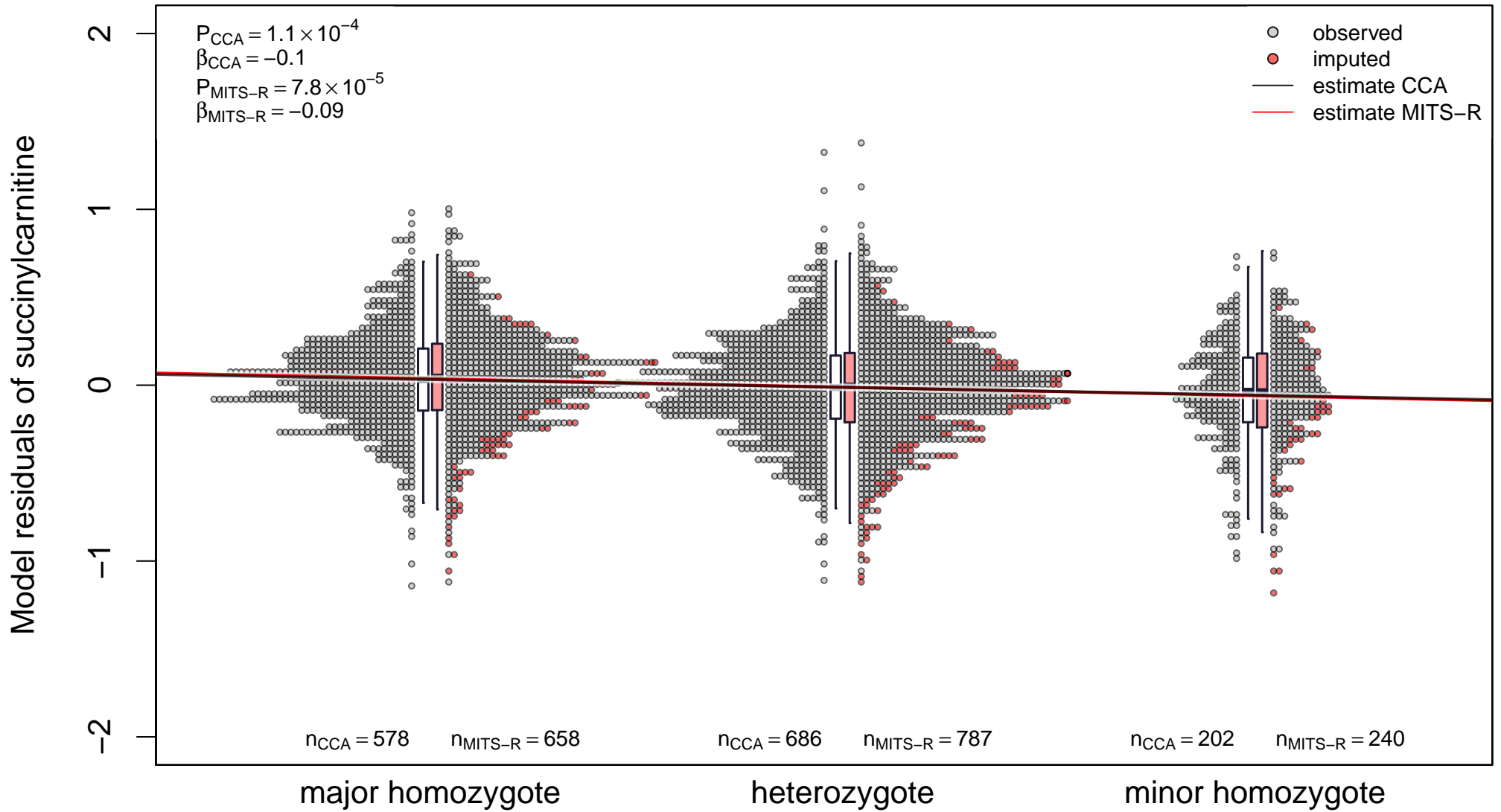
Genotype of SNP rs10988217 (CRAT)

# MITS



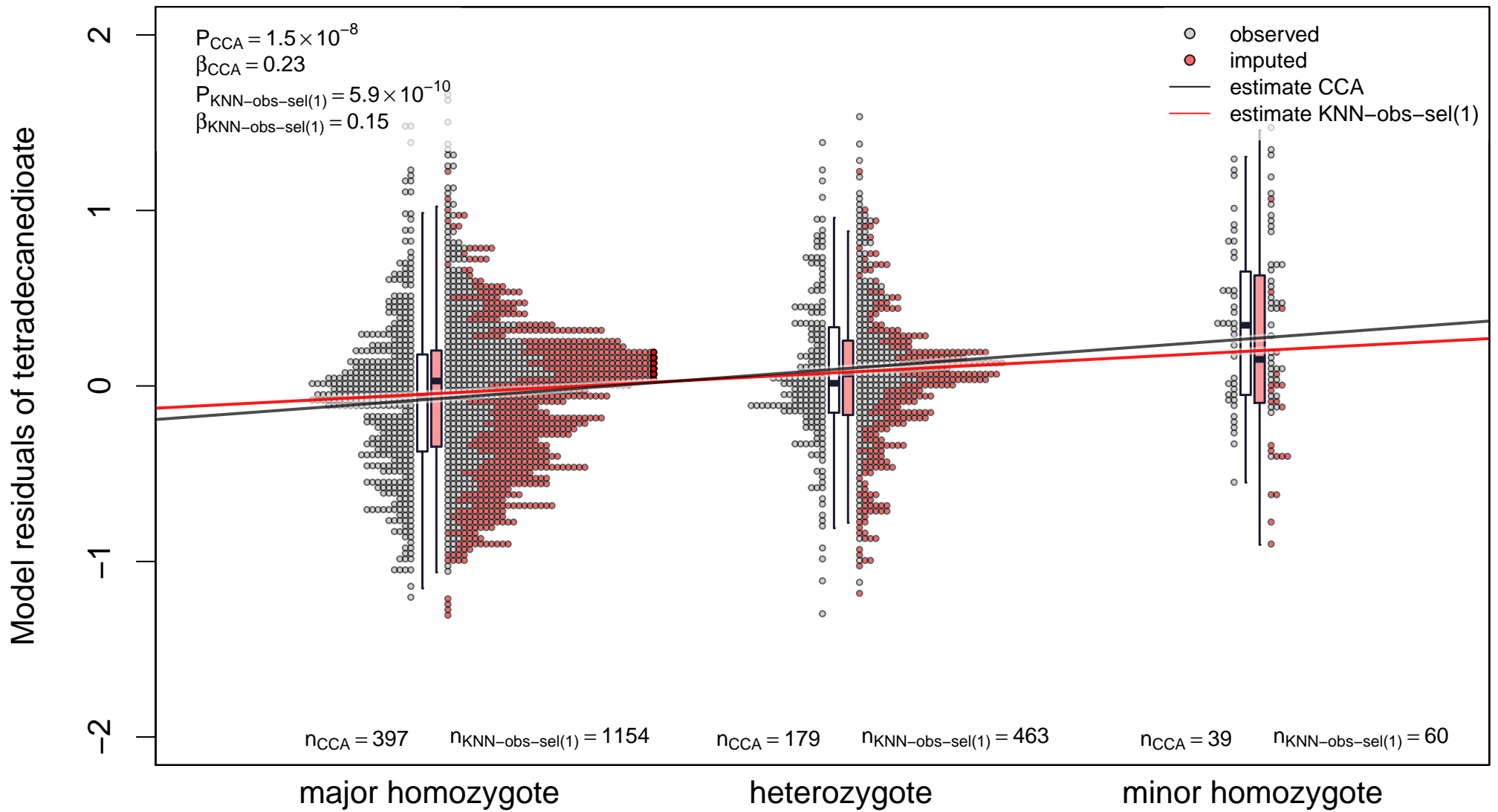
Genotype of SNP rs10988217 (CRAT)

# MITS-R

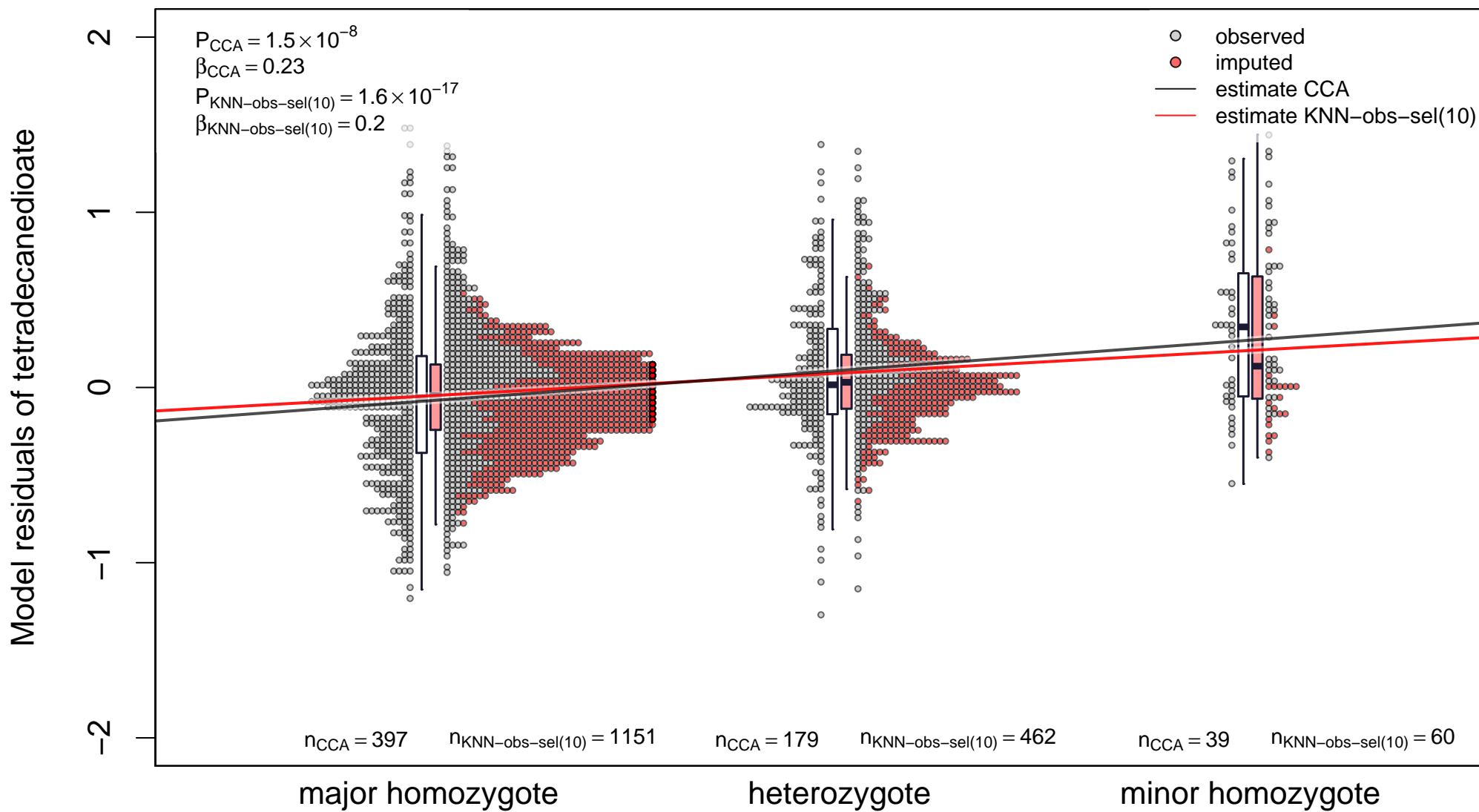


Genotype of SNP rs10988217 (CRAT)

# KNN-obs-sel(1)



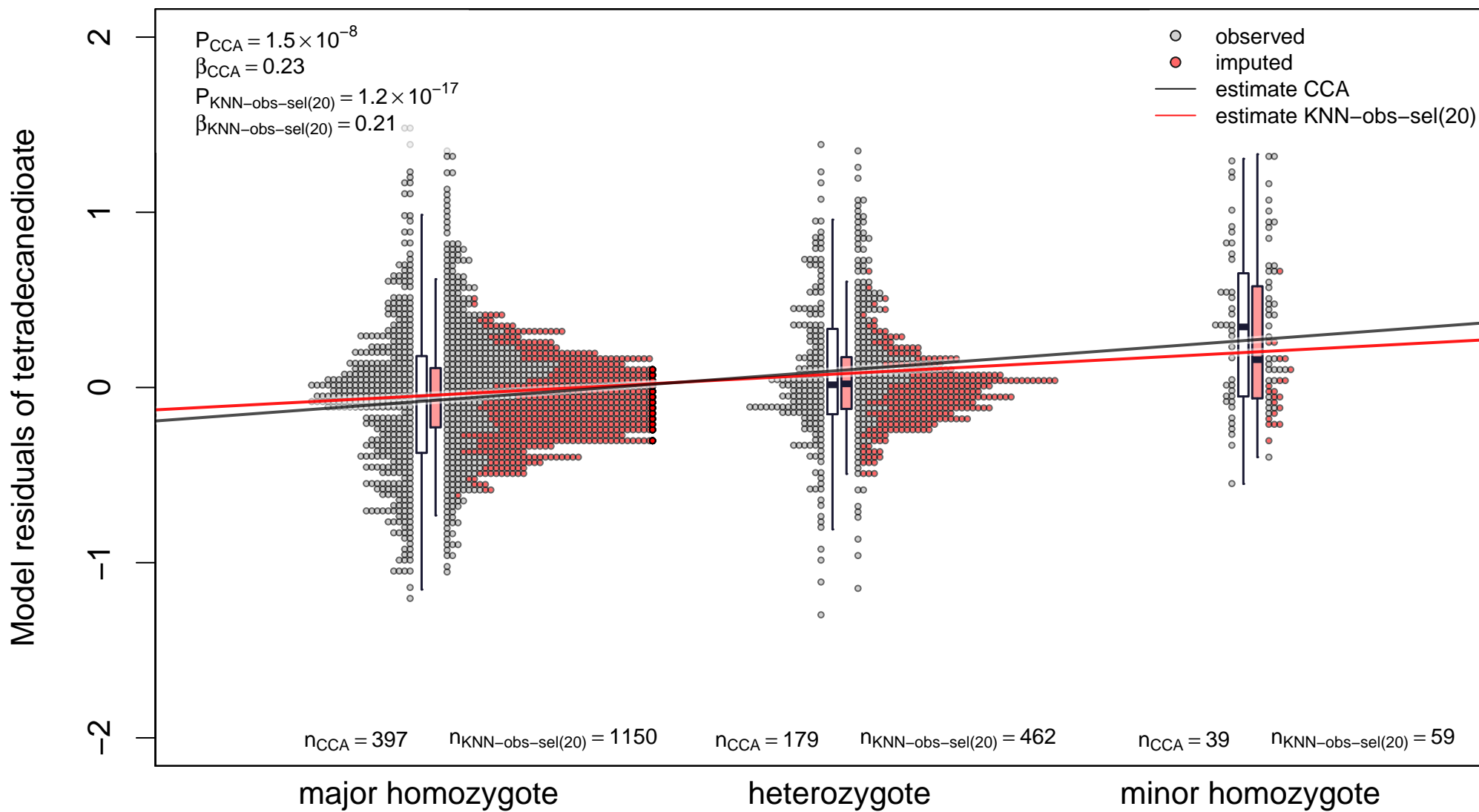
# KNN-obs-sel(10)



Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

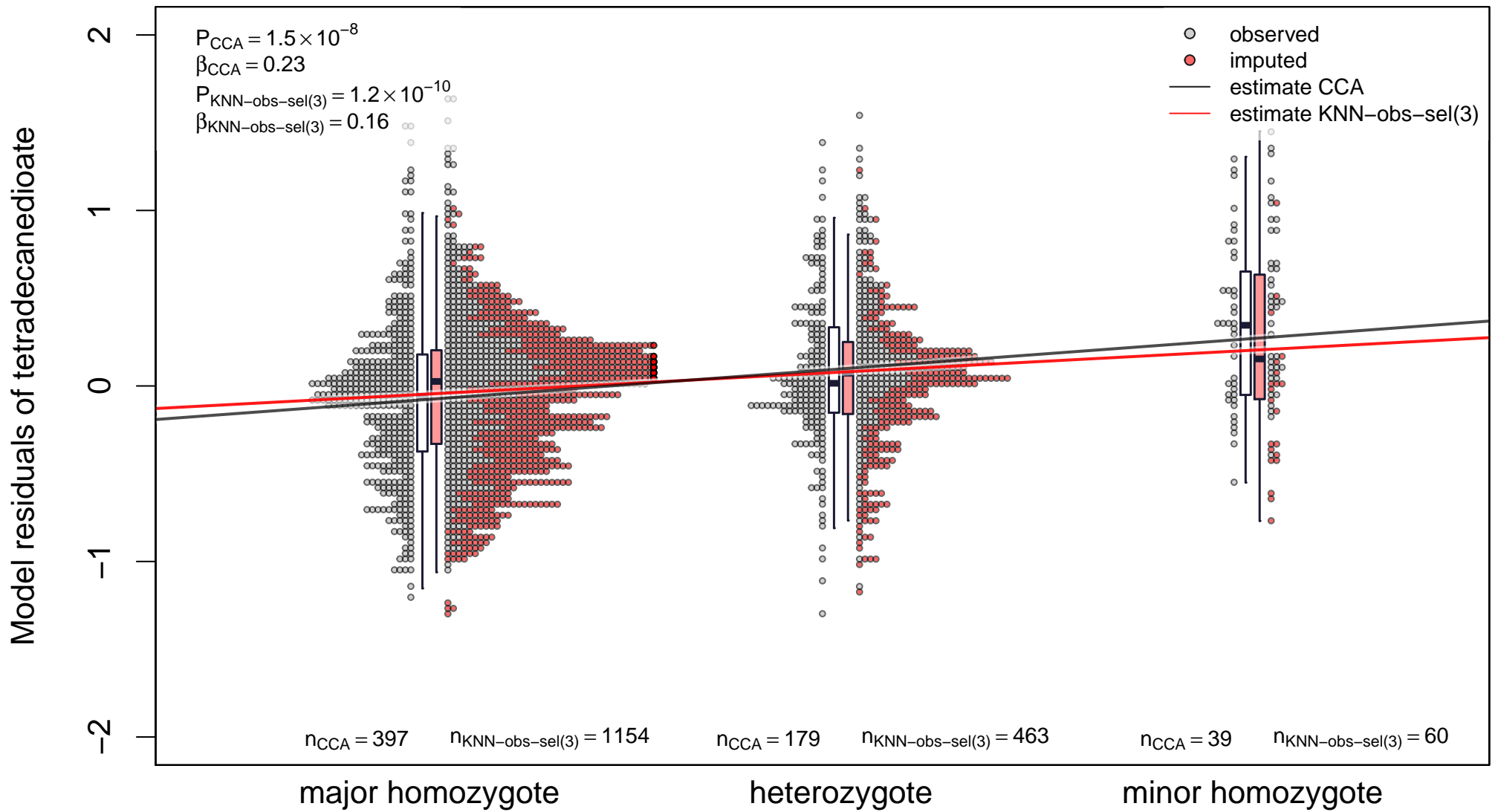


# KNN-obs-sel(20)

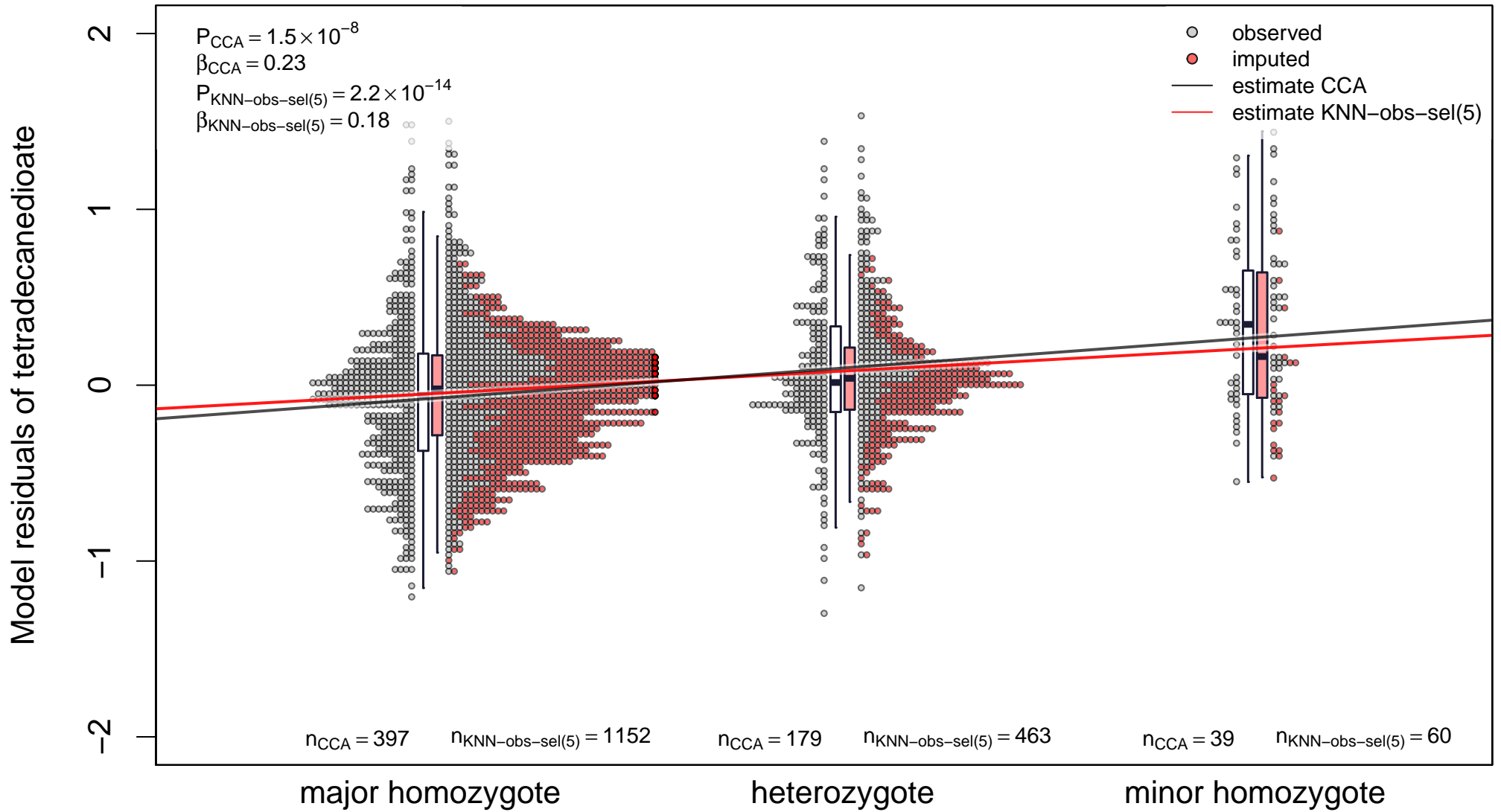


Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

# KNN-obs-sel(3)

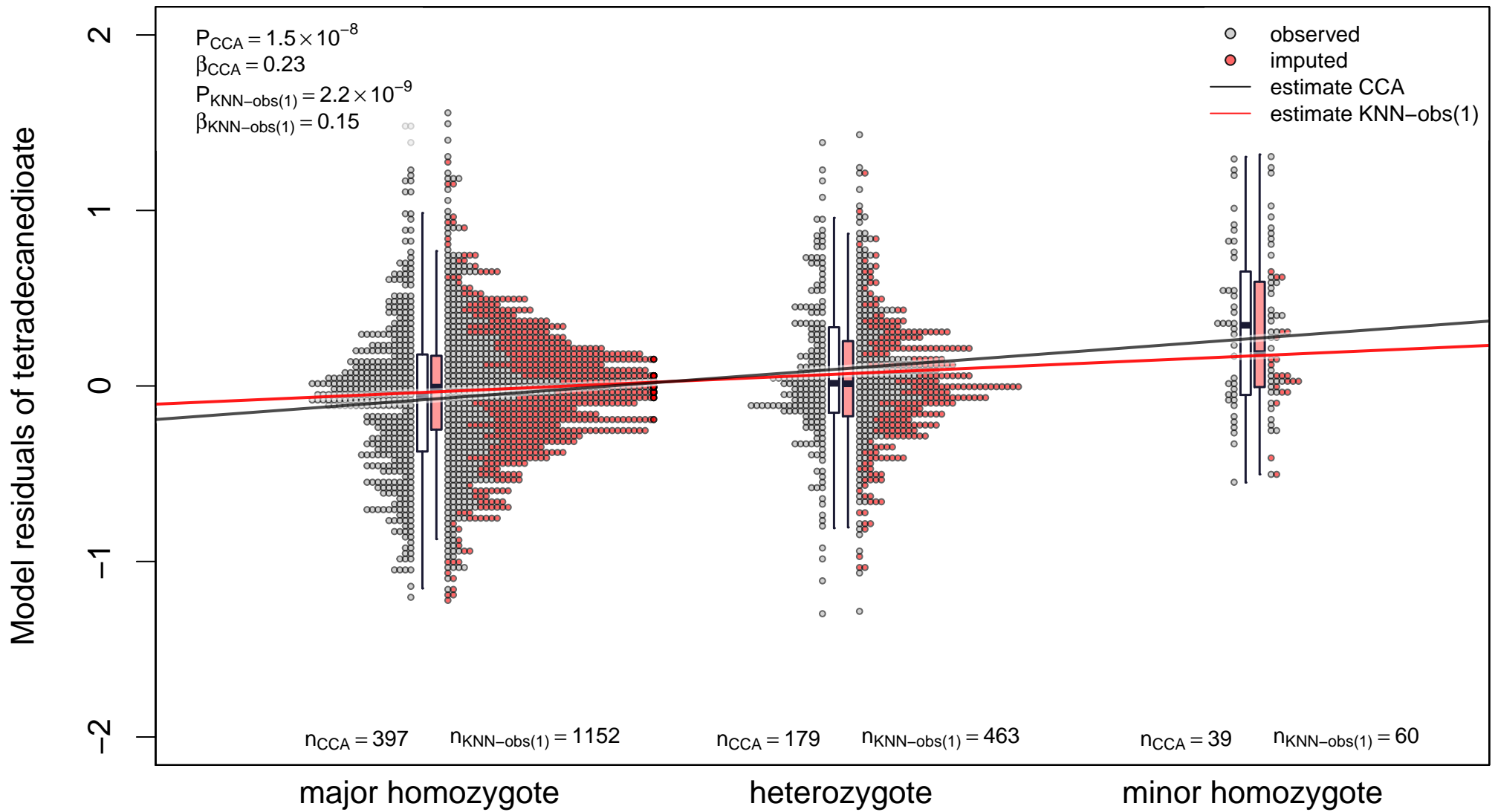


# KNN-obs-sel(5)



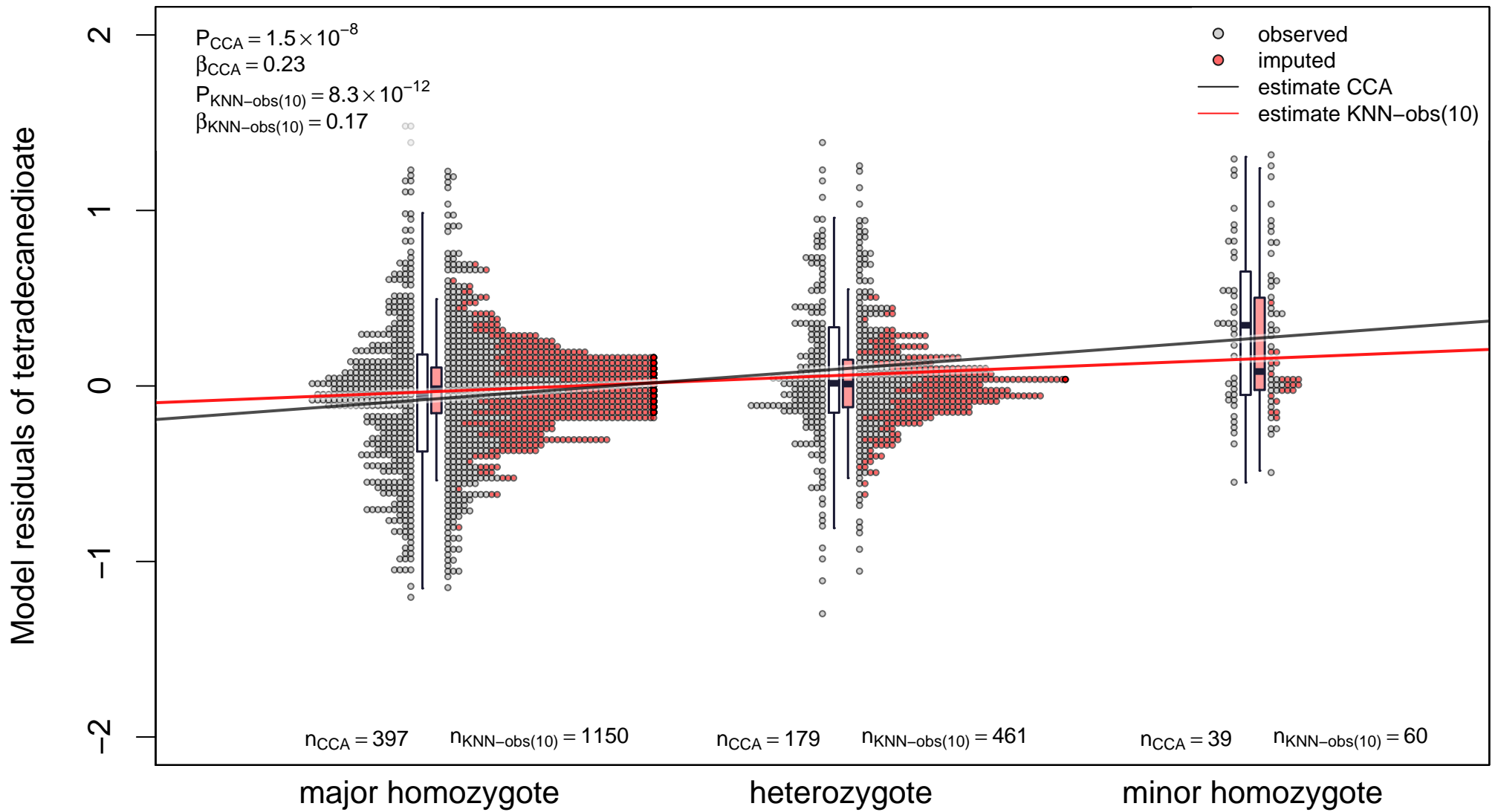
Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

# KNN-obs(1)



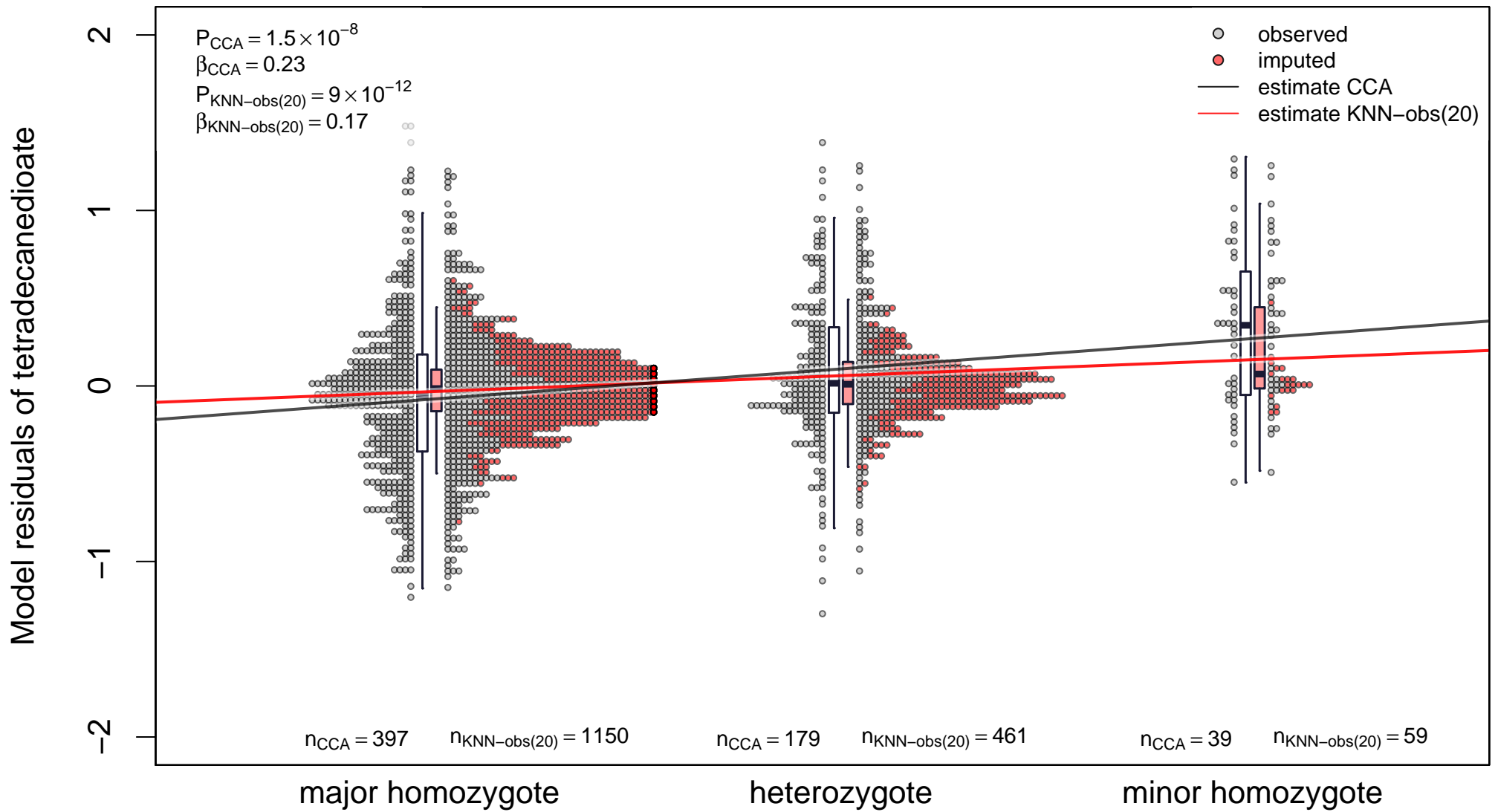
Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

# KNN-obs(10)



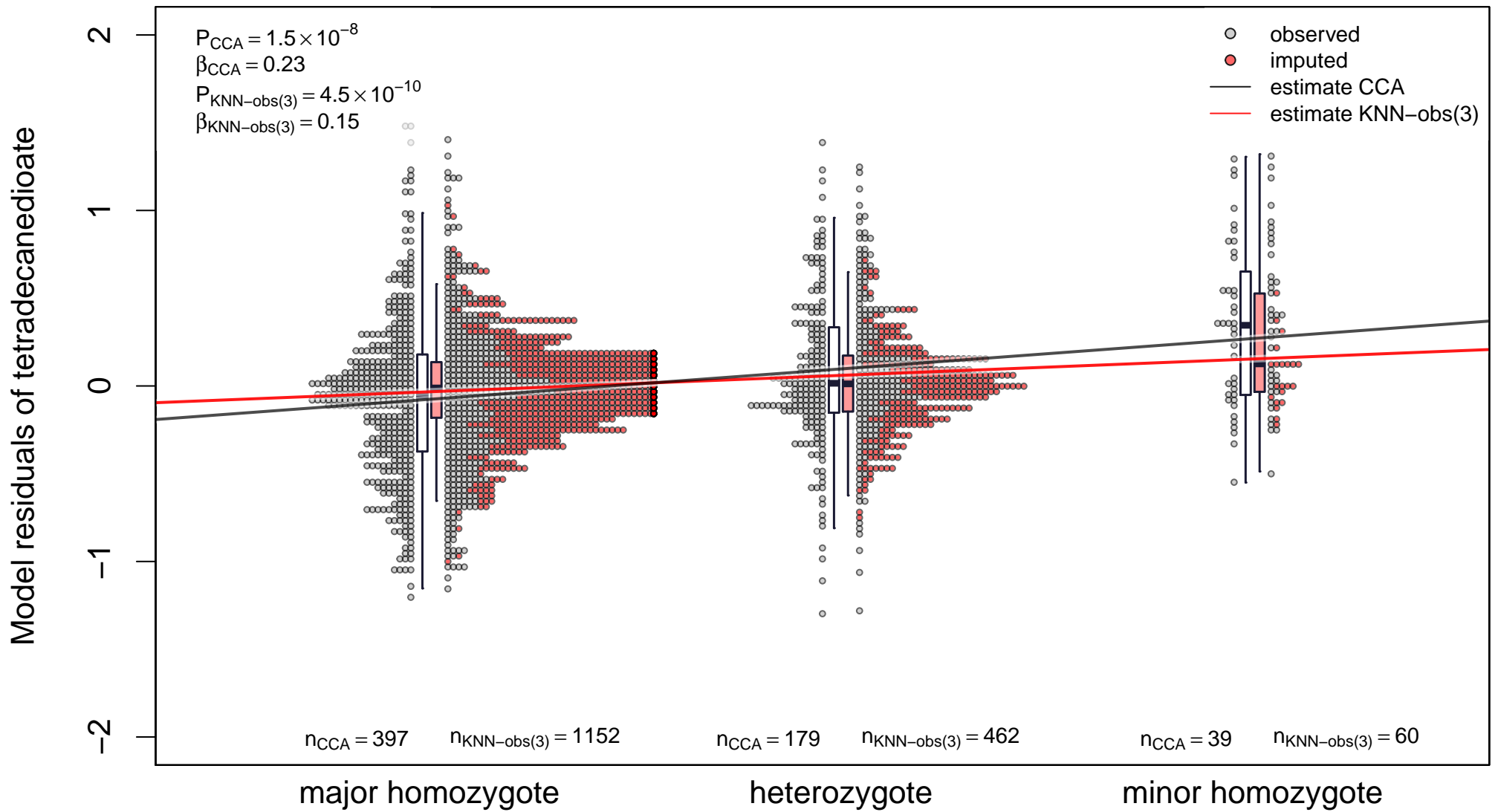
Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

# KNN-obs(20)



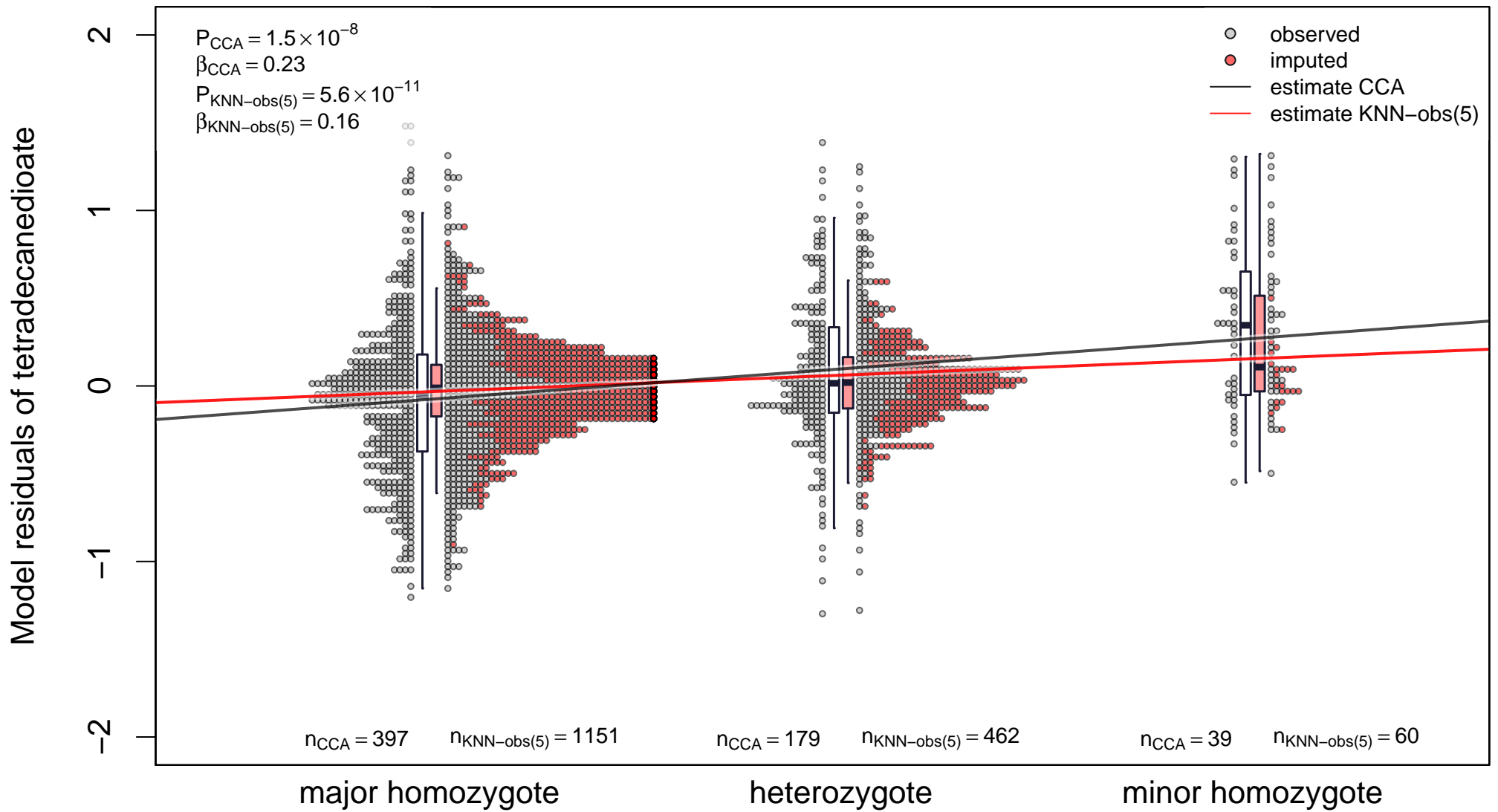
Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

# KNN-obs(3)



Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

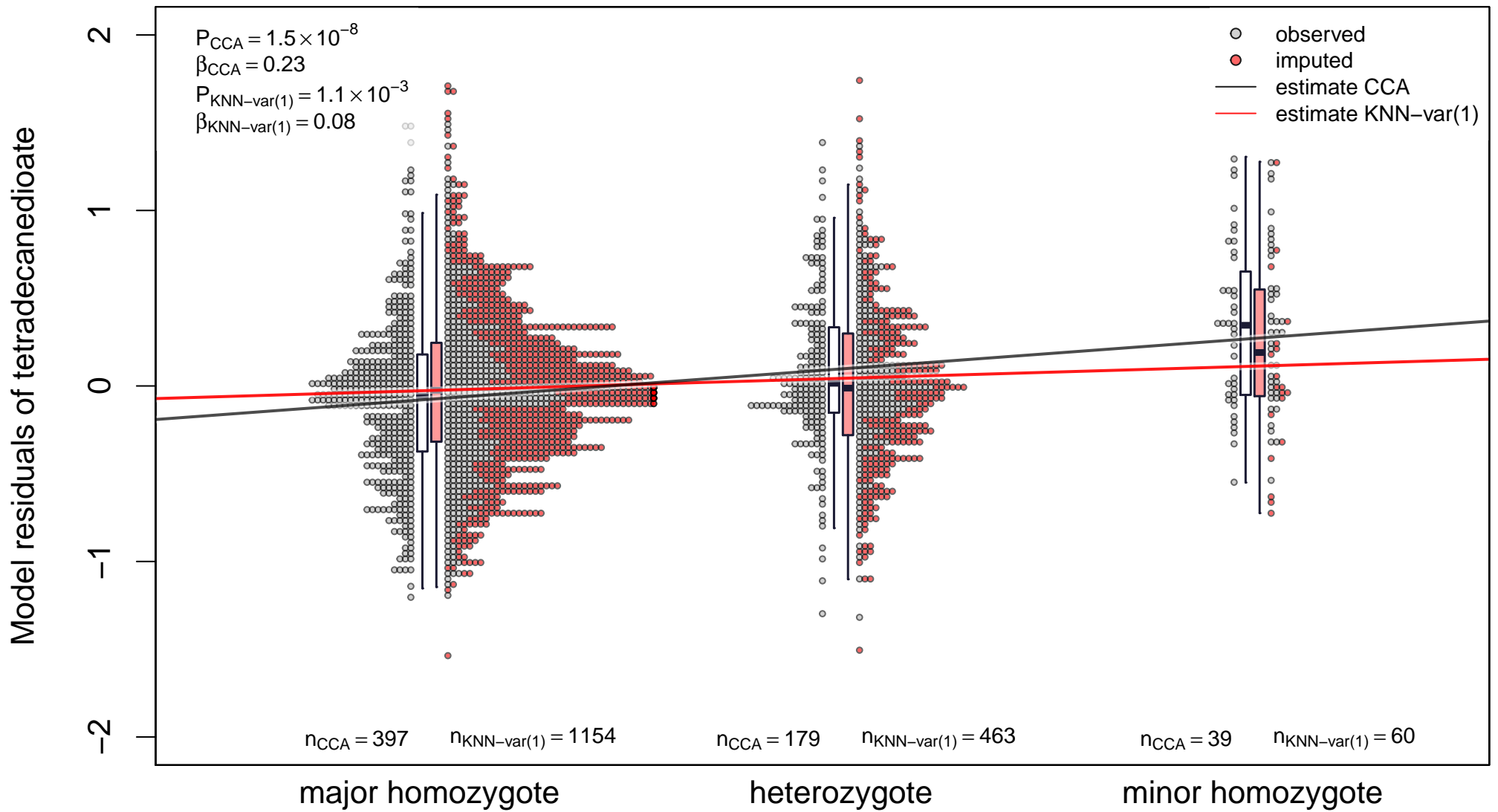
# KNN-obs(5)



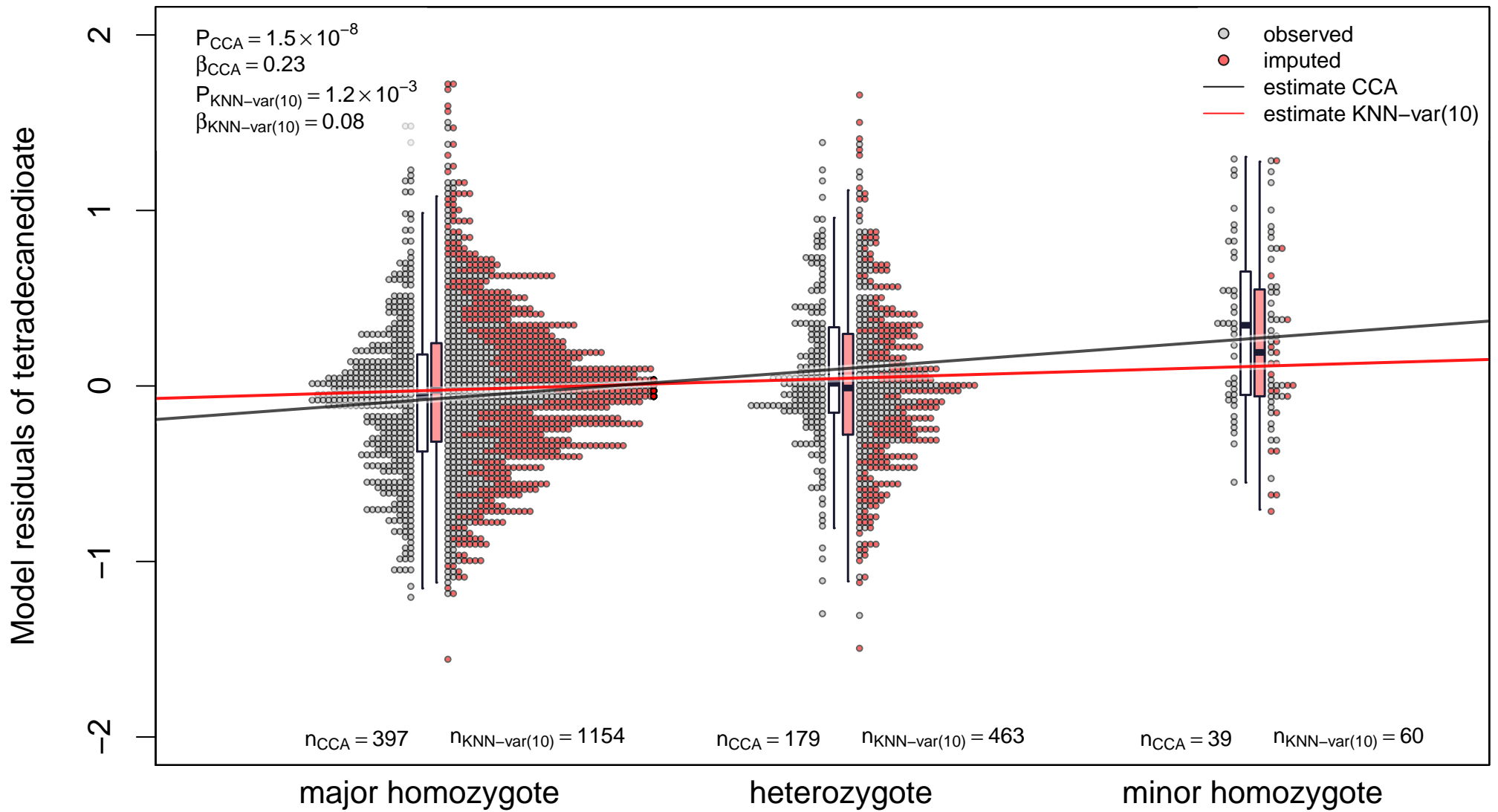
Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))



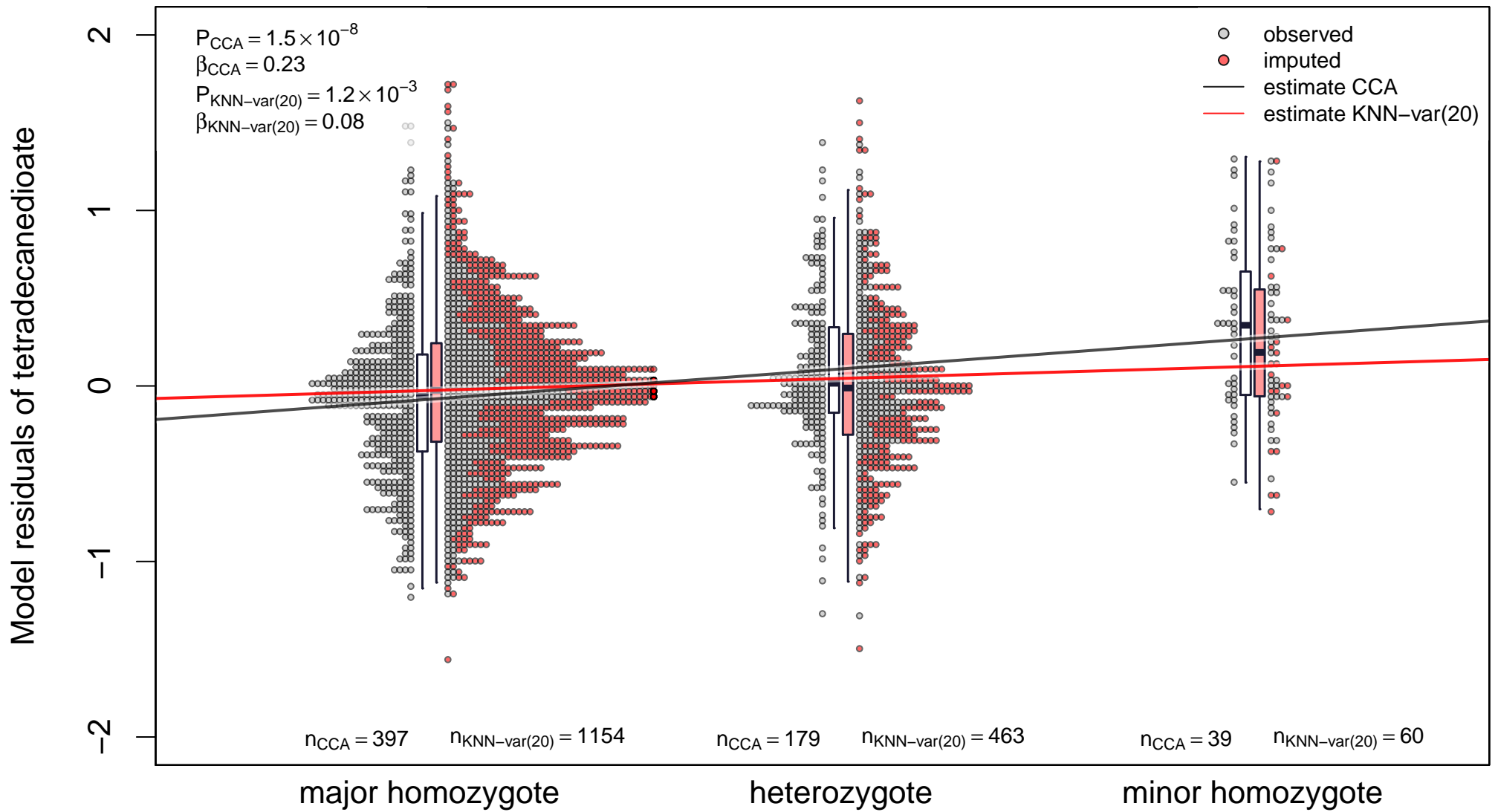
# KNN-var(1)



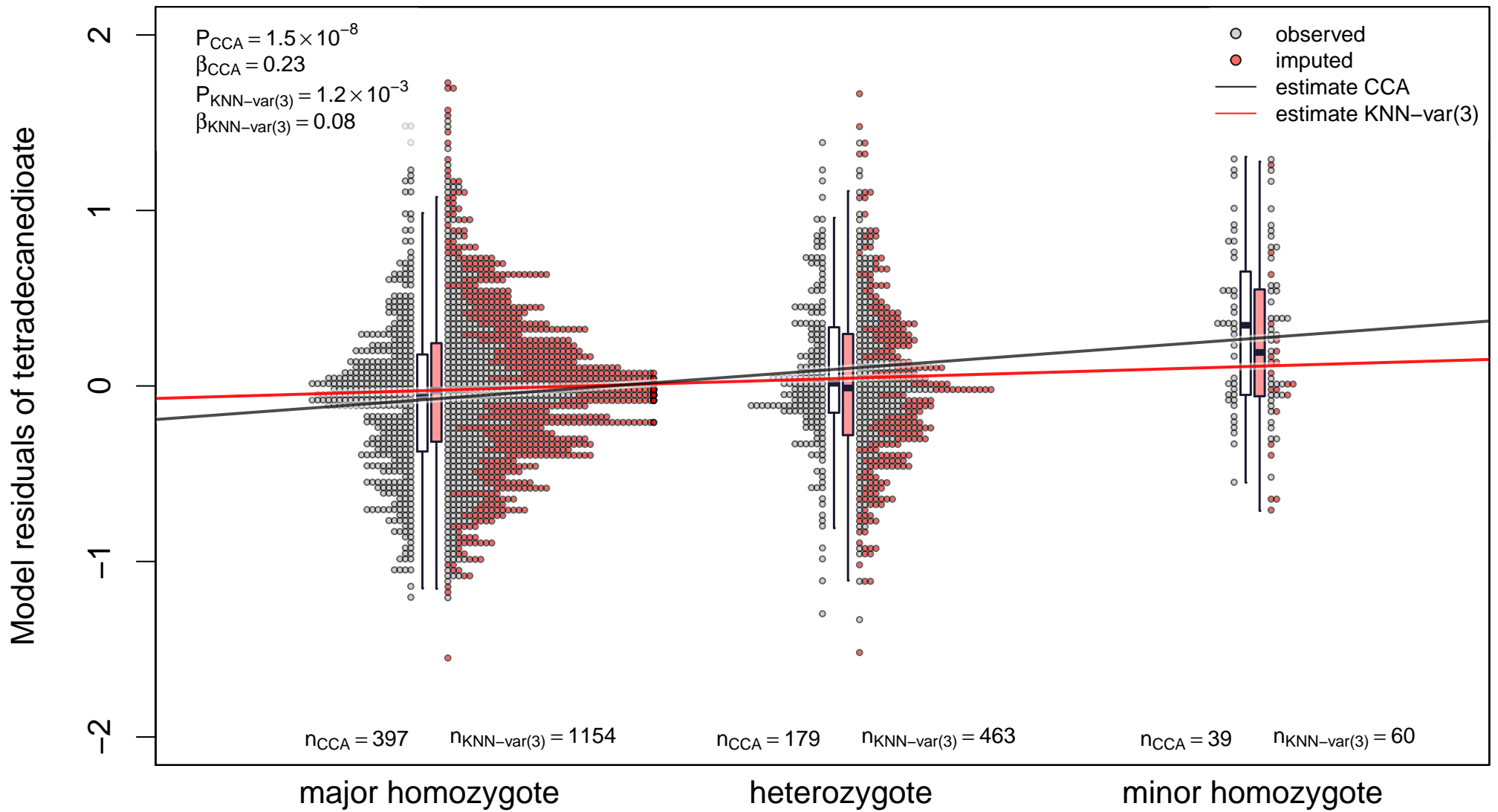
# KNN-var(10)



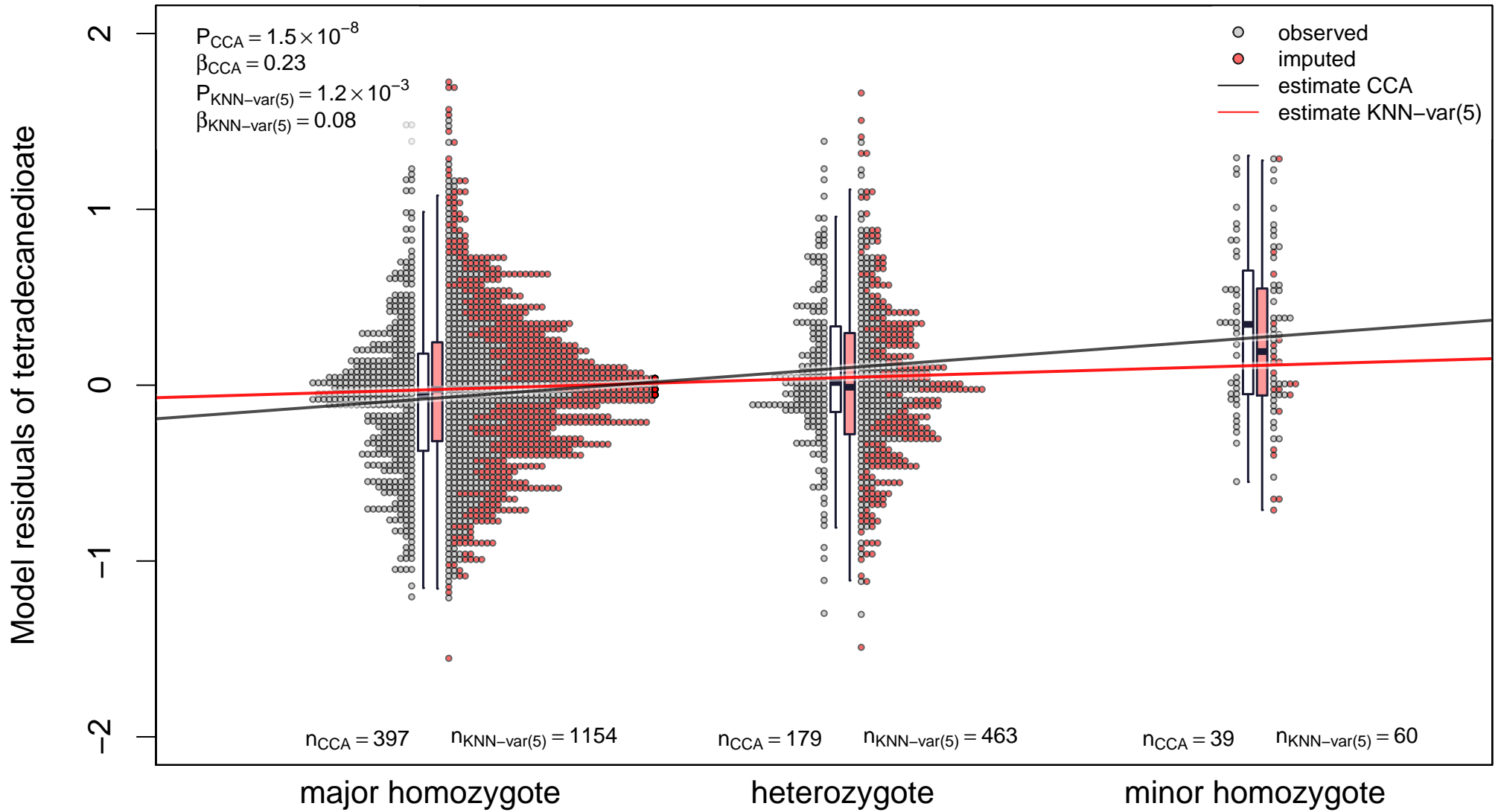
# KNN-var(20)



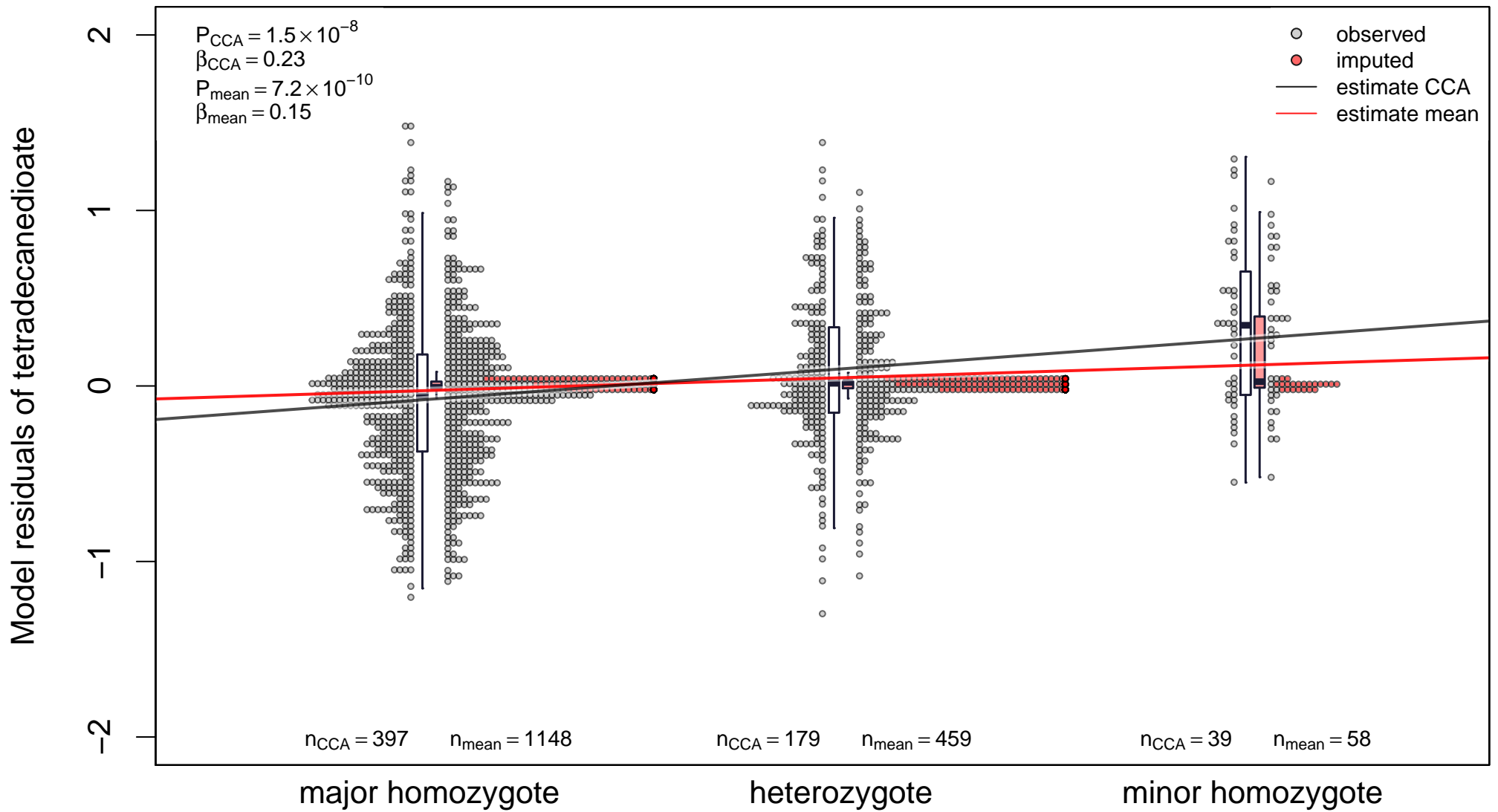
# KNN-var(3)



# KNN-var(5)

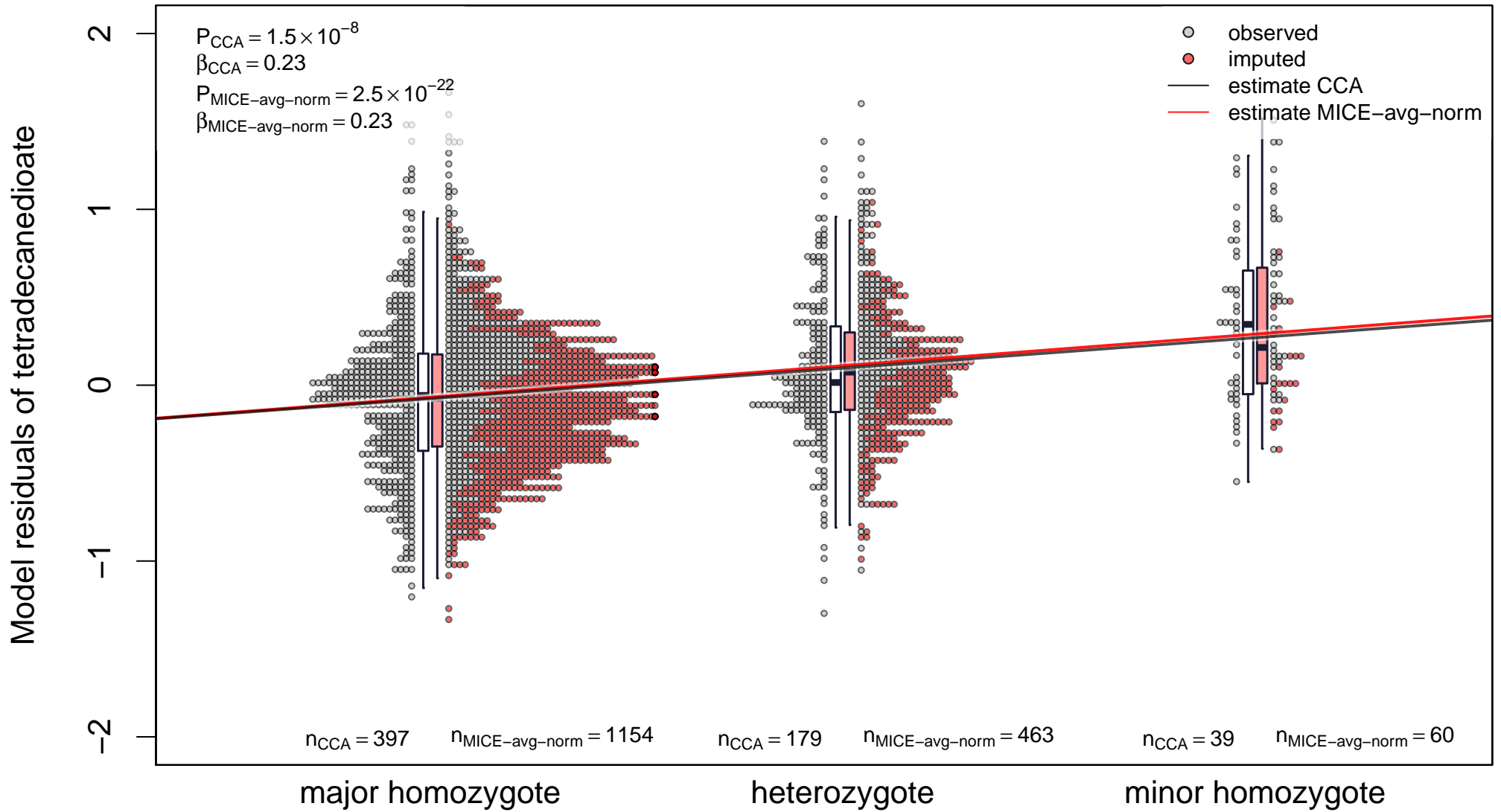


# mean

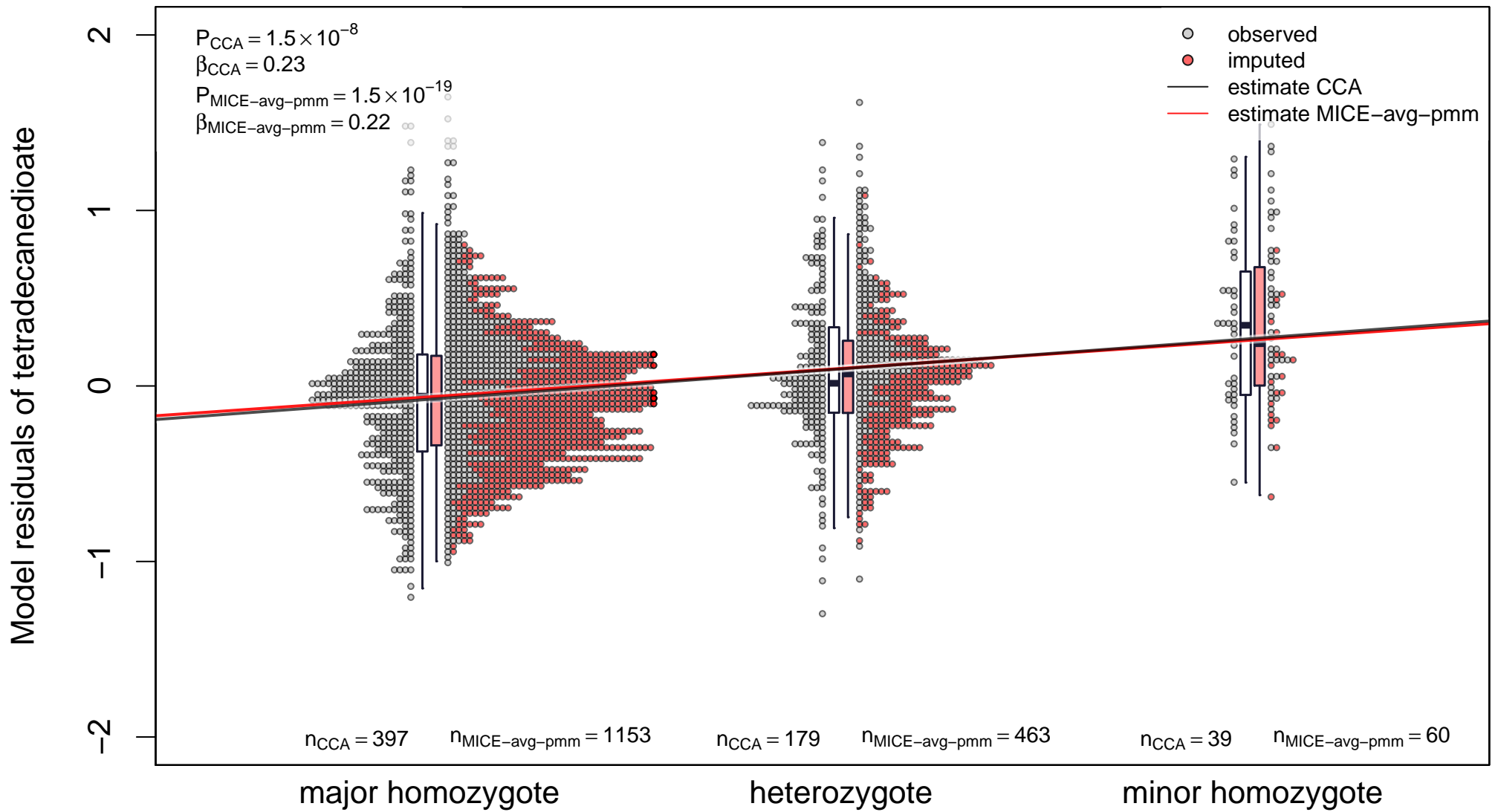


Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

# MICE-avg-norm



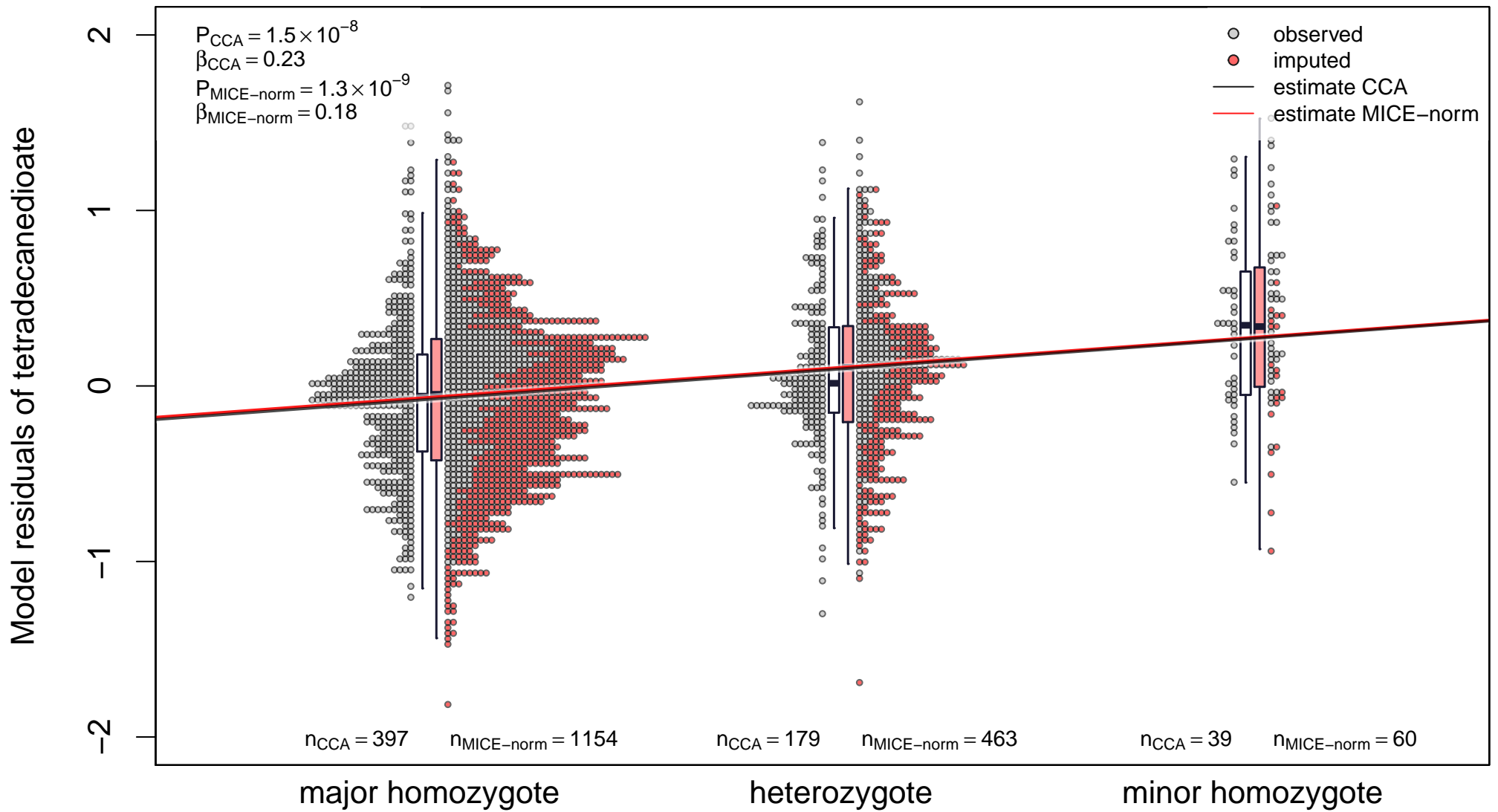
# MICE-avg-pmm



Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

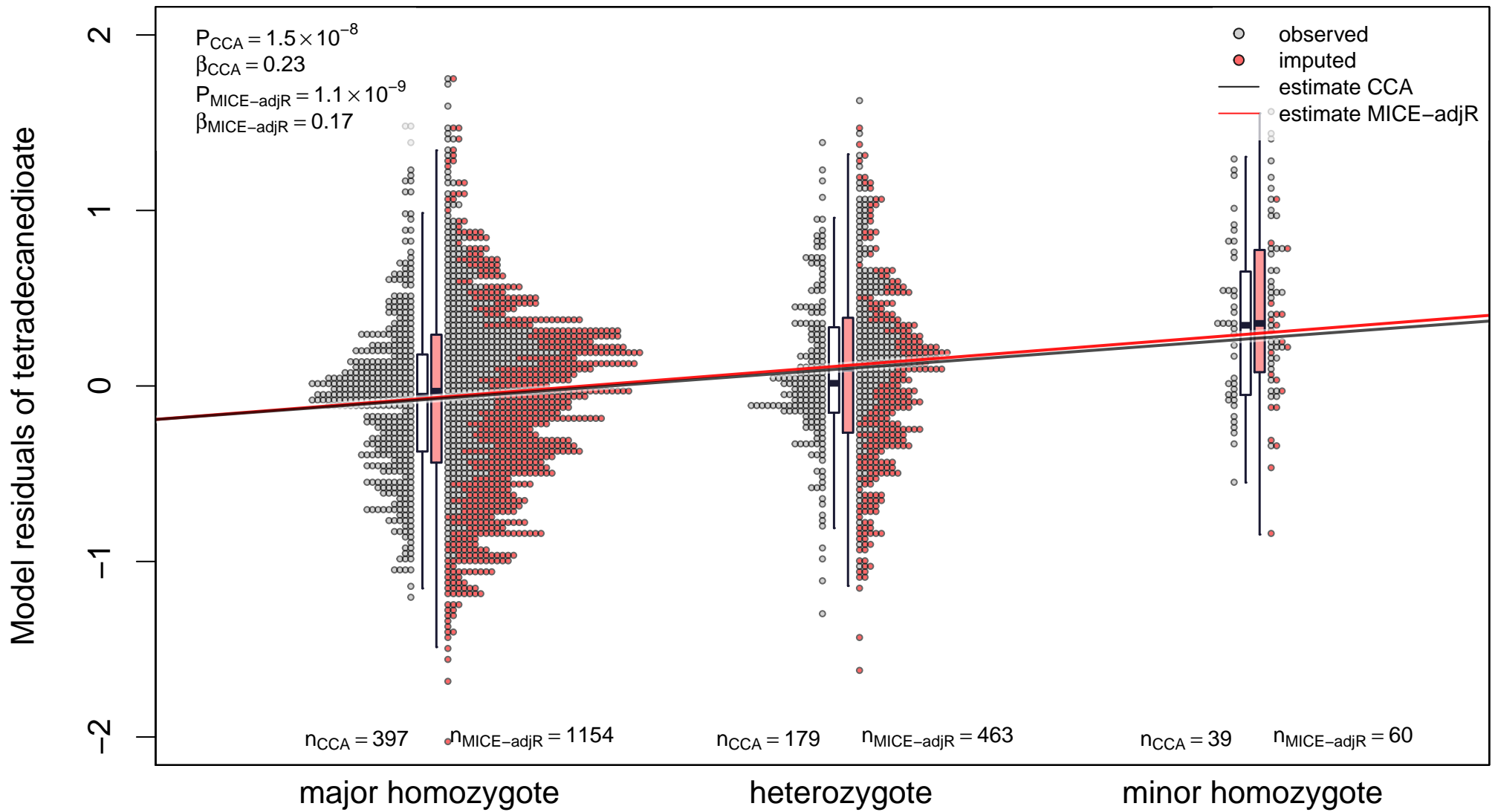


# MICE-norm

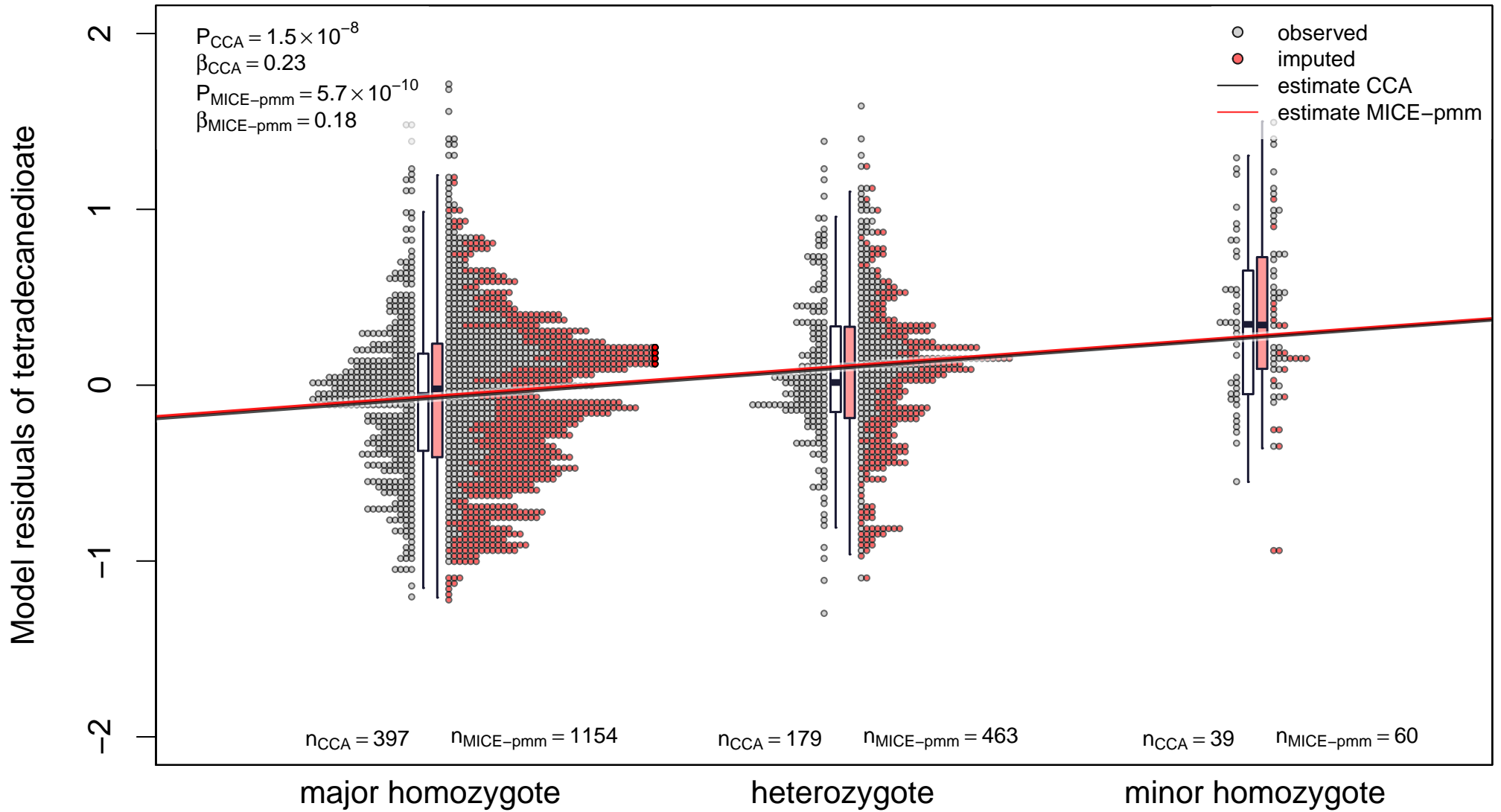


Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

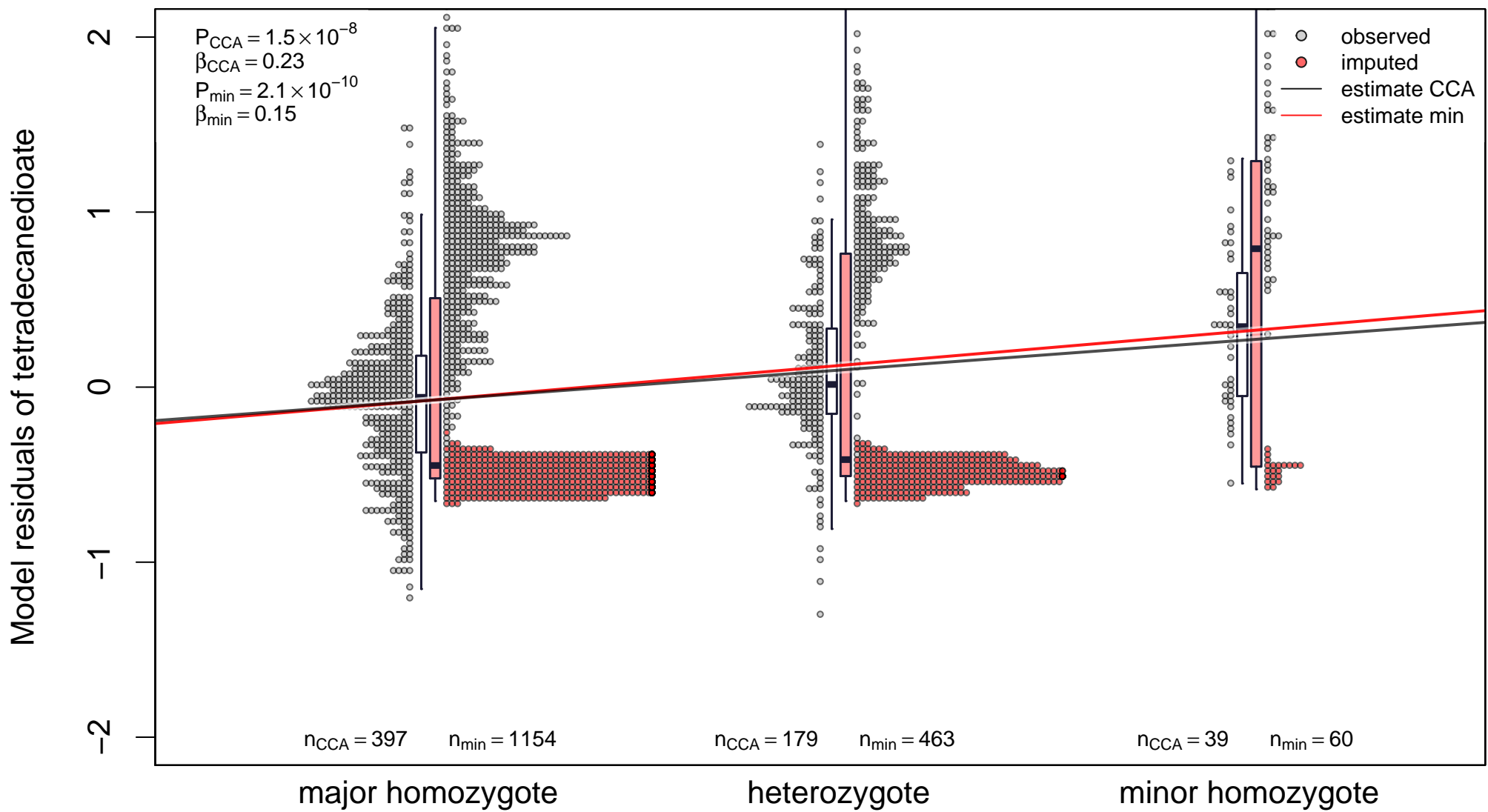
# MICE-adjR



# MICE-pmm

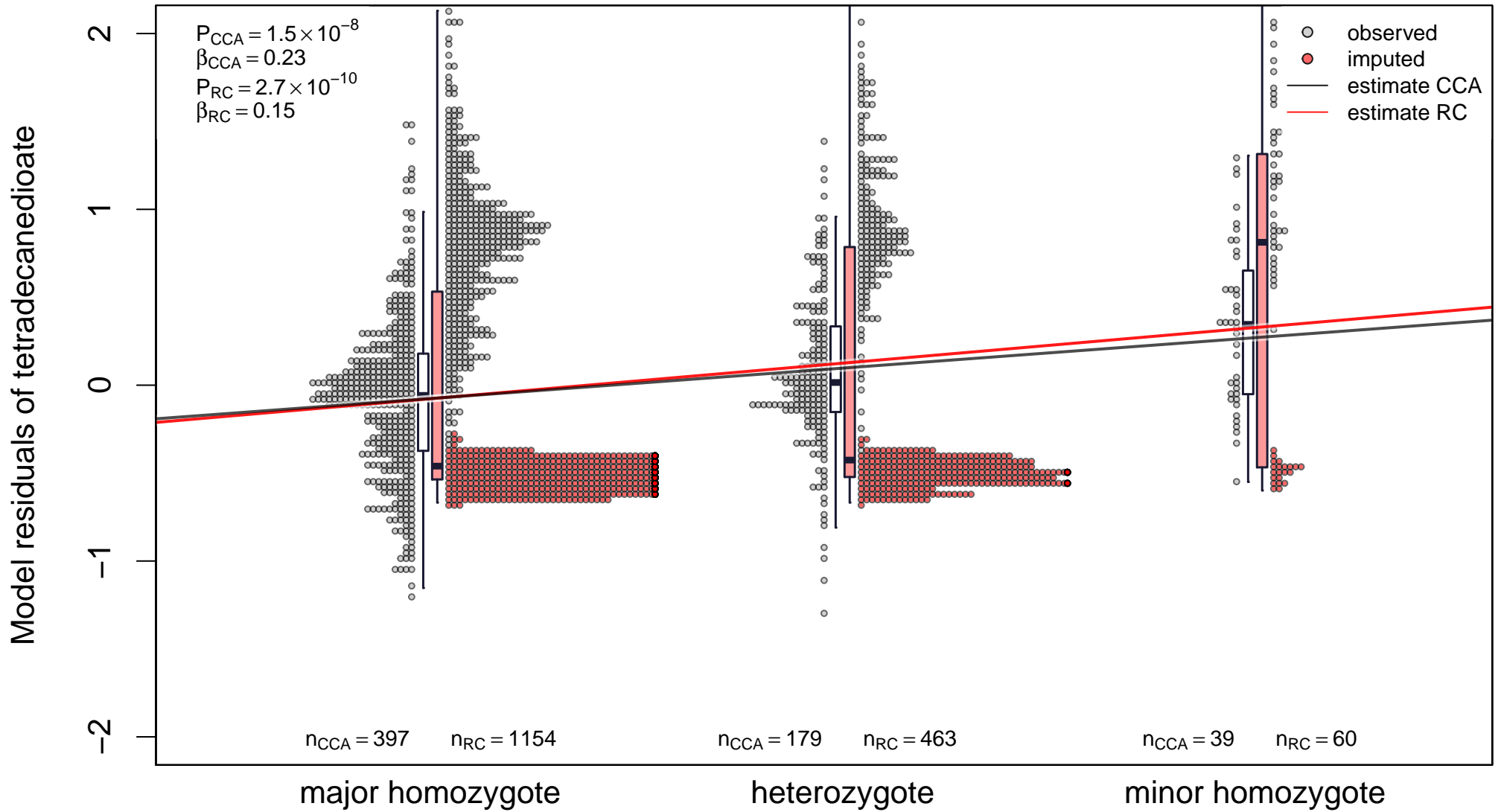


min



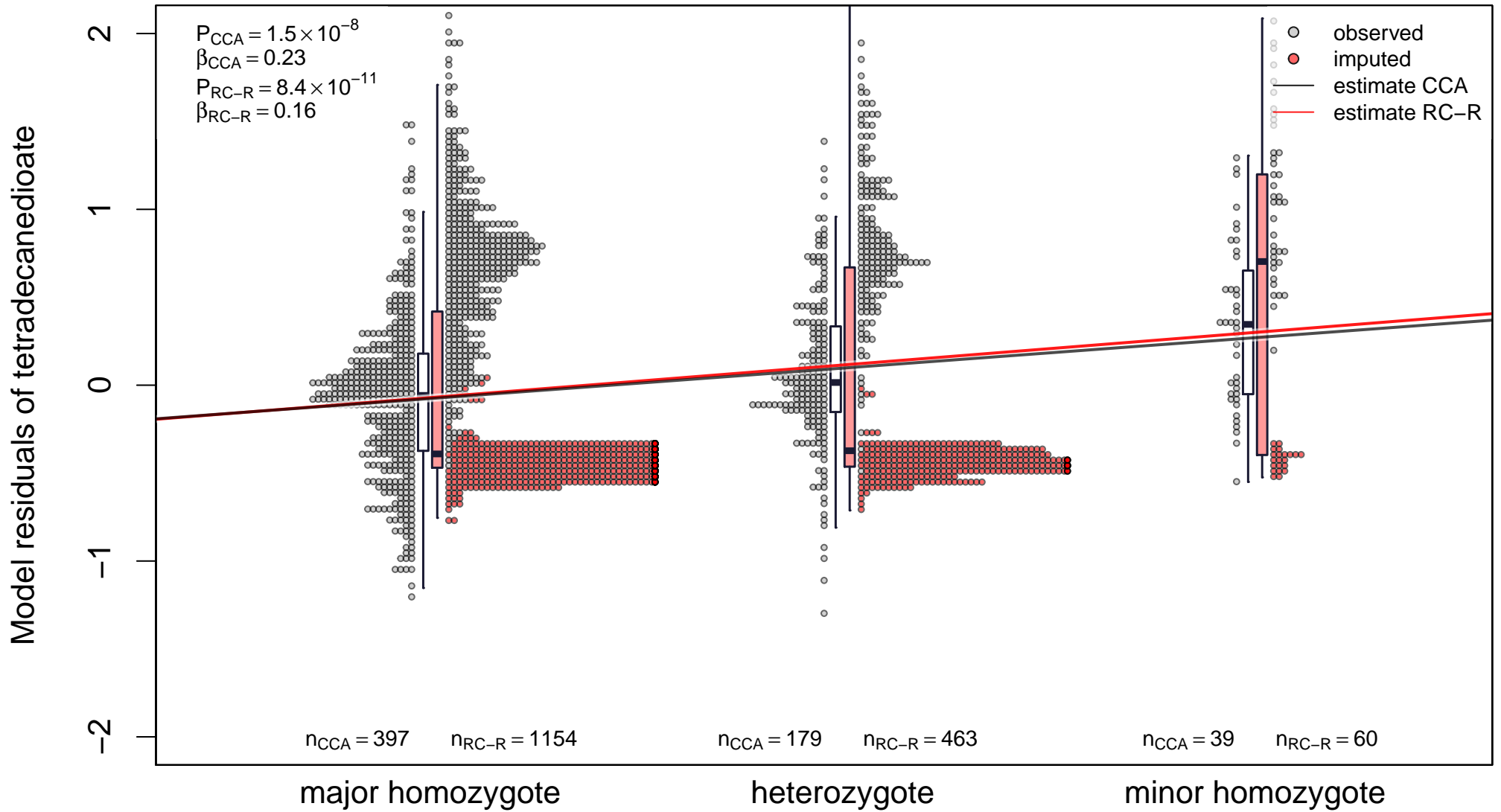
Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

# RC



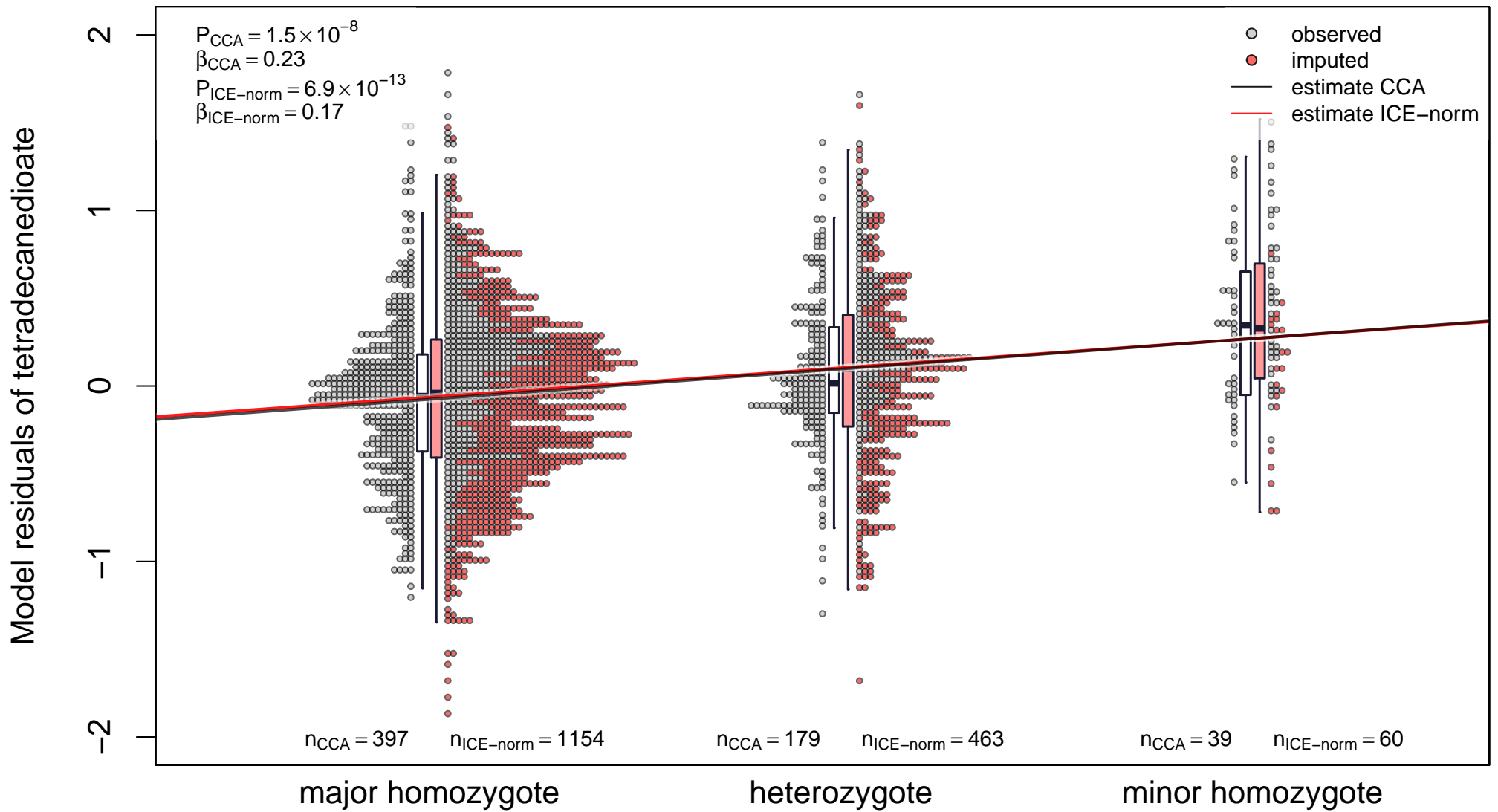
Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

# RC-R



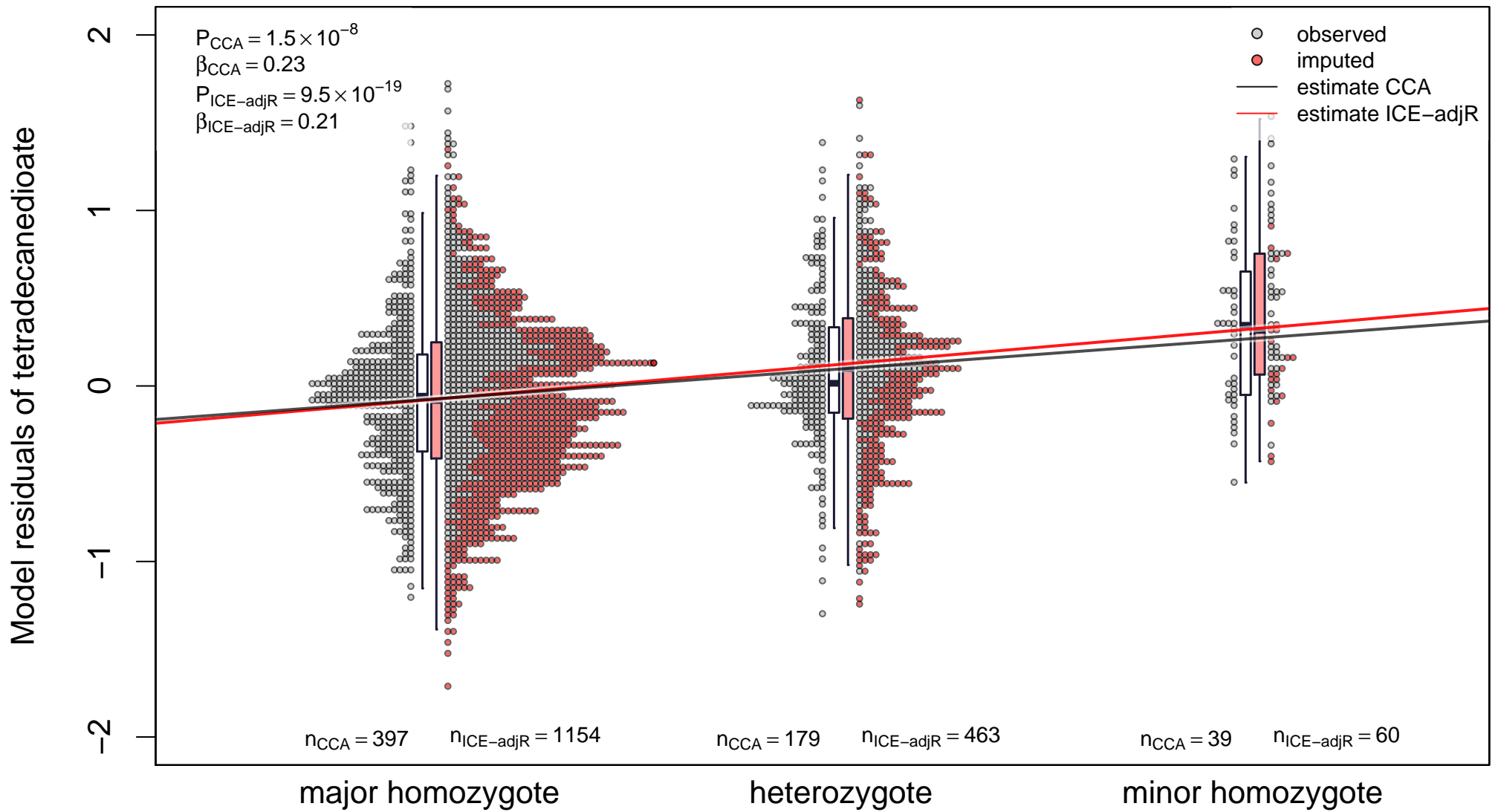
Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

# ICE-norm



Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

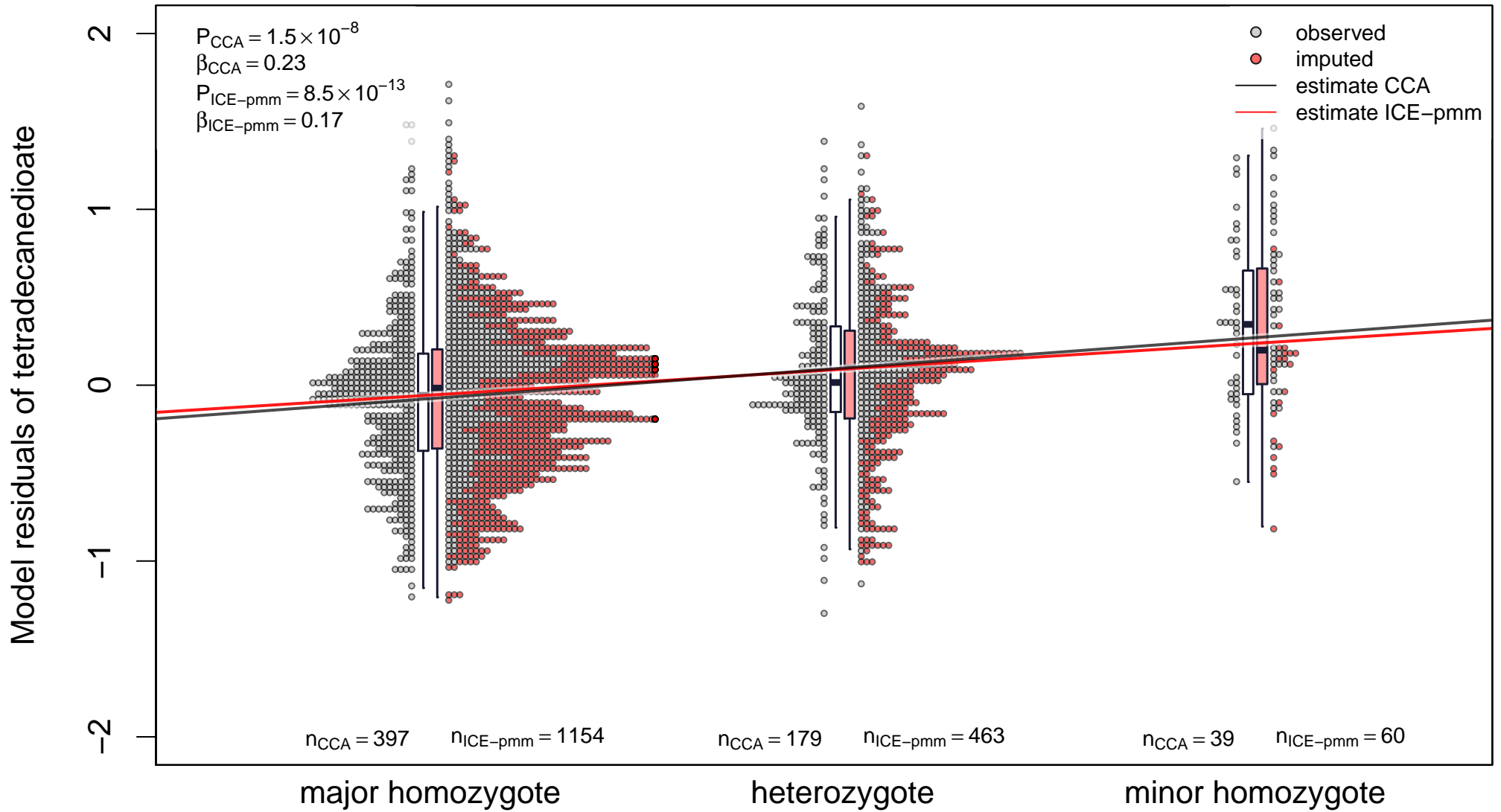
# ICE-adjR



Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

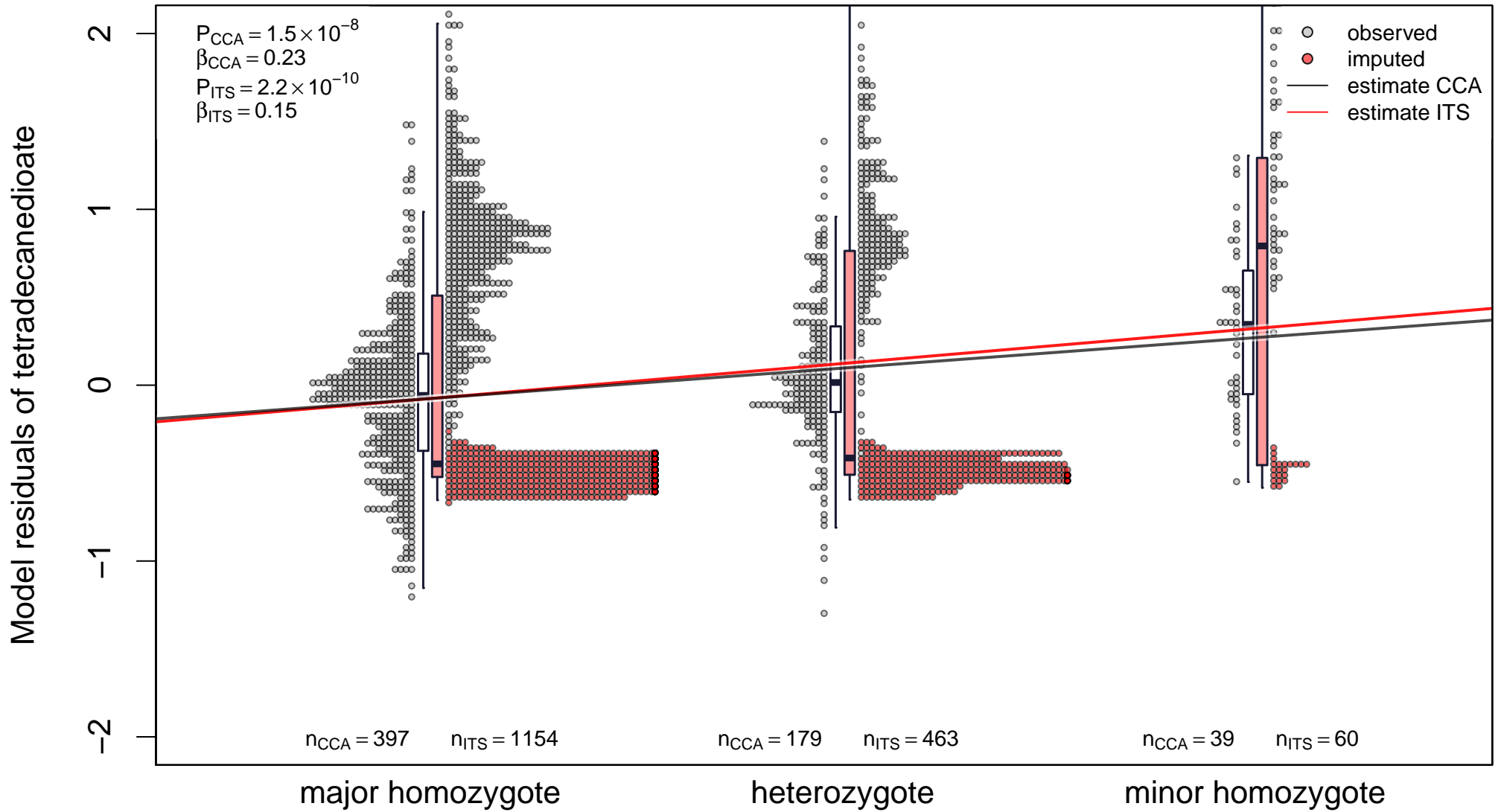


# ICE-pmm



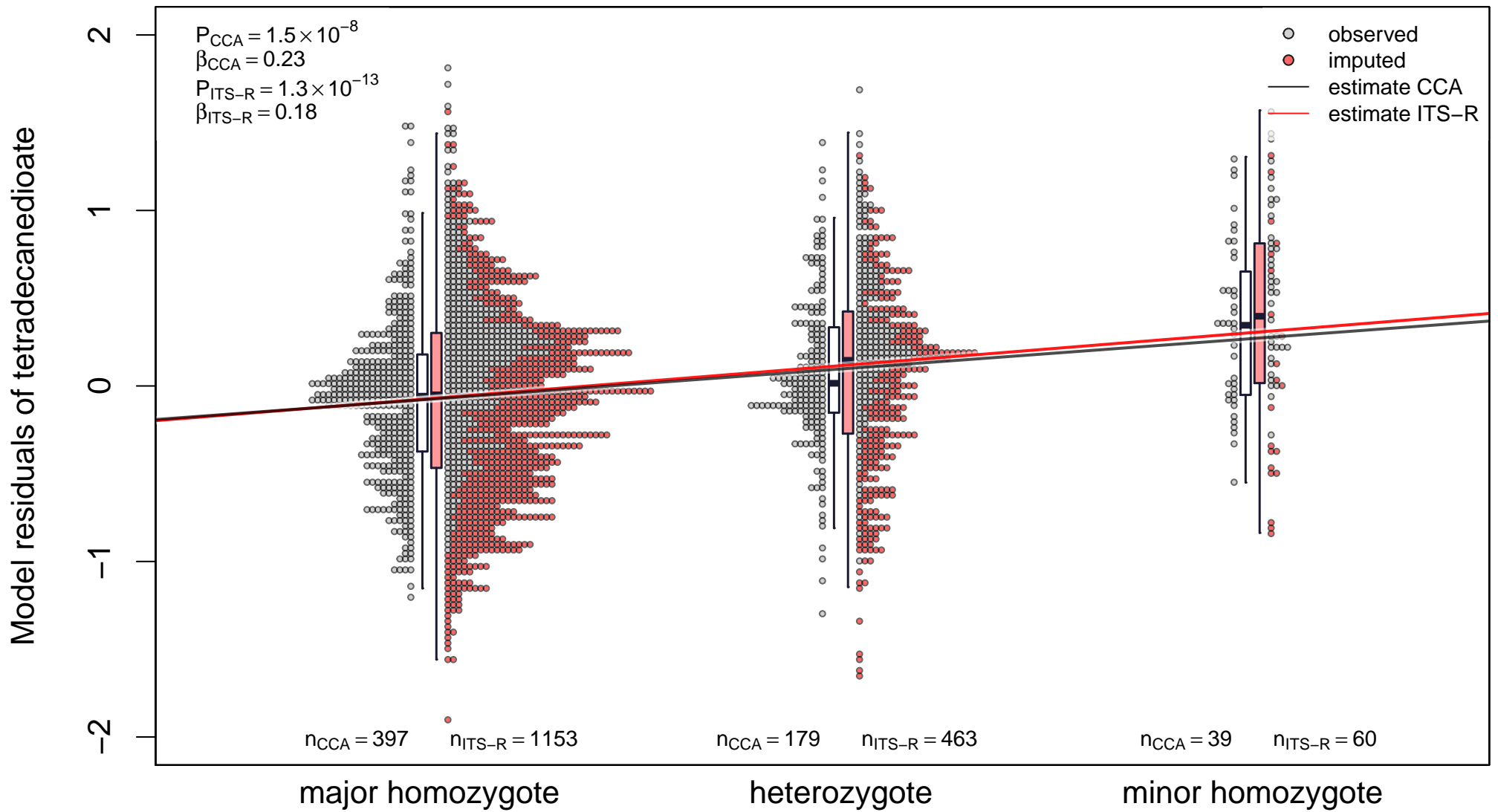
Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

# ITS

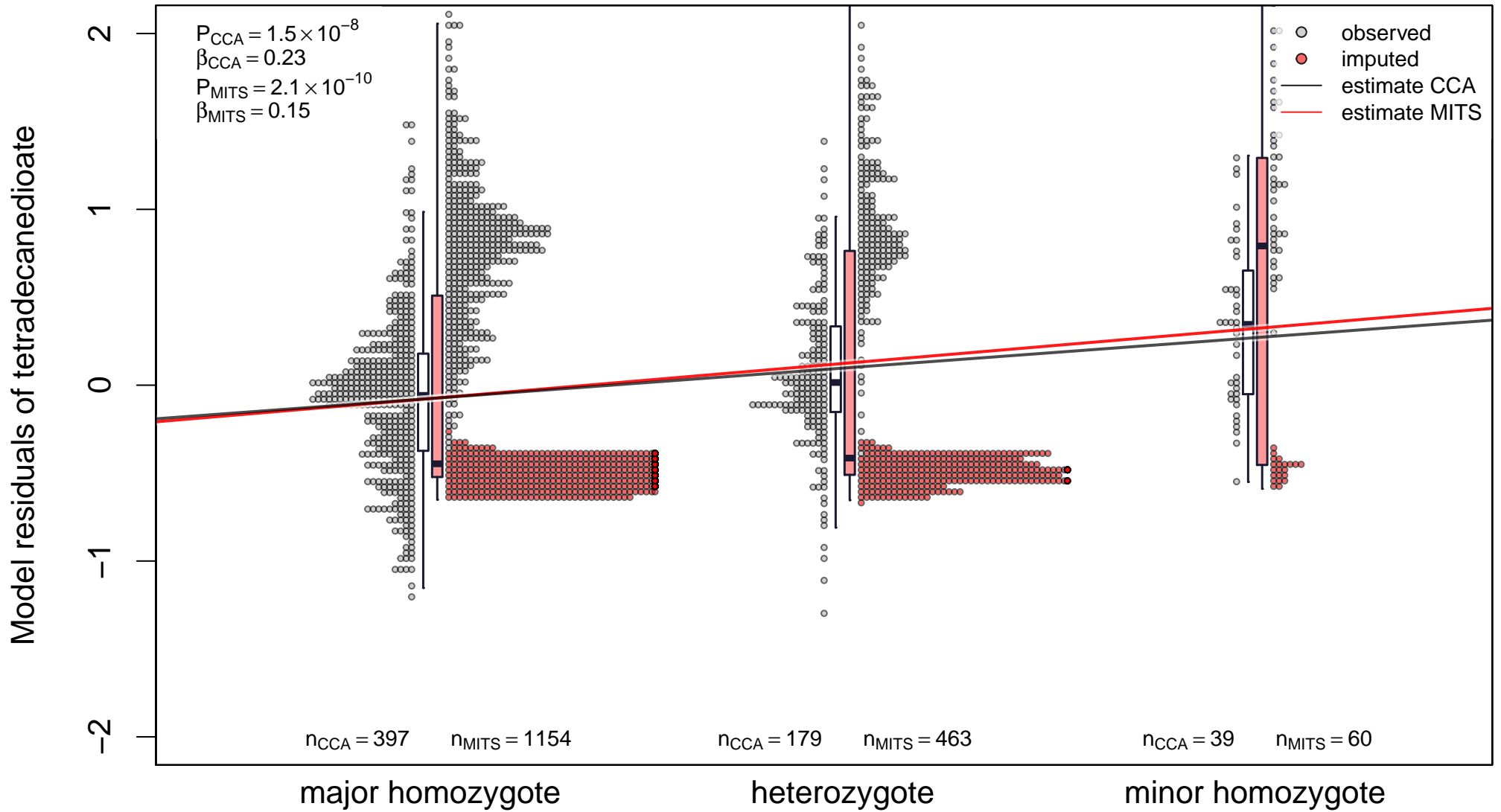


Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

# ITS-R

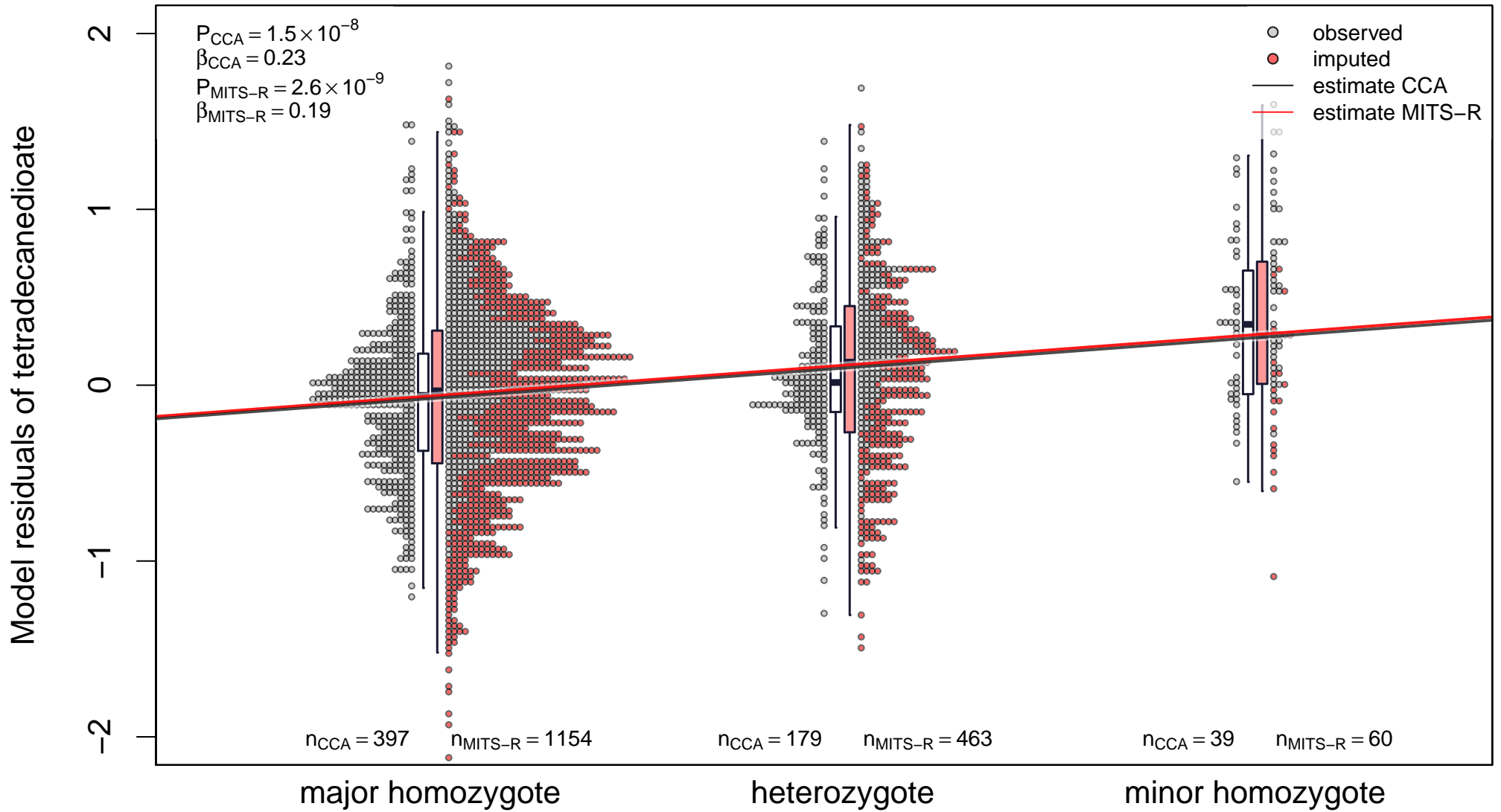


# MITS

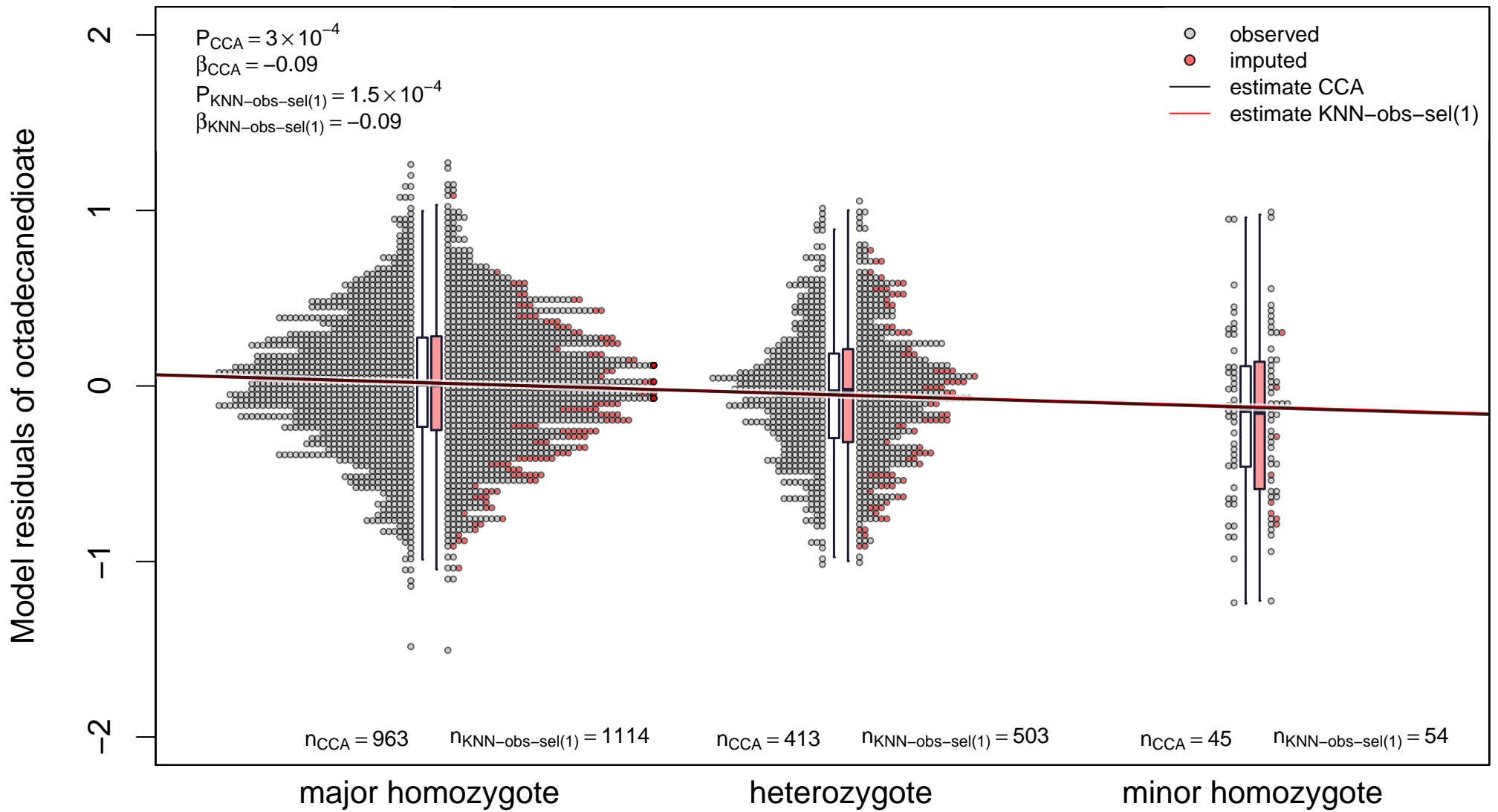


Genotype of SNP rs12317268 (SLCO1B1 (2 separate loci))

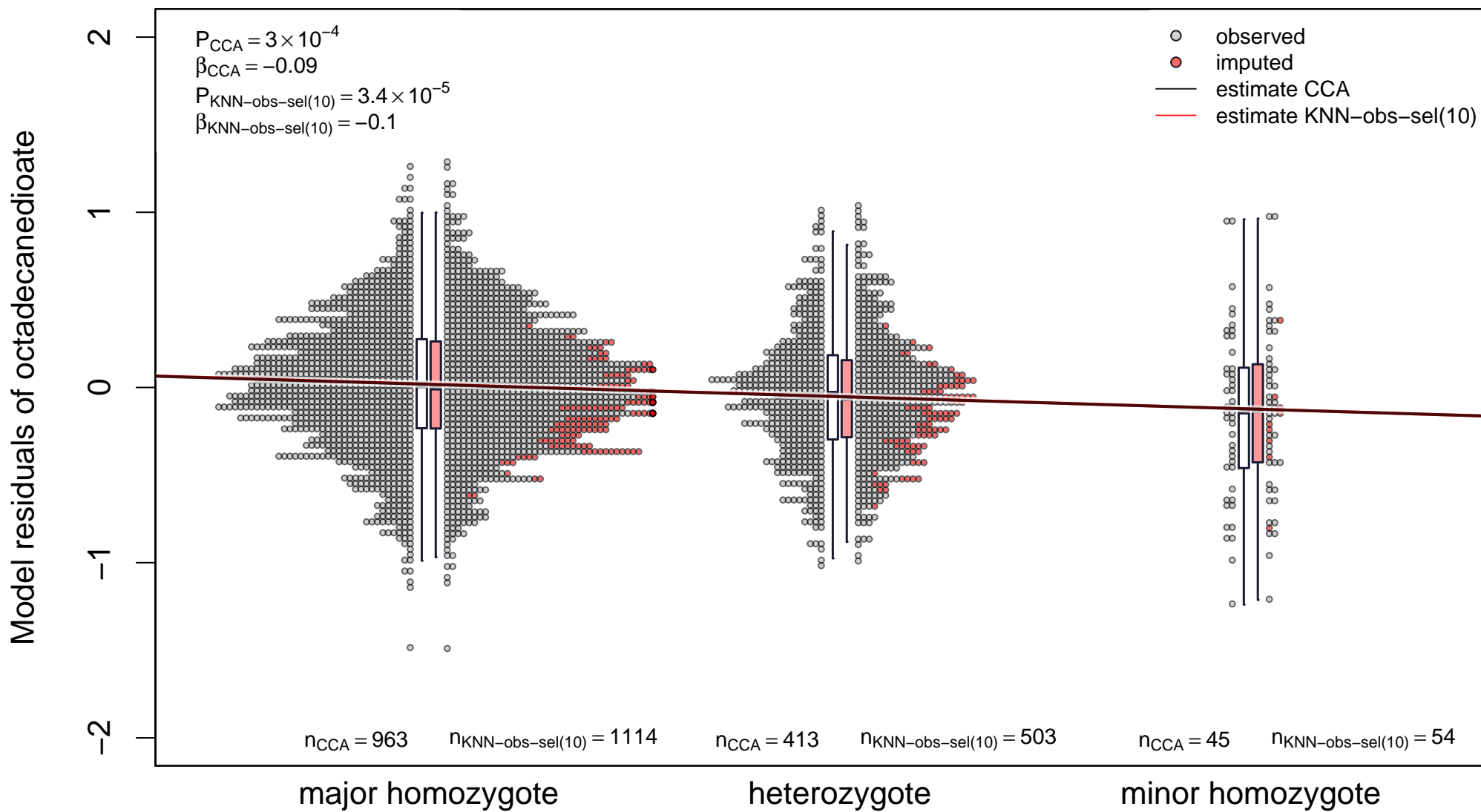
# MITS-R



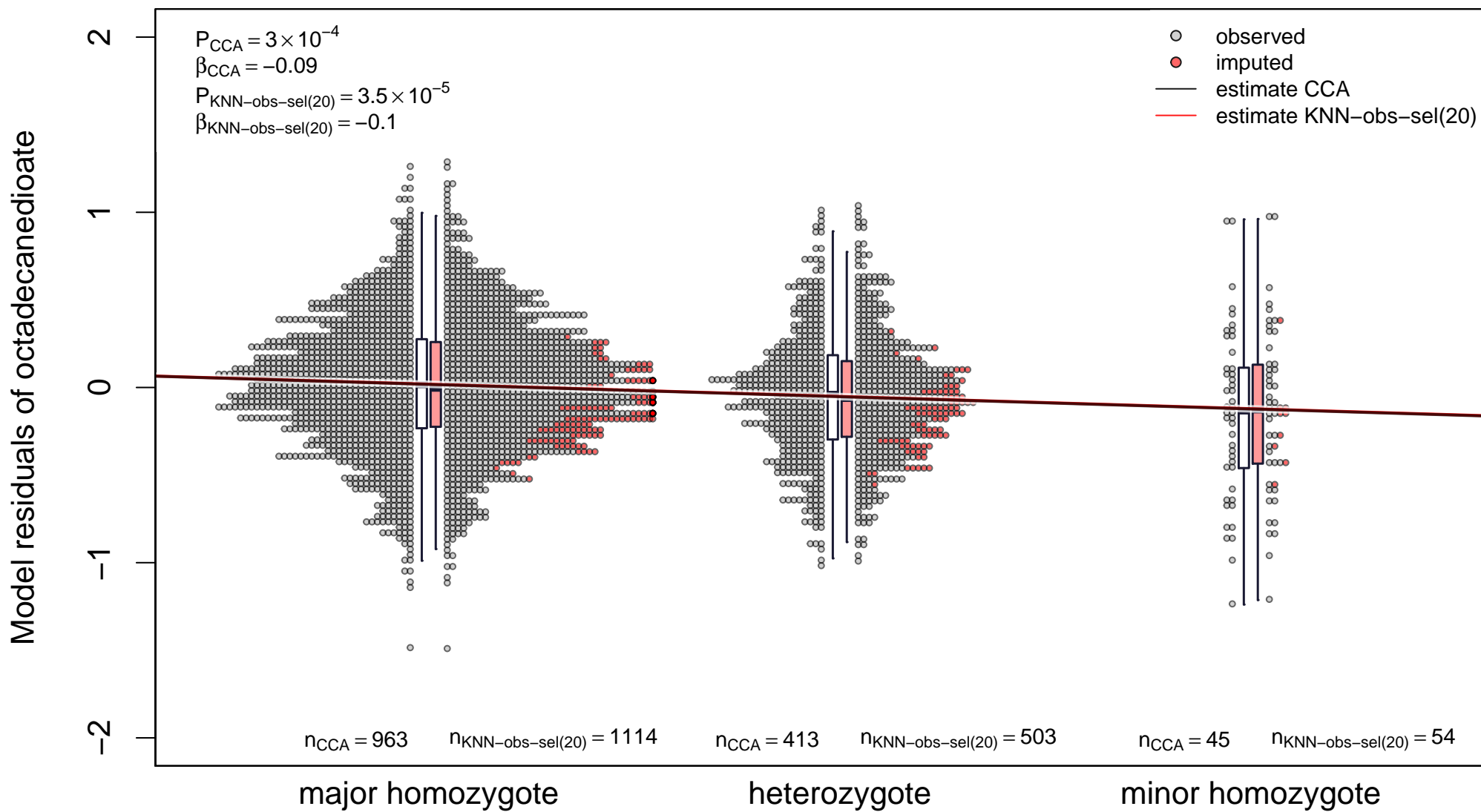
# KNN-obs-sel(1)



# KNN-obs-sel(10)

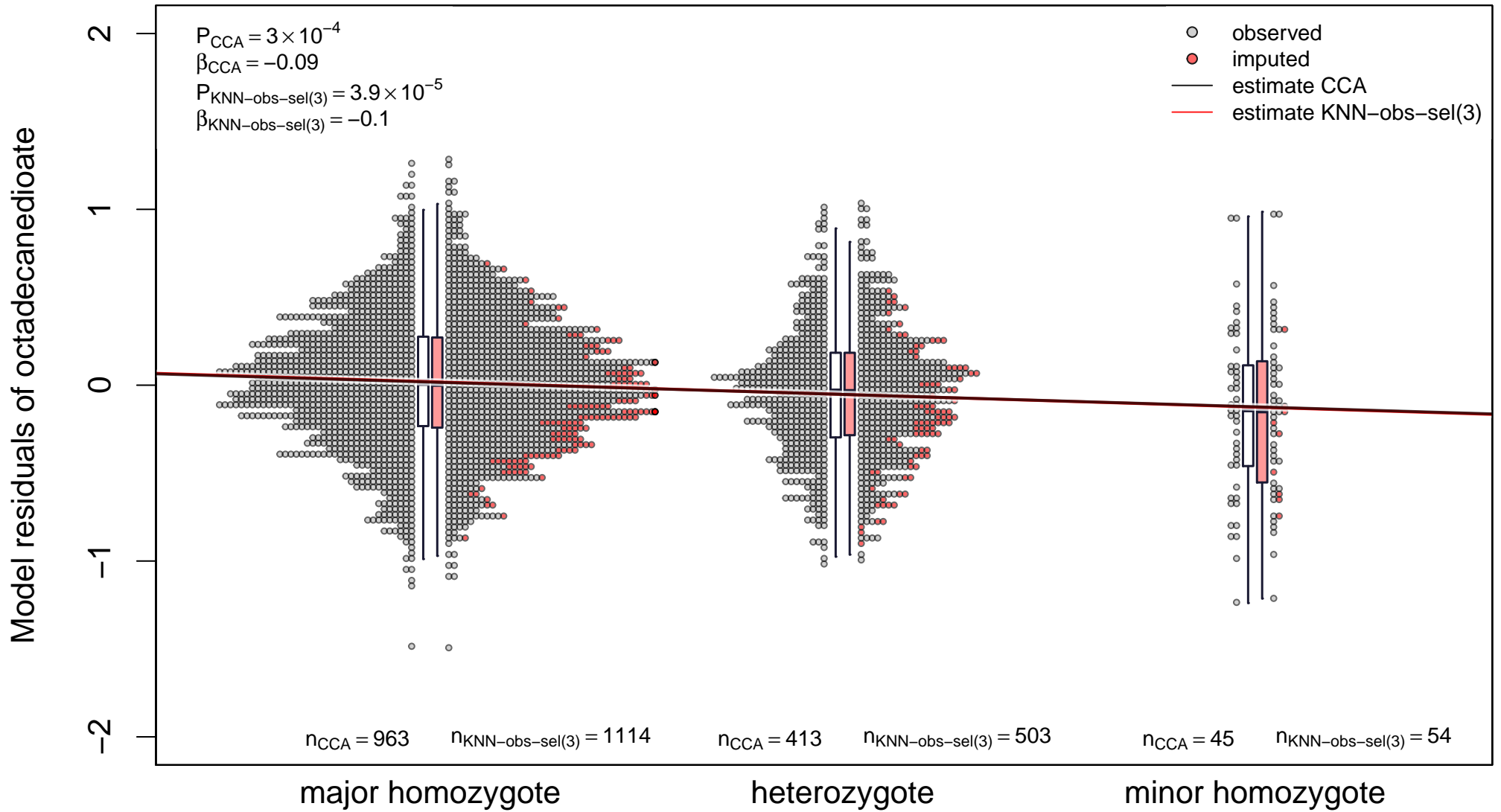


# KNN-obs-sel(20)



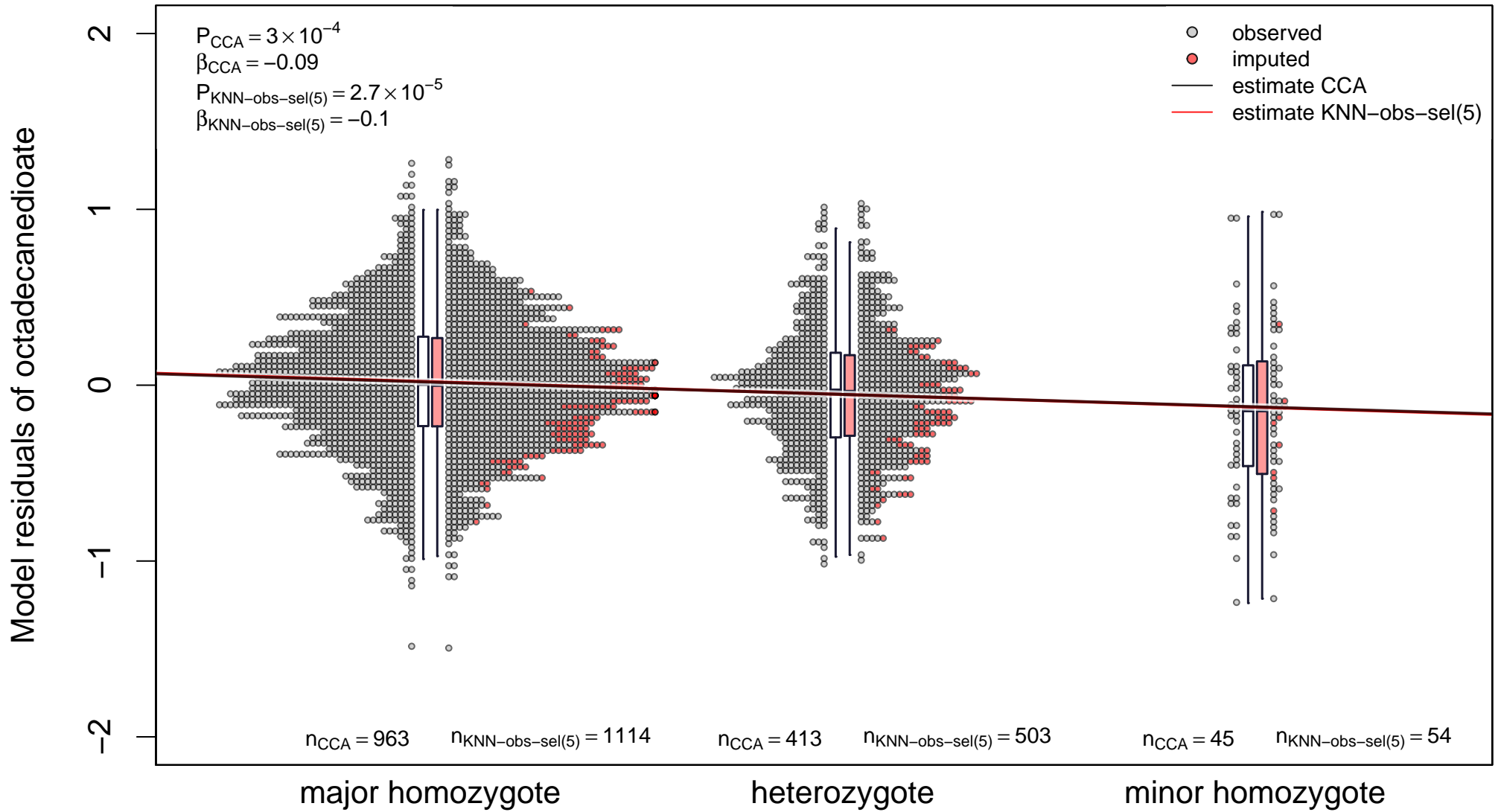


# KNN-obs-sel(3)



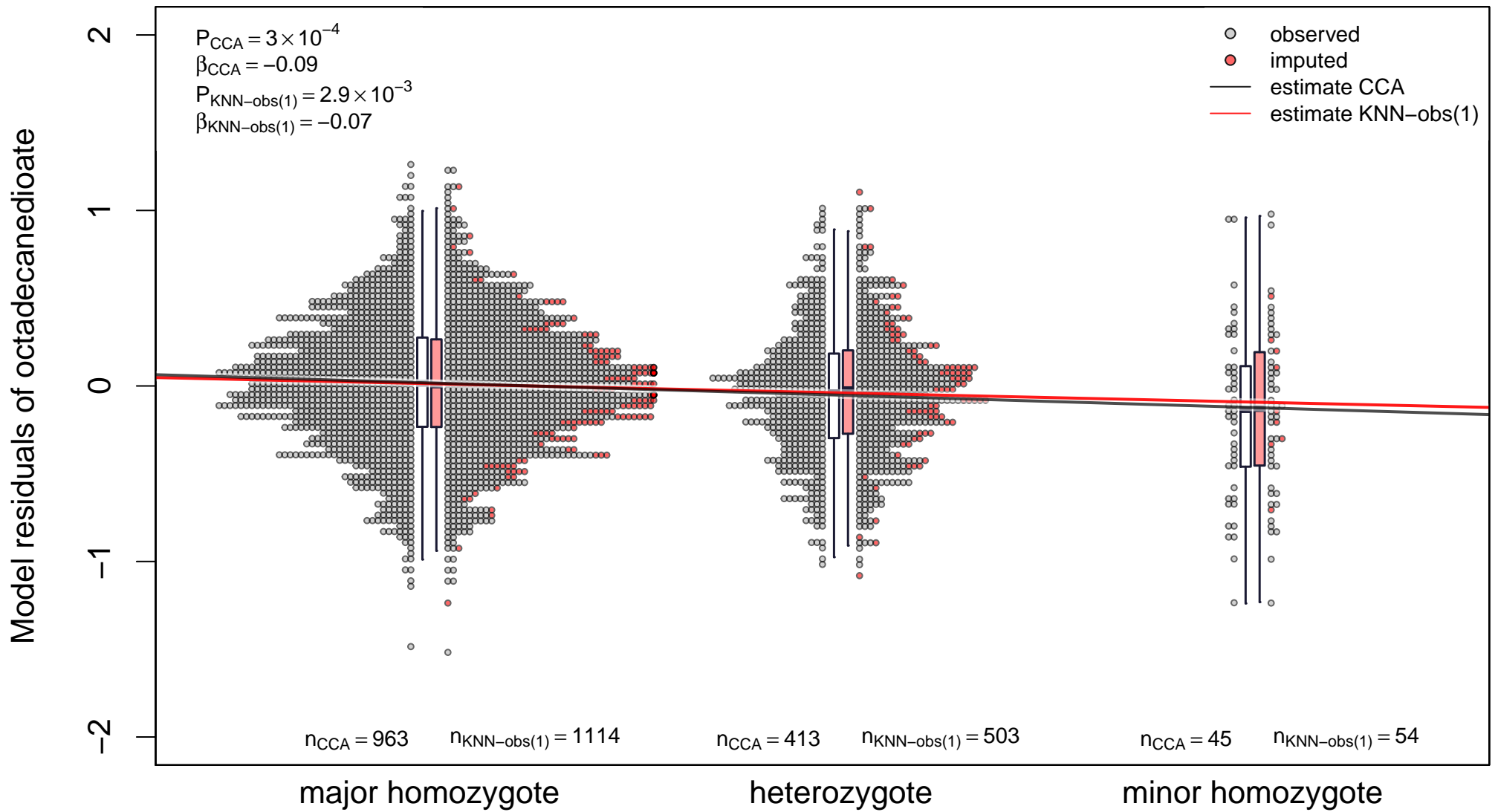
Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

# KNN-obs-sel(5)



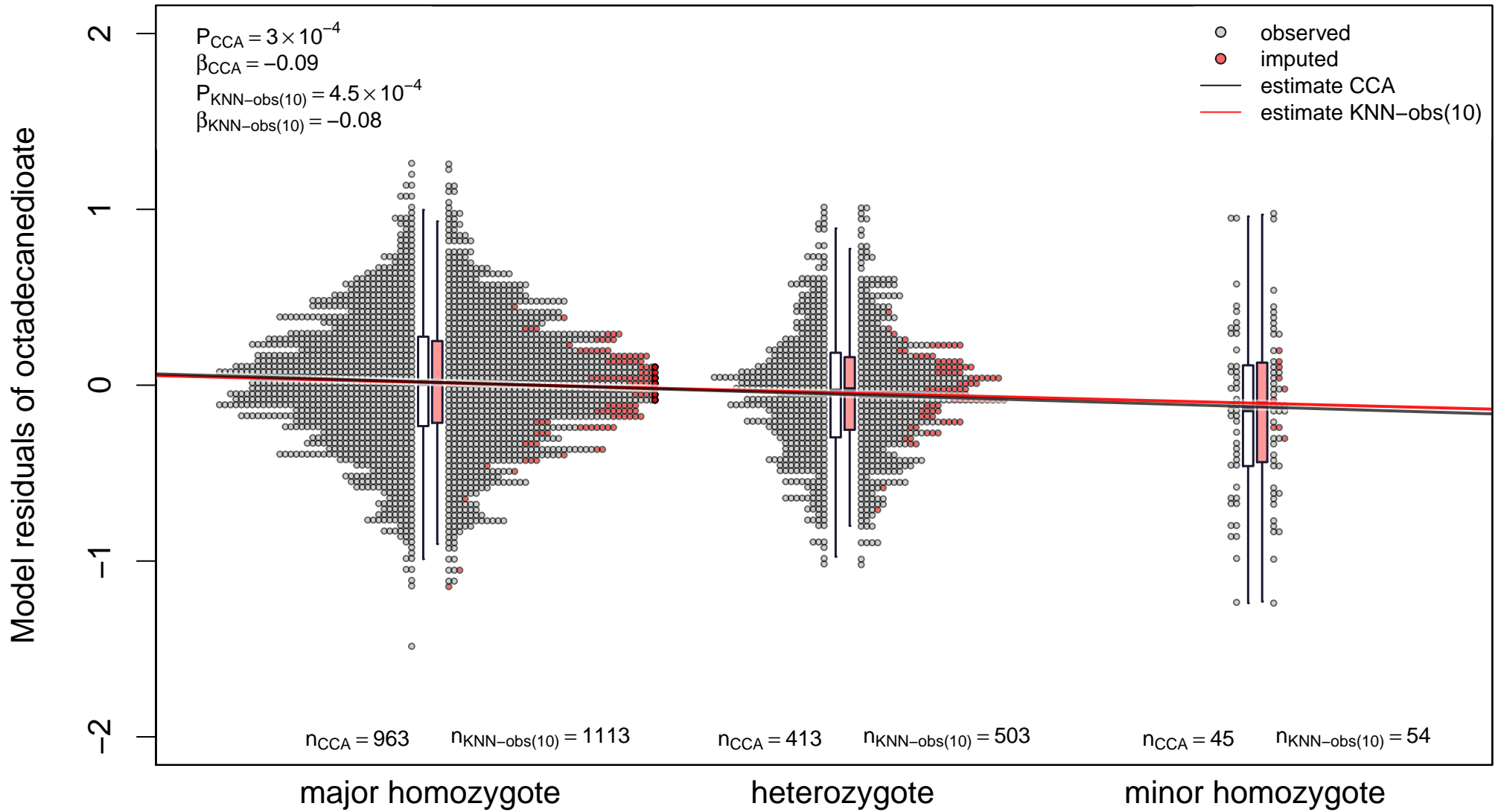
Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

# KNN-obs(1)



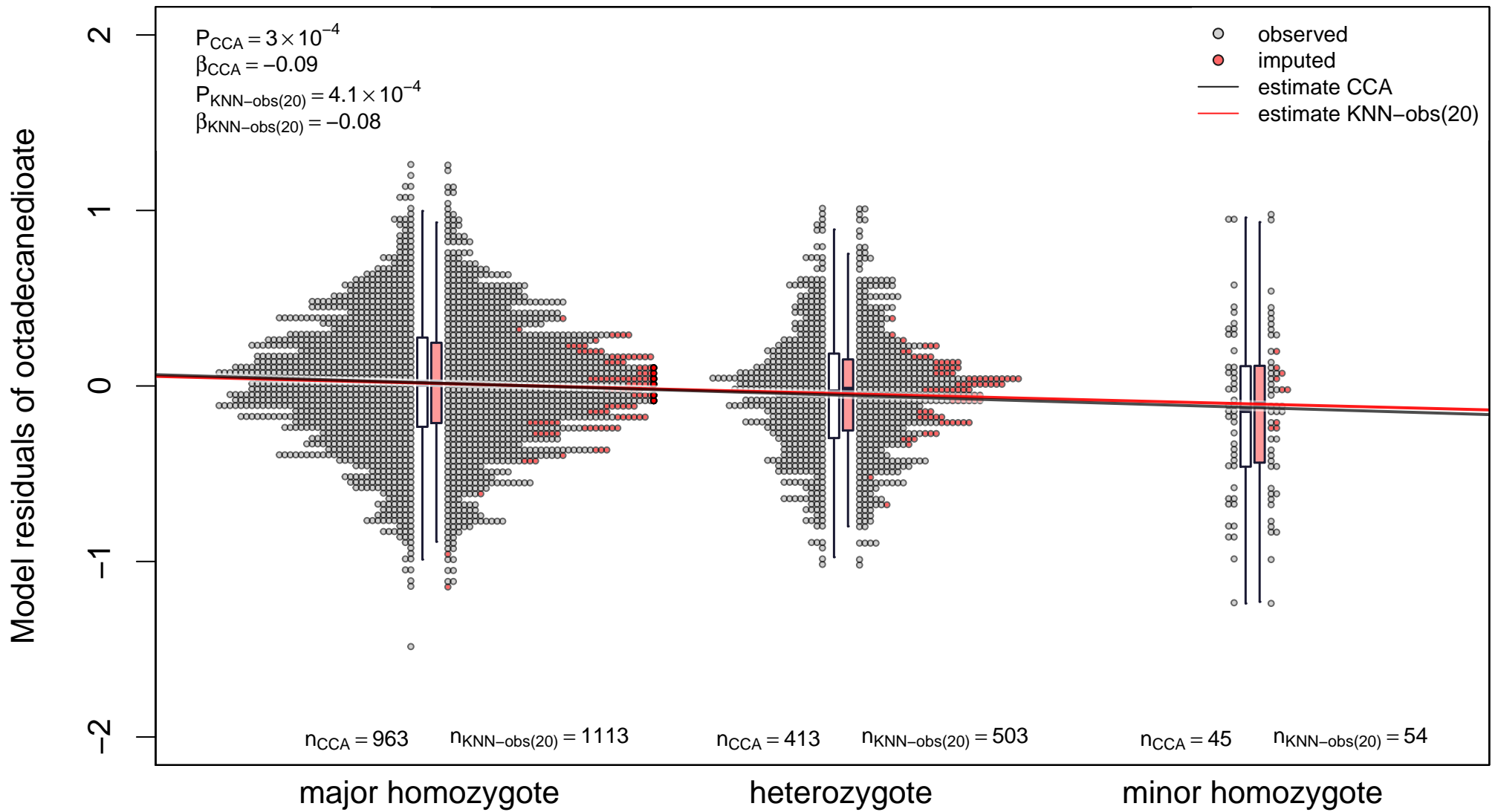
Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

# KNN-obs(10)



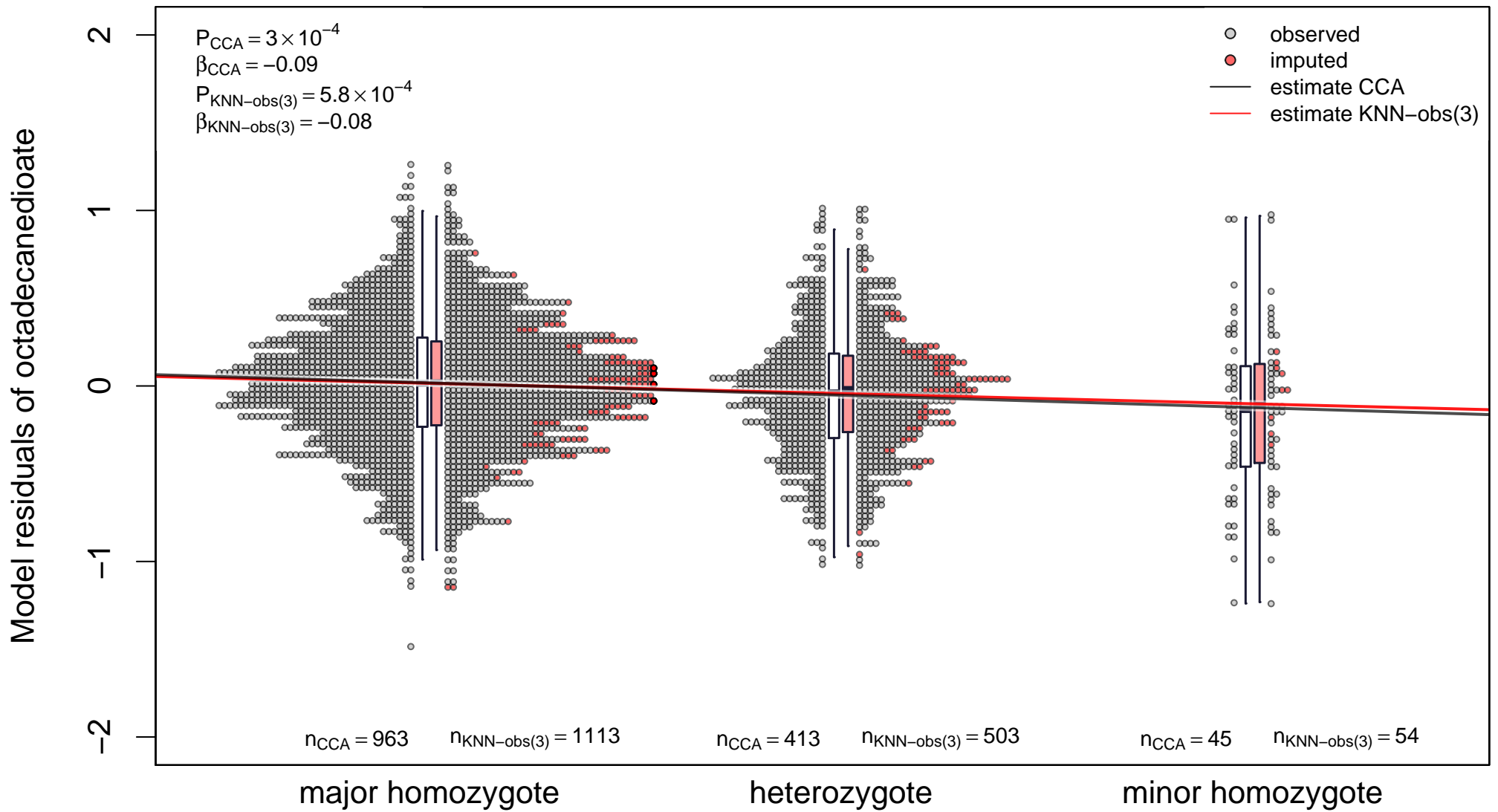
Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

# KNN-obs(20)

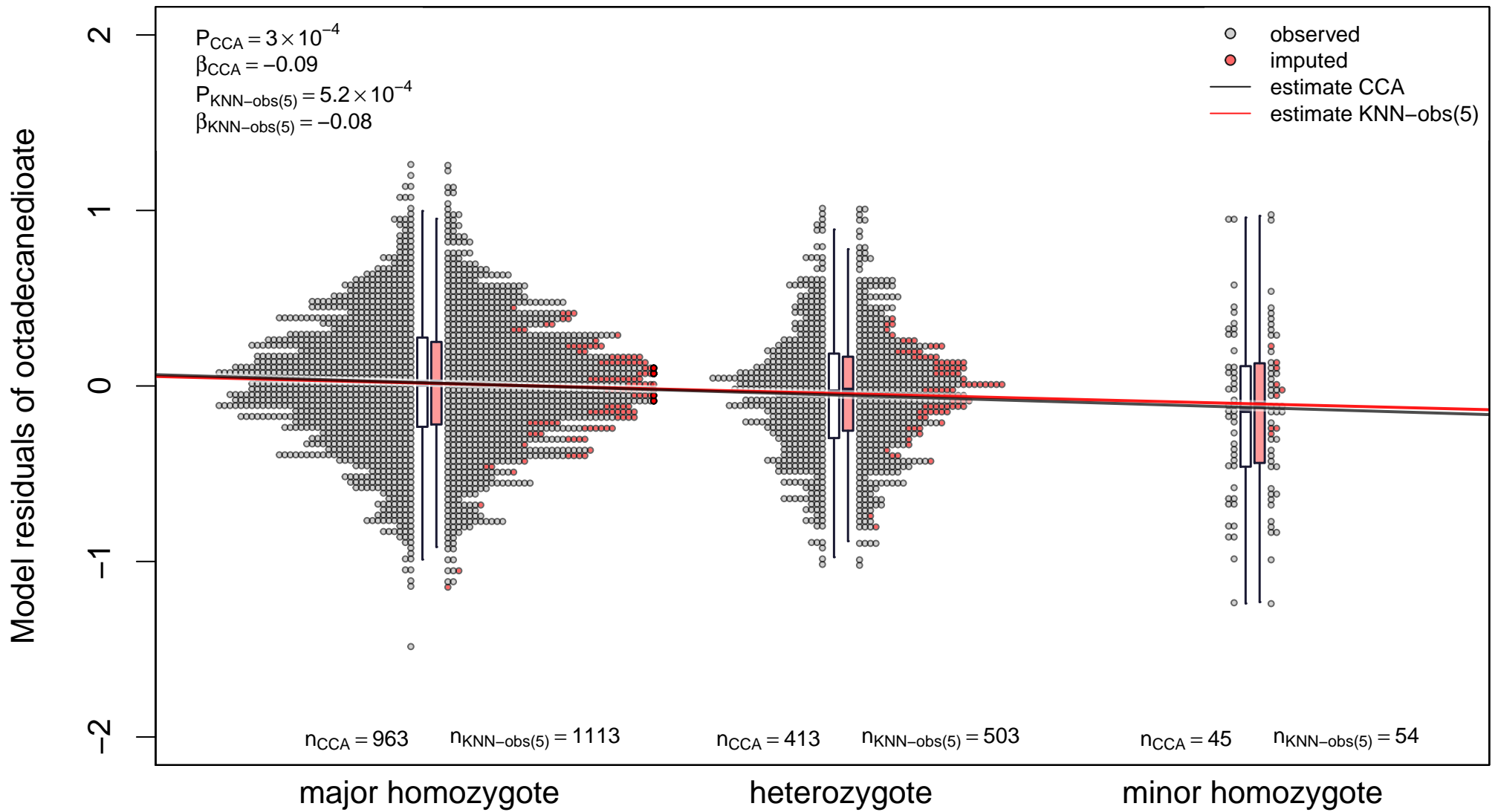


Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

# KNN-obs(3)

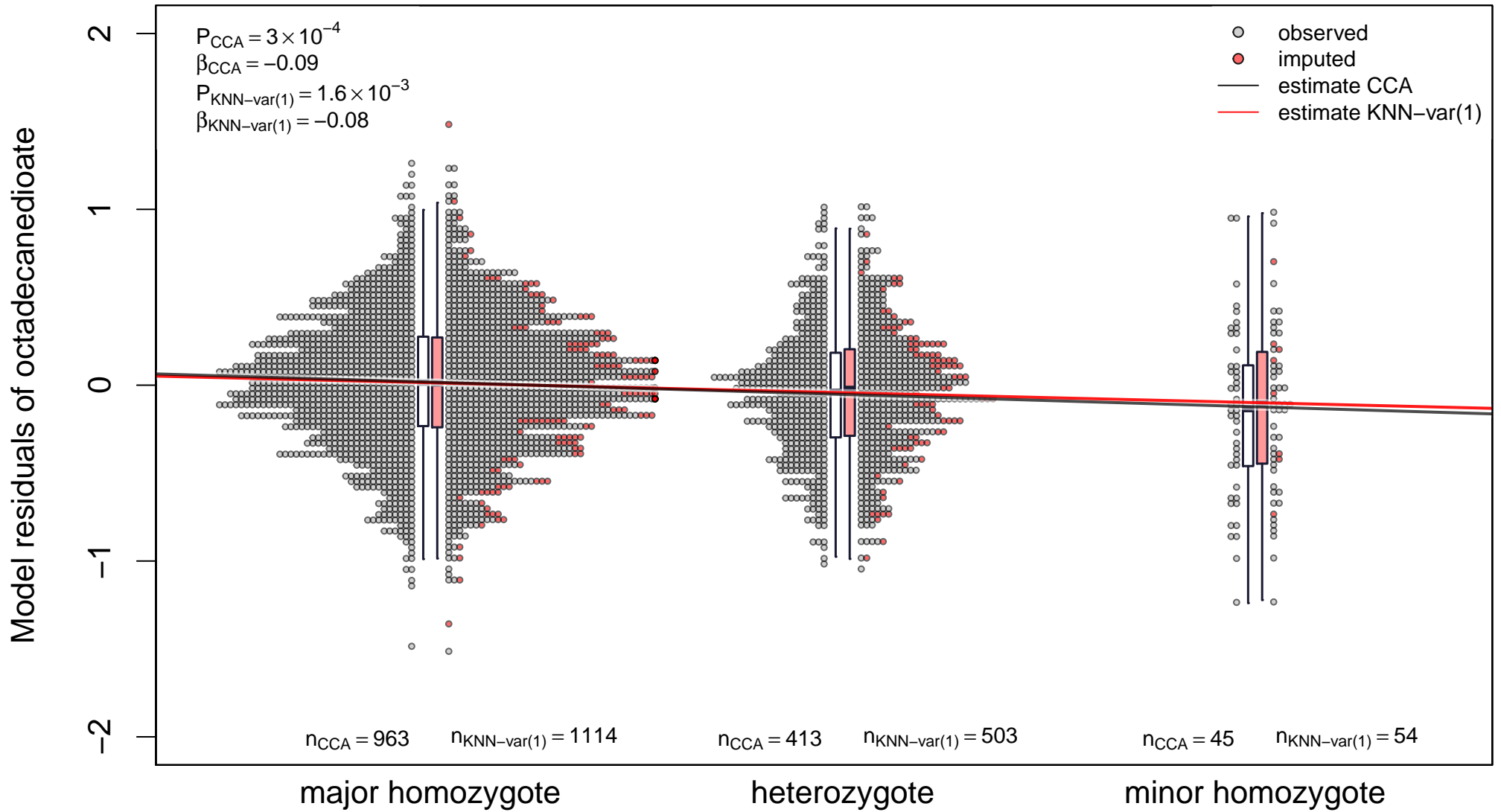


# KNN-obs(5)



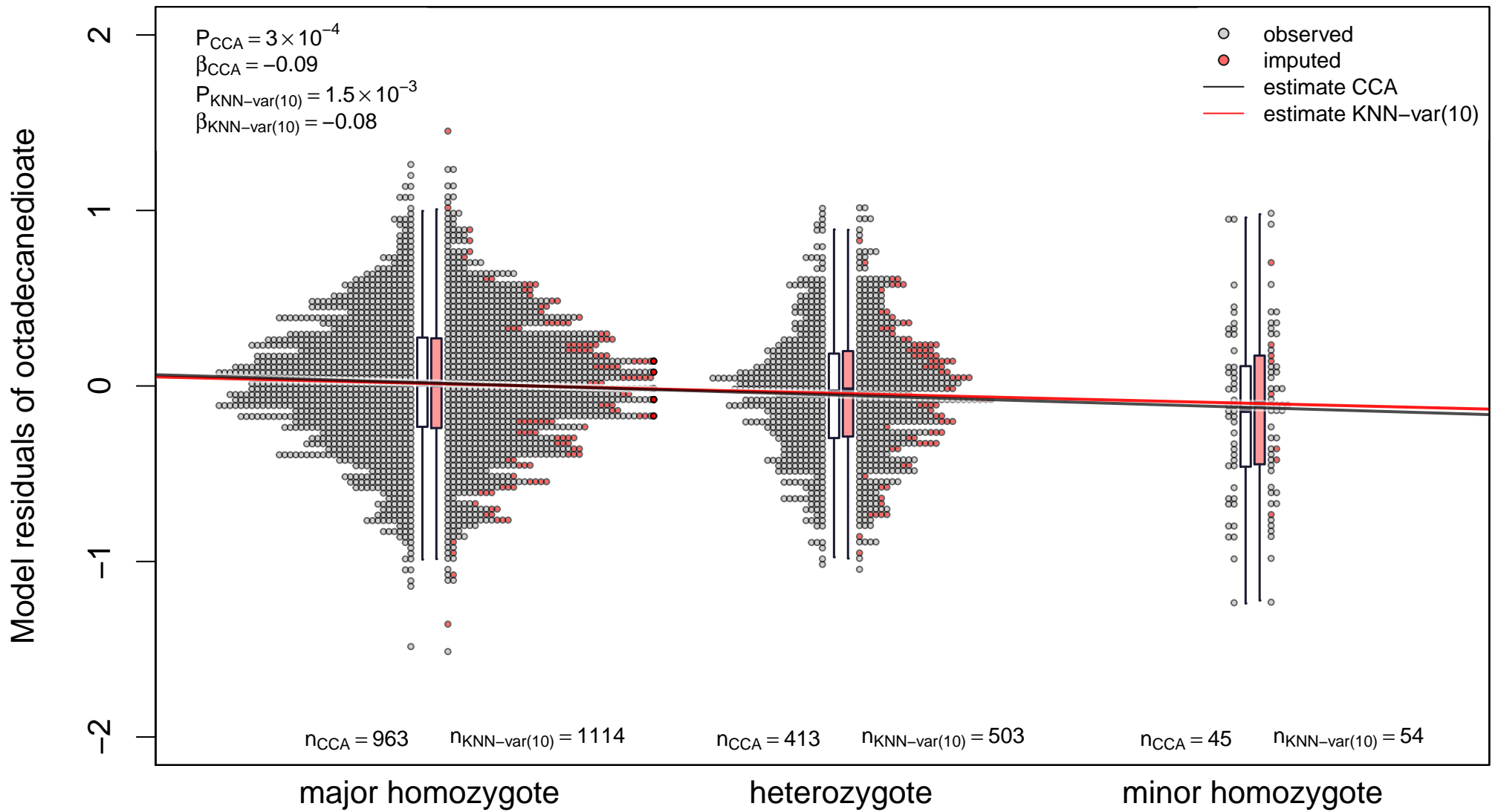
Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

# KNN-var(1)



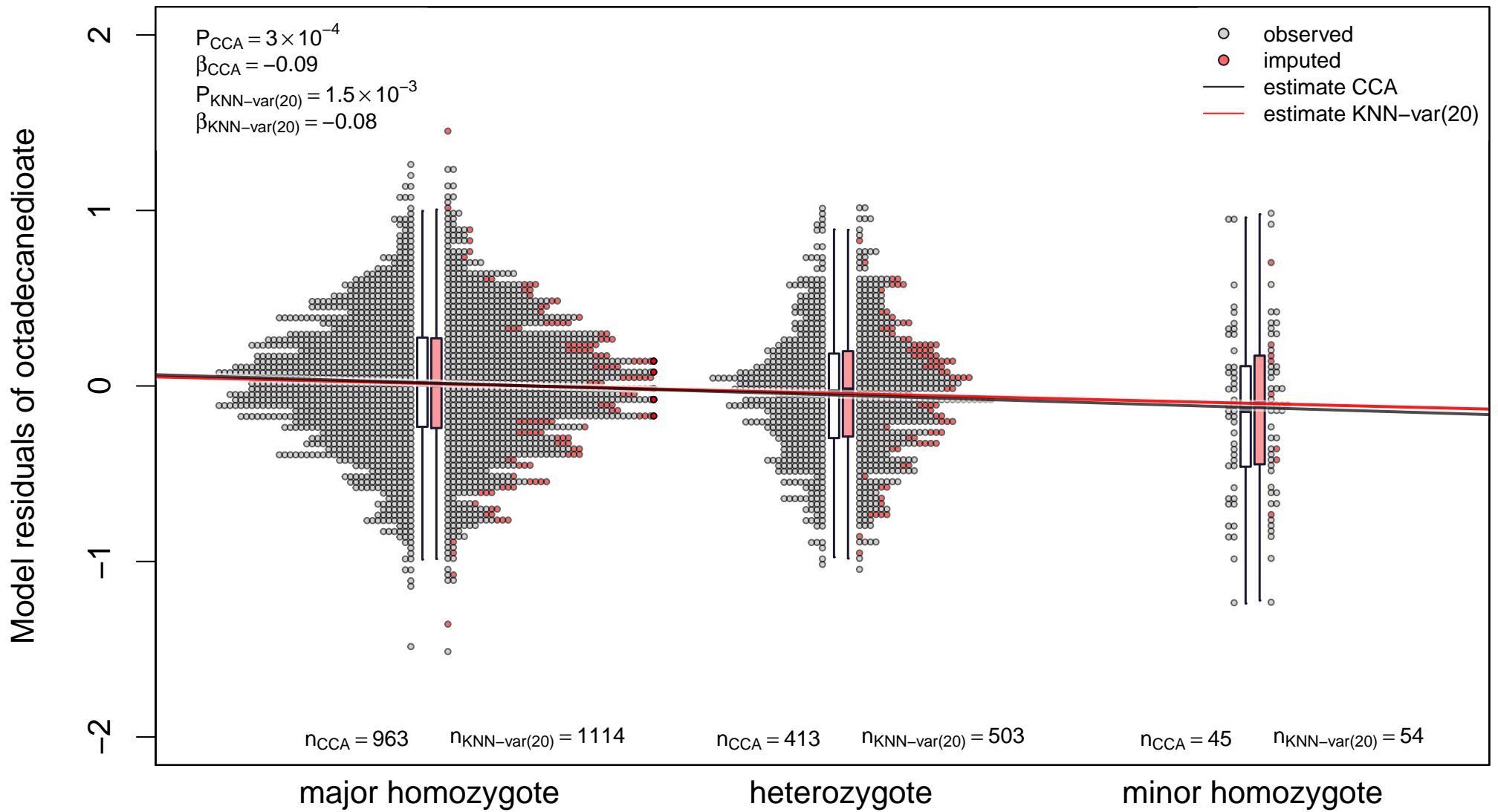


# KNN-var(10)

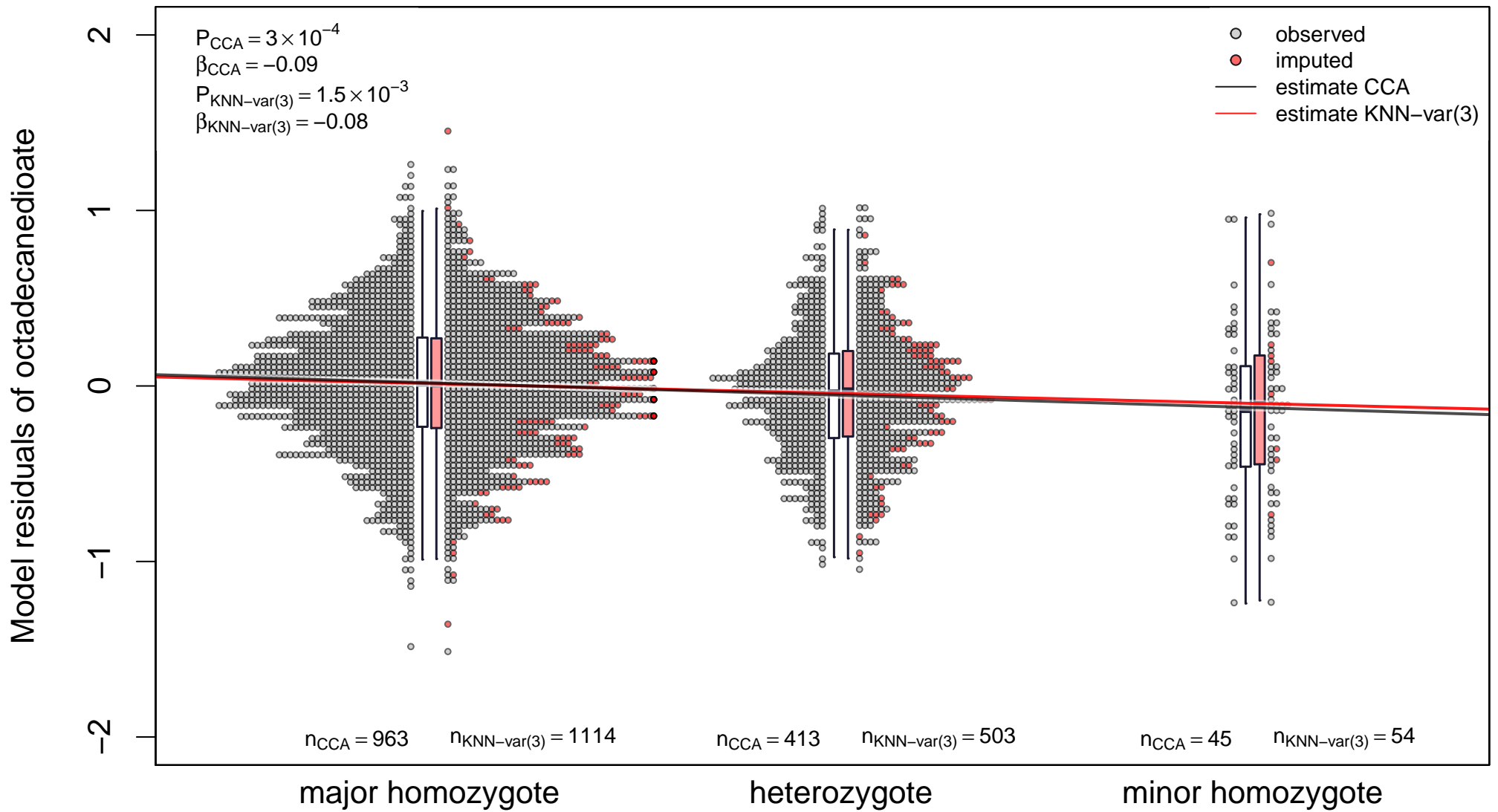


Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

# KNN-var(20)

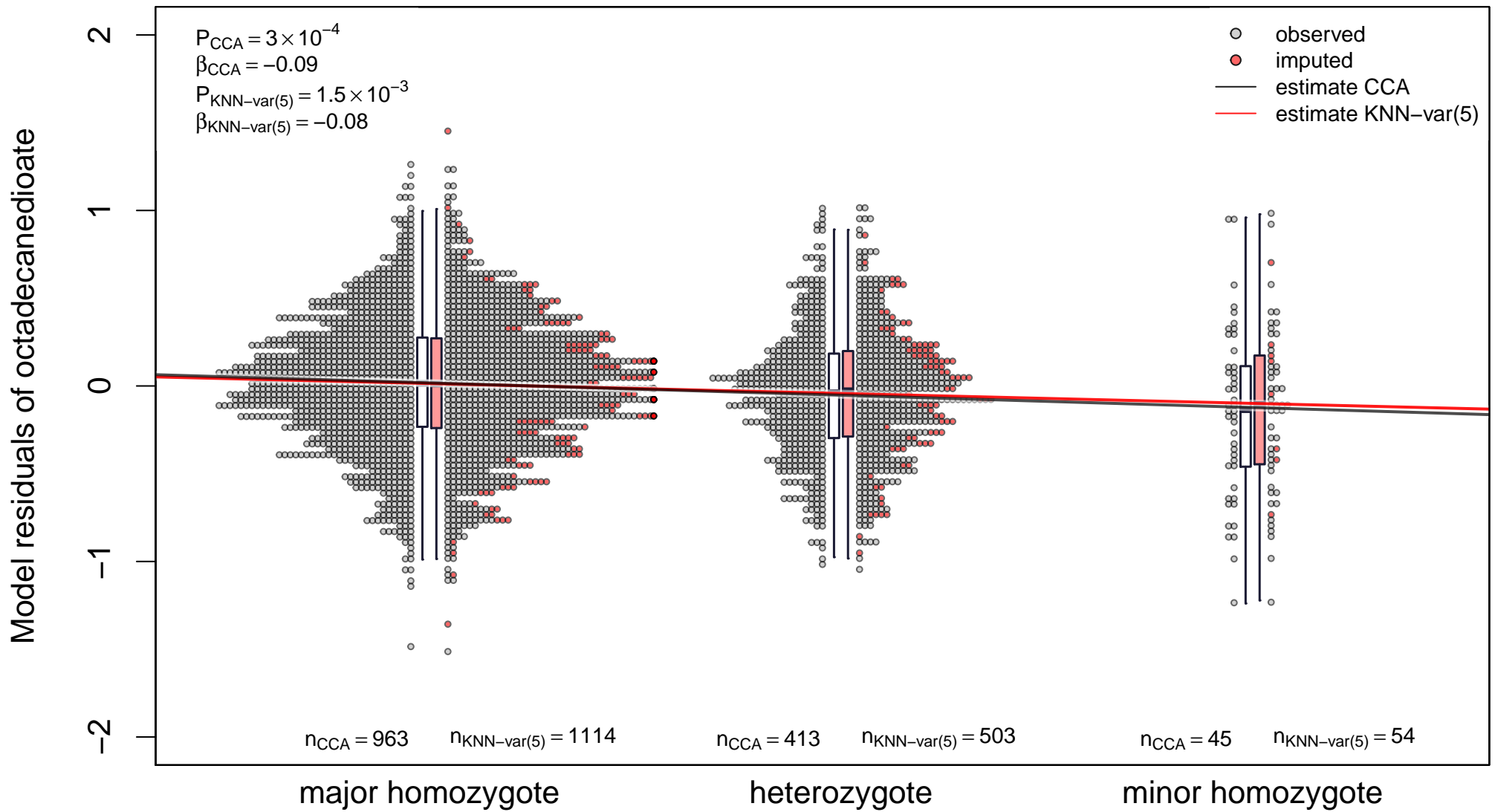


# KNN-var(3)



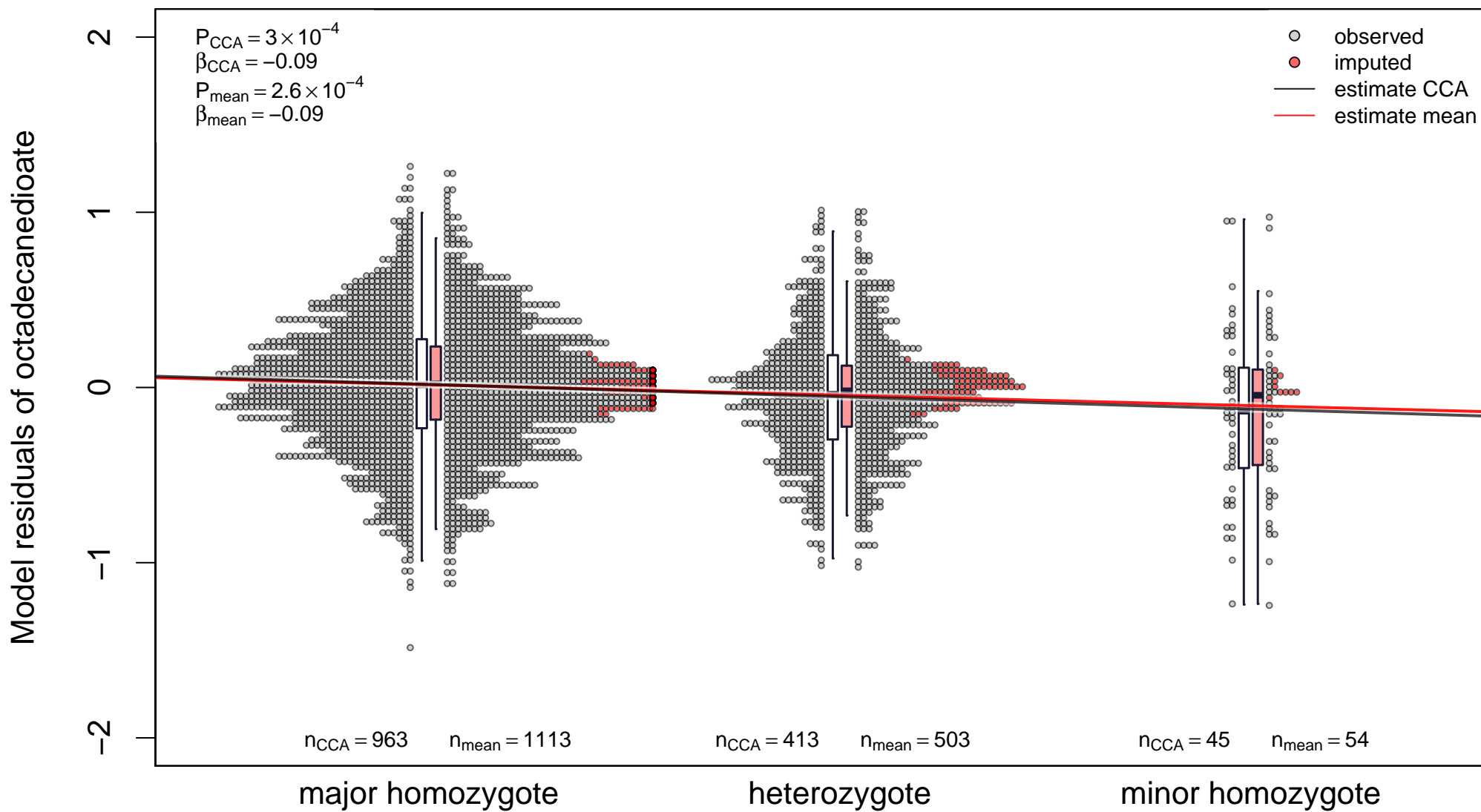
Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

# KNN-var(5)



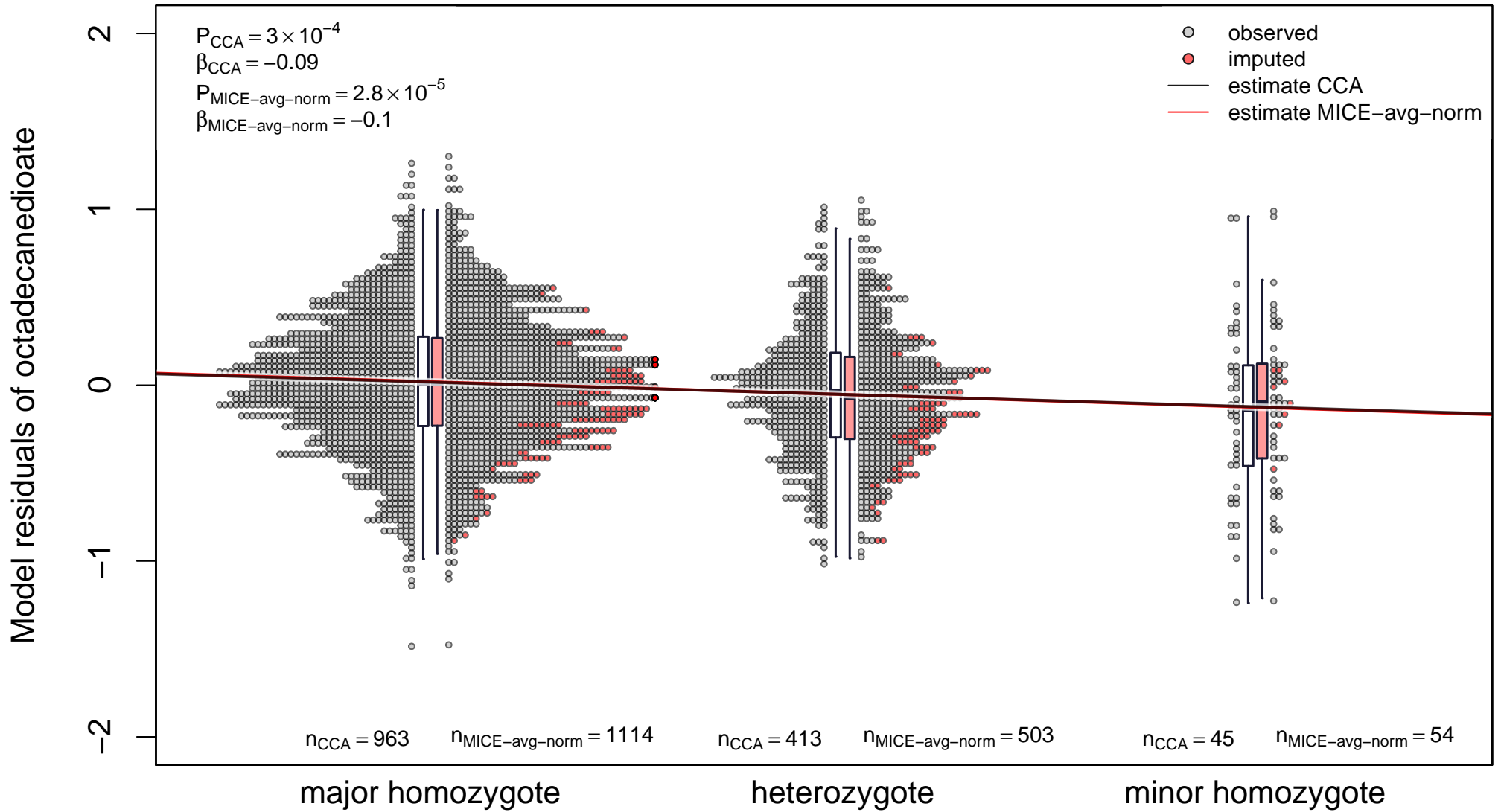
Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

# mean

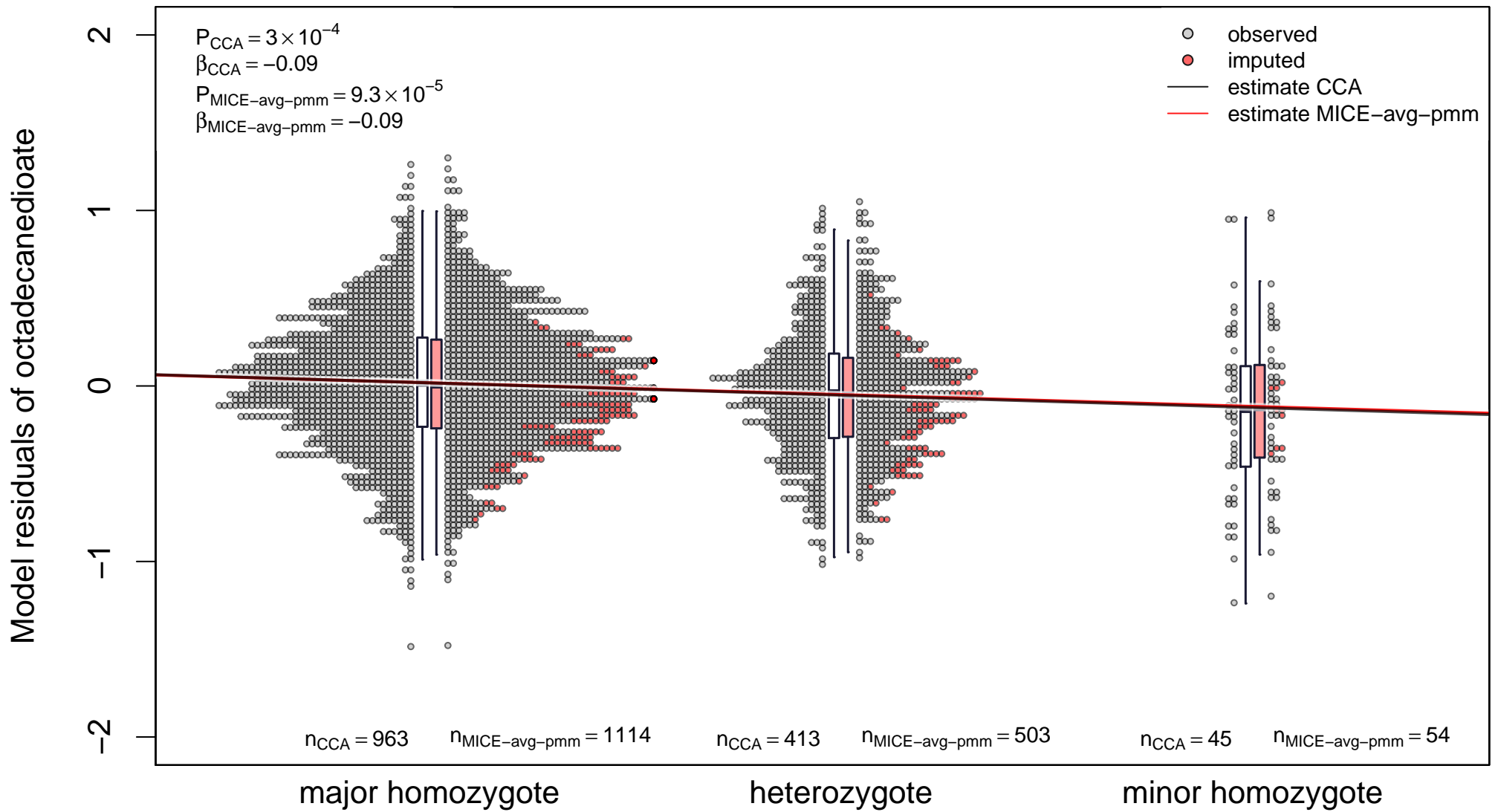


Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

# MICE-avg-norm

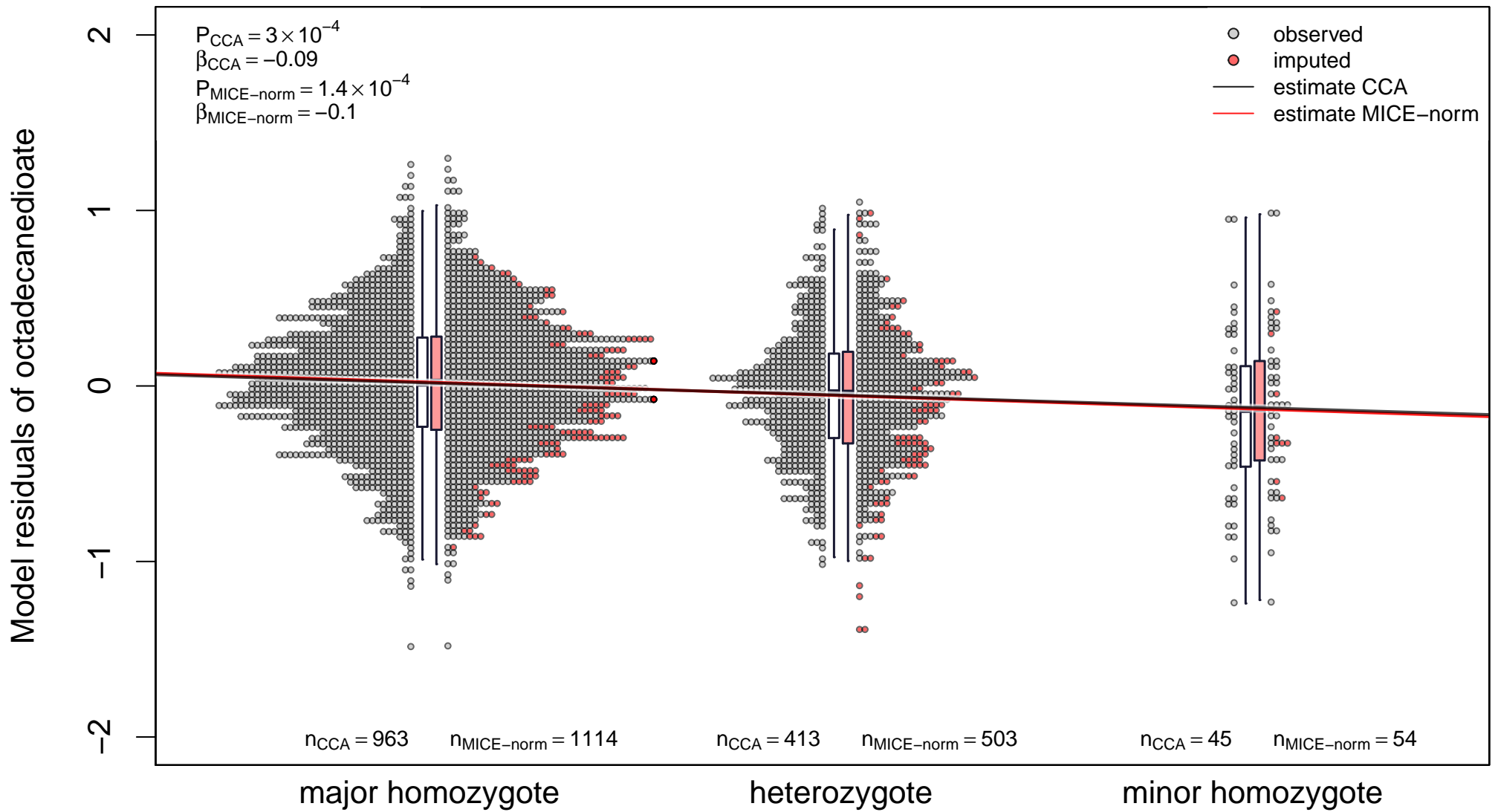


# MICE-avg-pmm



Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

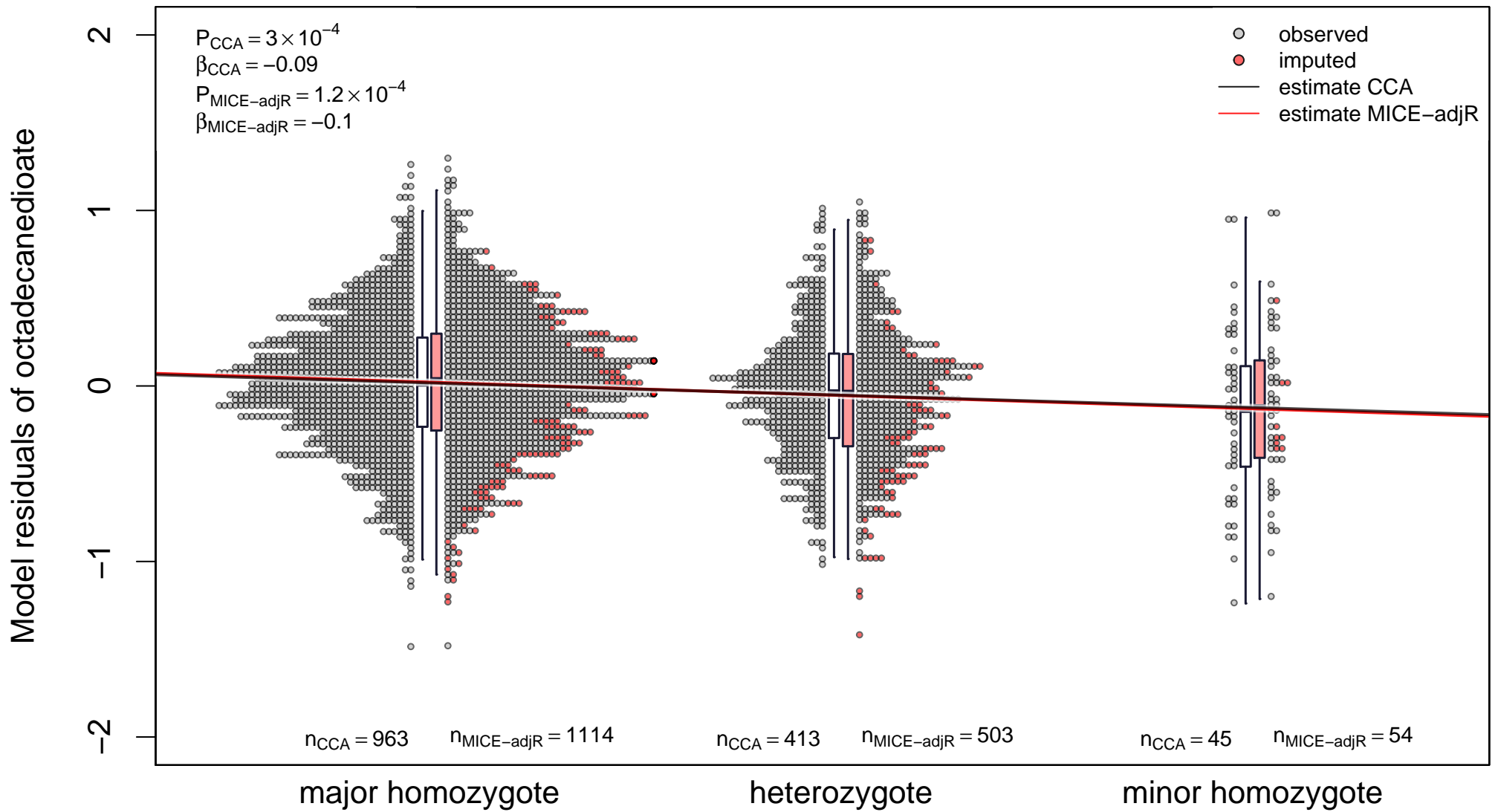
# MICE-norm



Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

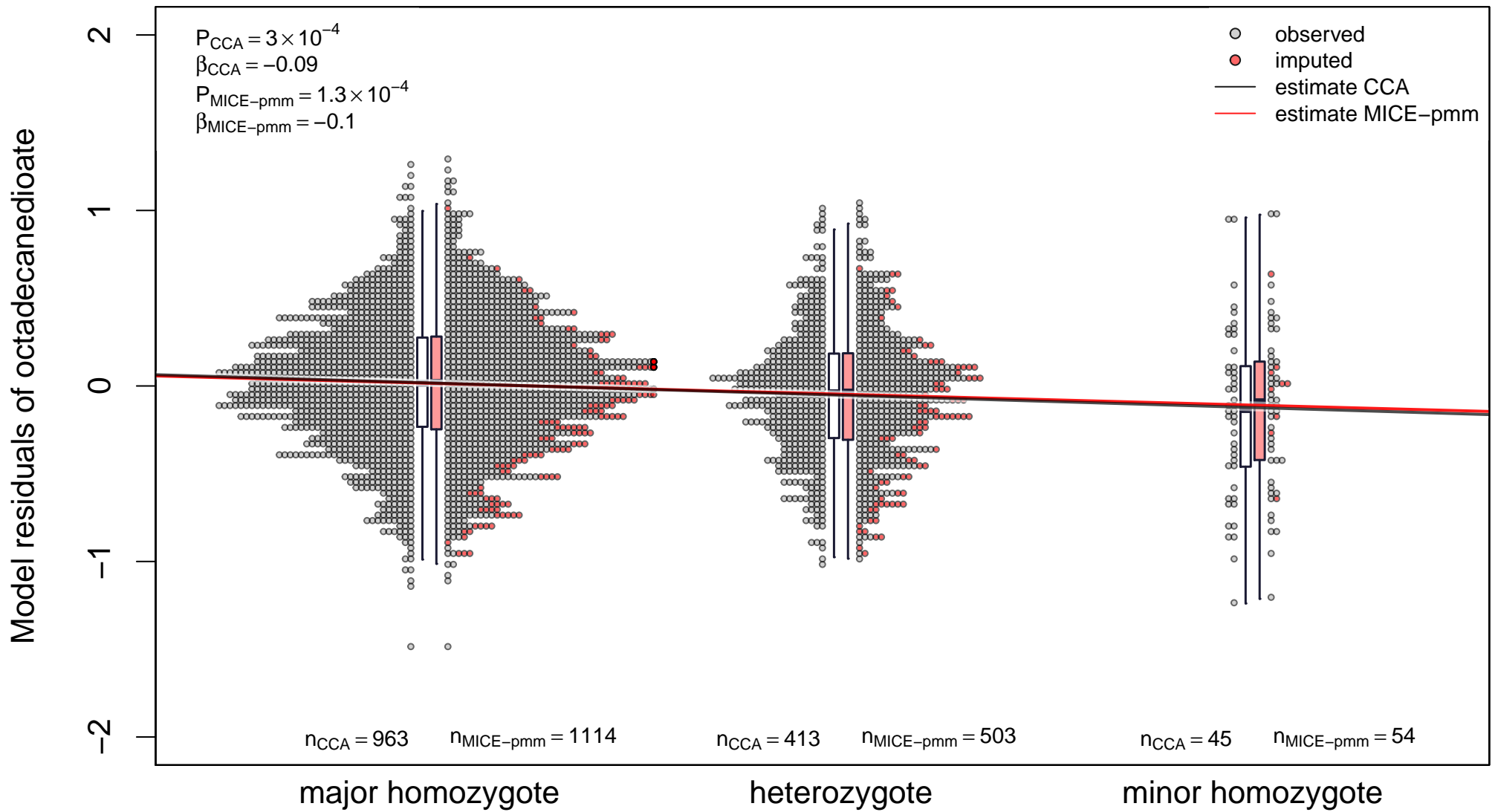


# MICE-adjR



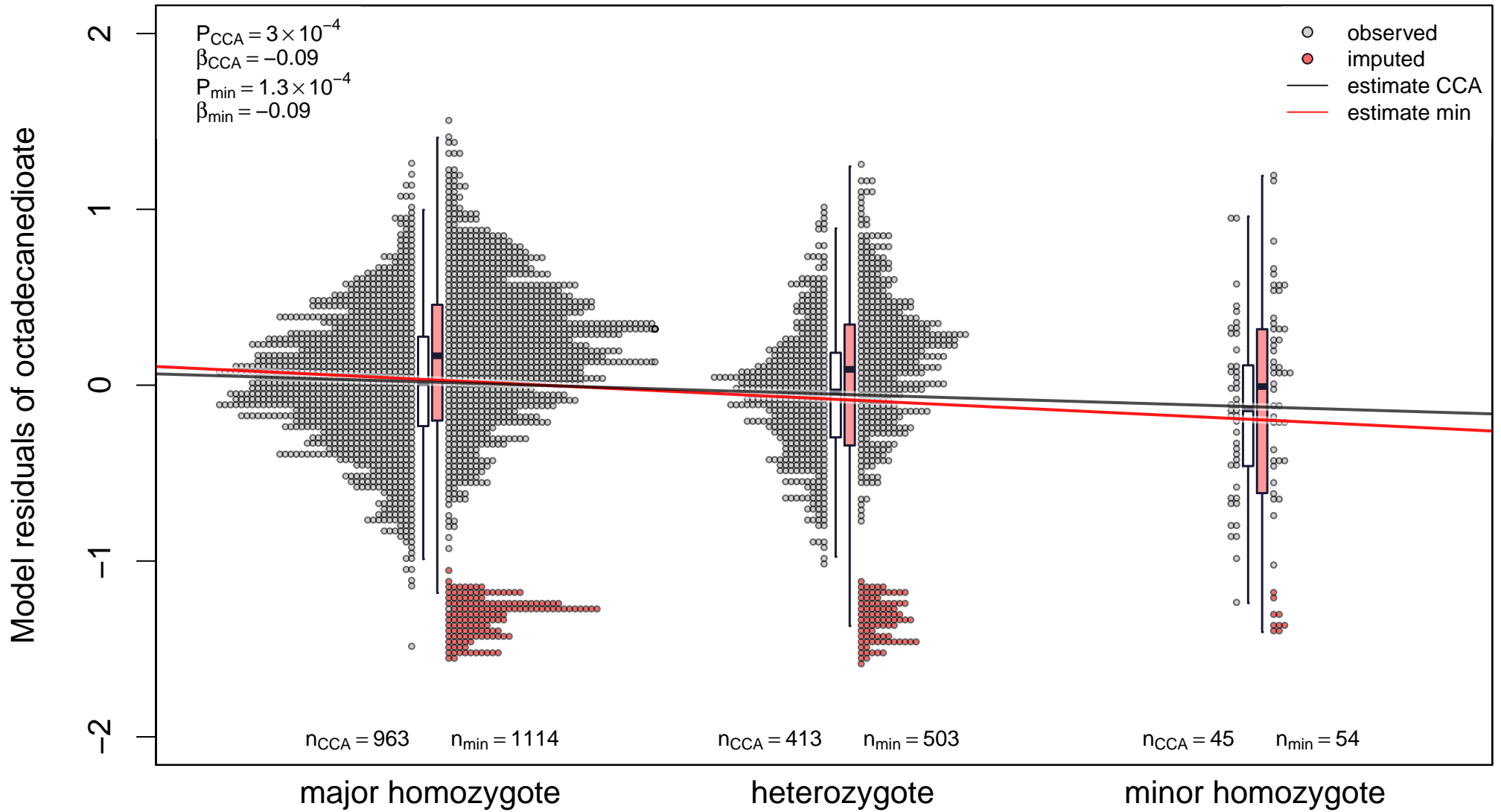
Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

# MICE-pmm



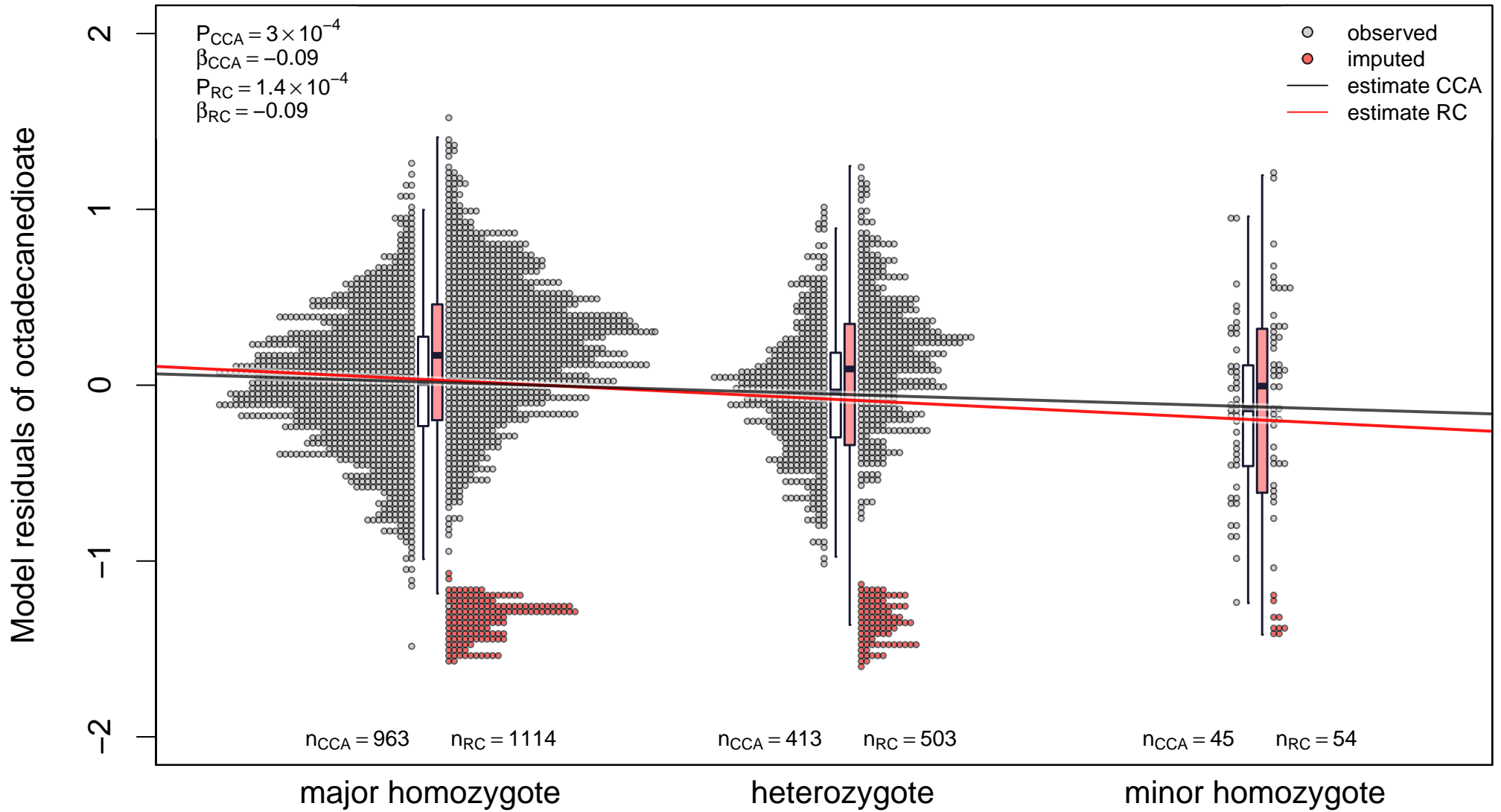
Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

min

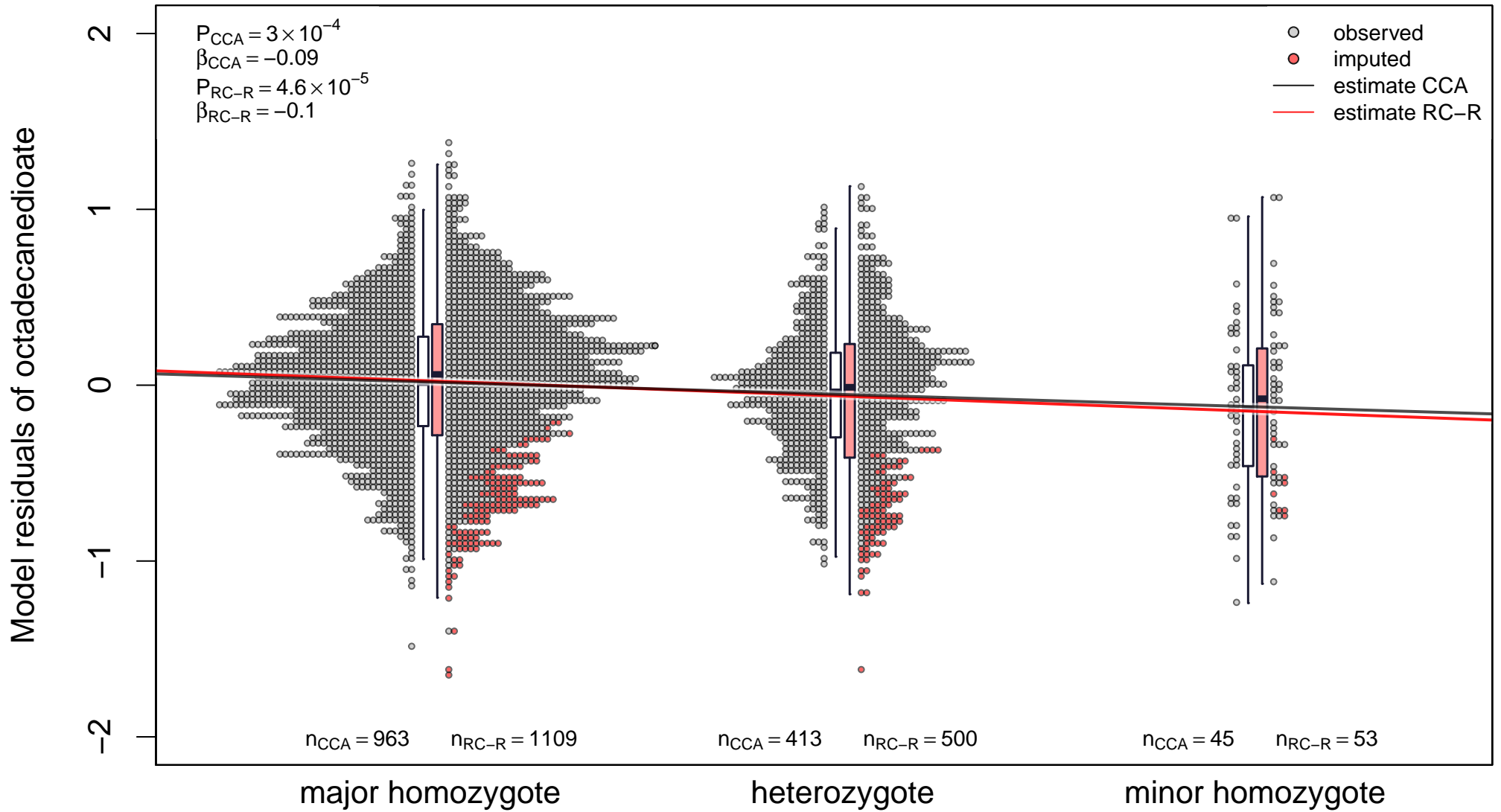


Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

# RC

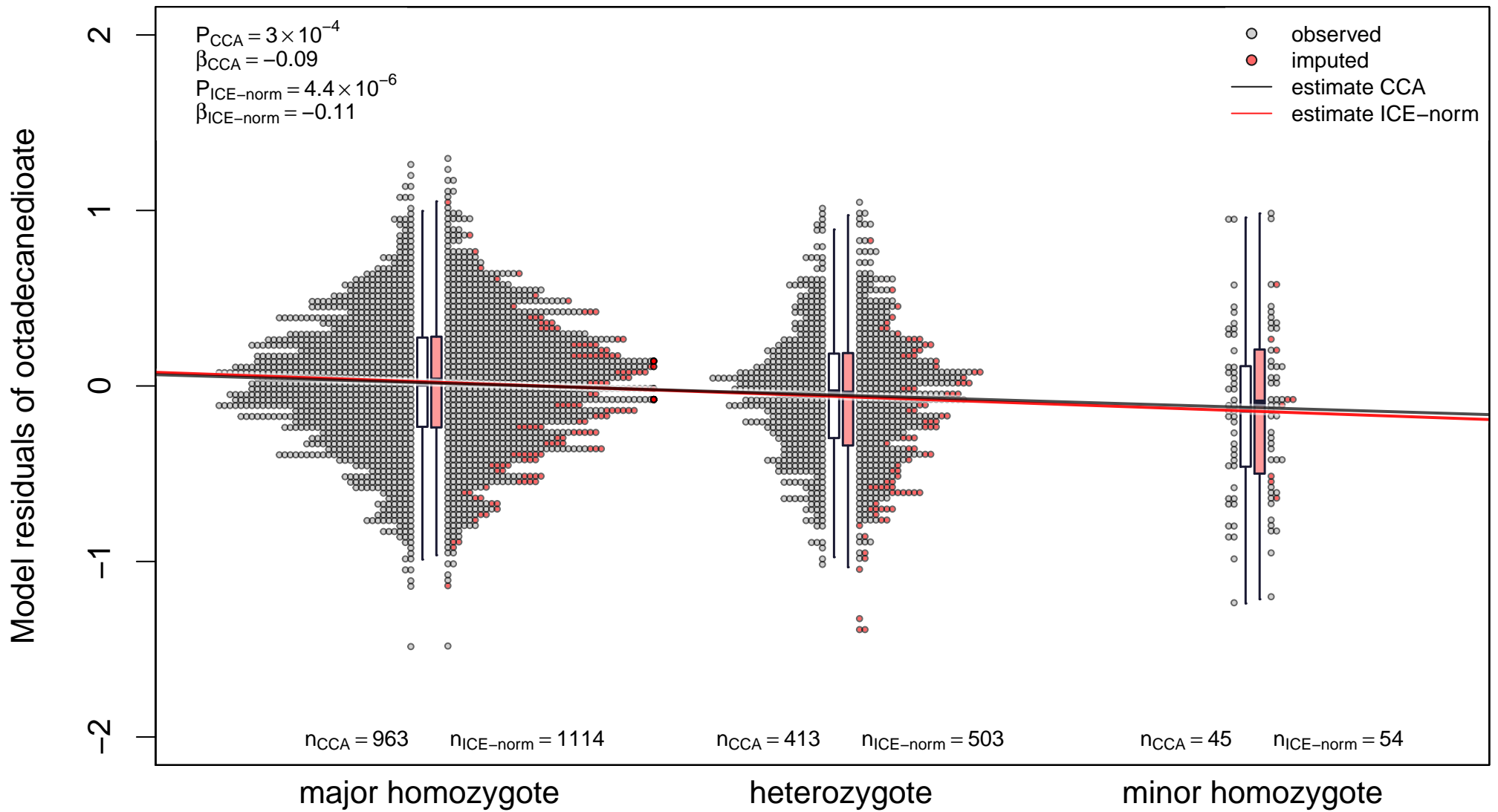


# RC-R

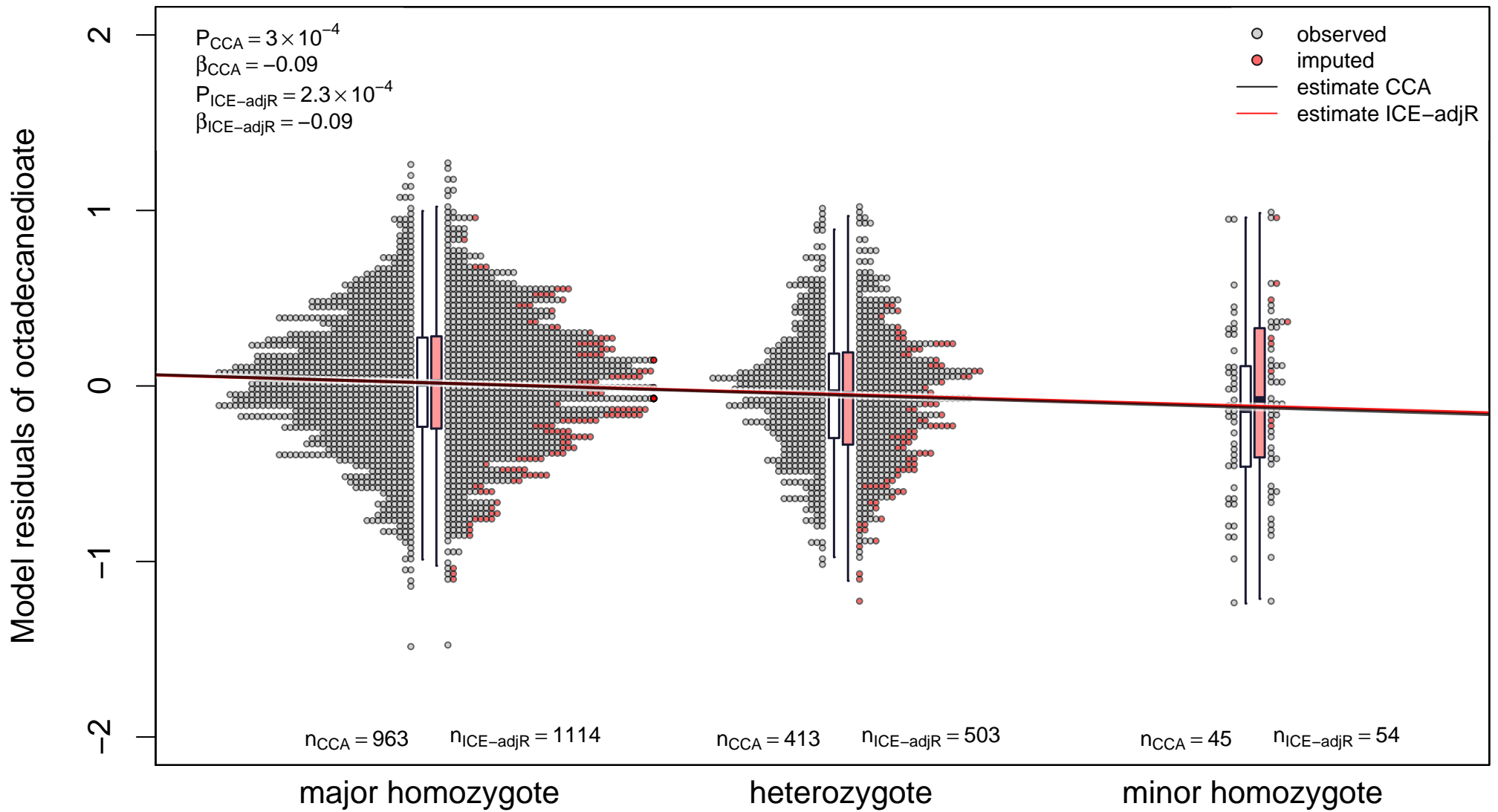


Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

# ICE-norm

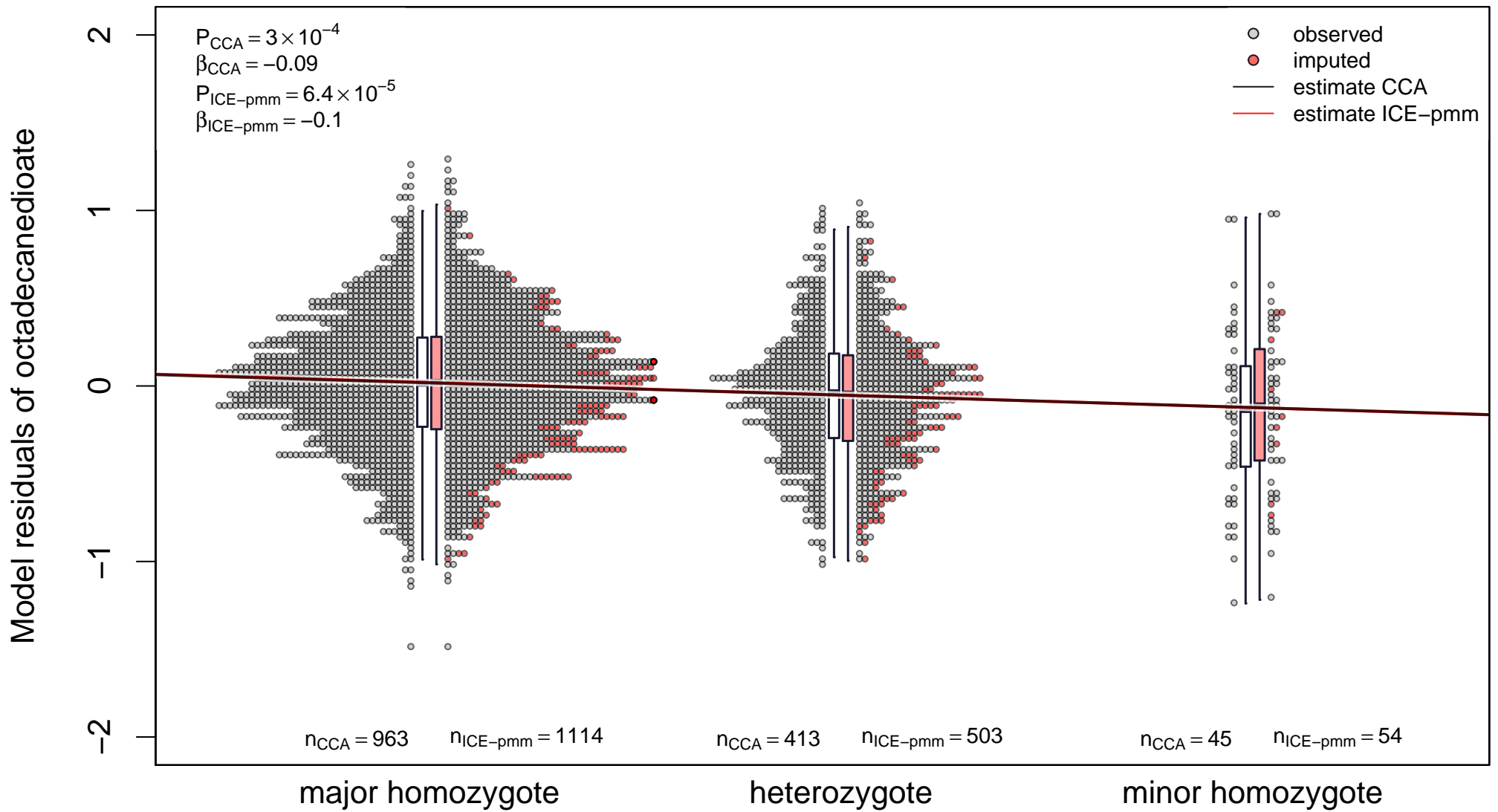


# ICE-adjR



Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

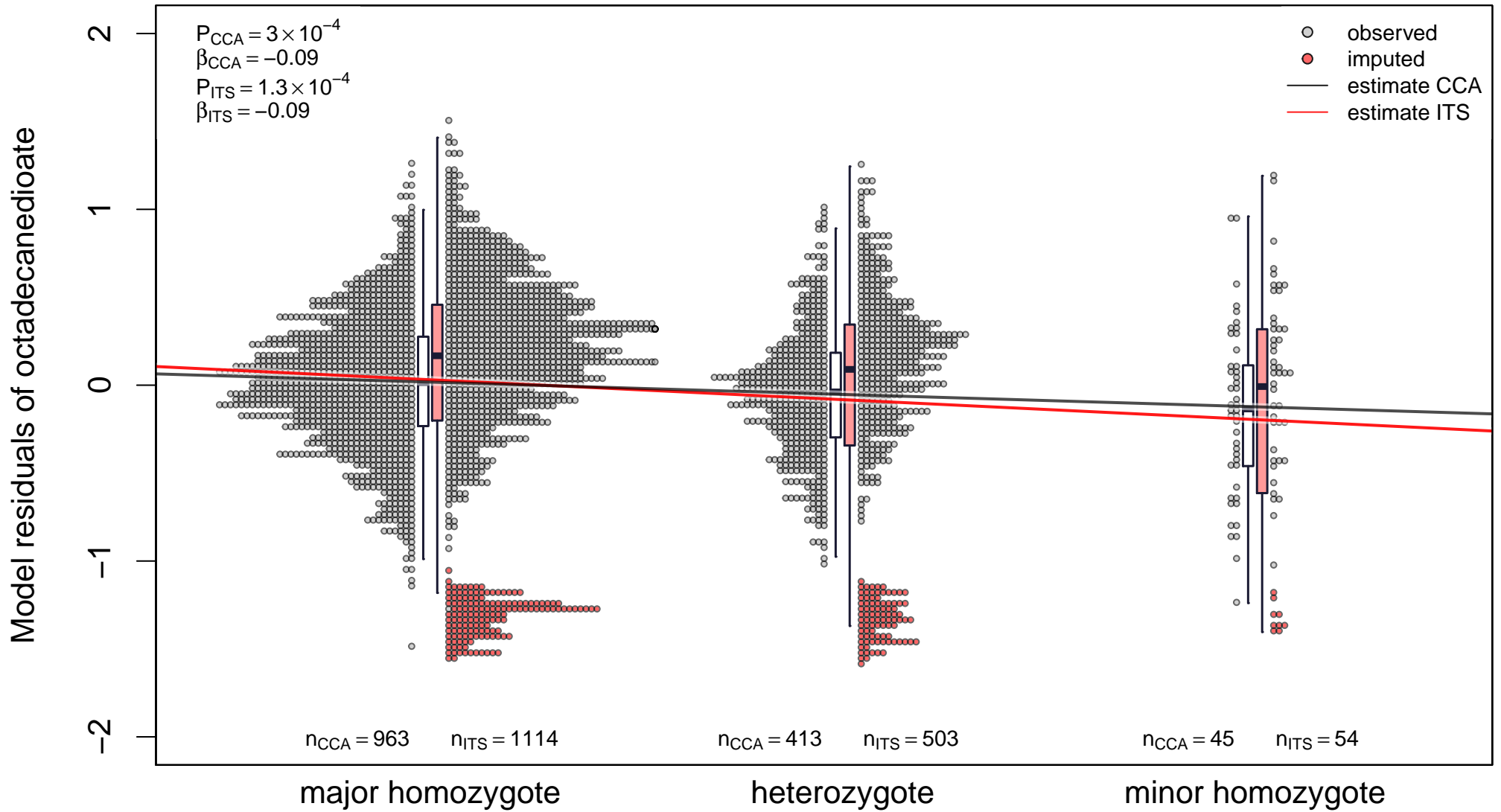
# ICE-pmm



Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

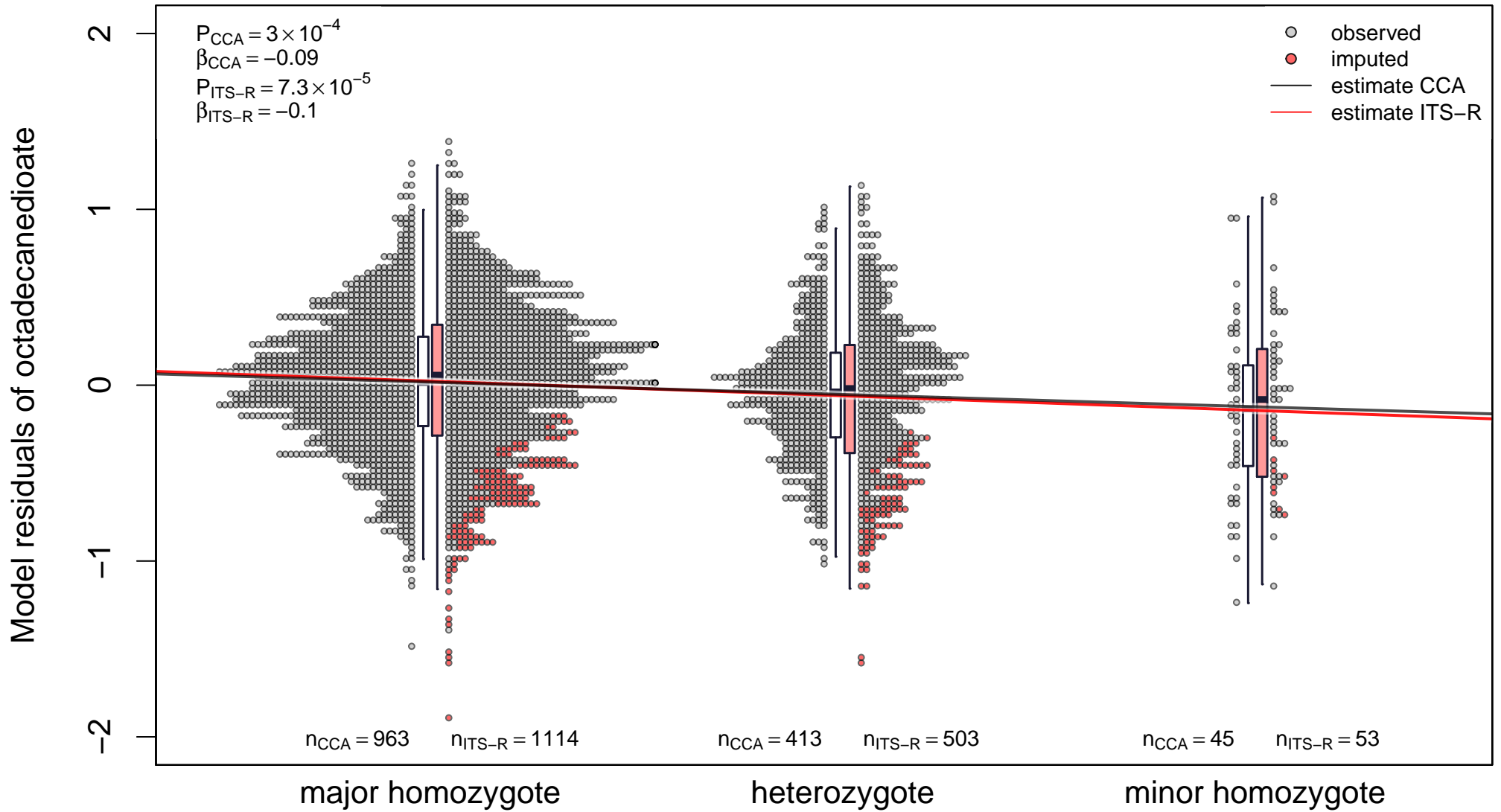


# ITS



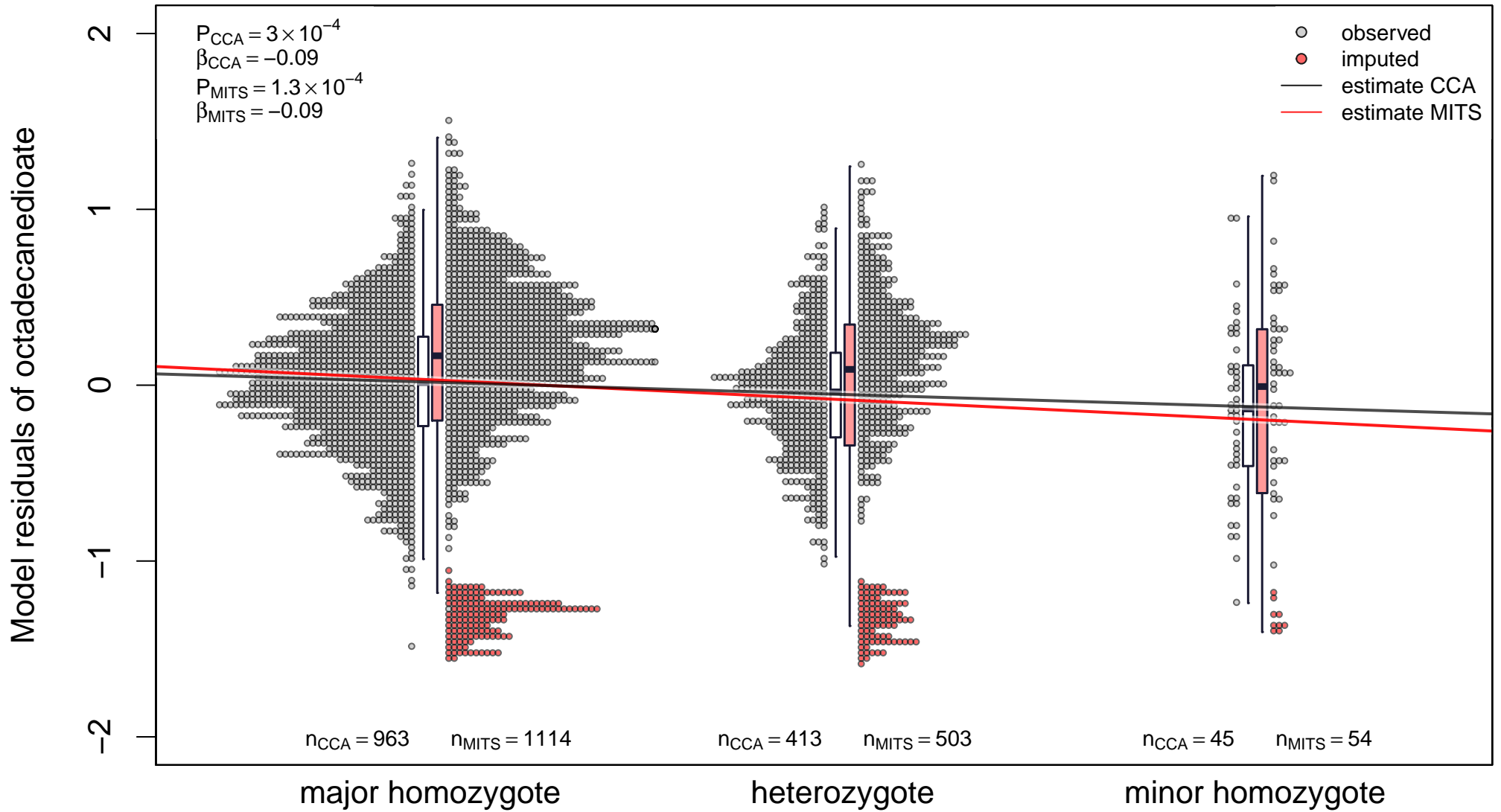
Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

# ITS-R



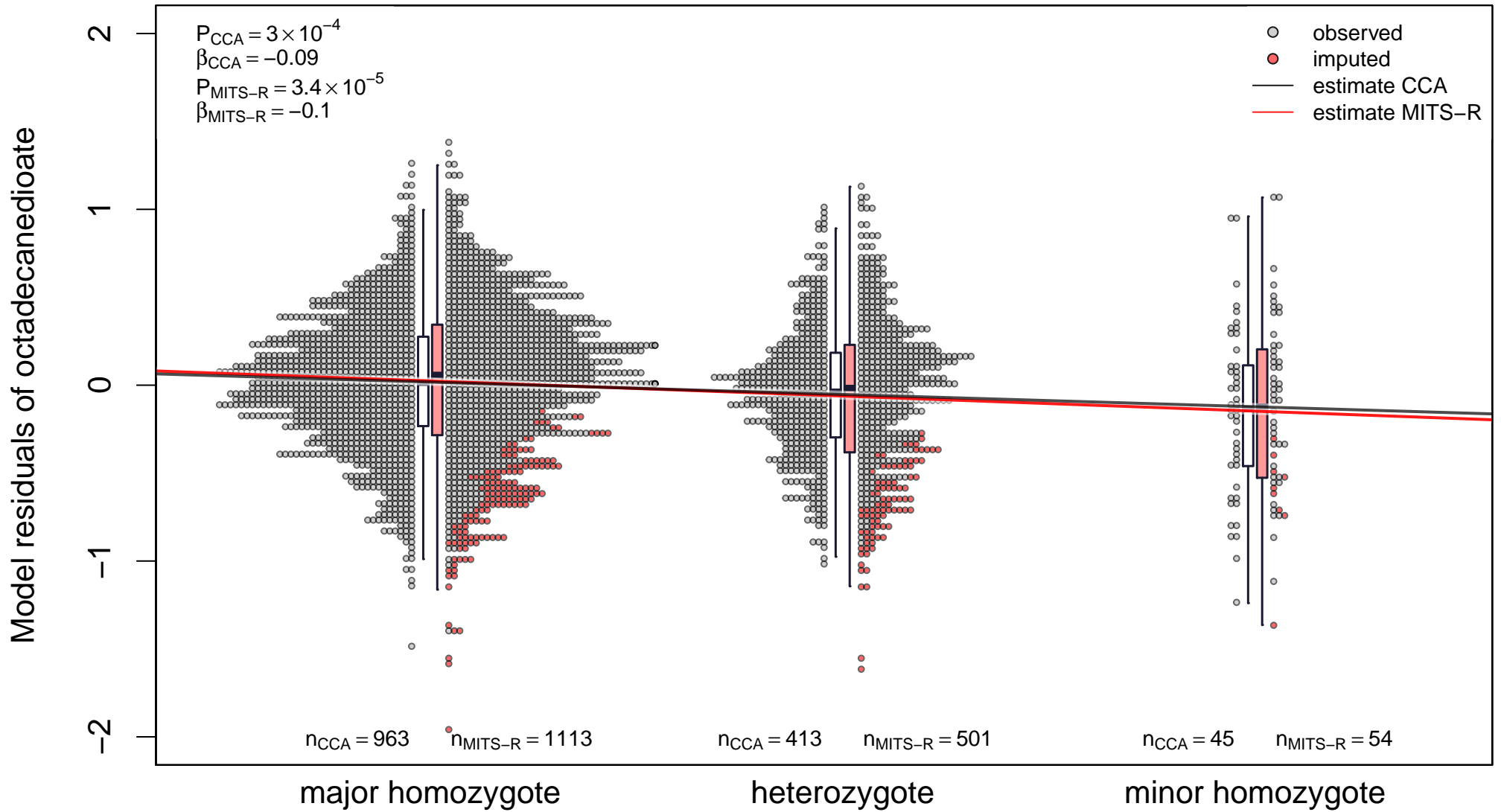
Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

# MITS

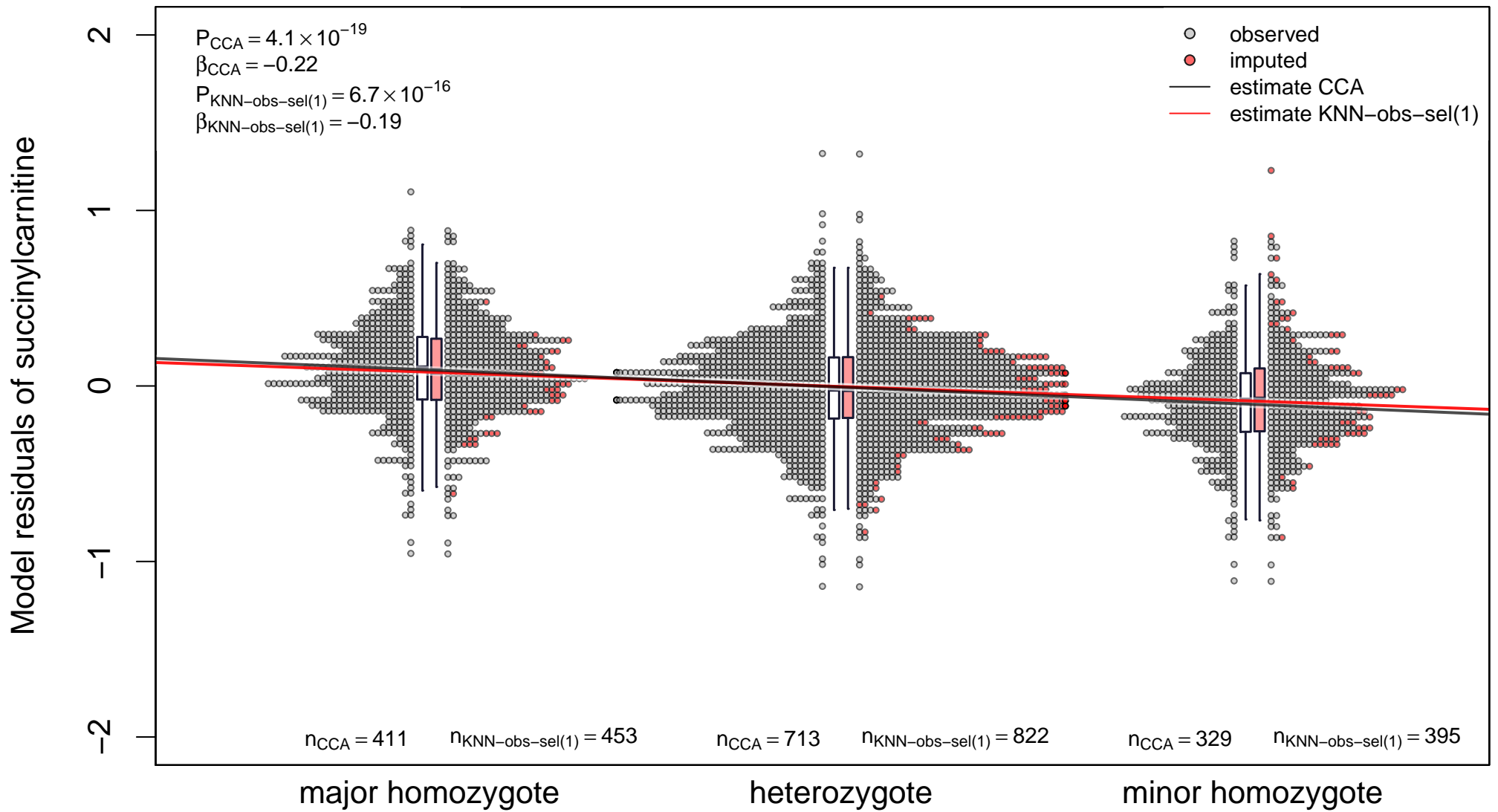


Genotype of SNP rs12829704 (SLCO1B1 (2 separate loci))

# MIT-S-R

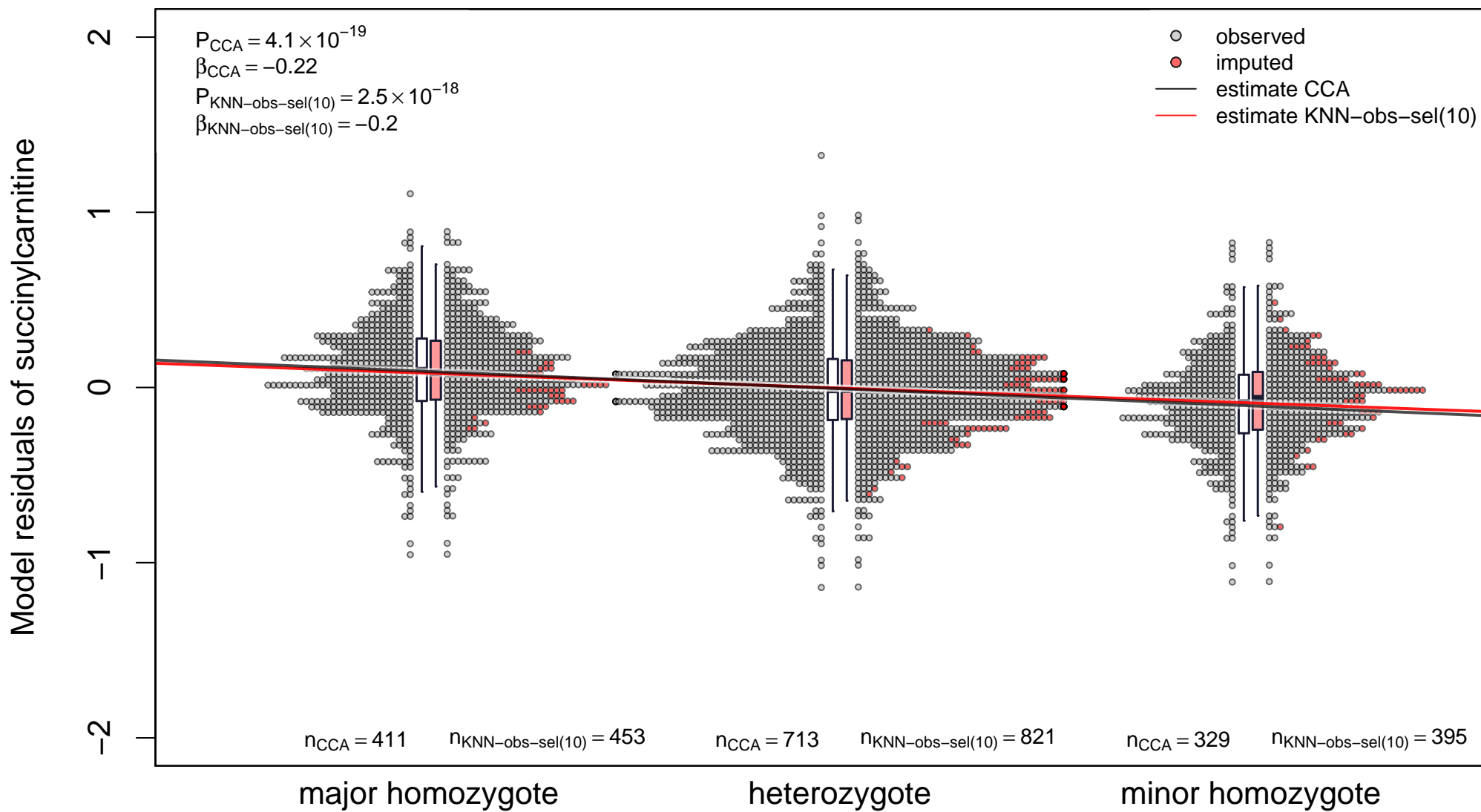


# KNN-obs-sel(1)



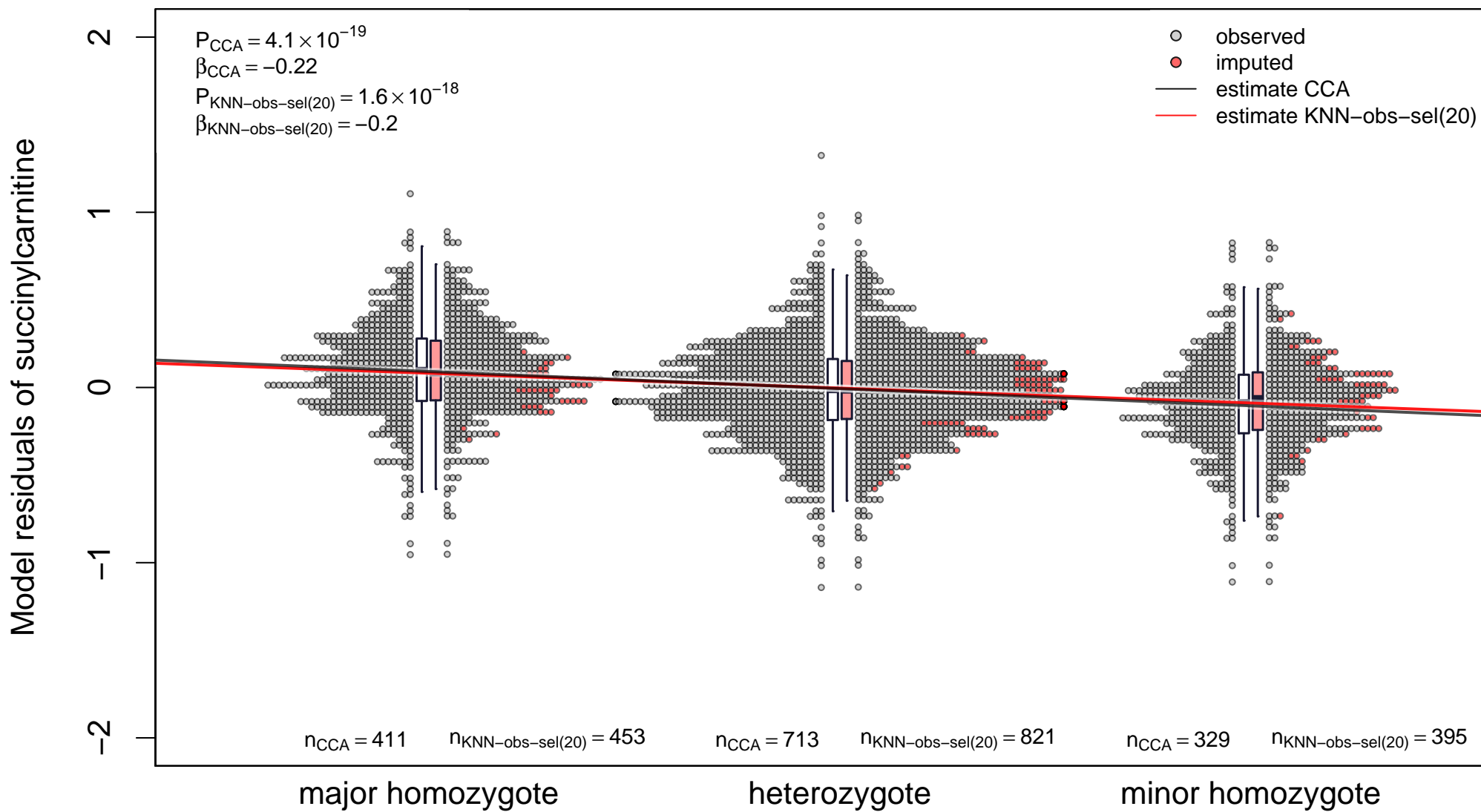
Genotype of SNP rs1472631 (LACTB)

# KNN-obs-sel(10)



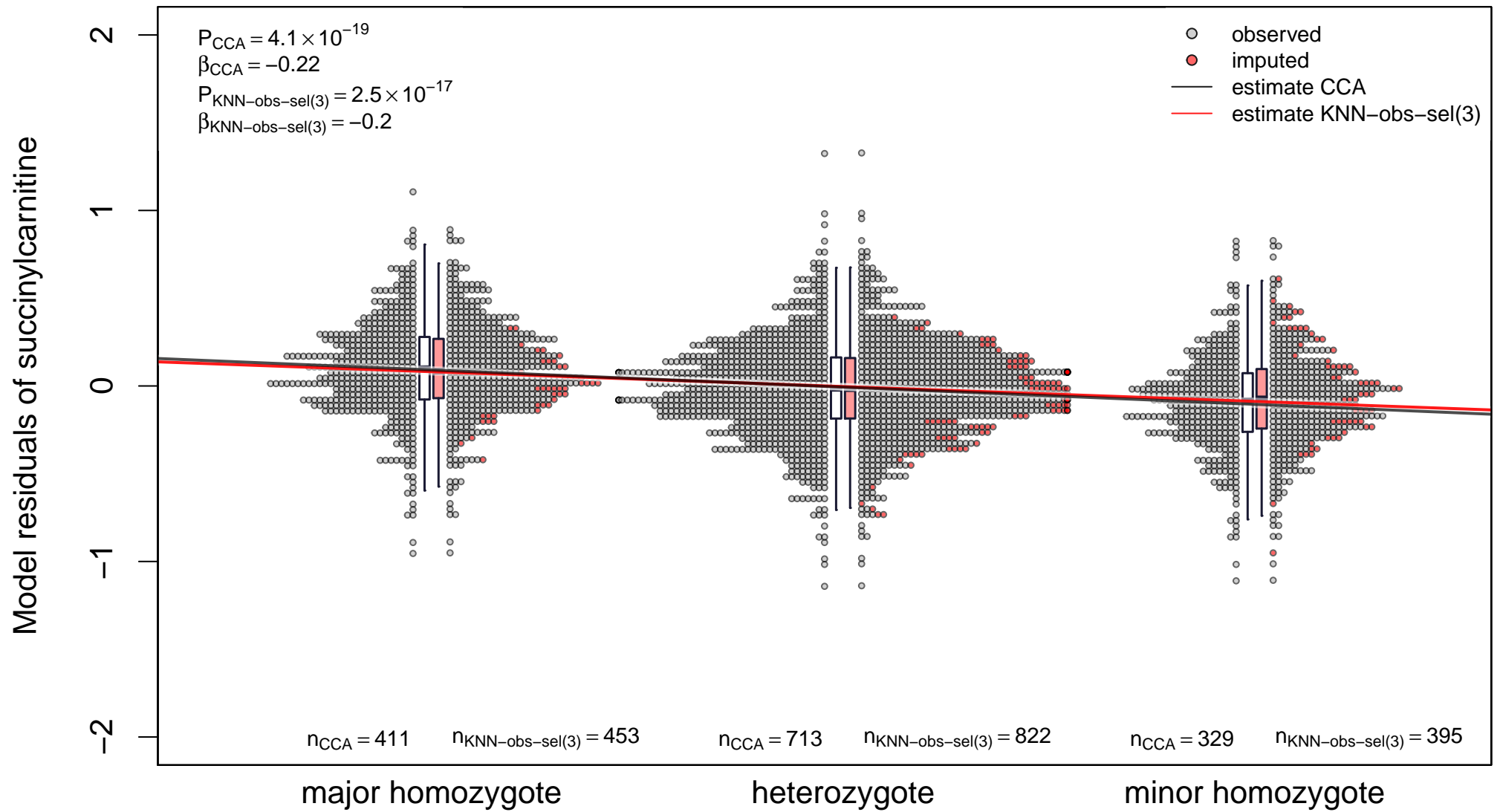
Genotype of SNP rs1472631 (LACTB)

# KNN-obs-sel(20)



Genotype of SNP rs1472631 (LACTB)

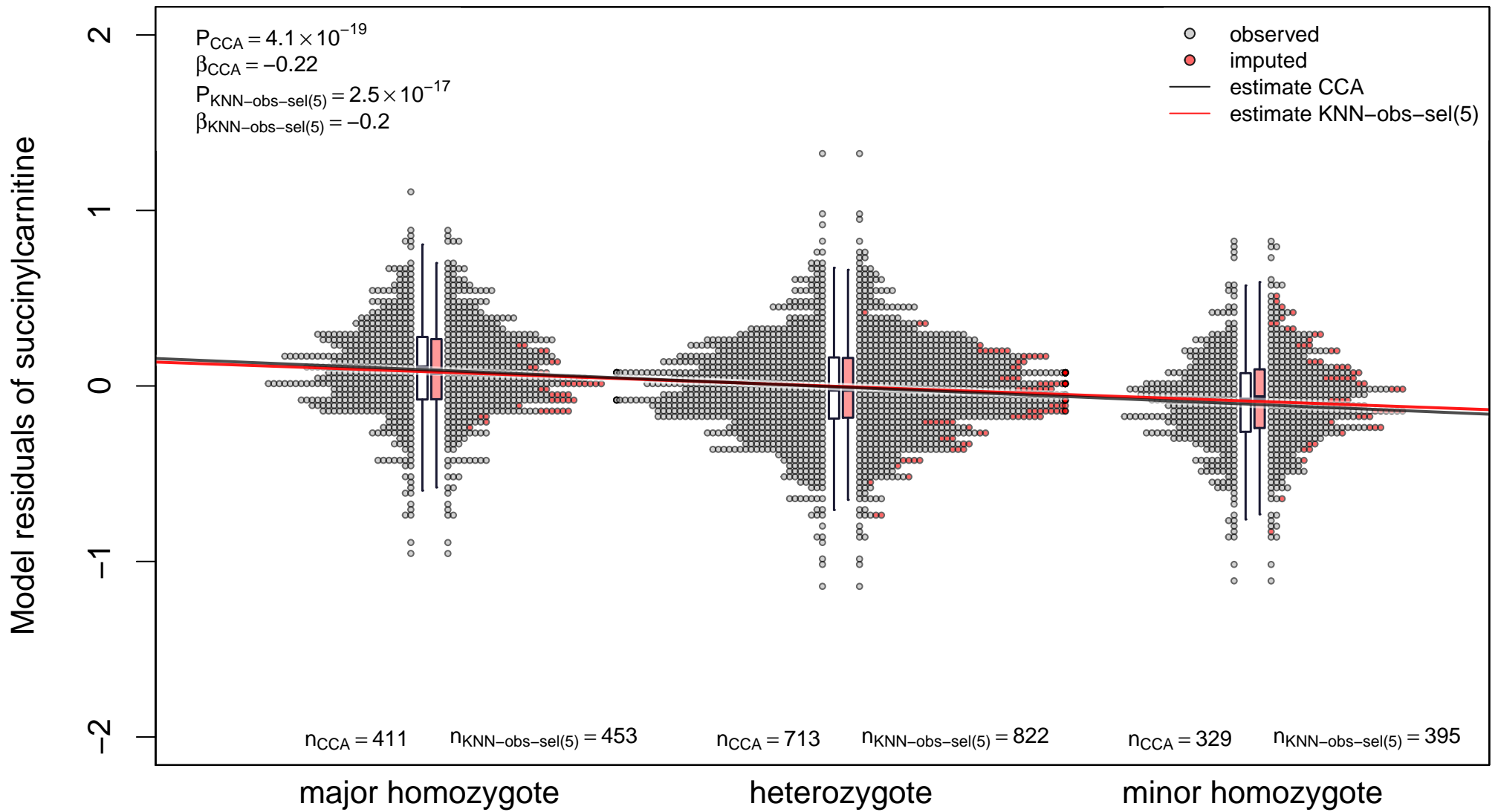
# KNN-obs-sel(3)



Genotype of SNP rs1472631 (LACTB)

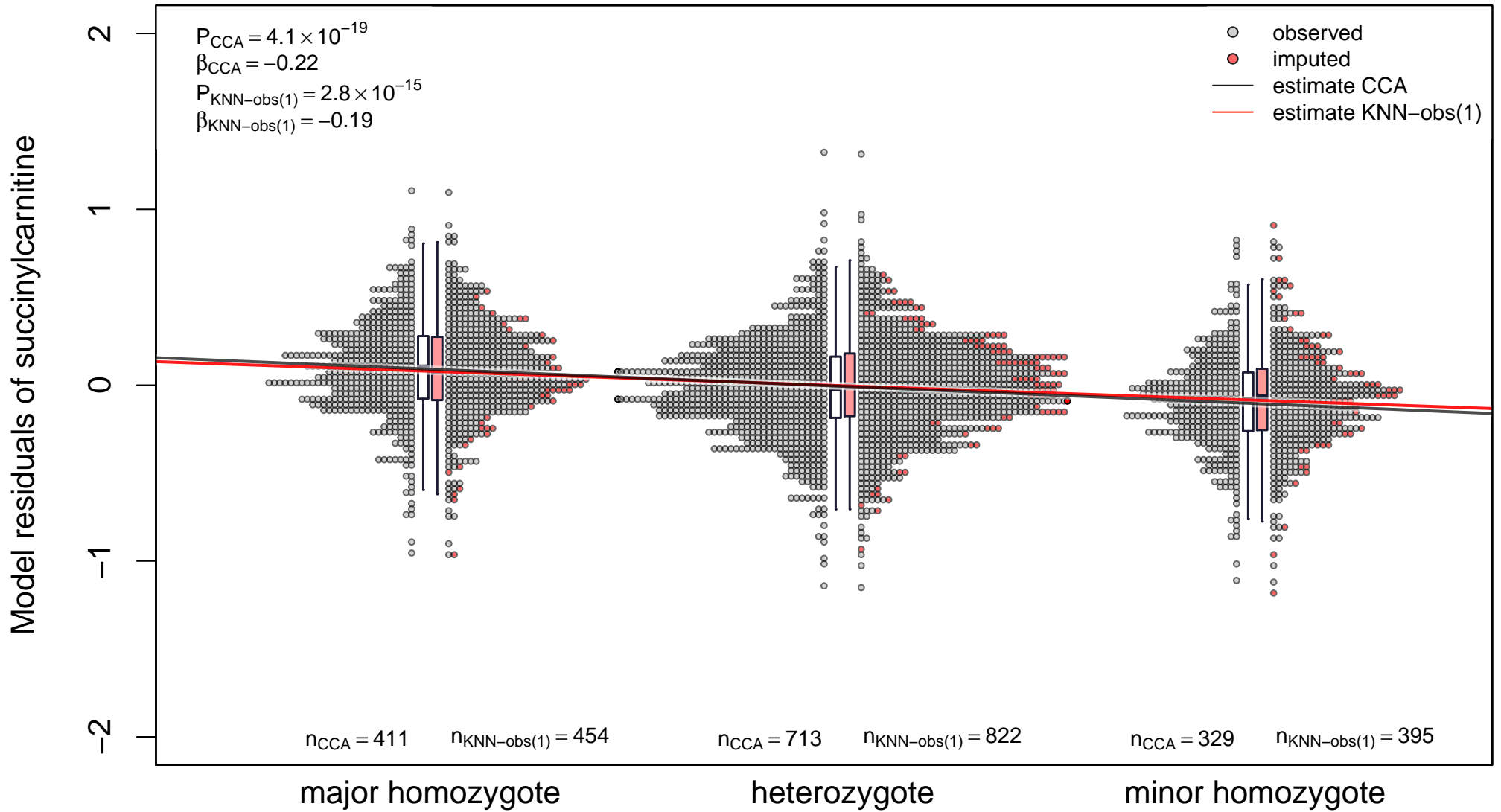


# KNN-obs-sel(5)



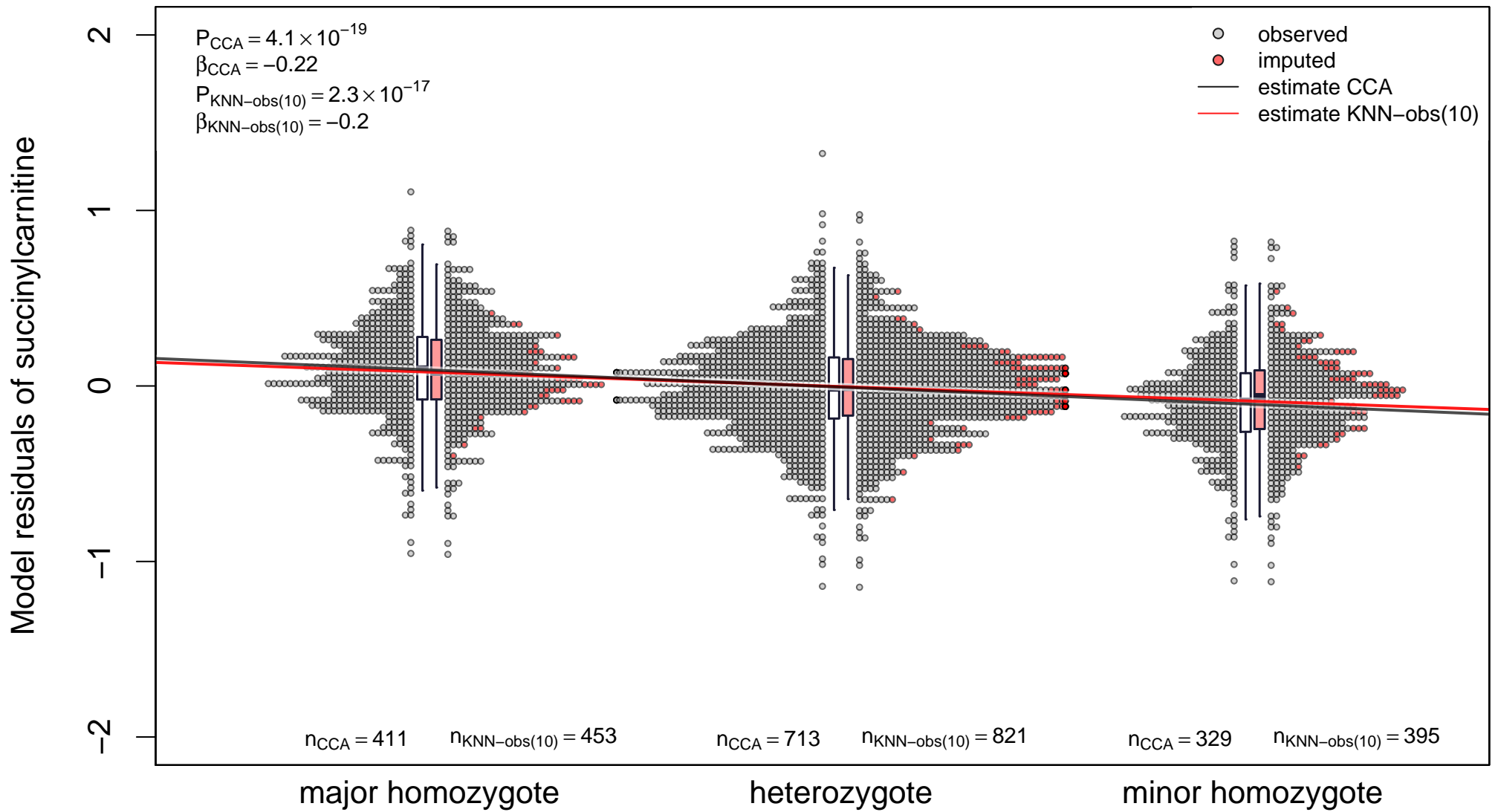
Genotype of SNP rs1472631 (LACTB)

# KNN-obs(1)



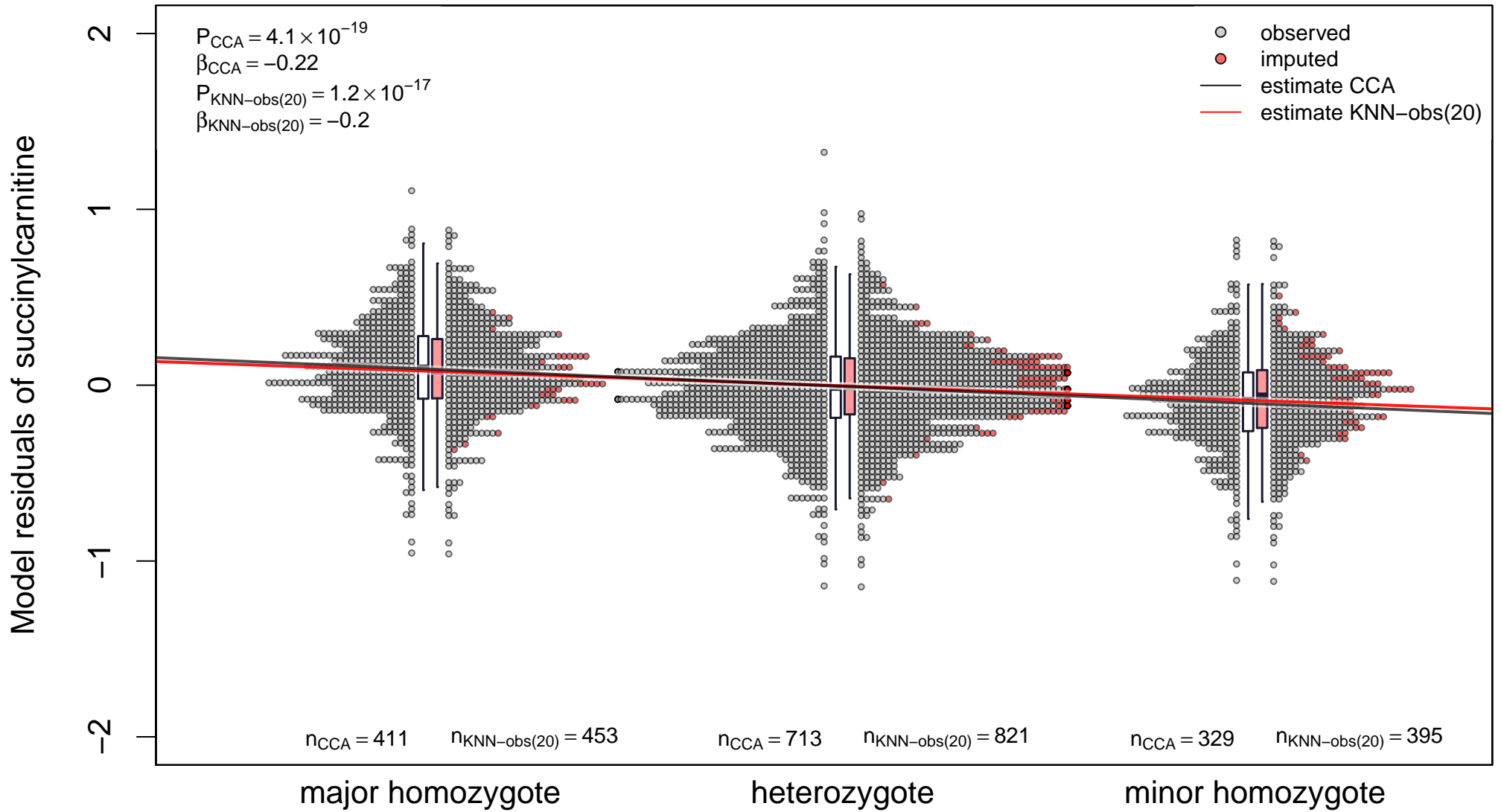
Genotype of SNP rs1472631 (LACTB)

# KNN-obs(10)



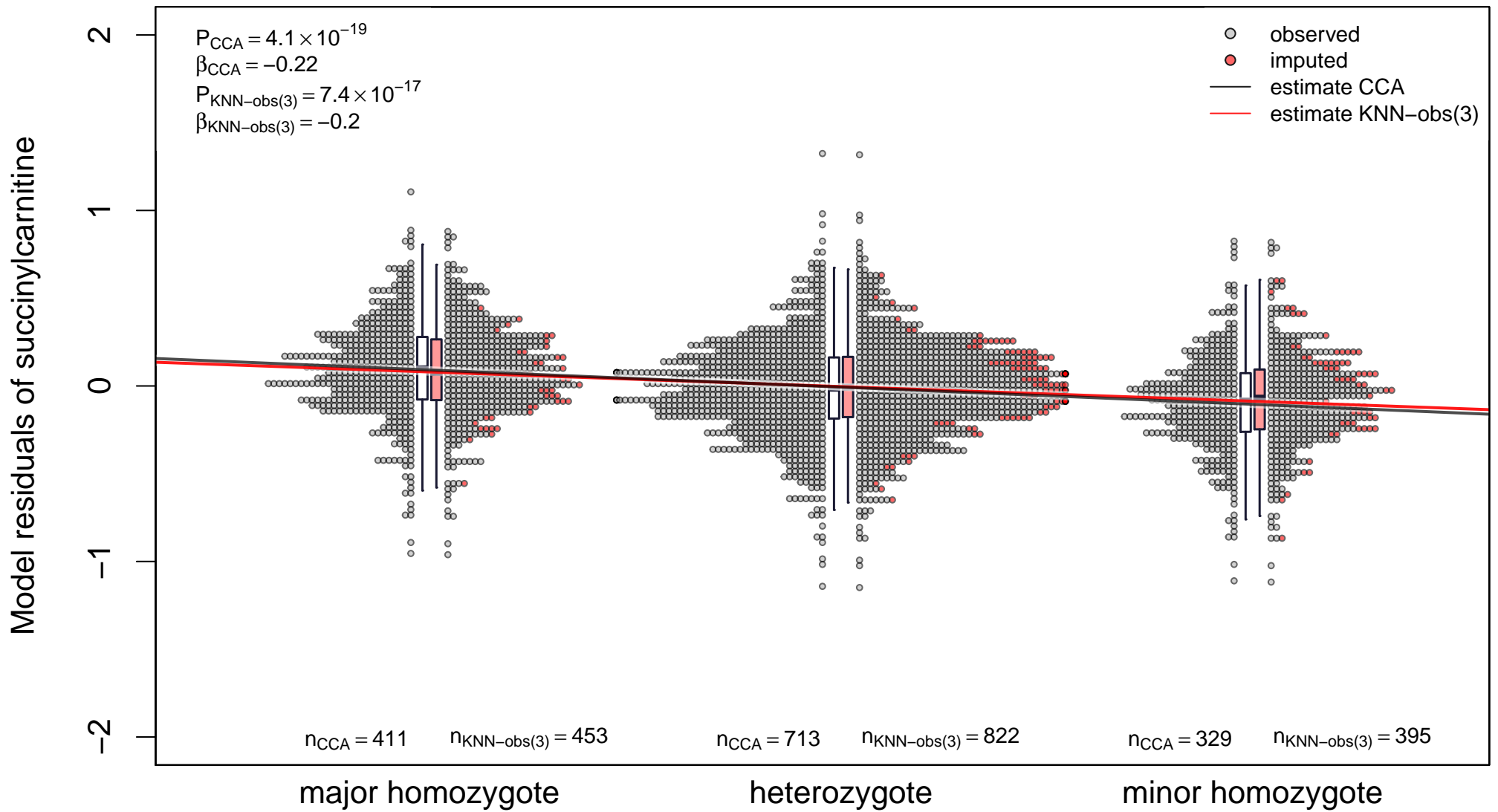
Genotype of SNP rs1472631 (LACTB)

# KNN-obs(20)



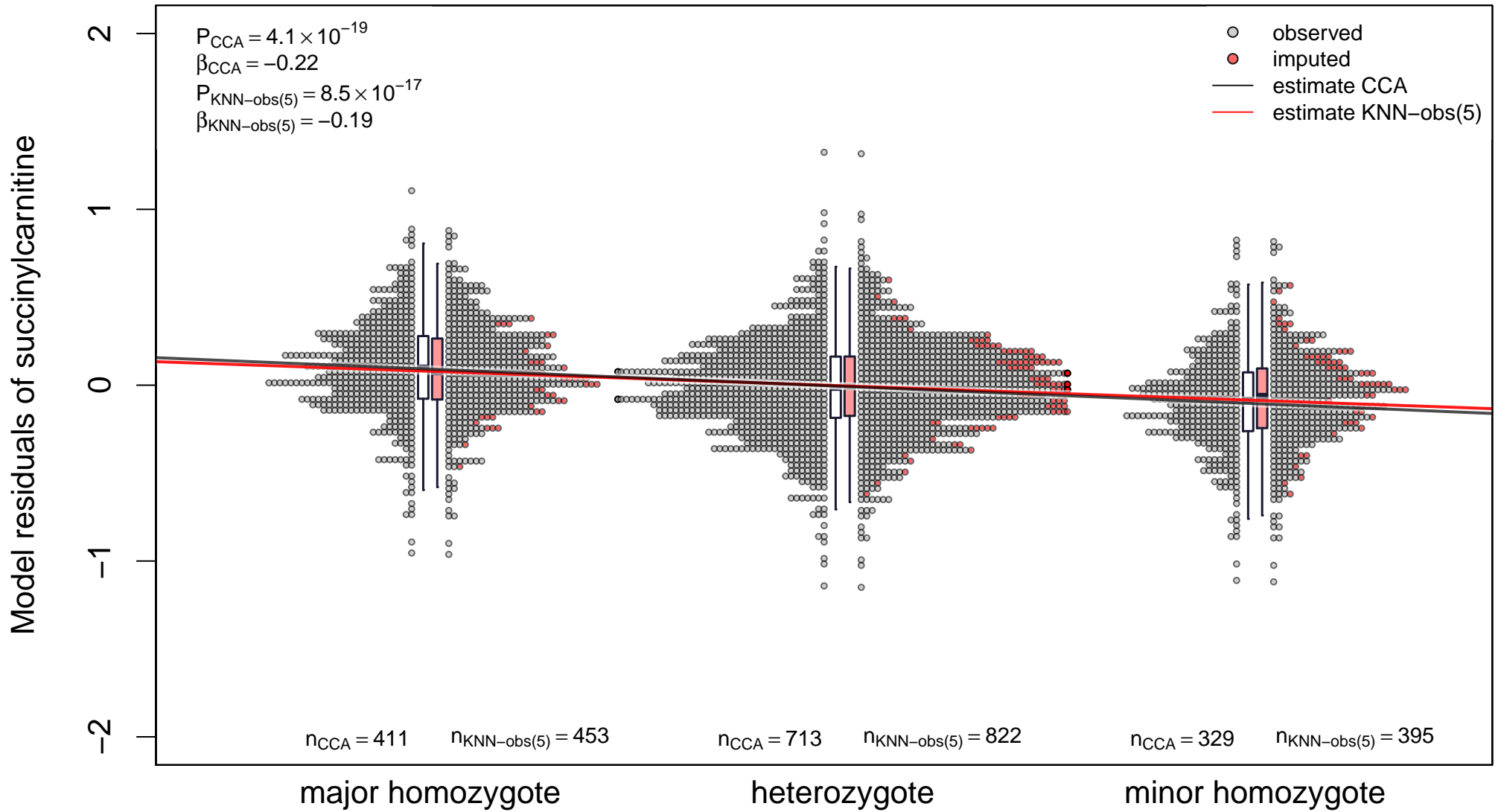
Genotype of SNP rs1472631 (LACTB)

# KNN-obs(3)



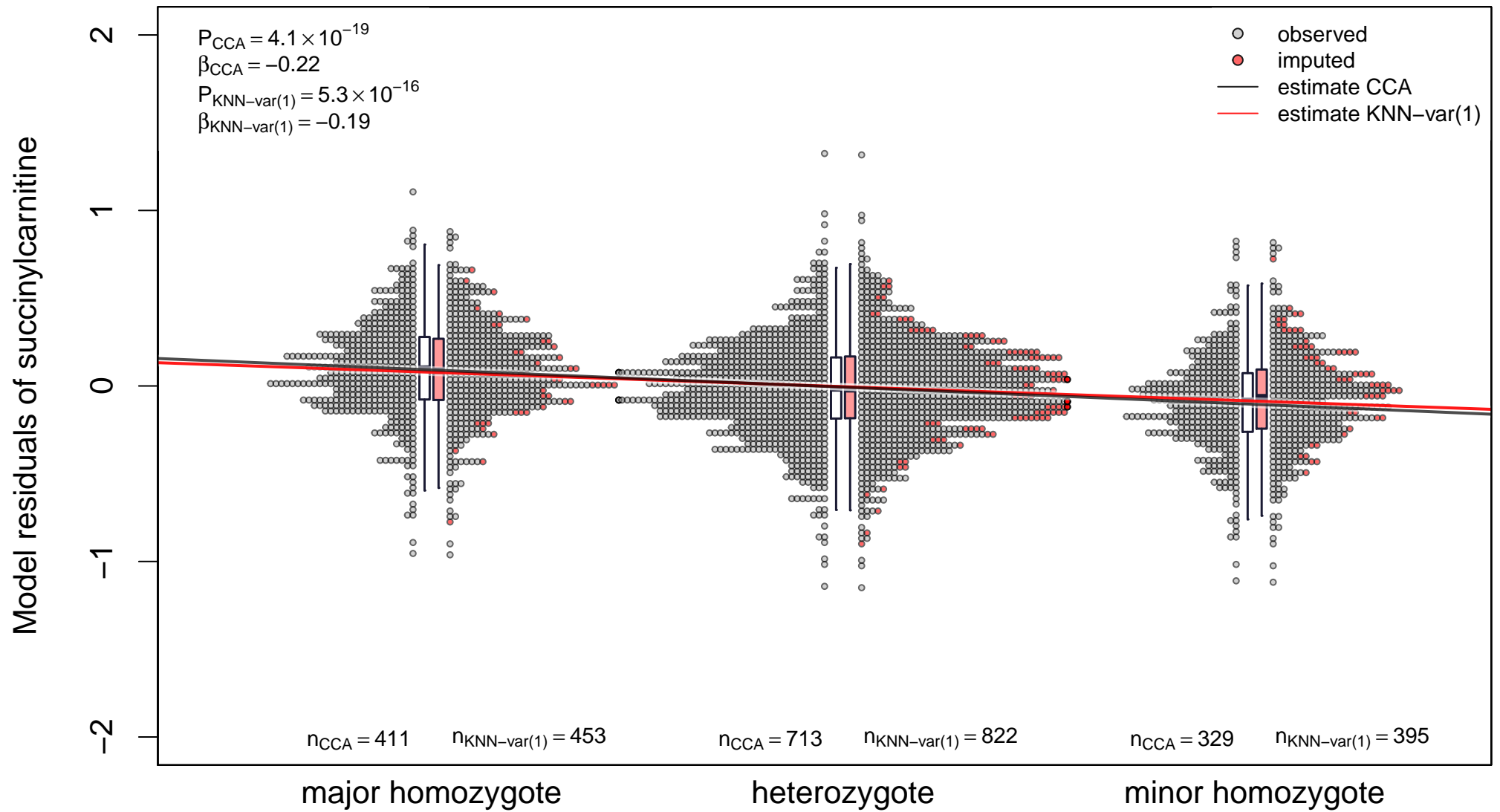
Genotype of SNP rs1472631 (LACTB)

# KNN-obs(5)

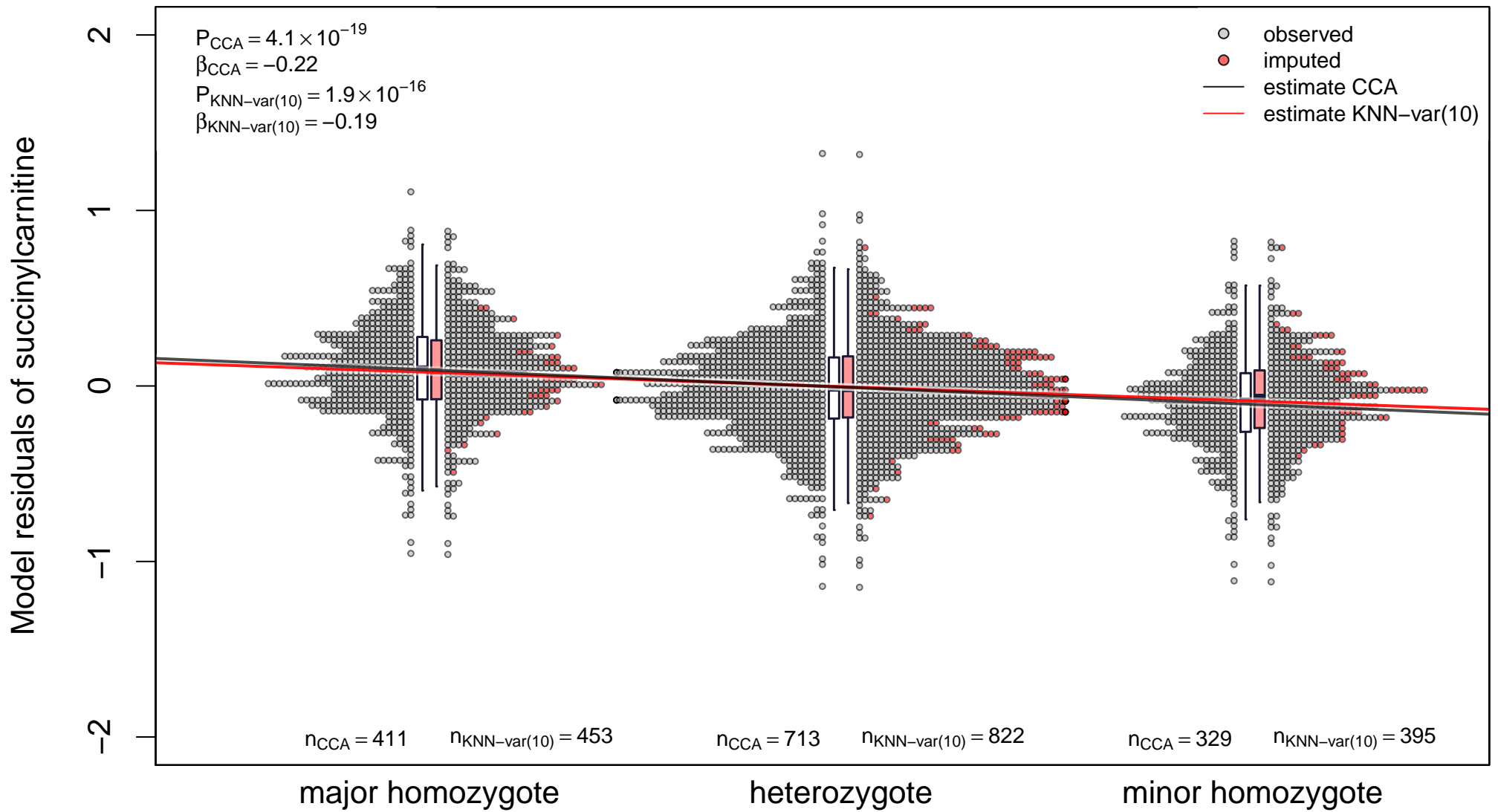


Genotype of SNP rs1472631 (LACTB)

# KNN-var(1)



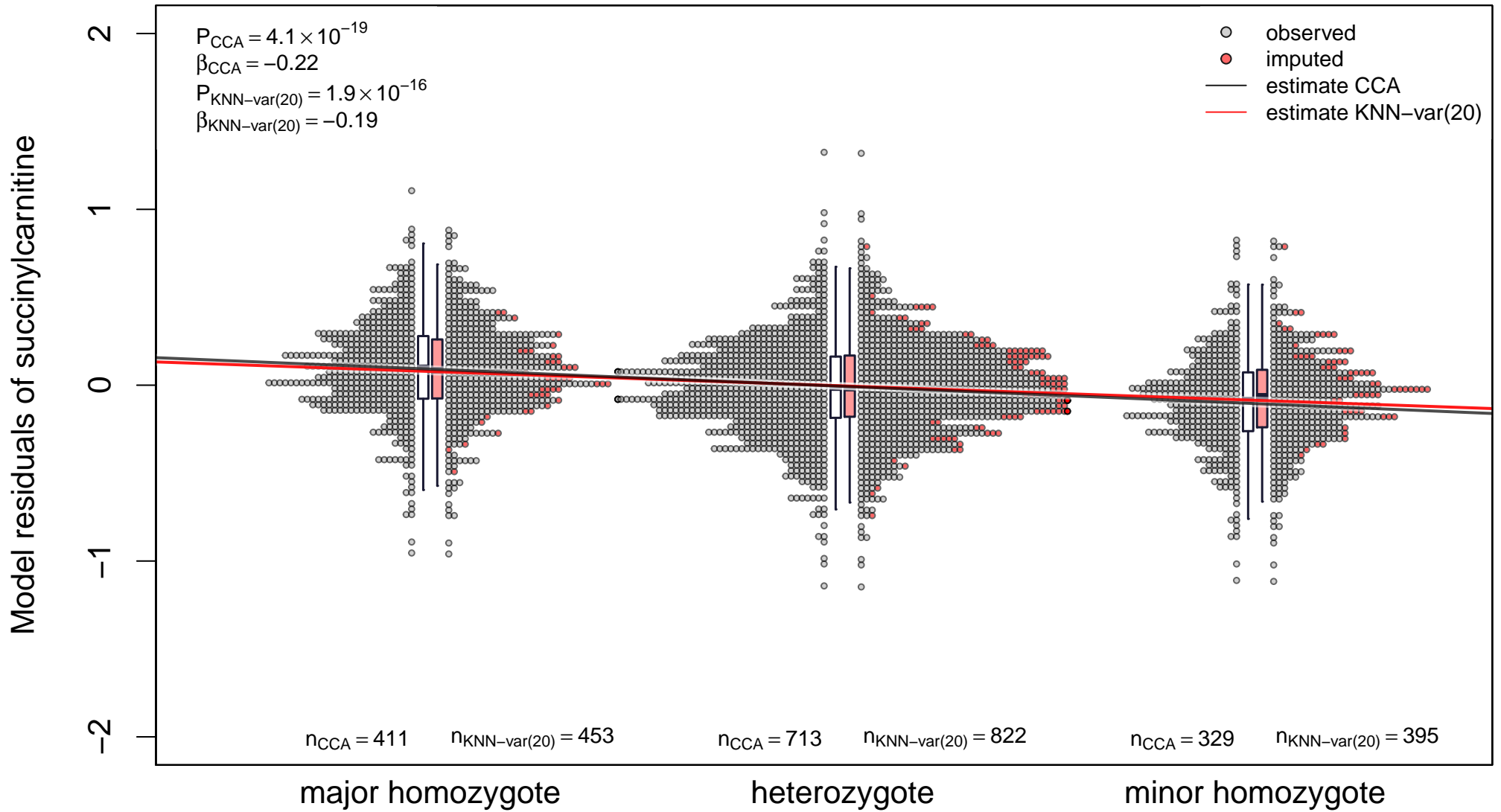
# KNN-var(10)



Genotype of SNP rs1472631 (LACTB)

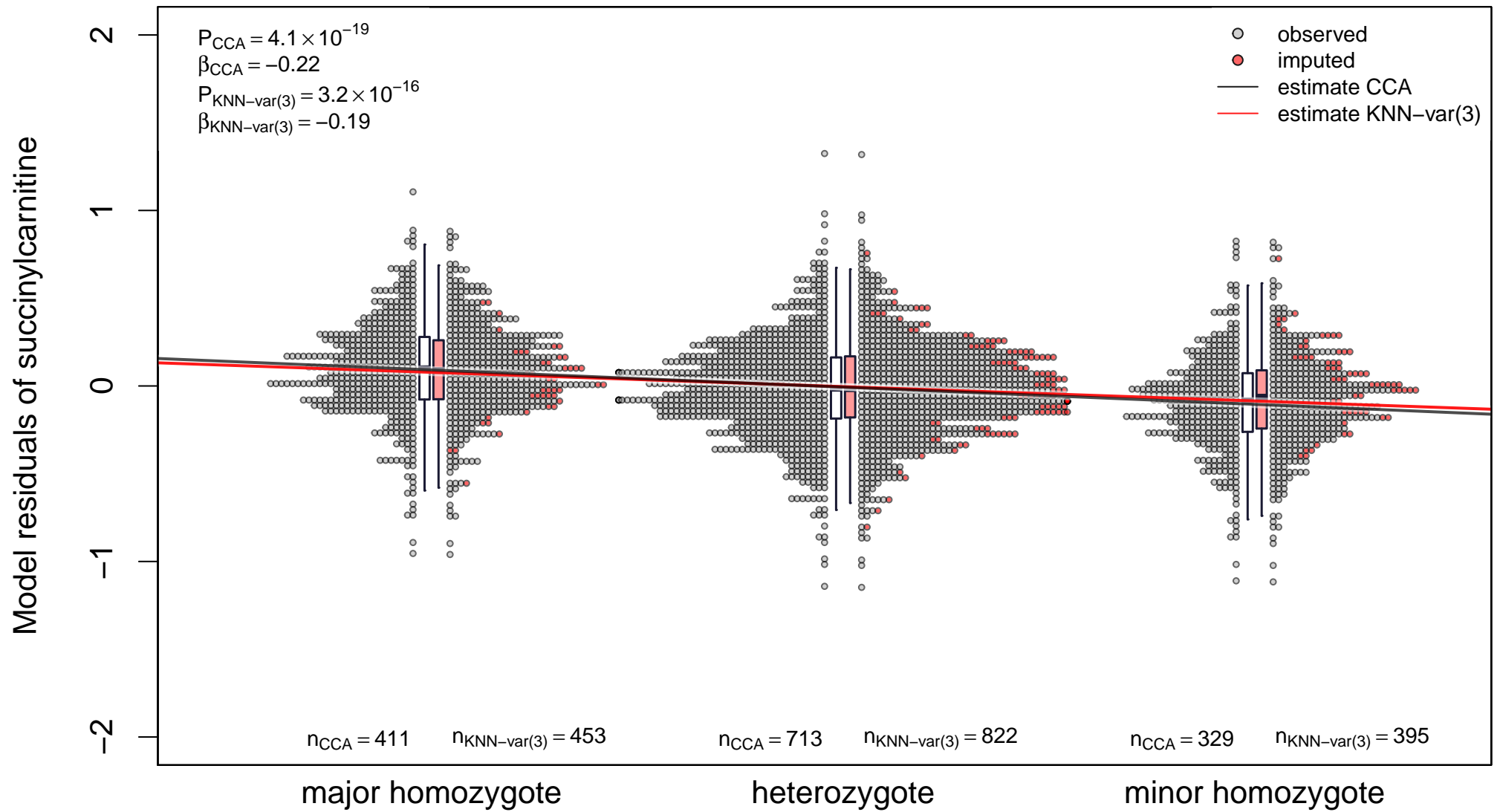


# KNN-var(20)



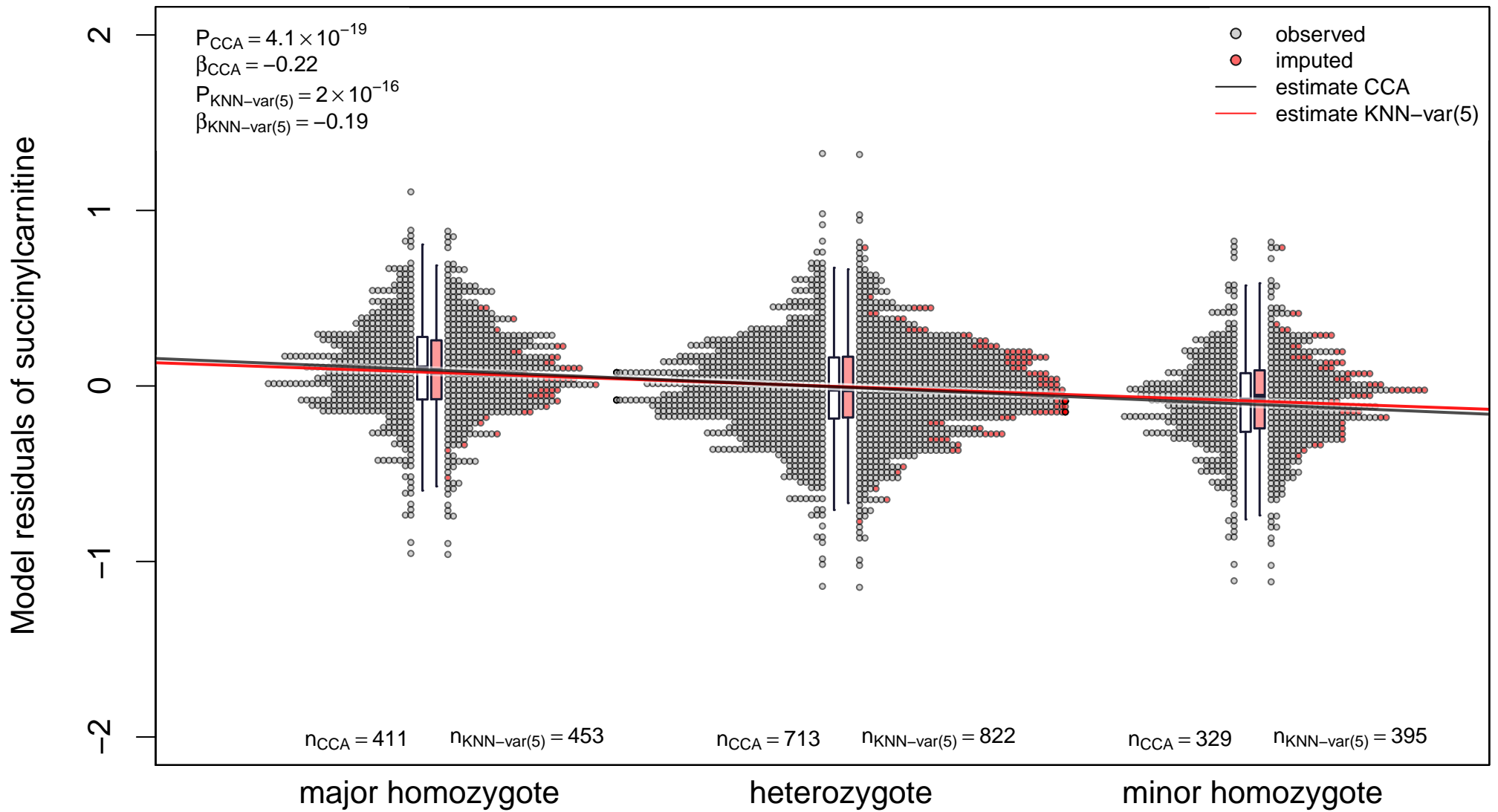
Genotype of SNP rs1472631 (LACTB)

# KNN-var(3)

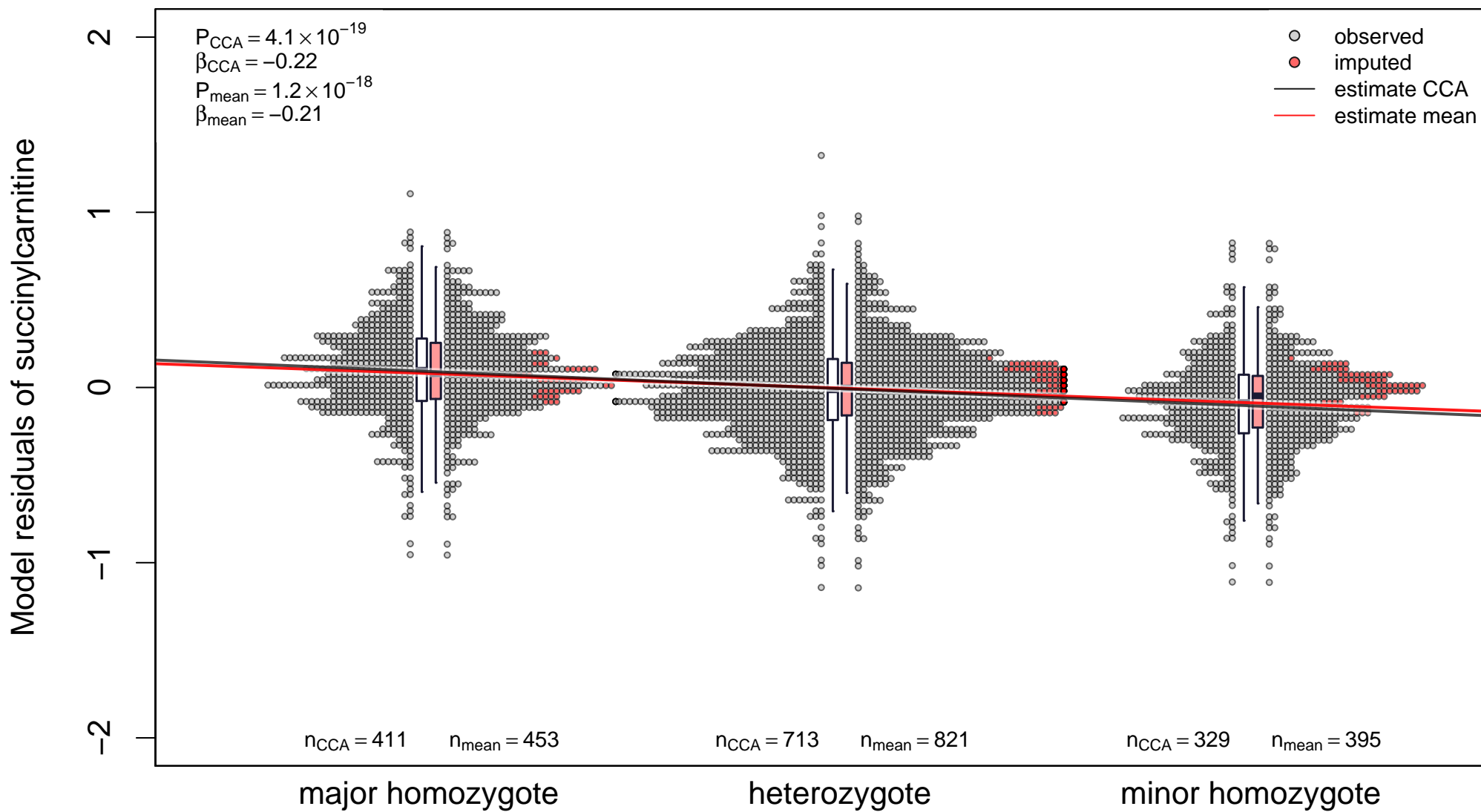


Genotype of SNP rs1472631 (LACTB)

# KNN-var(5)

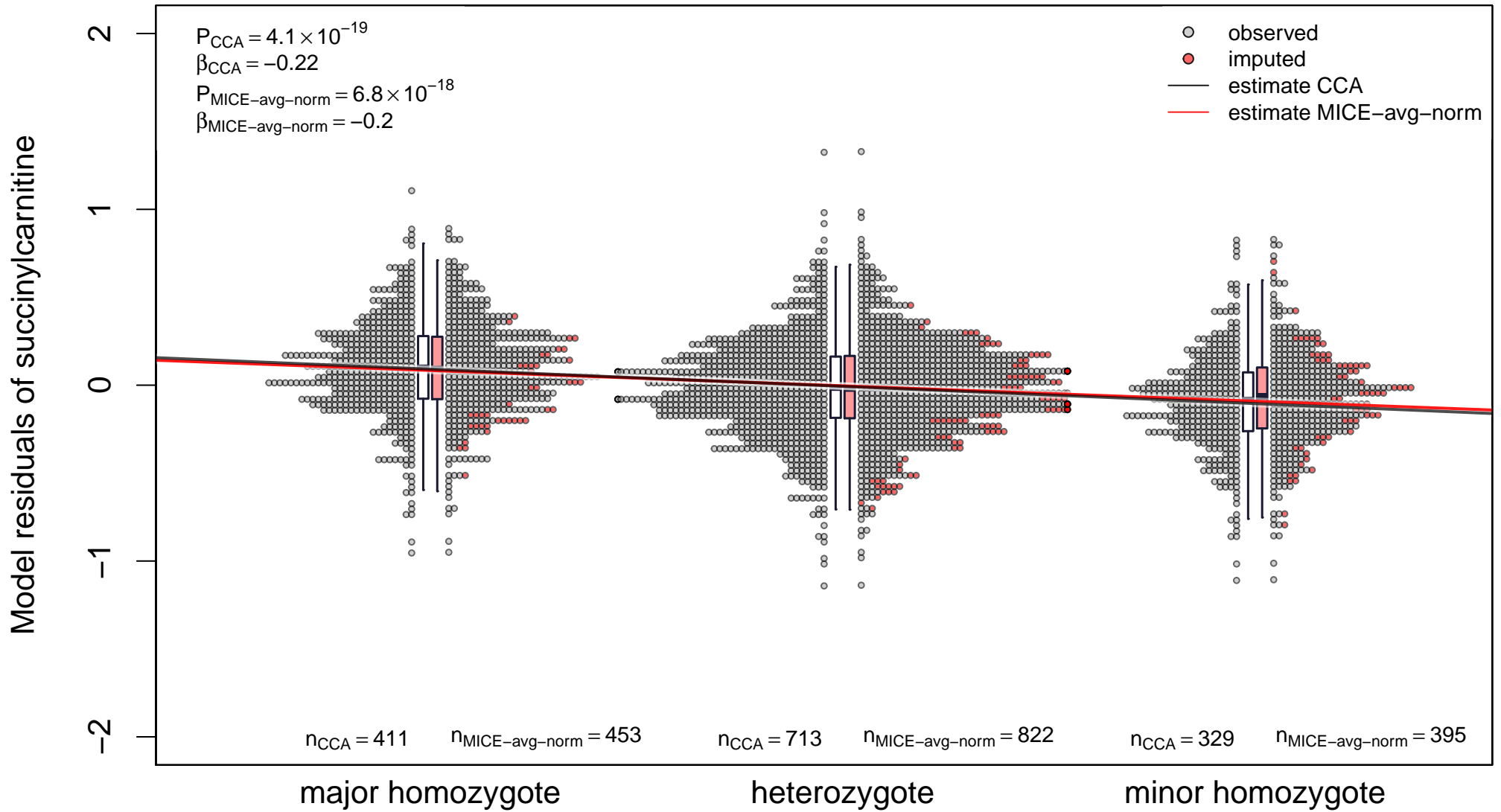


# mean



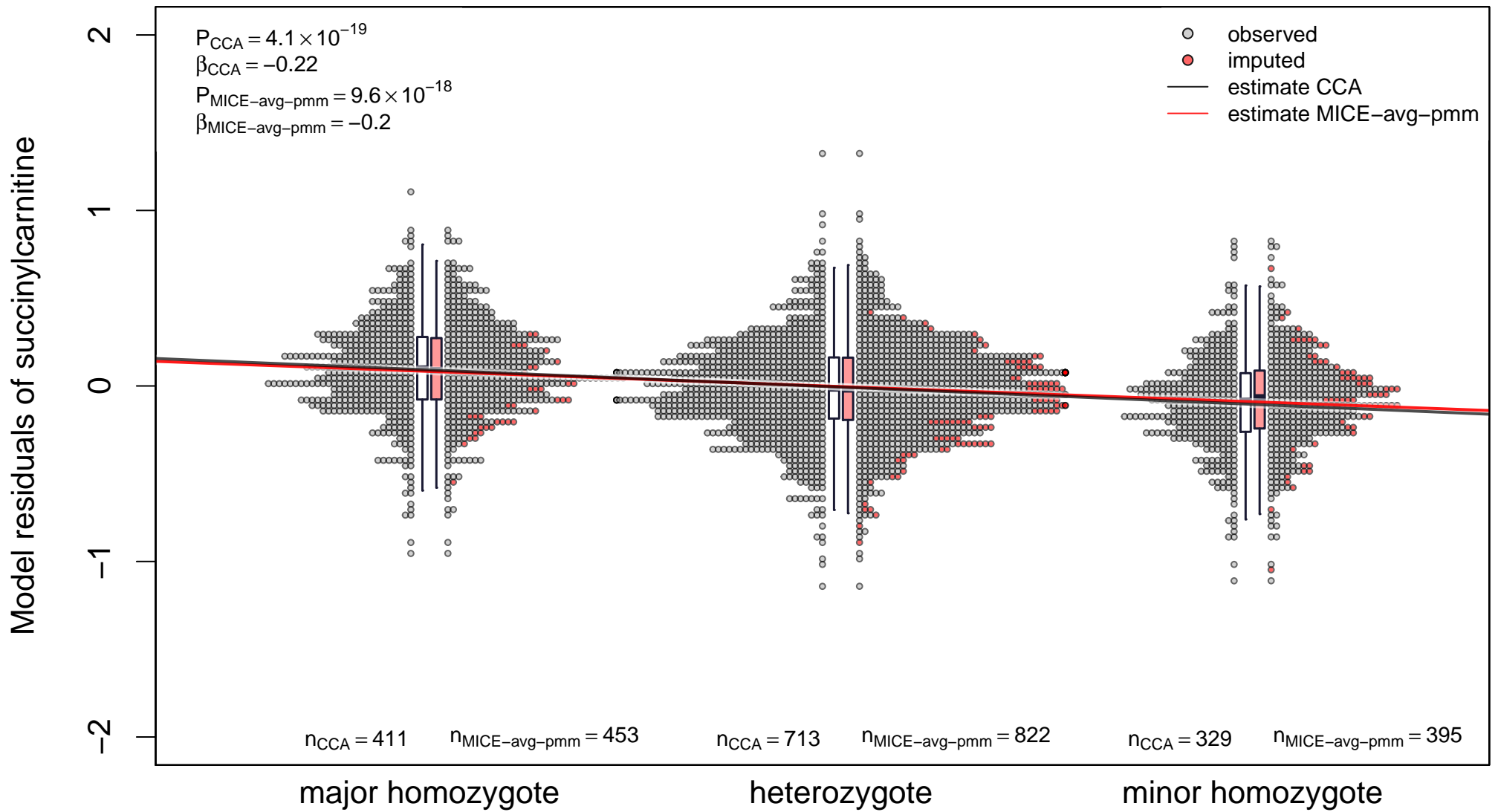
Genotype of SNP rs1472631 (LACTB)

# MICE-avg-norm



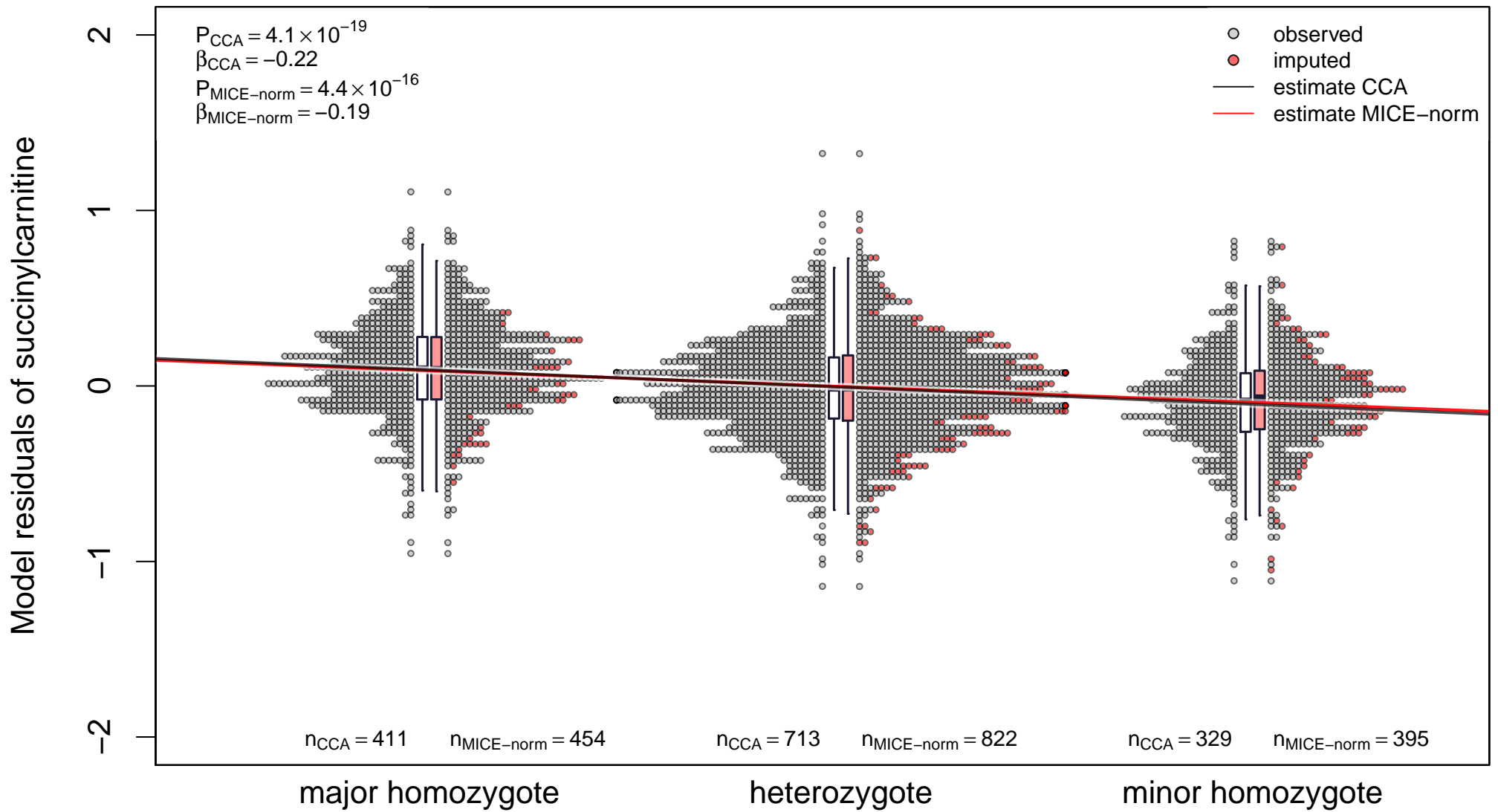
Genotype of SNP rs1472631 (LACTB)

# MICE-avg-pmm



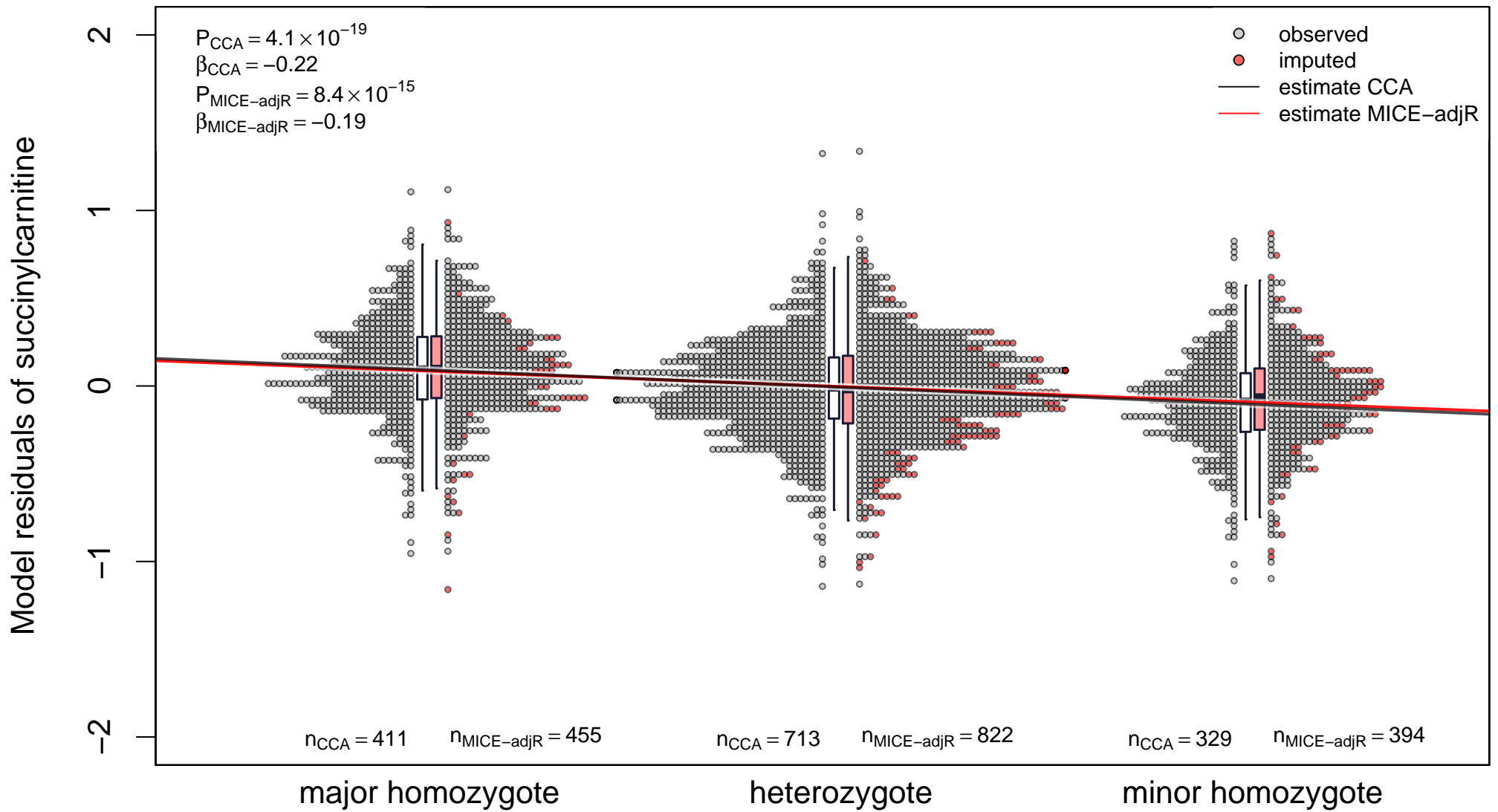
Genotype of SNP rs1472631 (LACTB)

# MICE-norm



Genotype of SNP rs1472631 (LACTB)

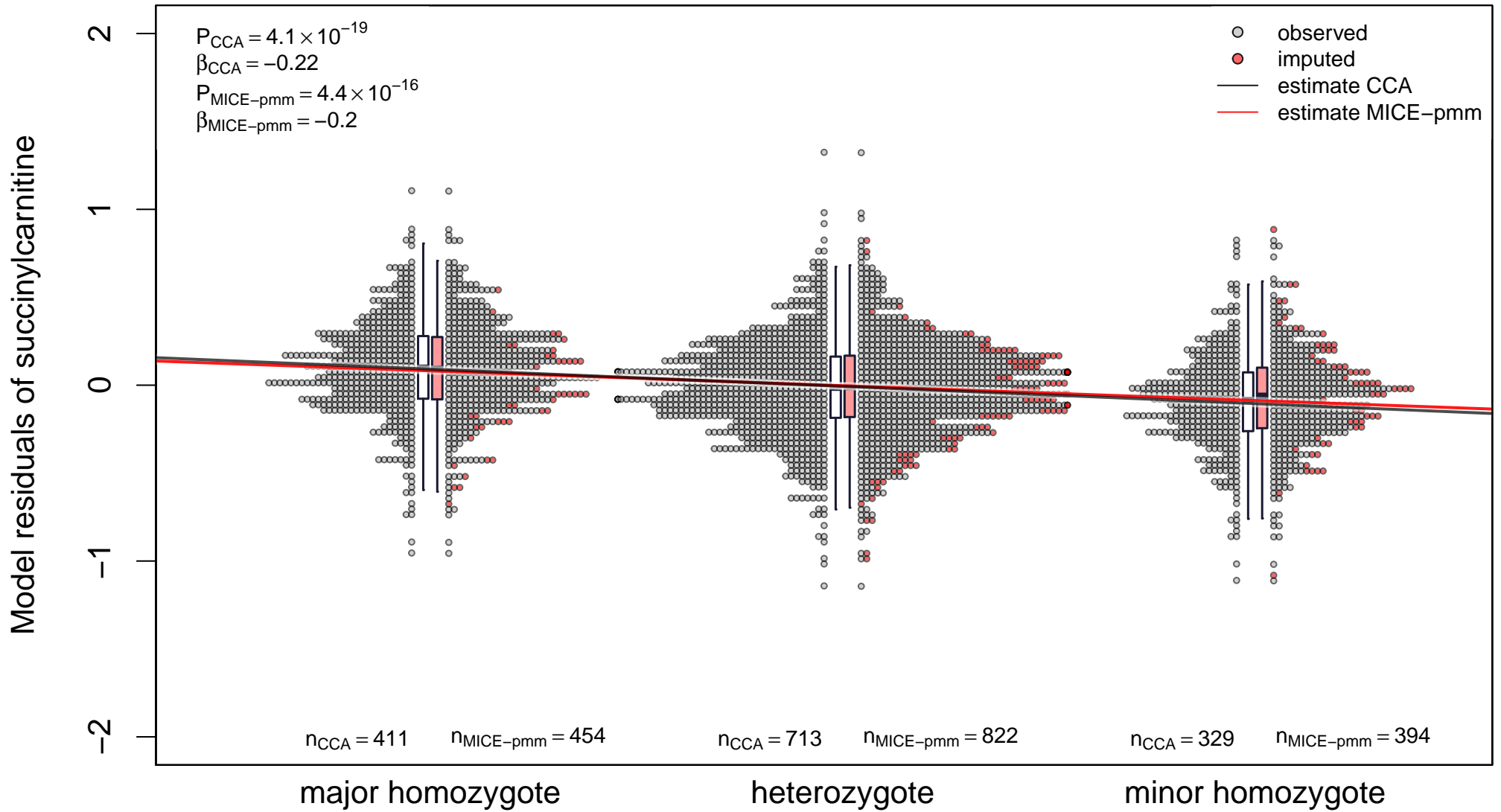
# MICE-adjR



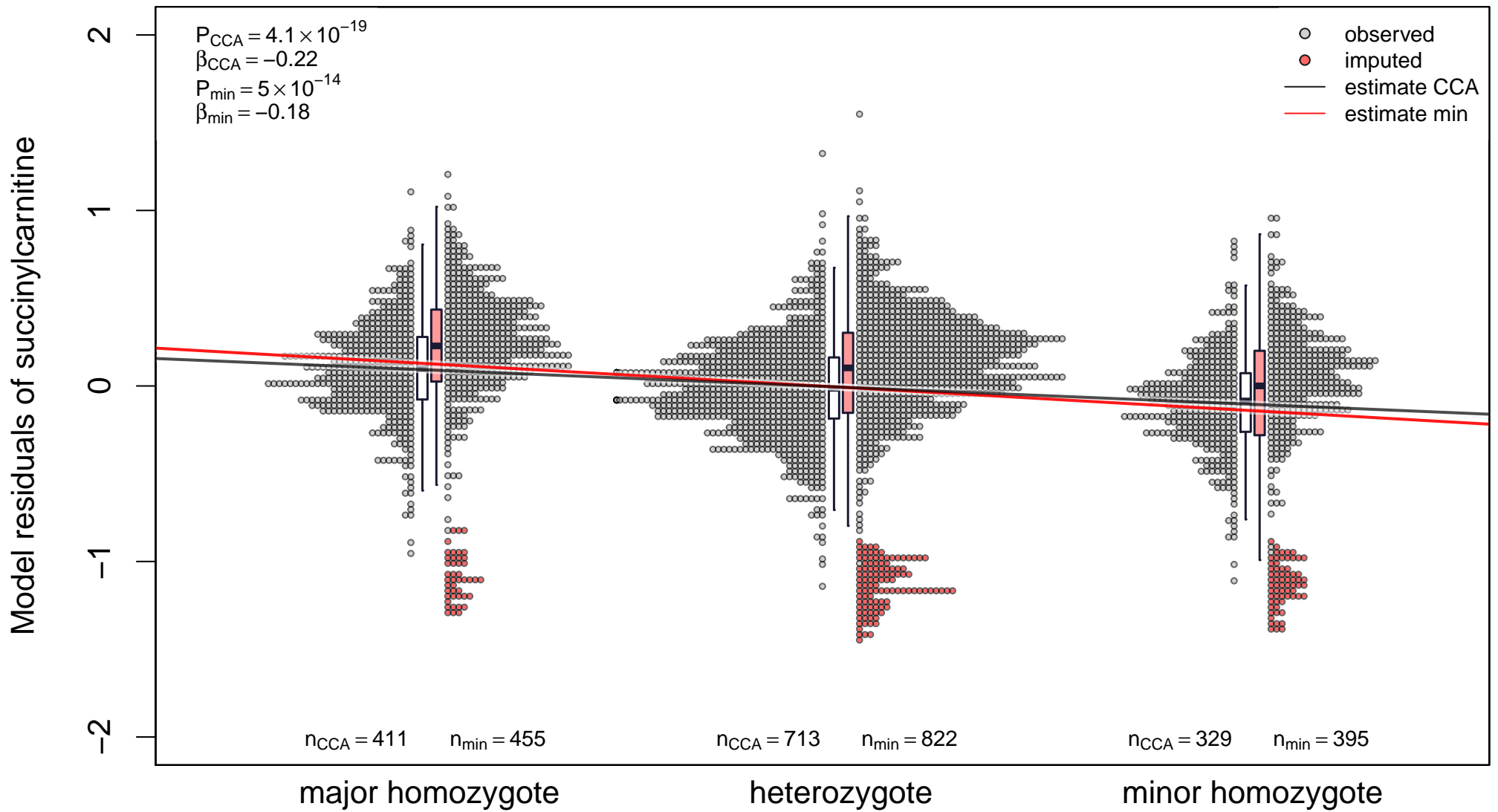
Genotype of SNP rs1472631 (LACTB)



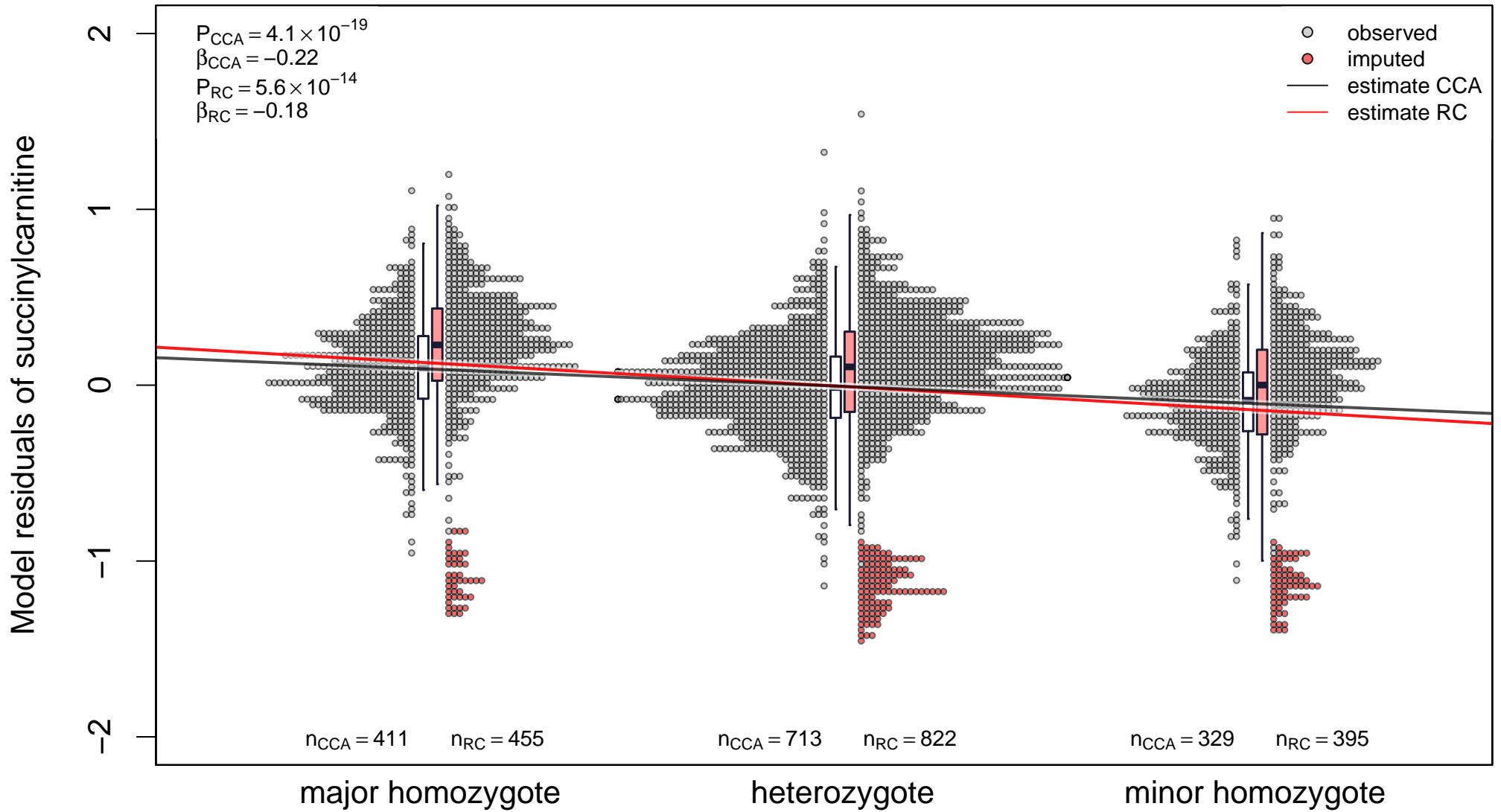
# MICE-pmm



min

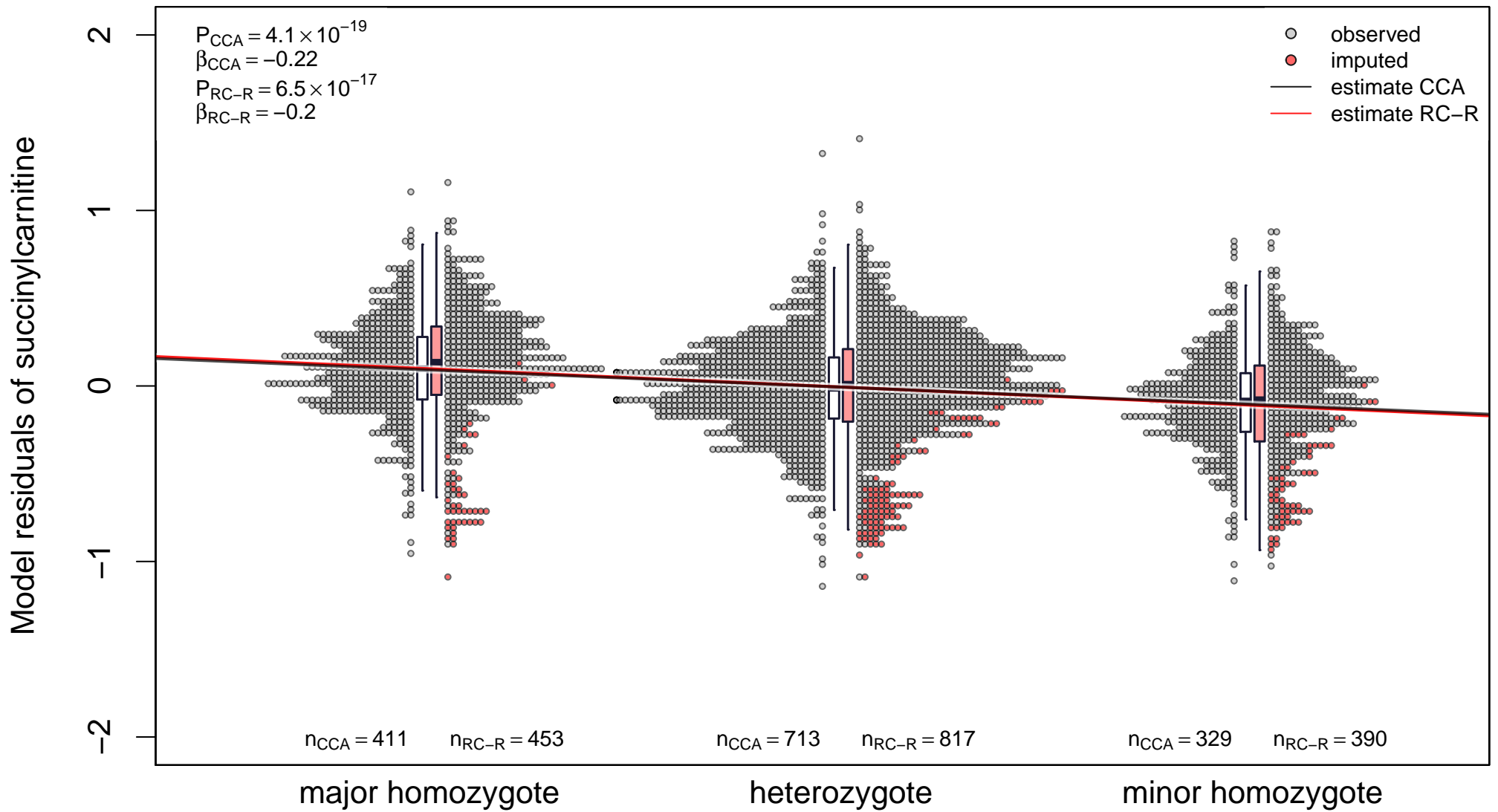


# RC



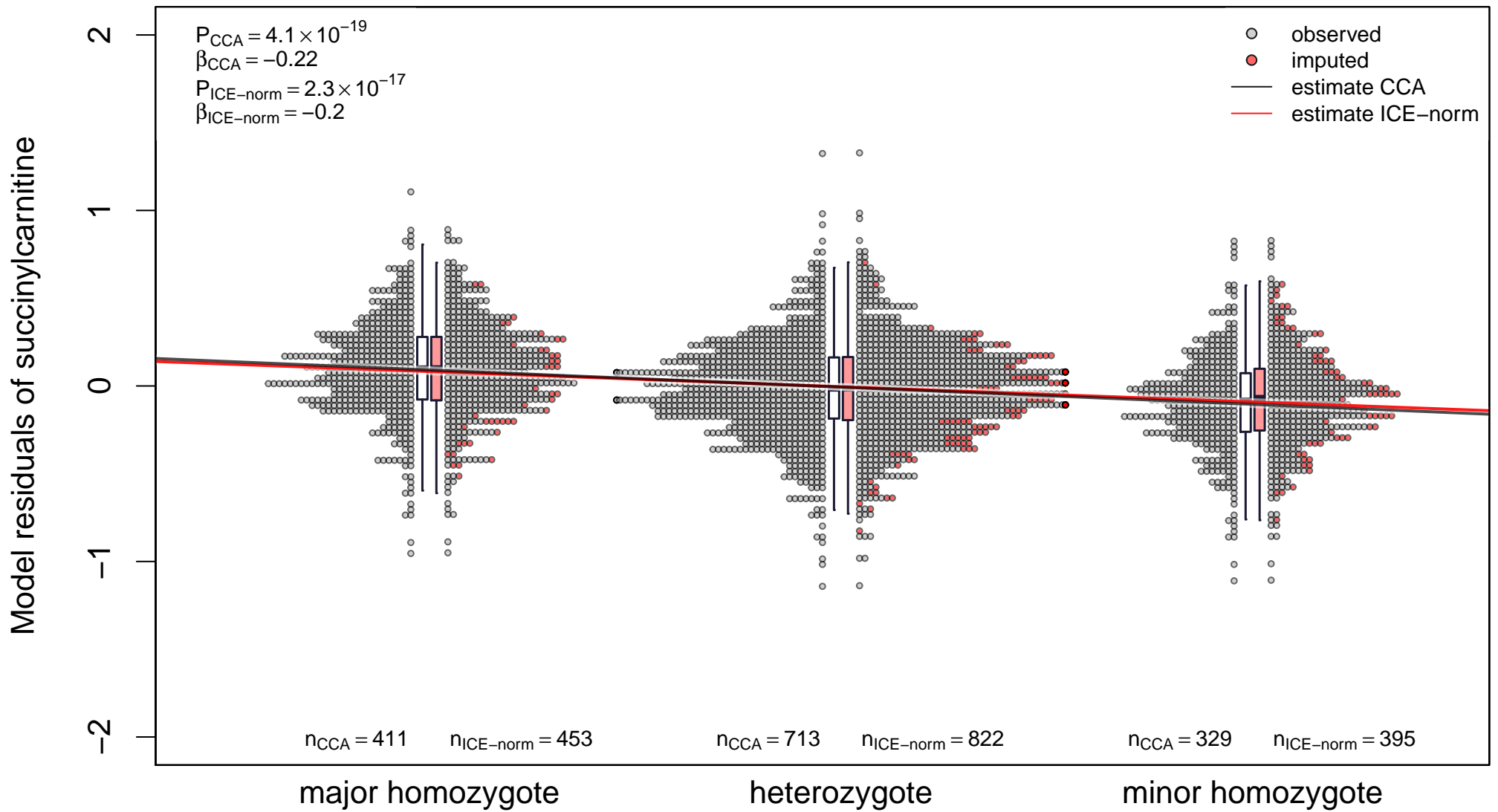
Genotype of SNP rs1472631 (LACTB)

# RC-R



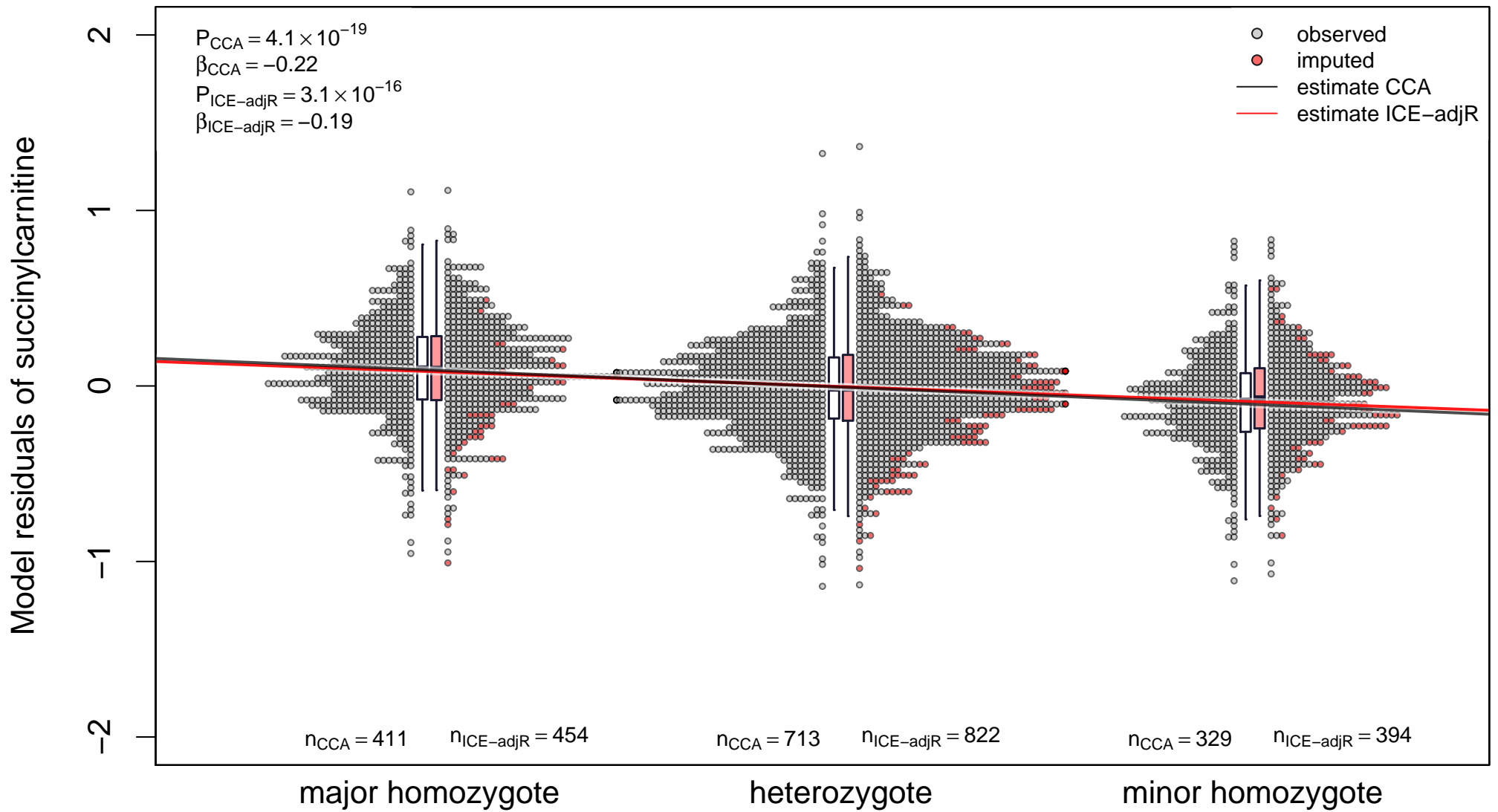
Genotype of SNP rs1472631 (LACTB)

# ICE-norm



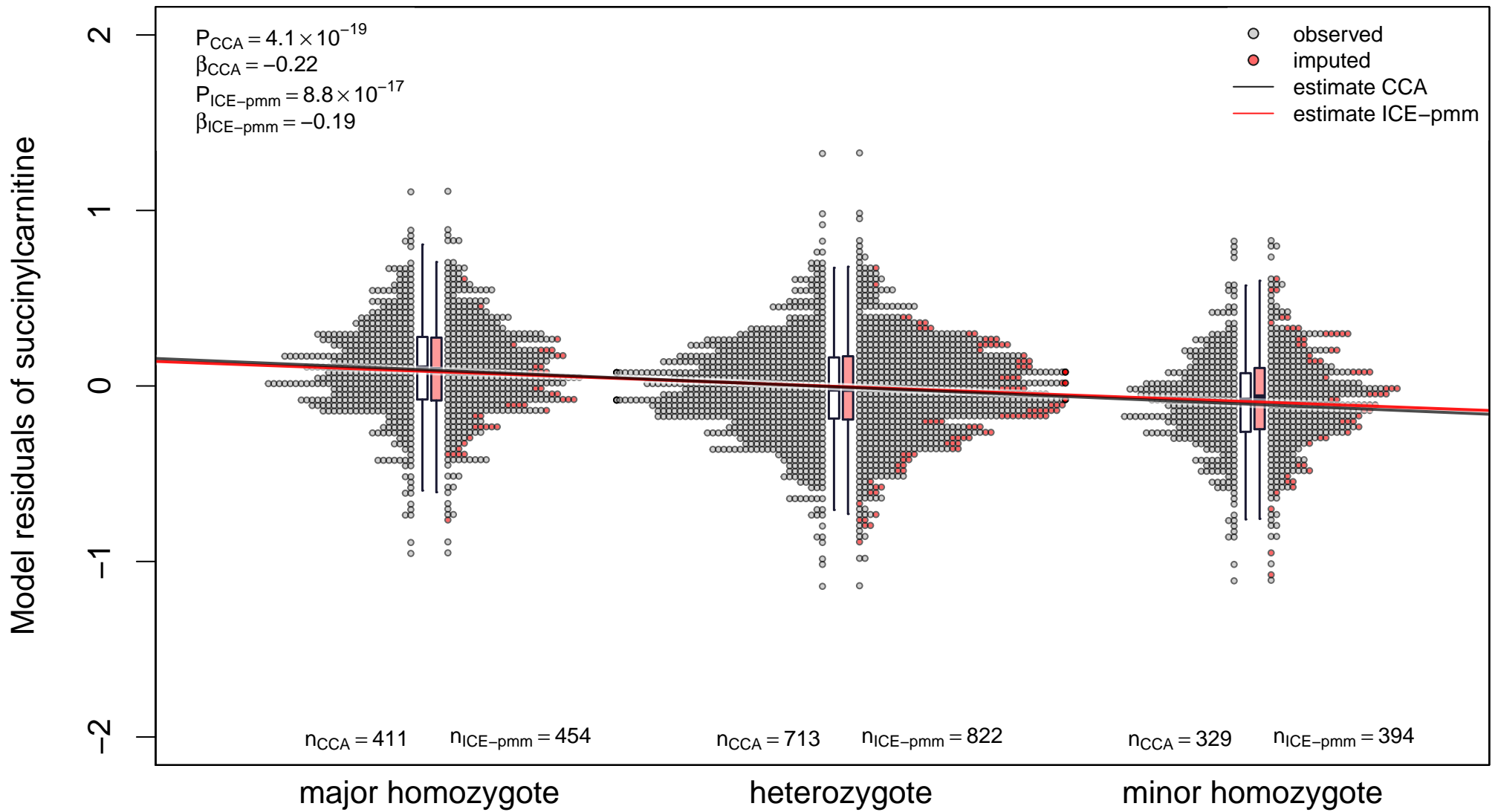
Genotype of SNP rs1472631 (LACTB)

# ICE-adjR



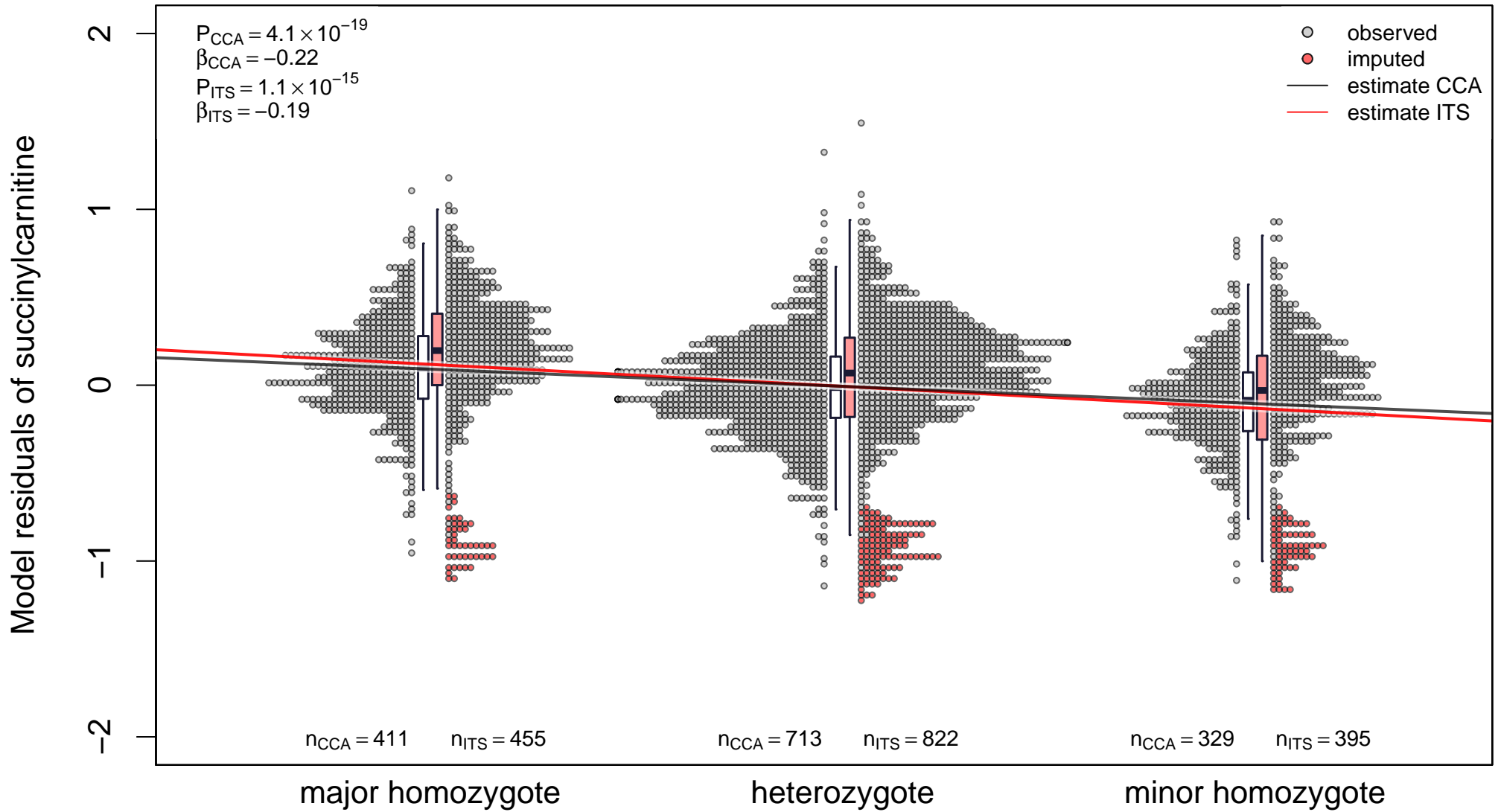
Genotype of SNP rs1472631 (LACTB)

# ICE-pmm



Genotype of SNP rs1472631 (LACTB)

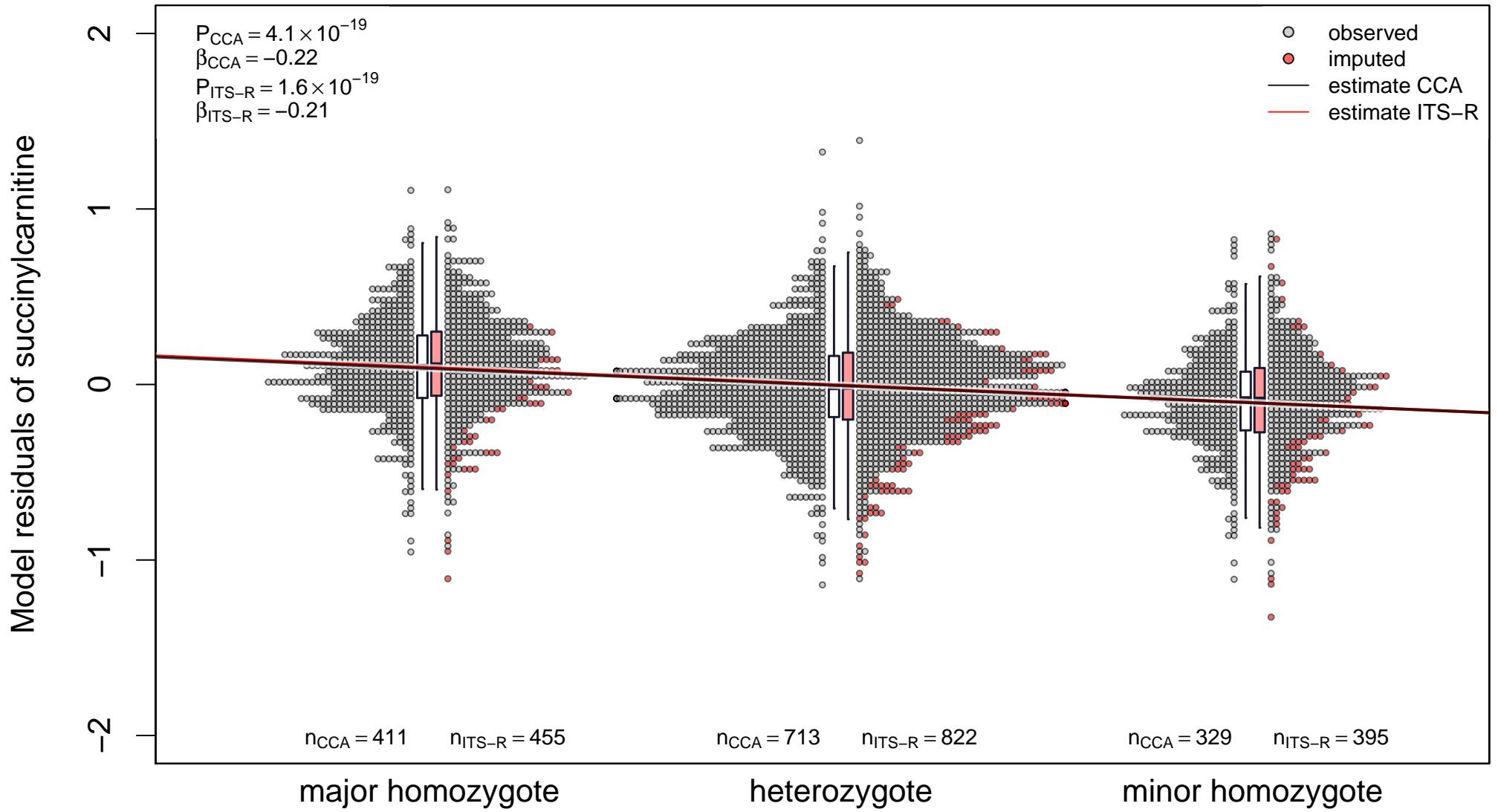
# ITS



Genotype of SNP rs1472631 (LACTB)

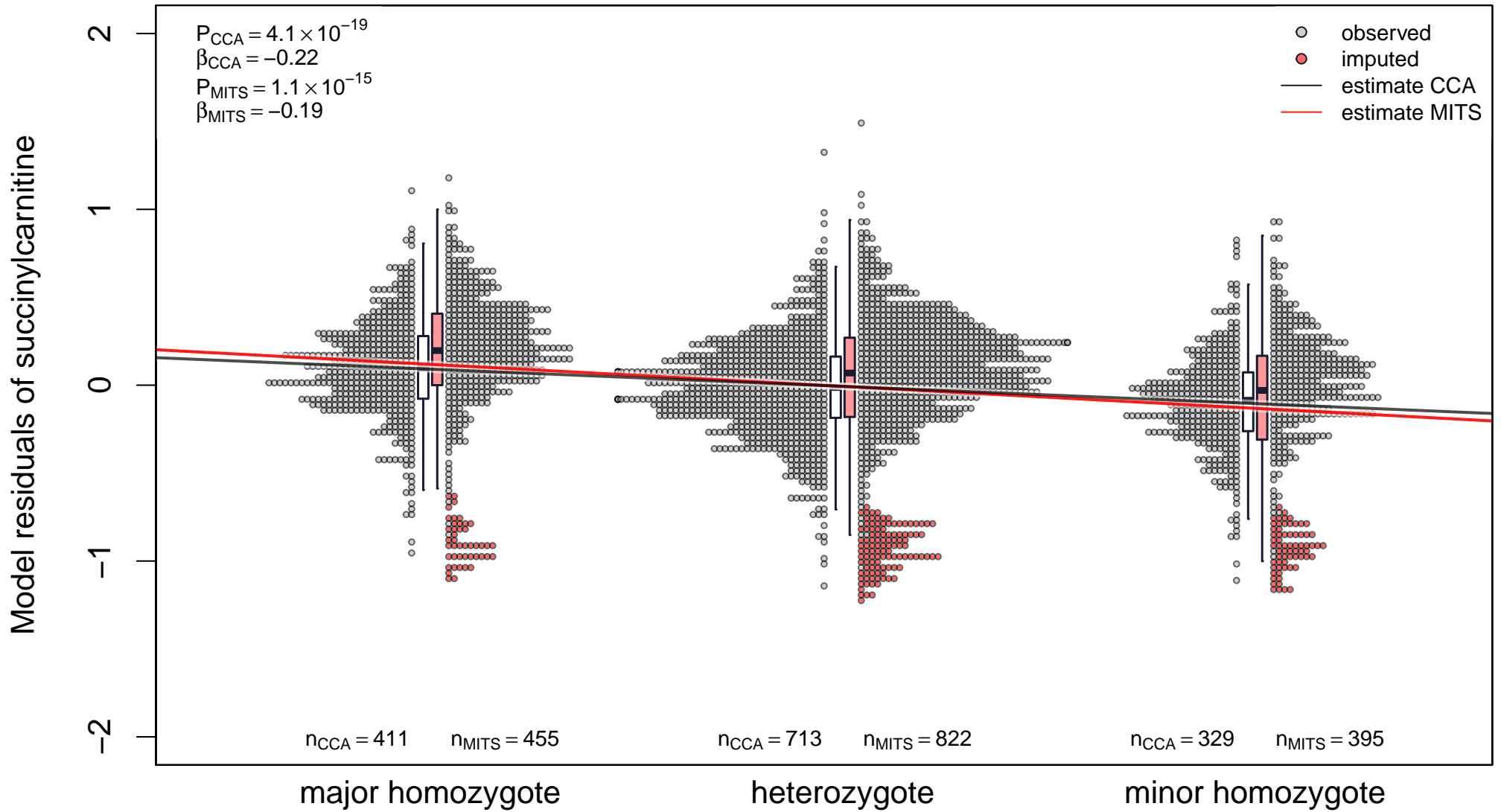


# ITS-R



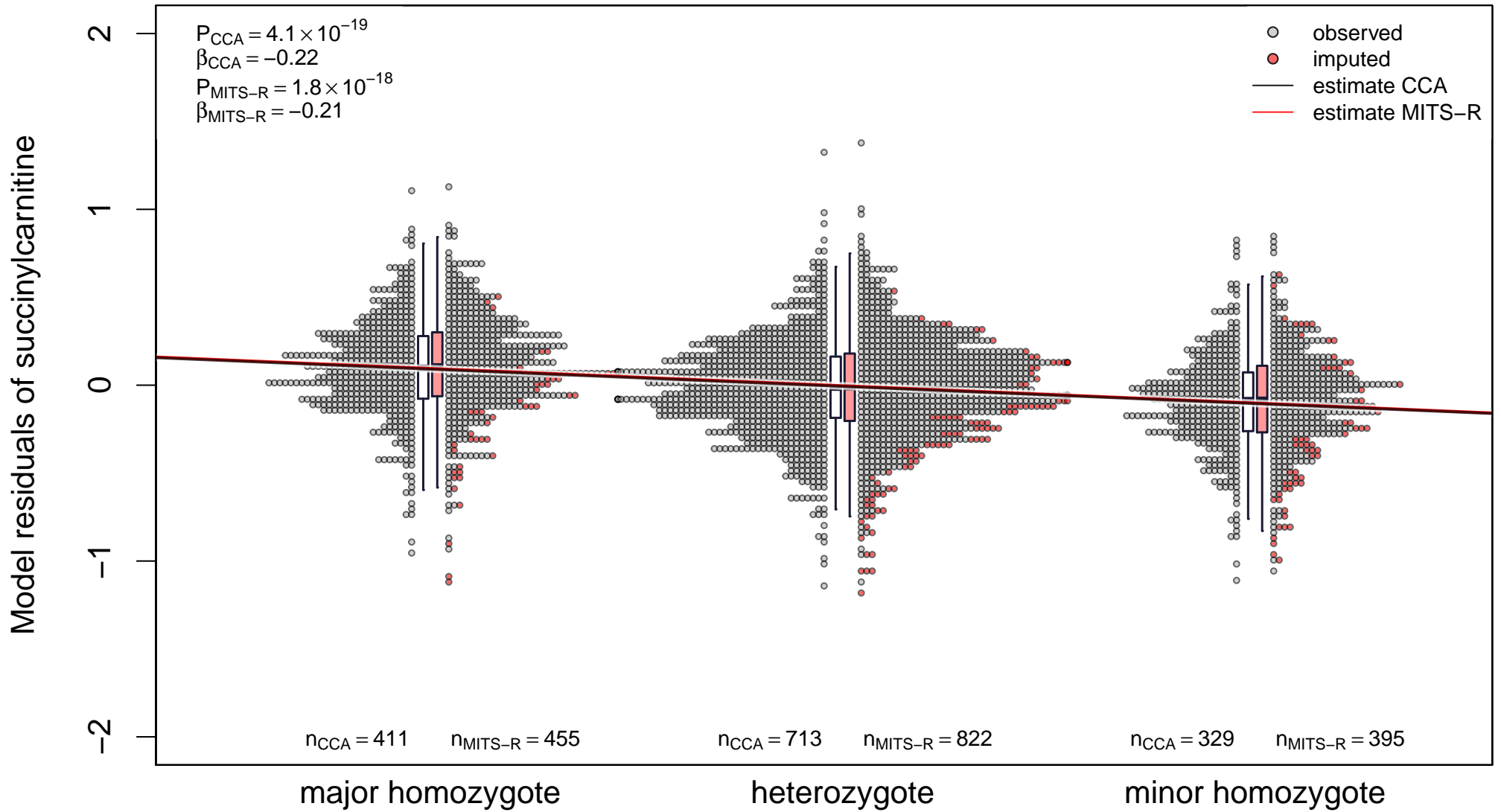
Genotype of SNP rs1472631 (LACTB)

# MITS



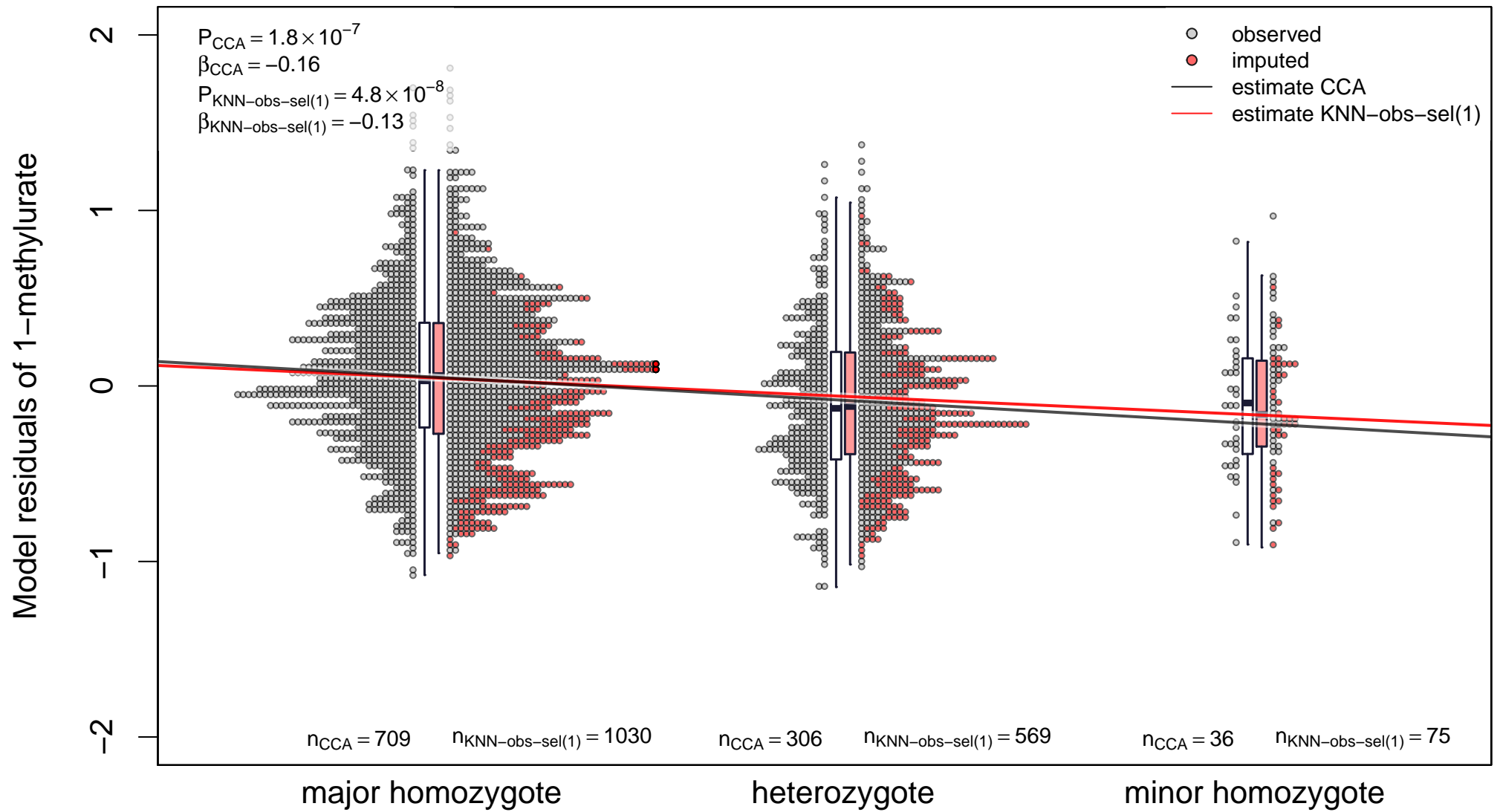
Genotype of SNP rs1472631 (LACTB)

# MIT-S-R



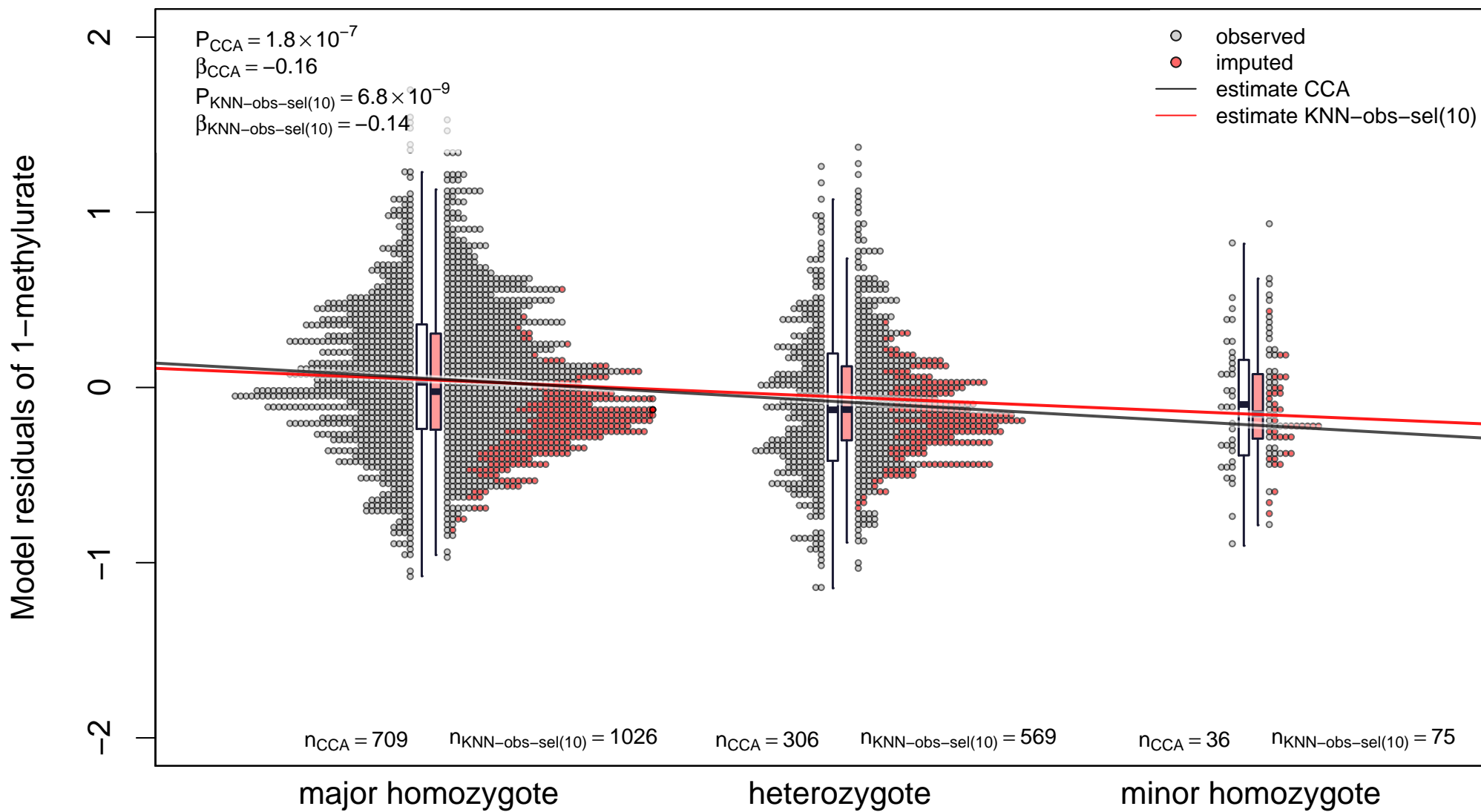
Genotype of SNP rs1472631 (LACTB)

# KNN-obs-sel(1)



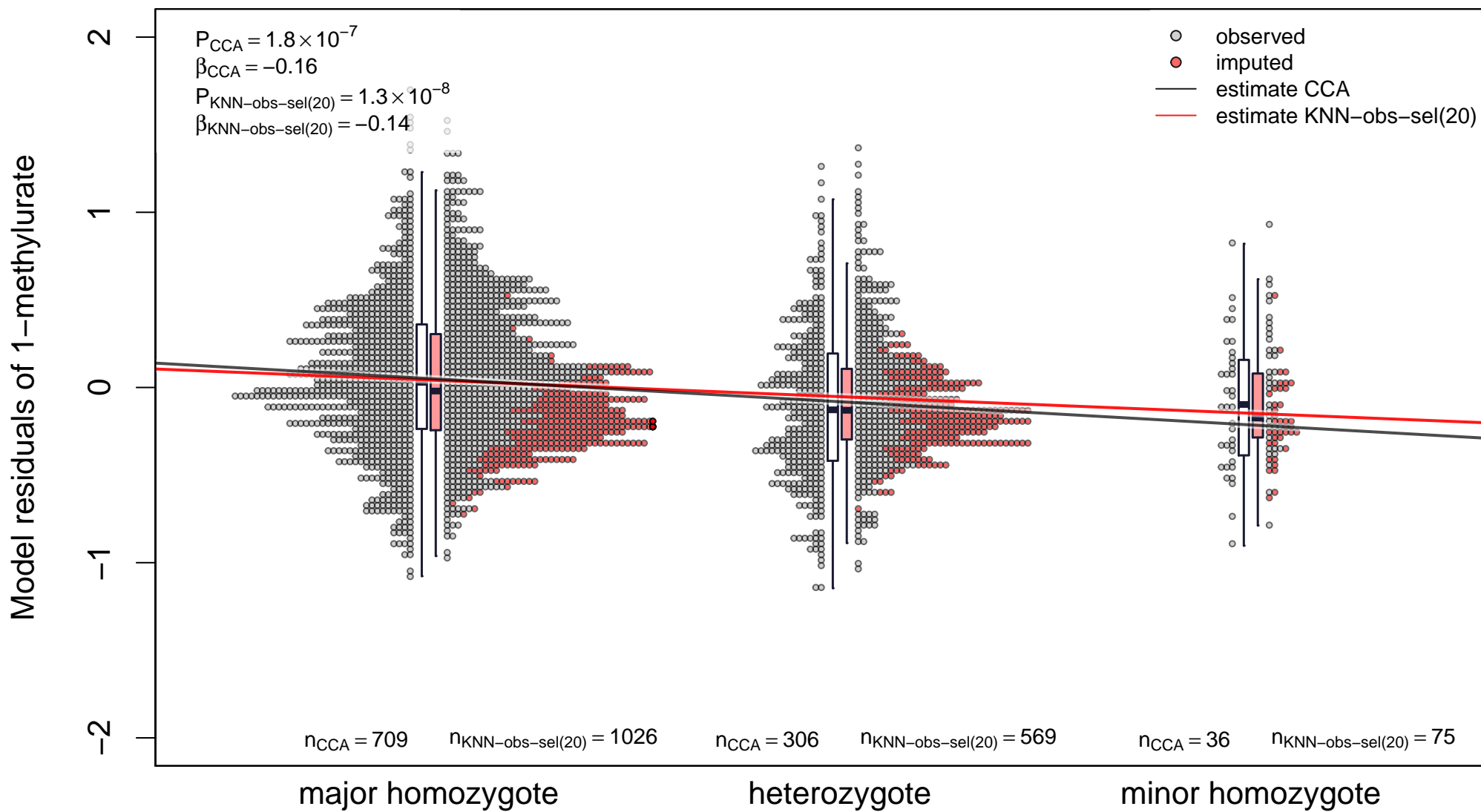
Genotype of SNP rs1495741 (NAT2)

# KNN-obs-sel(10)



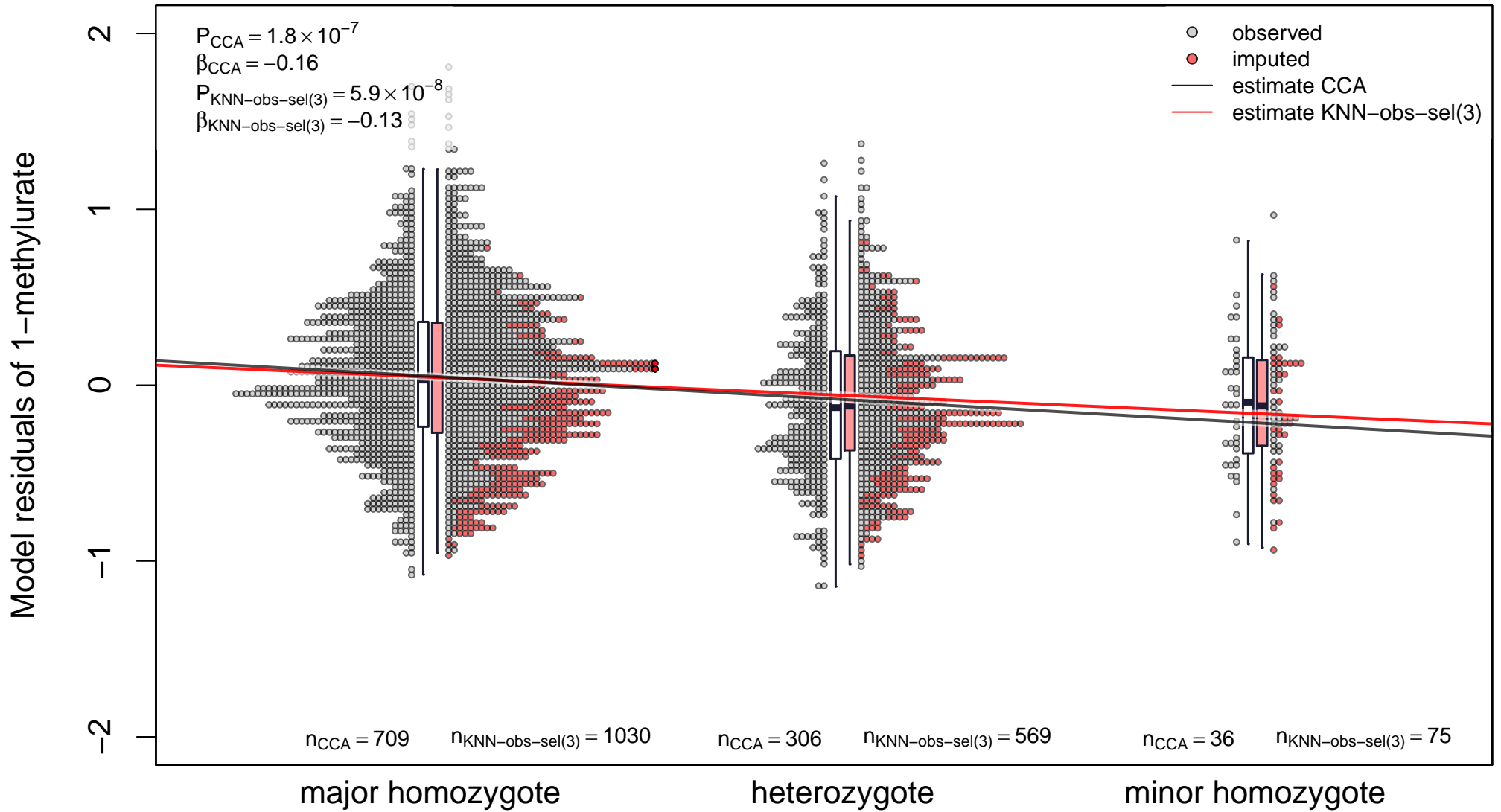
Genotype of SNP rs1495741 (NAT2)

# KNN-obs-sel(20)



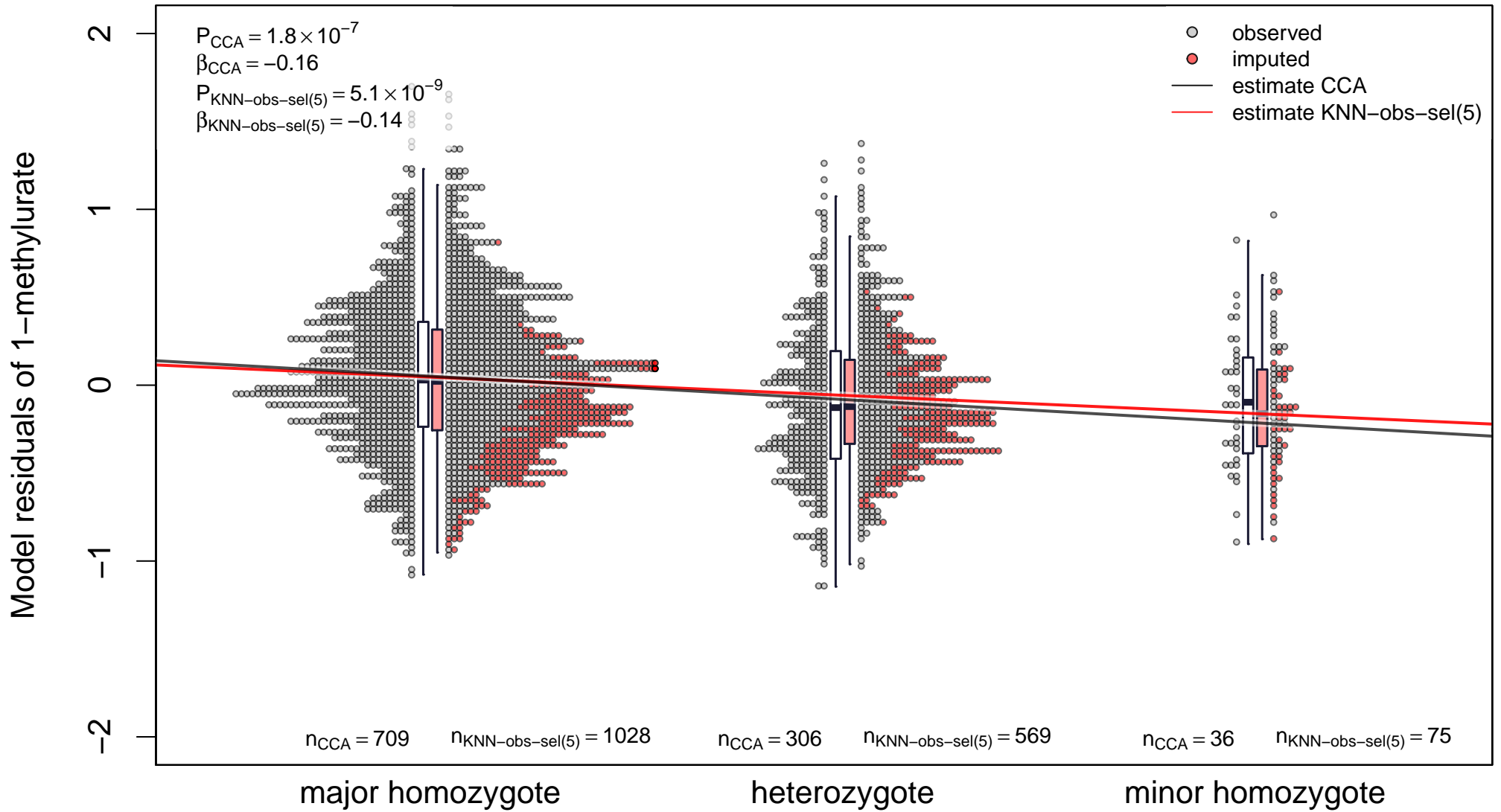
Genotype of SNP rs1495741 (NAT2)

# KNN-obs-sel(3)



Genotype of SNP rs1495741 (NAT2)

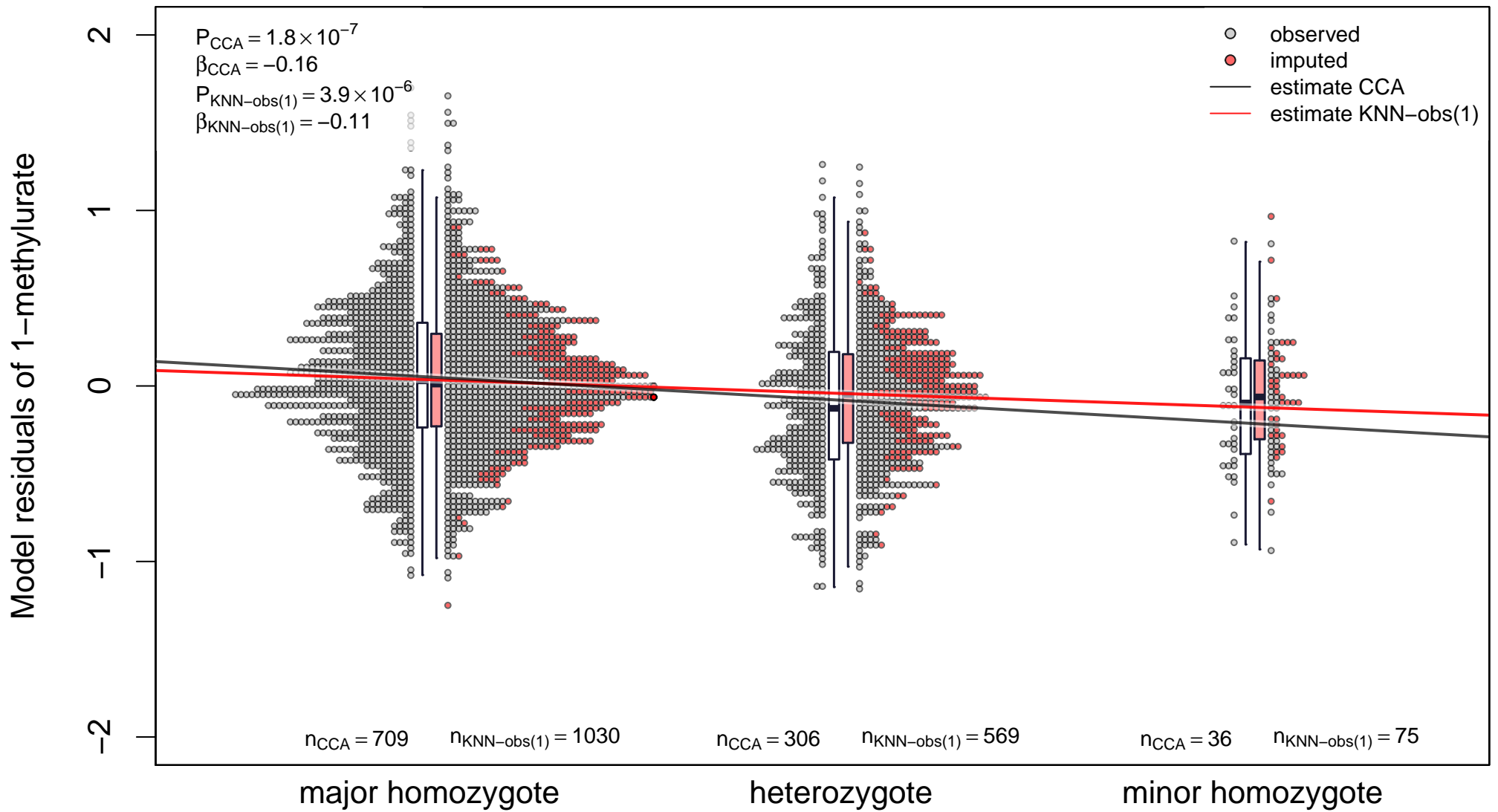
# KNN-obs-sel(5)



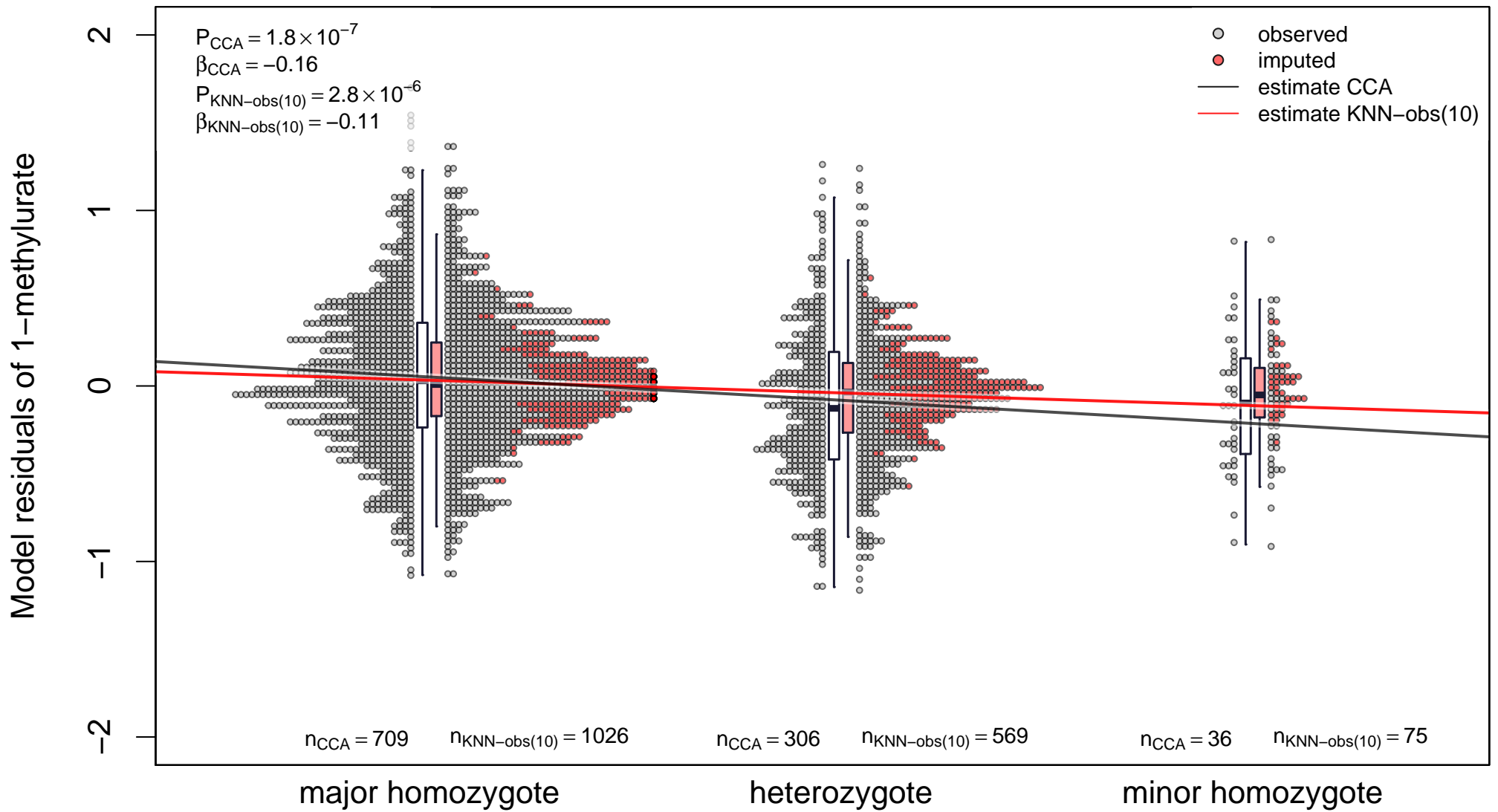
Genotype of SNP rs1495741 (NAT2)



# KNN-obs(1)

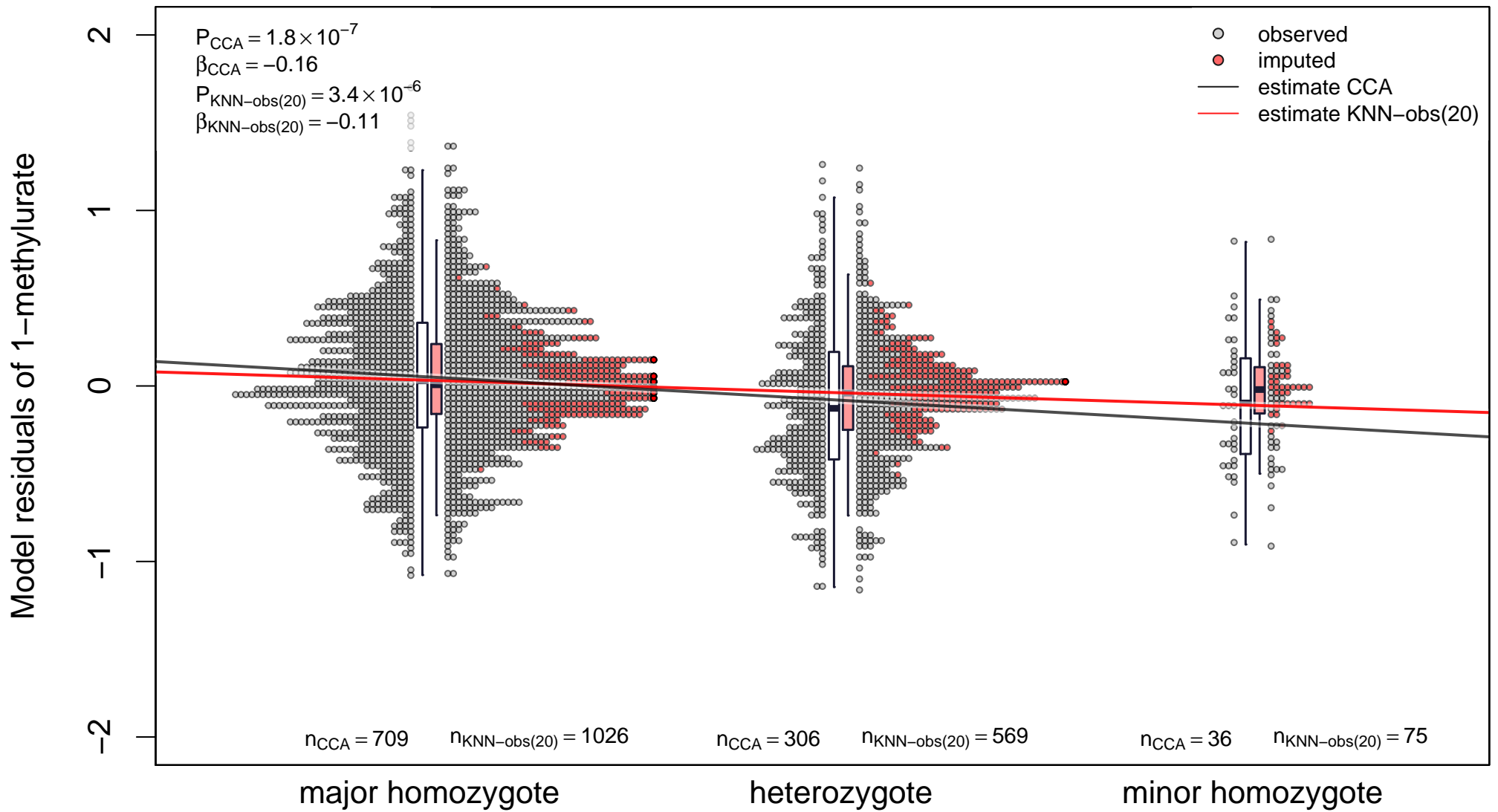


# KNN-obs(10)



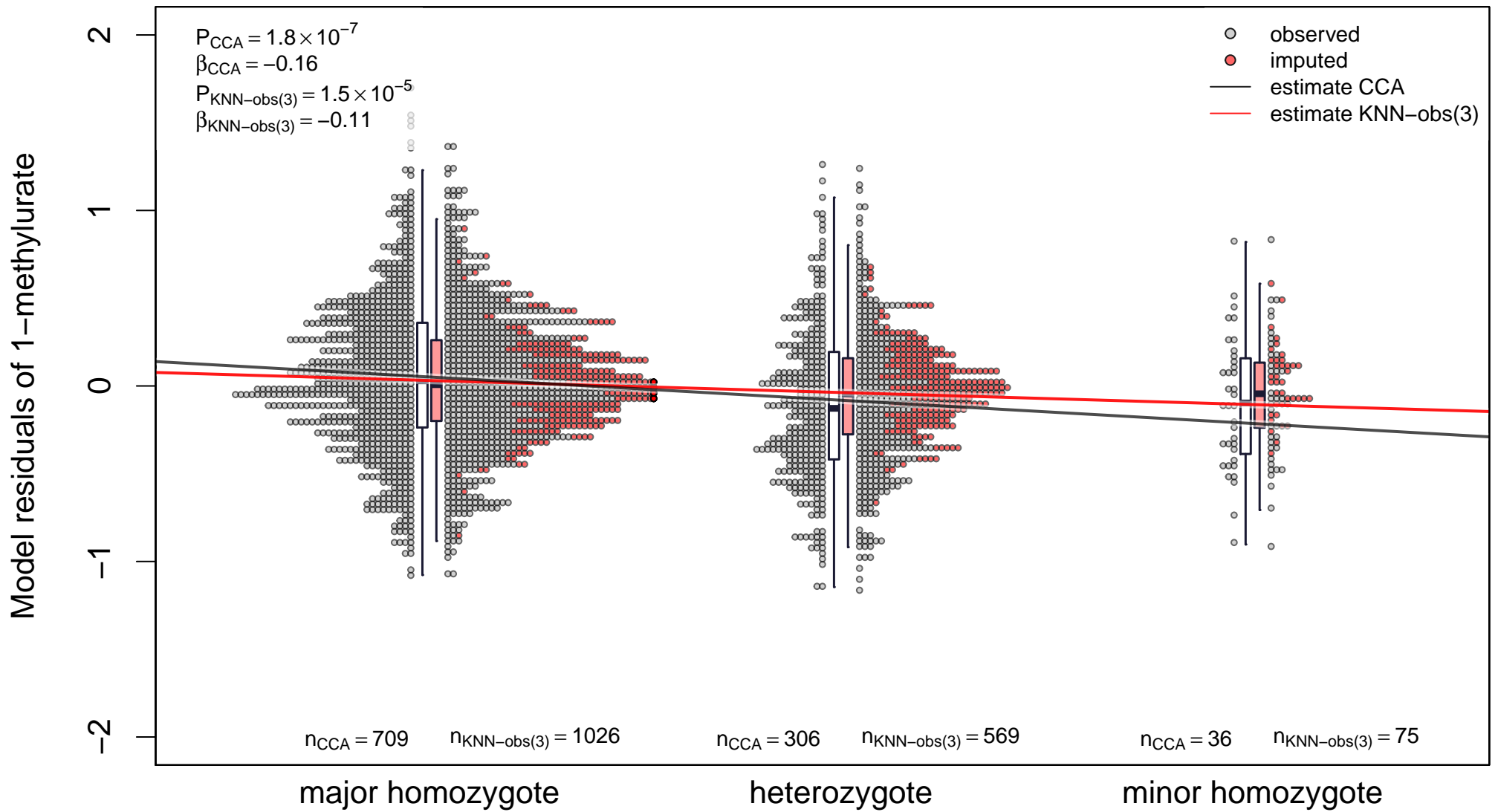
Genotype of SNP rs1495741 (NAT2)

# KNN-obs(20)

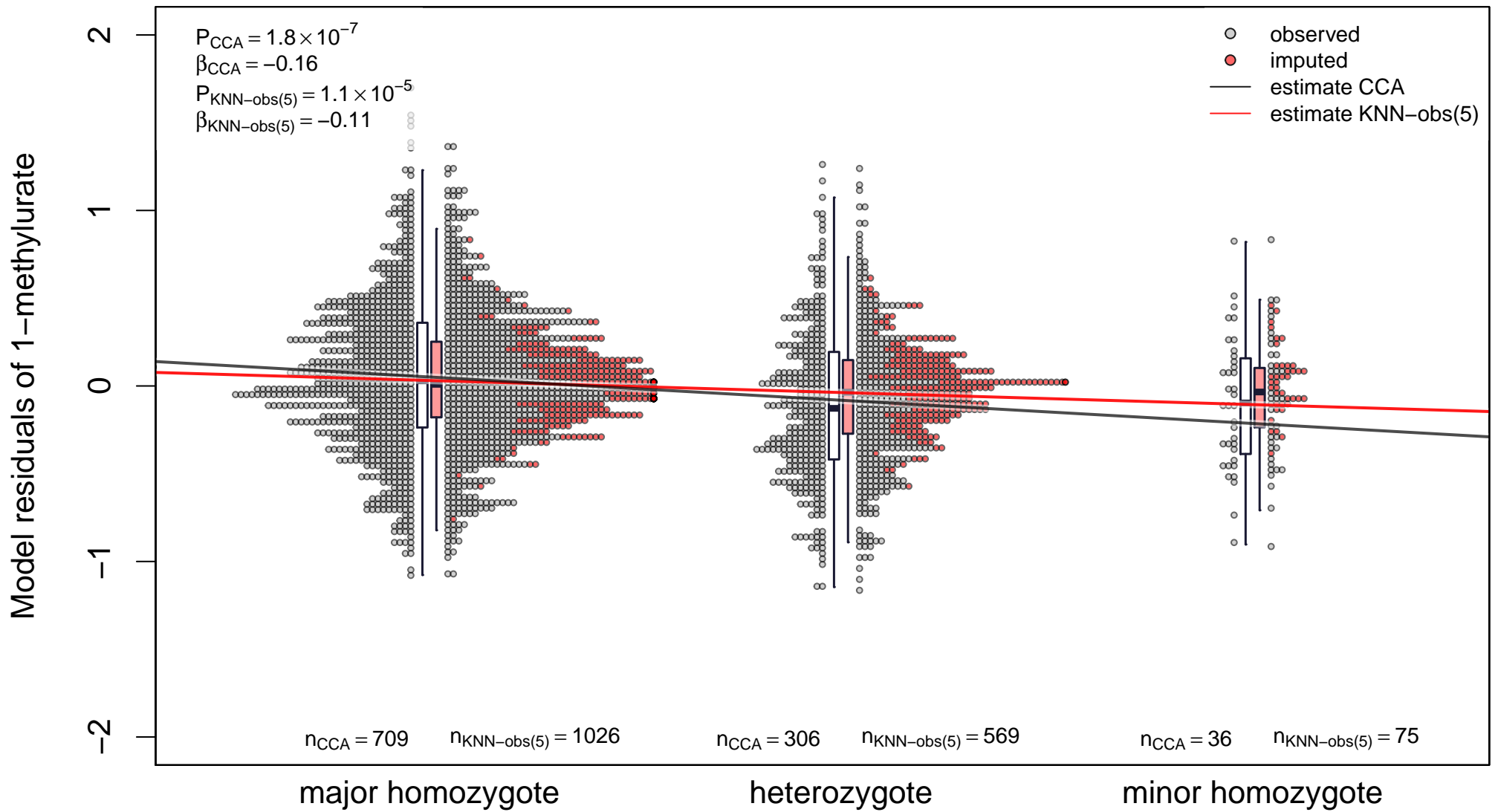


Genotype of SNP rs1495741 (NAT2)

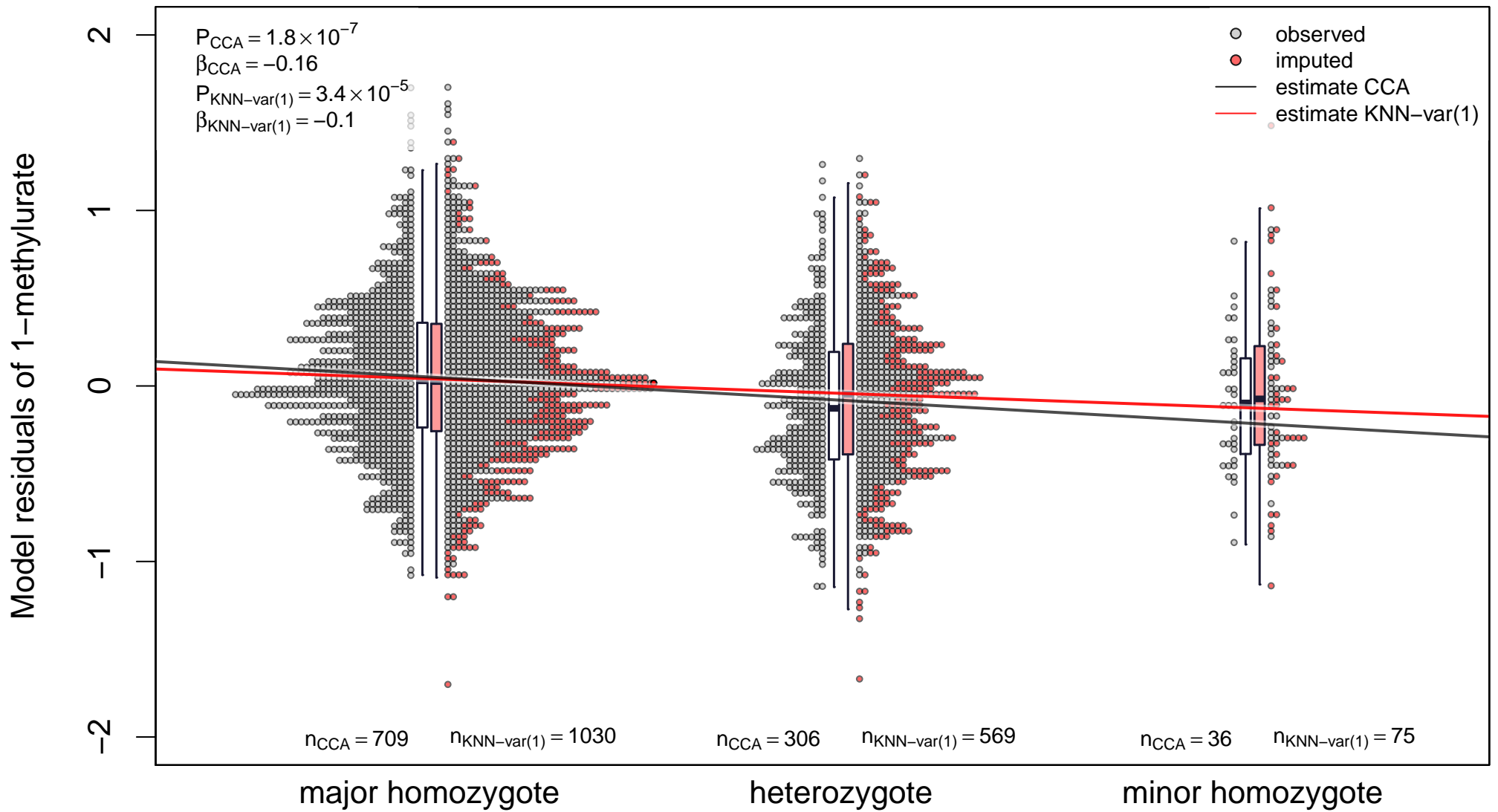
# KNN-obs(3)



# KNN-obs(5)

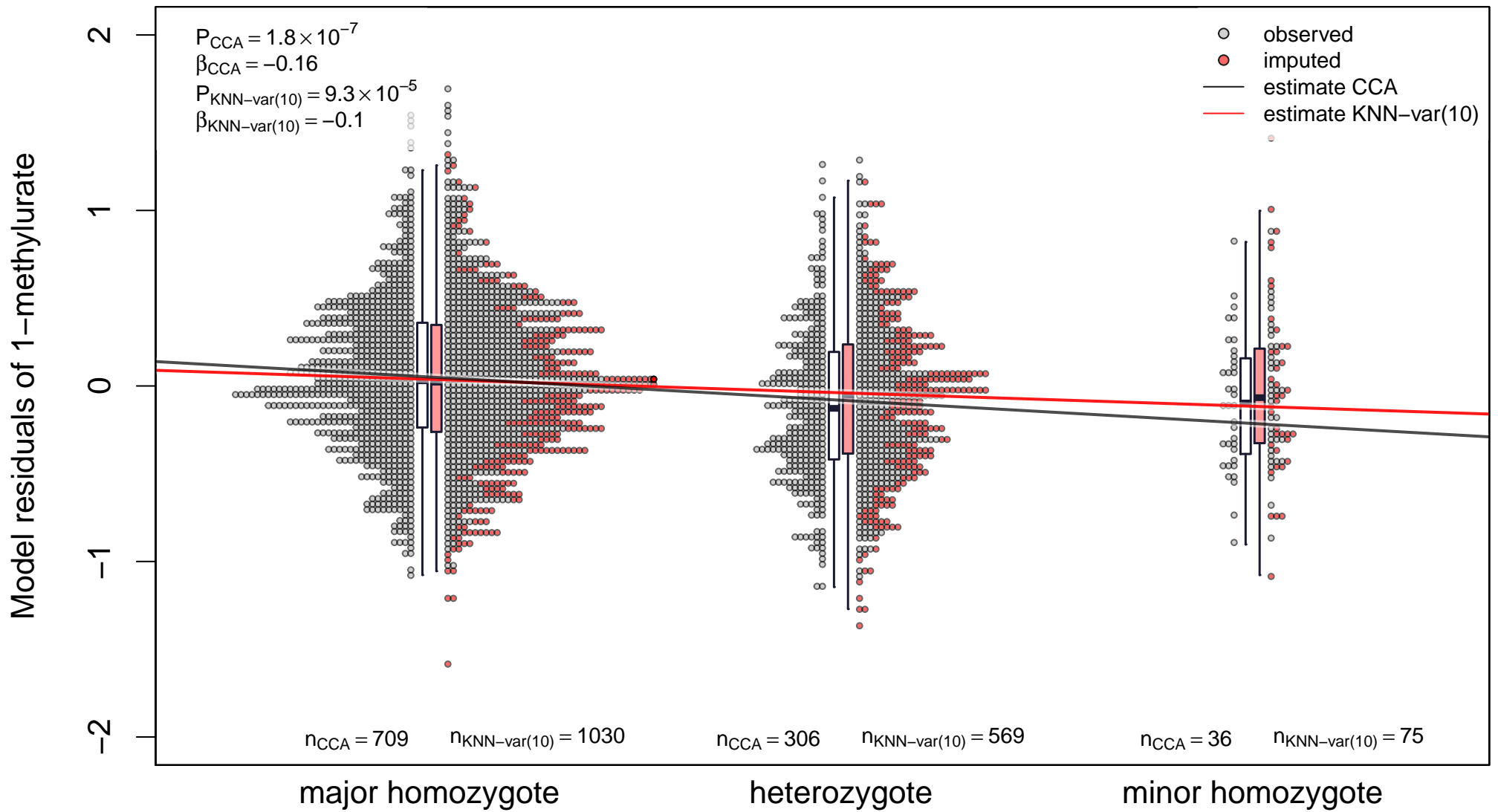


# KNN-var(1)



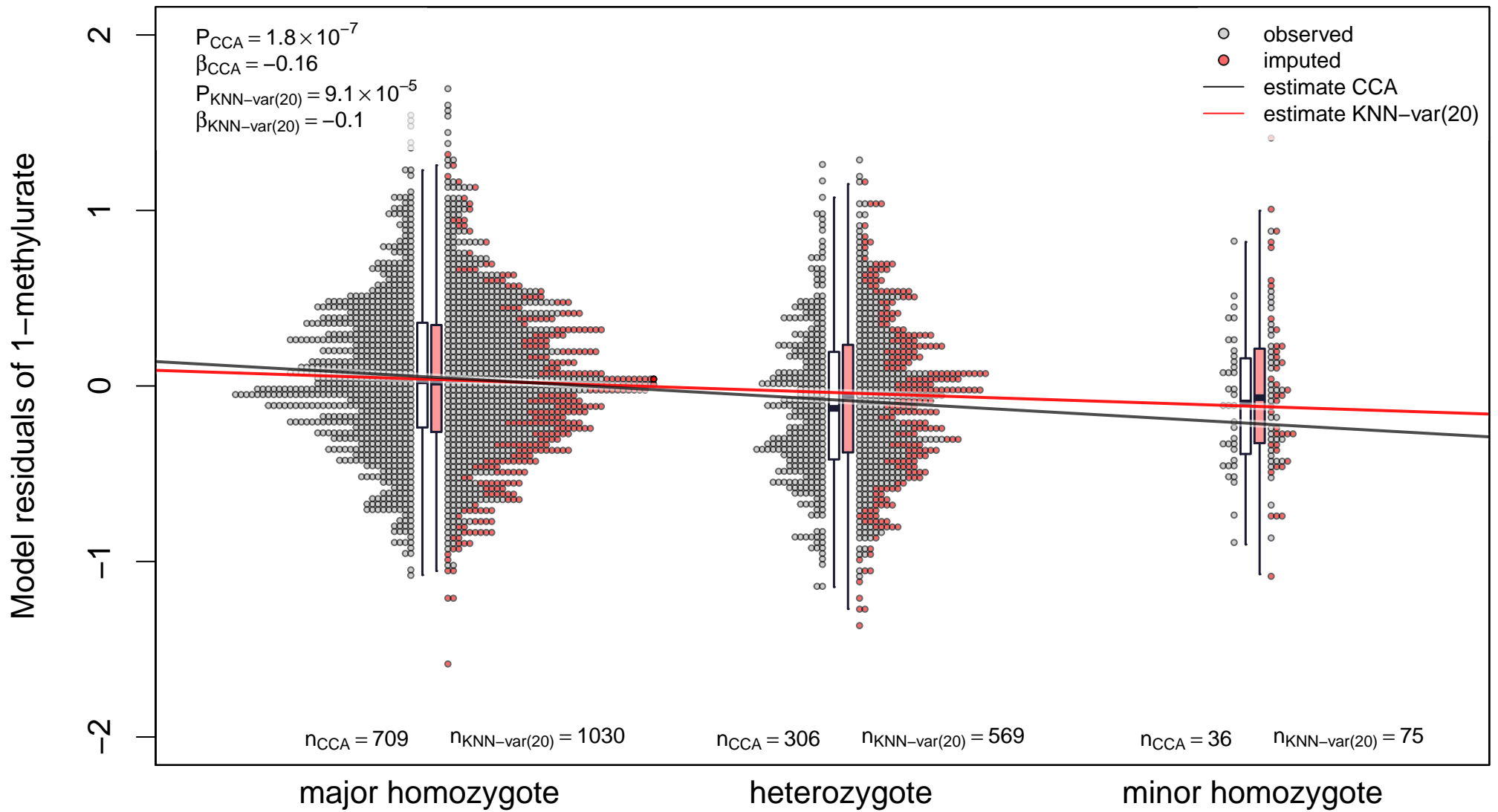
Genotype of SNP rs1495741 (NAT2)

# KNN-var(10)



Genotype of SNP rs1495741 (NAT2)

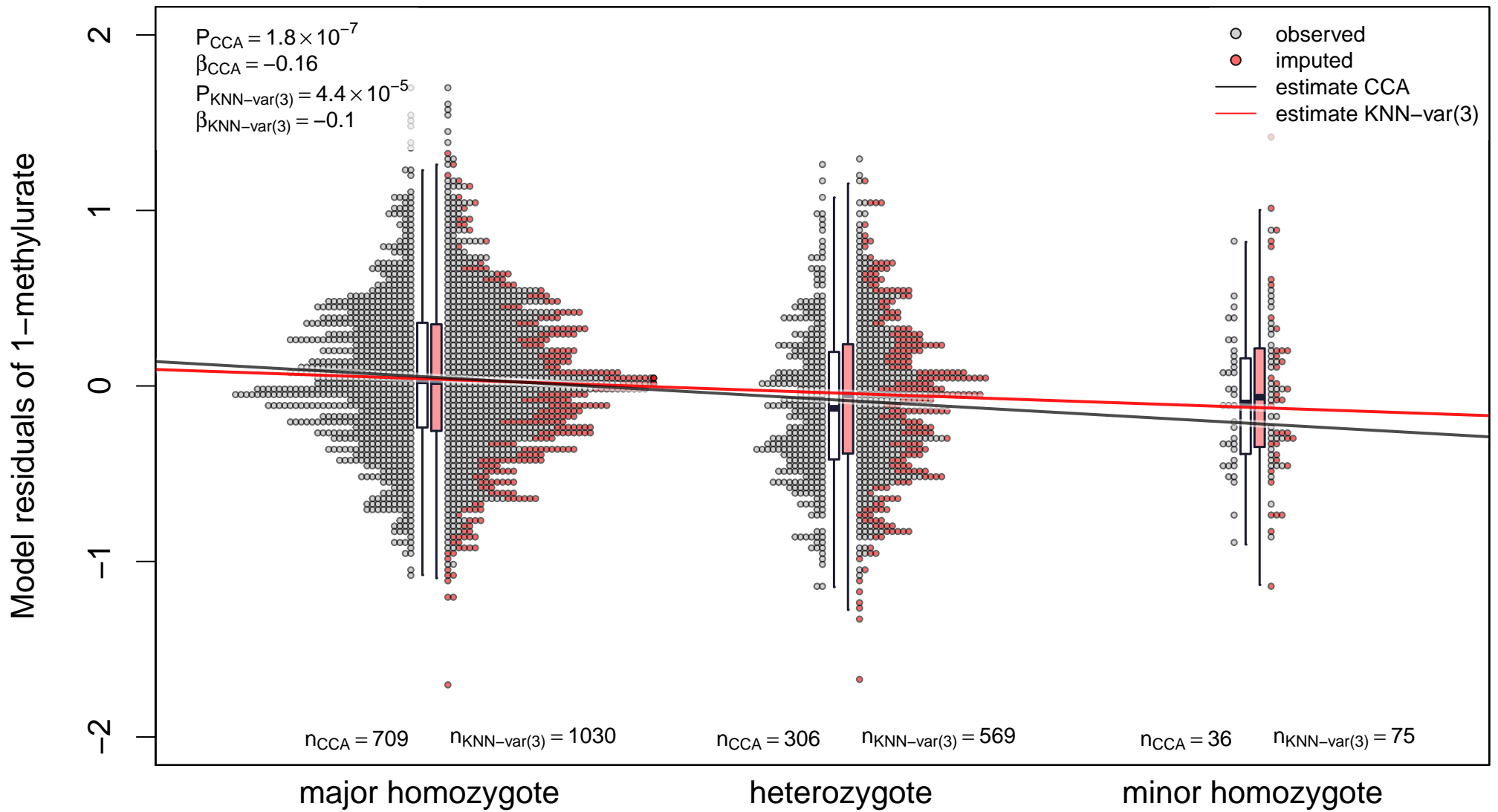
# KNN-var(20)



Genotype of SNP rs1495741 (NAT2)

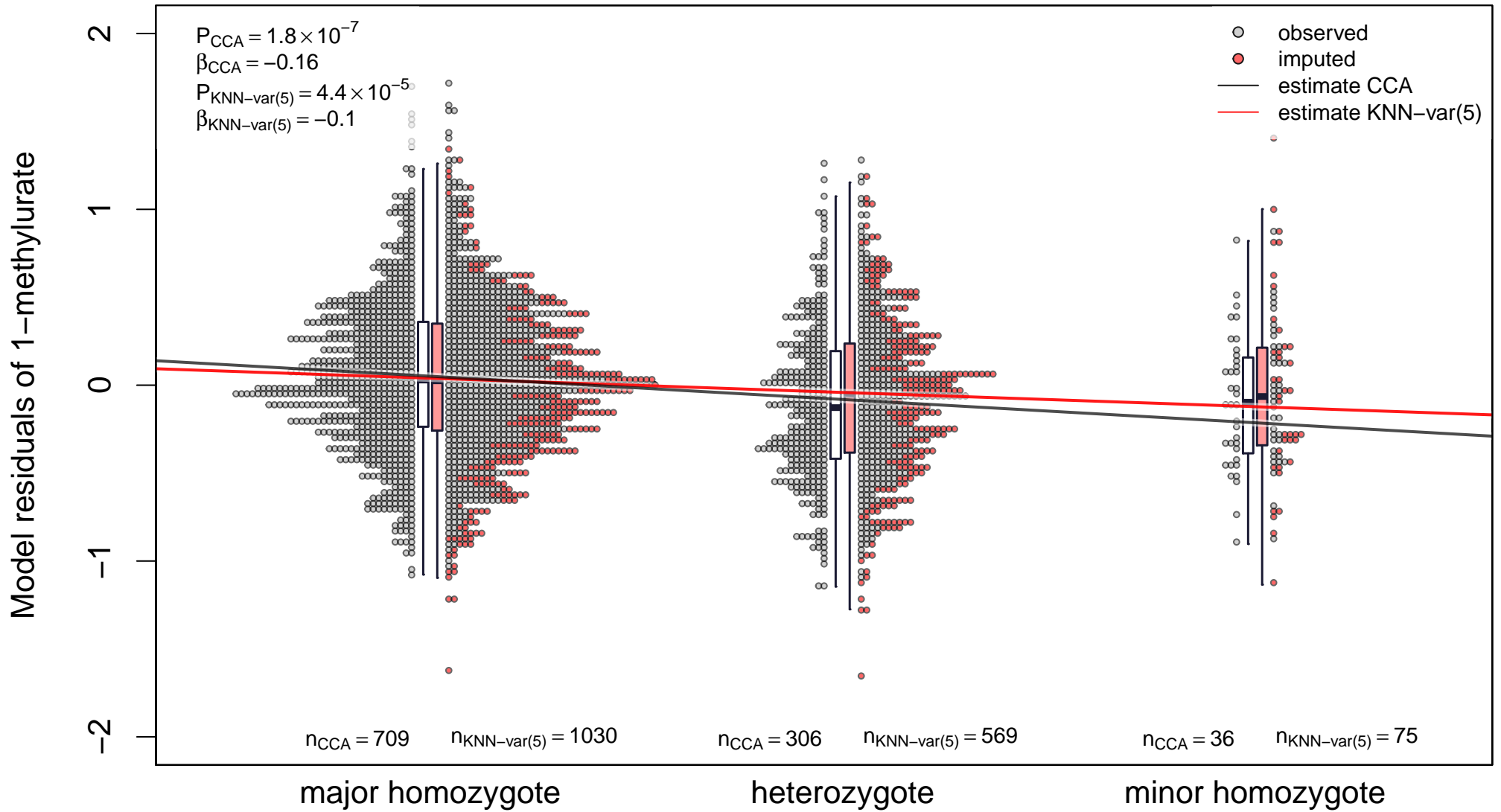


# KNN-var(3)



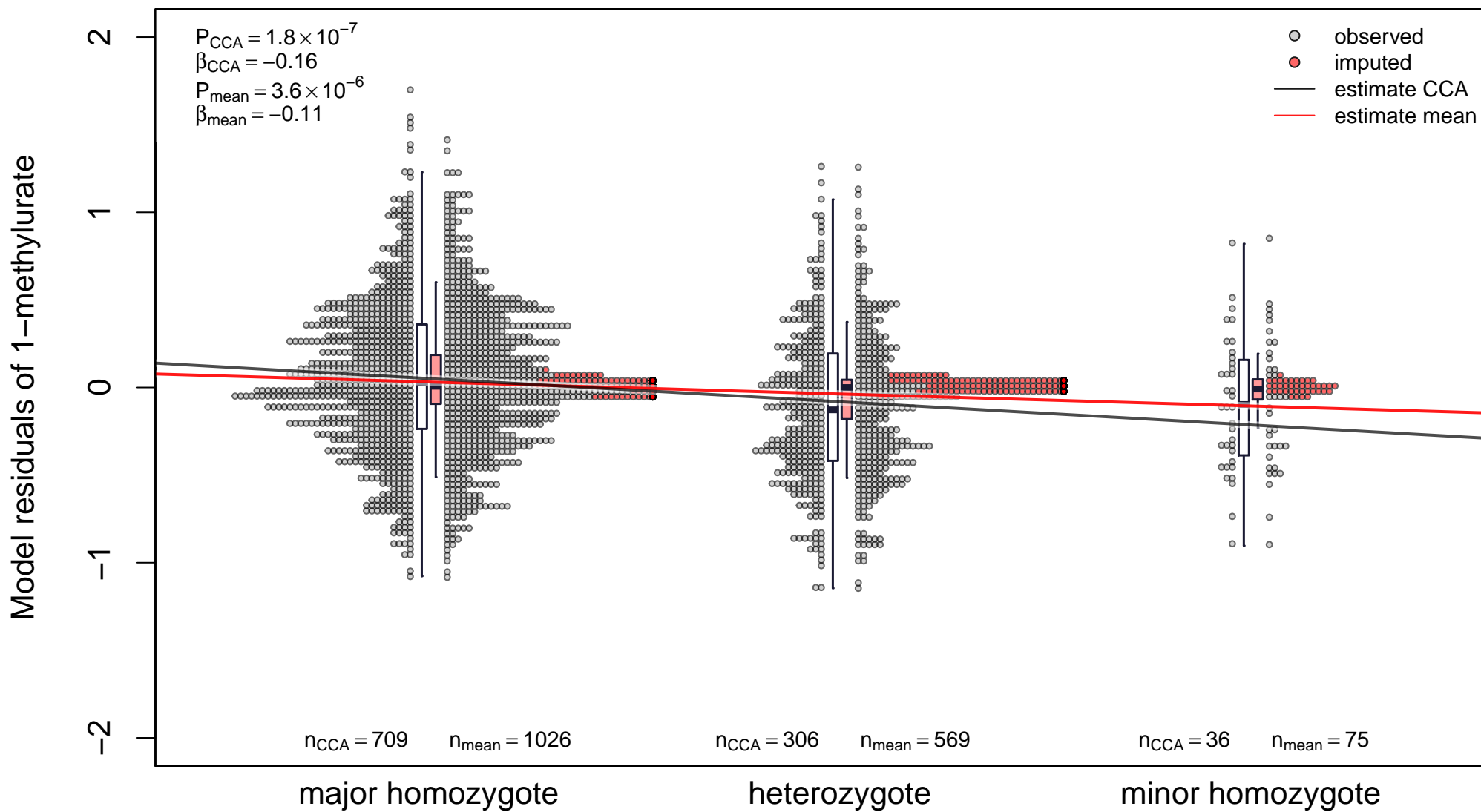
Genotype of SNP rs1495741 (NAT2)

# KNN-var(5)



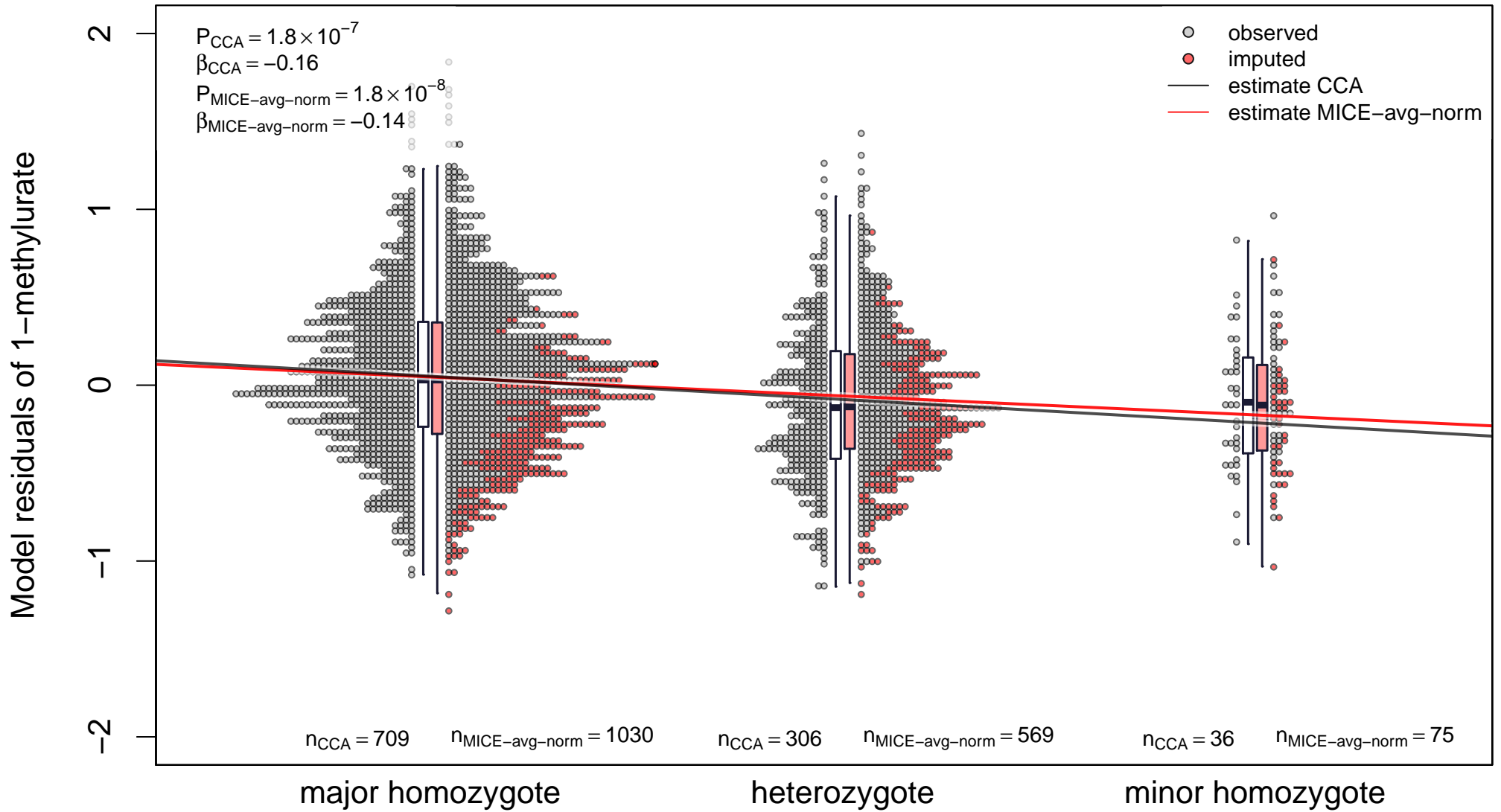
Genotype of SNP rs1495741 (NAT2)

# mean

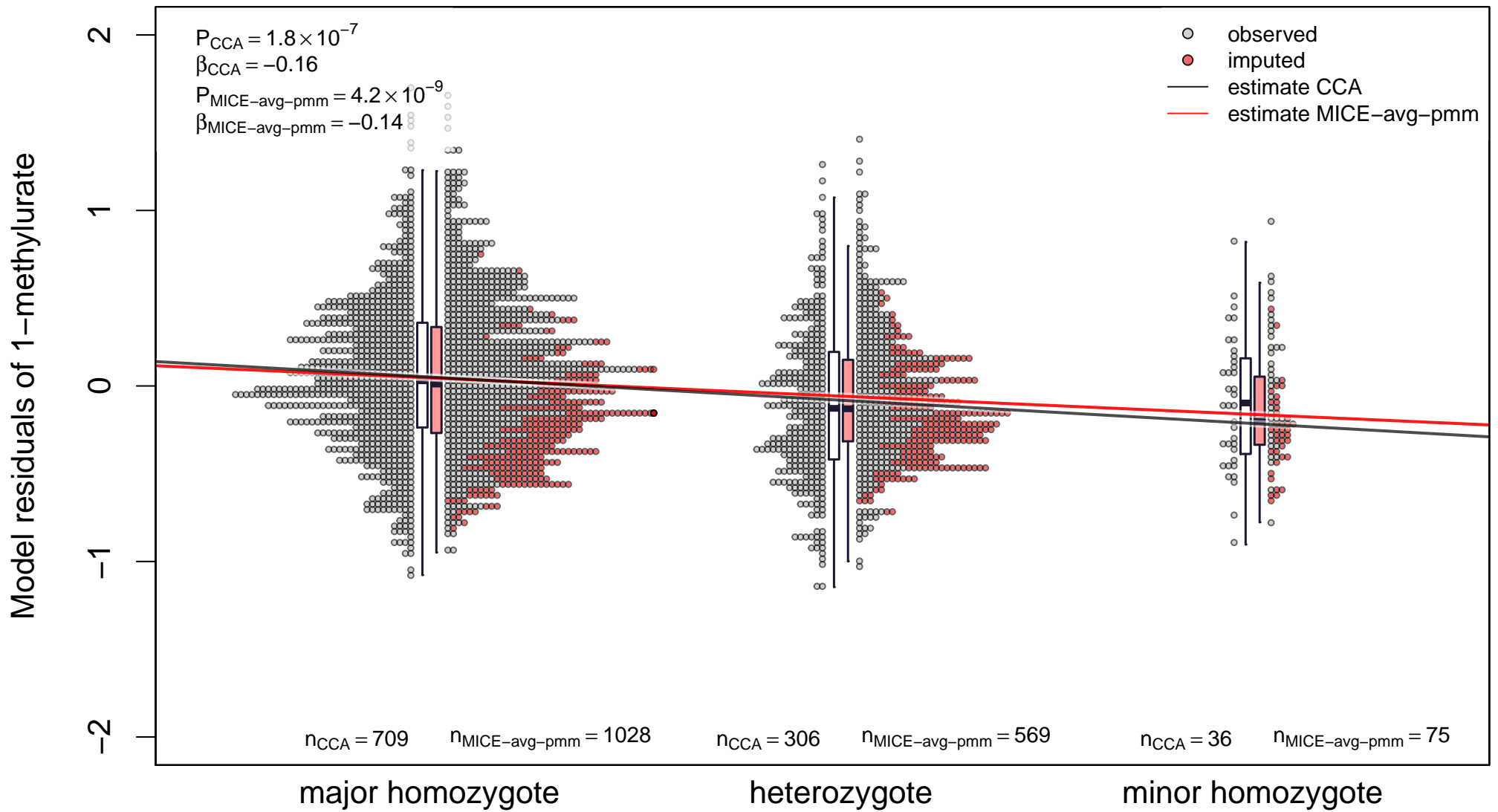


Genotype of SNP rs1495741 (NAT2)

# MICE-avg-norm

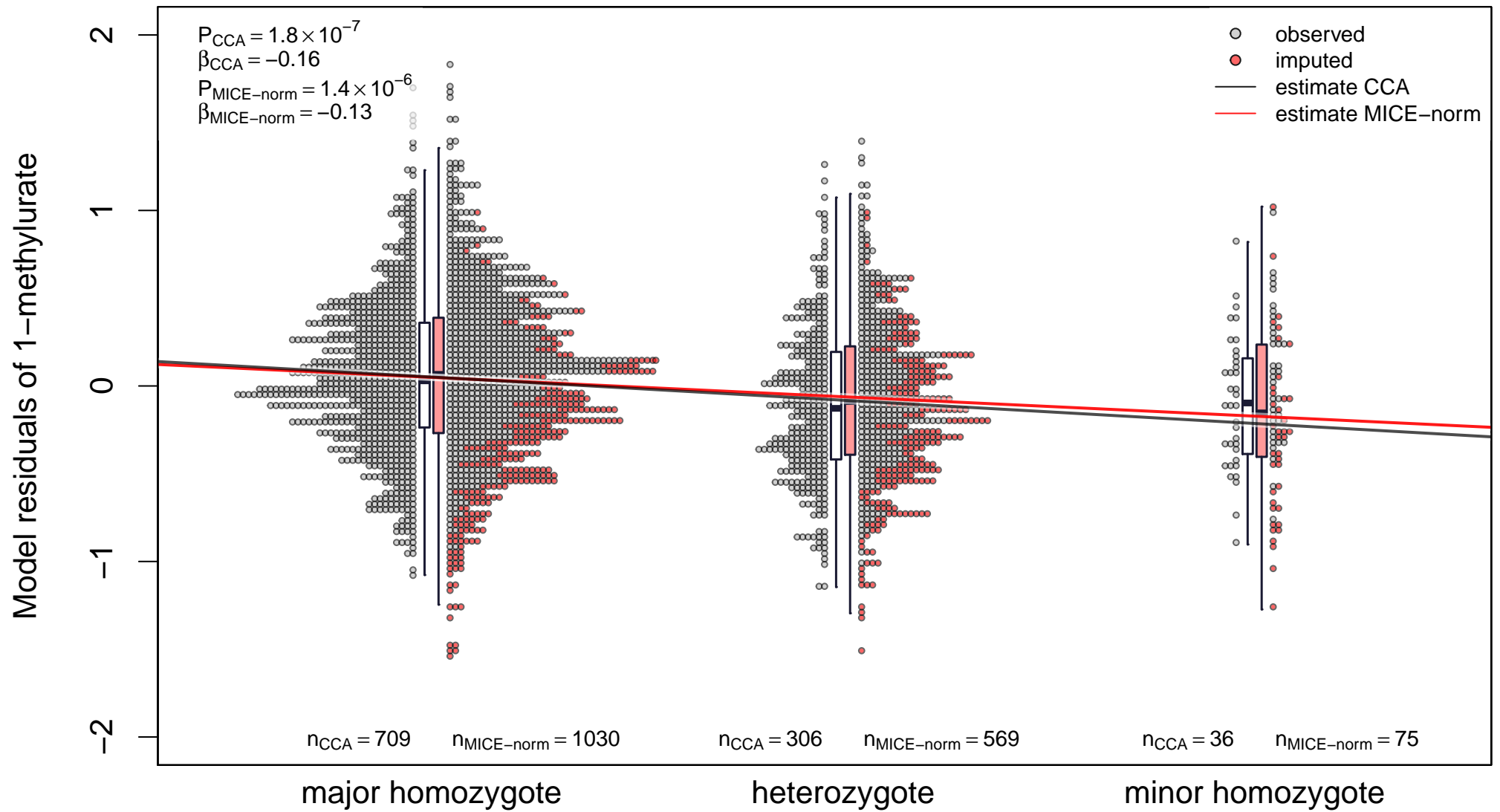


# MICE-avg-pmm



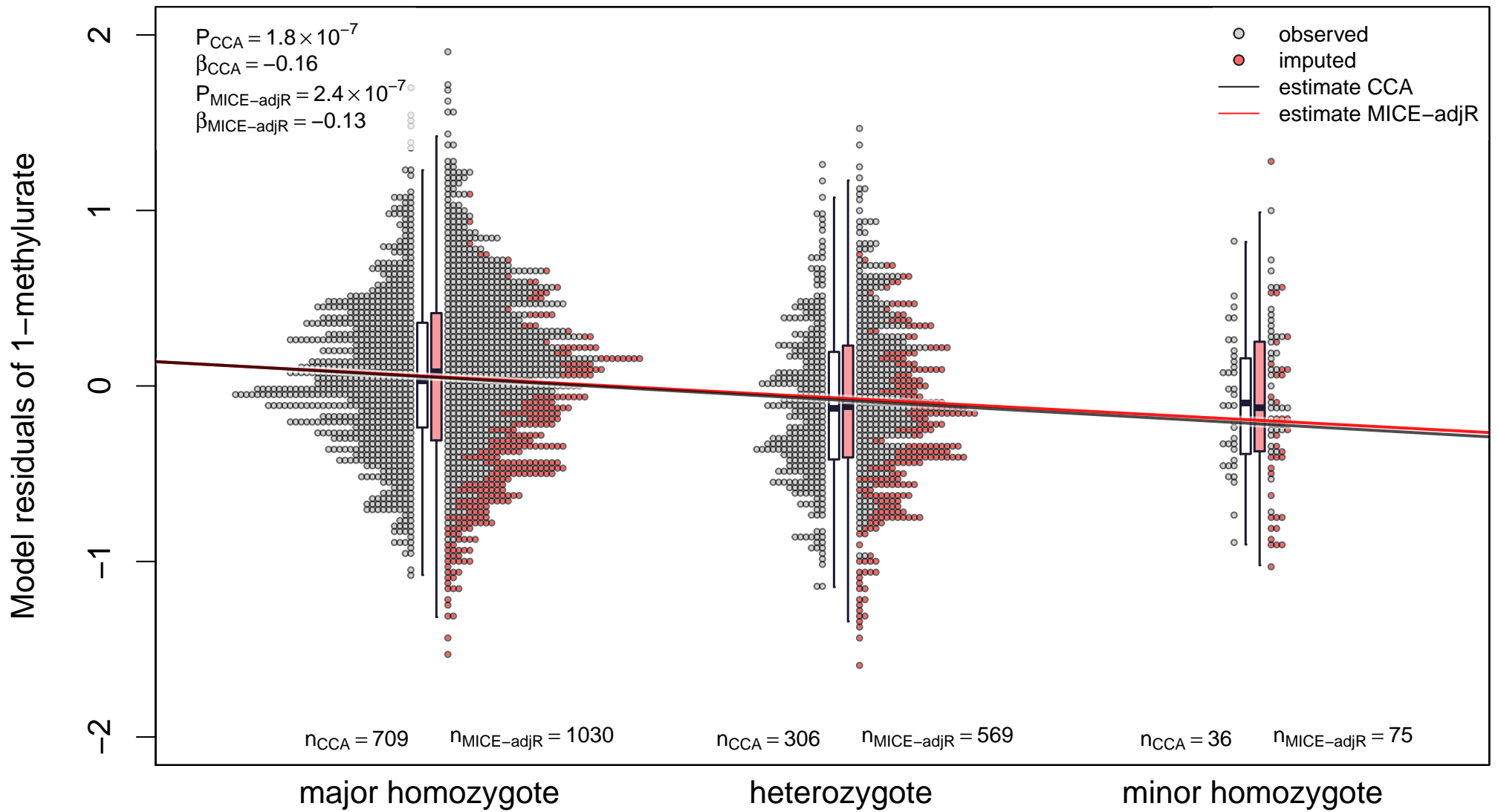
Genotype of SNP rs1495741 (NAT2)

# MICE-norm

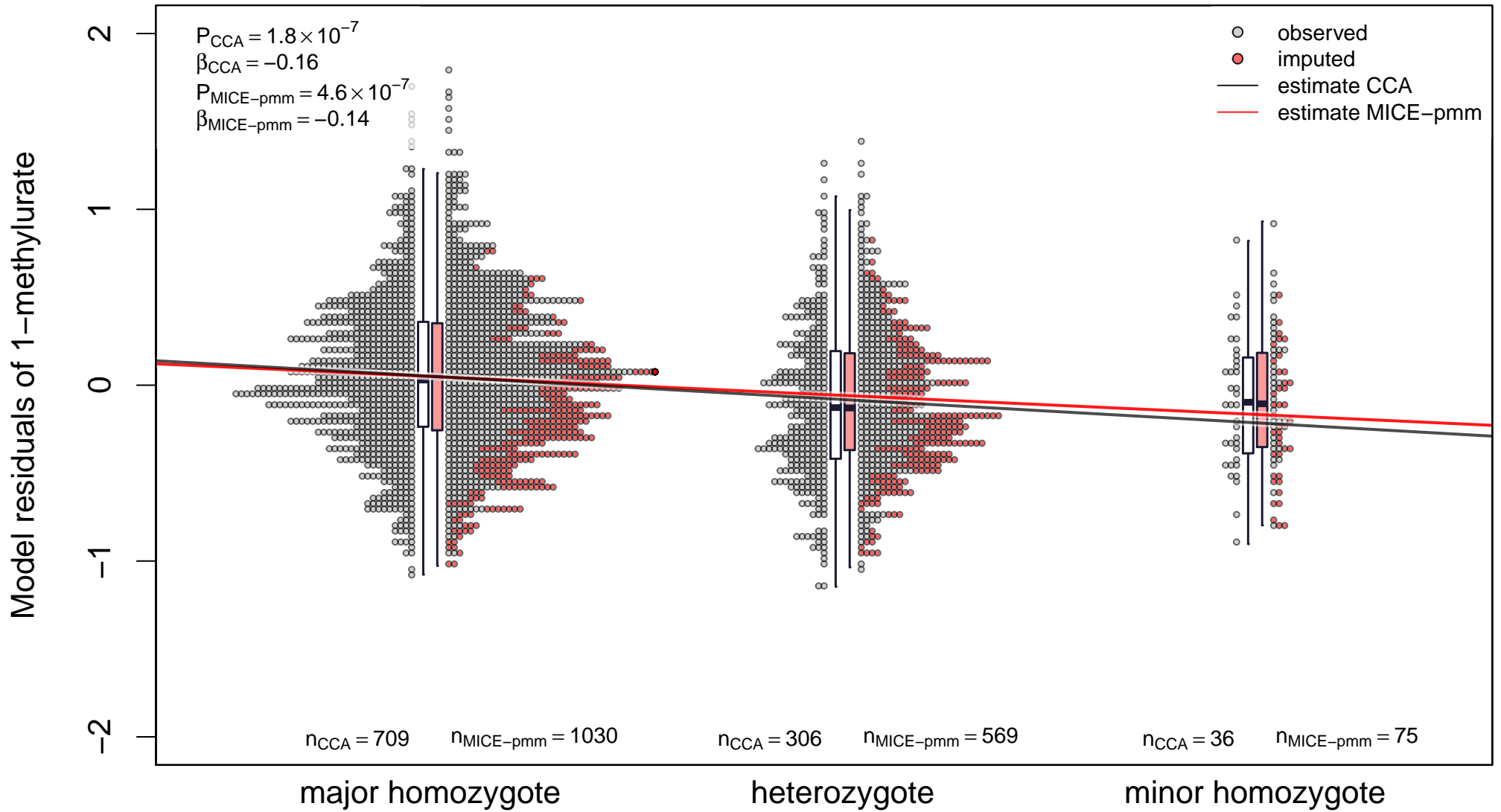


Genotype of SNP rs1495741 (NAT2)

# MICE-adjR



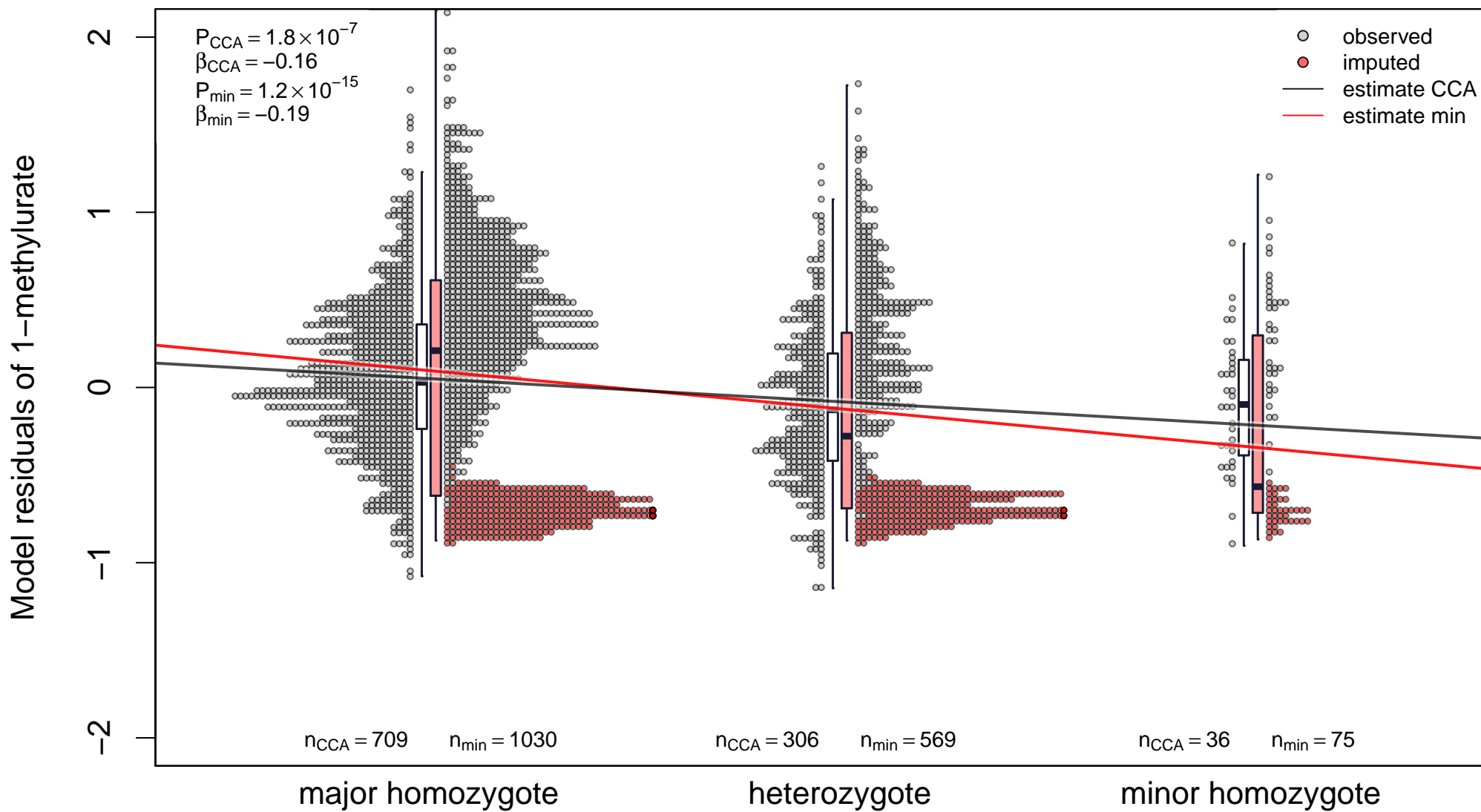
# MICE-pmm



Genotype of SNP rs1495741 (NAT2)

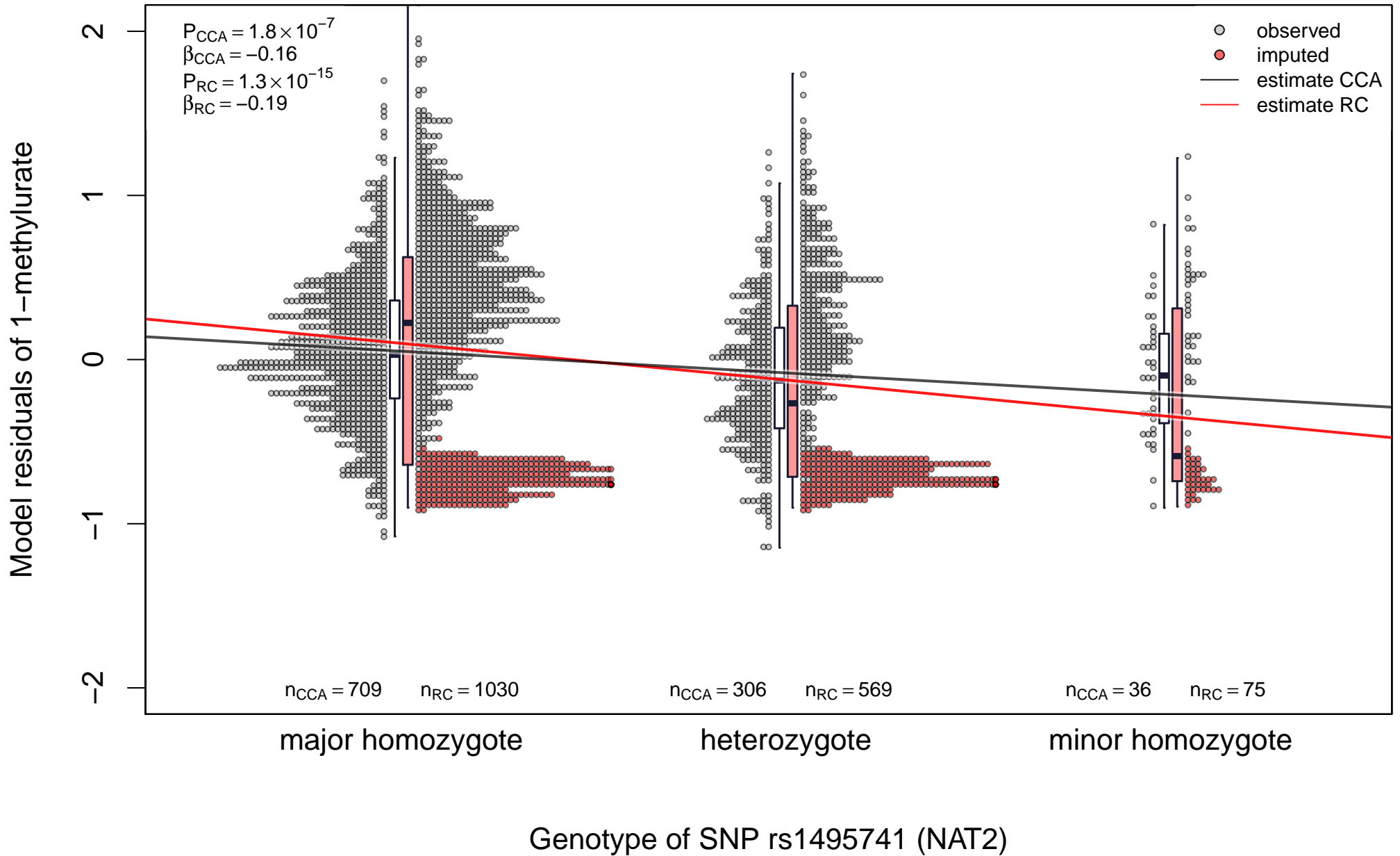


min

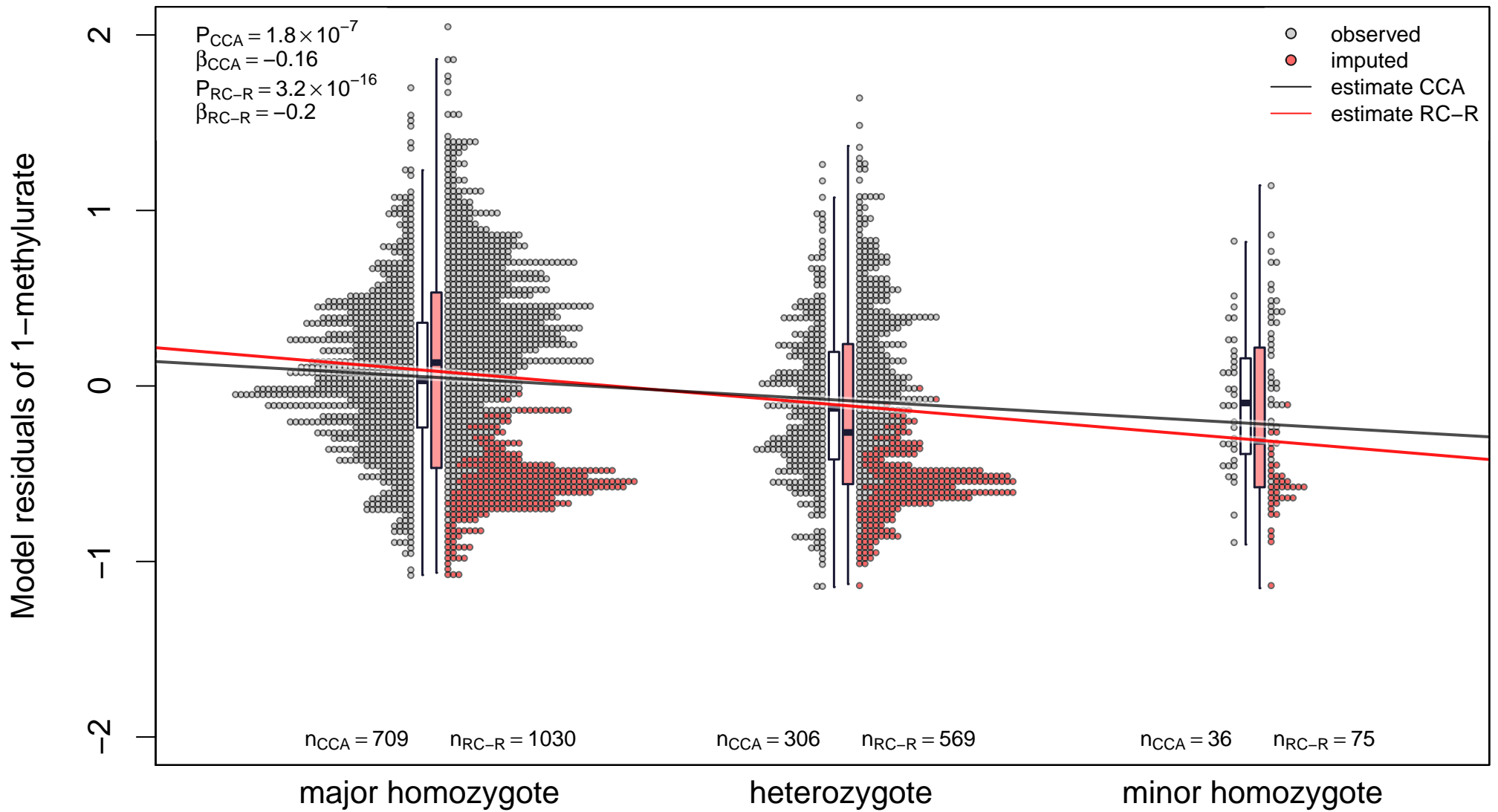


Genotype of SNP rs1495741 (NAT2)

# RC

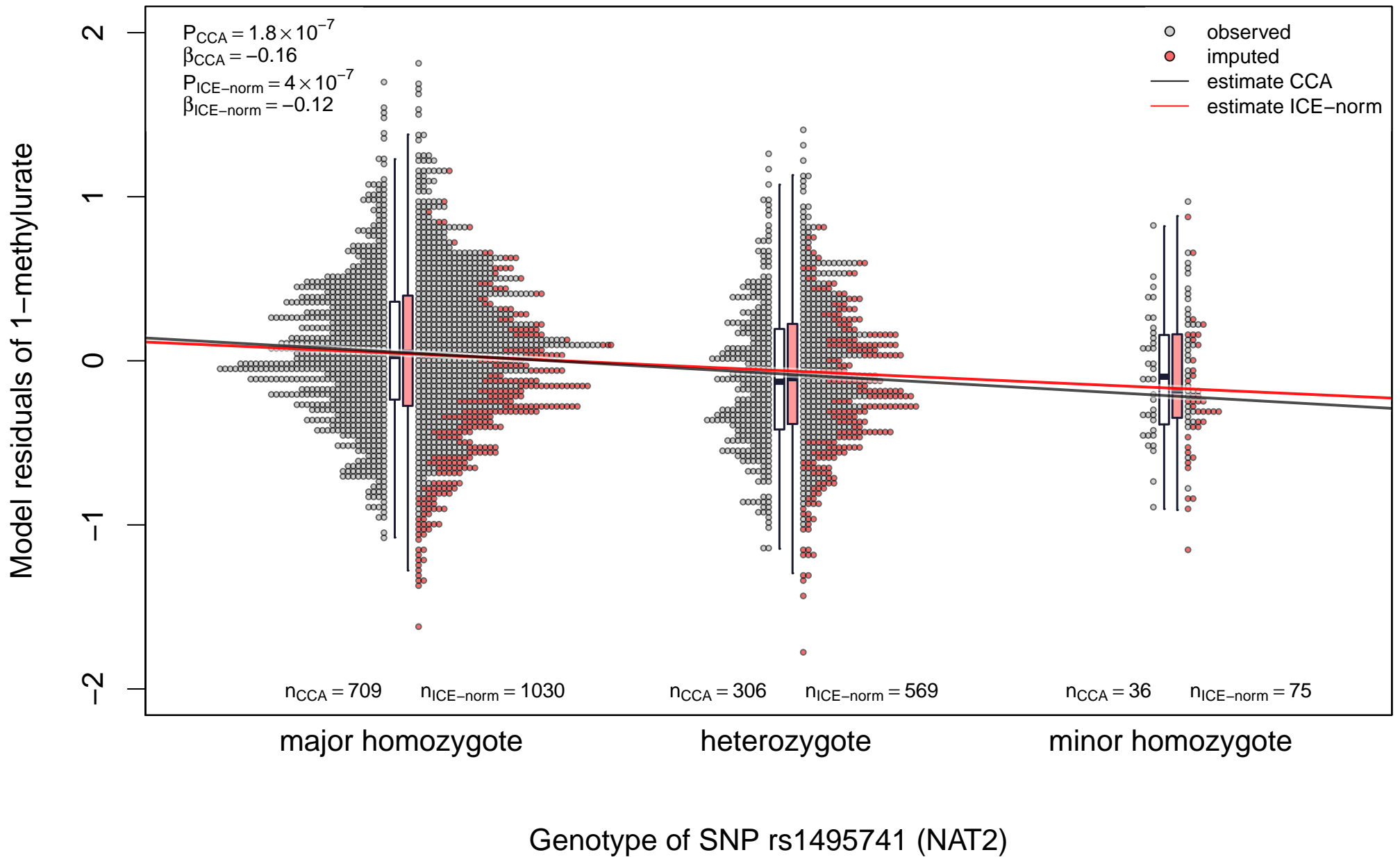


# RC-R

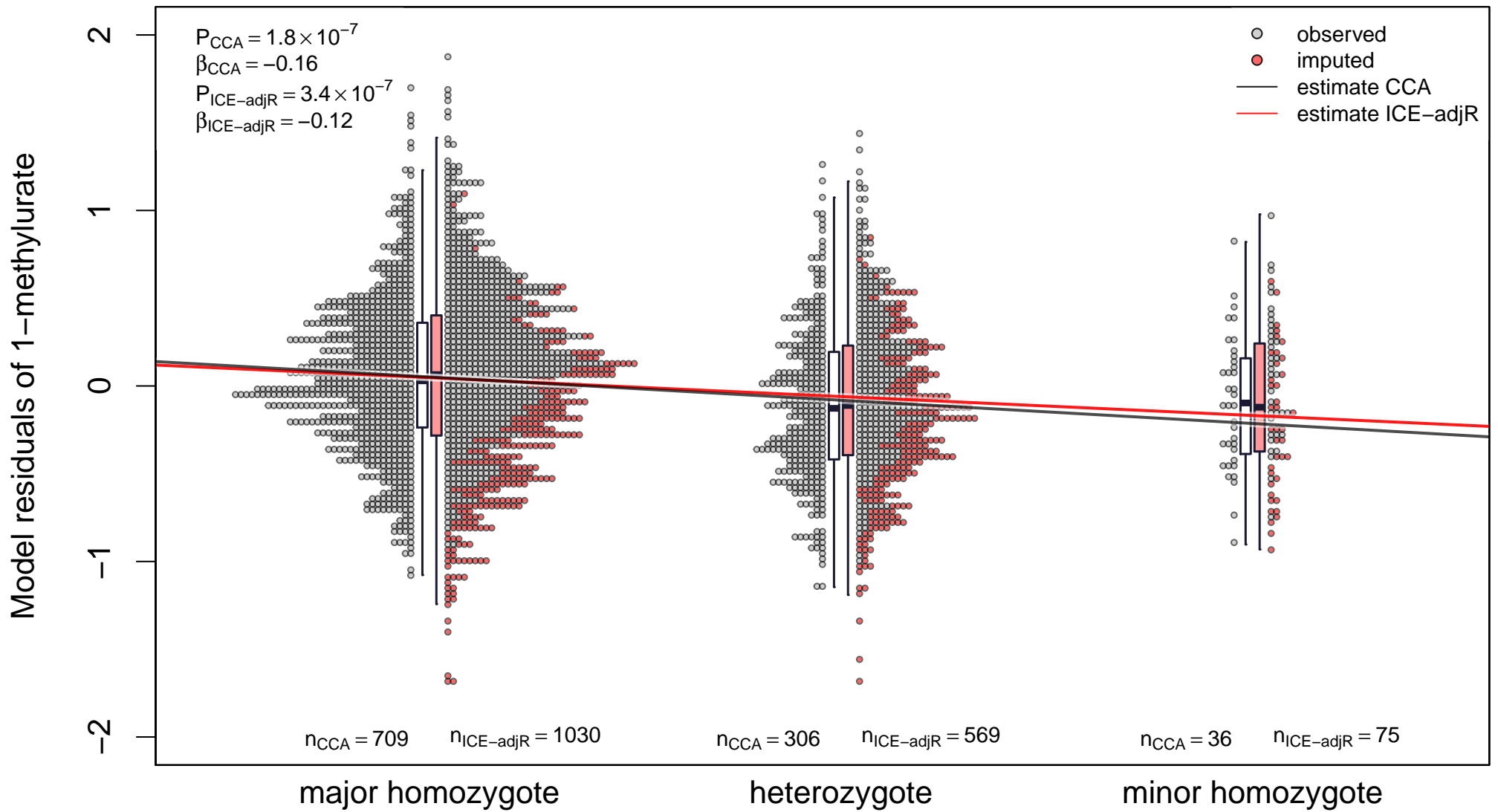


Genotype of SNP rs1495741 (NAT2)

# ICE-norm

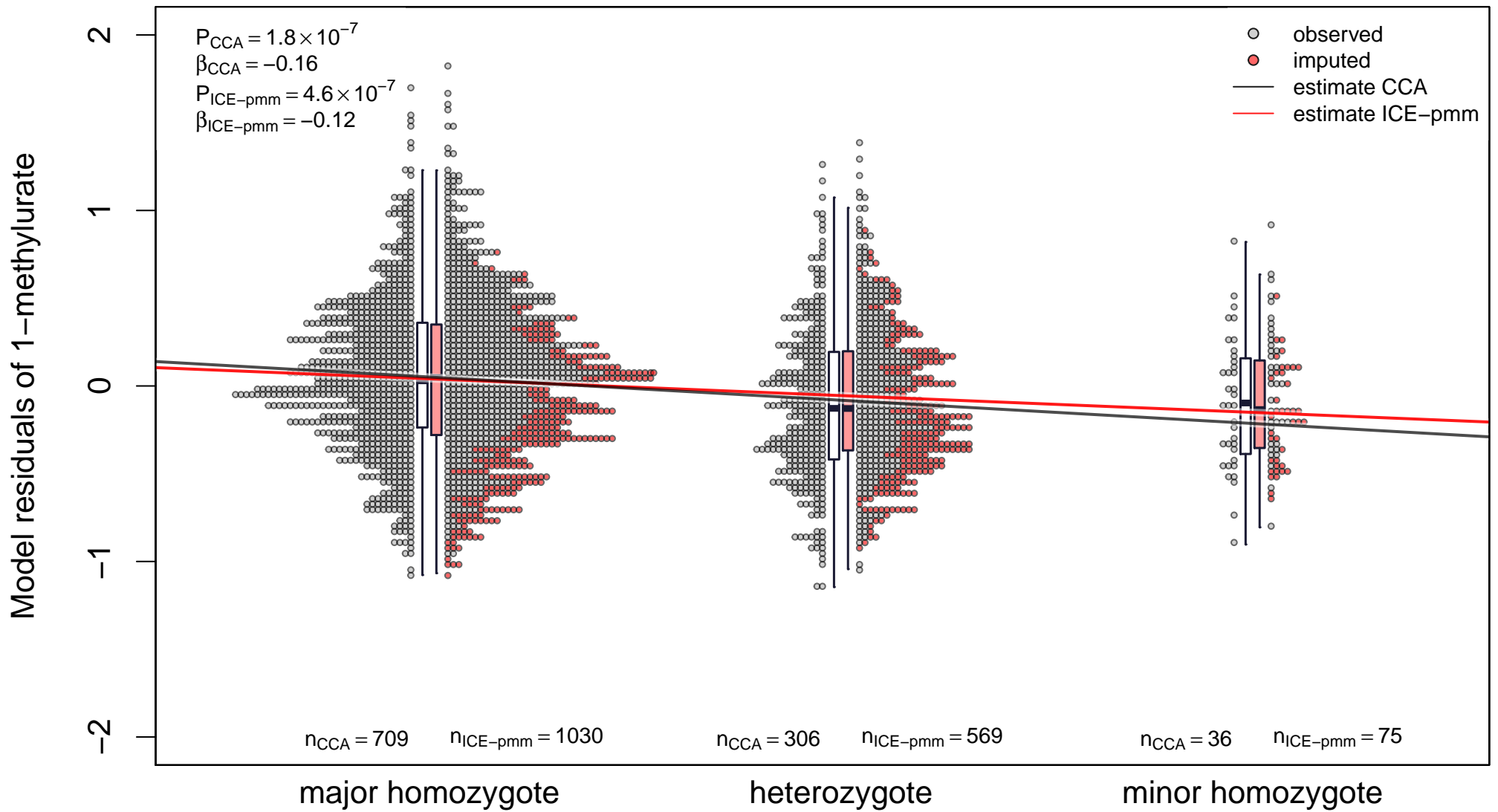


# ICE-adjR



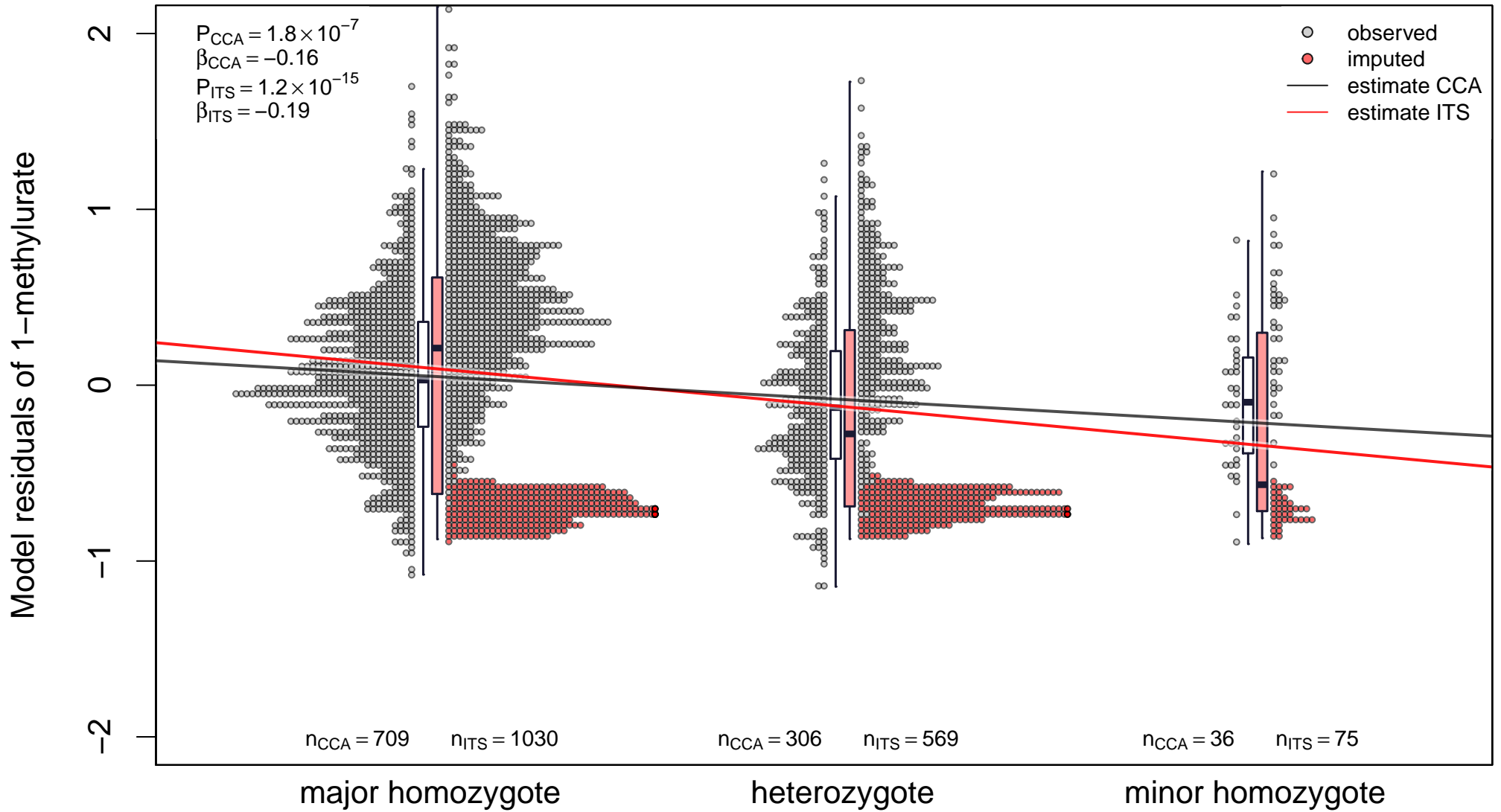
Genotype of SNP rs1495741 (NAT2)

# ICE-pmm



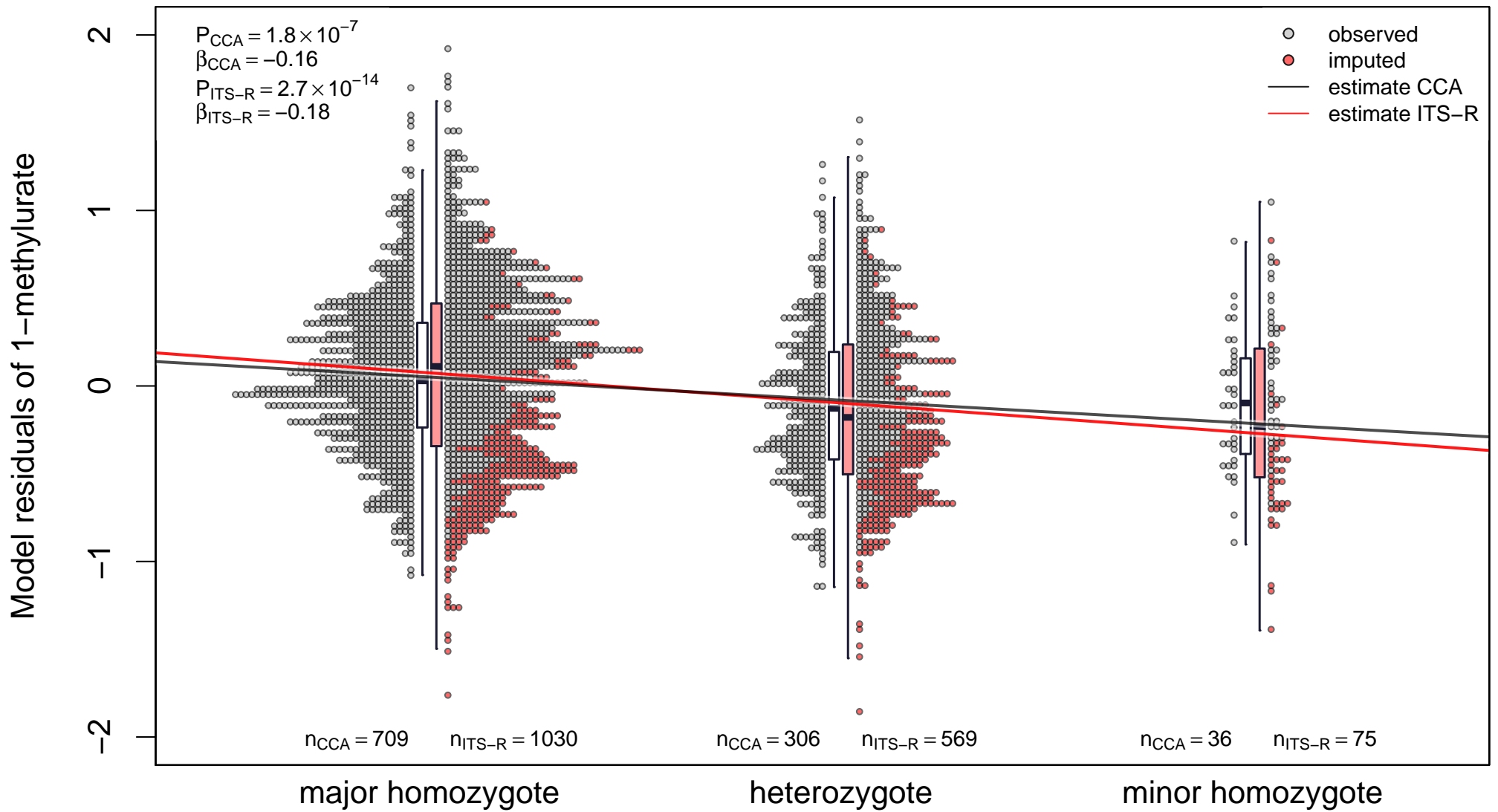
Genotype of SNP rs1495741 (NAT2)

# ITS



Genotype of SNP rs1495741 (NAT2)

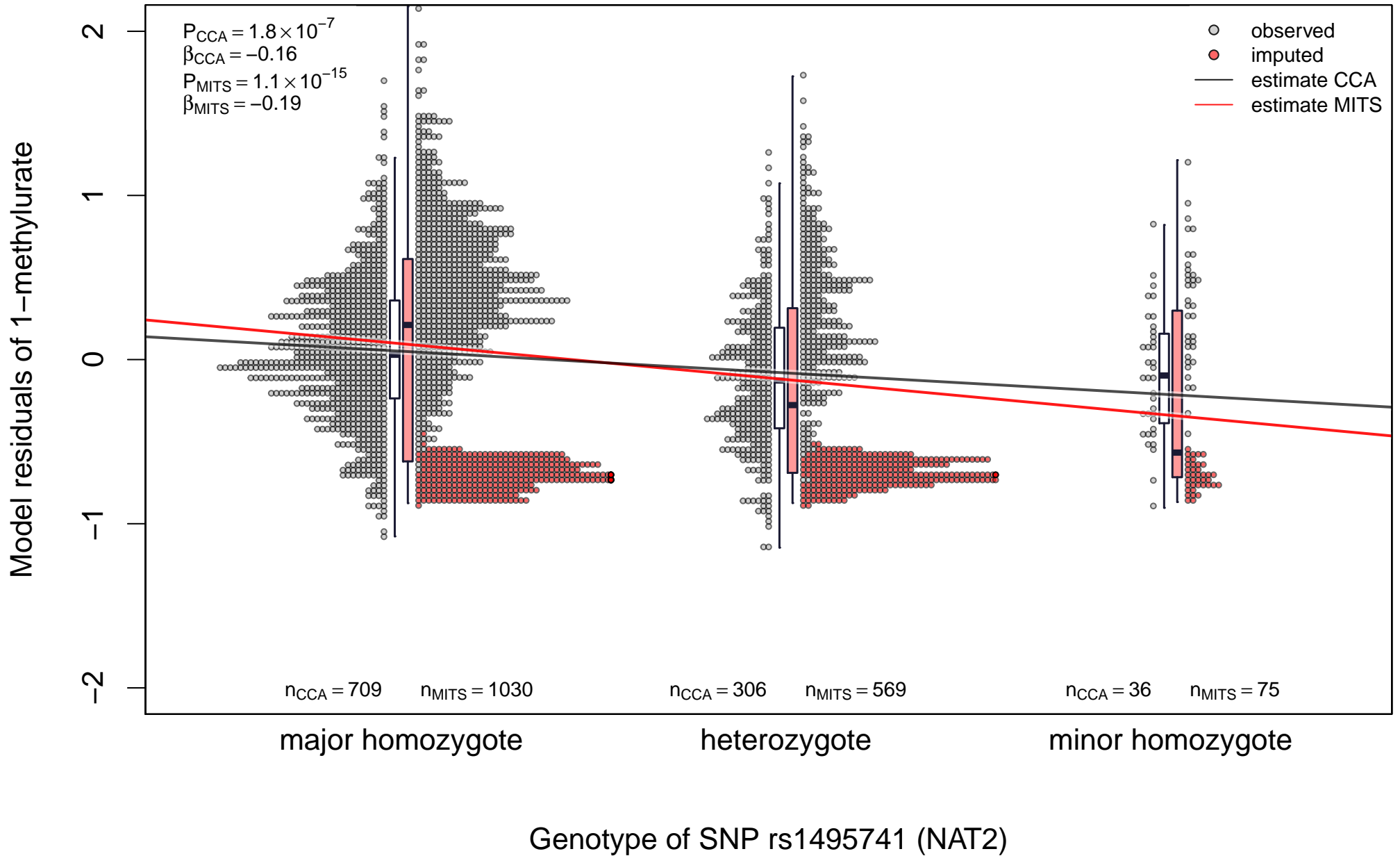
# ITS-R



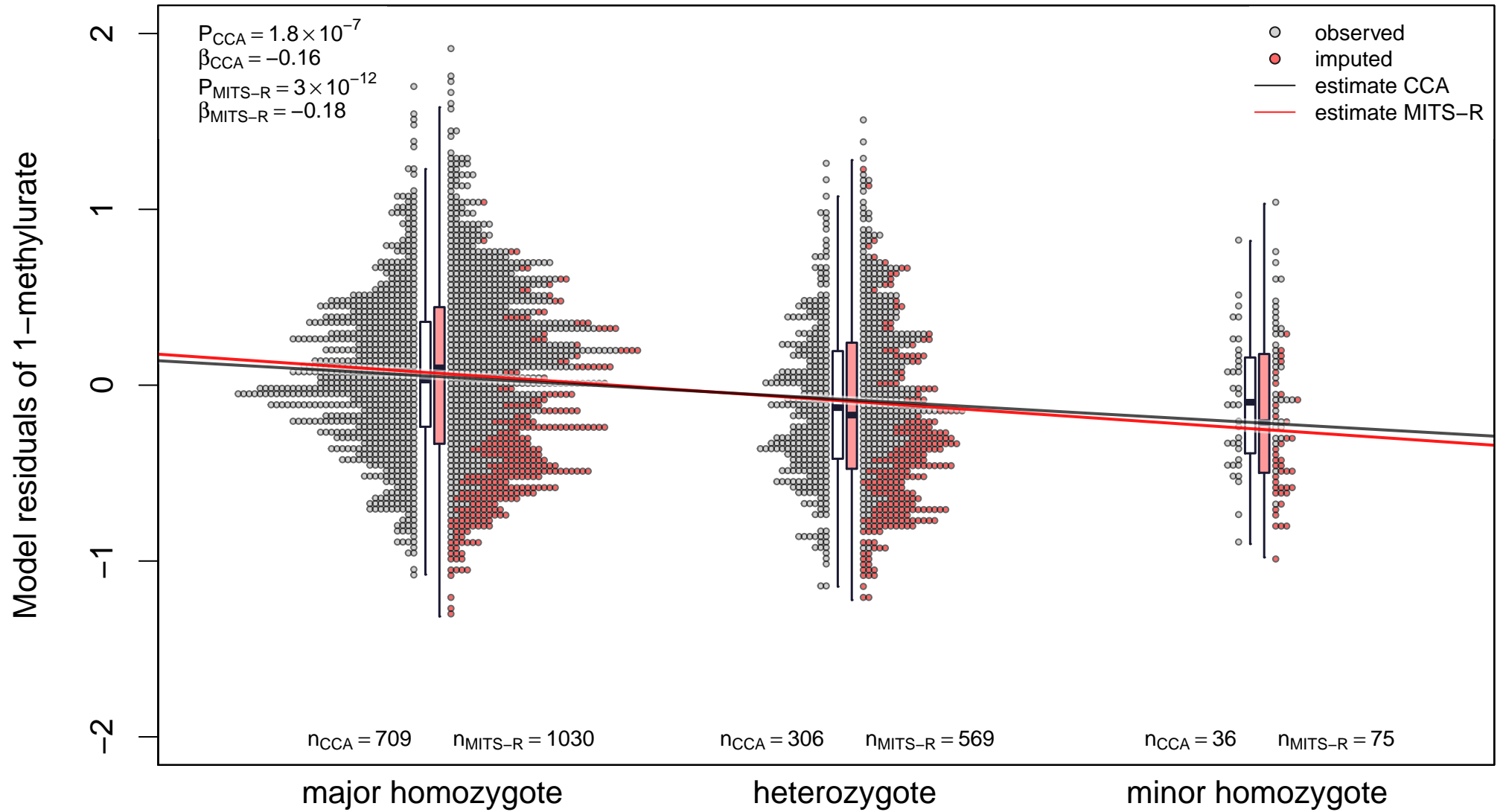
Genotype of SNP rs1495741 (NAT2)



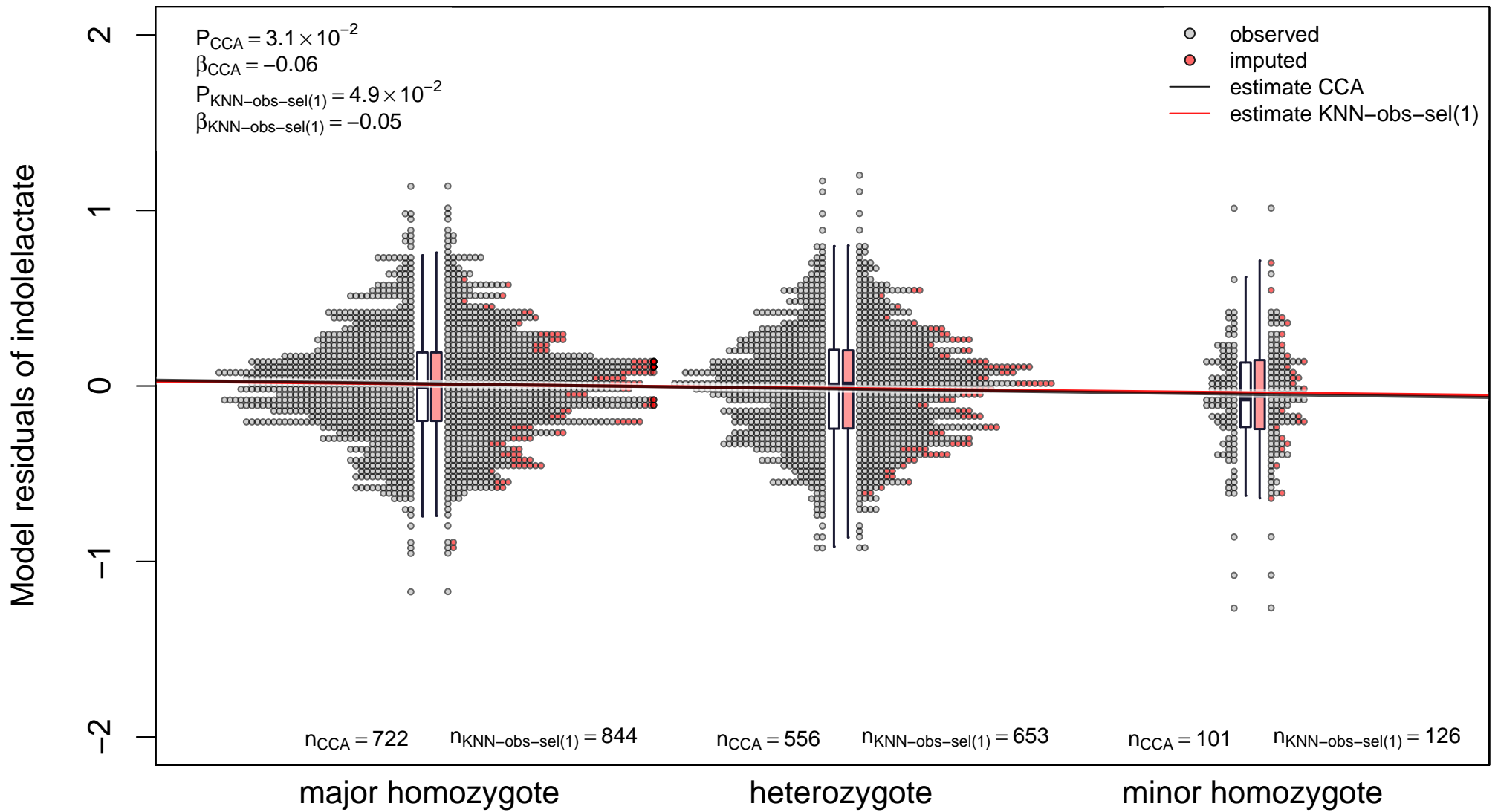
# MITS



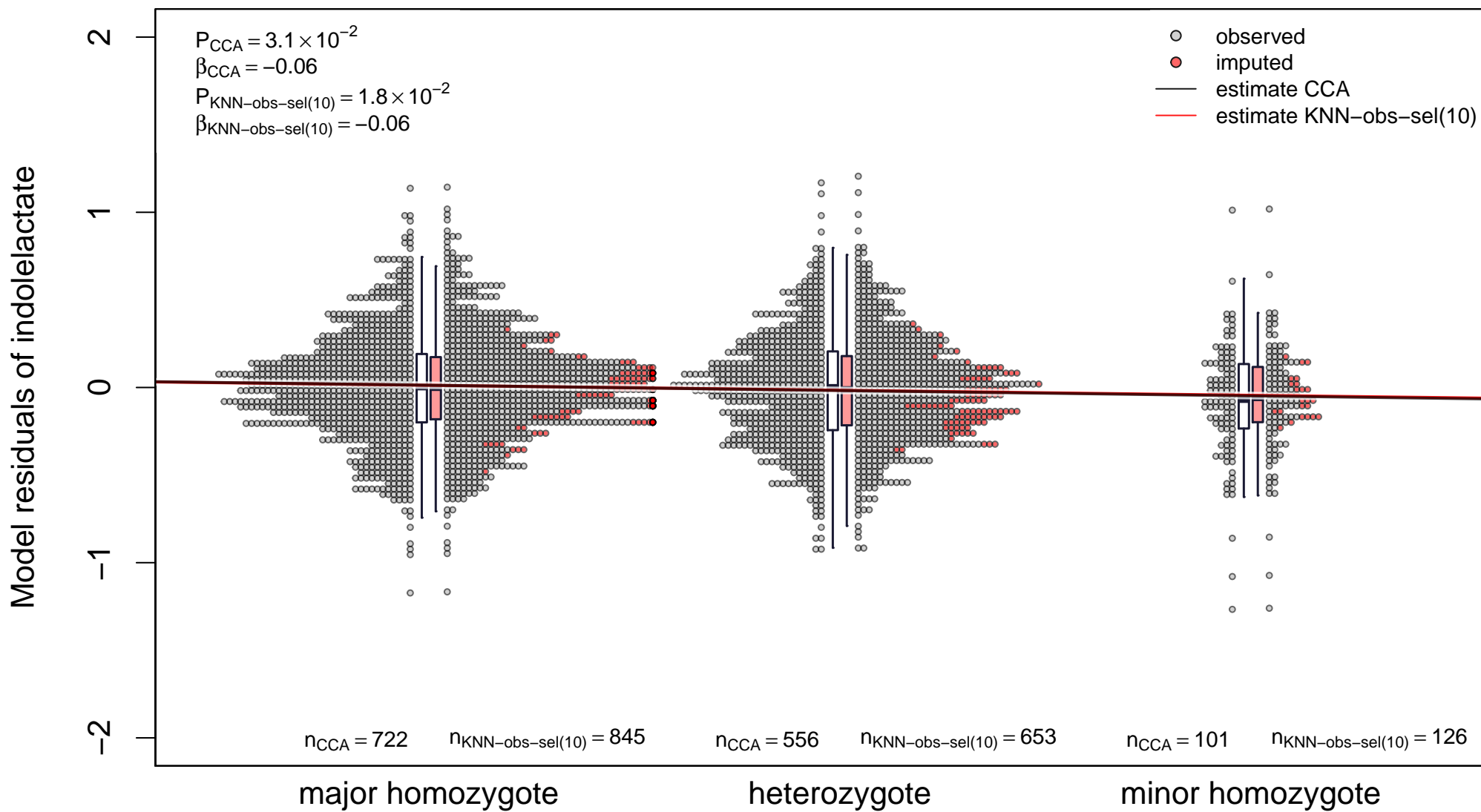
# MIT-S-R



# KNN-obs-sel(1)

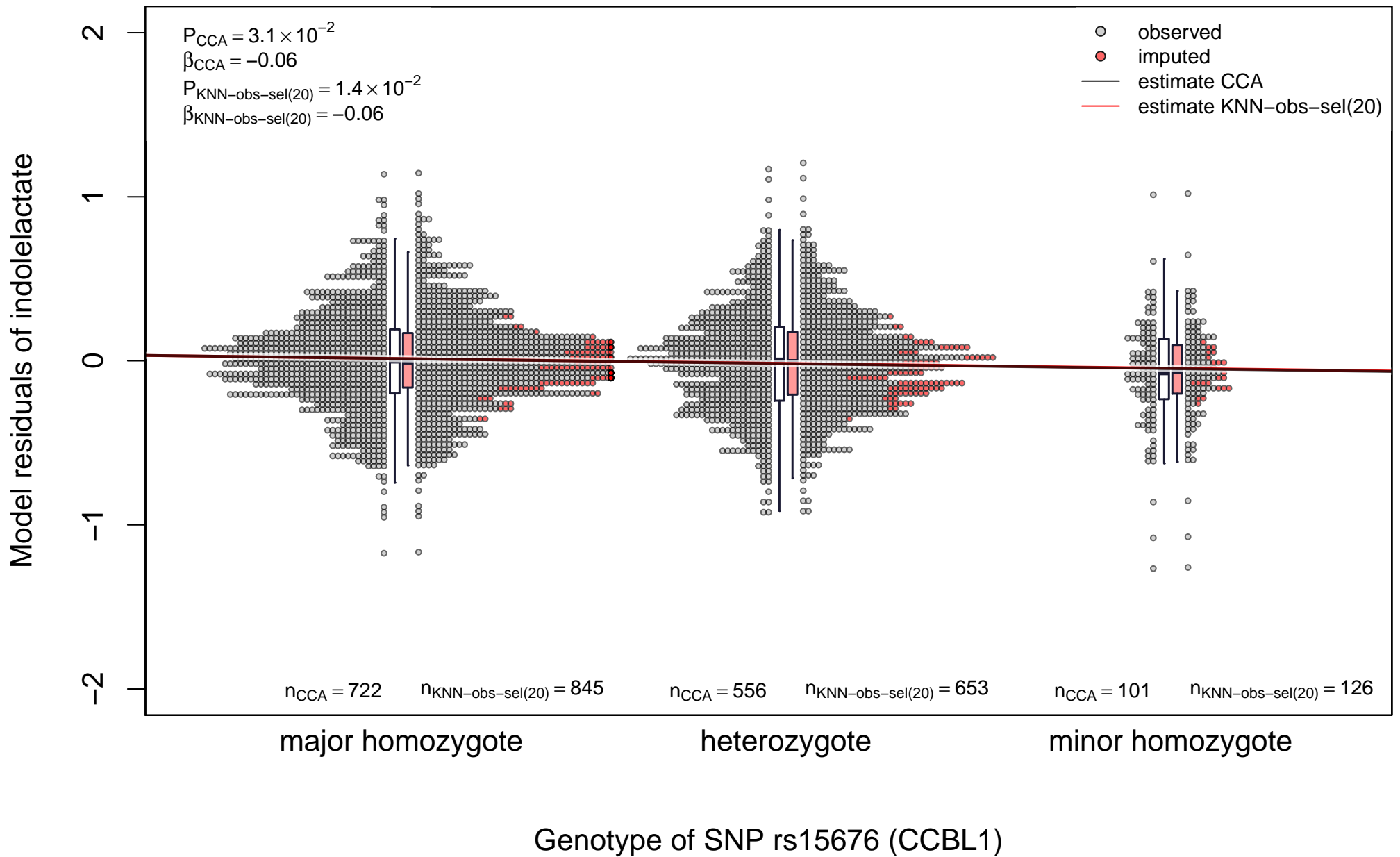


# KNN-obs-sel(10)

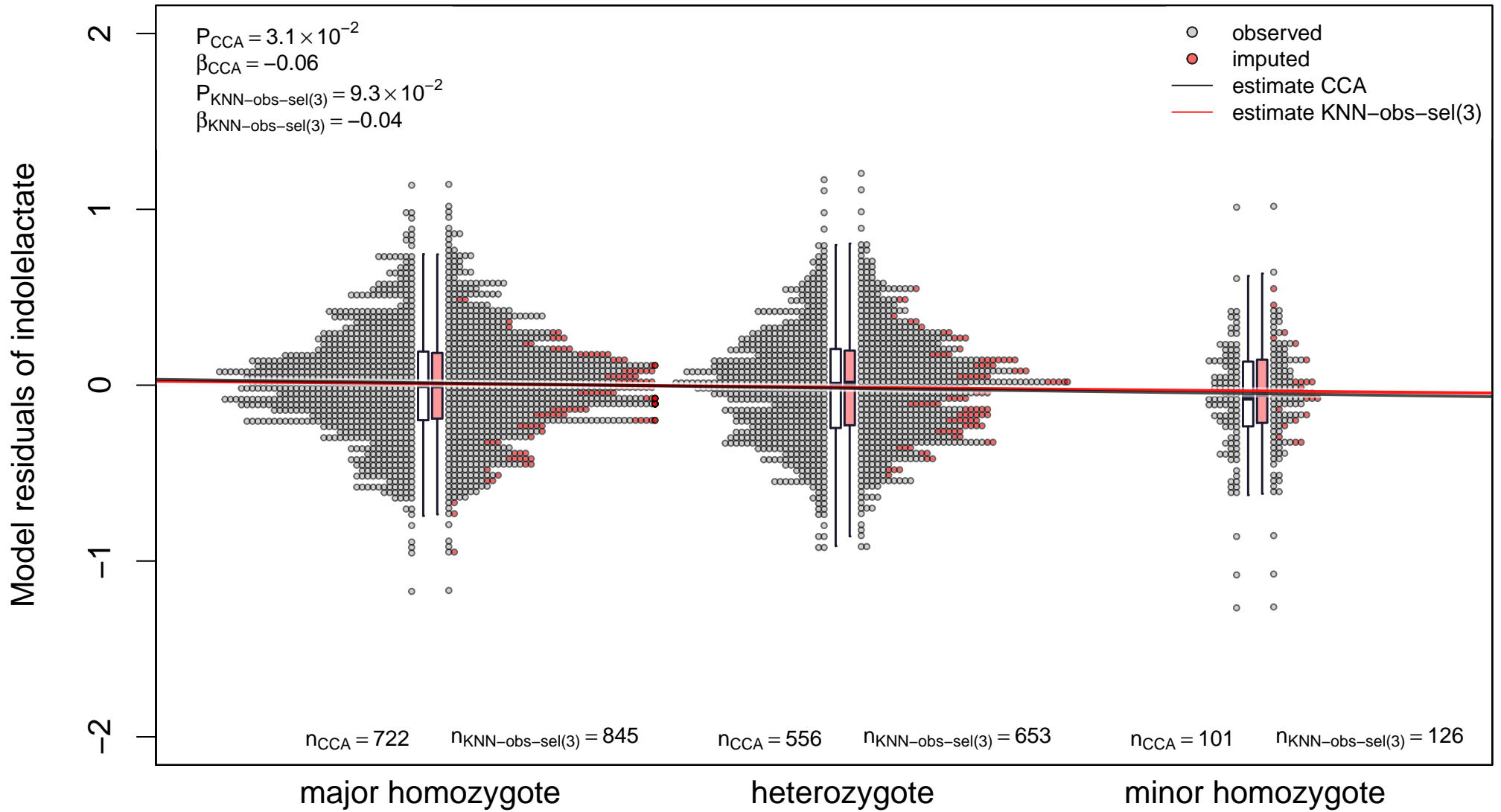


Genotype of SNP rs15676 (CCBL1)

# KNN-obs-sel(20)

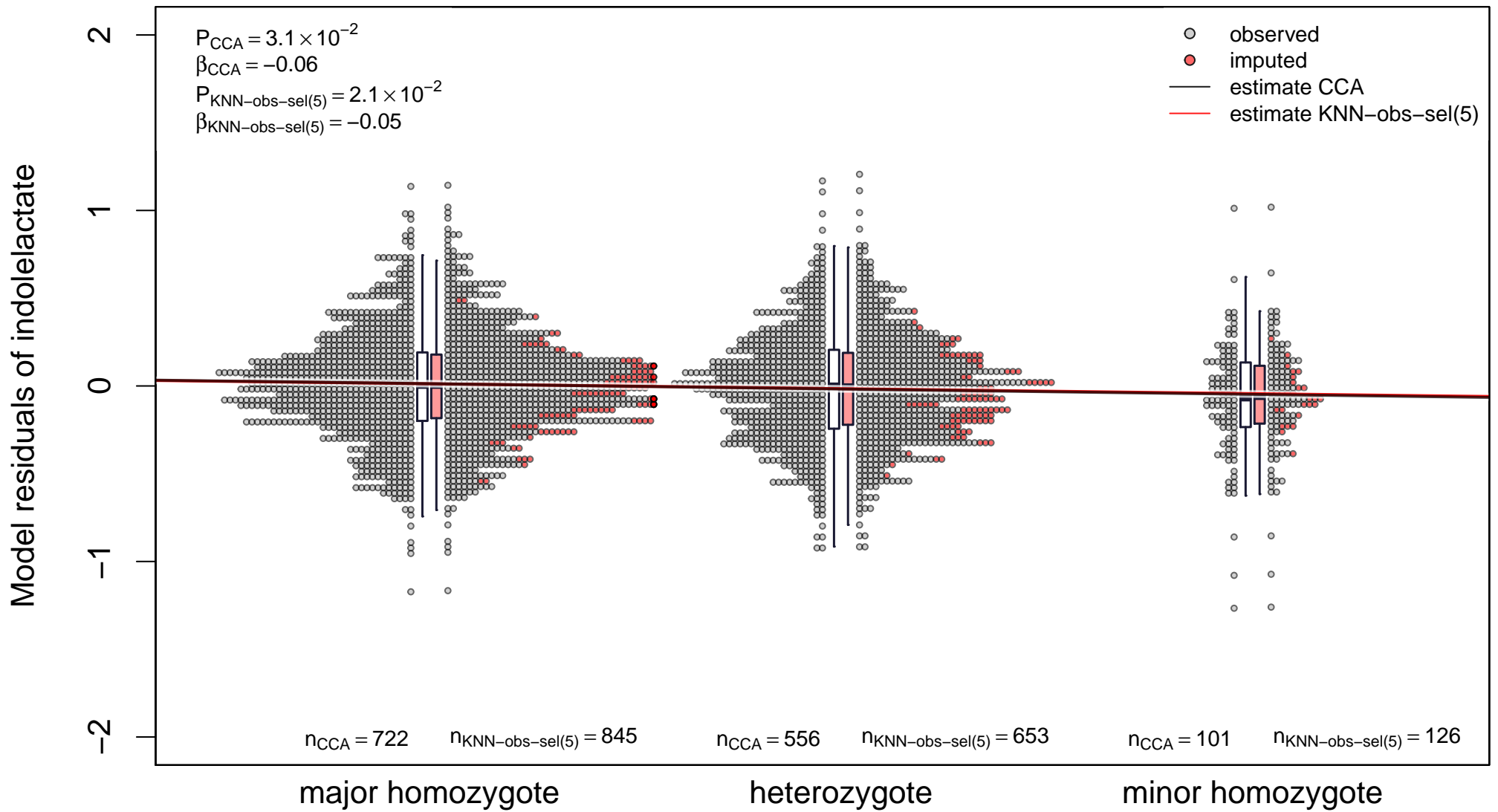


# KNN-obs-sel(3)



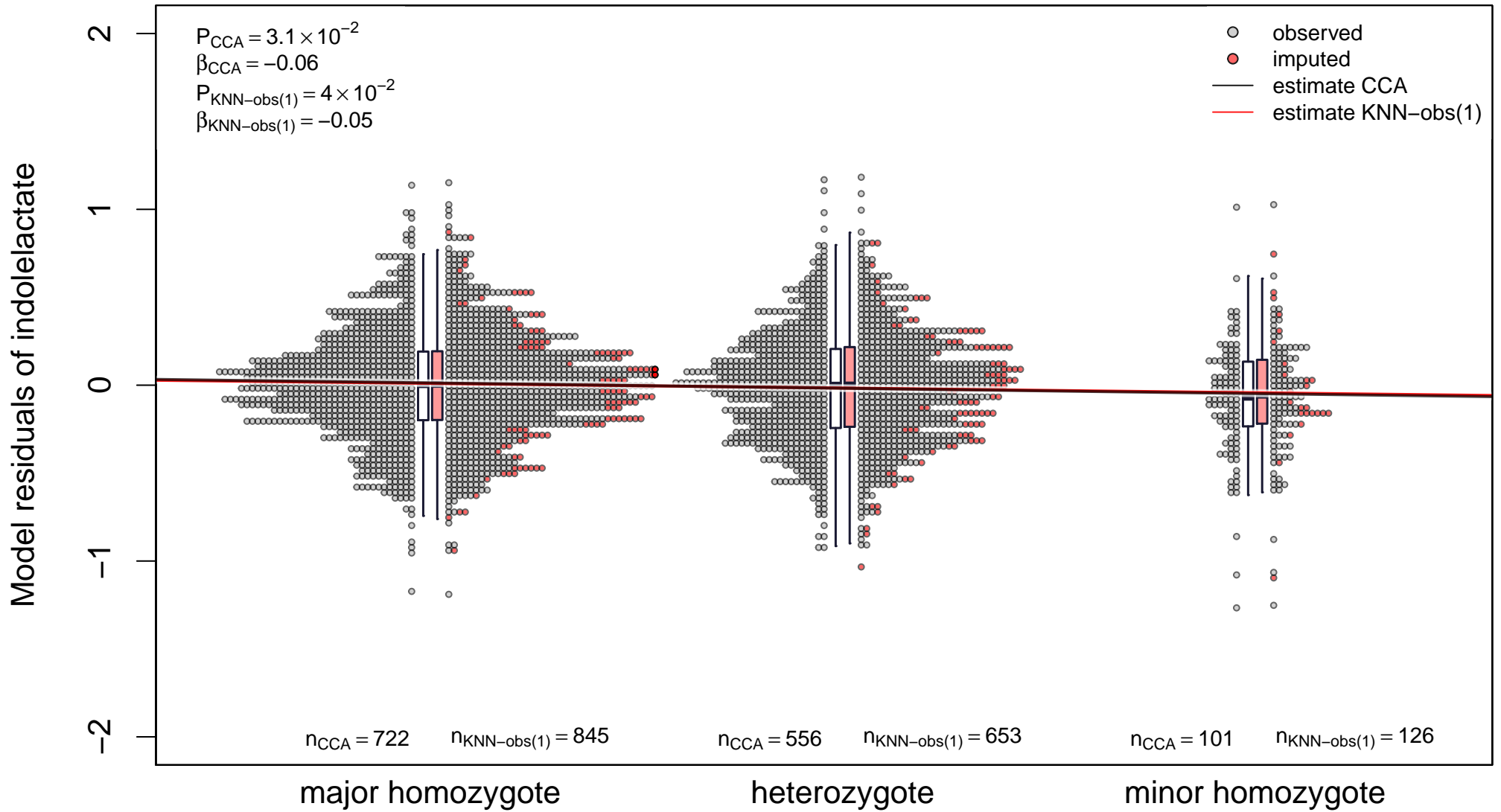
Genotype of SNP rs15676 (CCBL1)

# KNN-obs-sel(5)



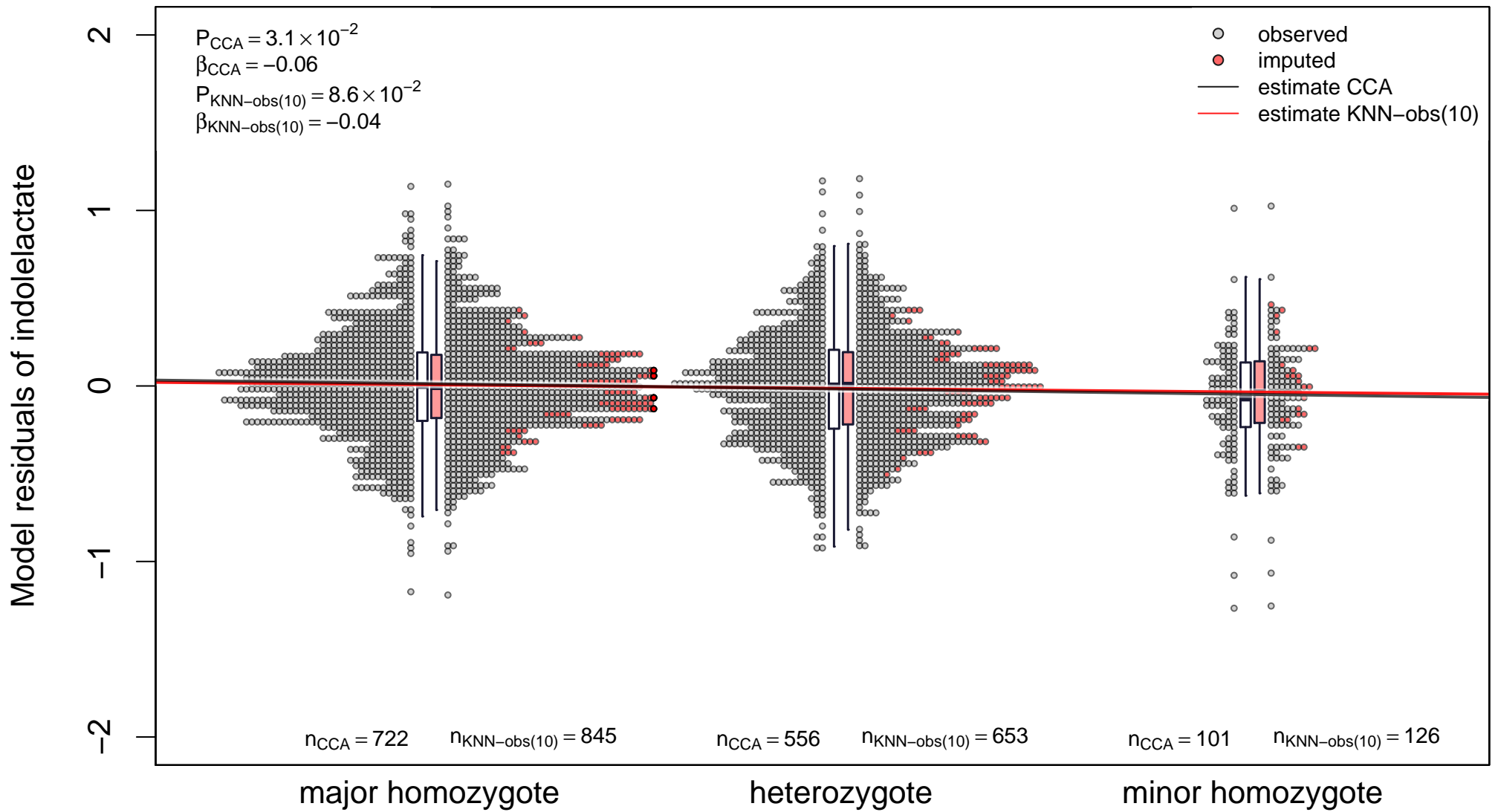
Genotype of SNP rs15676 (CCBL1)

# KNN-obs(1)



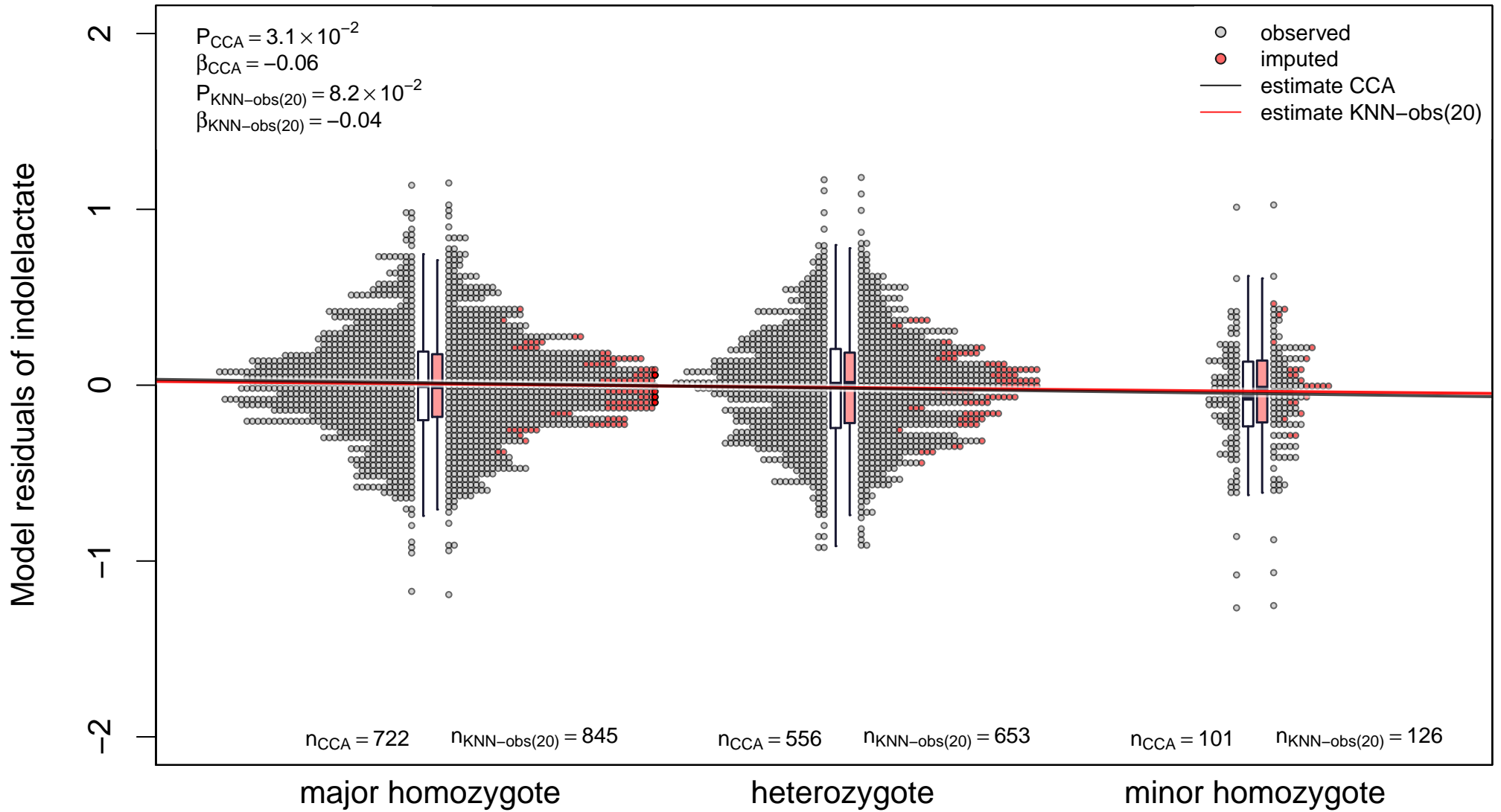


# KNN-obs(10)



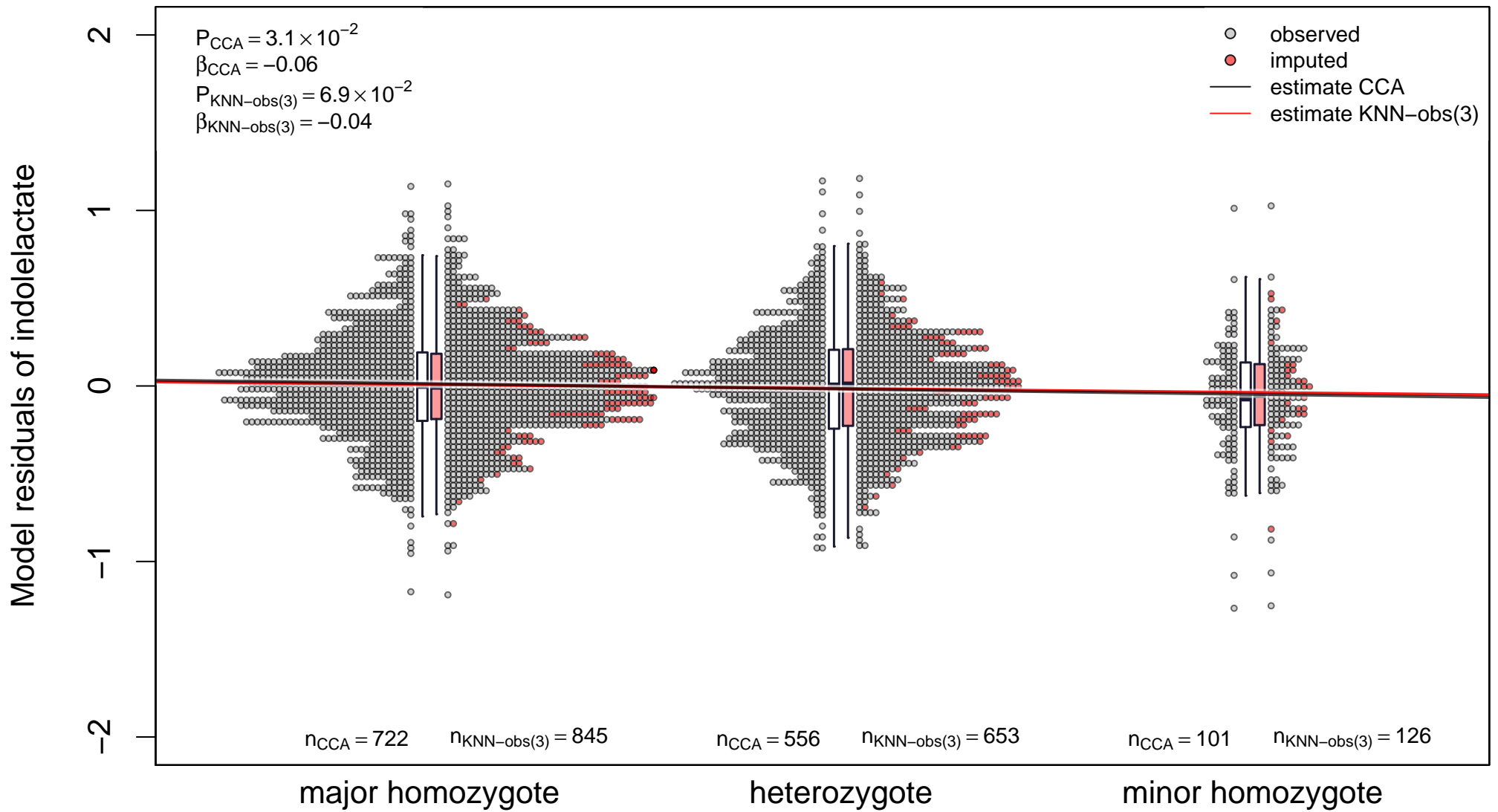
Genotype of SNP rs15676 (CCBL1)

# KNN-obs(20)



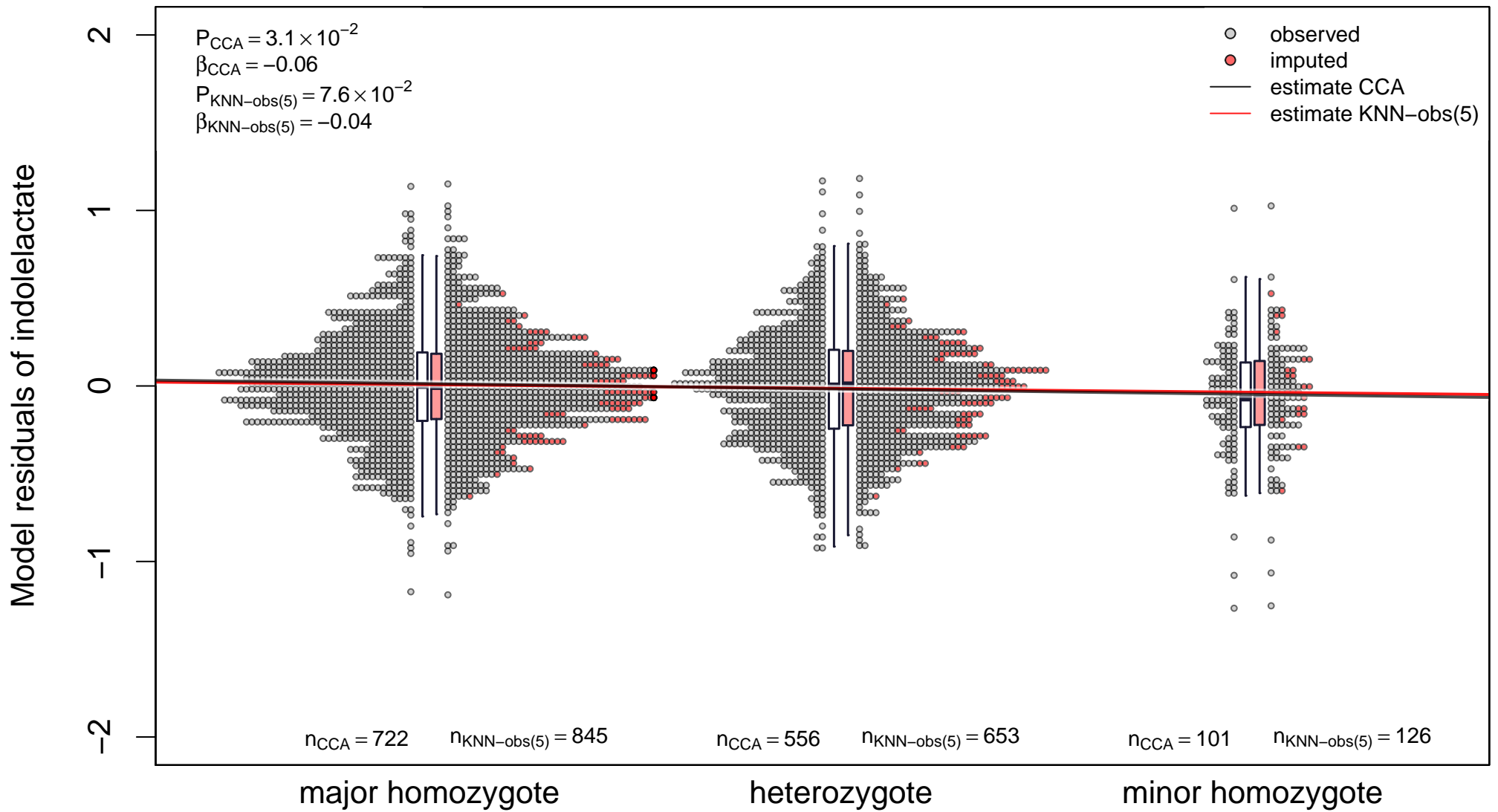
Genotype of SNP rs15676 (CCBL1)

# KNN-obs(3)



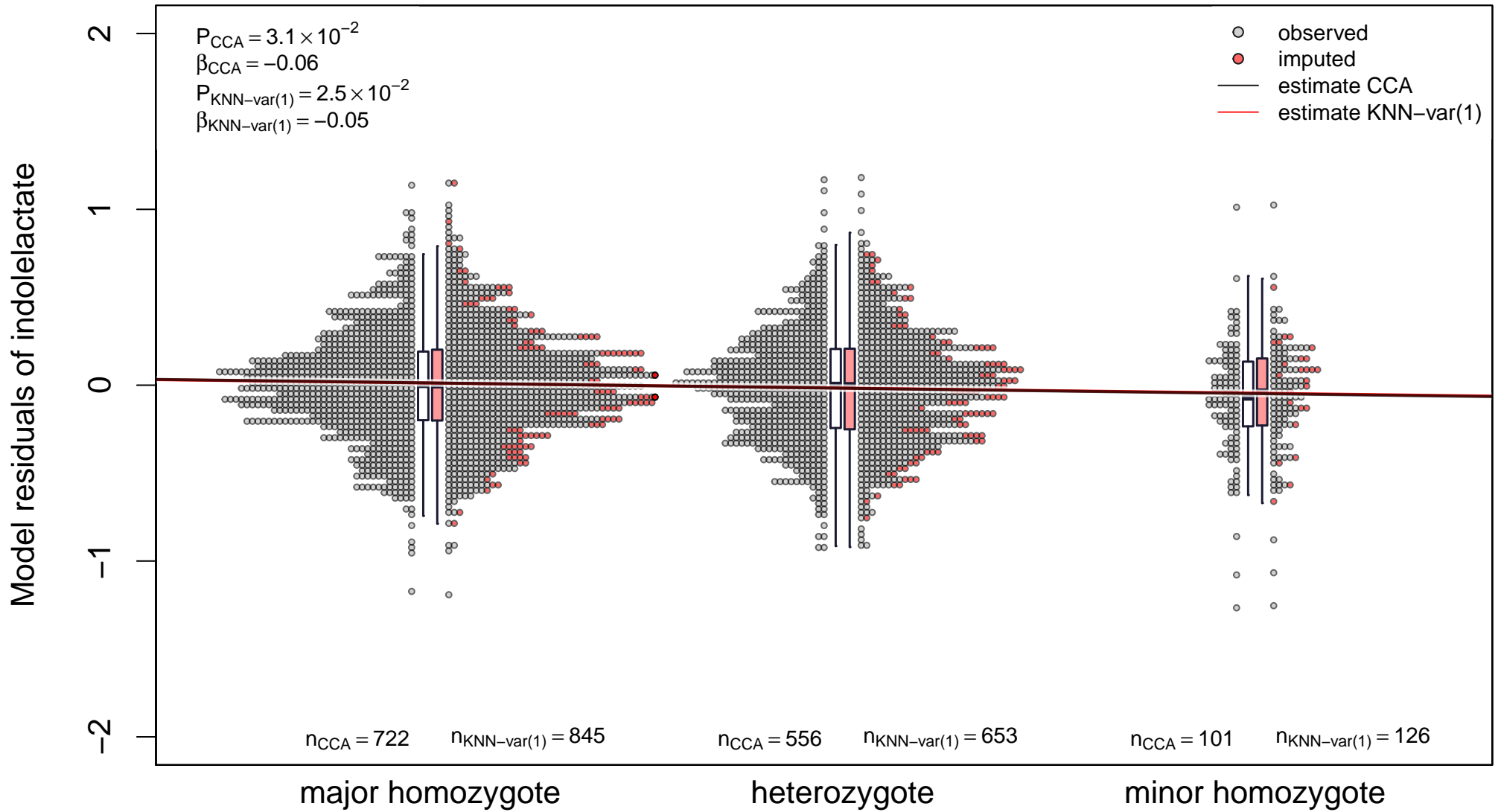
Genotype of SNP rs15676 (CCBL1)

# KNN-obs(5)

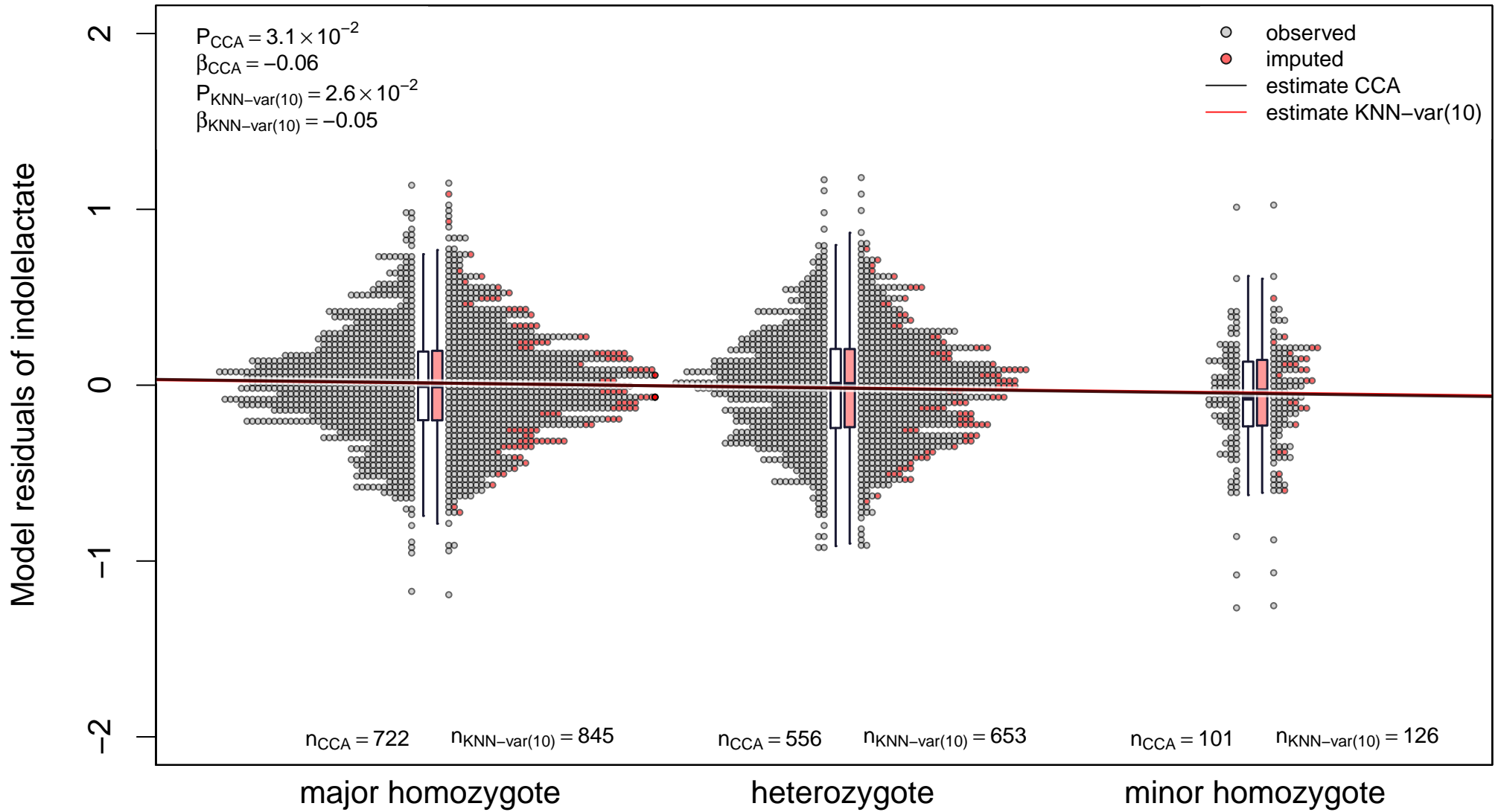


Genotype of SNP rs15676 (CCBL1)

# KNN-var(1)

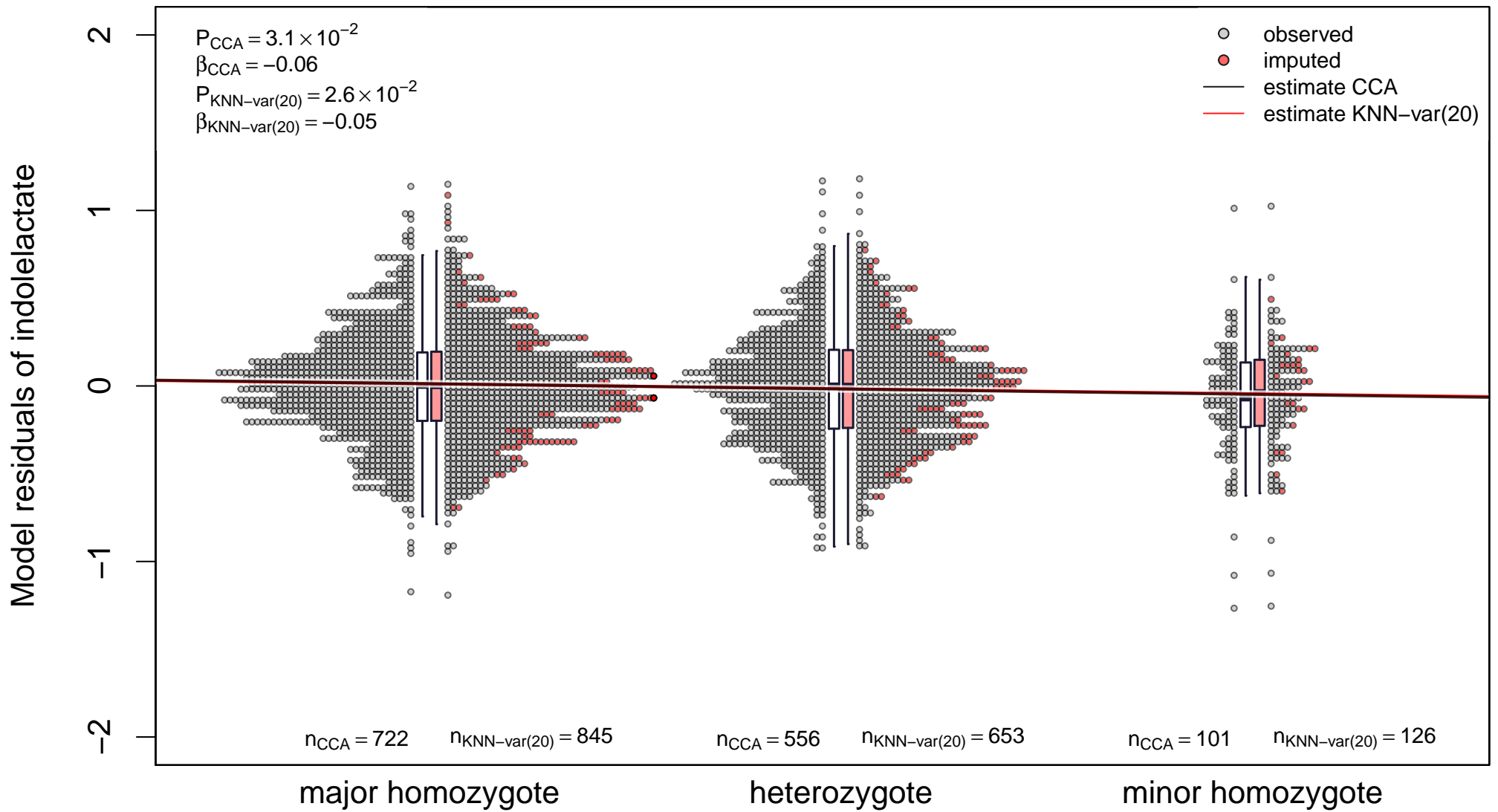


# KNN-var(10)



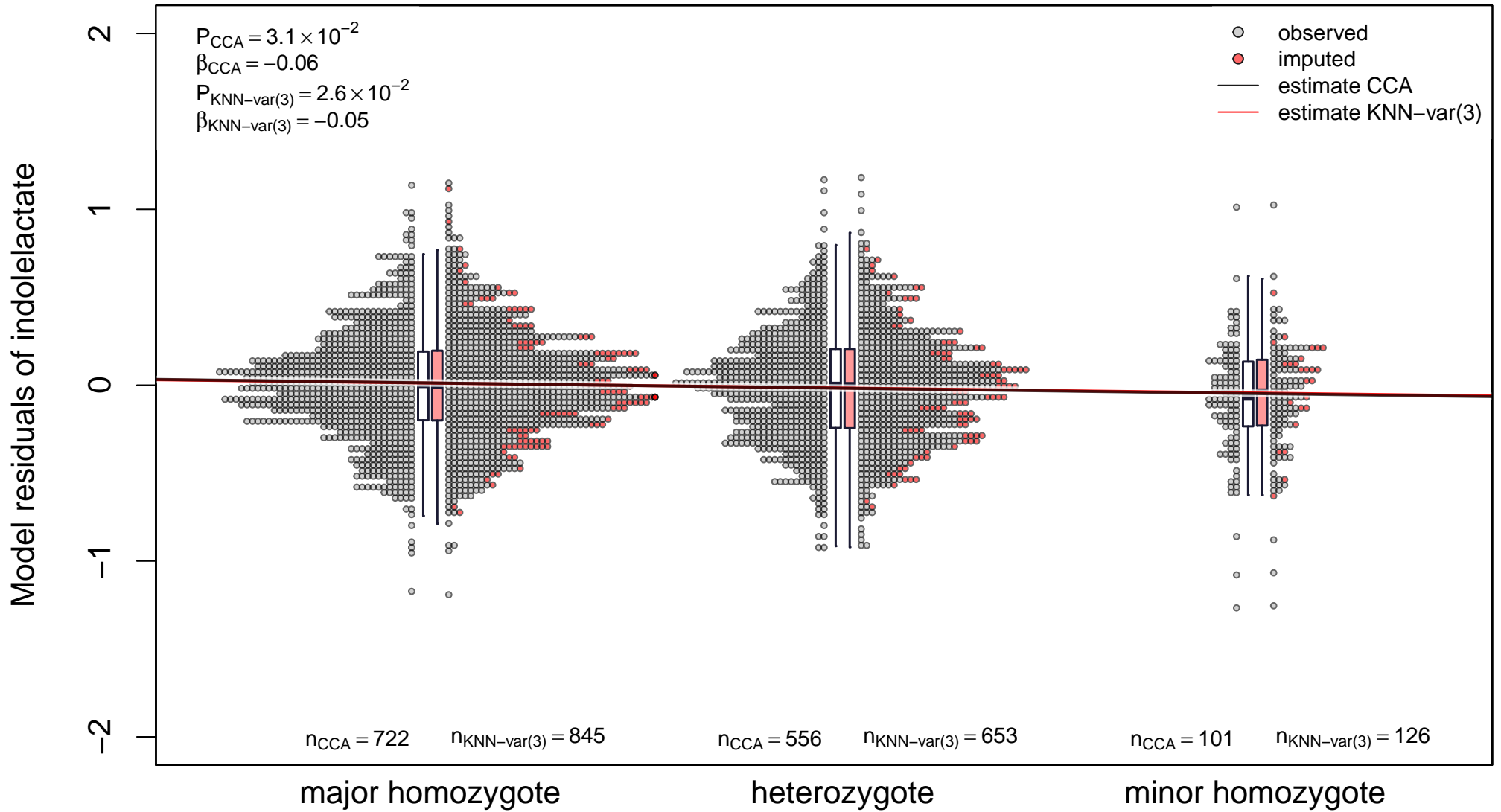
Genotype of SNP rs15676 (CCBL1)

# KNN-var(20)



Genotype of SNP rs15676 (CCBL1)

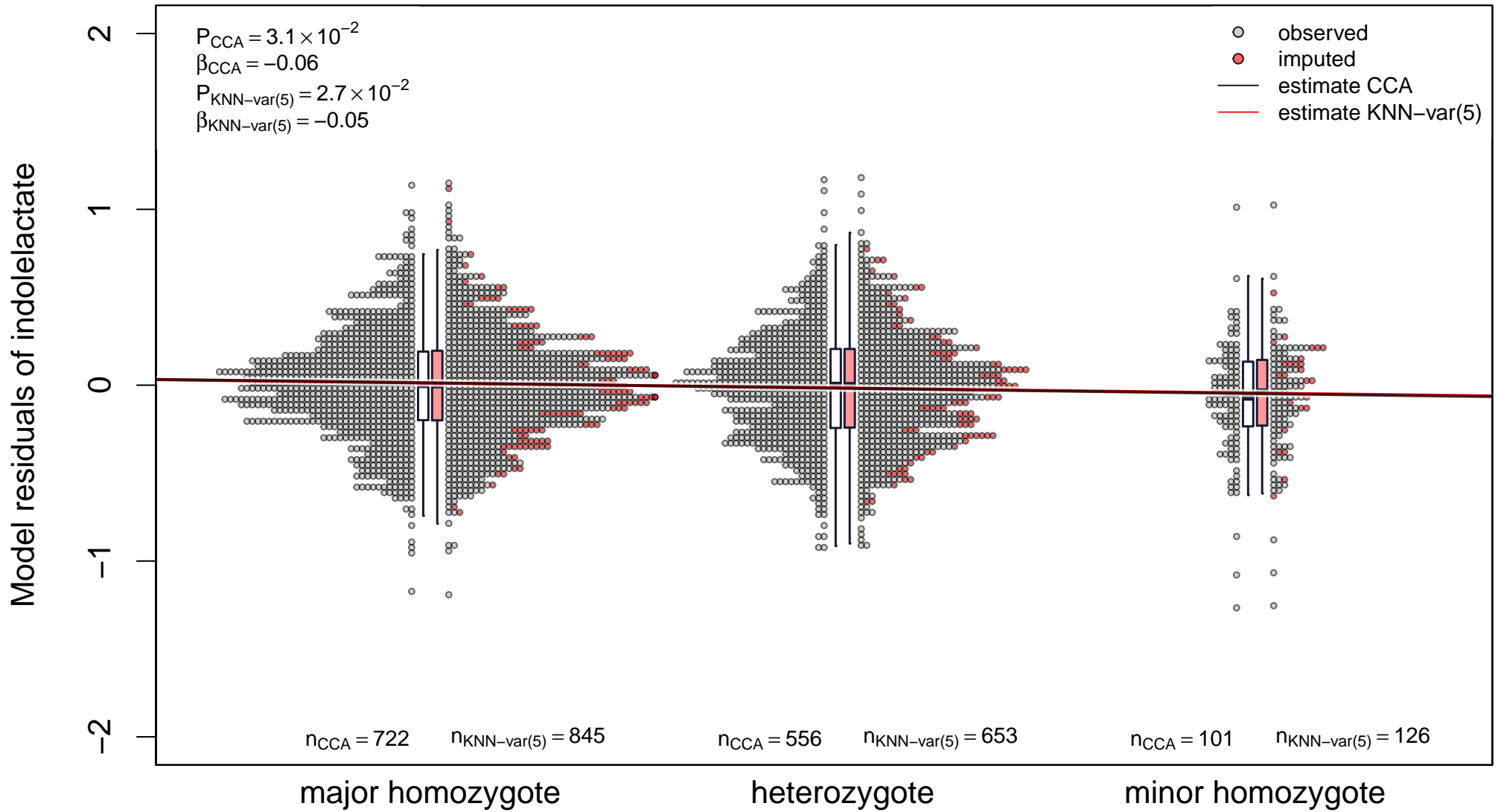
# KNN-var(3)



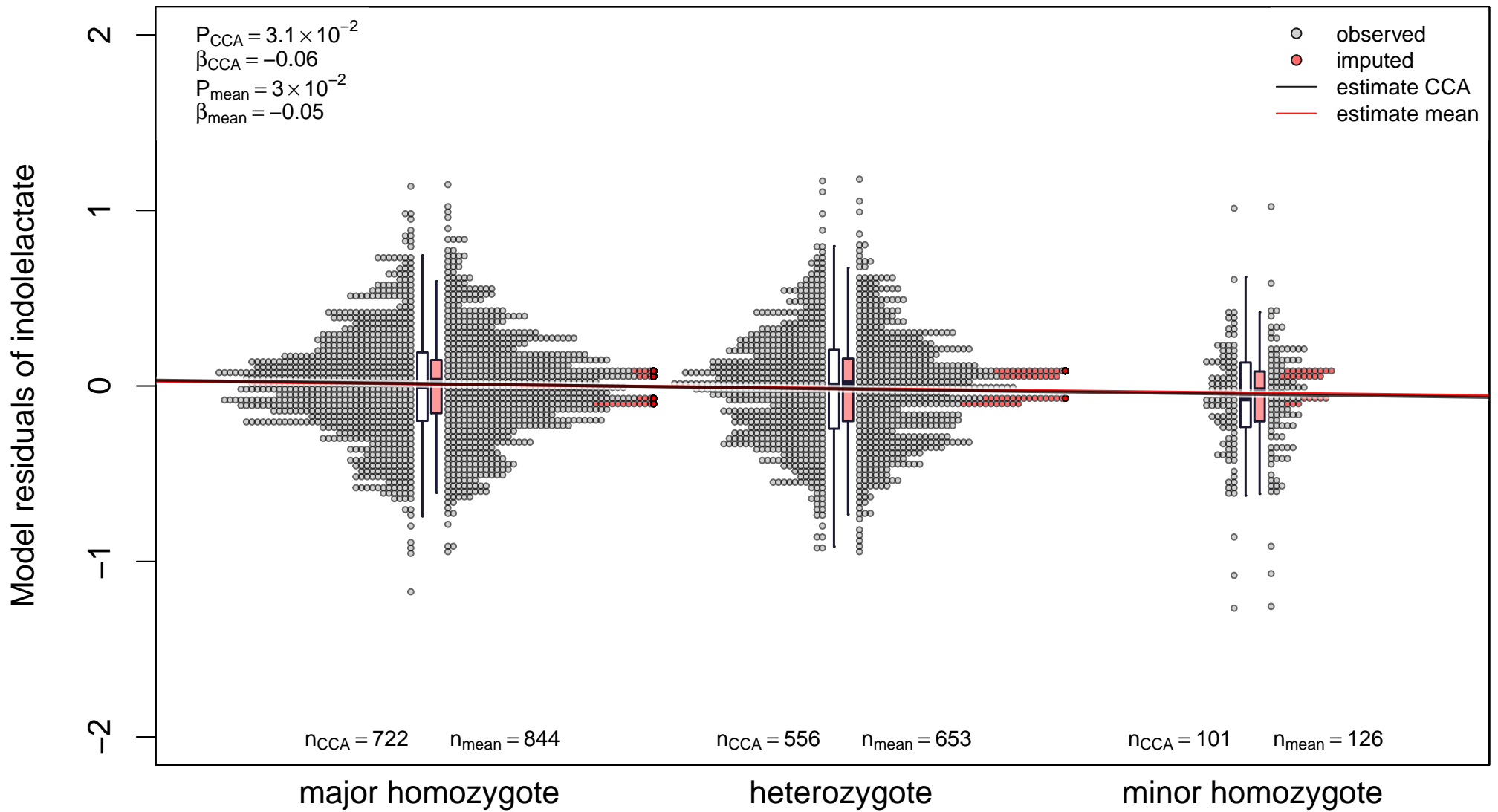
Genotype of SNP rs15676 (CCBL1)



# KNN-var(5)

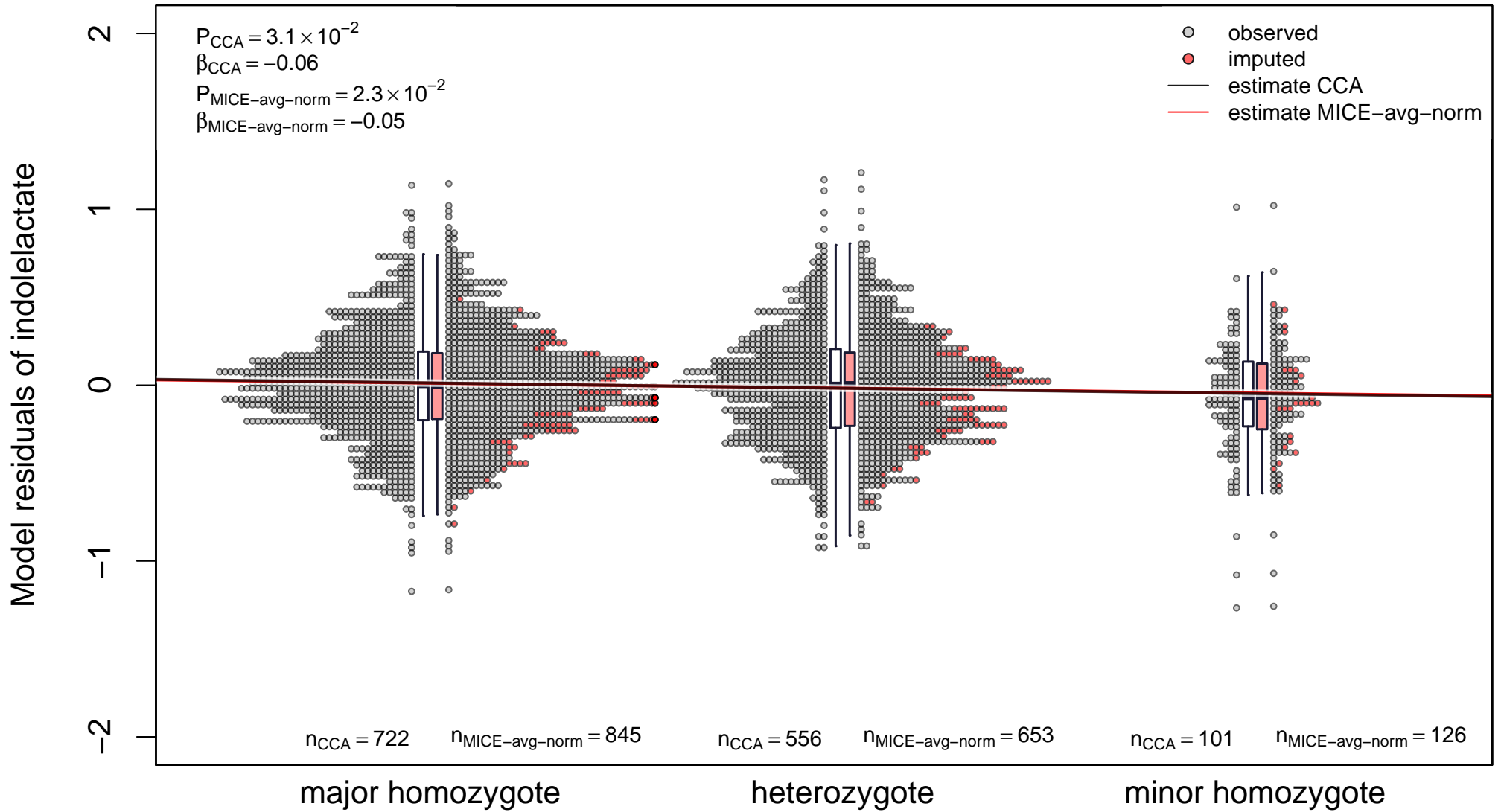


# mean



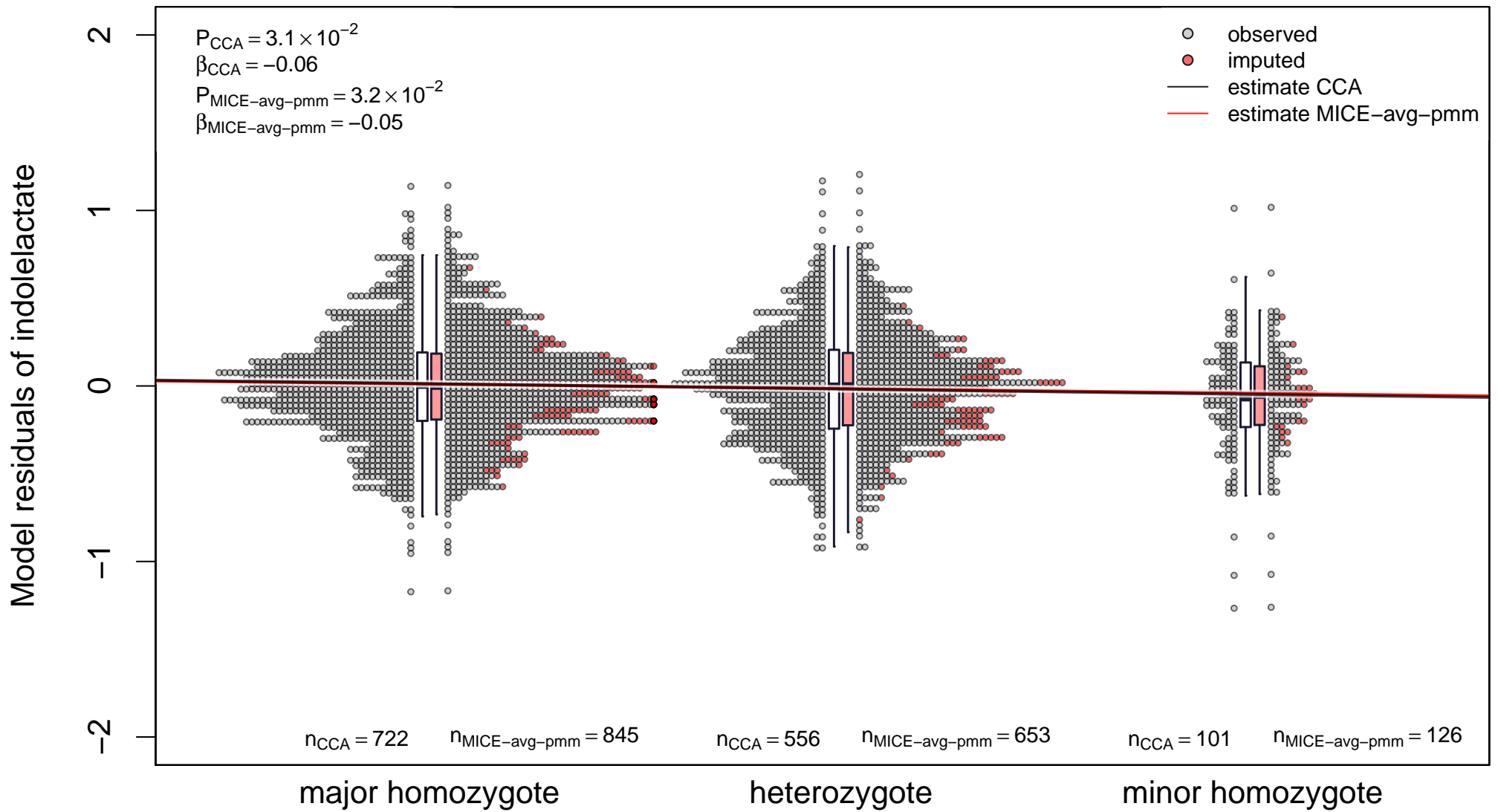
Genotype of SNP rs15676 (CCBL1)

# MICE-avg-norm

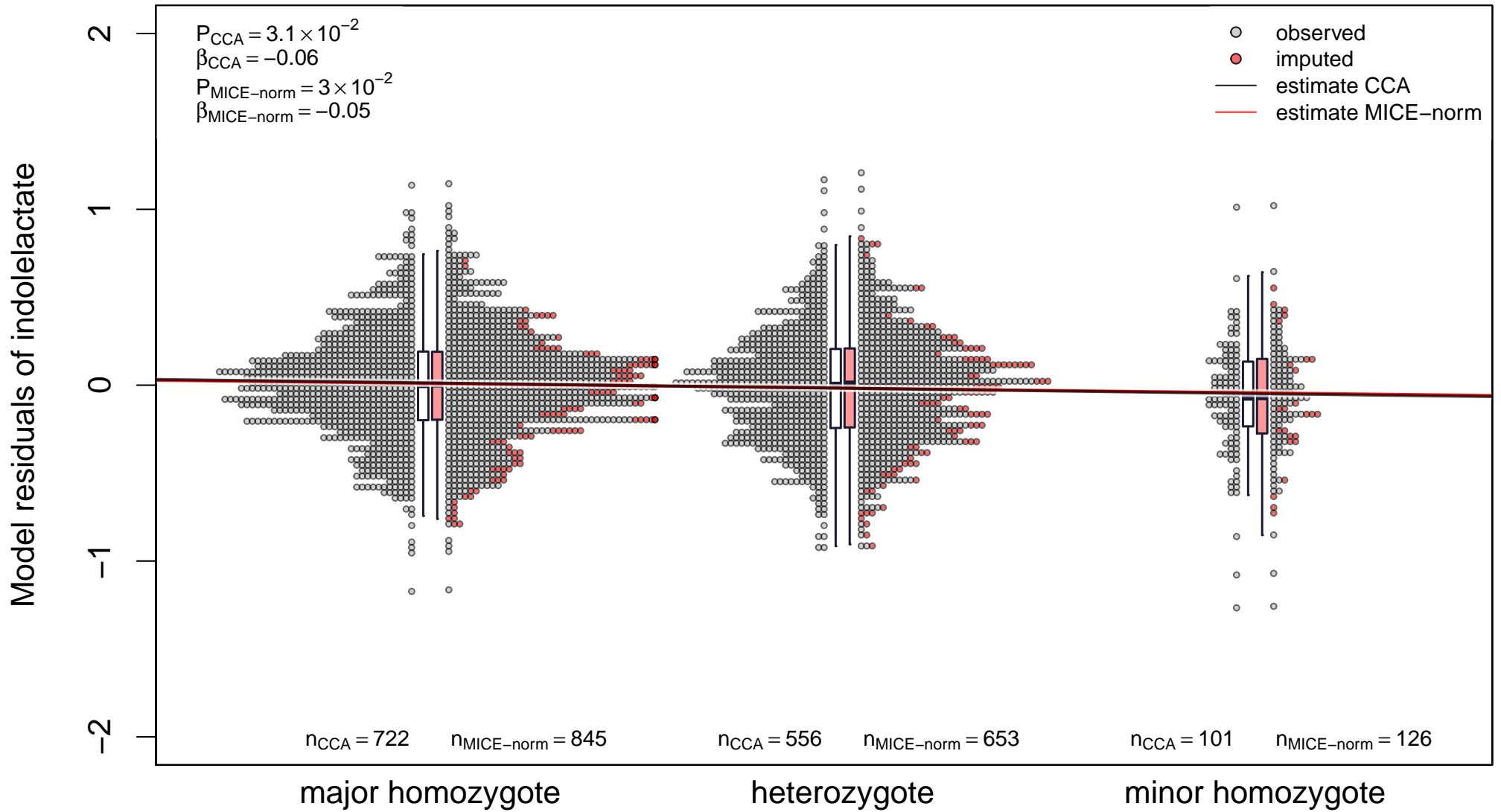


Genotype of SNP rs15676 (CCBL1)

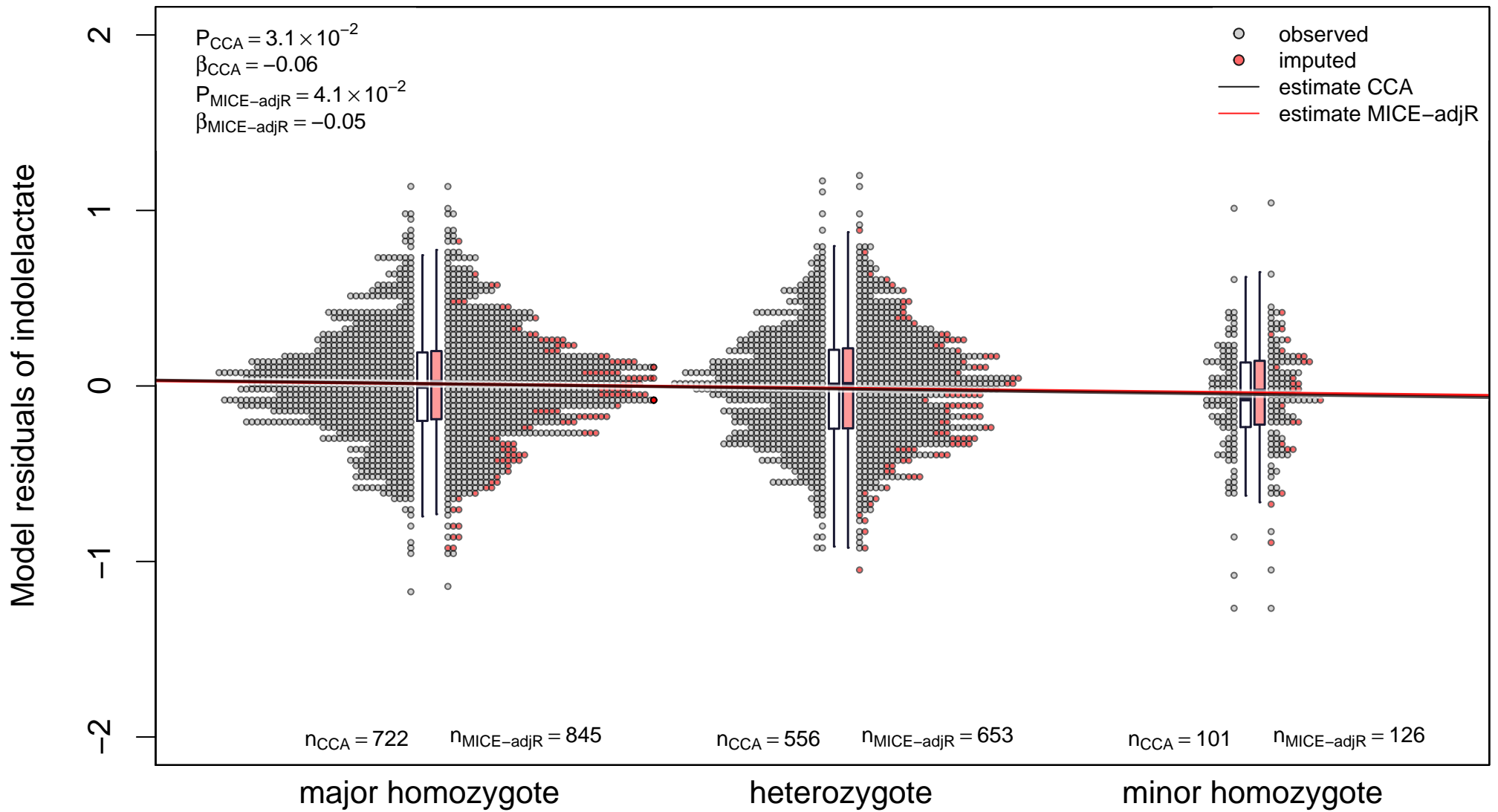
# MICE-avg-pmm



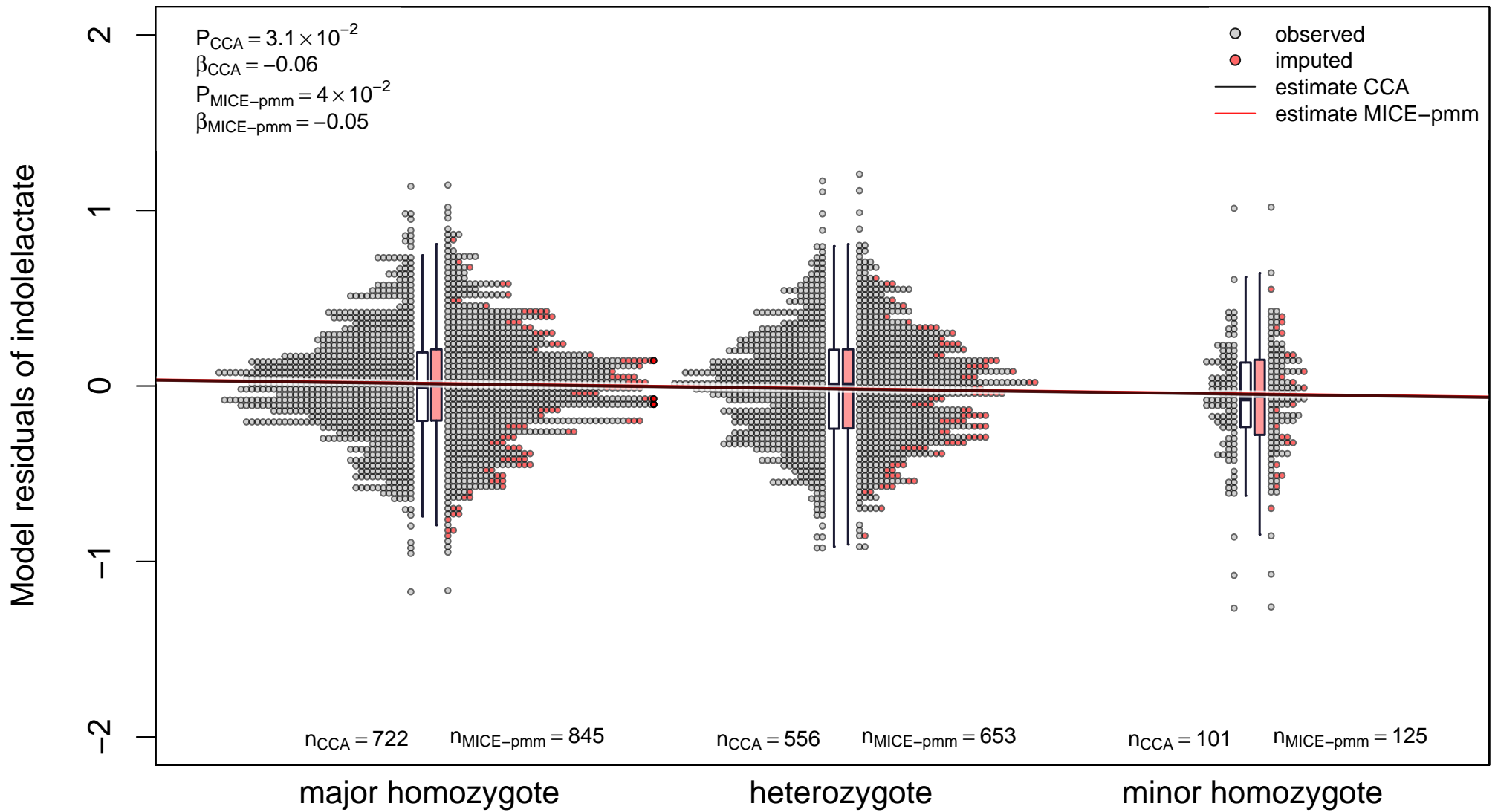
# MICE-norm



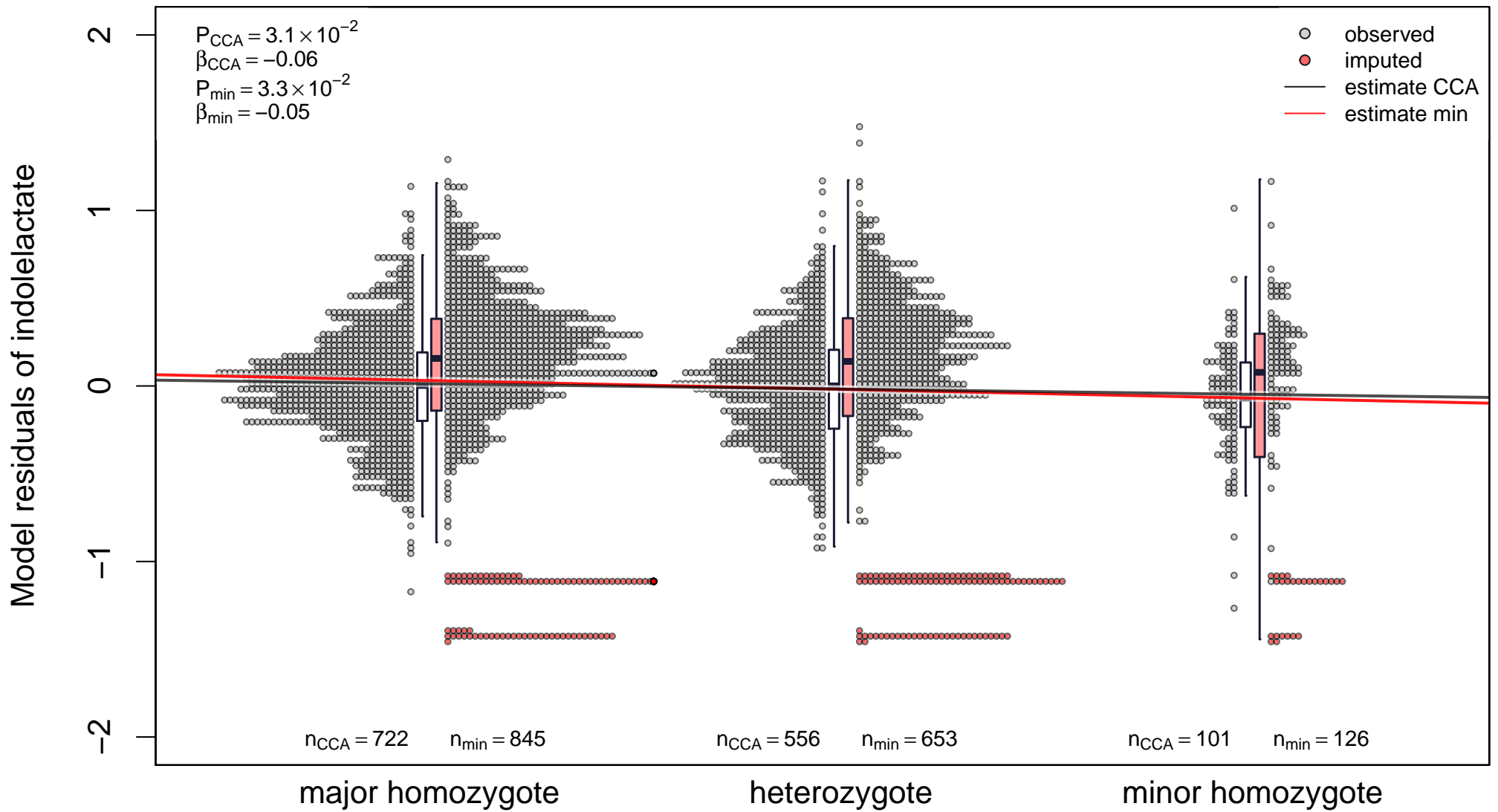
# MICE-adjR



# MICE-pmm

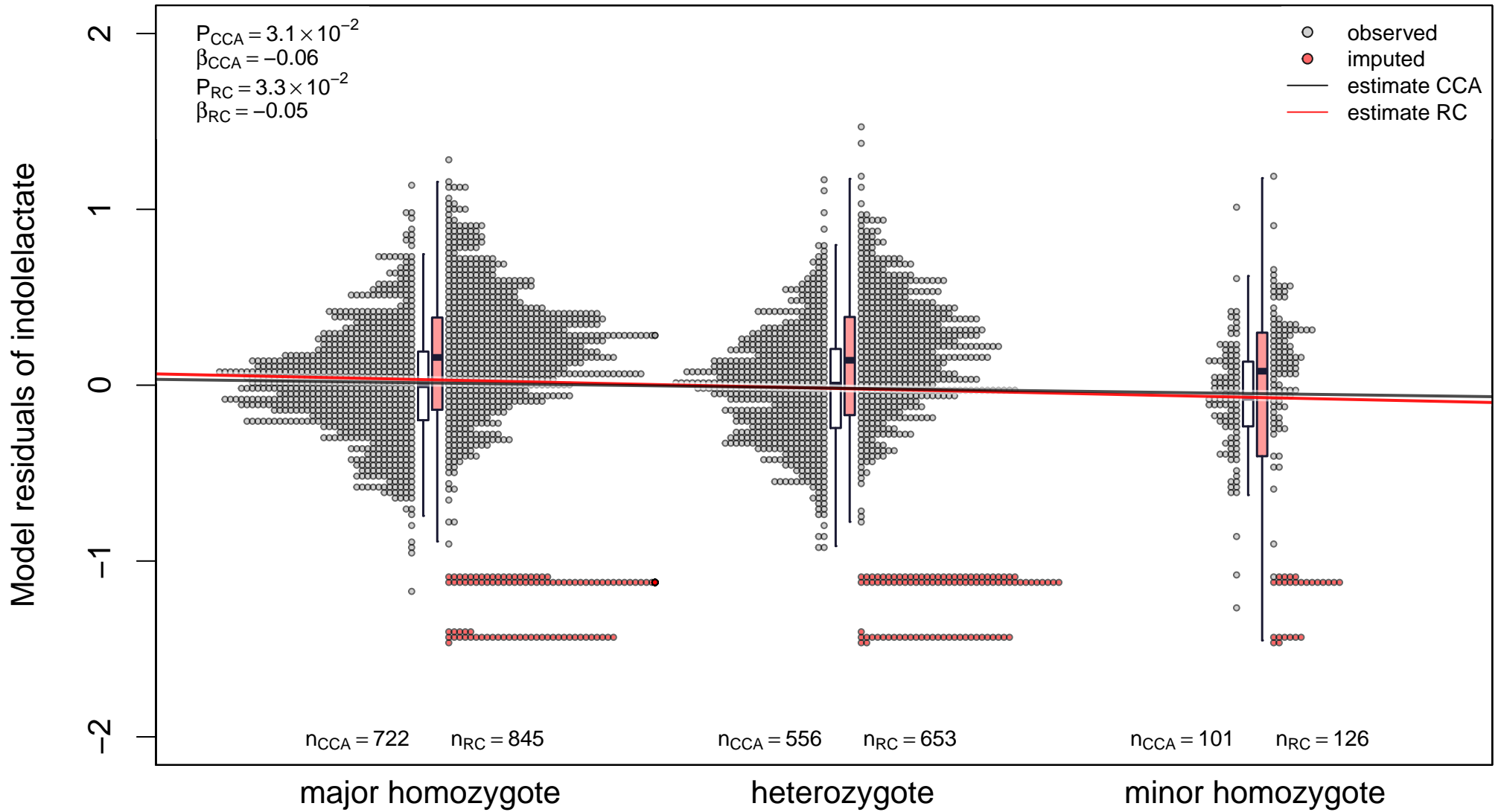


min



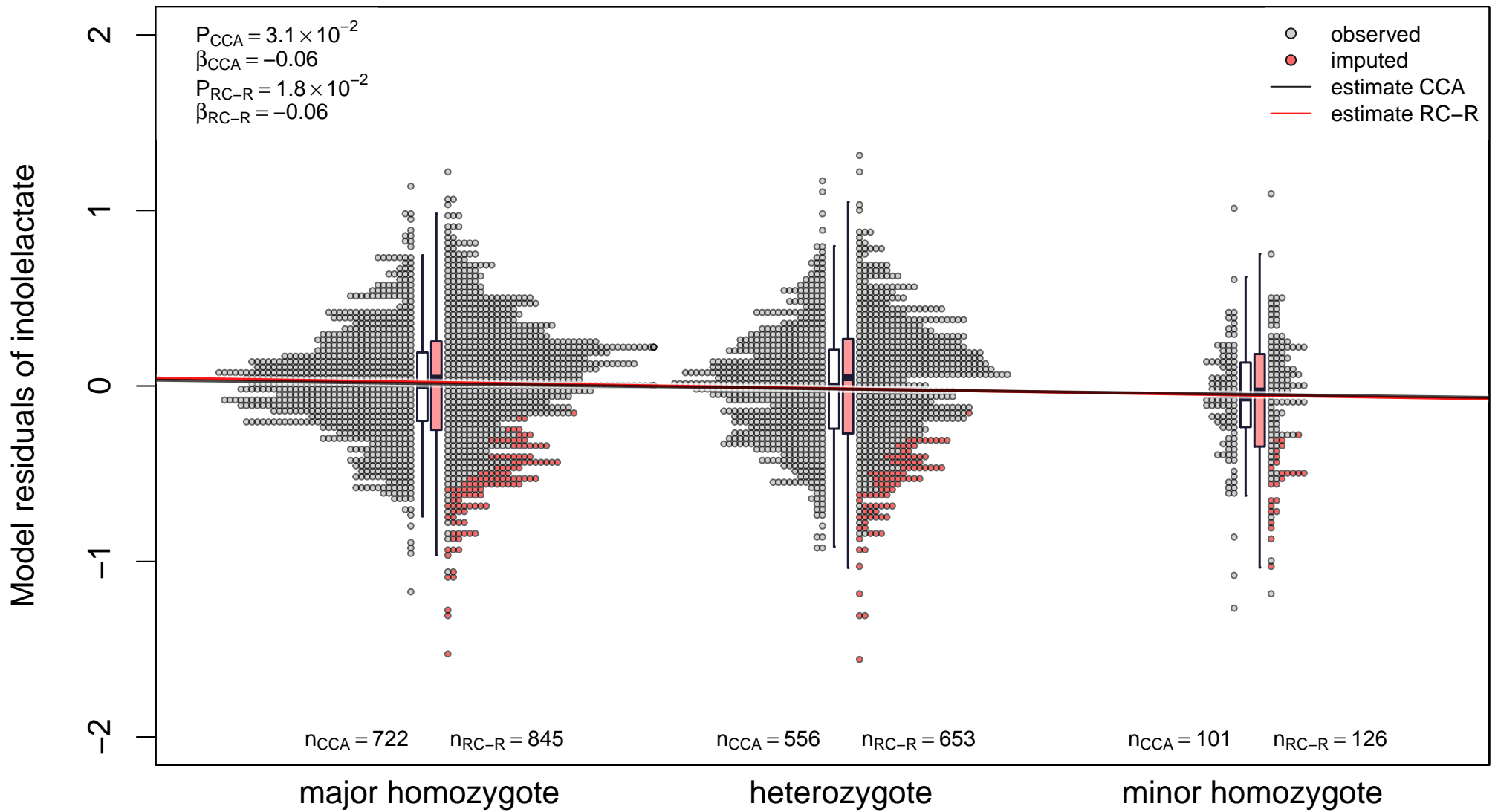


# RC

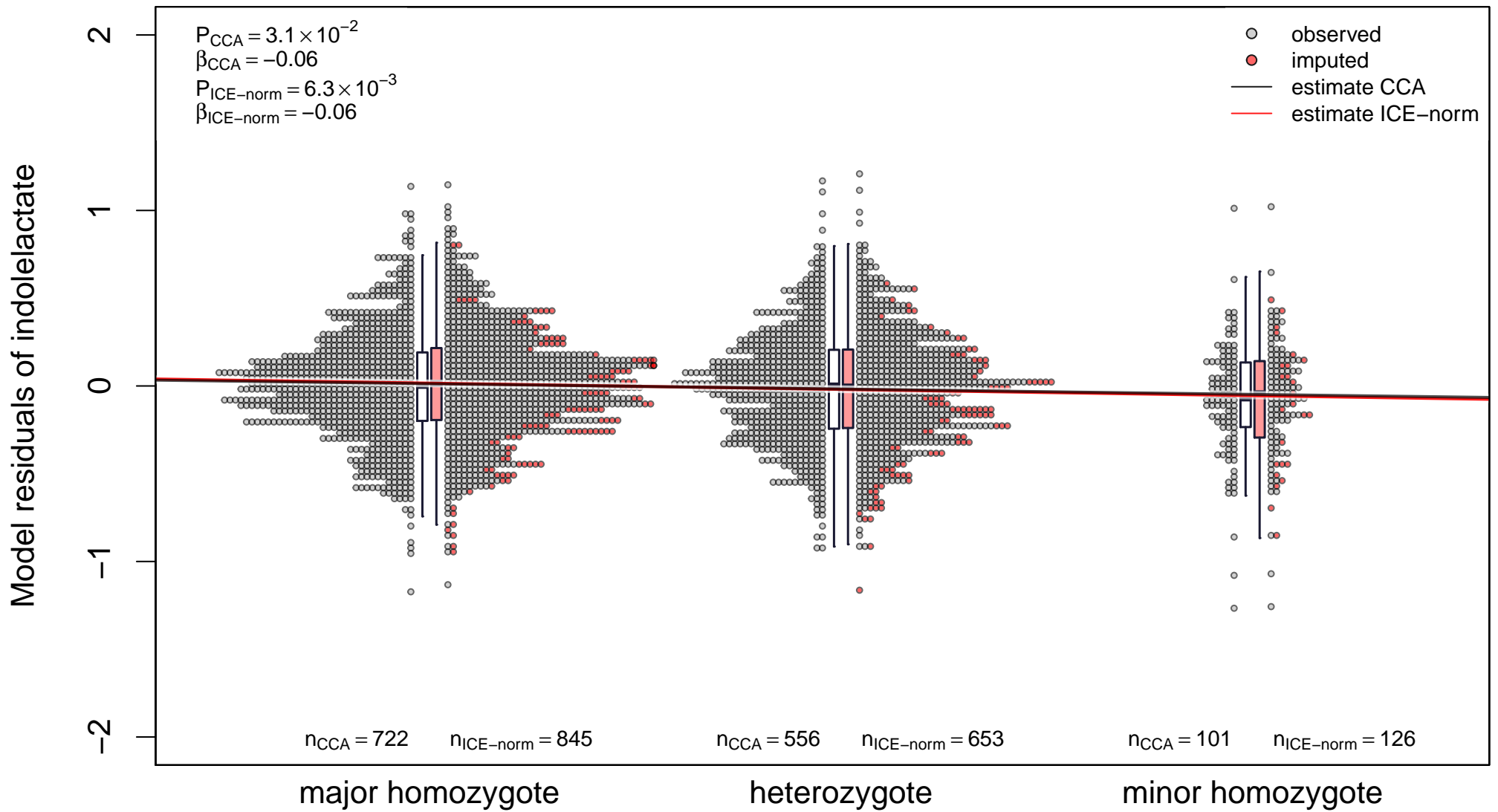


Genotype of SNP rs15676 (CCBL1)

# RC-R

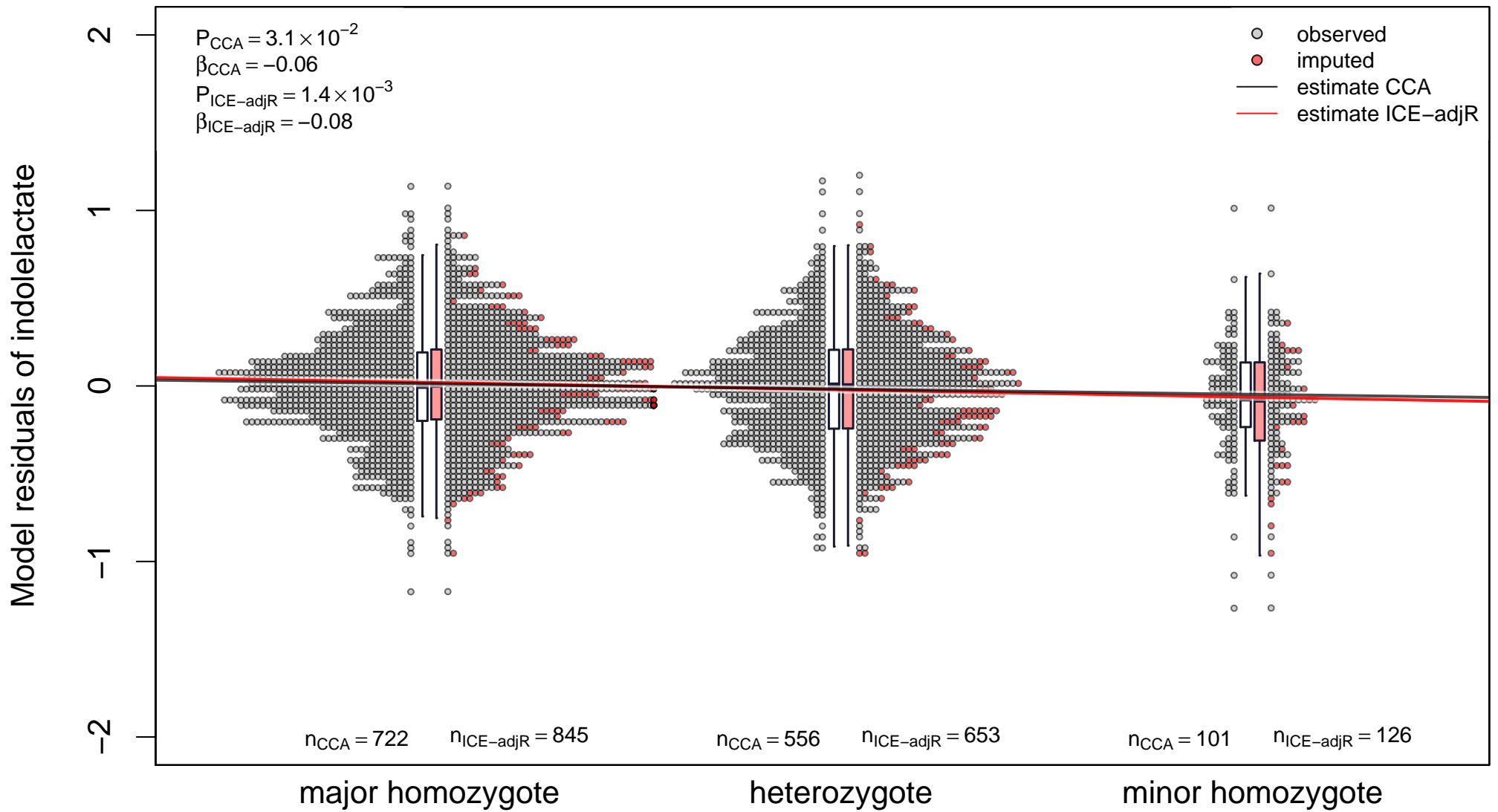


# ICE-norm

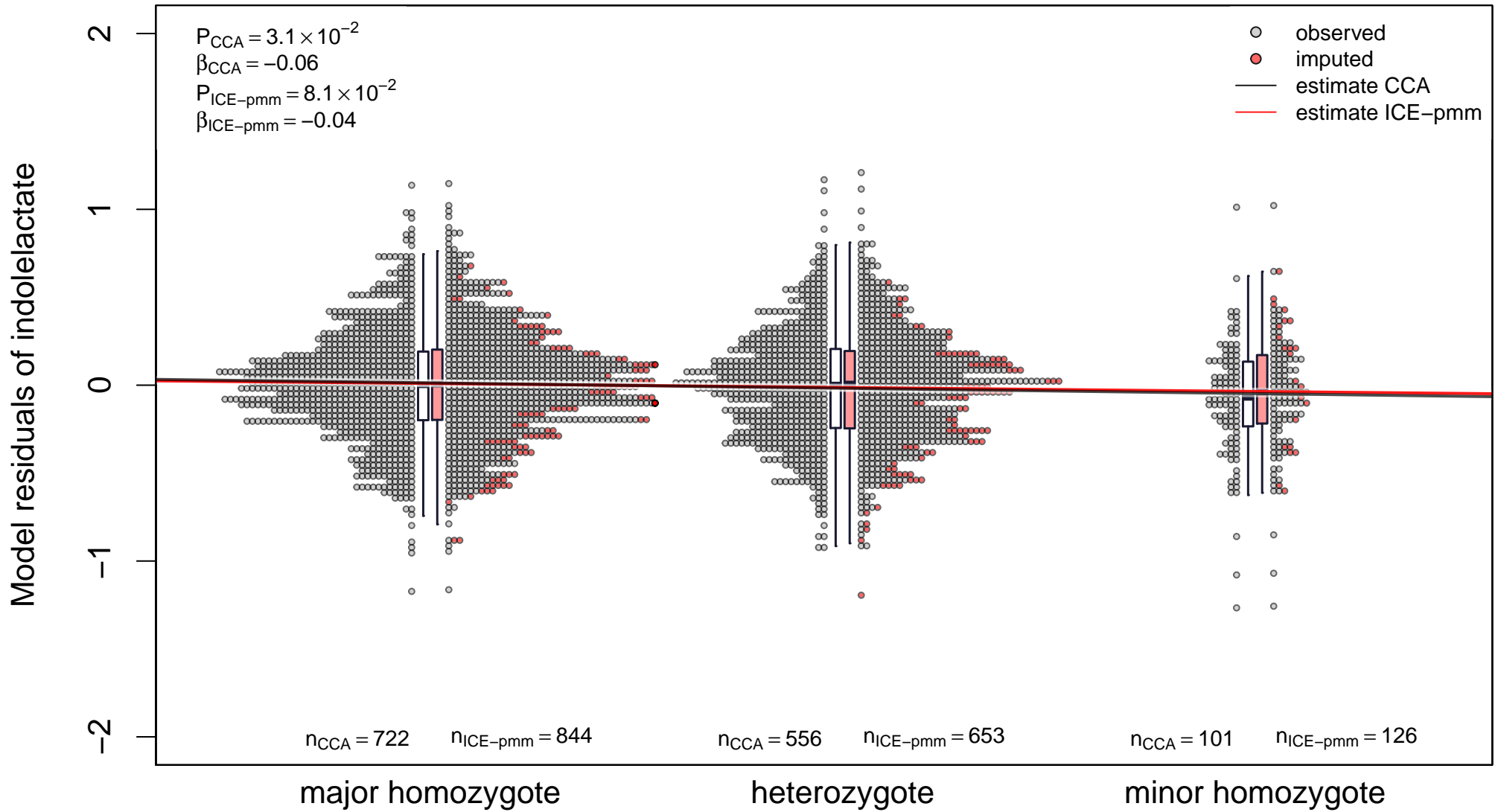


Genotype of SNP rs15676 (CCBL1)

# ICE-adjR

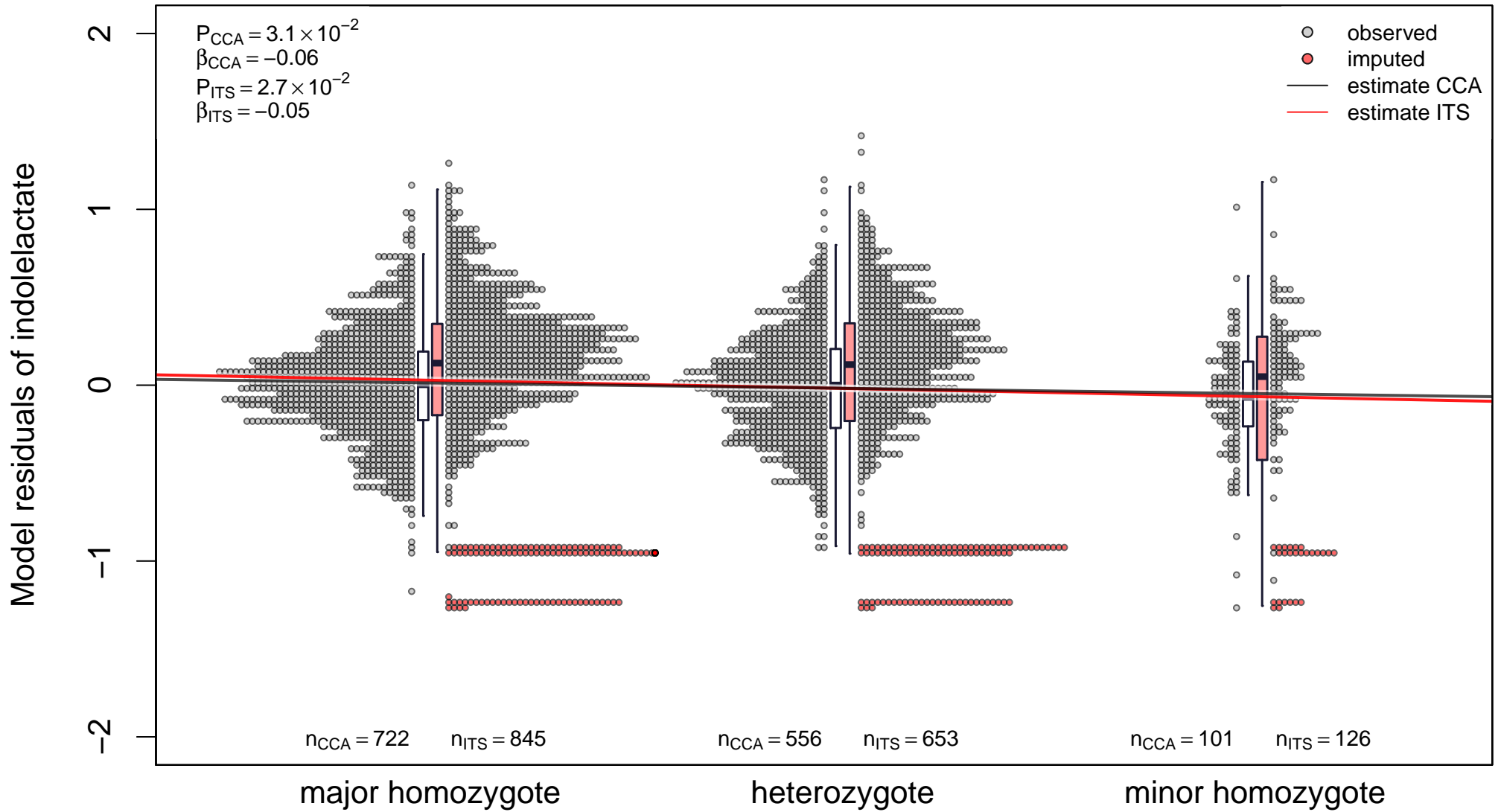


# ICE-pmm



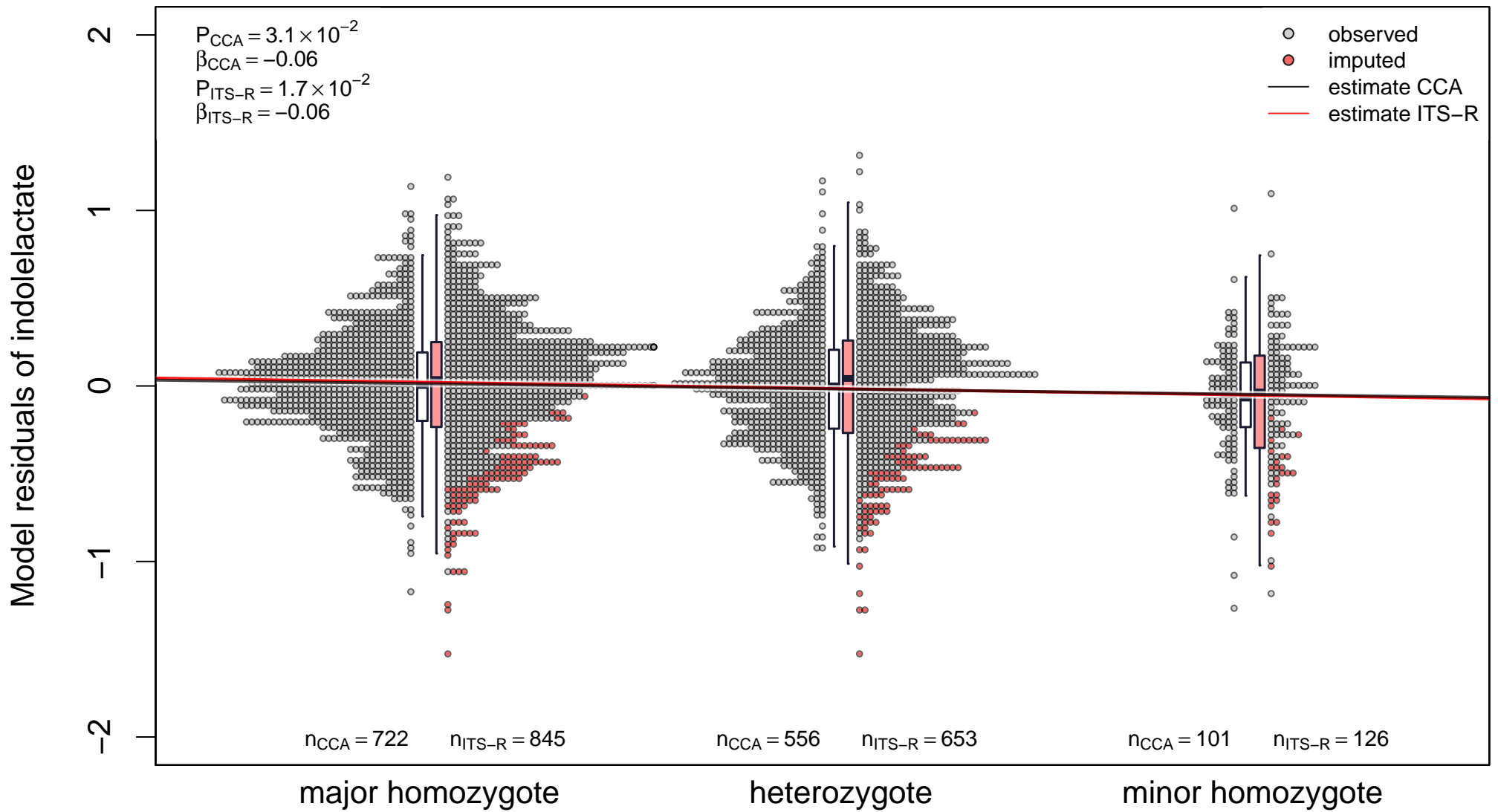
Genotype of SNP rs15676 (CCBL1)

# ITS

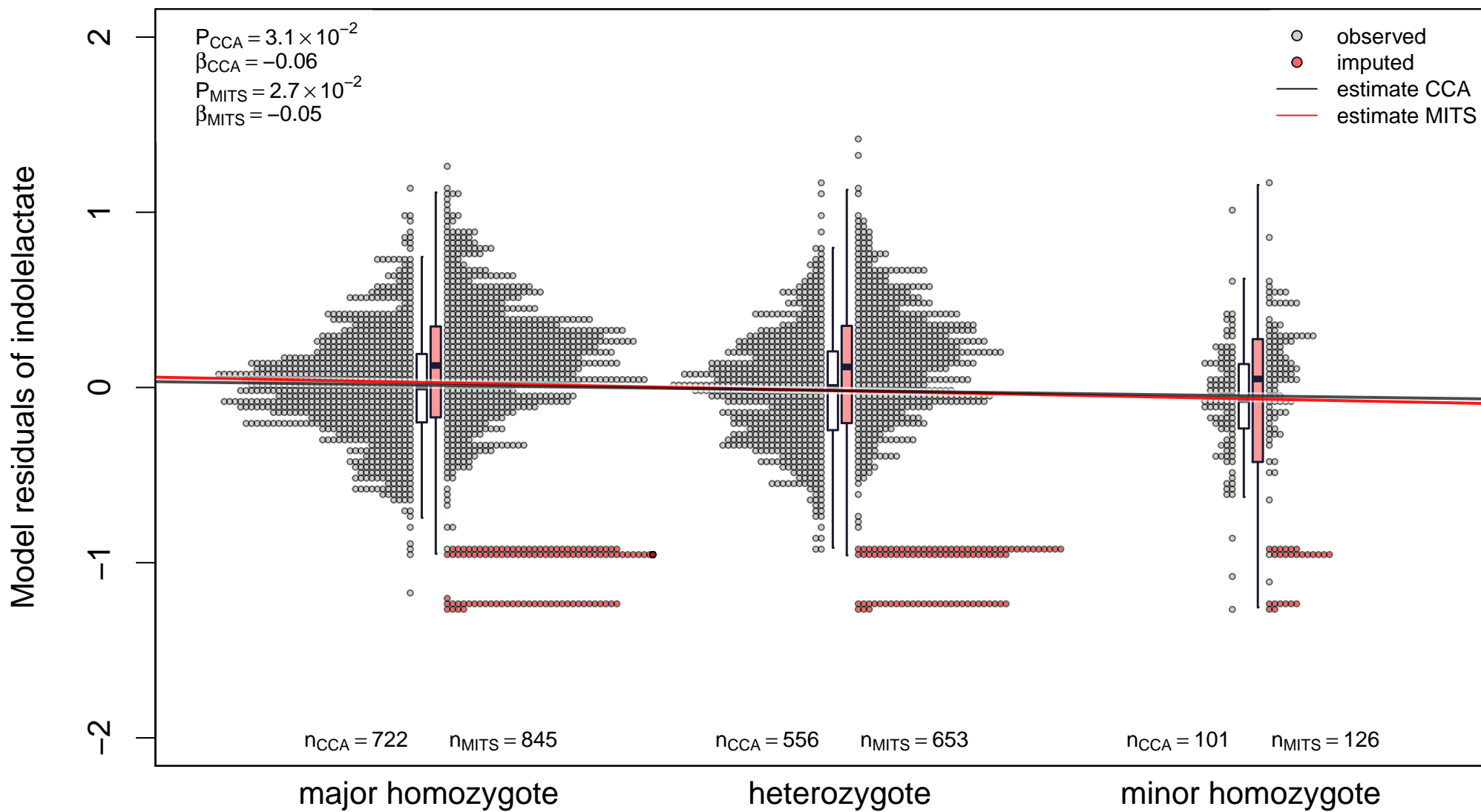


Genotype of SNP rs15676 (CCBL1)

# ITS-R



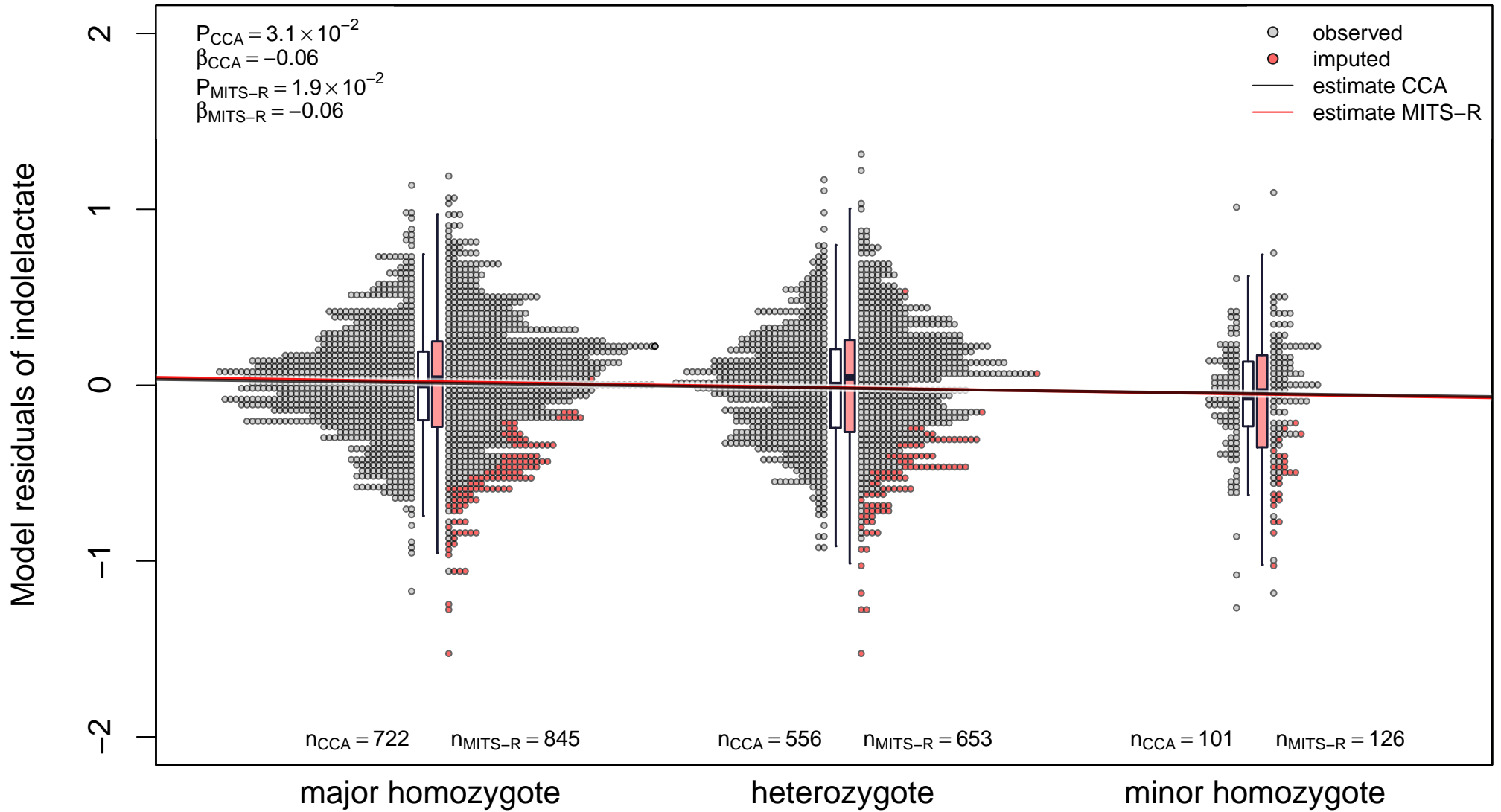
# MITS



Genotype of SNP rs15676 (CCBL1)

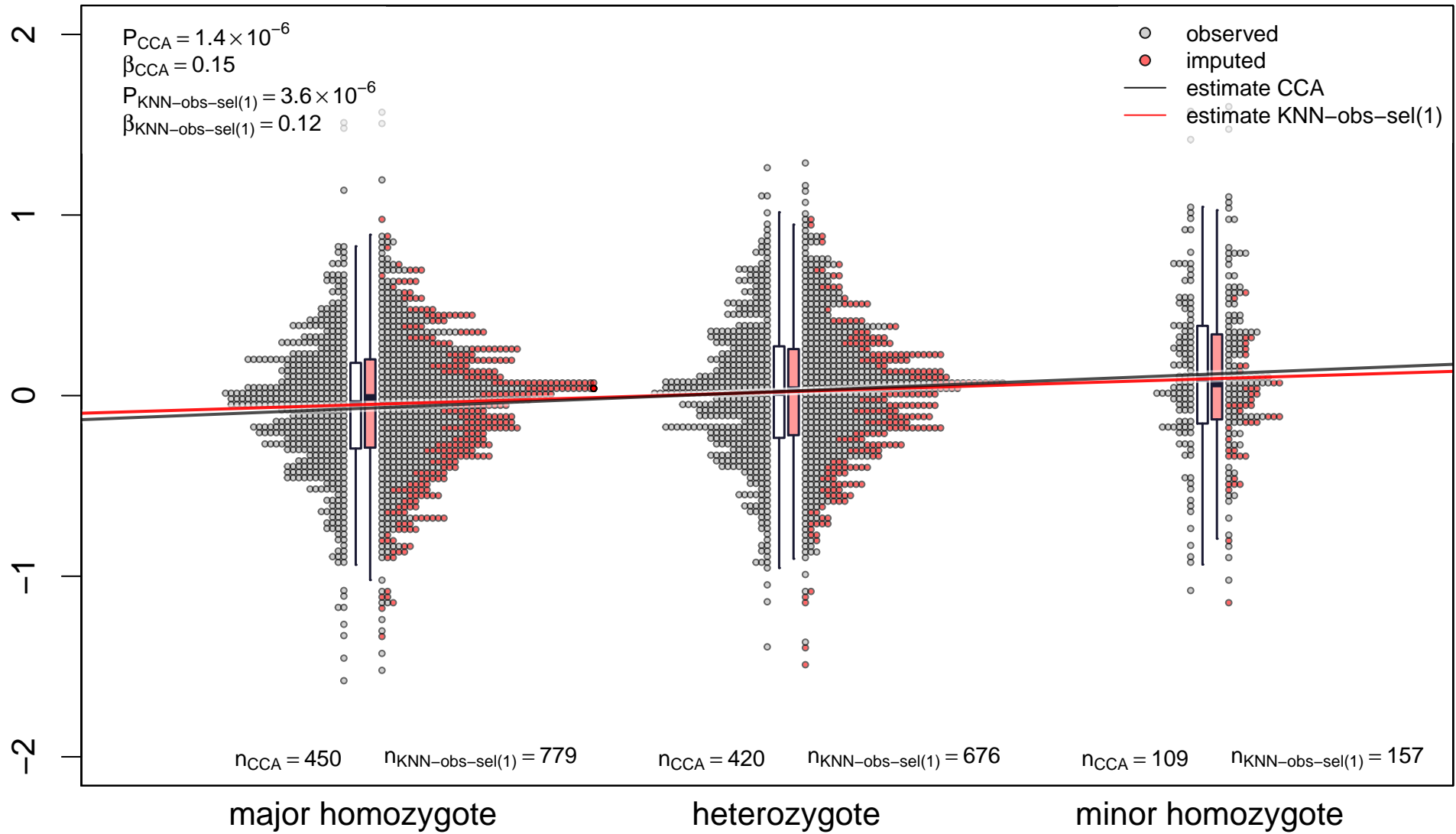


# MITS-R



# KNN-obs-sel(1)

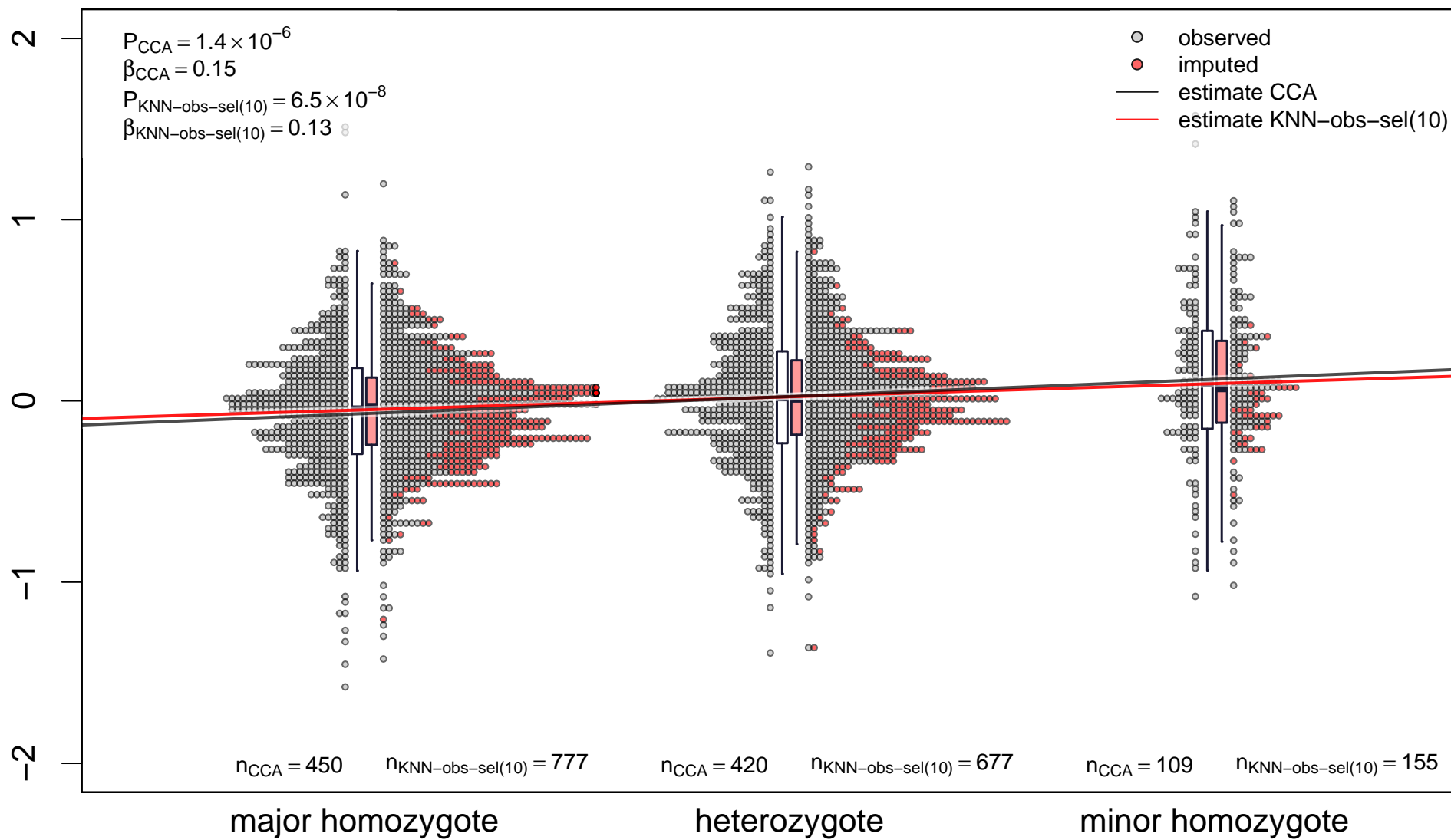
Model residuals of 2-linoleoylglycerophosphoethanolamine\*



Genotype of SNP rs174535 (FADS1)

# KNN-obs-sel(10)

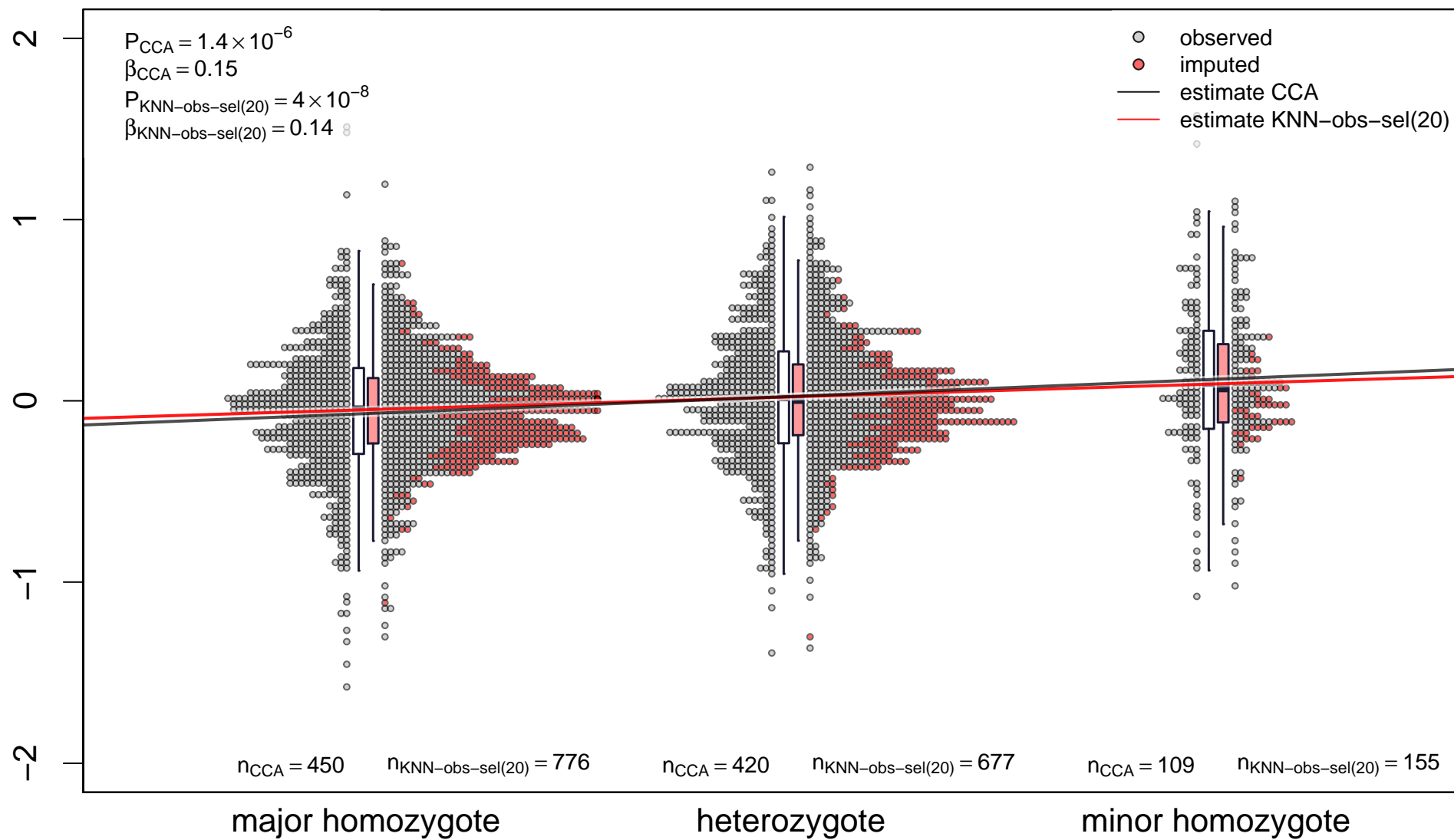
Model residuals of 2-linoleoylglycerophosphoethanolamine\*



Genotype of SNP rs174535 (FADS1)

# KNN-obs-sel(20)

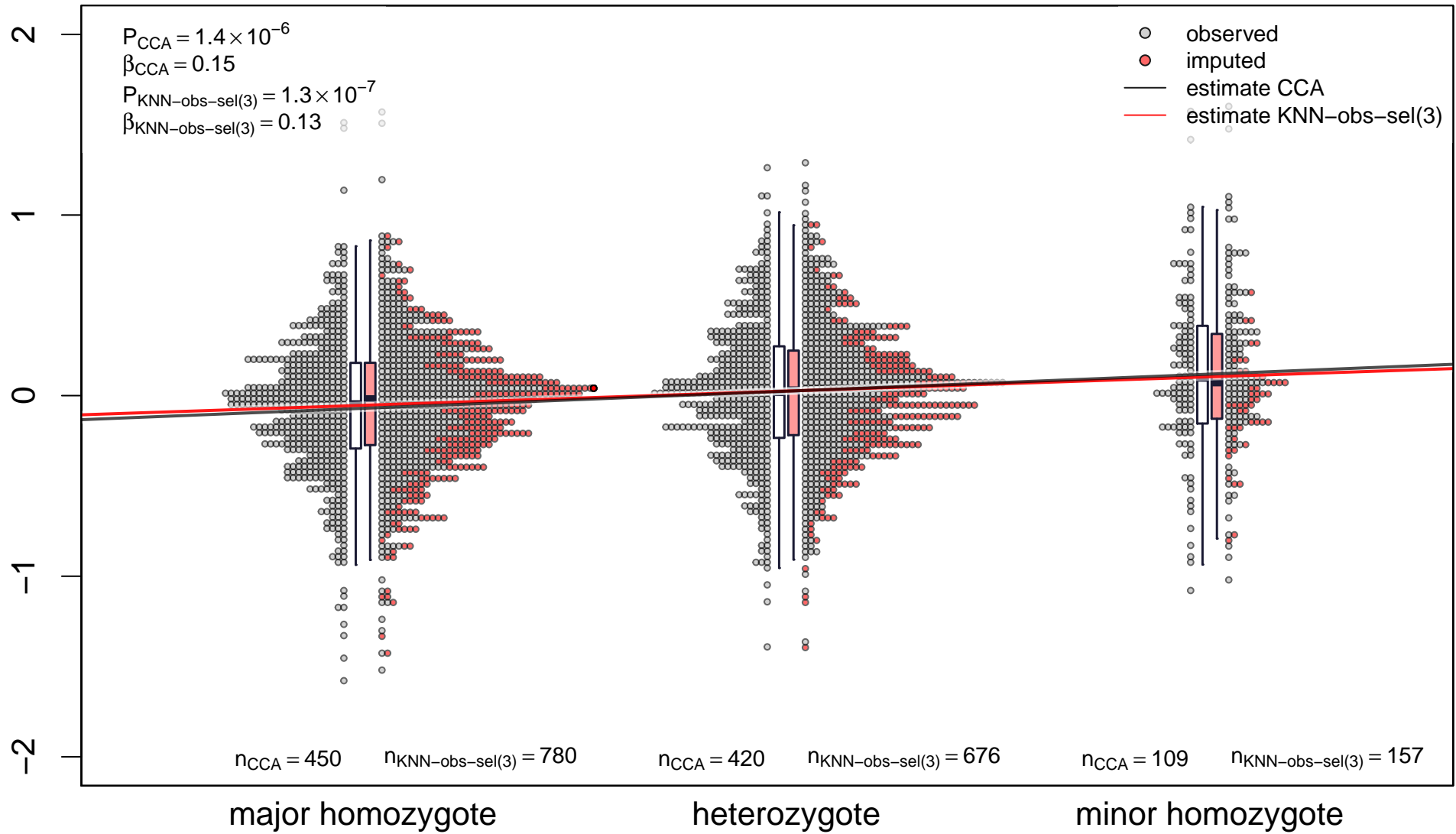
Model residuals of 2-linoleoylglycerophosphoethanolamine\*



Genotype of SNP rs174535 (FADS1)

# KNN-obs-sel(3)

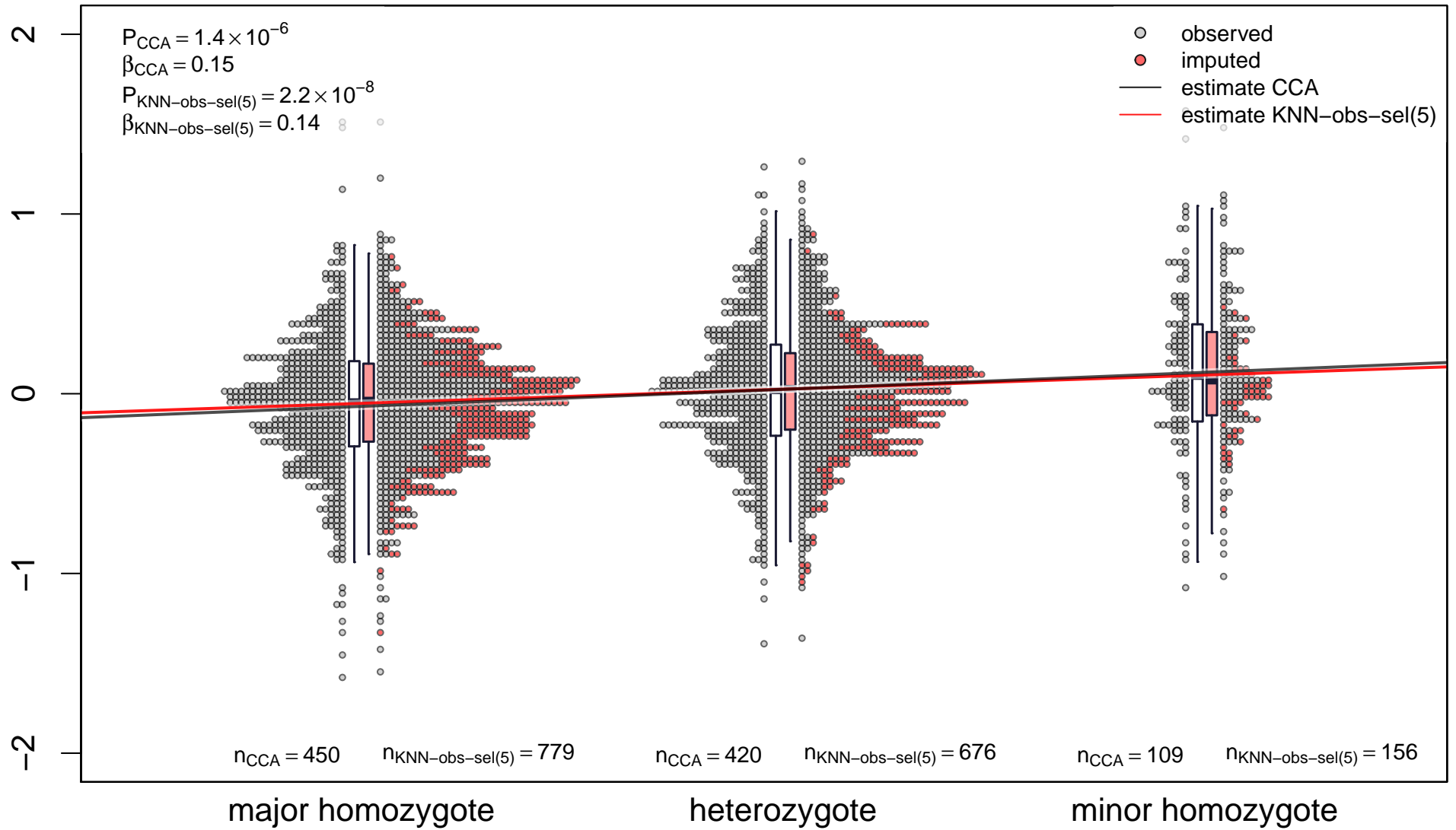
Model residuals of 2-linoleoylglycerophosphoethanolamine\*



Genotype of SNP rs174535 (FADS1)

# KNN-obs-sel(5)

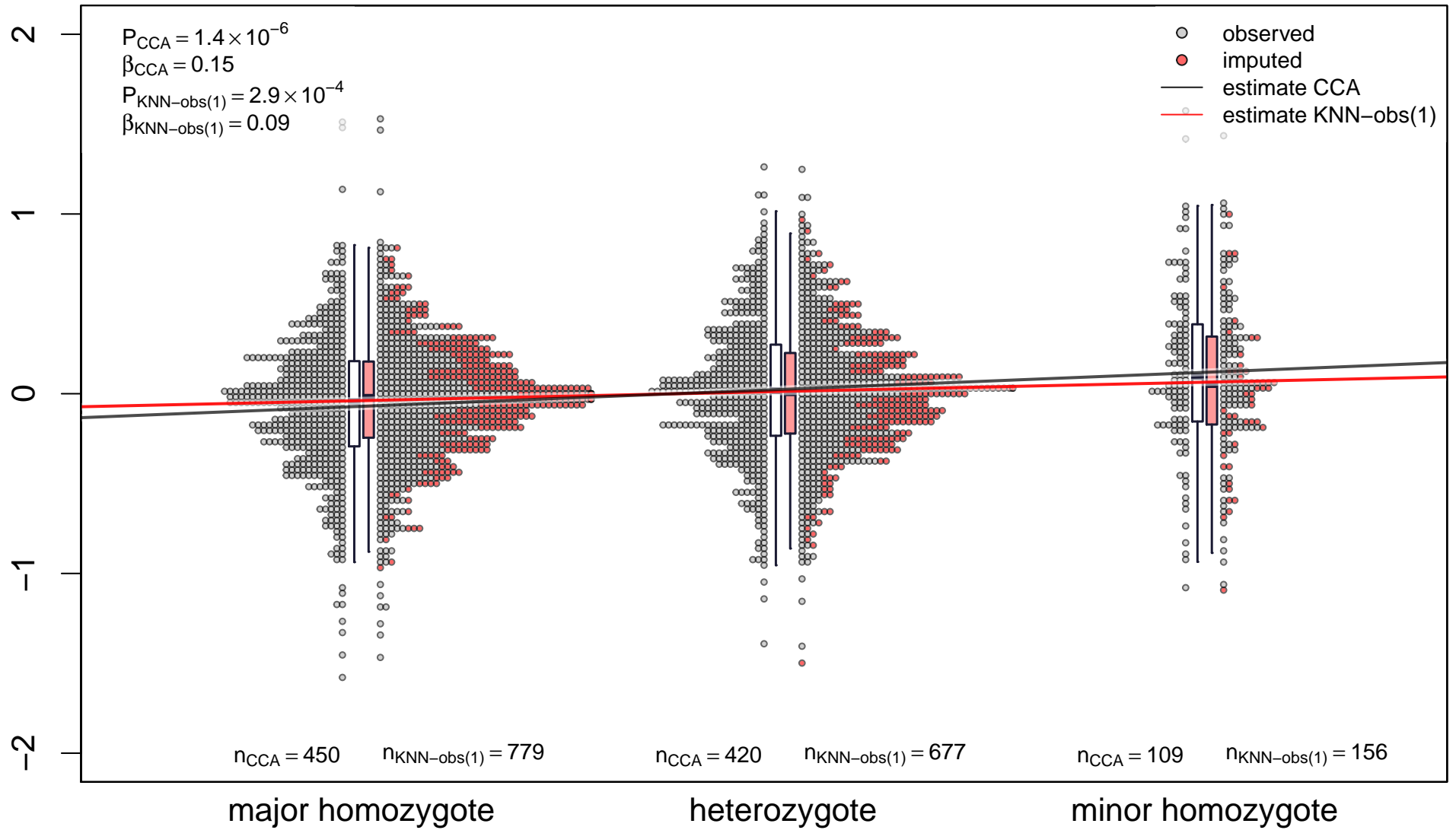
Model residuals of 2-linoleoylglycerophosphoethanolamine\*



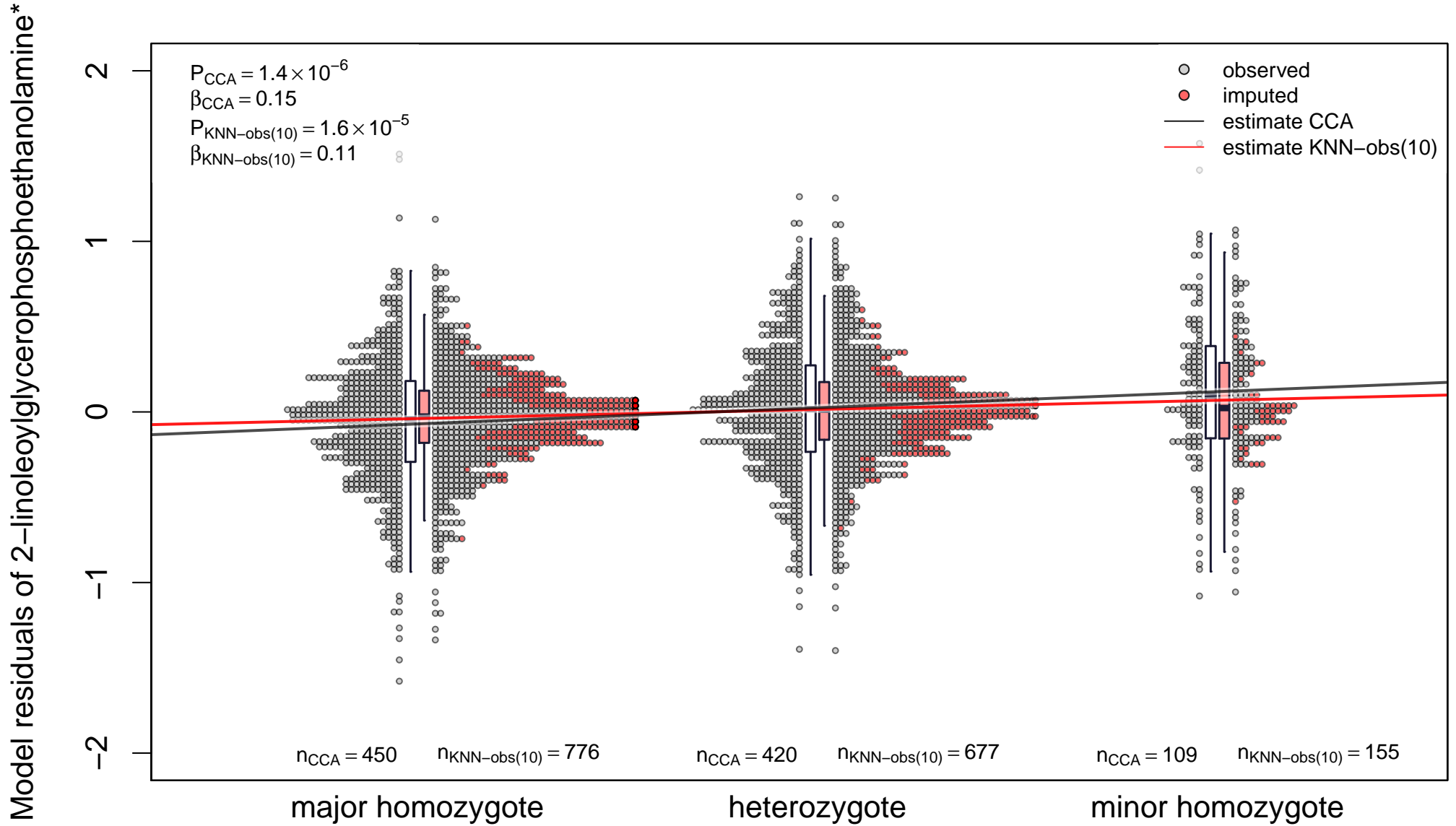
Genotype of SNP rs174535 (FADS1)

# KNN-obs(1)

Model residuals of 2-linoleoylglycerophosphoethanolamine\*



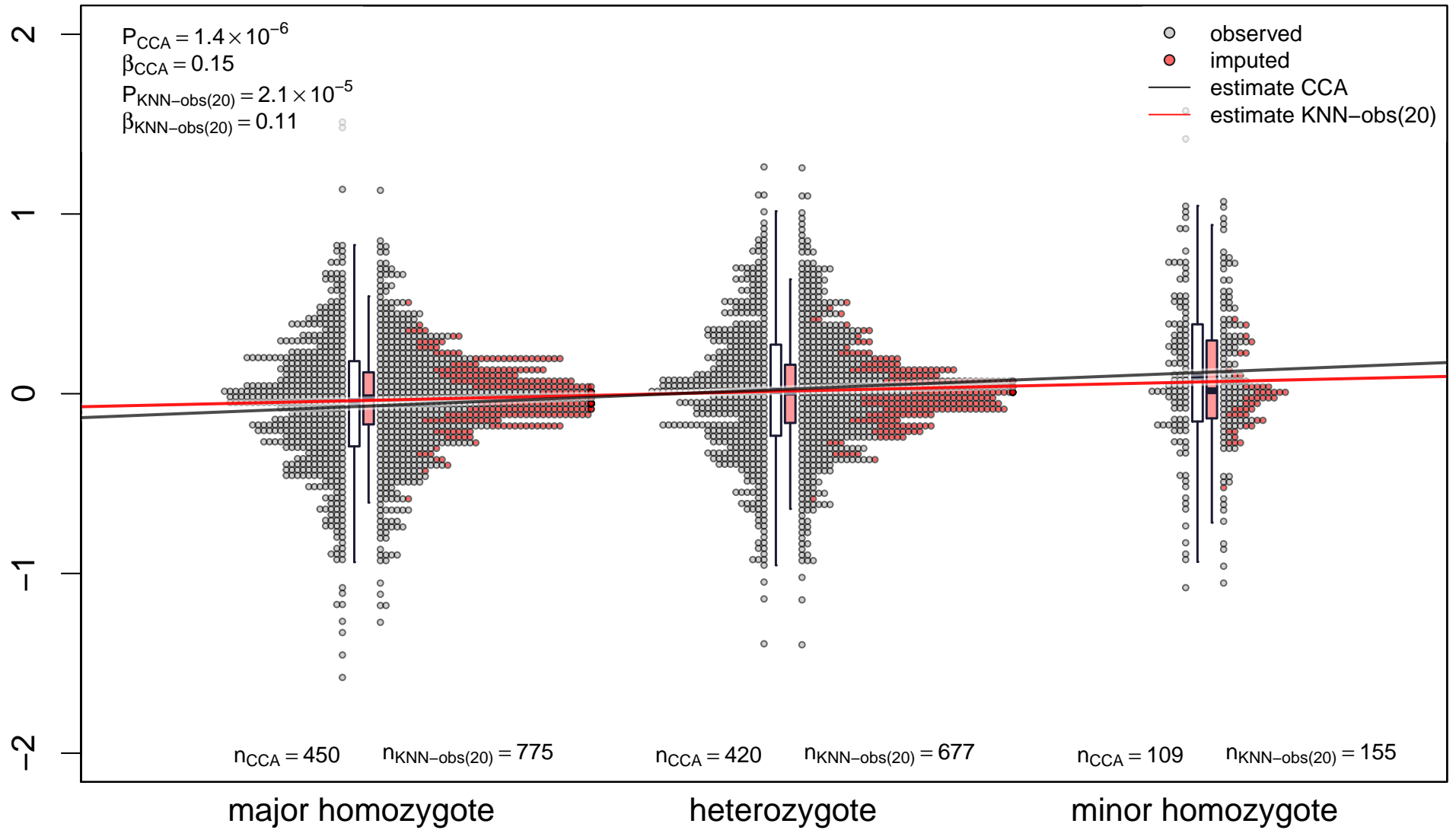
# KNN-obs(10)





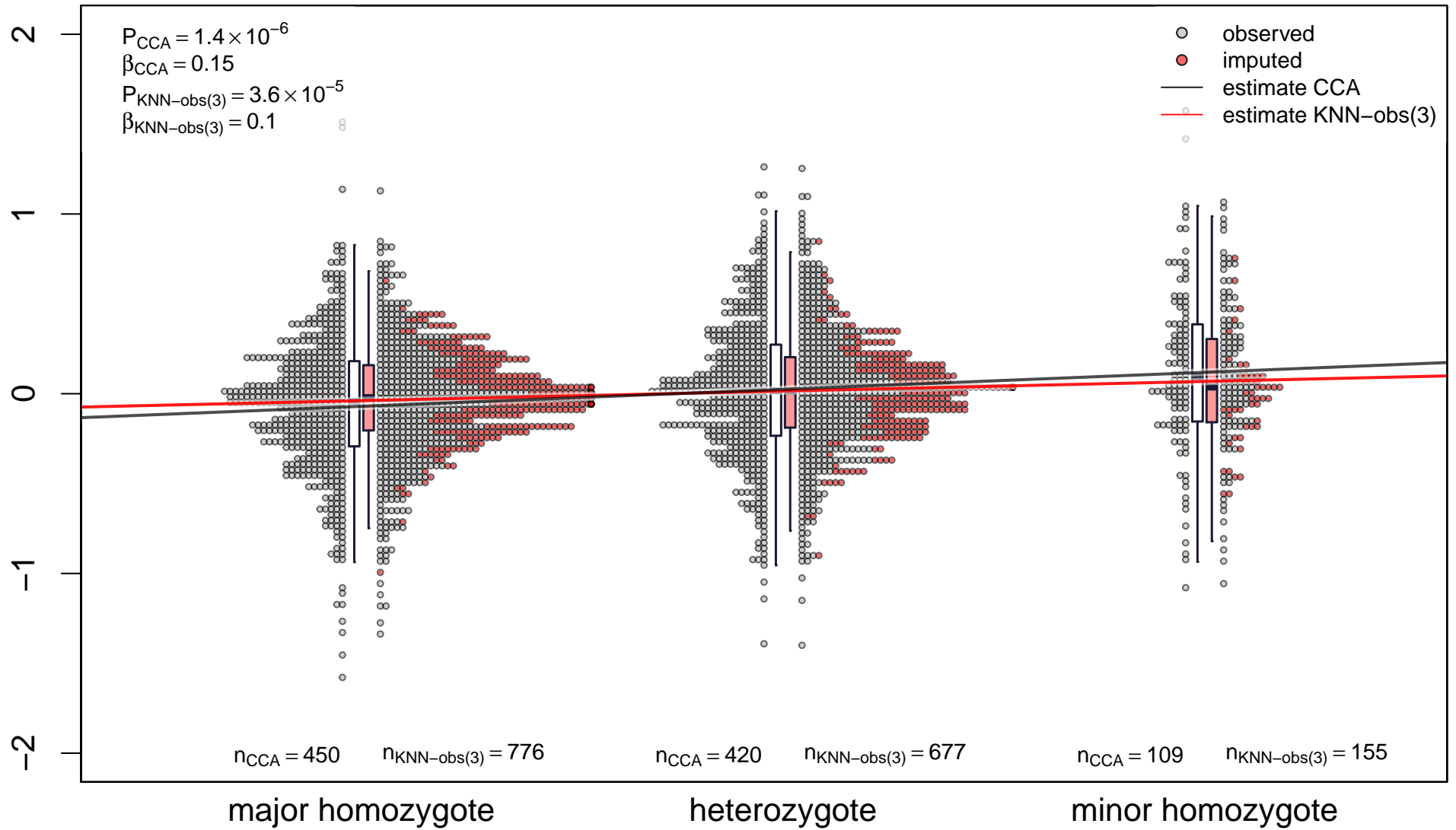
# KNN-obs(20)

Model residuals of 2-linoleoylglycerophosphoethanolamine\*



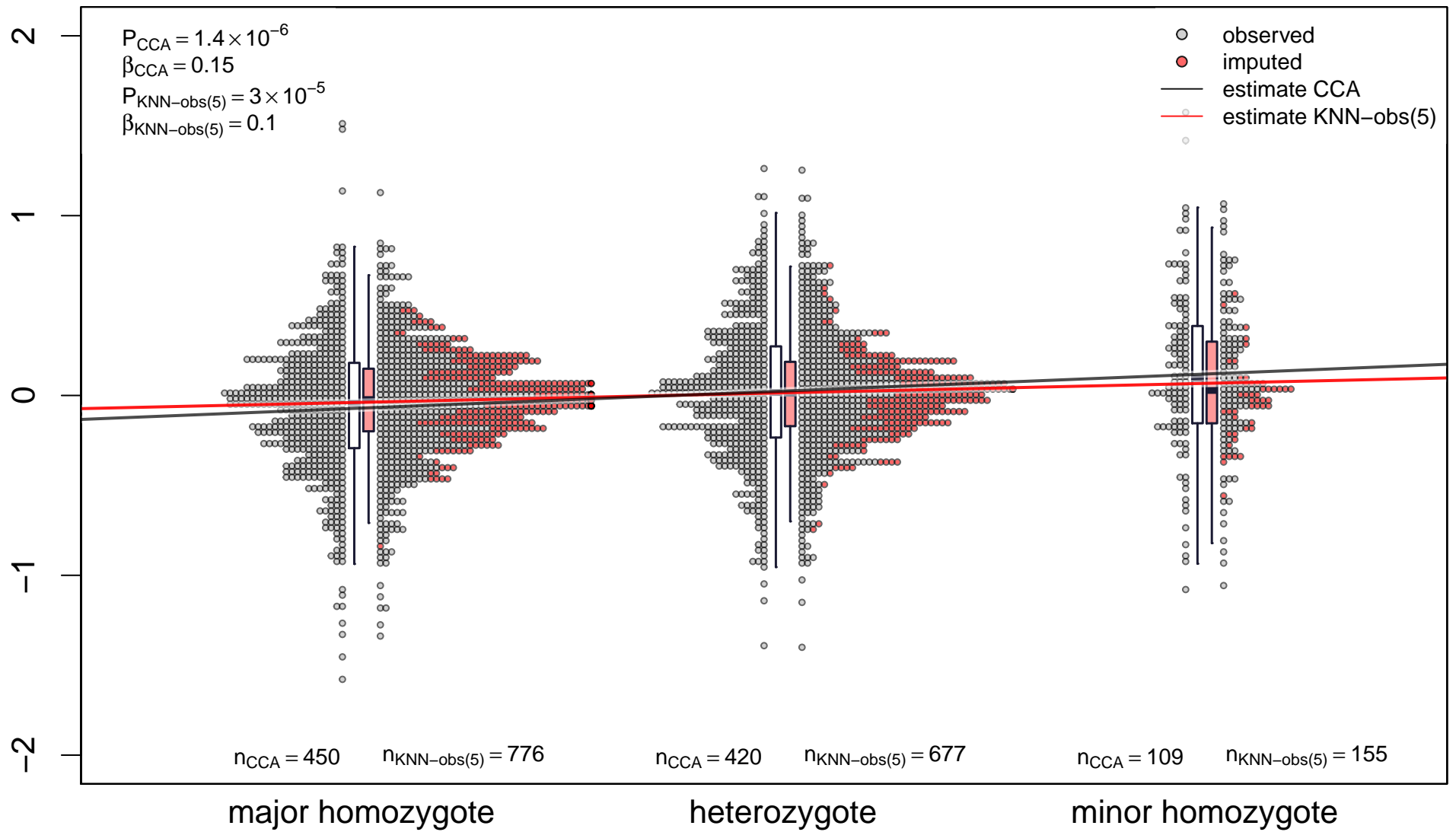
# KNN-obs(3)

Model residuals of 2-linoleoylglycerophosphoethanolamine\*



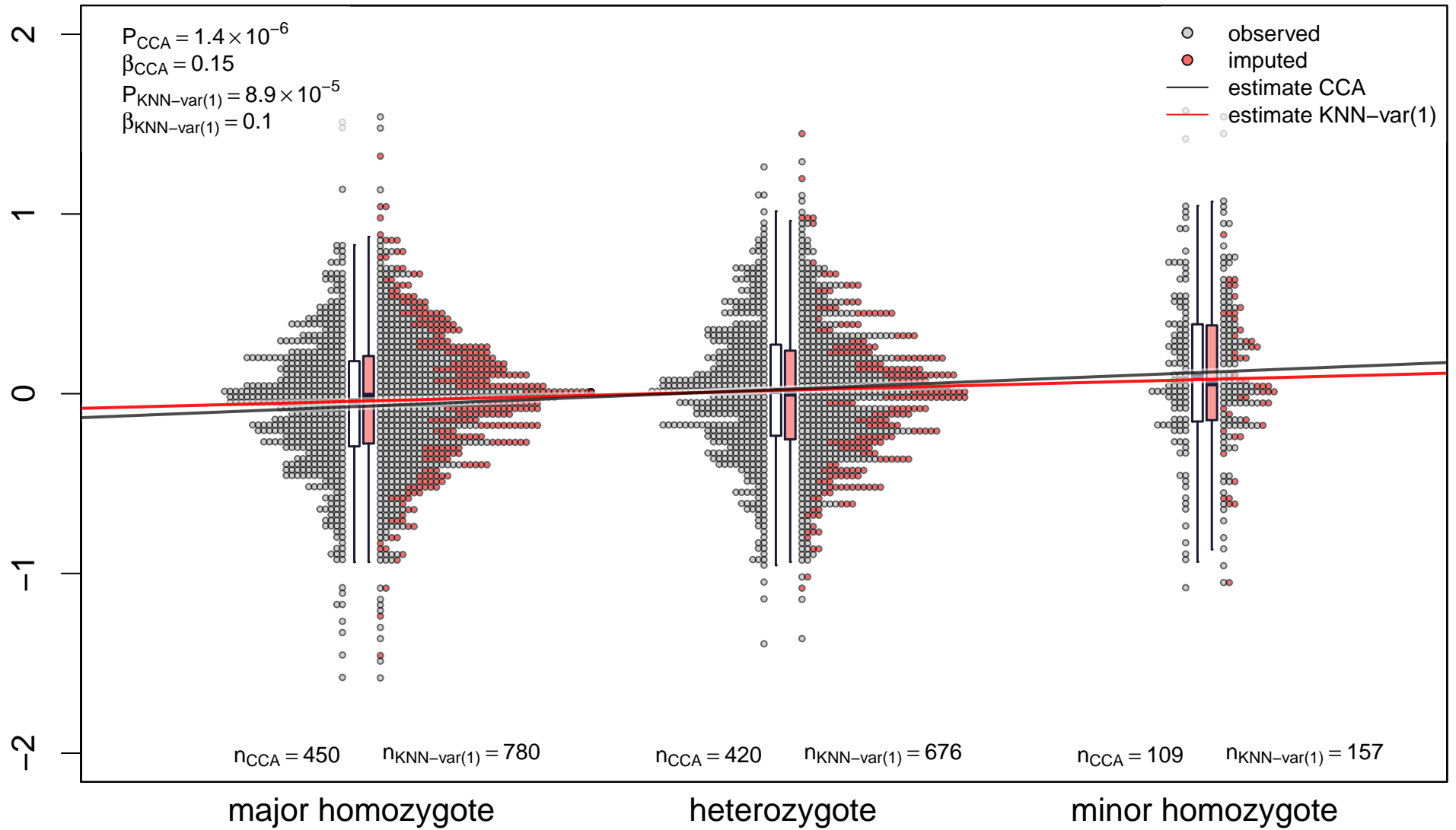
# KNN-obs(5)

Model residuals of 2-linoleoylglycerophosphoethanolamine\*



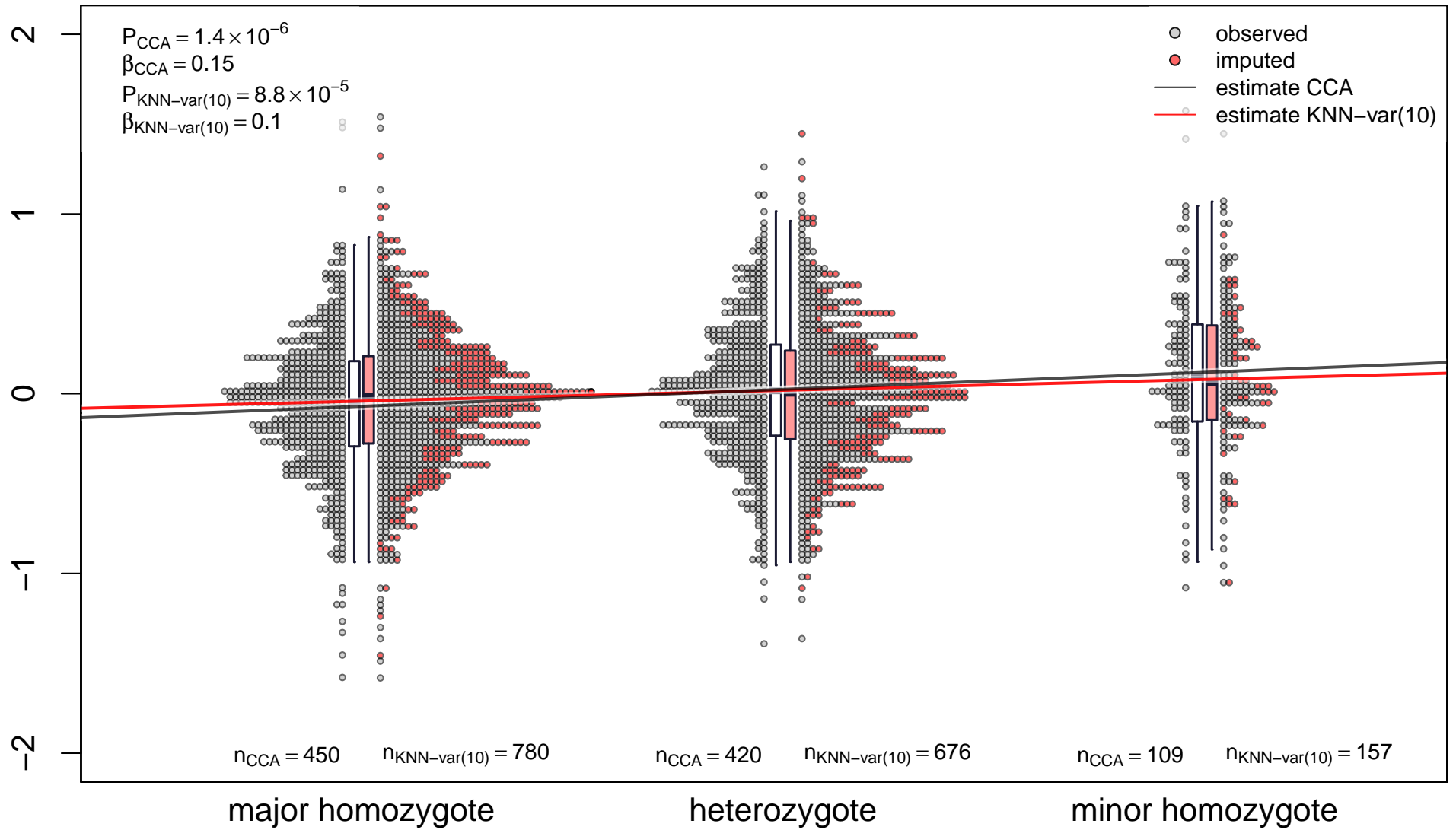
# KNN-var(1)

Model residuals of 2-linoleoylglycerophosphoethanolamine\*



# KNN-var(10)

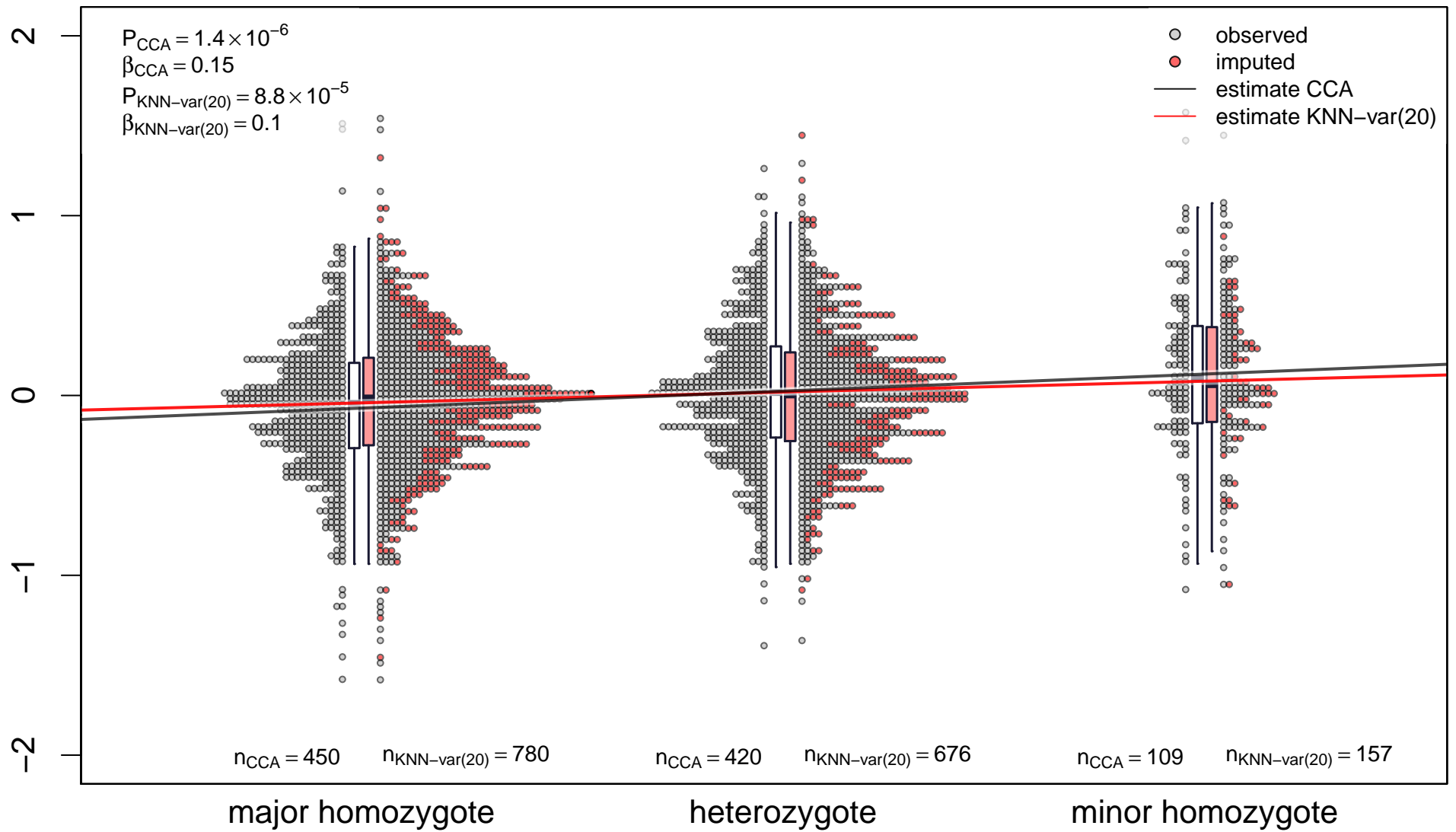
Model residuals of 2-linoleoylglycerophosphoethanolamine\*



Genotype of SNP rs174535 (FADS1)

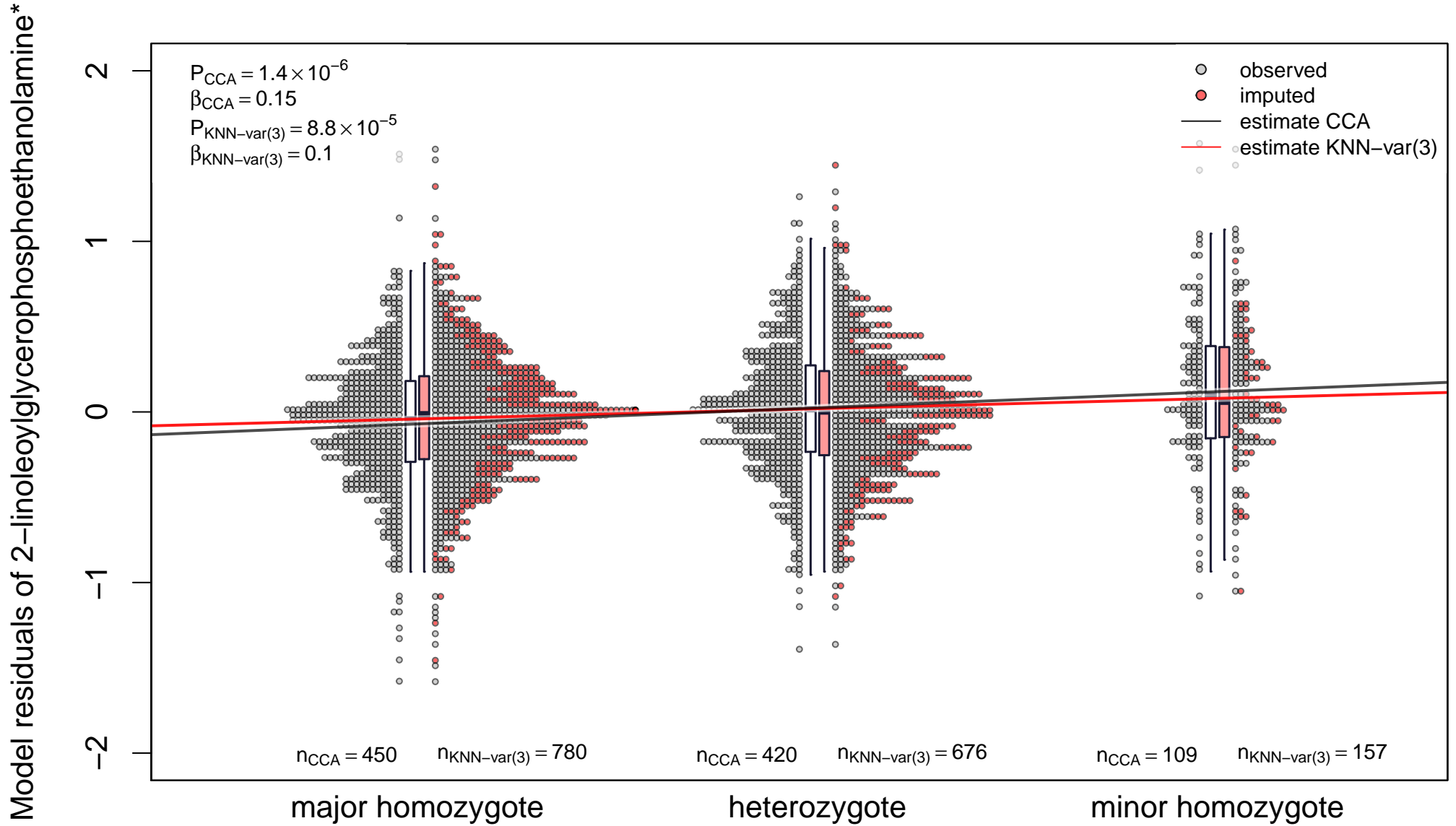
# KNN-var(20)

Model residuals of 2-linoleoylglycerophosphoethanolamine\*



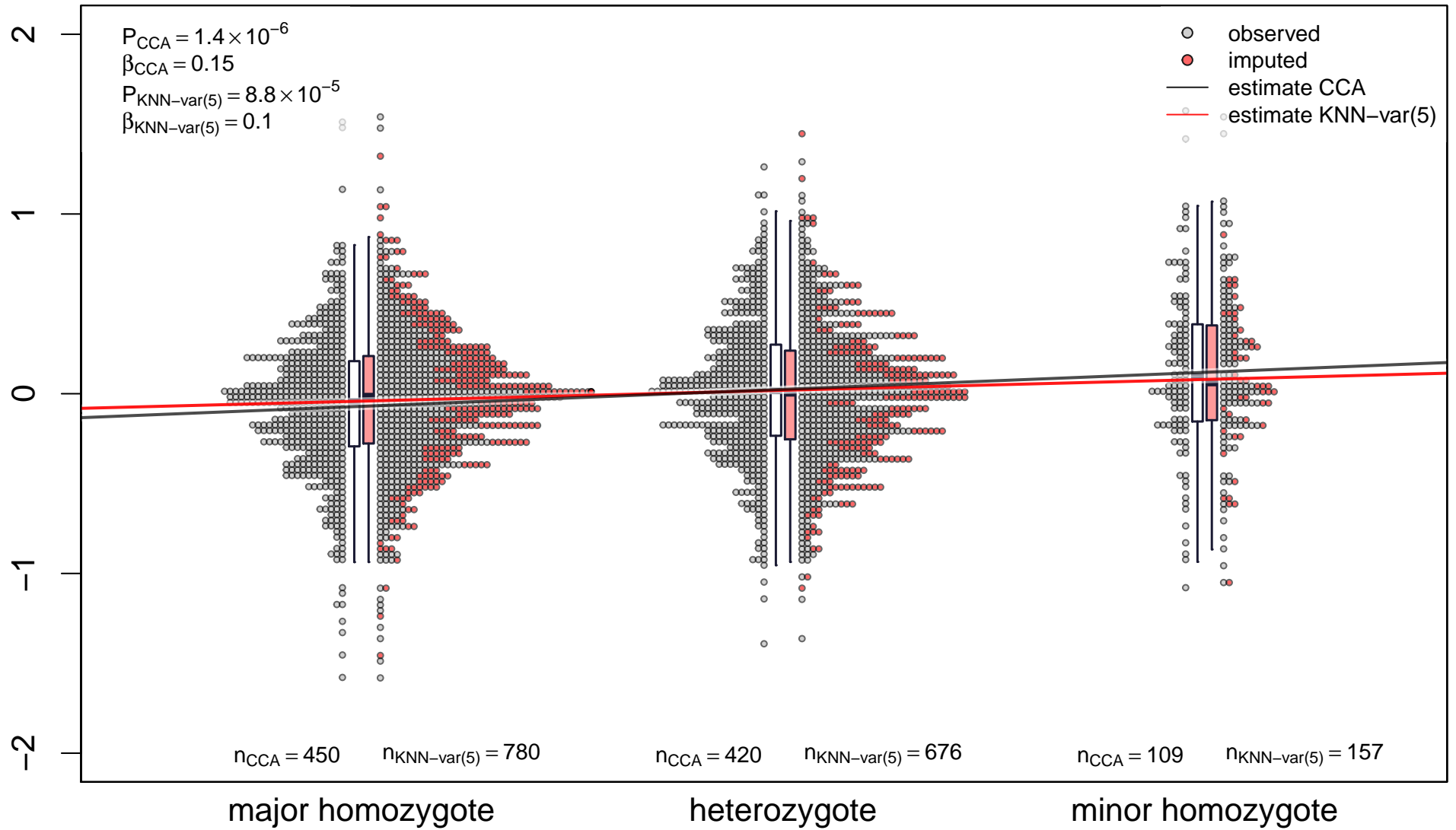
Genotype of SNP rs174535 (FADS1)

# KNN-var(3)



# KNN-var(5)

Model residuals of 2-linoleoylglycerophosphoethanolamine\*

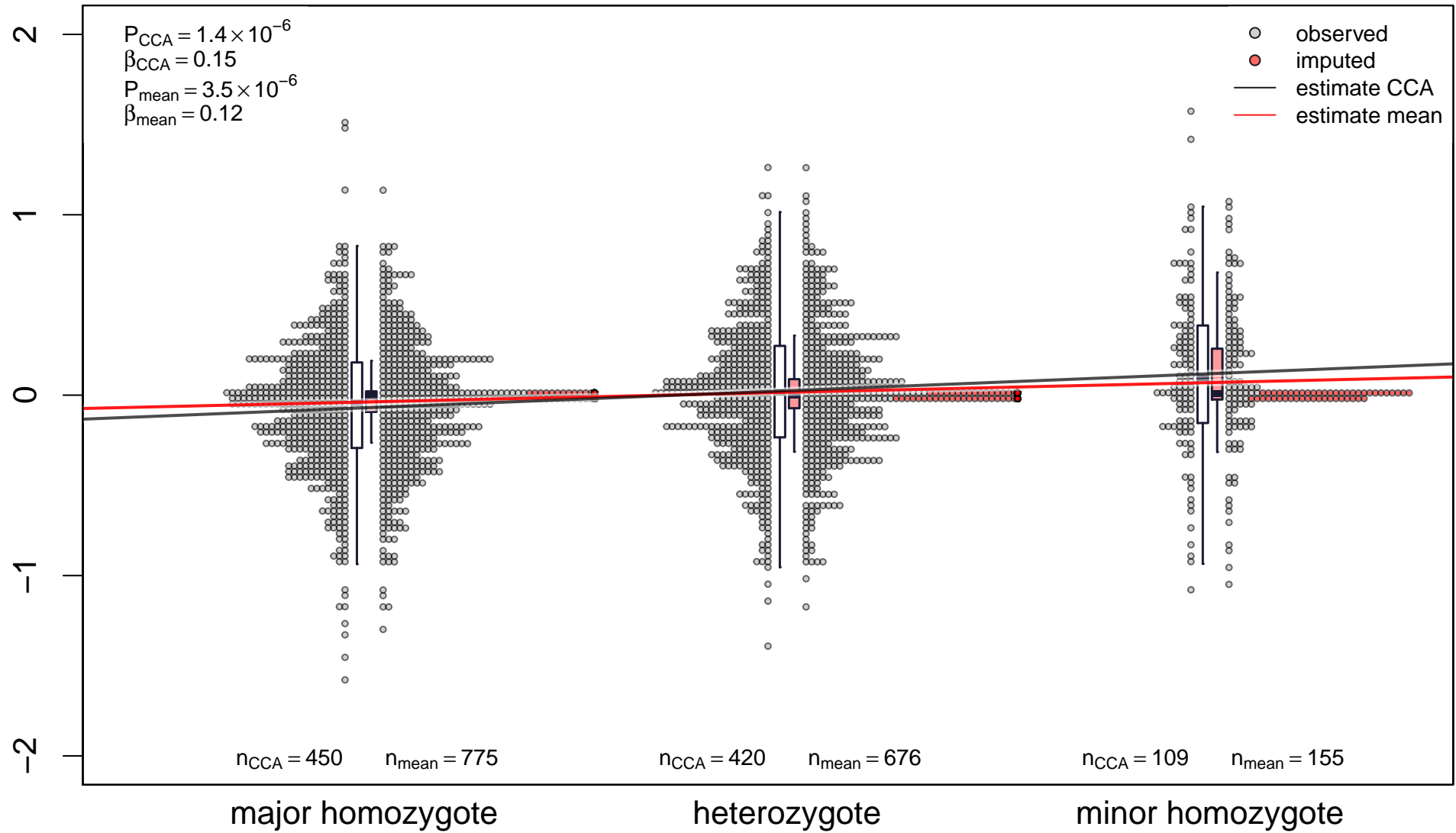


Genotype of SNP rs174535 (FADS1)



Model residuals of 2-linoleoylglycerophosphoethanolamine\*

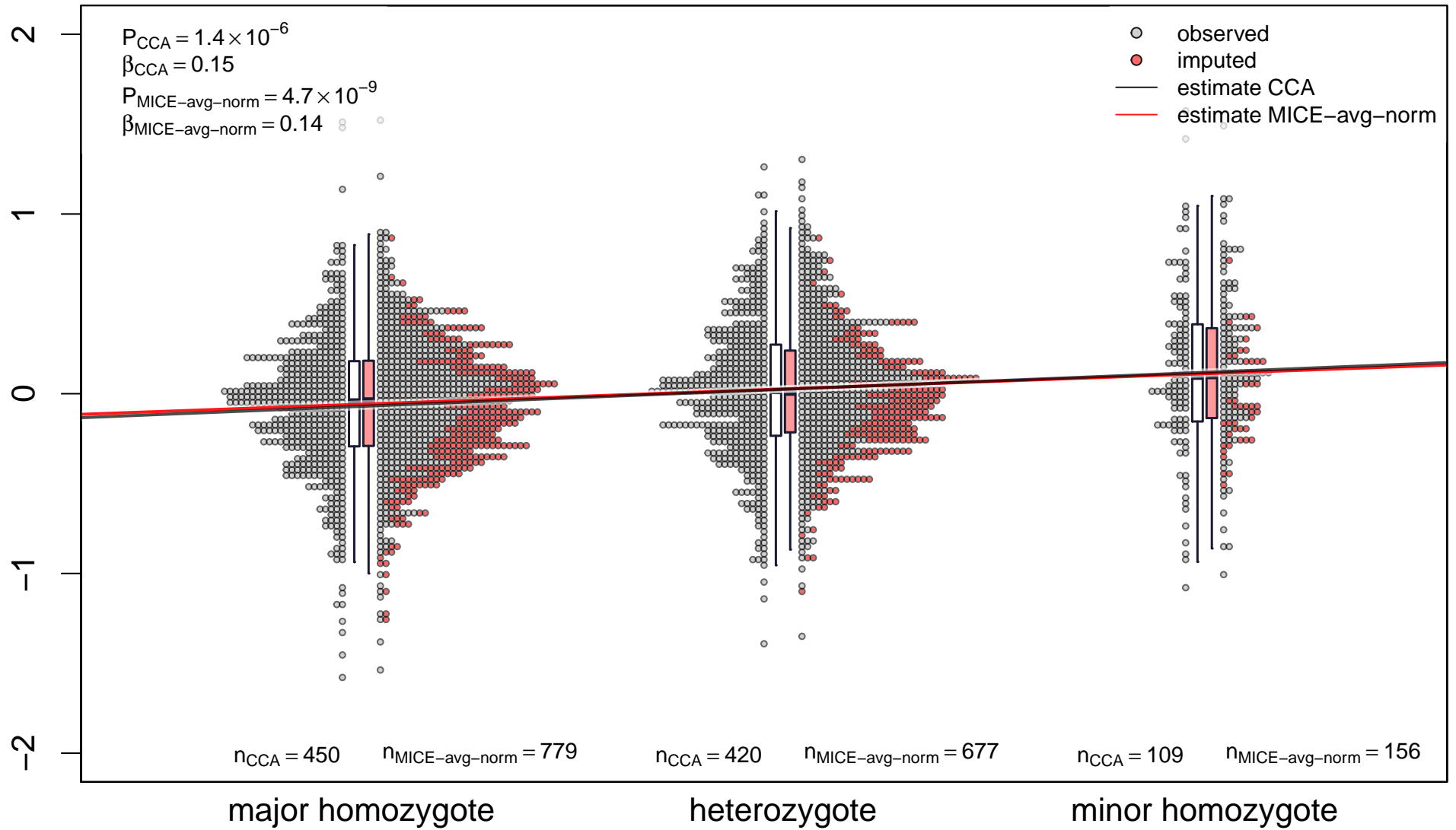
mean



Genotype of SNP rs174535 (FADS1)

# MICE-avg-norm

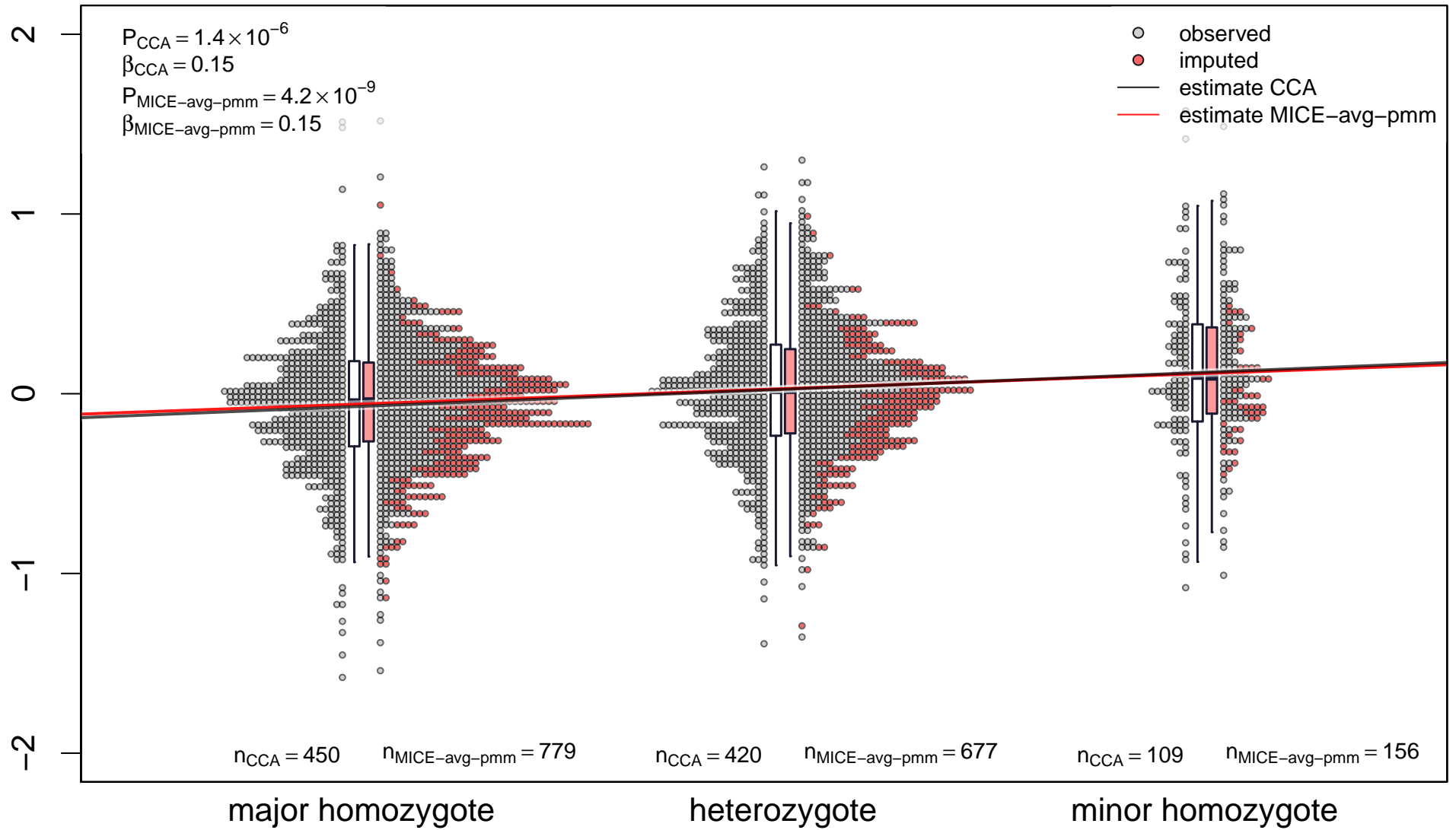
Model residuals of 2-linoleoylglycerophosphoethanolamine\*



Genotype of SNP rs174535 (FADS1)

# MICE-avg-pmm

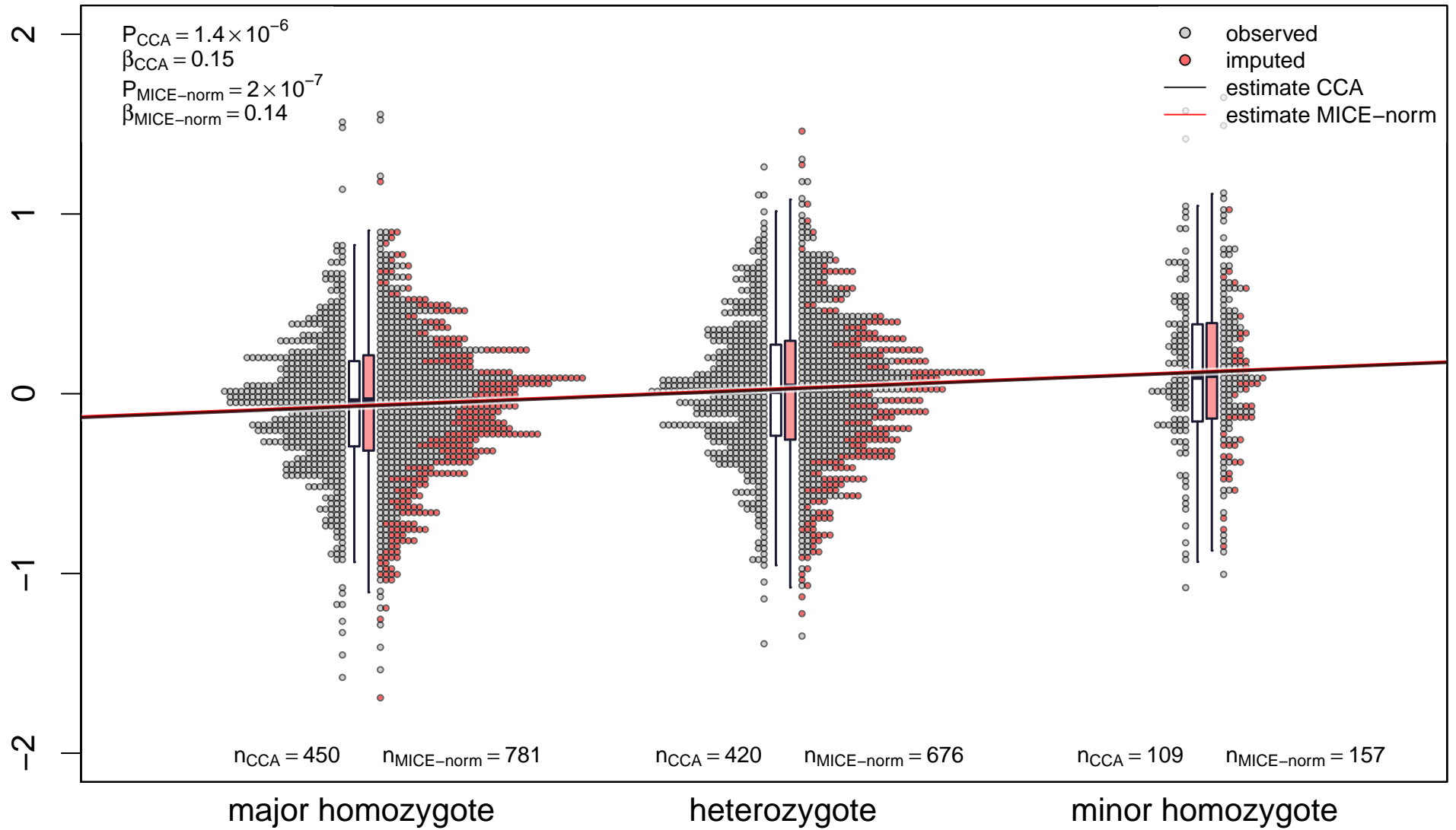
Model residuals of 2-linoleoylglycerophosphoethanolamine\*



Genotype of SNP rs174535 (FADS1)

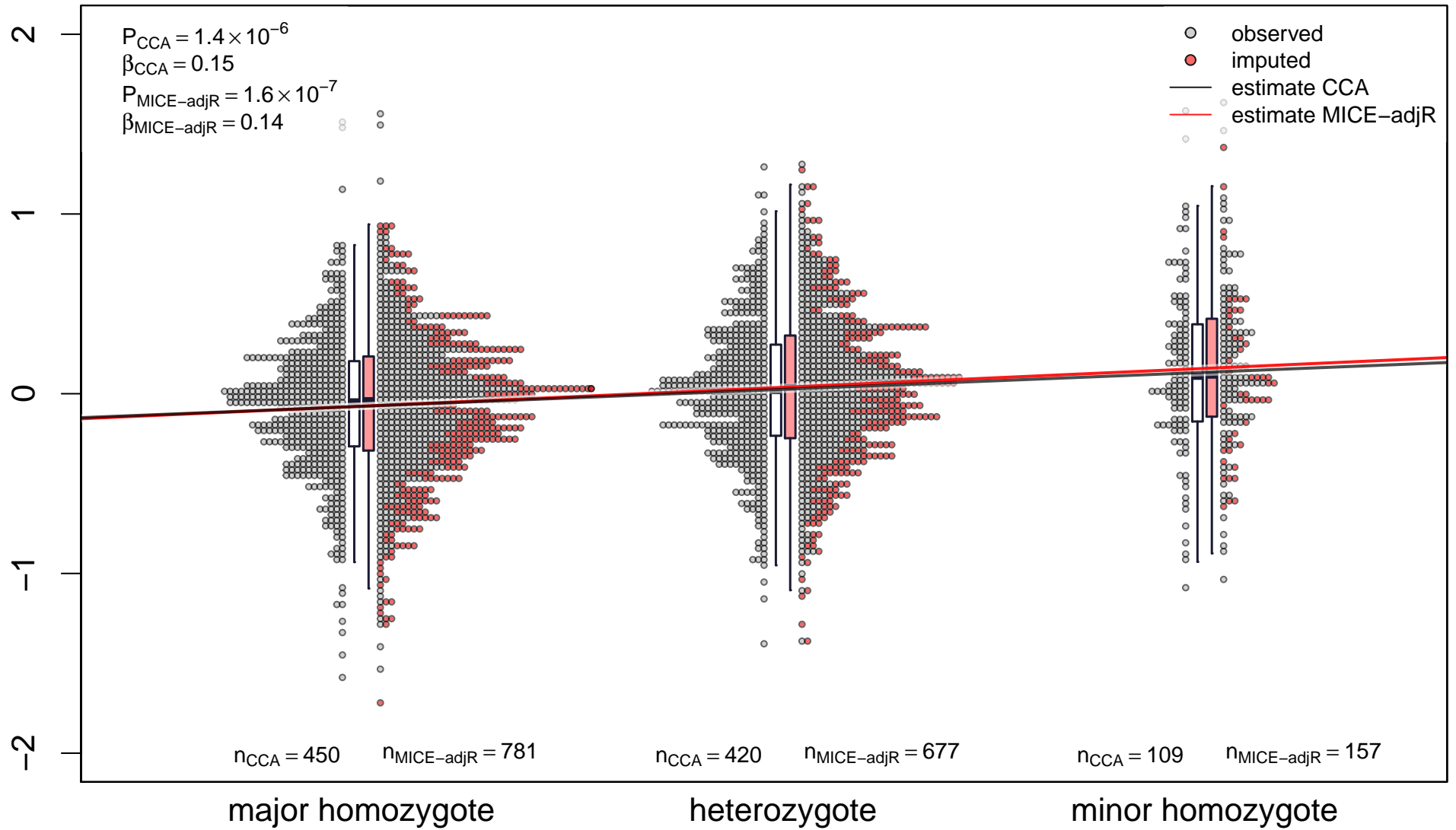
# MICE-norm

Model residuals of 2-linoleoylglycerophosphoethanolamine\*



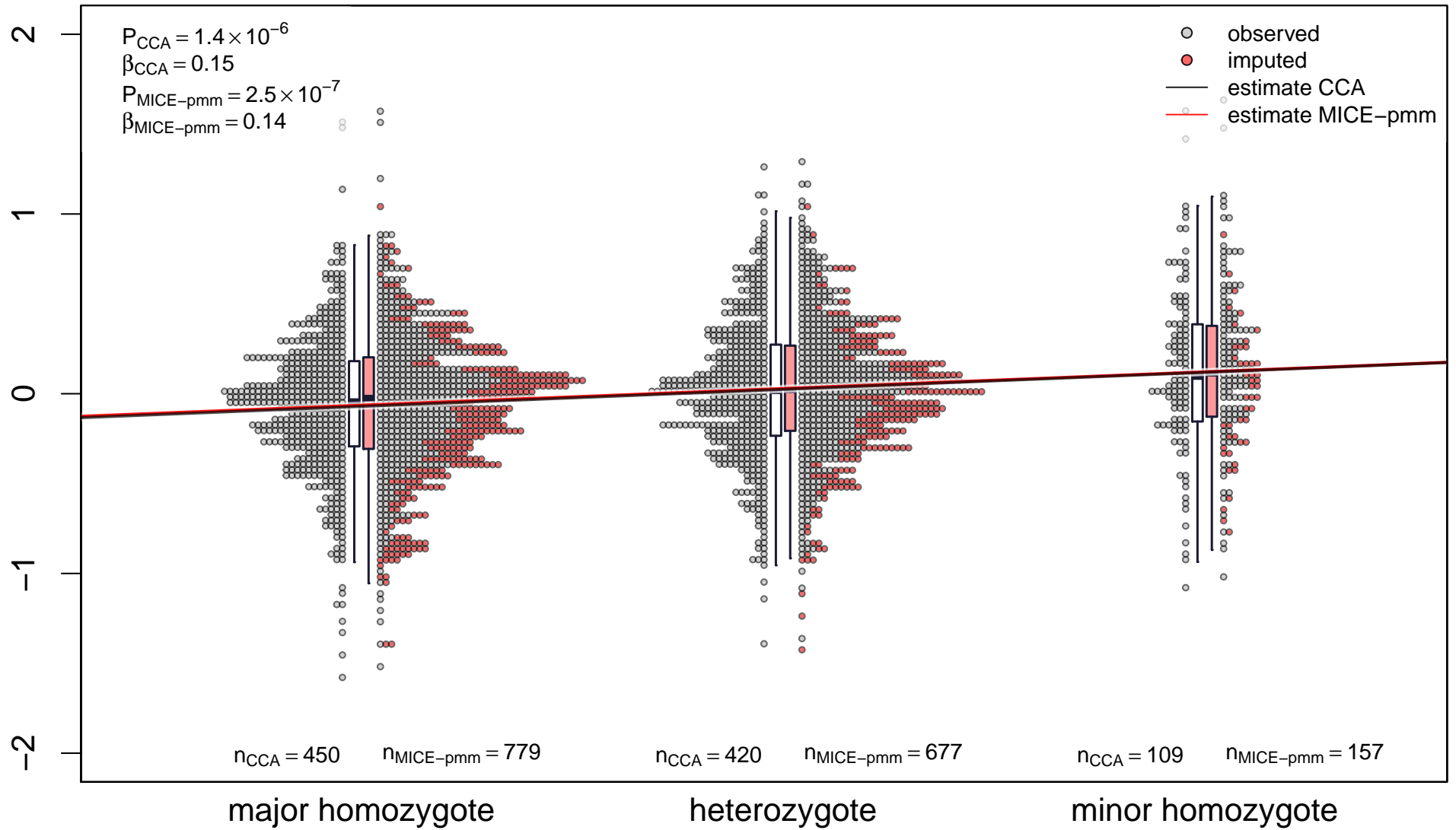
# MICE-adjR

Model residuals of 2-linoleoylglycerophosphoethanolamine\*



# MICE-pmm

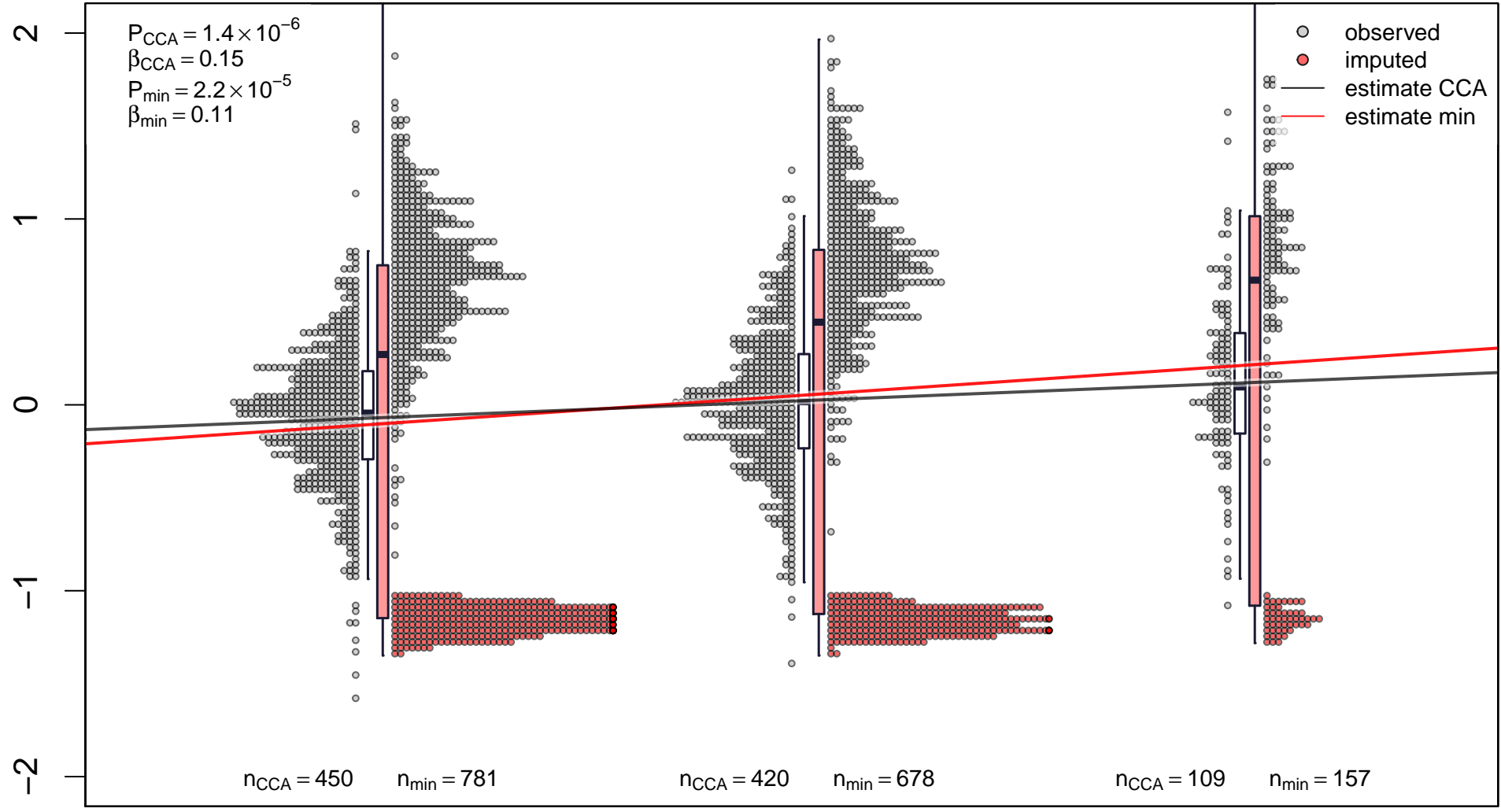
Model residuals of 2-linoleoylglycerophosphoethanolamine\*



Genotype of SNP rs174535 (FADS1)

Model residuals of 2-linoleoylglycerophosphoethanolamine\*

min



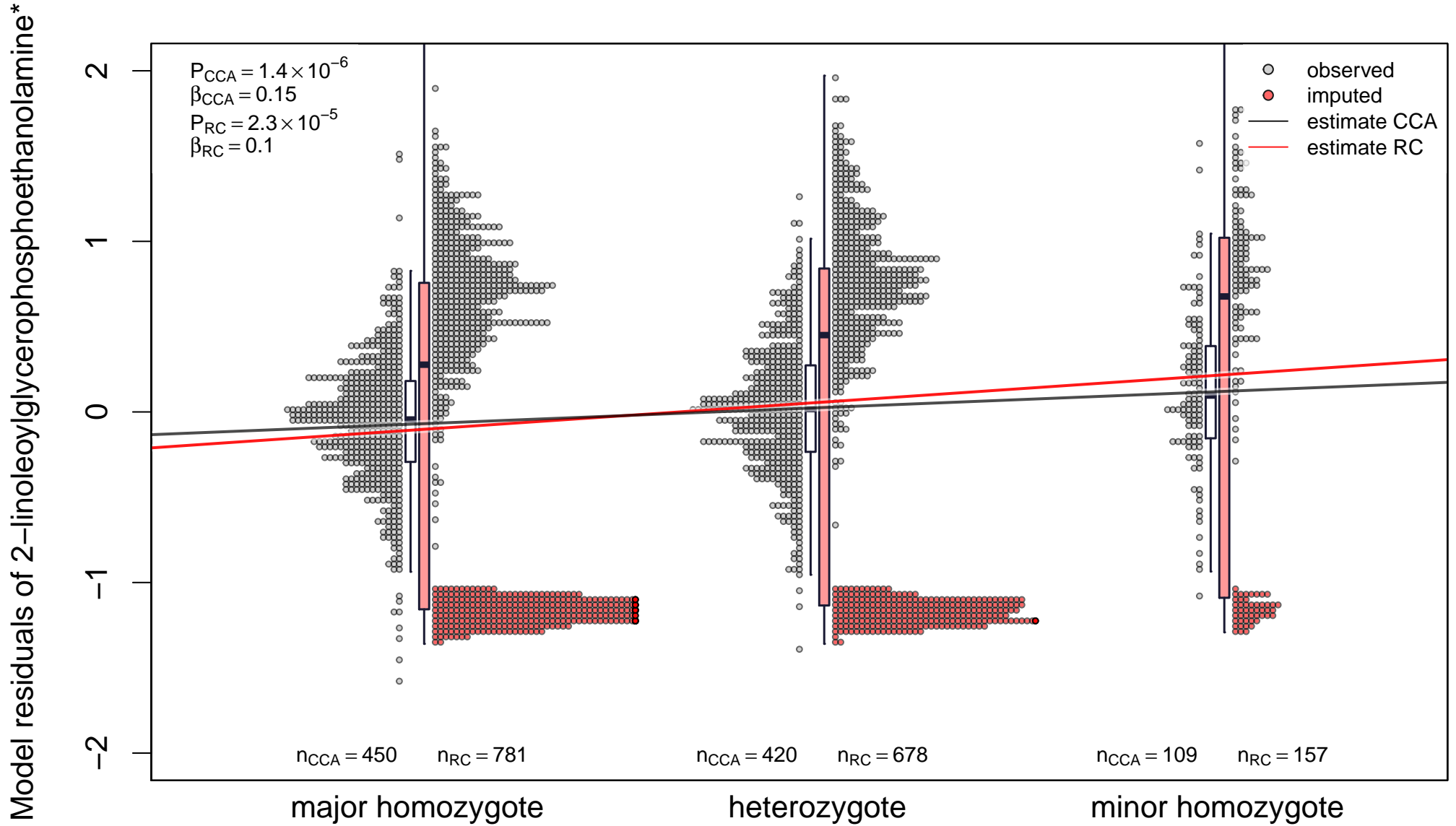
major homozygote

heterozygote

minor homozygote

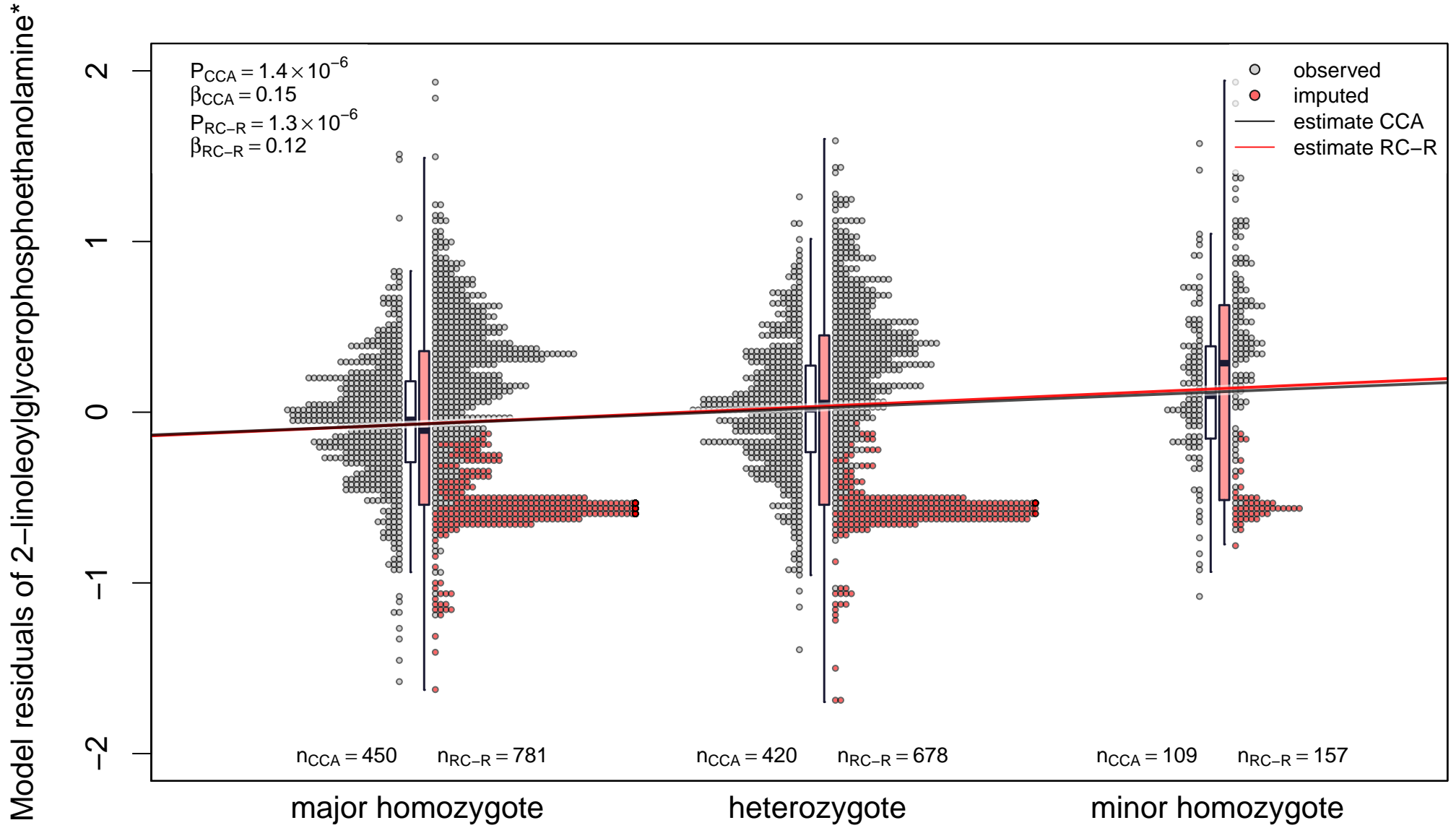
Genotype of SNP rs174535 (FADS1)

# RC



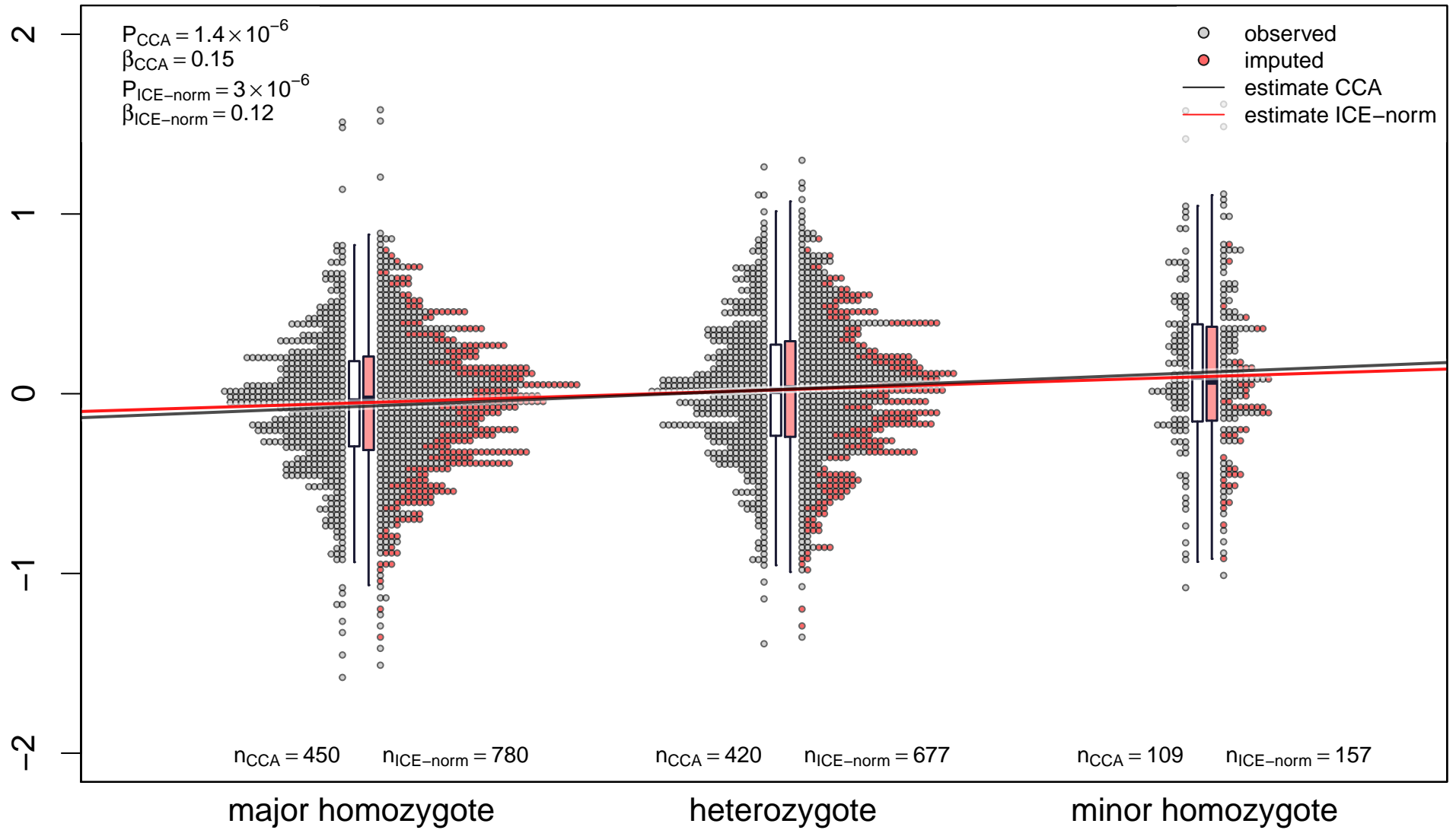


# RC-R



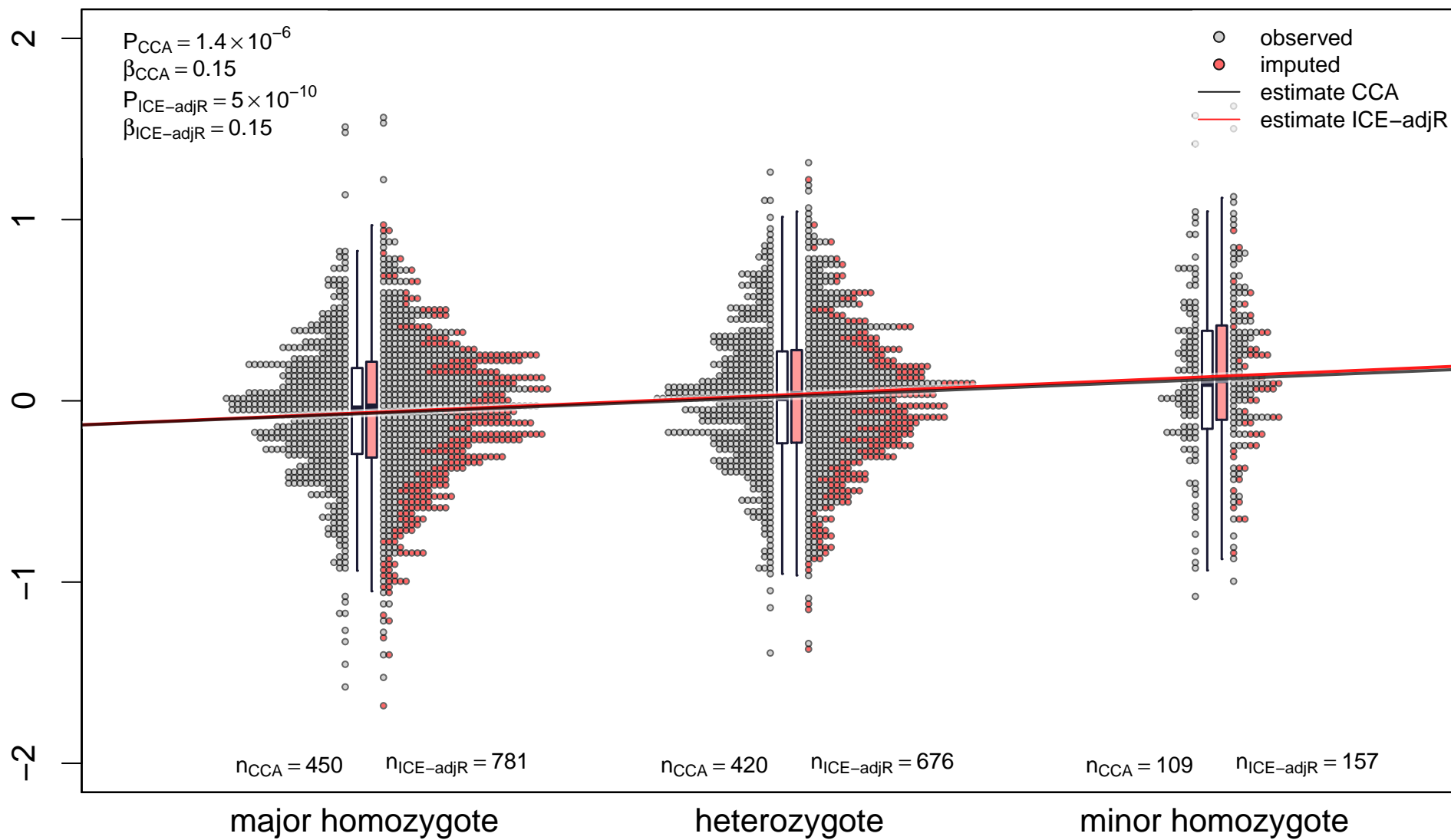
# ICE-norm

Model residuals of 2-linoleoylglycerophosphoethanolamine\*



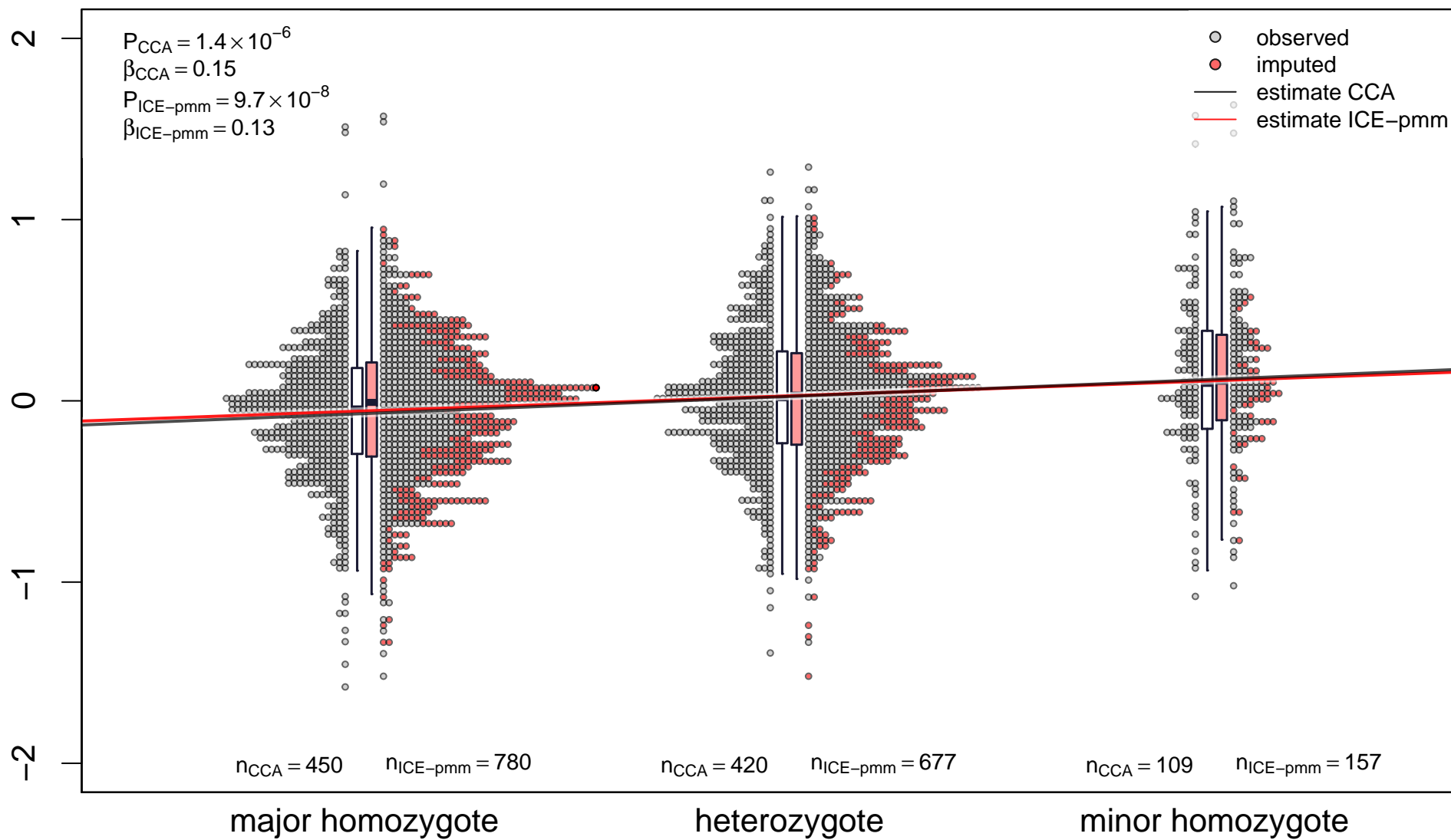
# ICE-adjR

Model residuals of 2-linoleoylglycerophosphoethanolamine\*

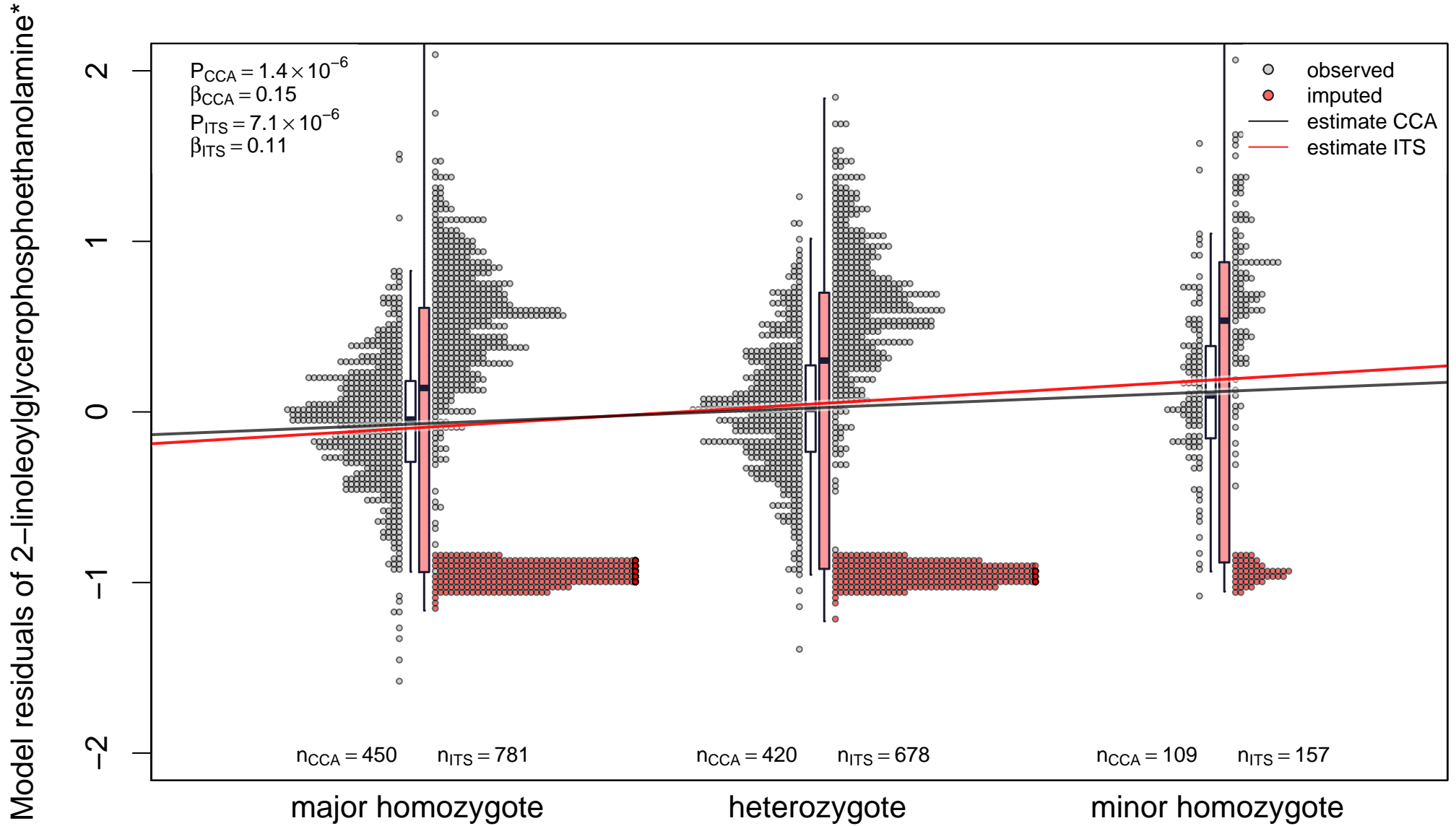


# ICE-pmm

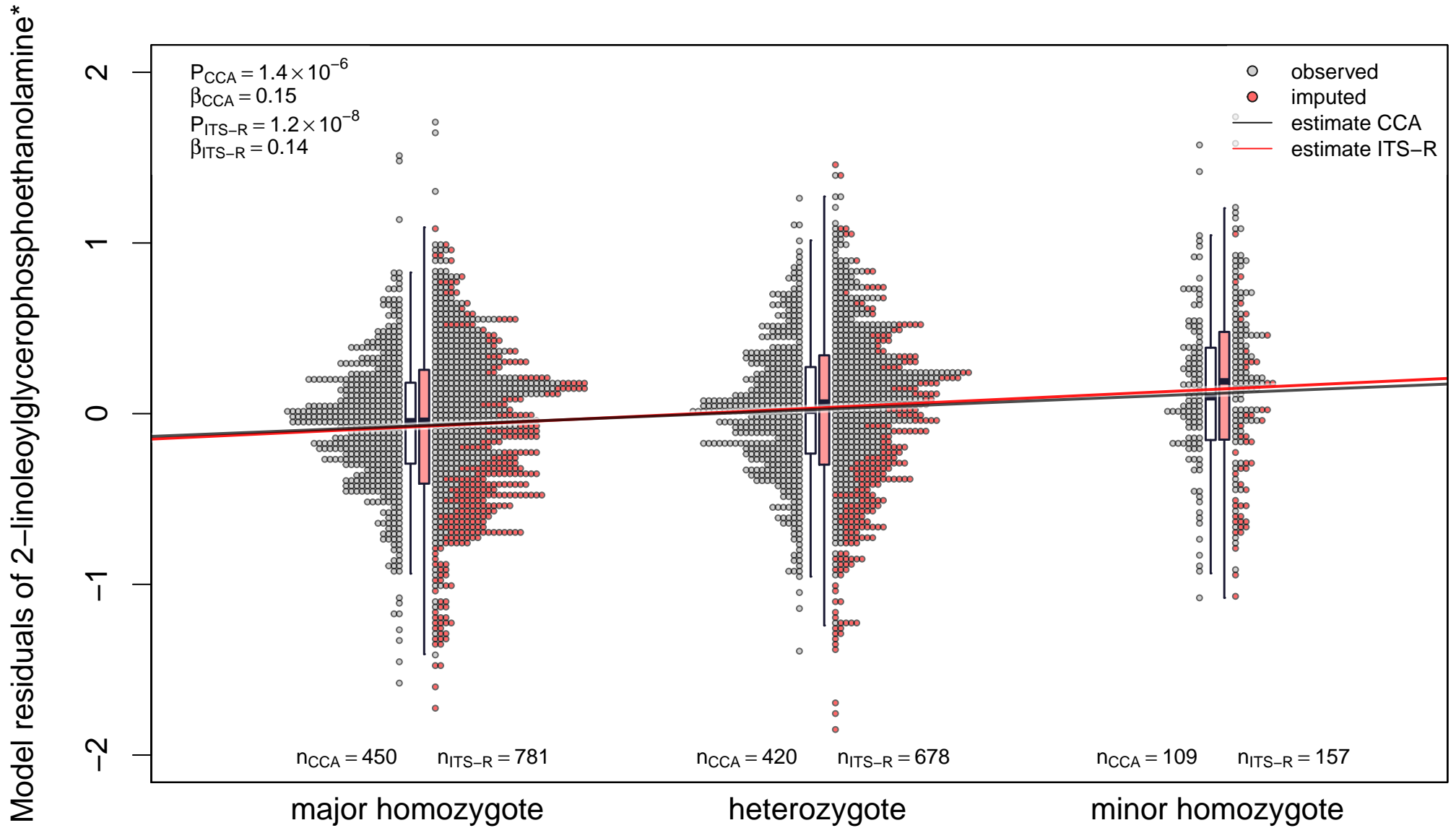
Model residuals of 2-linoleoylglycerophosphoethanolamine\*



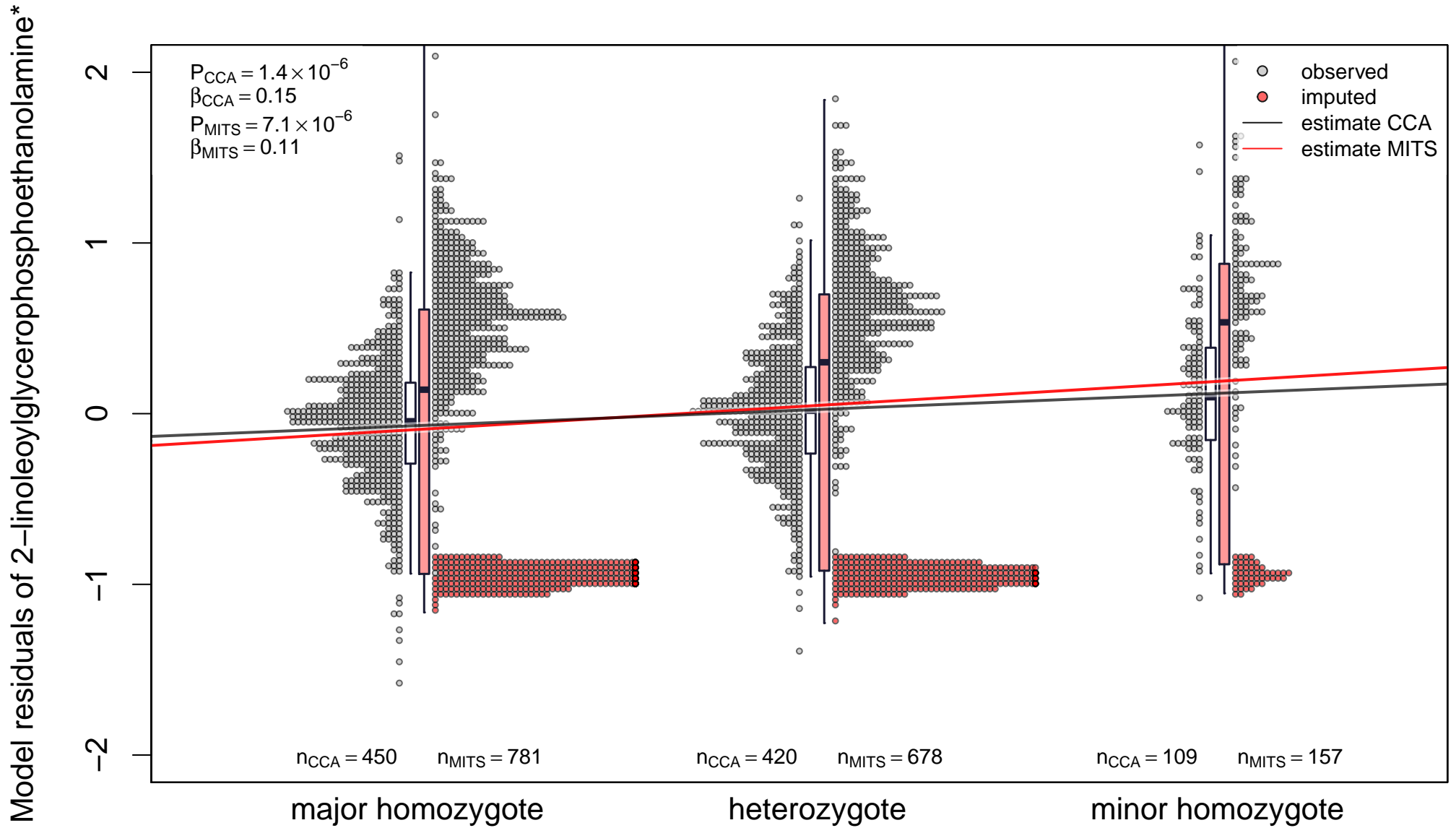
# ITS



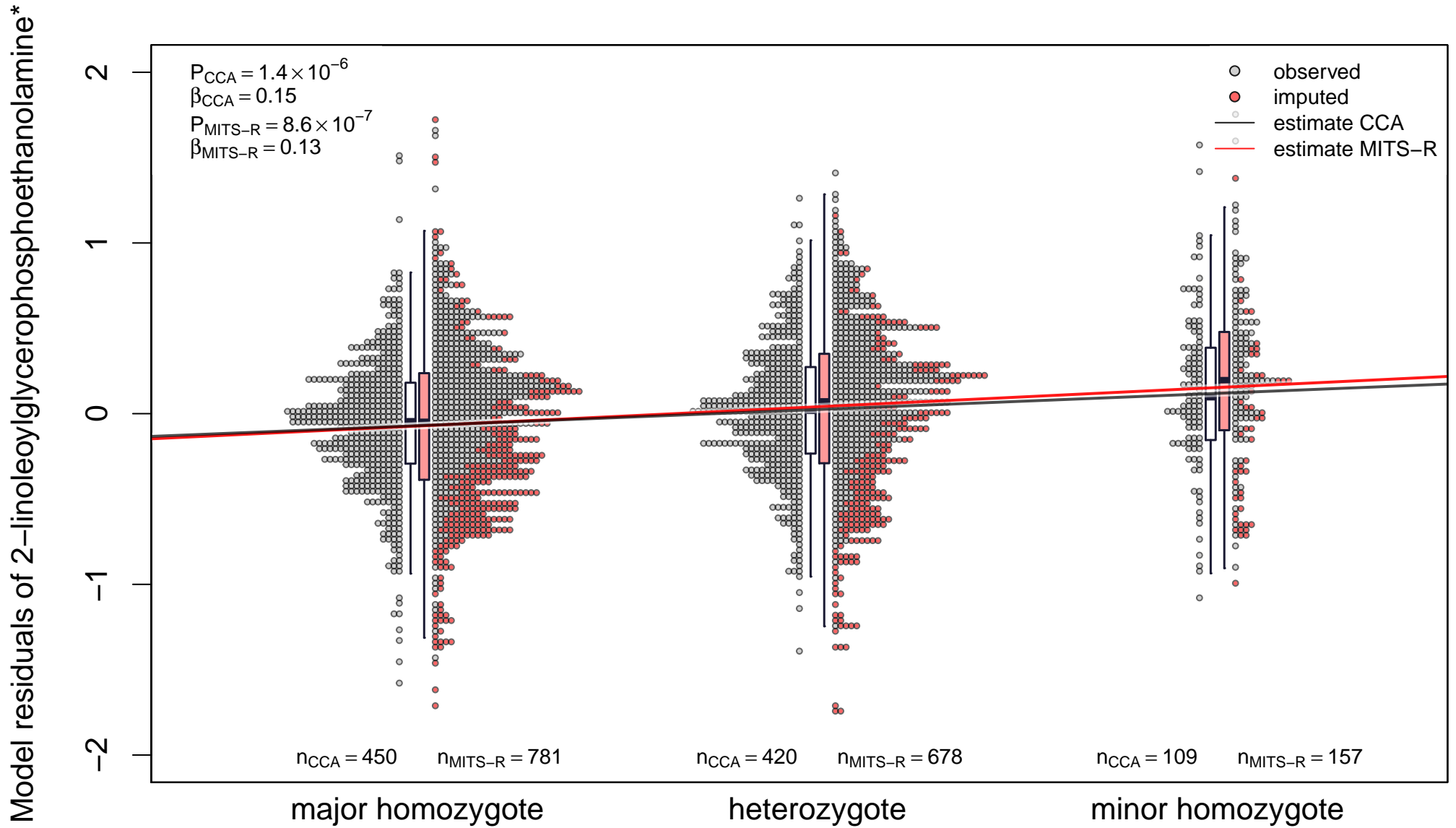
# ITS-R



# MITS

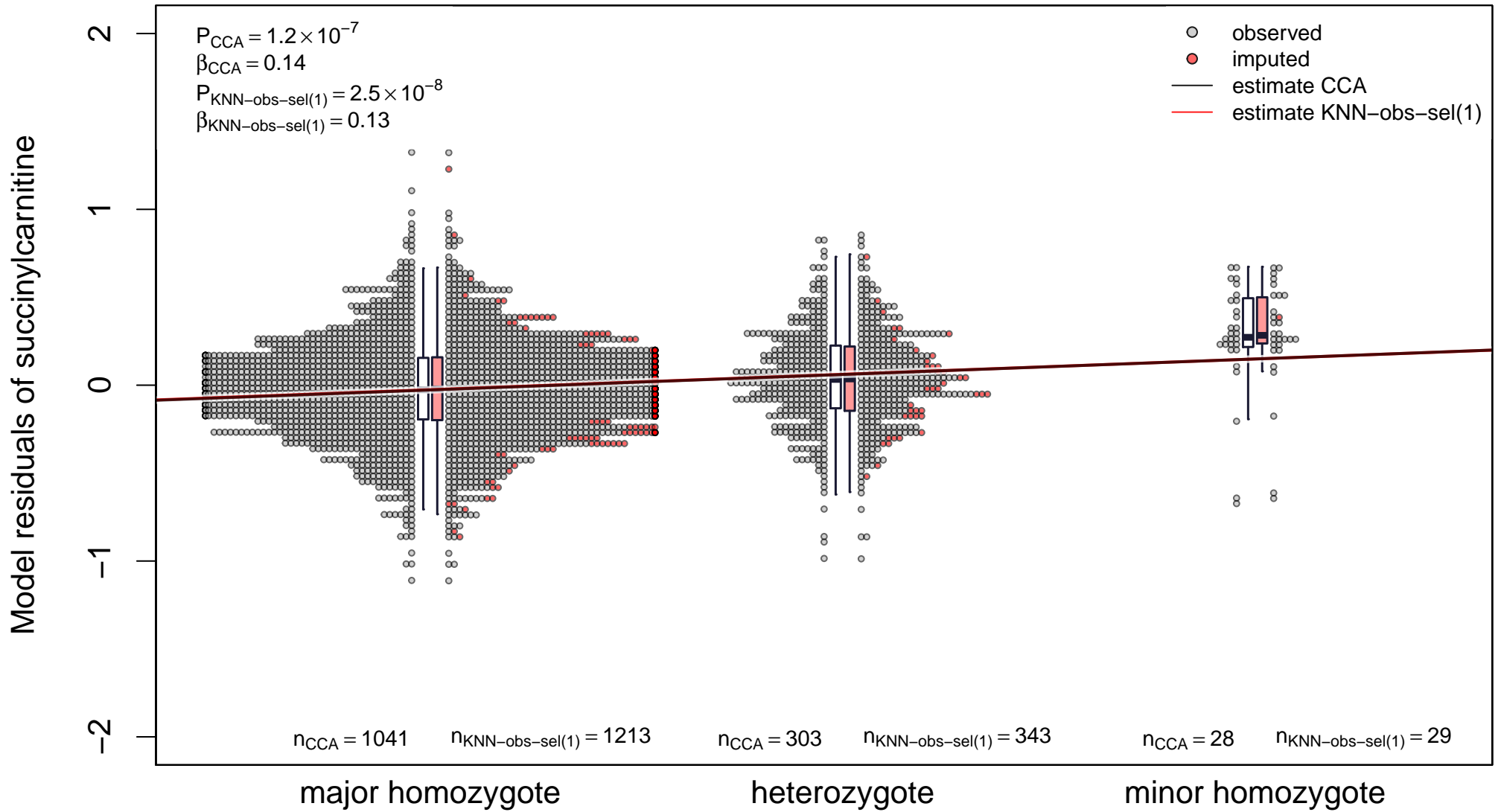


# MITS-R



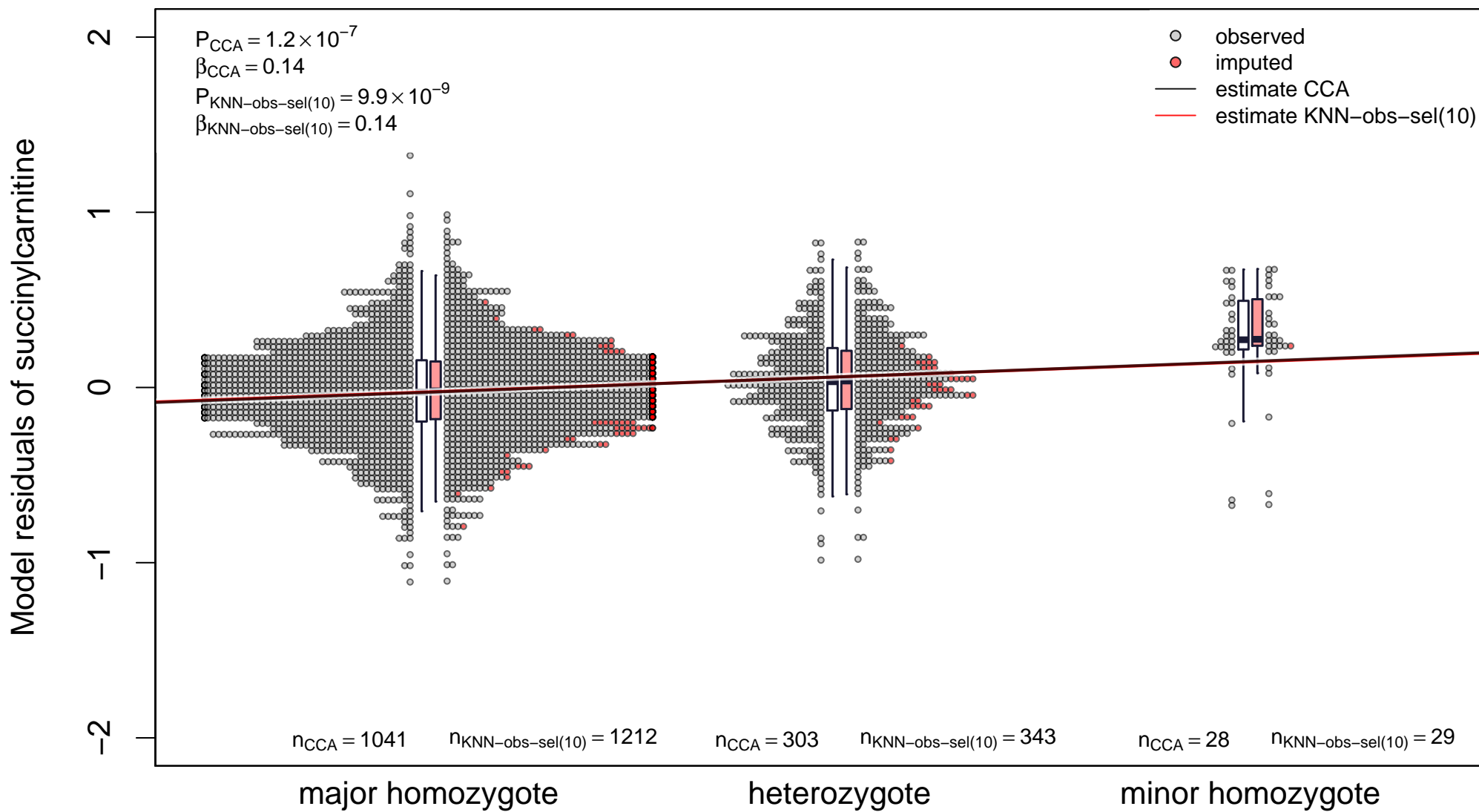


# KNN-obs-sel(1)



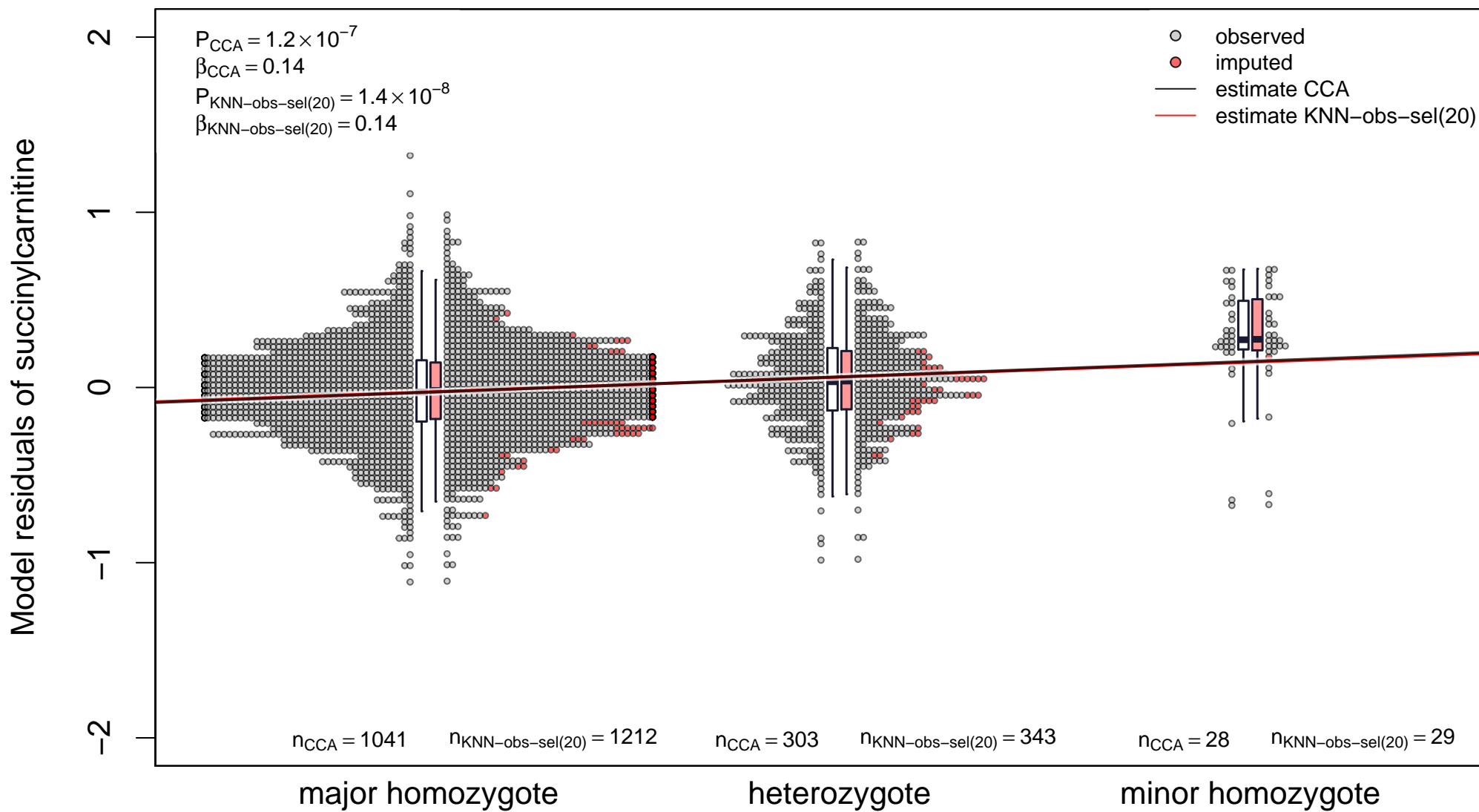
Genotype of SNP rs17806888 (SUCLG2)

# KNN-obs-sel(10)



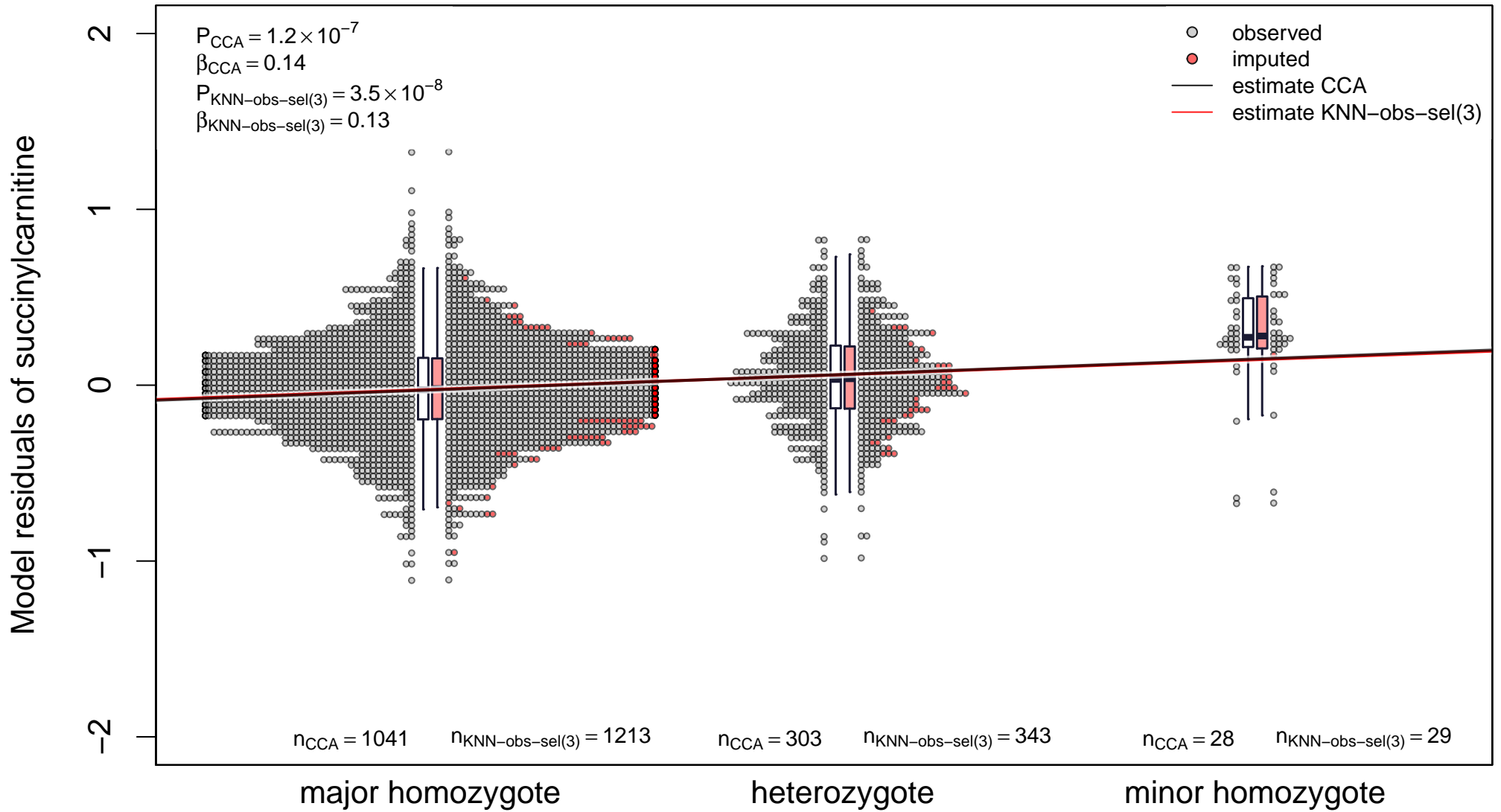
Genotype of SNP rs17806888 (SUCLG2)

# KNN-obs-sel(20)



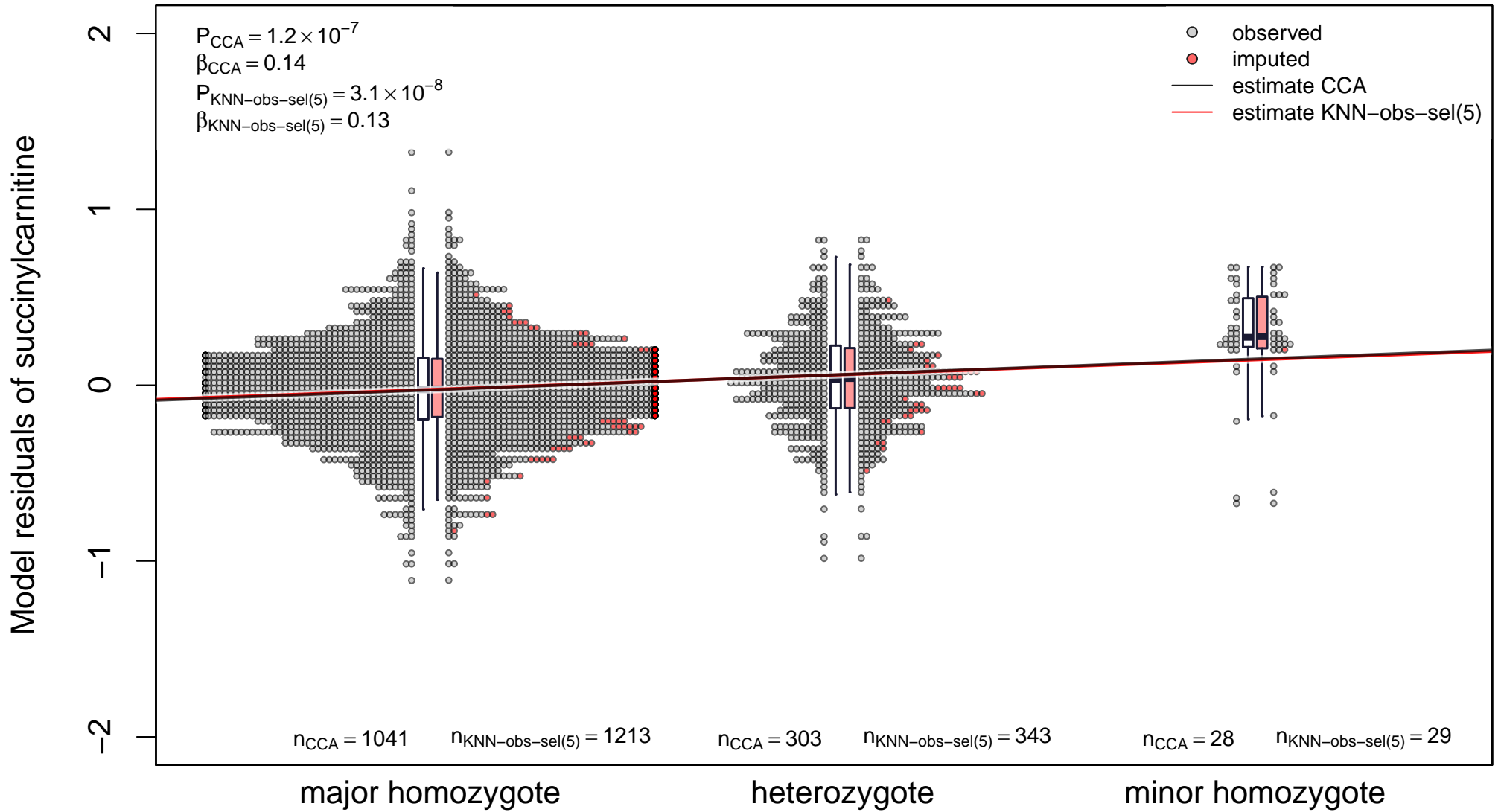
Genotype of SNP rs17806888 (SUCLG2)

# KNN-obs-sel(3)



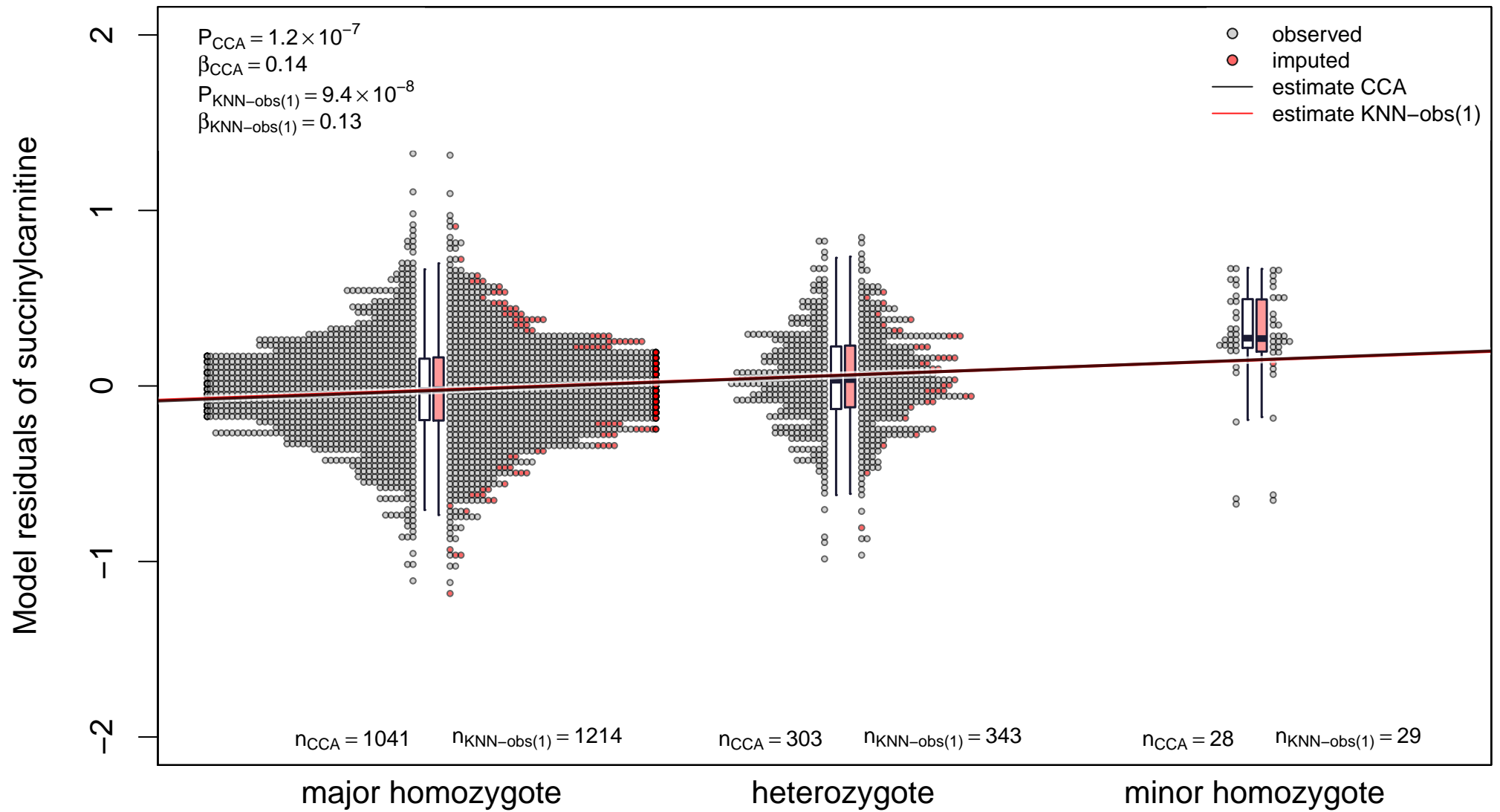
Genotype of SNP rs17806888 (SUCLG2)

# KNN-obs-sel(5)



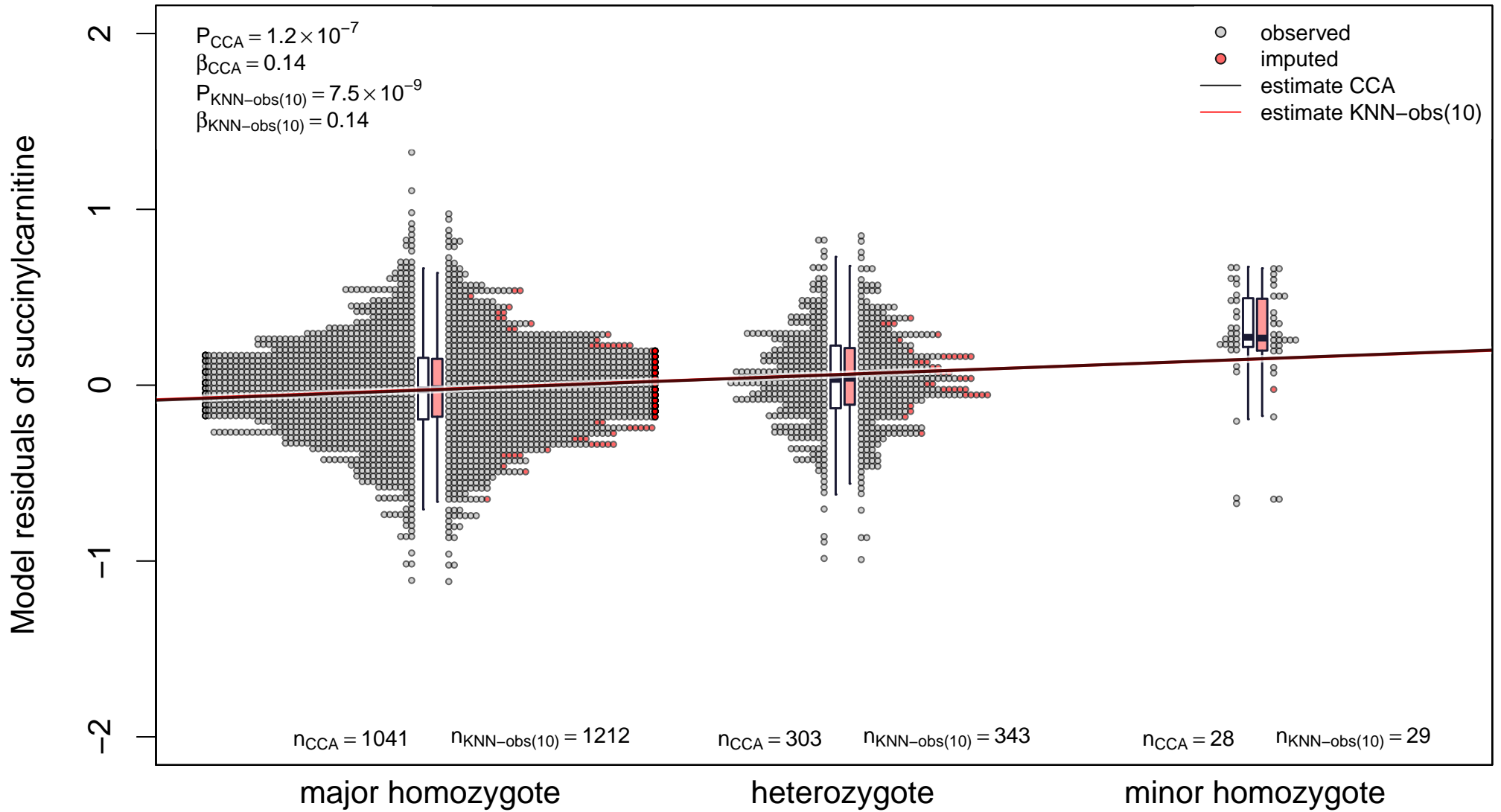
Genotype of SNP rs17806888 (SUCLG2)

# KNN-obs(1)



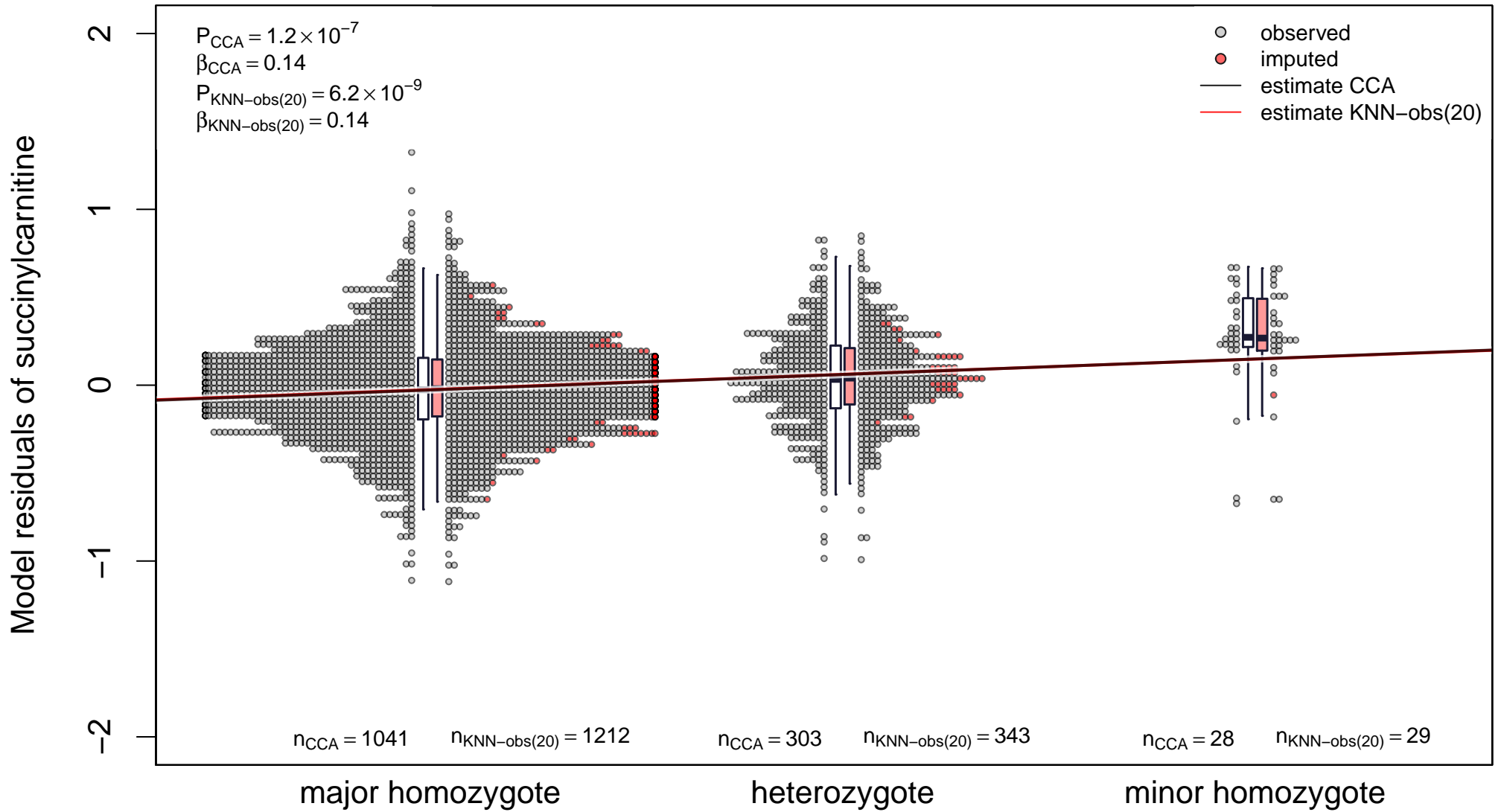
Genotype of SNP rs17806888 (SUCLG2)

# KNN-obs(10)



Genotype of SNP rs17806888 (SUCLG2)

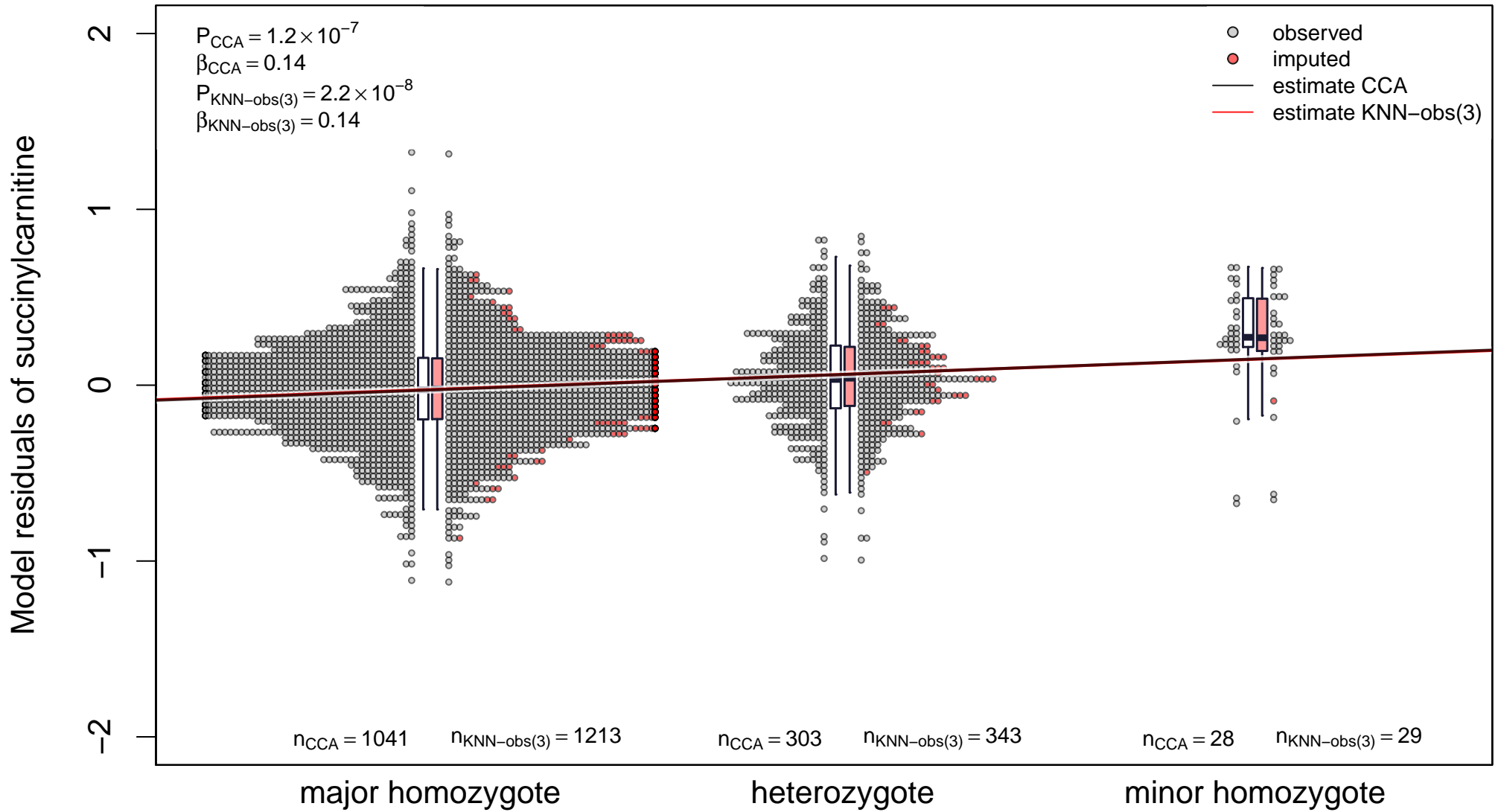
# KNN-obs(20)



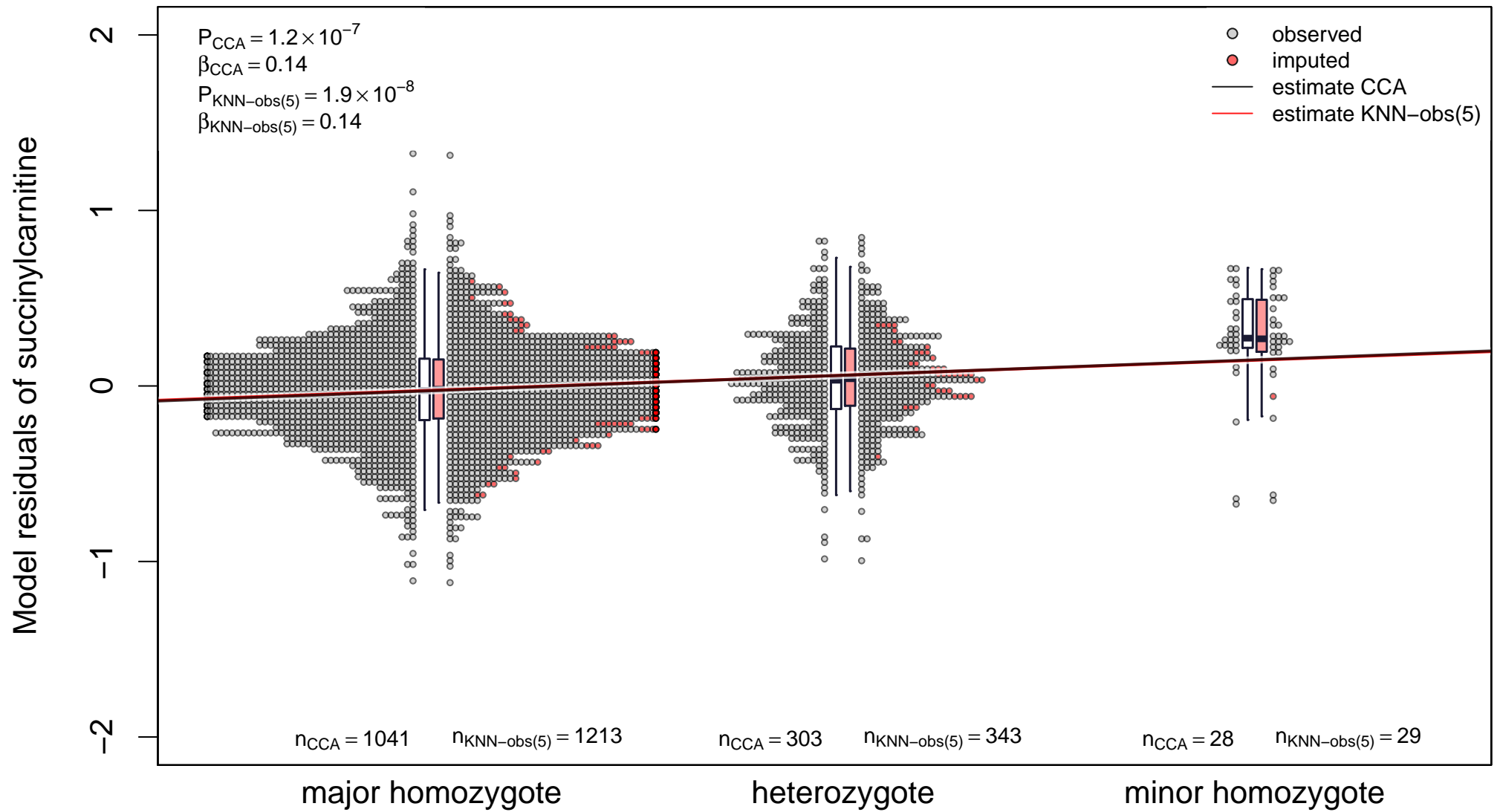
Genotype of SNP rs17806888 (SUCLG2)



# KNN-obs(3)

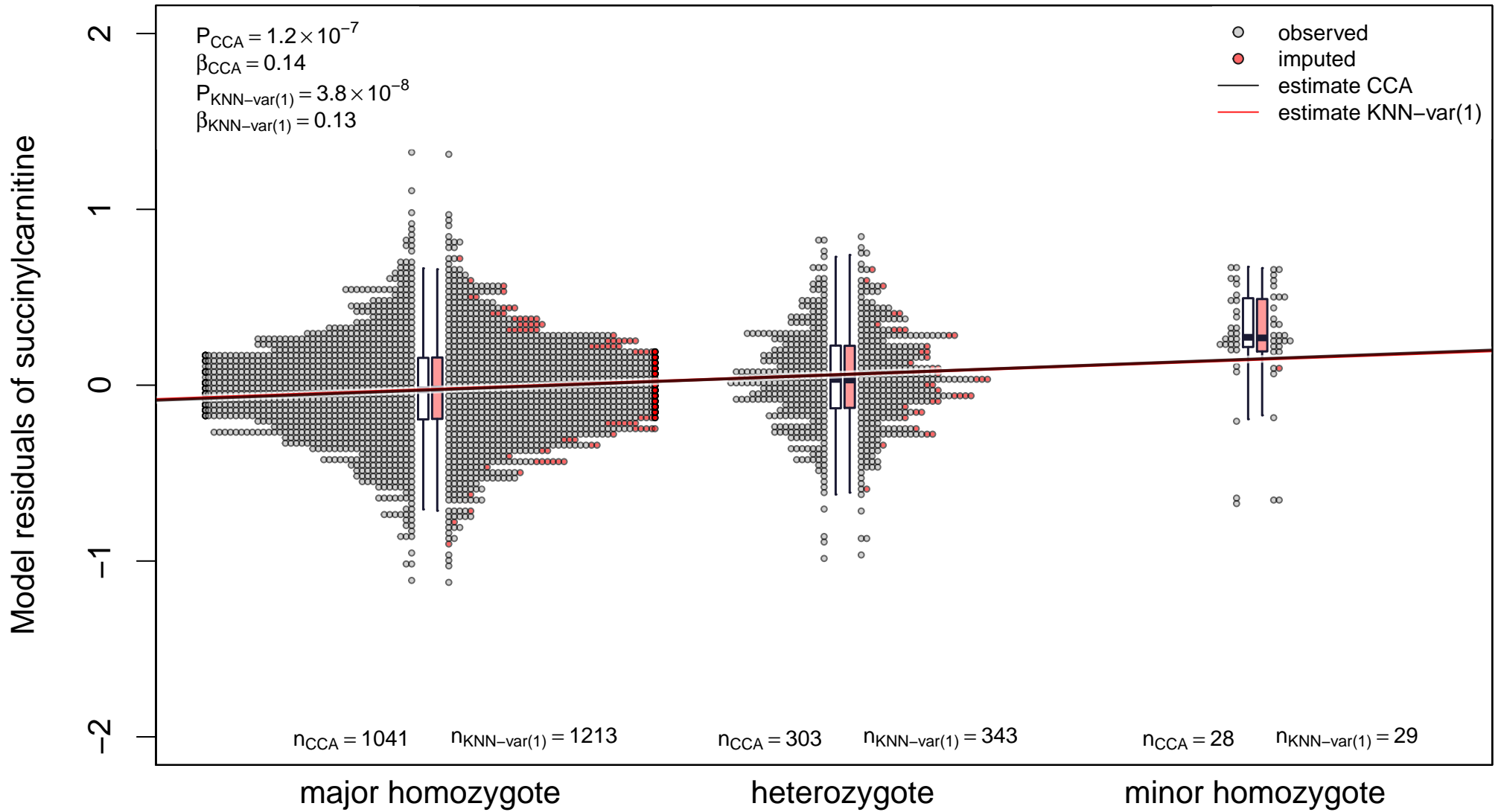


# KNN-obs(5)



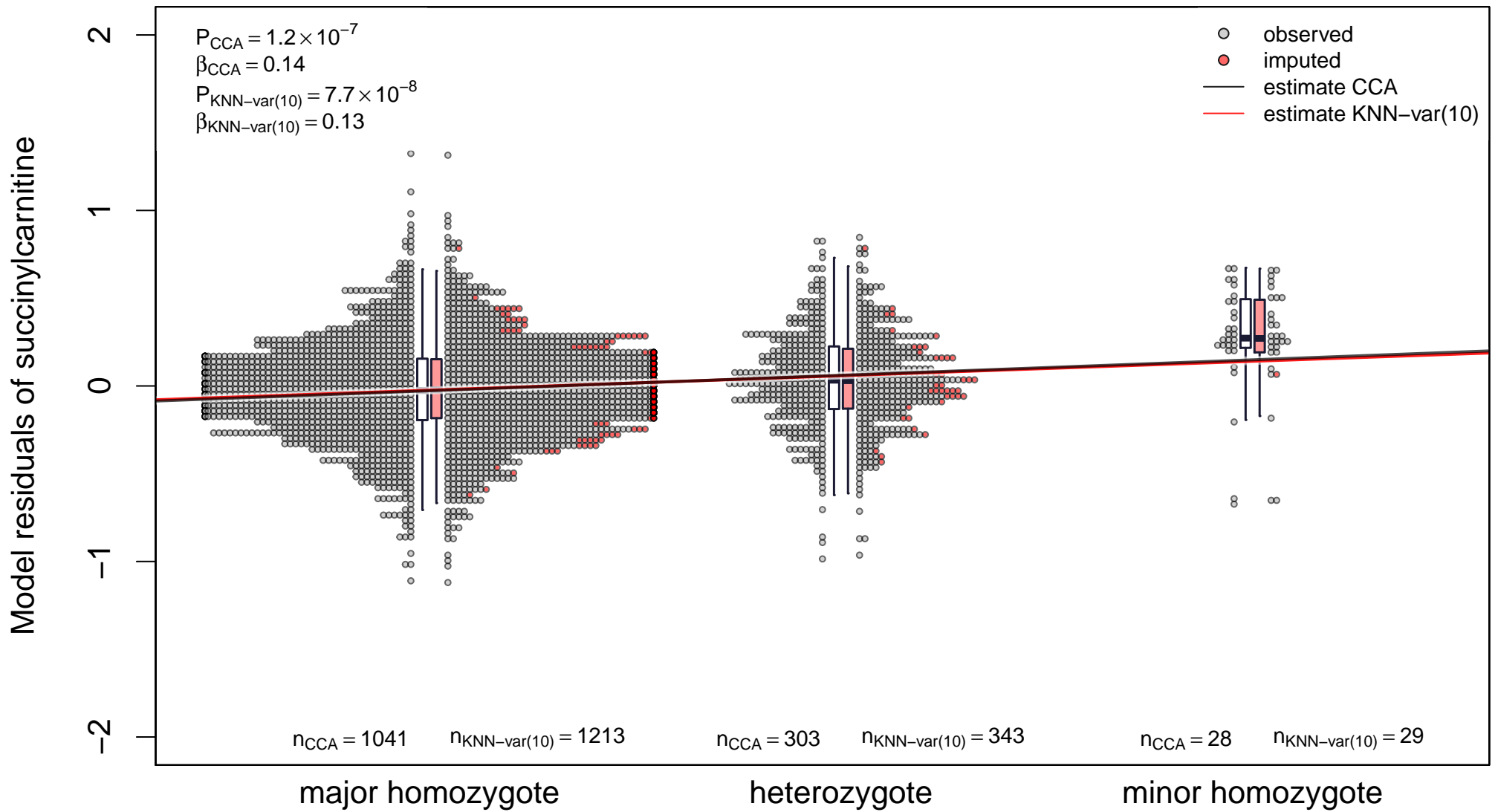
Genotype of SNP rs17806888 (SUCLG2)

# KNN-var(1)



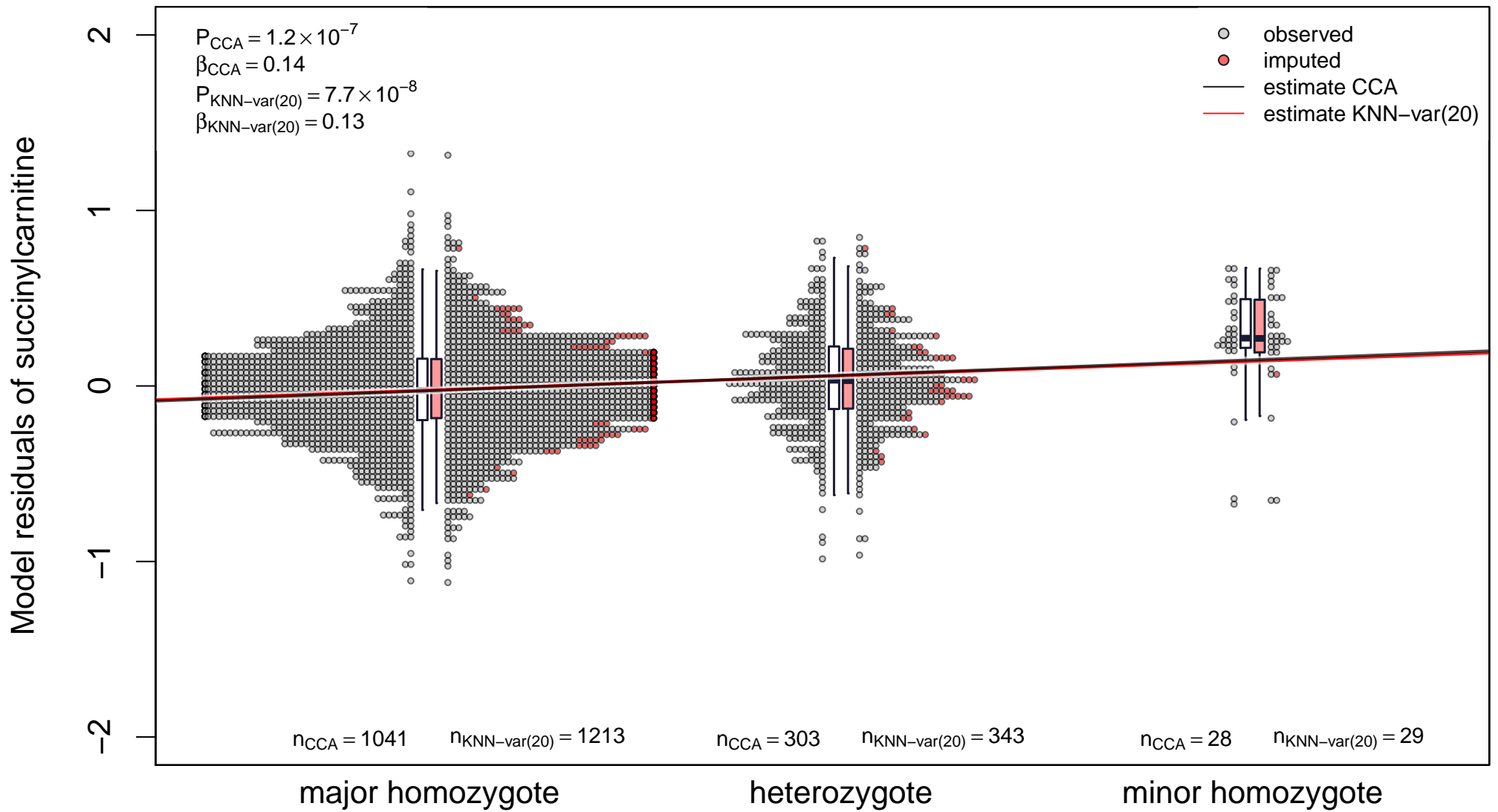
Genotype of SNP rs17806888 (SUCLG2)

# KNN-var(10)



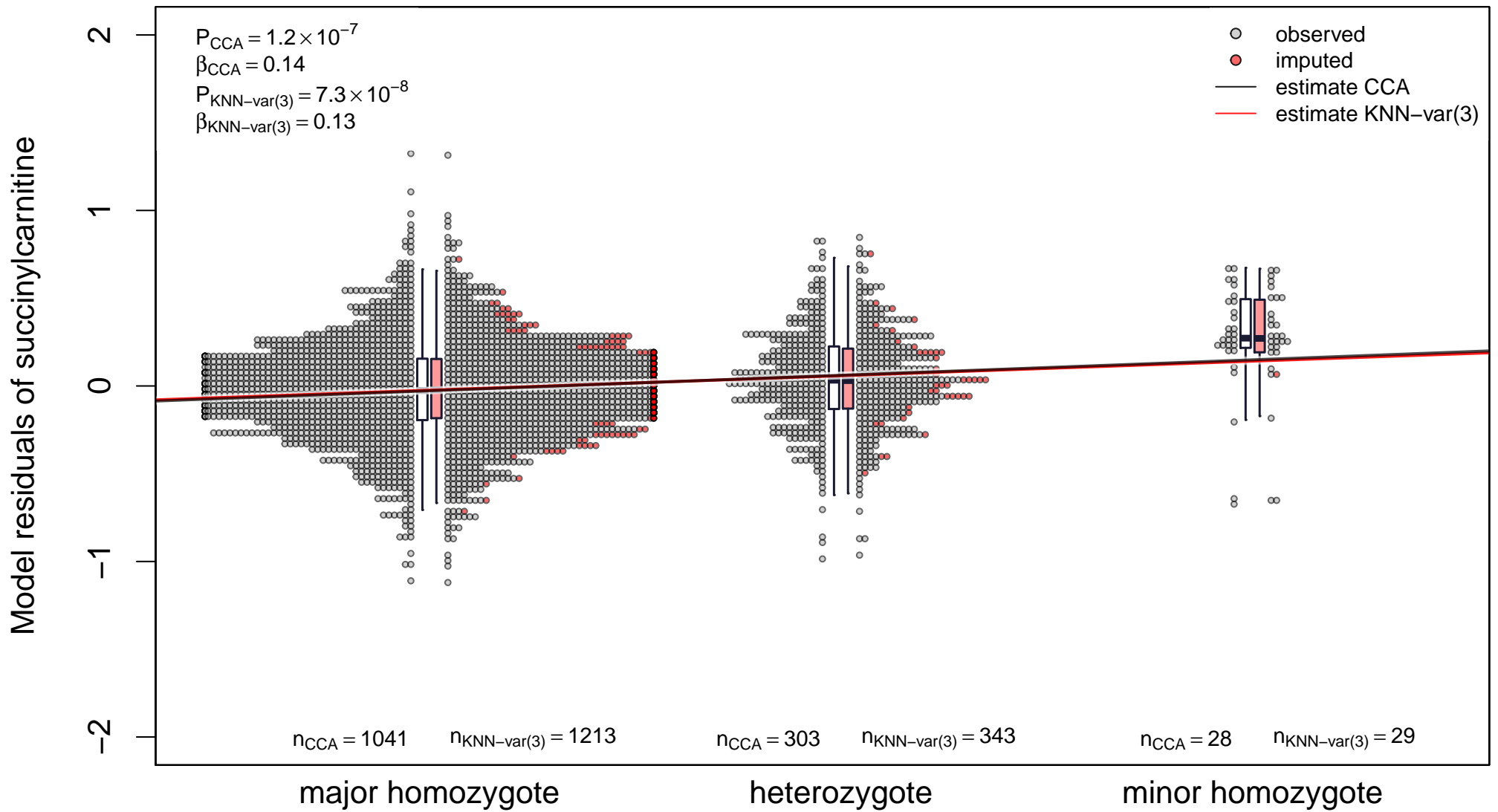
Genotype of SNP rs17806888 (SUCLG2)

# KNN-var(20)



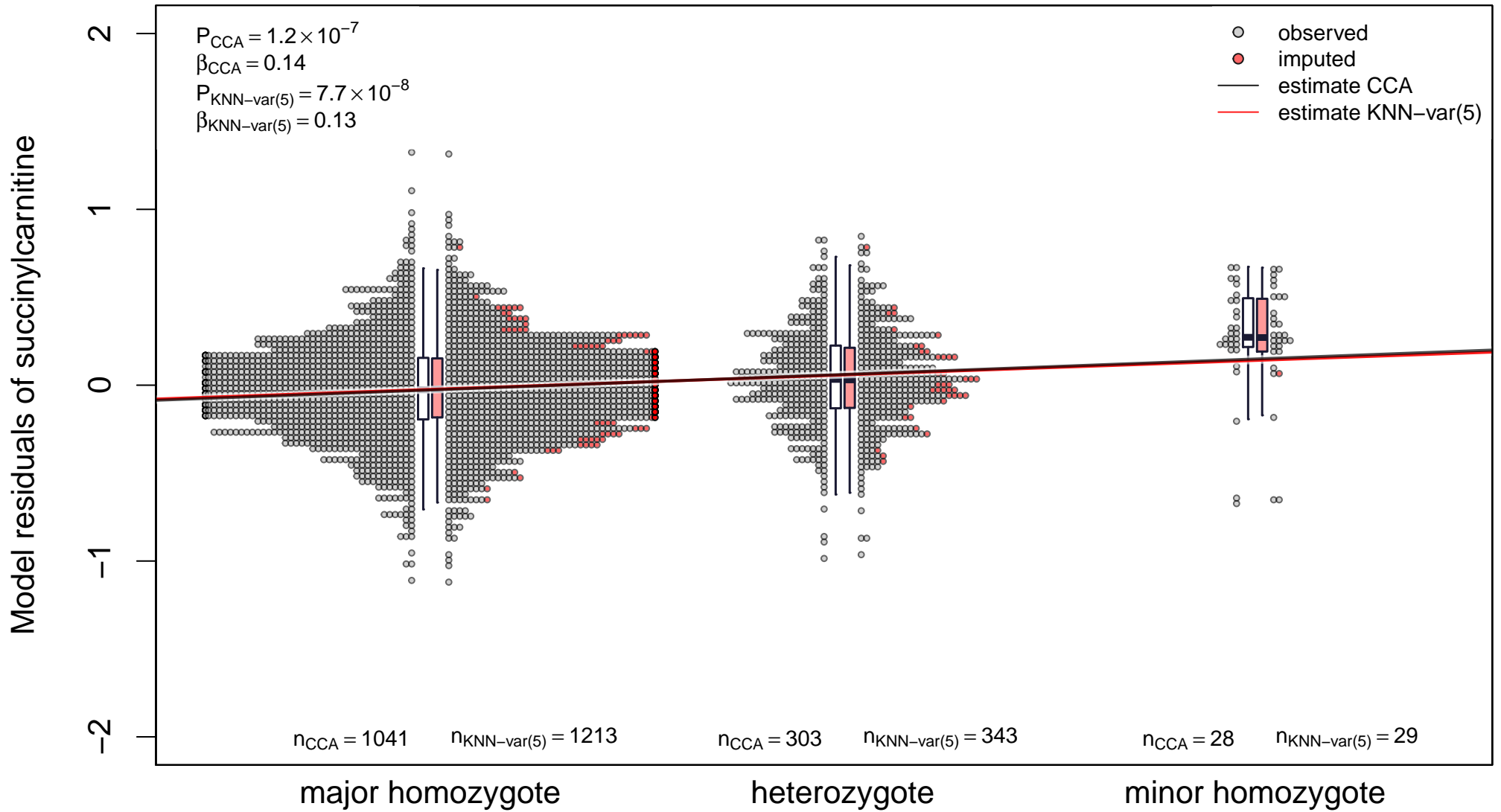
Genotype of SNP rs17806888 (SUCLG2)

# KNN-var(3)



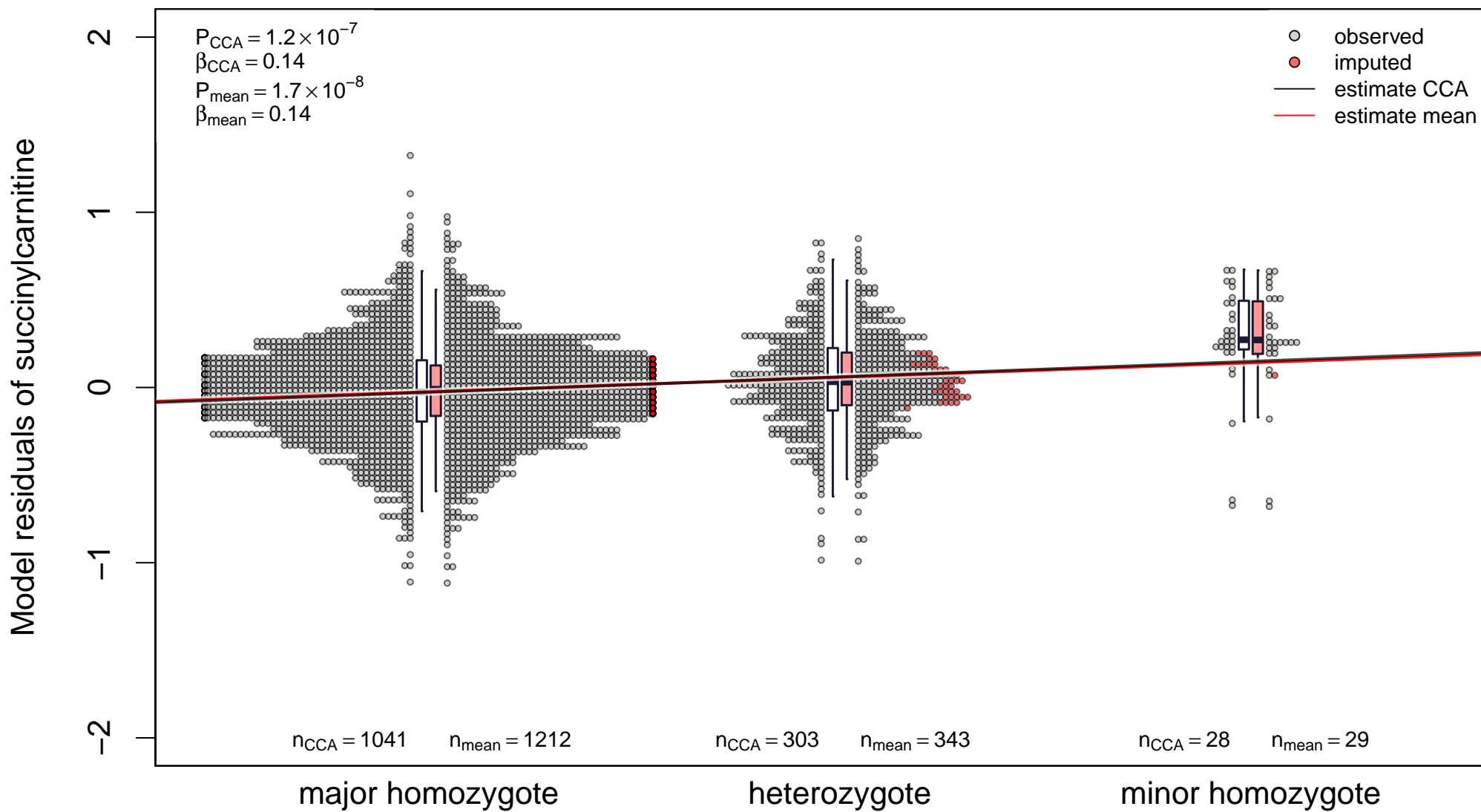
Genotype of SNP rs17806888 (SUCLG2)

# KNN-var(5)



Genotype of SNP rs17806888 (SUCLG2)

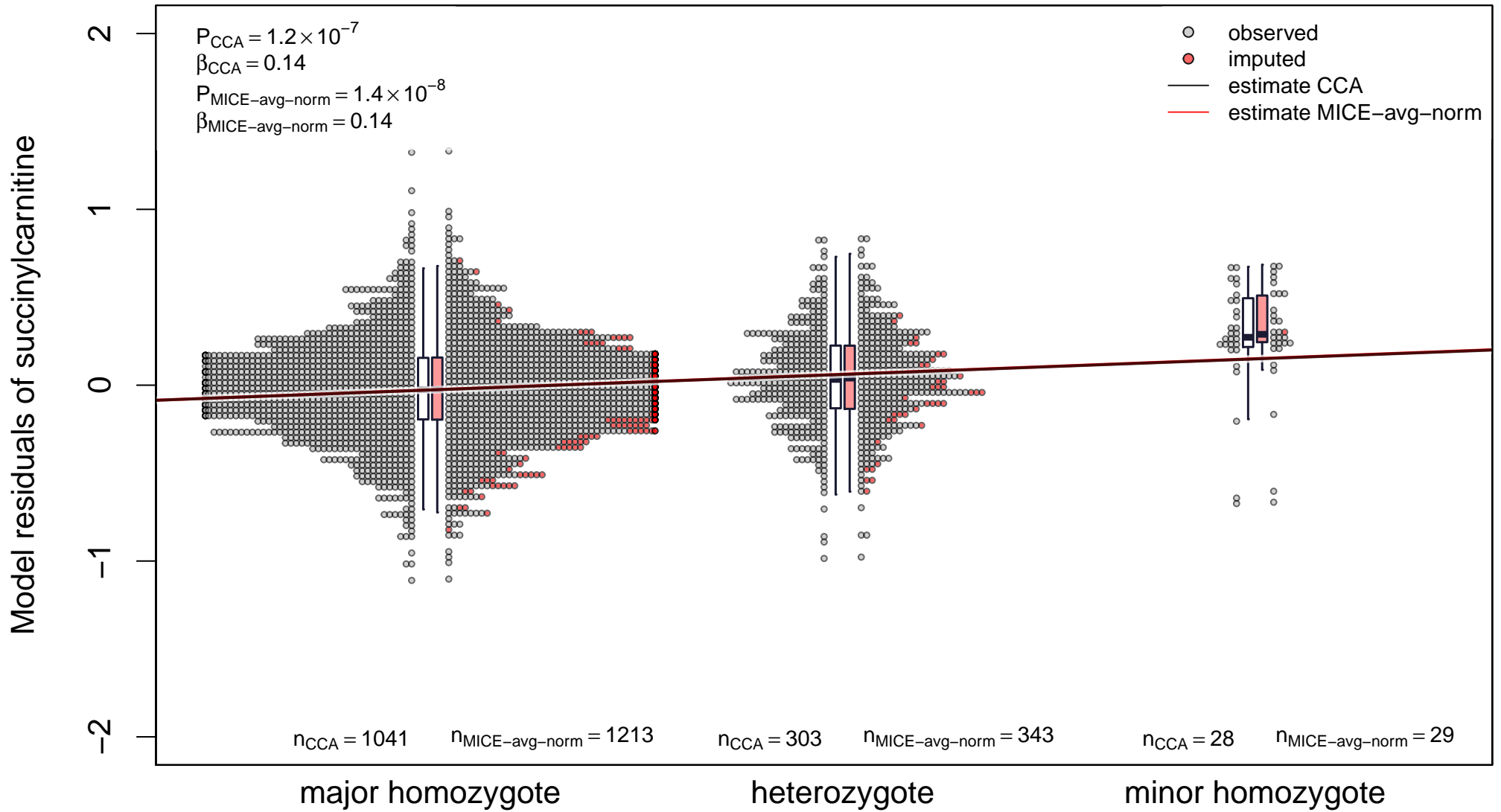
# mean



Genotype of SNP rs17806888 (SUCLG2)

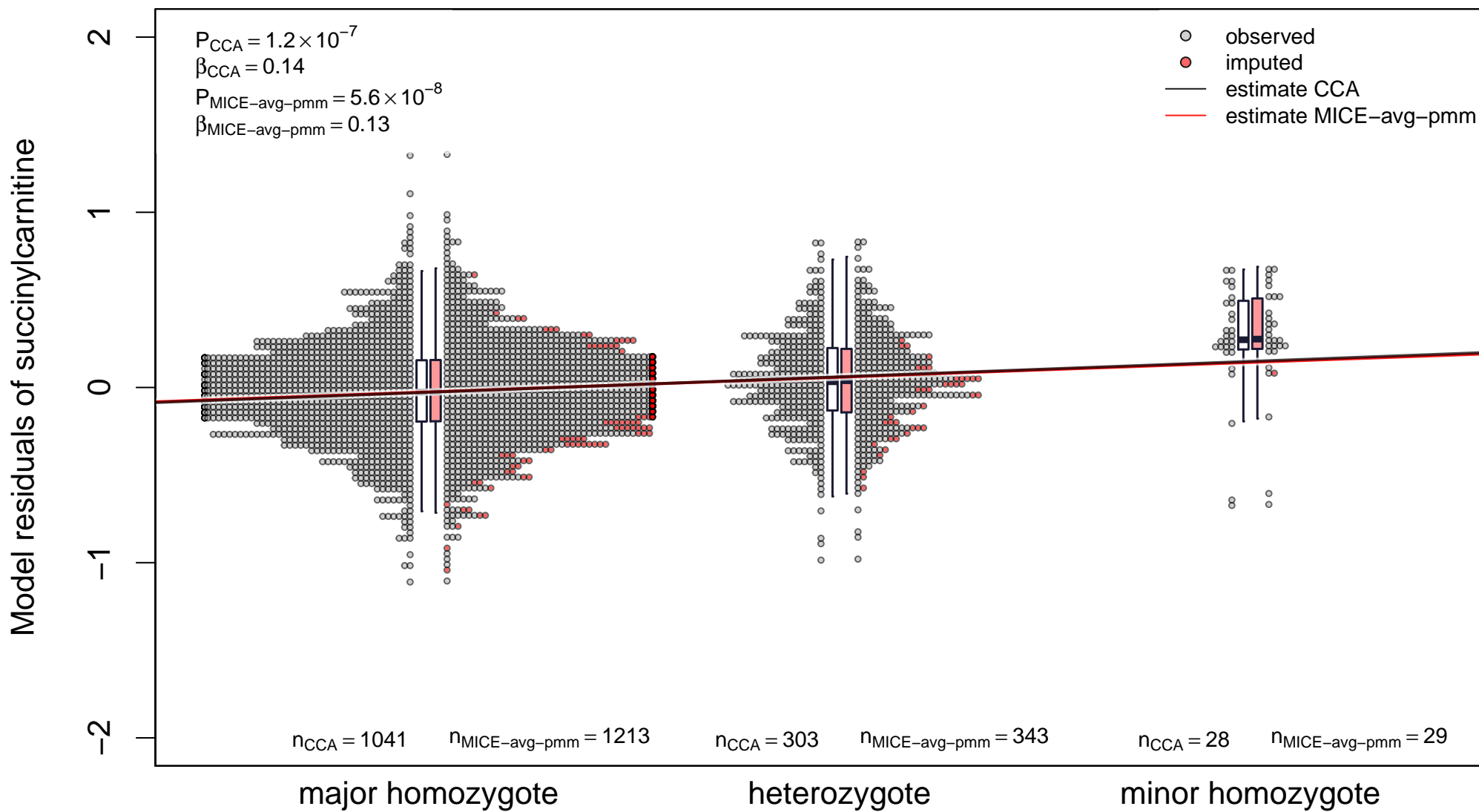


# MICE-avg-norm

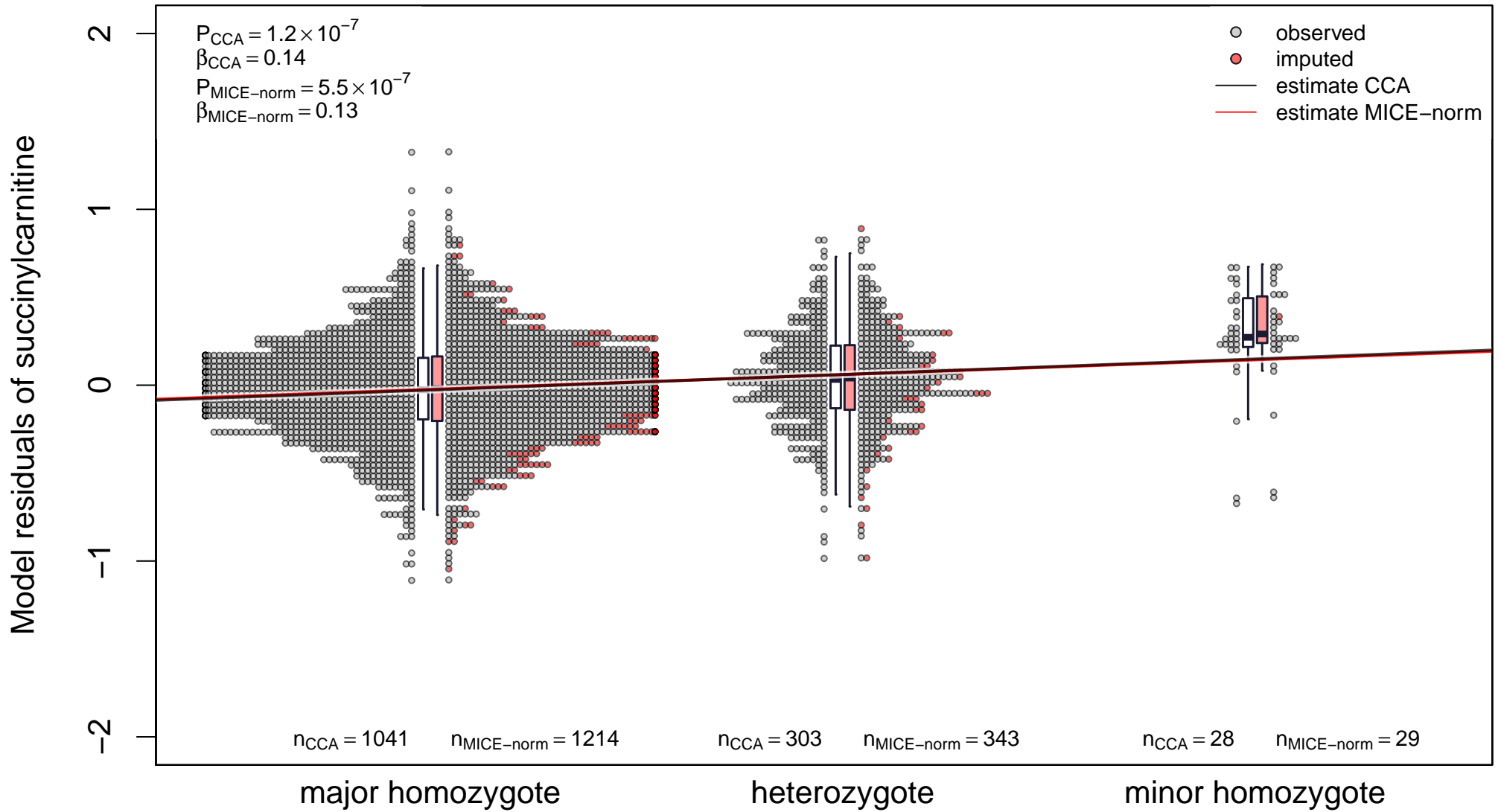


Genotype of SNP rs17806888 (SUCLG2)

# MICE-avg-pmm

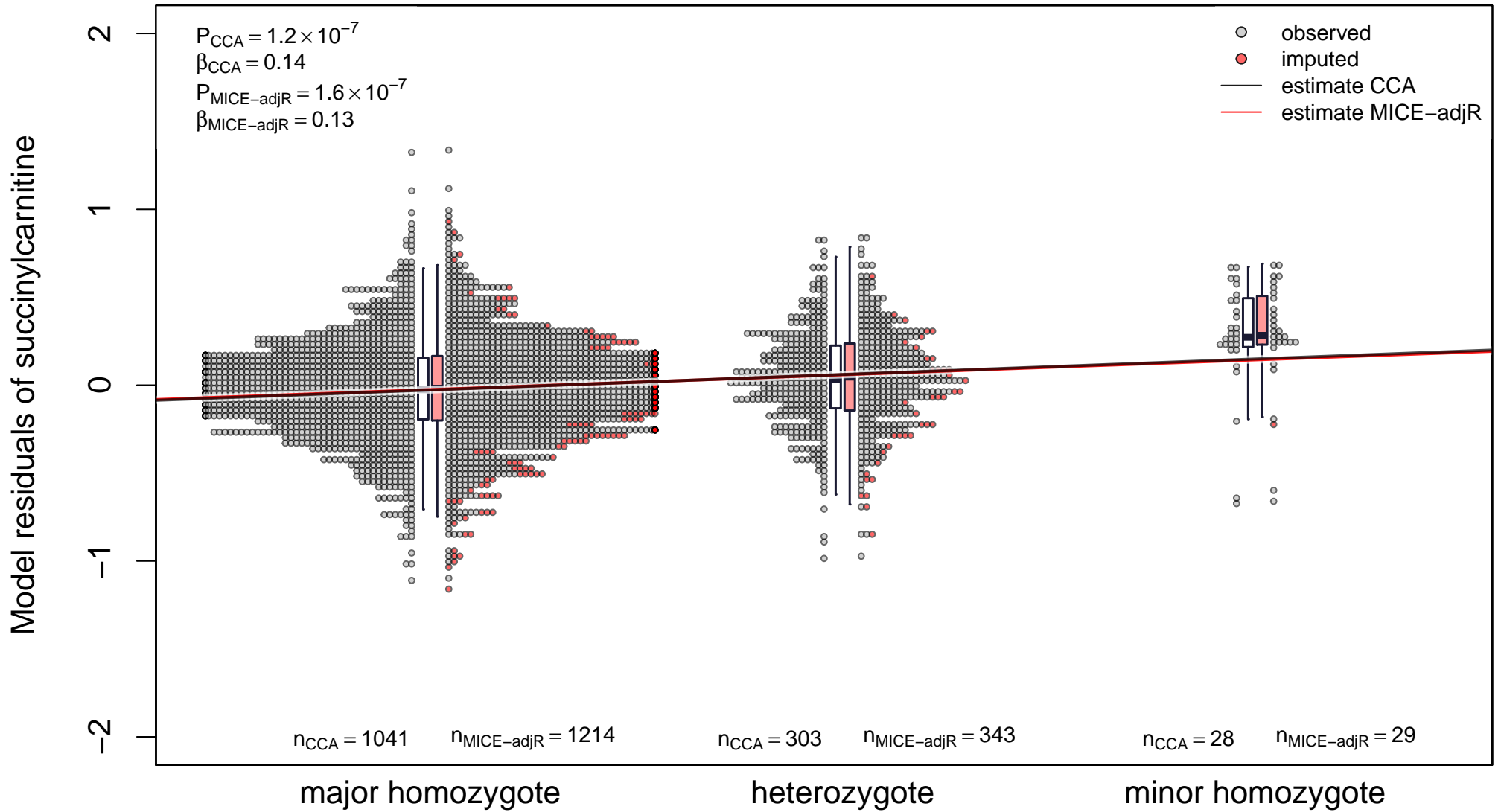


# MICE-norm



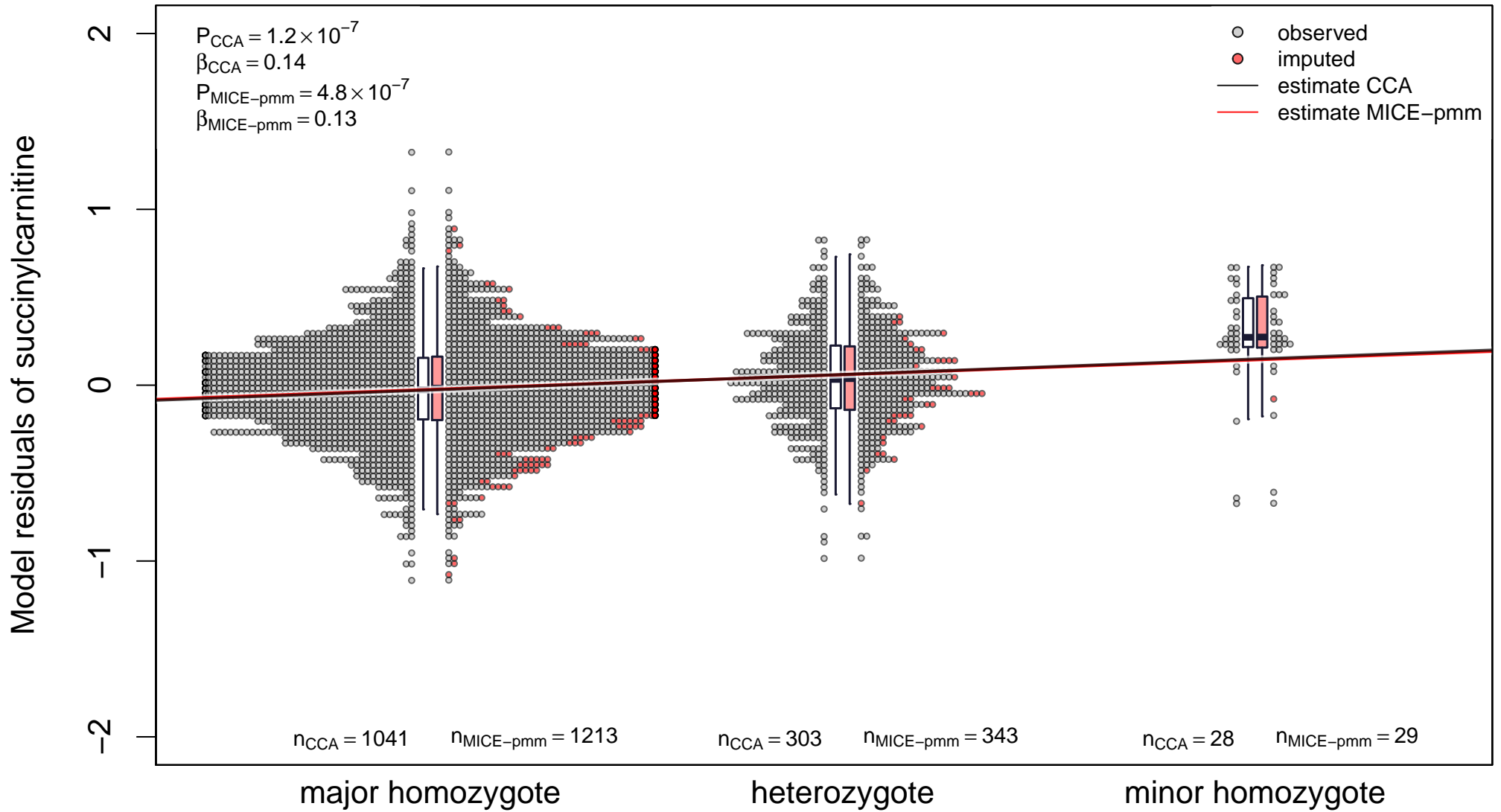
Genotype of SNP rs17806888 (SUCLG2)

# MICE-adjR



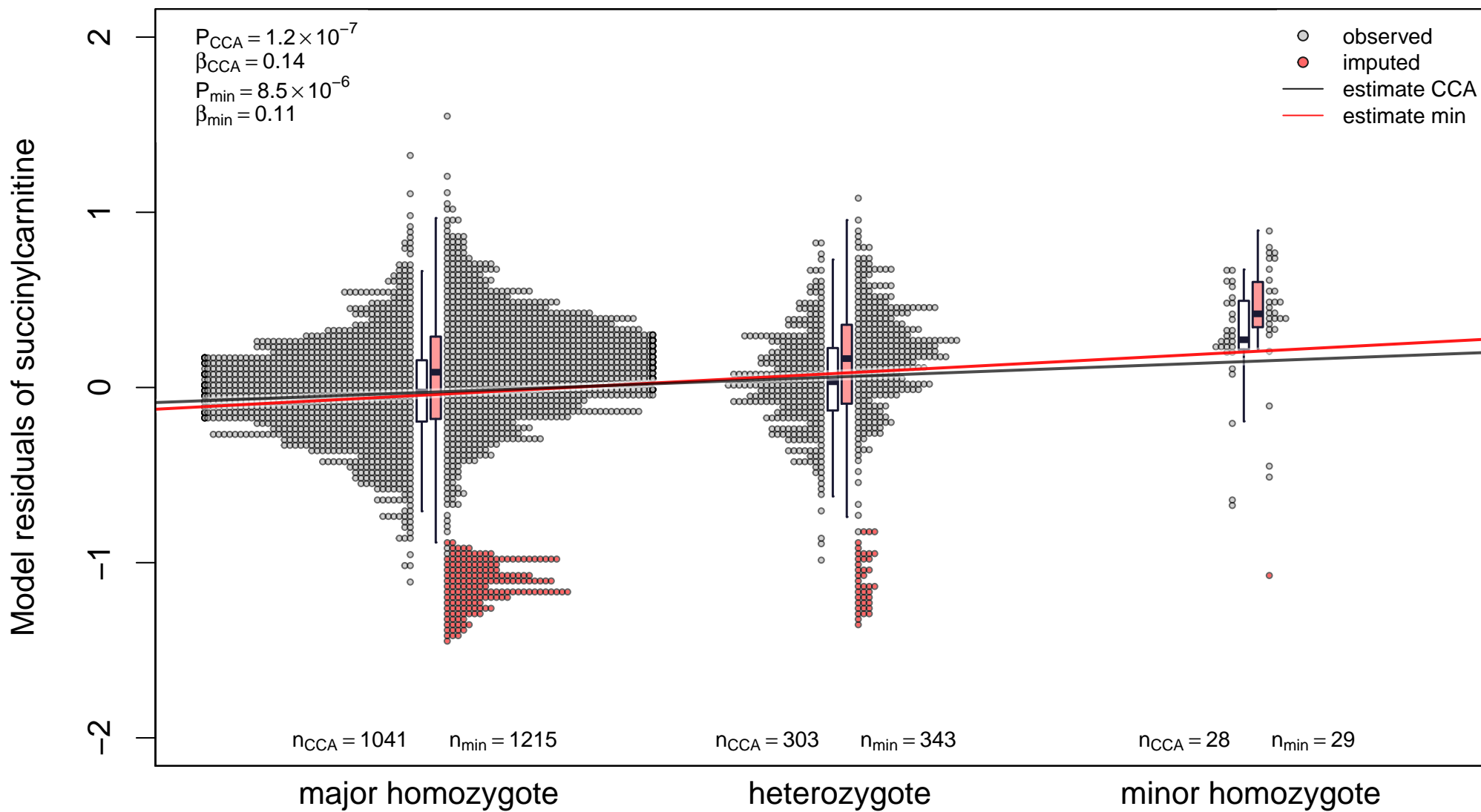
Genotype of SNP rs17806888 (SUCLG2)

# MICE-pmm

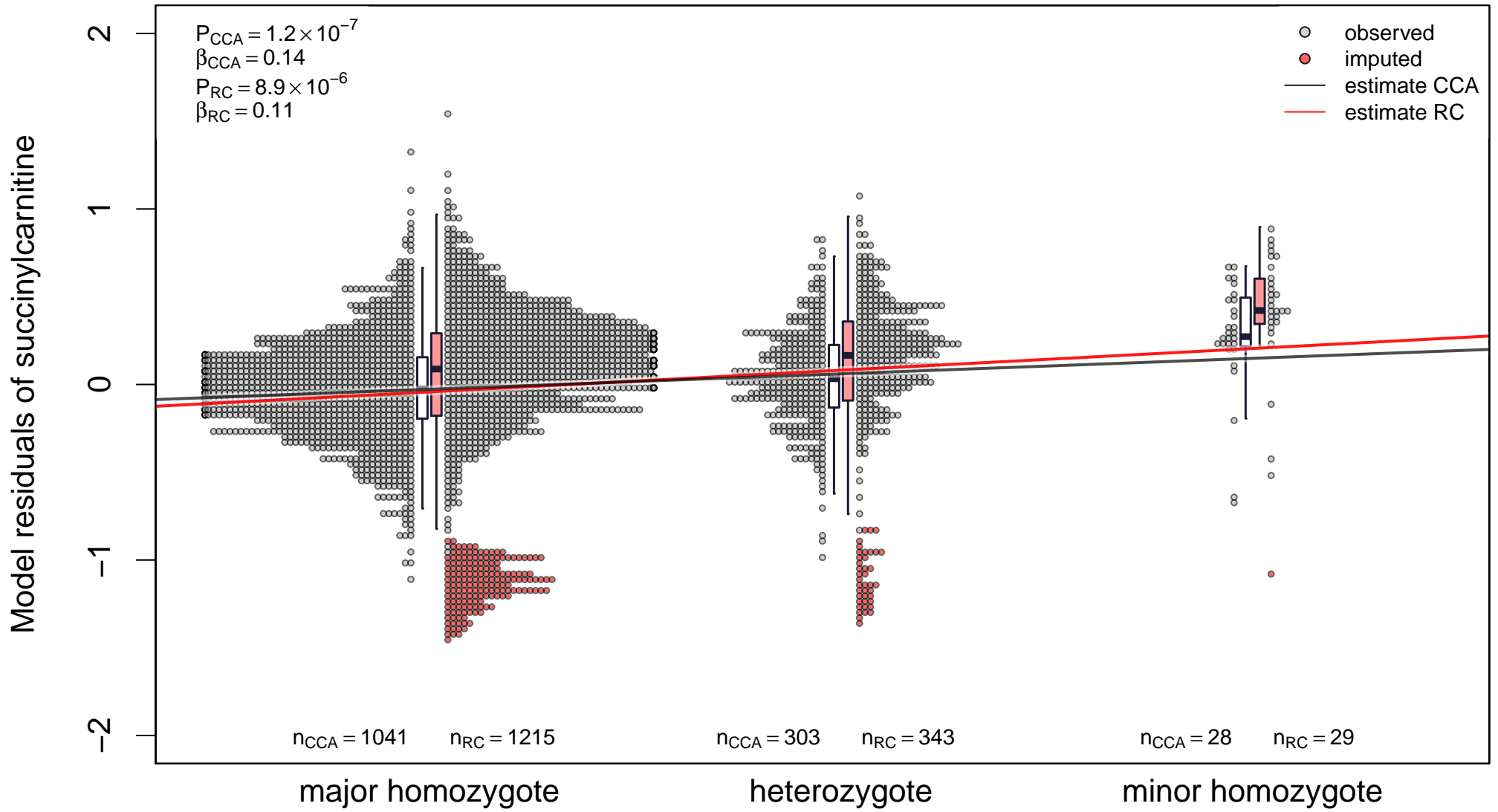


Genotype of SNP rs17806888 (SUCLG2)

min

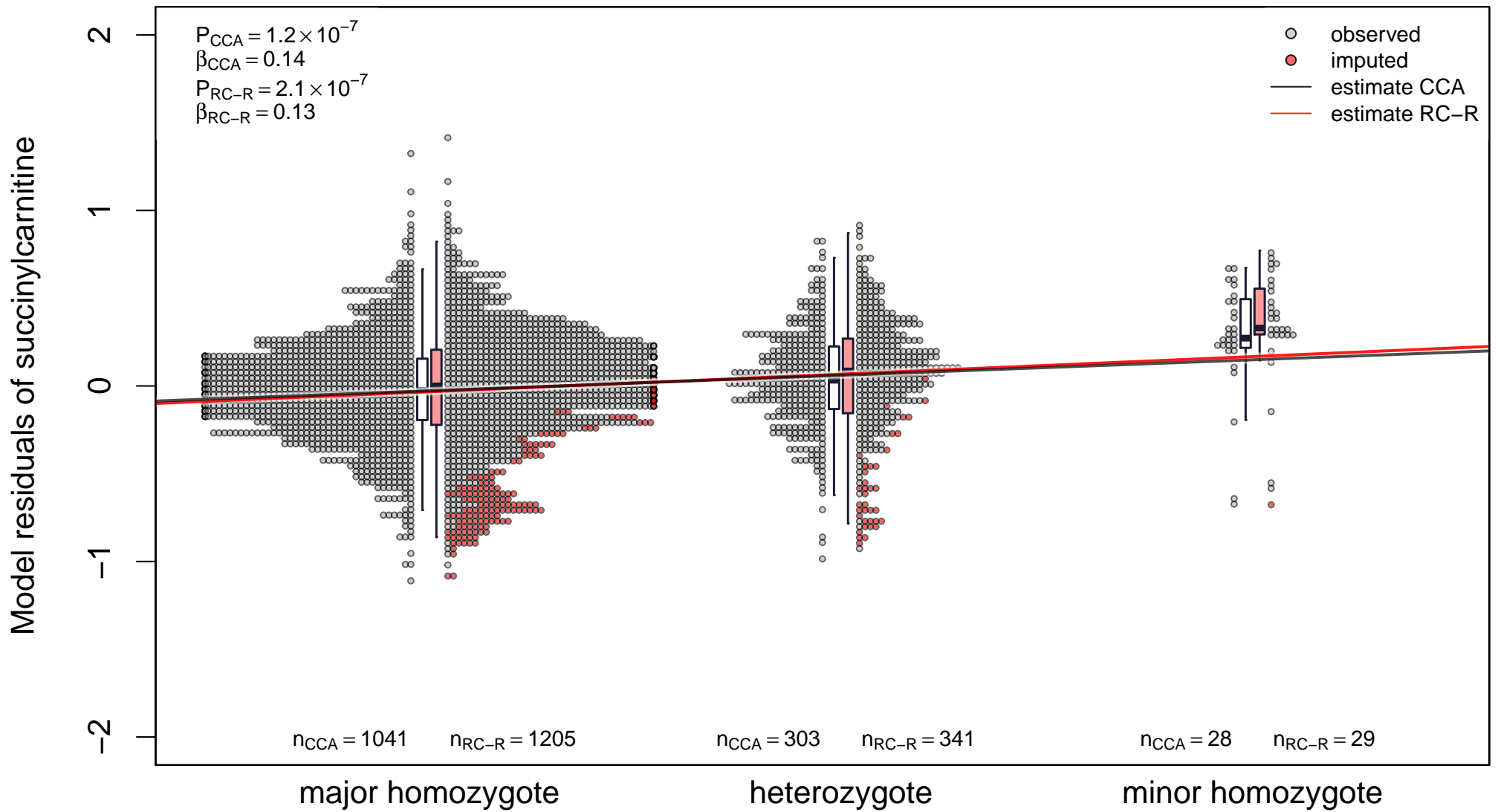


# RC



Genotype of SNP rs17806888 (SUCLG2)

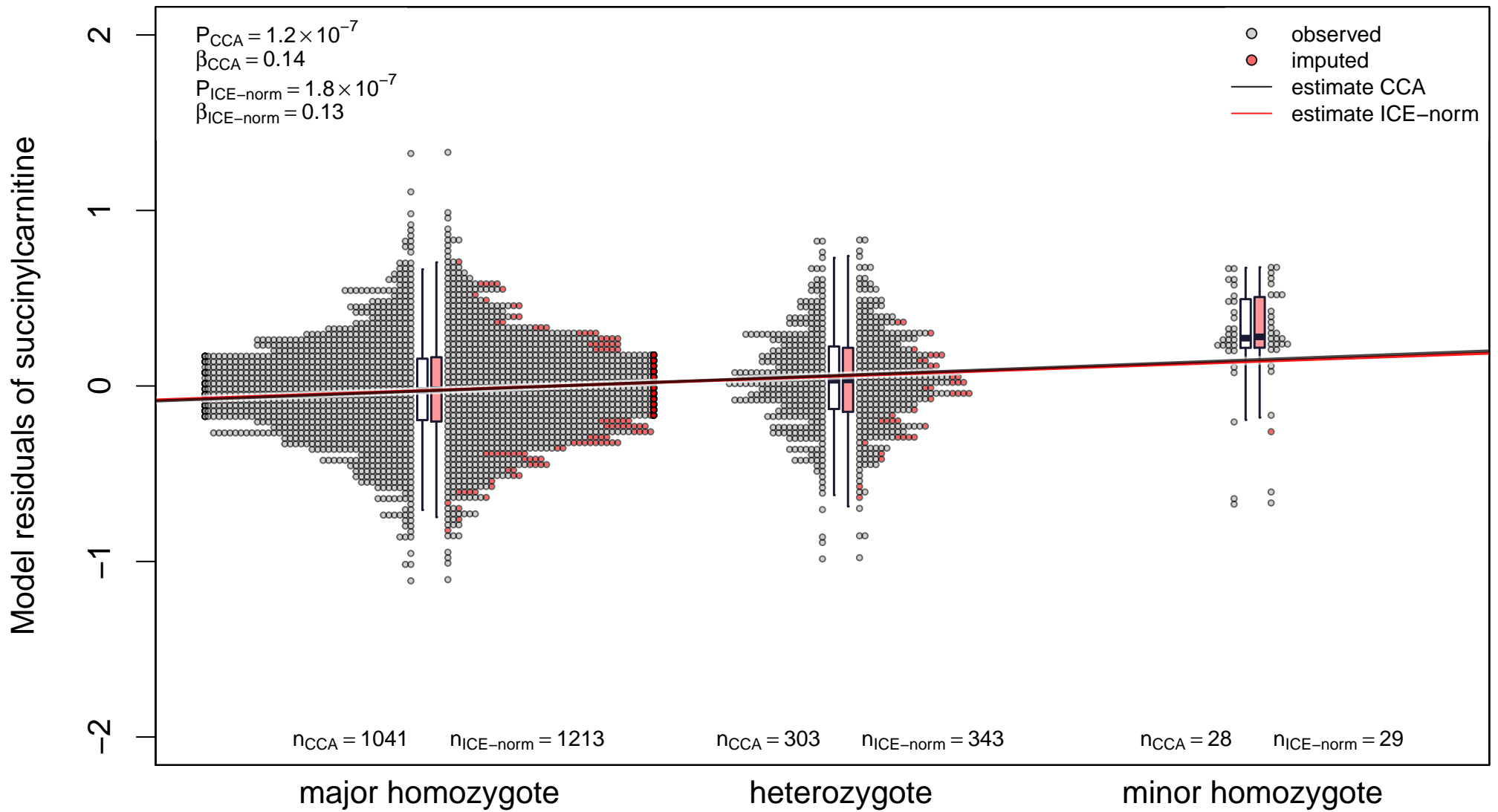
# RC-R



Genotype of SNP rs17806888 (SUCLG2)

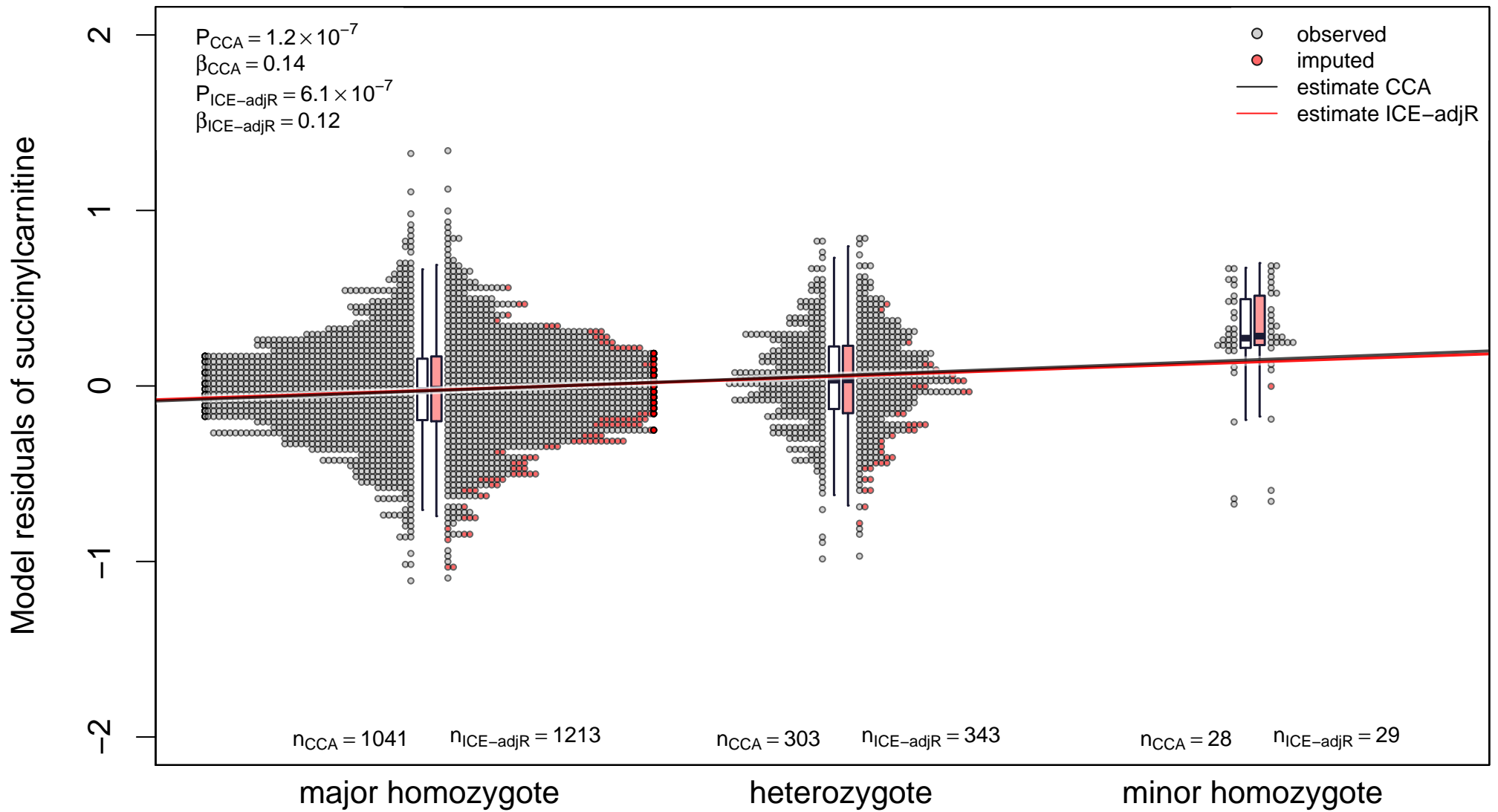


# ICE-norm



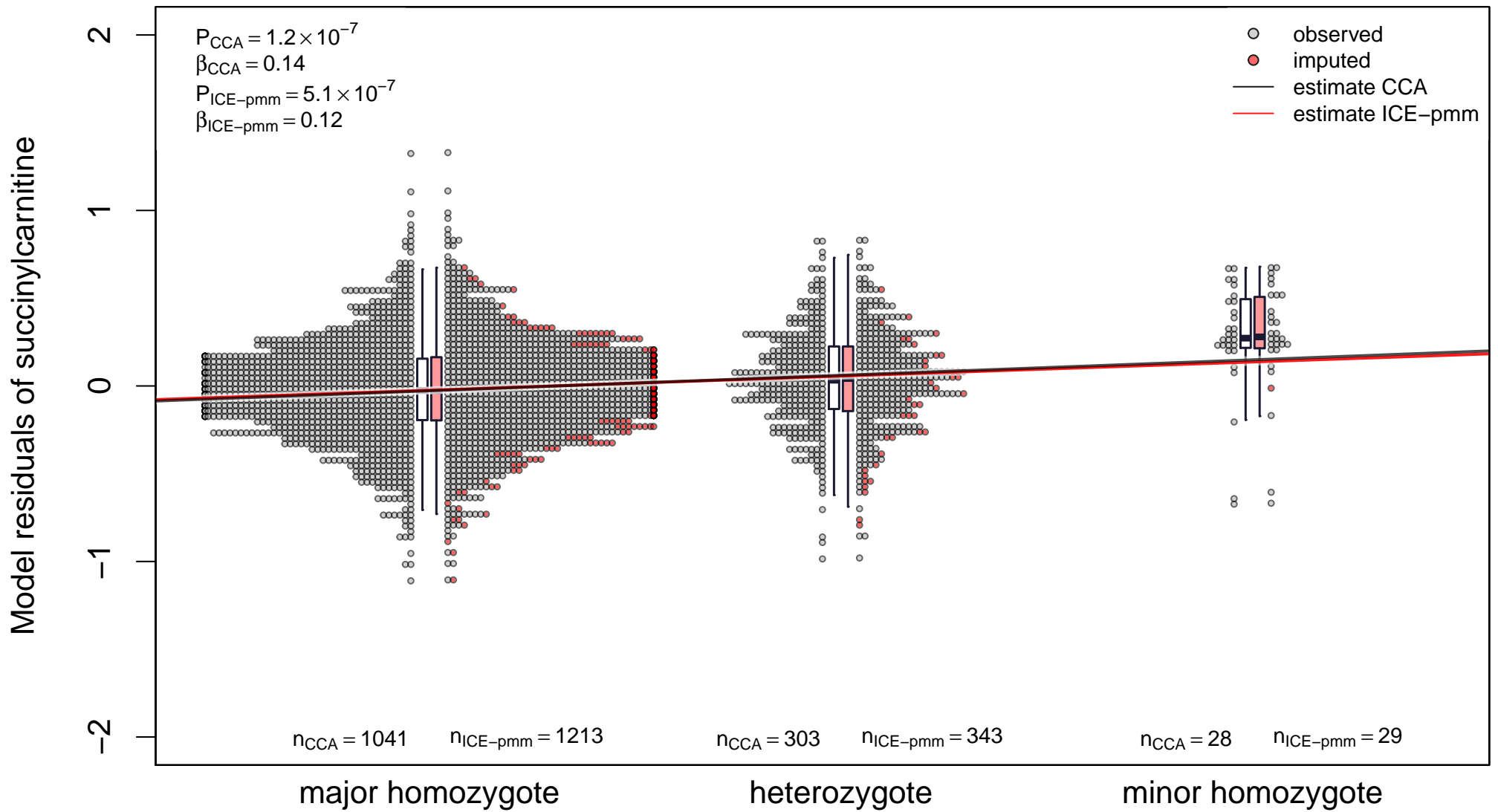
Genotype of SNP rs17806888 (SUCLG2)

# ICE-adjR



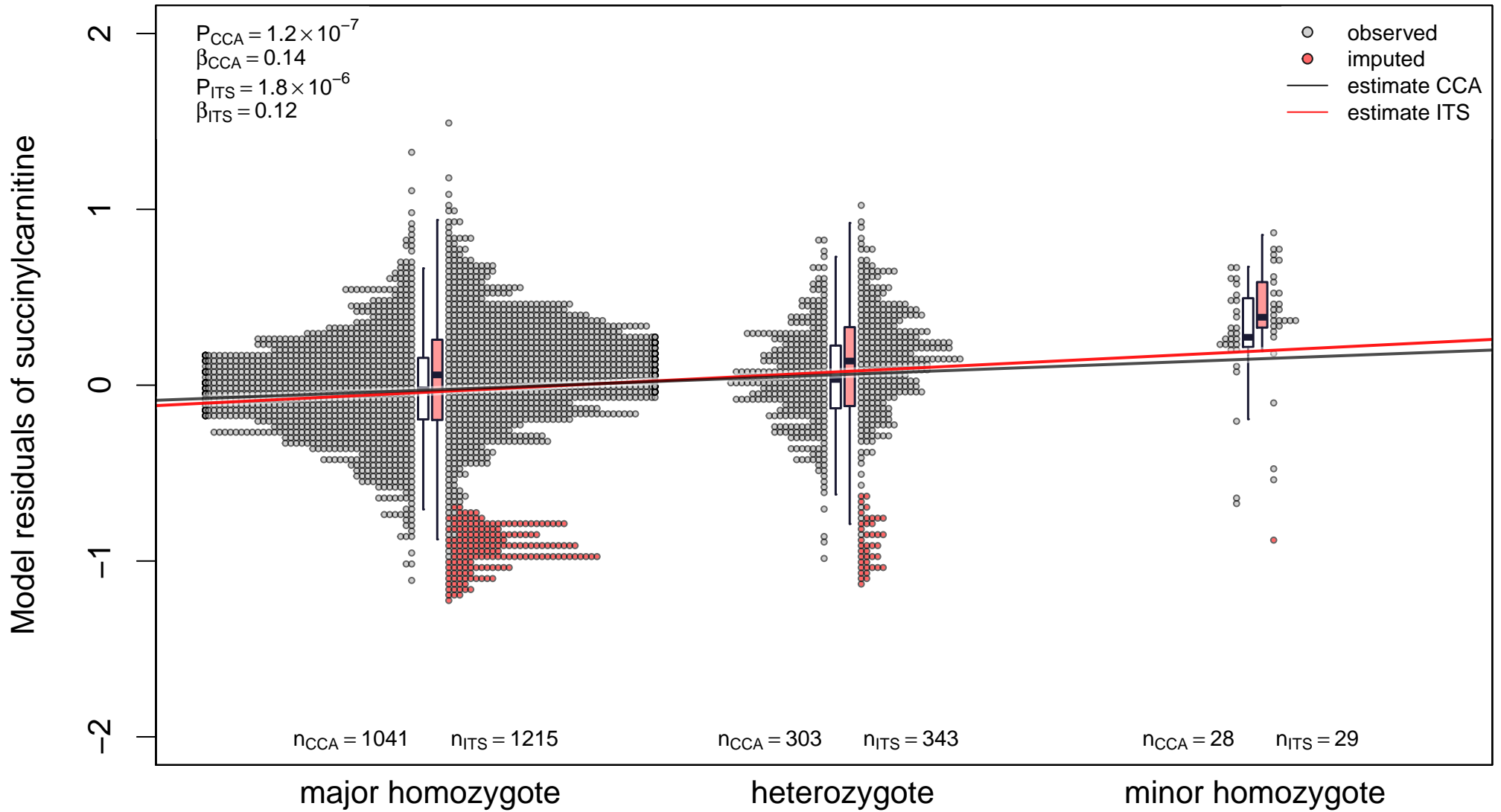
Genotype of SNP rs17806888 (SUCLG2)

# ICE-pmm



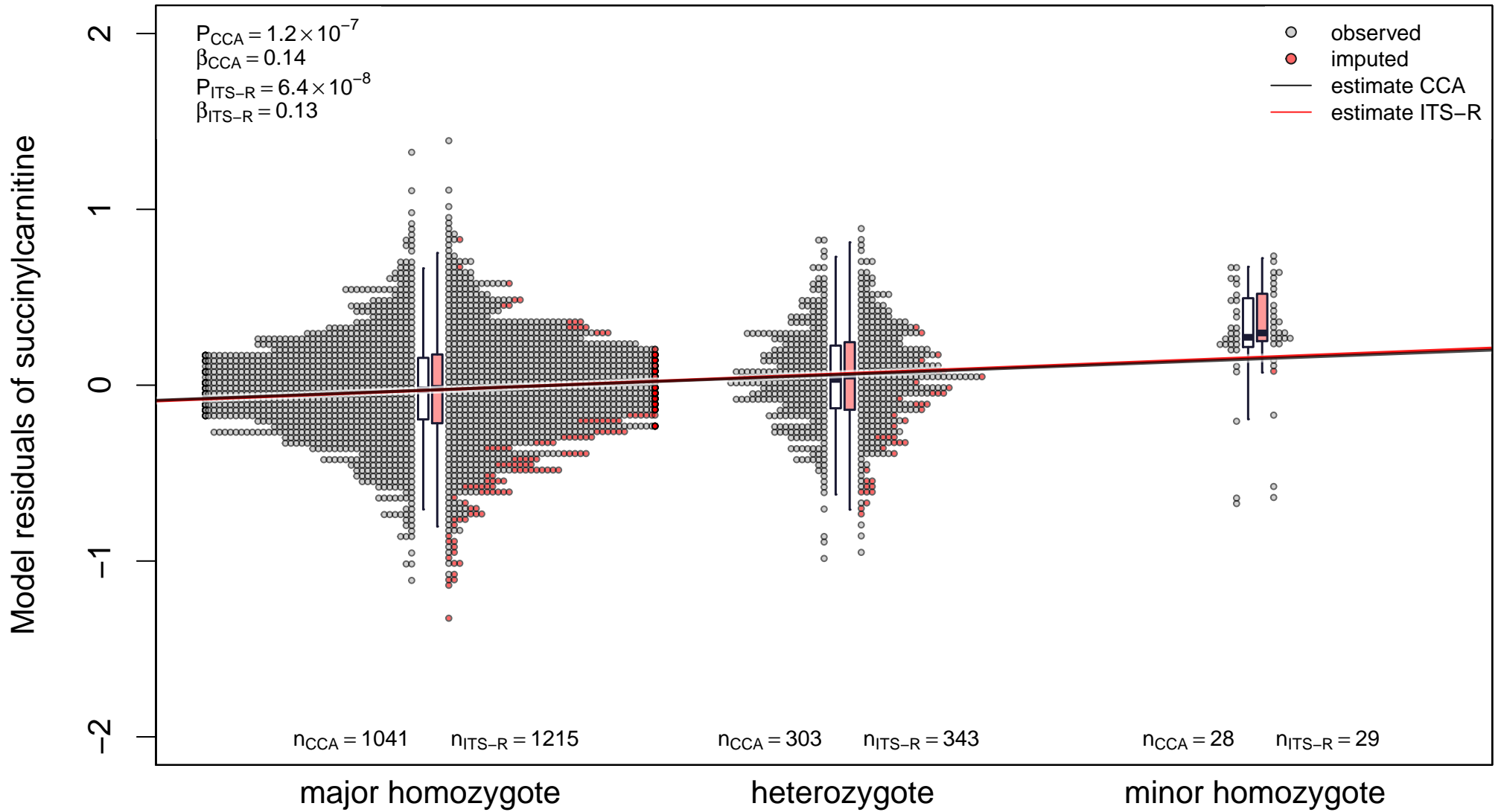
Genotype of SNP rs17806888 (SUCLG2)

# ITS



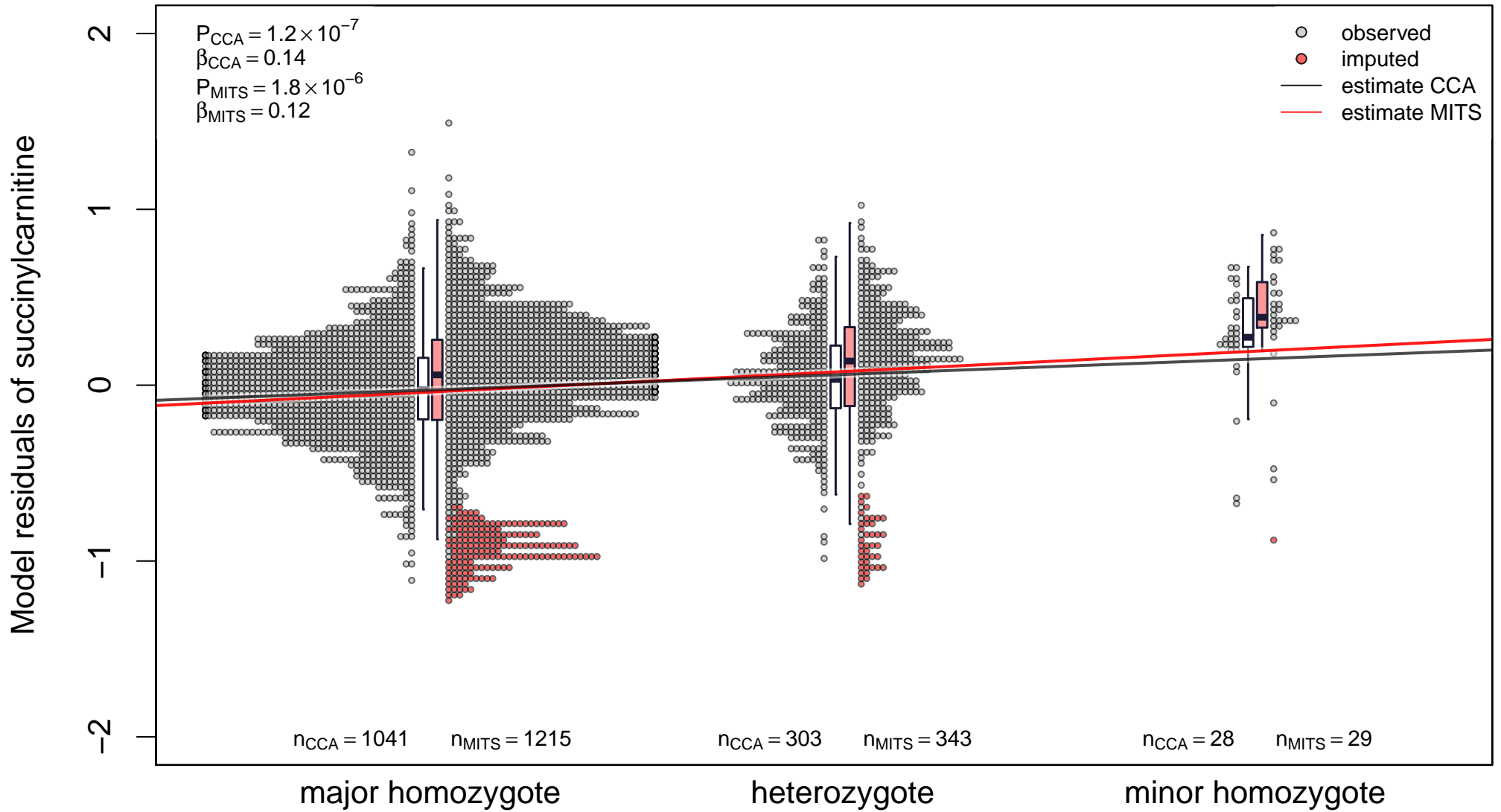
Genotype of SNP rs17806888 (SUCLG2)

# ITS-R



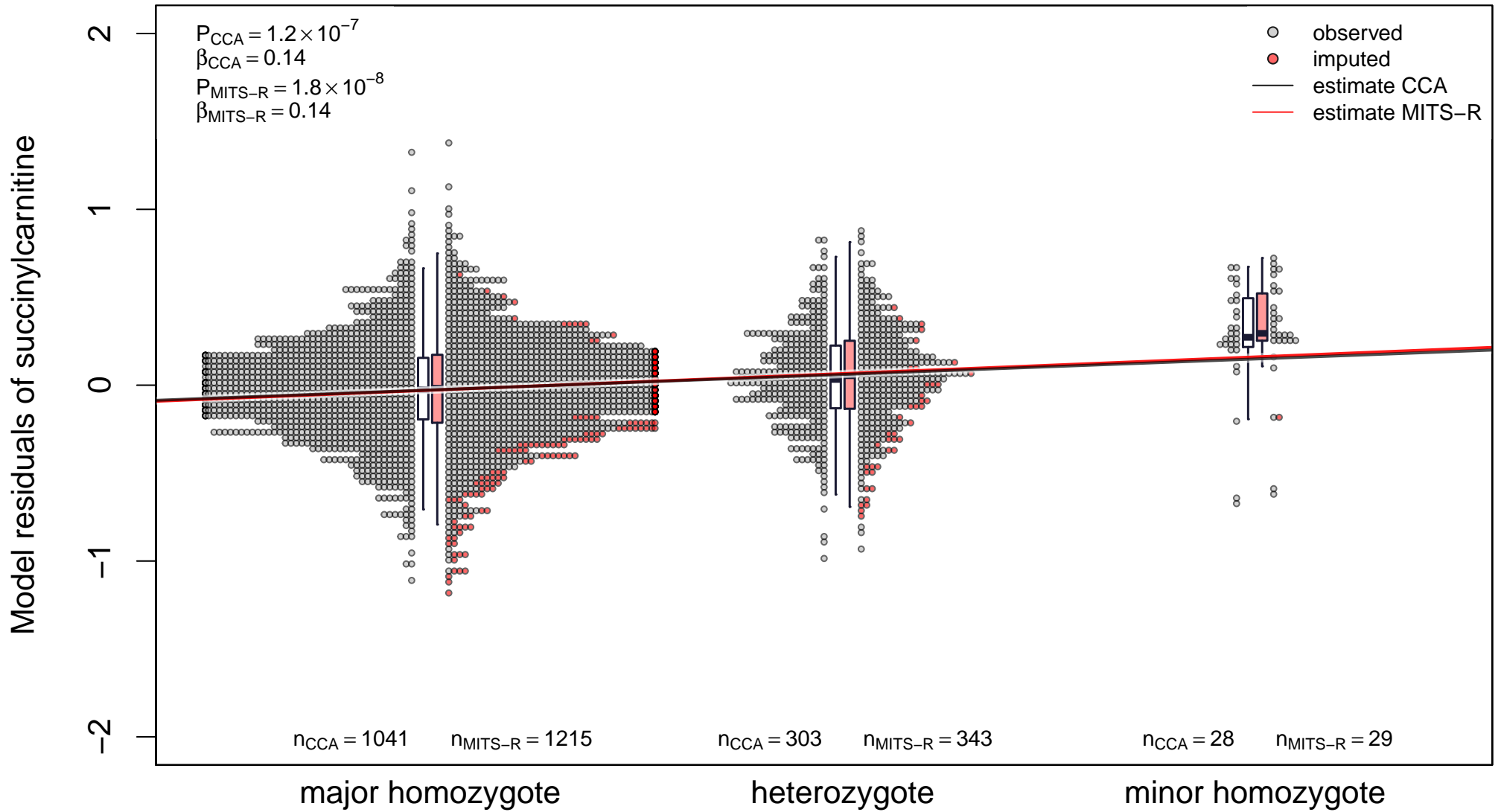
Genotype of SNP rs17806888 (SUCLG2)

# MITS



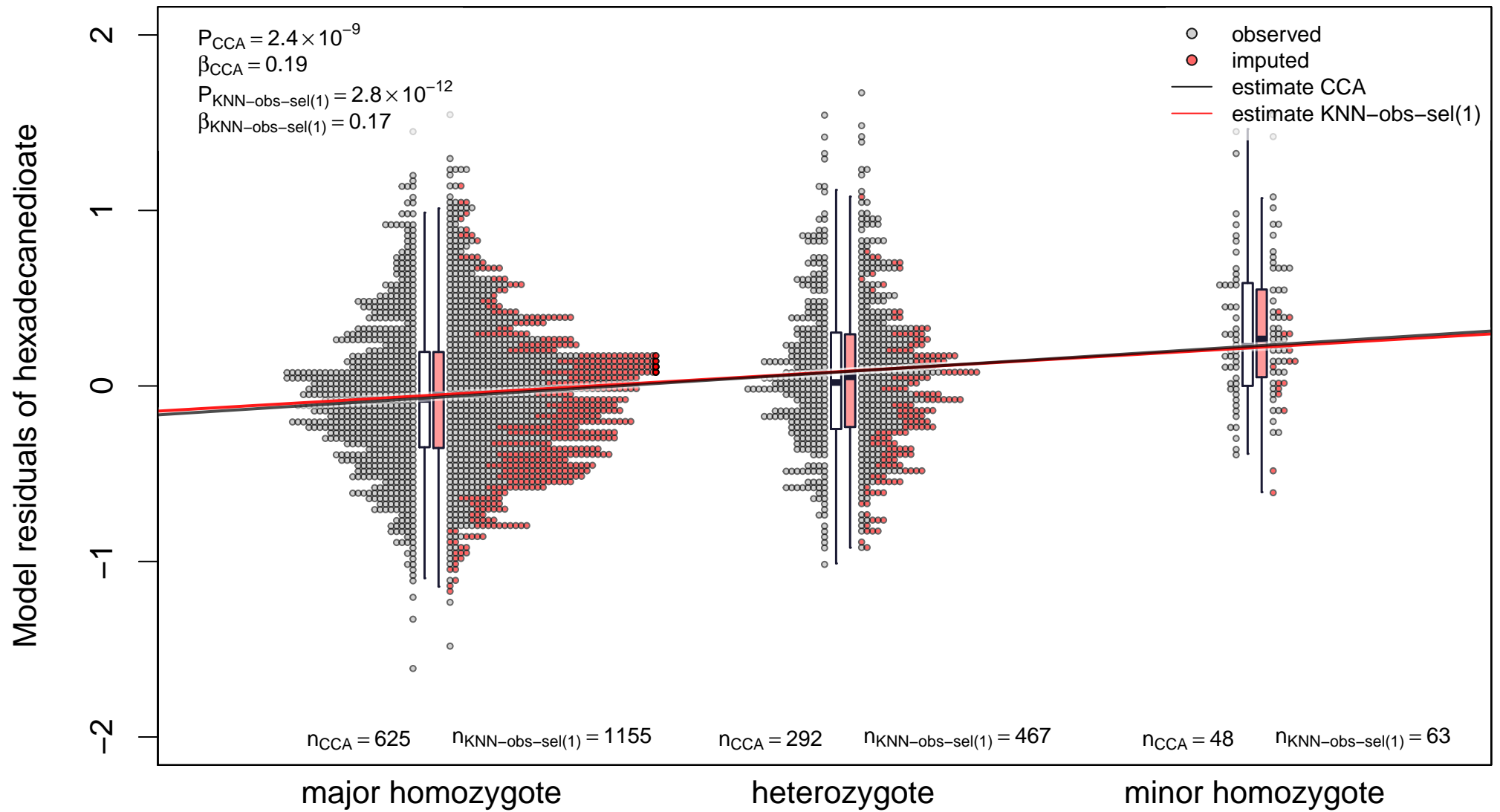
Genotype of SNP rs17806888 (SUCLG2)

# MITS-R



Genotype of SNP rs17806888 (SUCLG2)

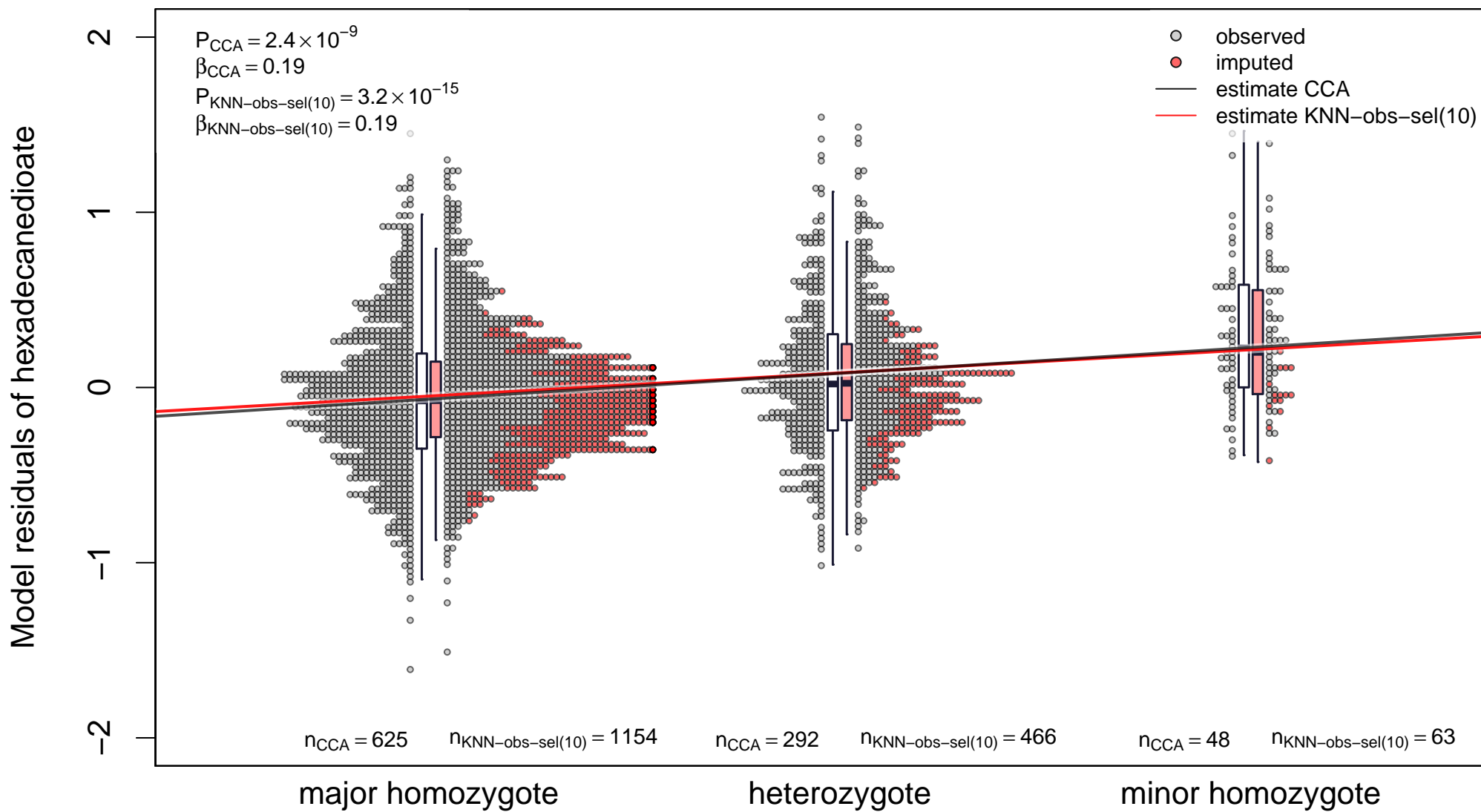
# KNN-obs-sel(1)



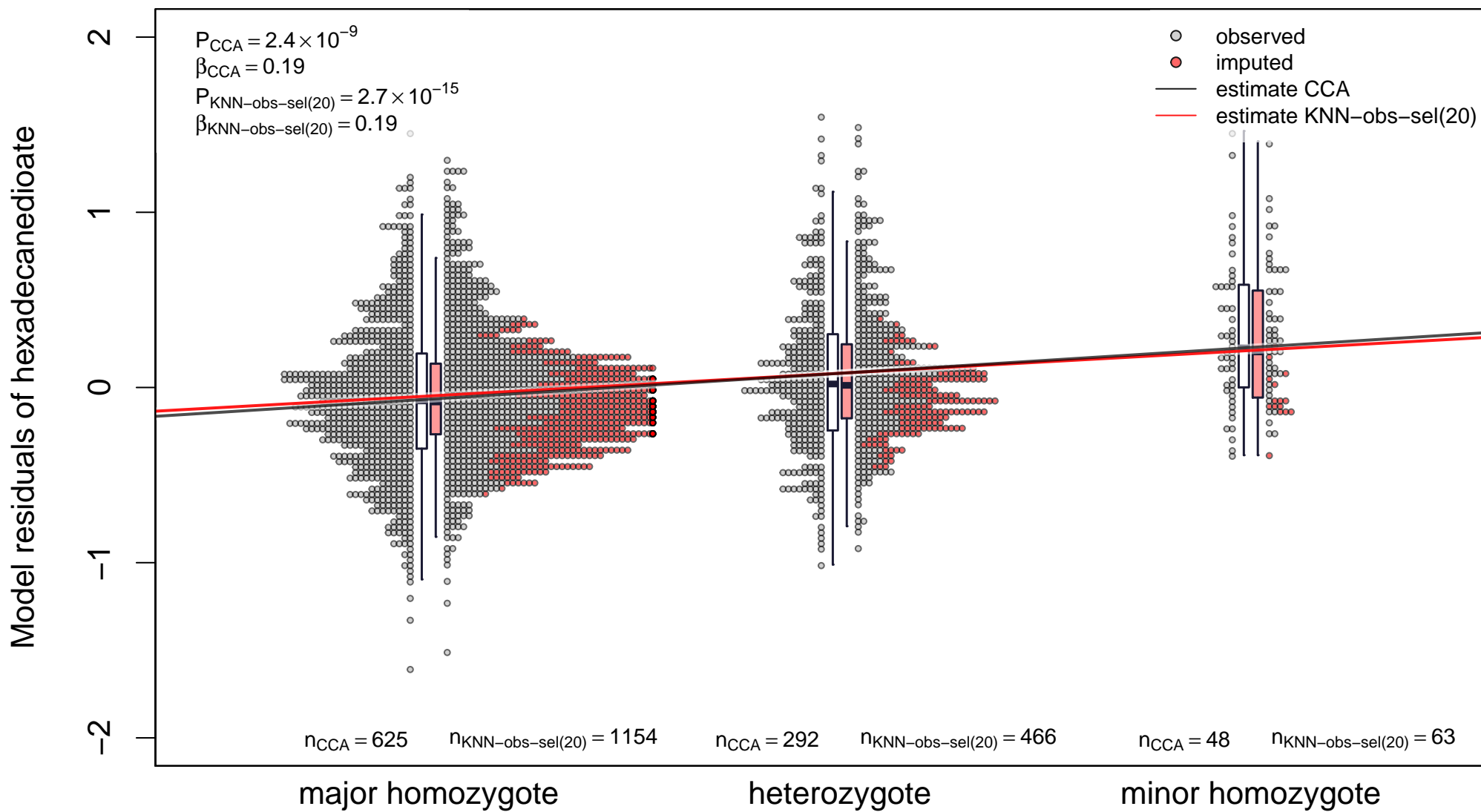
Genotype of SNP rs1871395 (SLCO1B1 (2 separate loci))



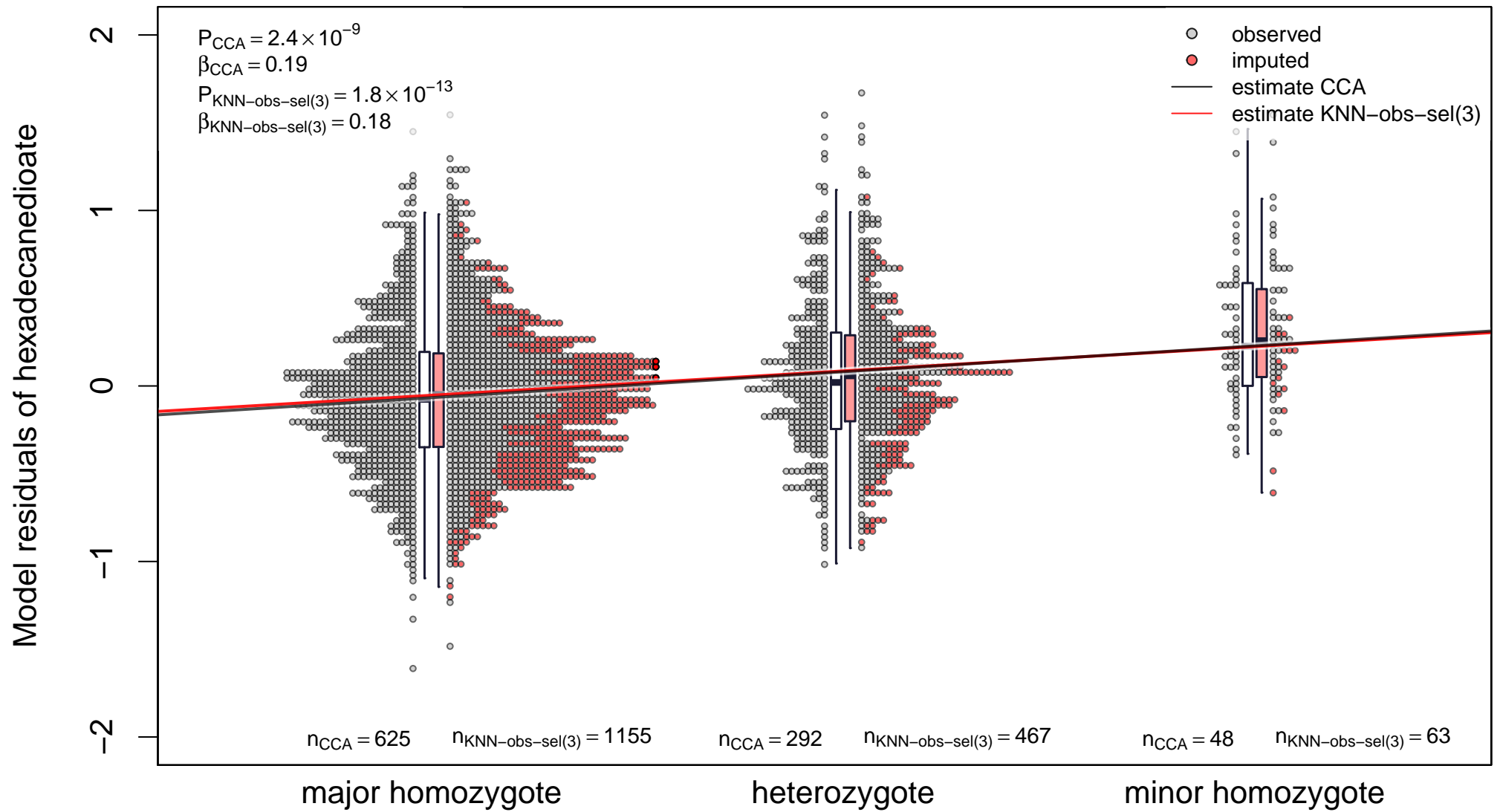
# KNN-obs-sel(10)



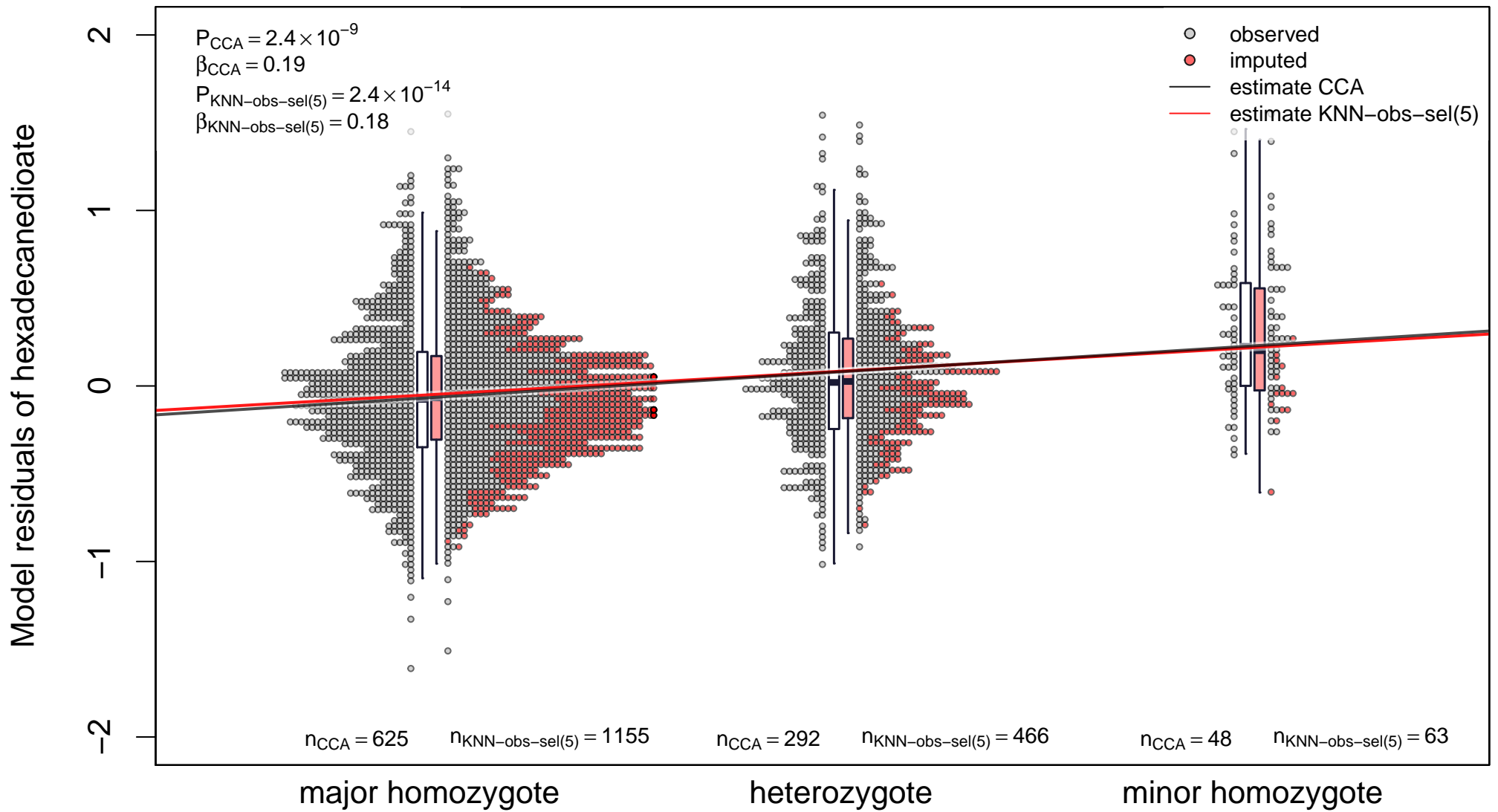
# KNN-obs-sel(20)



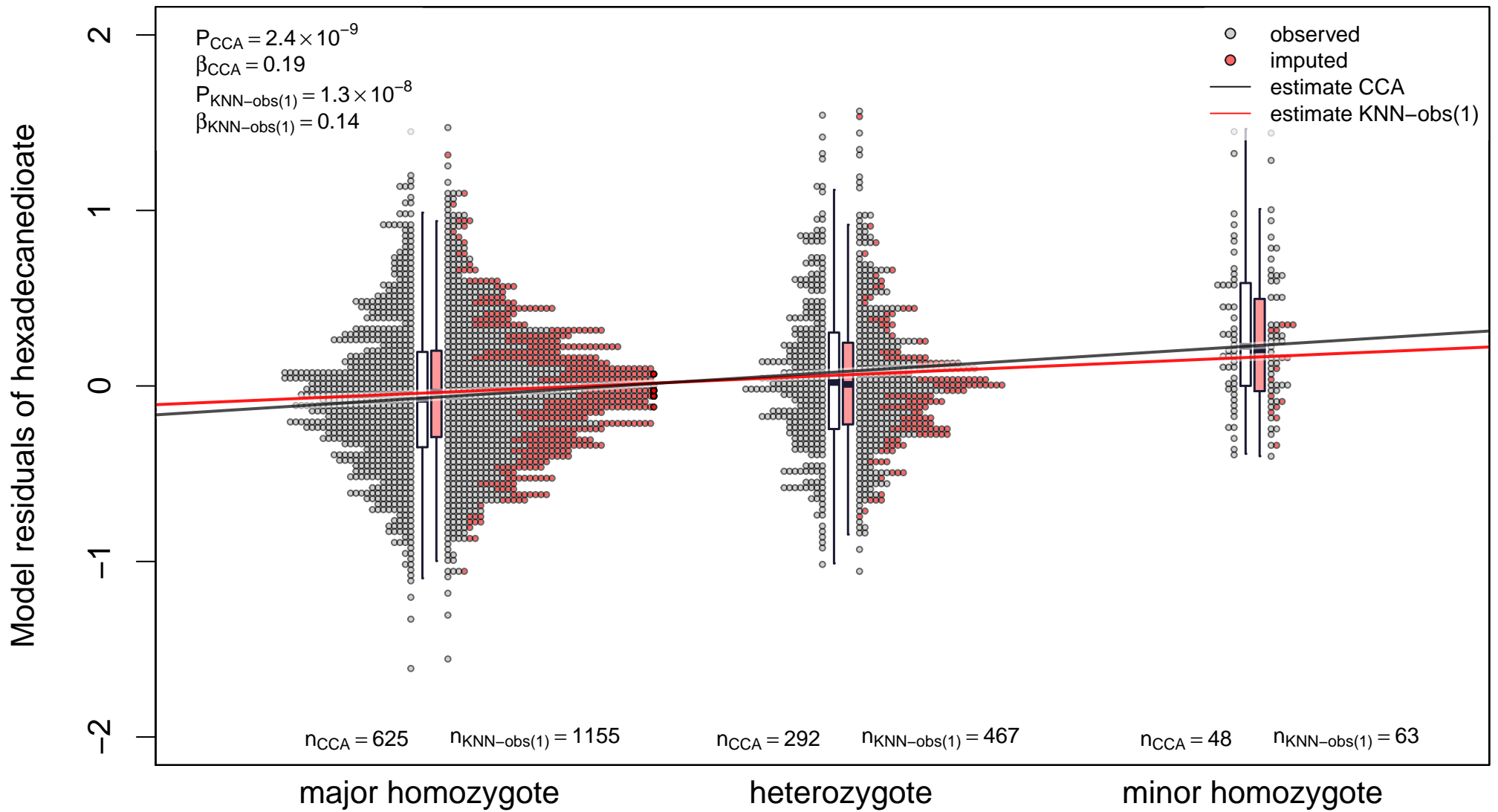
# KNN-obs-sel(3)



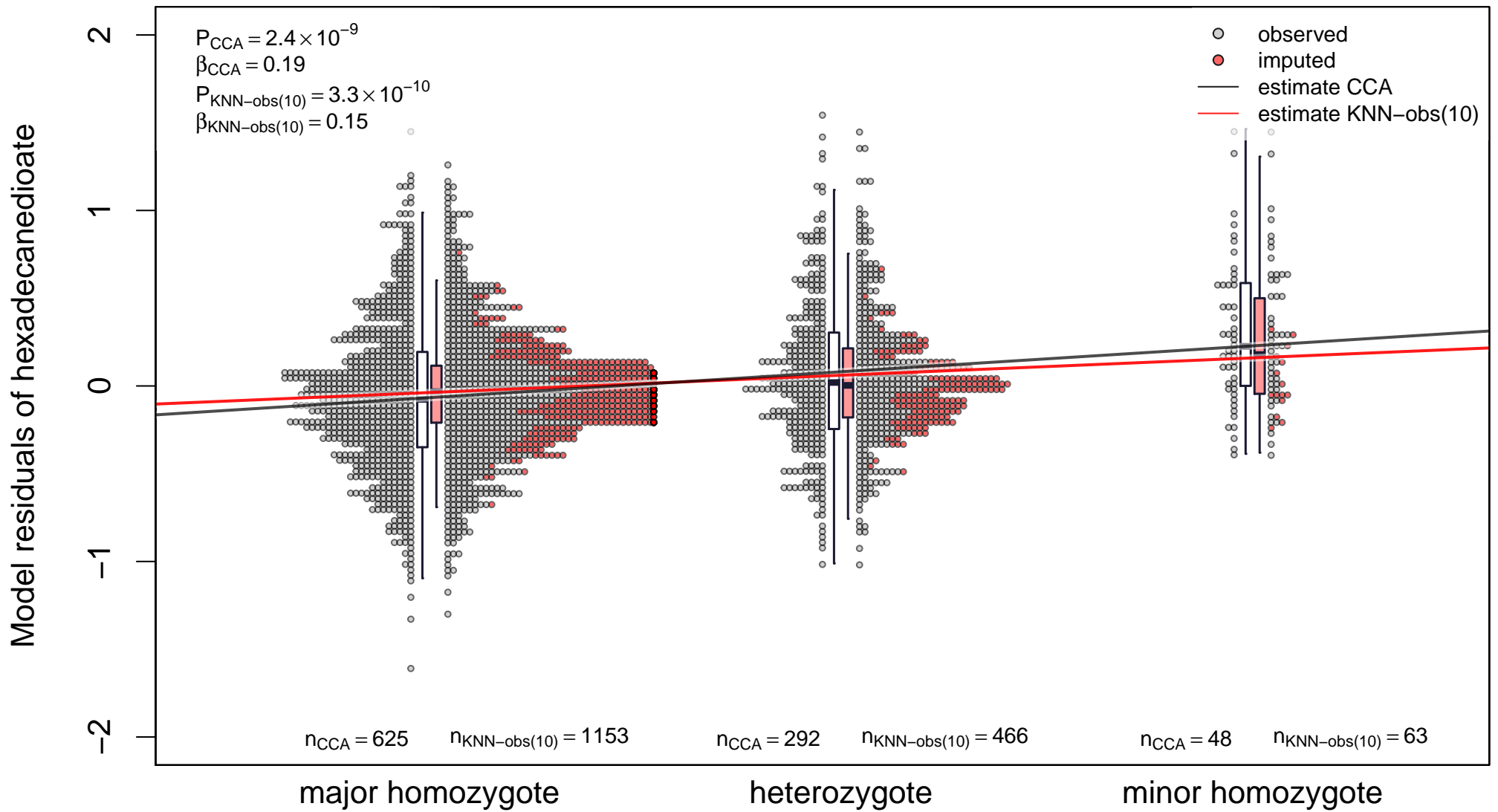
# KNN-obs-sel(5)



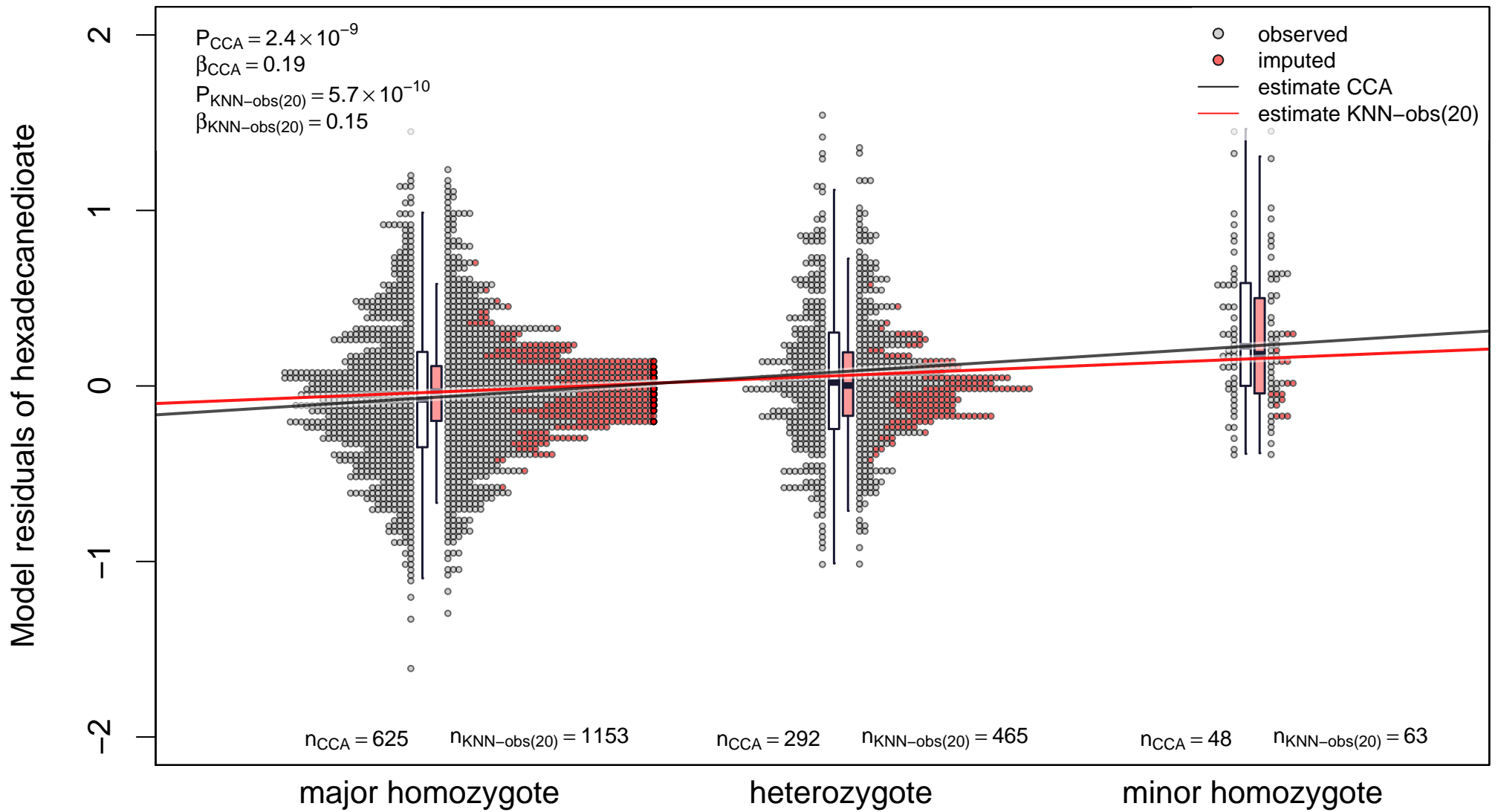
# KNN-obs(1)



# KNN-obs(10)

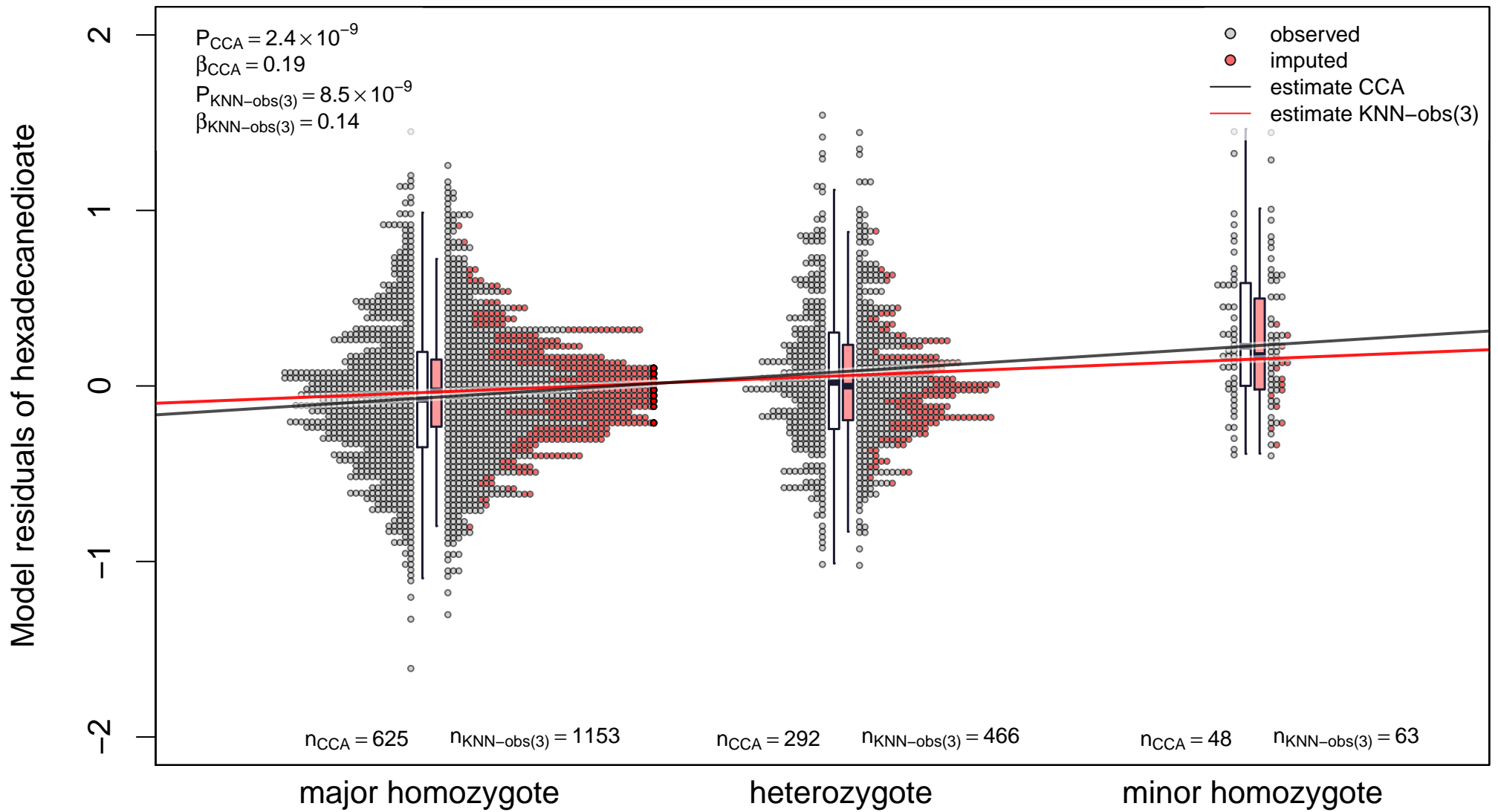


# KNN-obs(20)



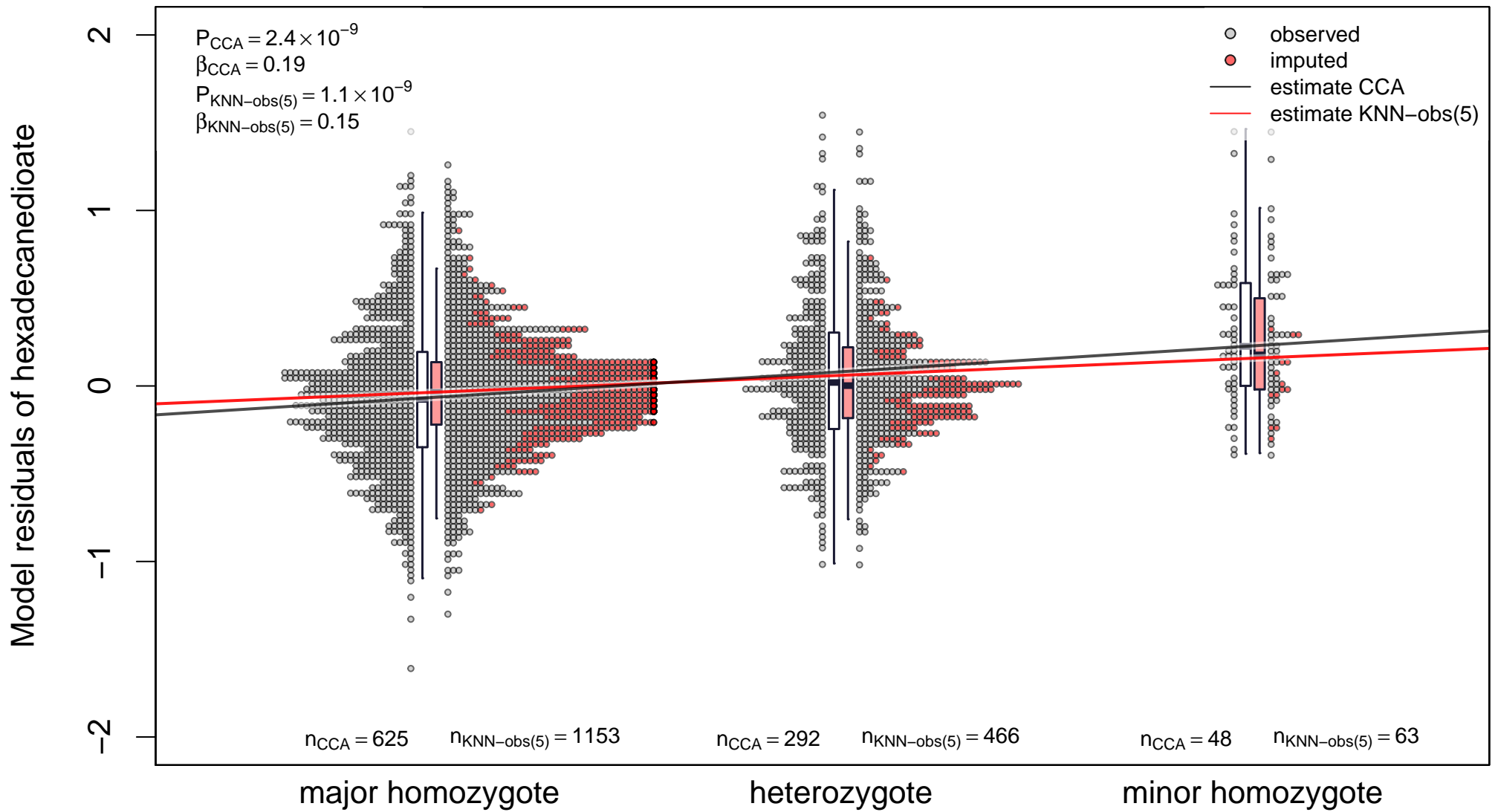
Genotype of SNP rs1871395 (SLCO1B1 (2 separate loci))

# KNN-obs(3)

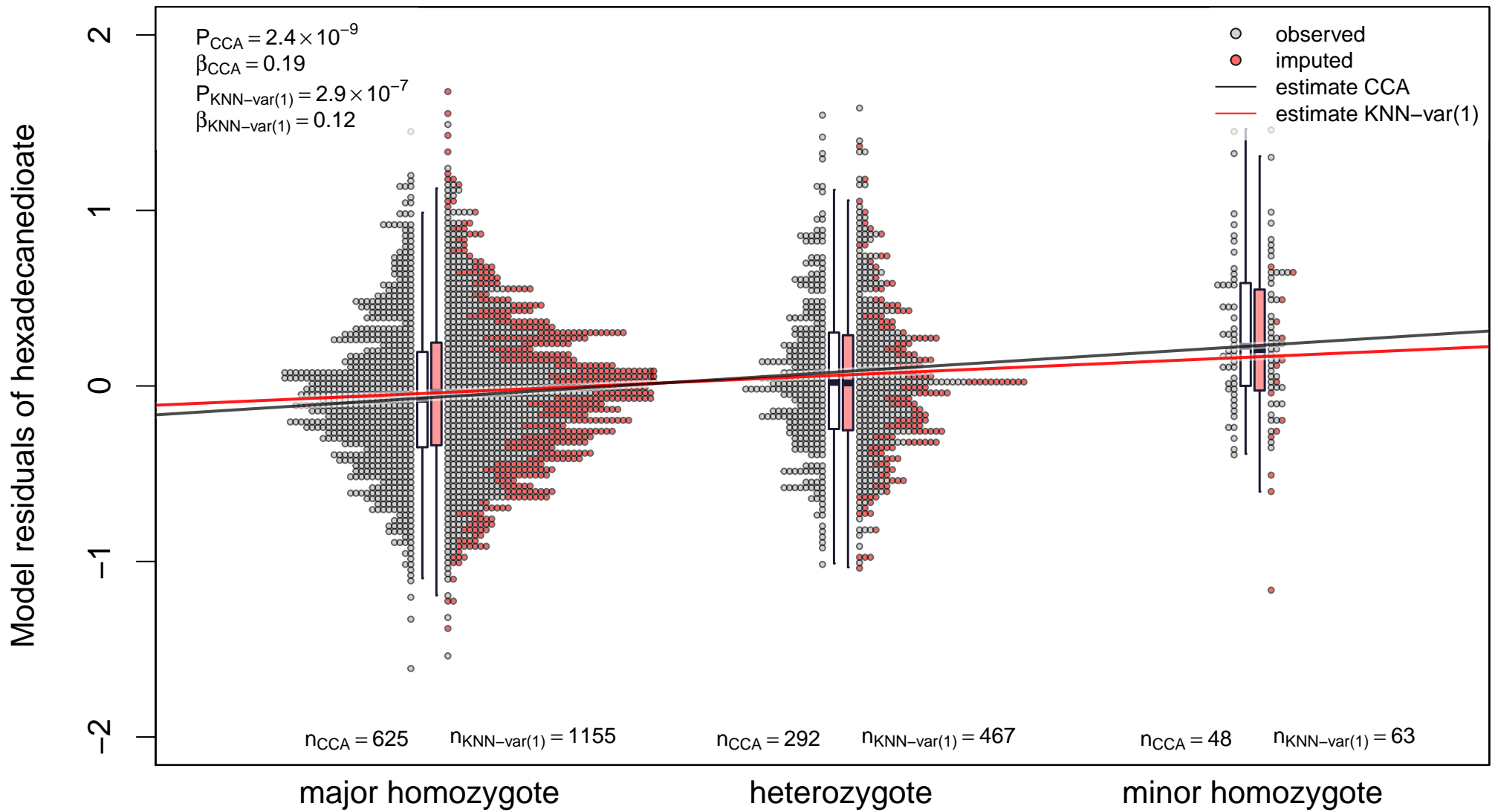




# KNN-obs(5)

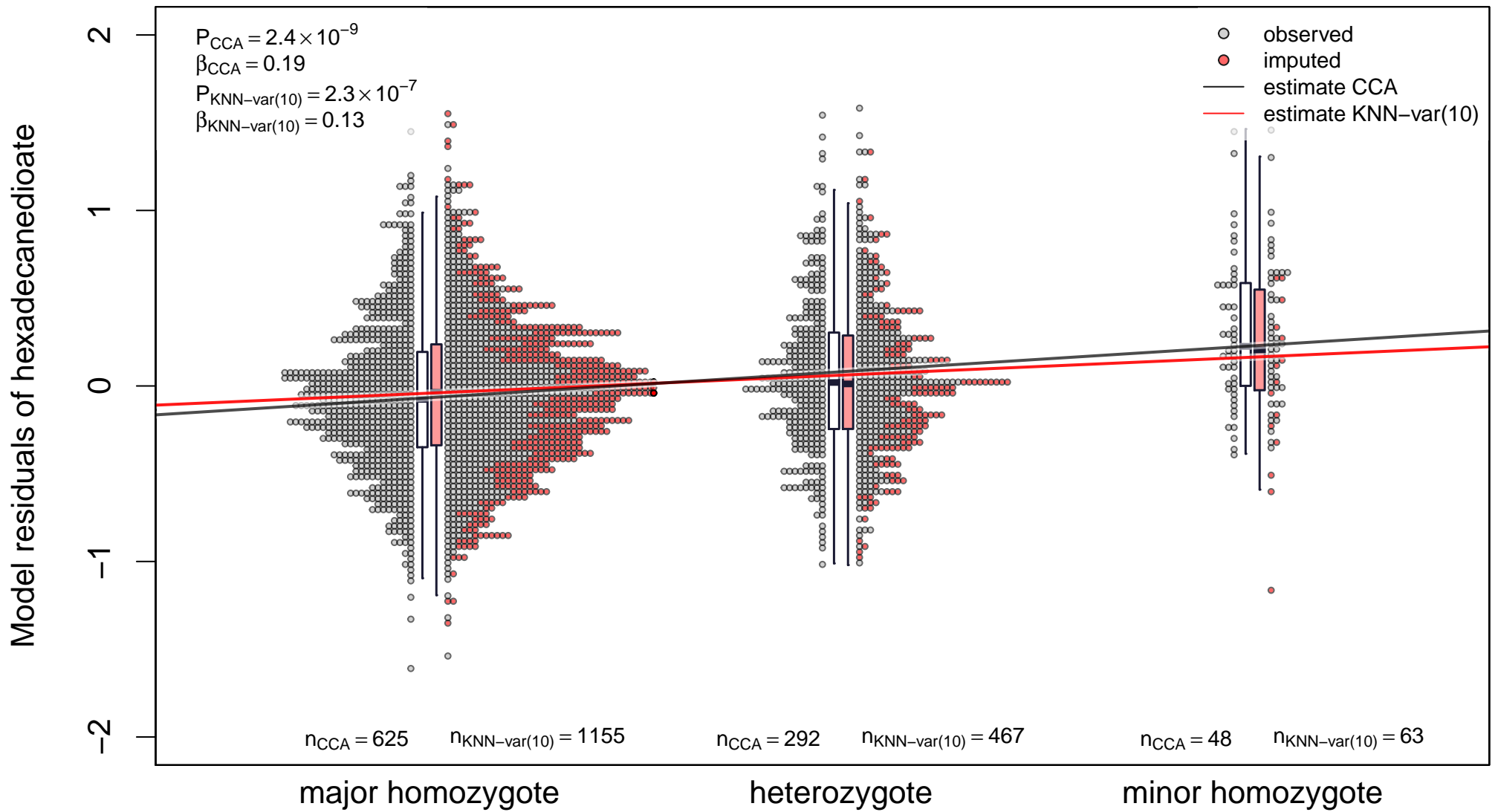


# KNN-var(1)

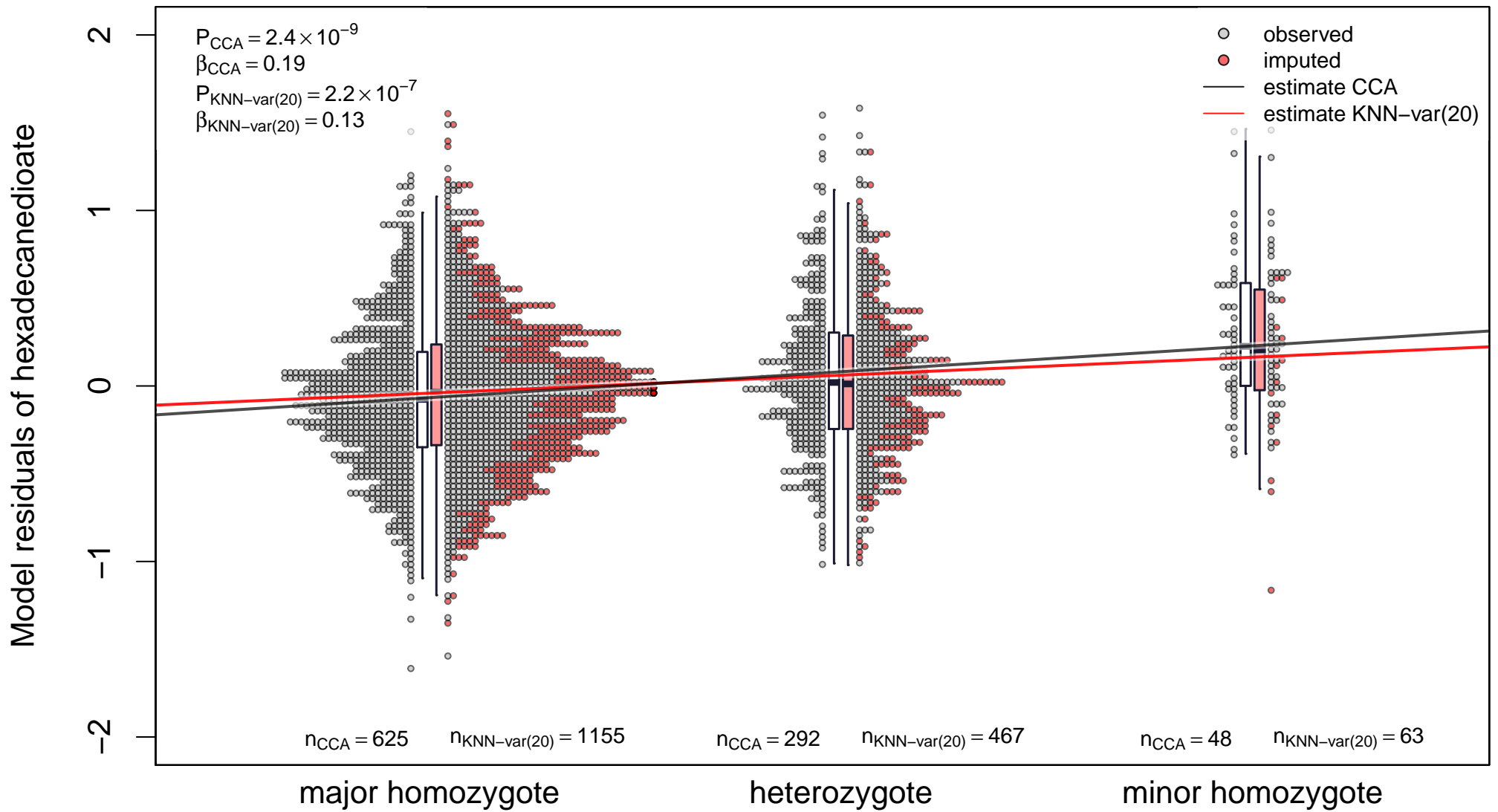


Genotype of SNP rs1871395 (SLCO1B1 (2 separate loci))

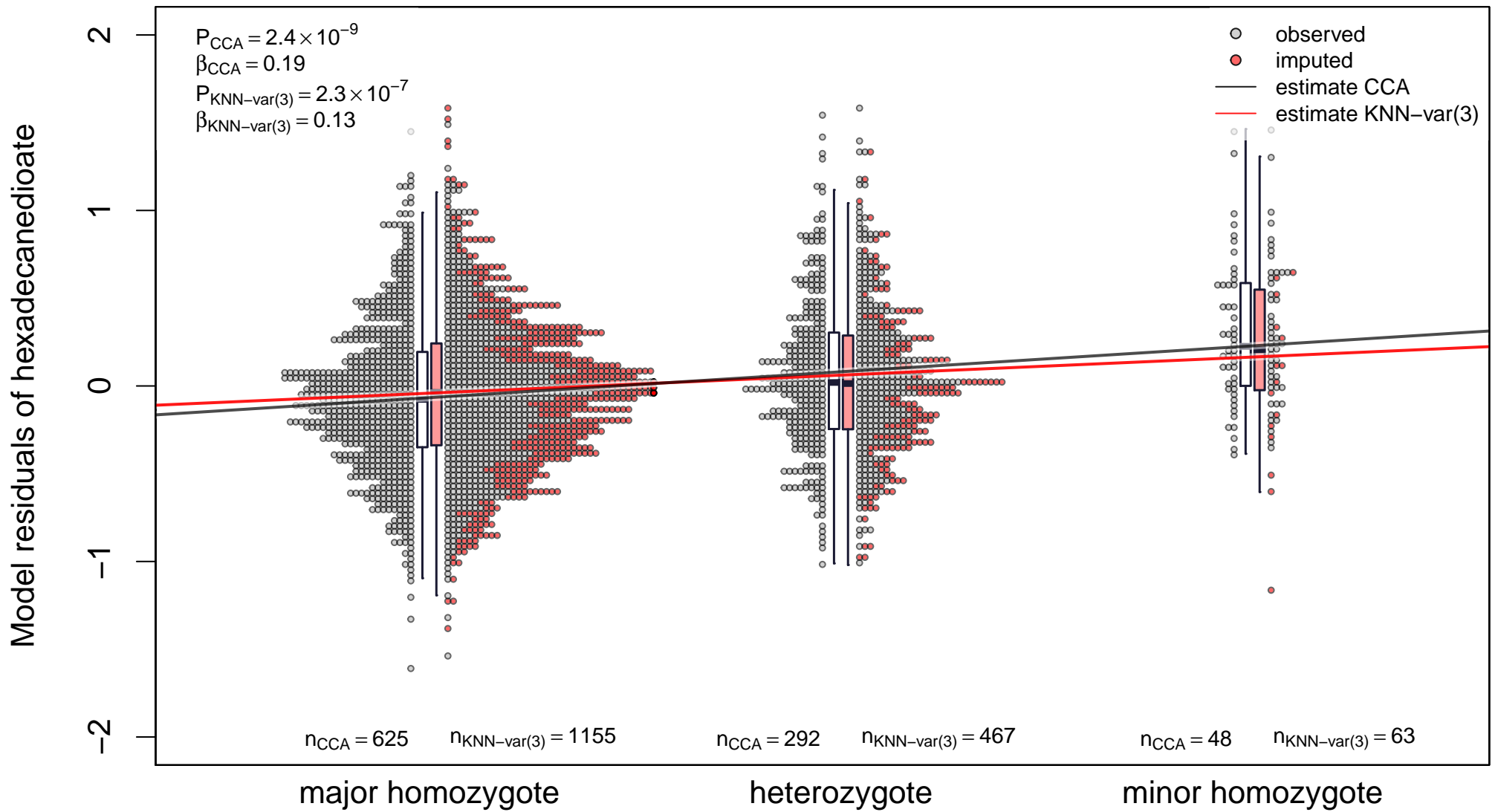
# KNN-var(10)



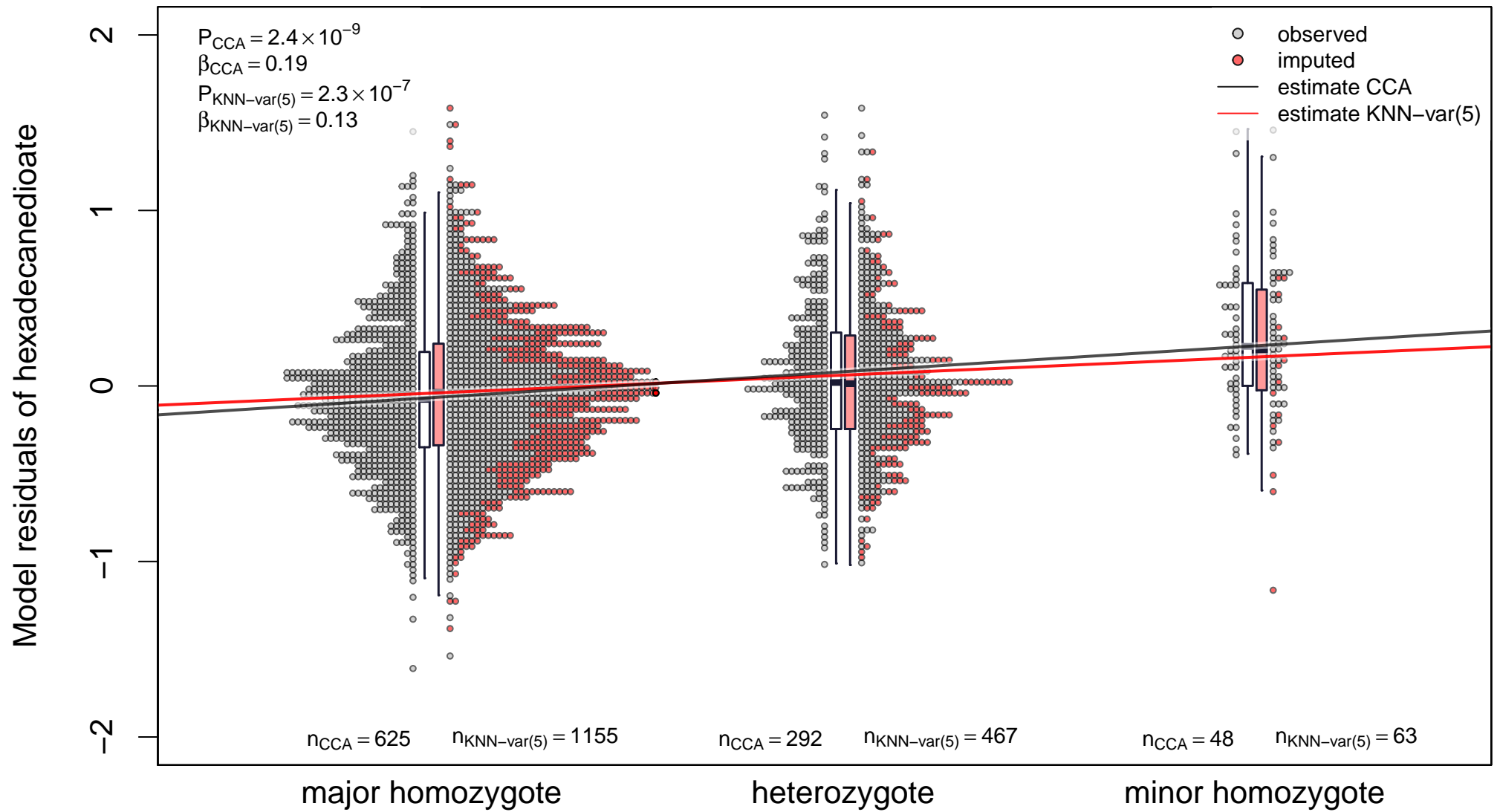
# KNN-var(20)



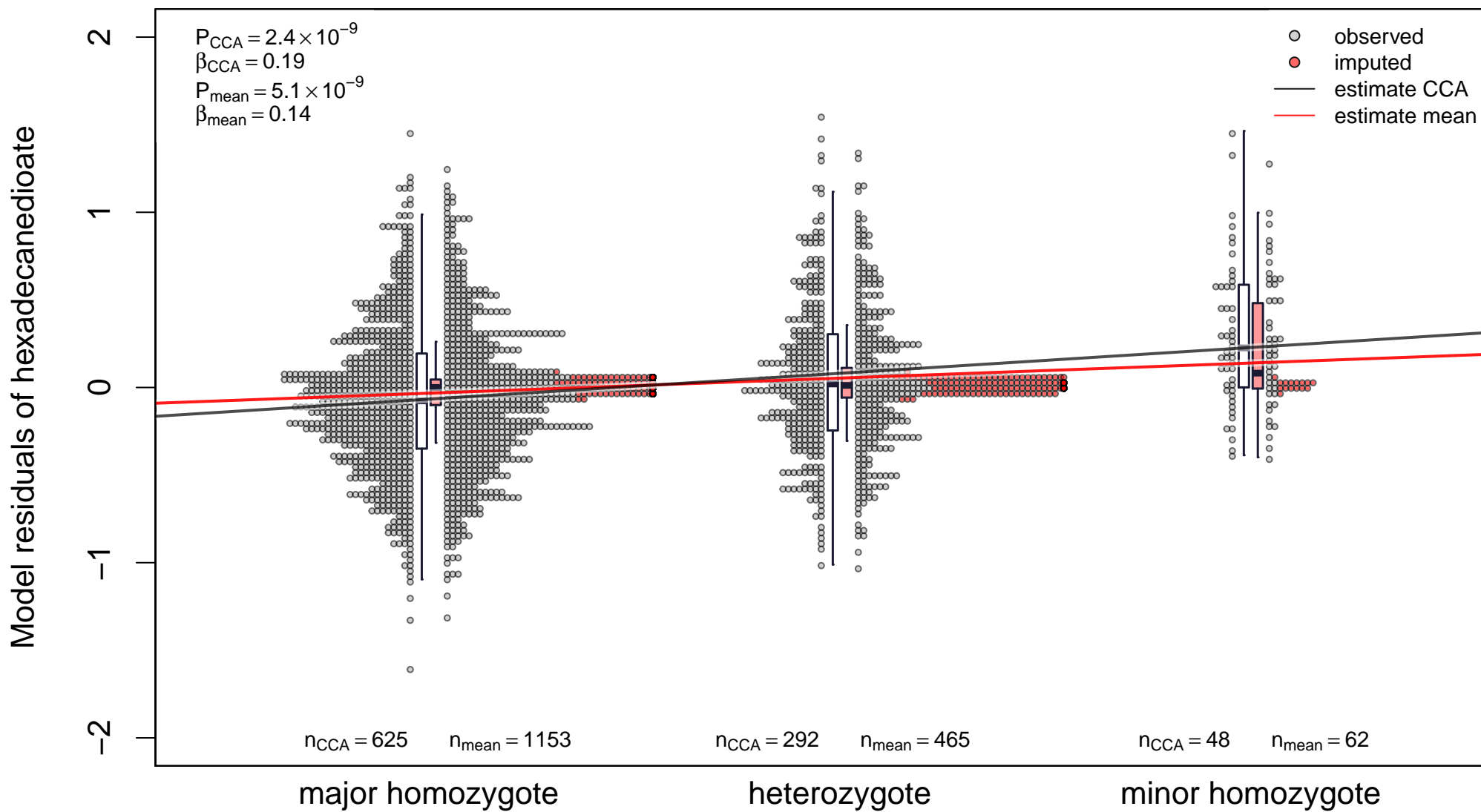
# KNN-var(3)



# KNN-var(5)

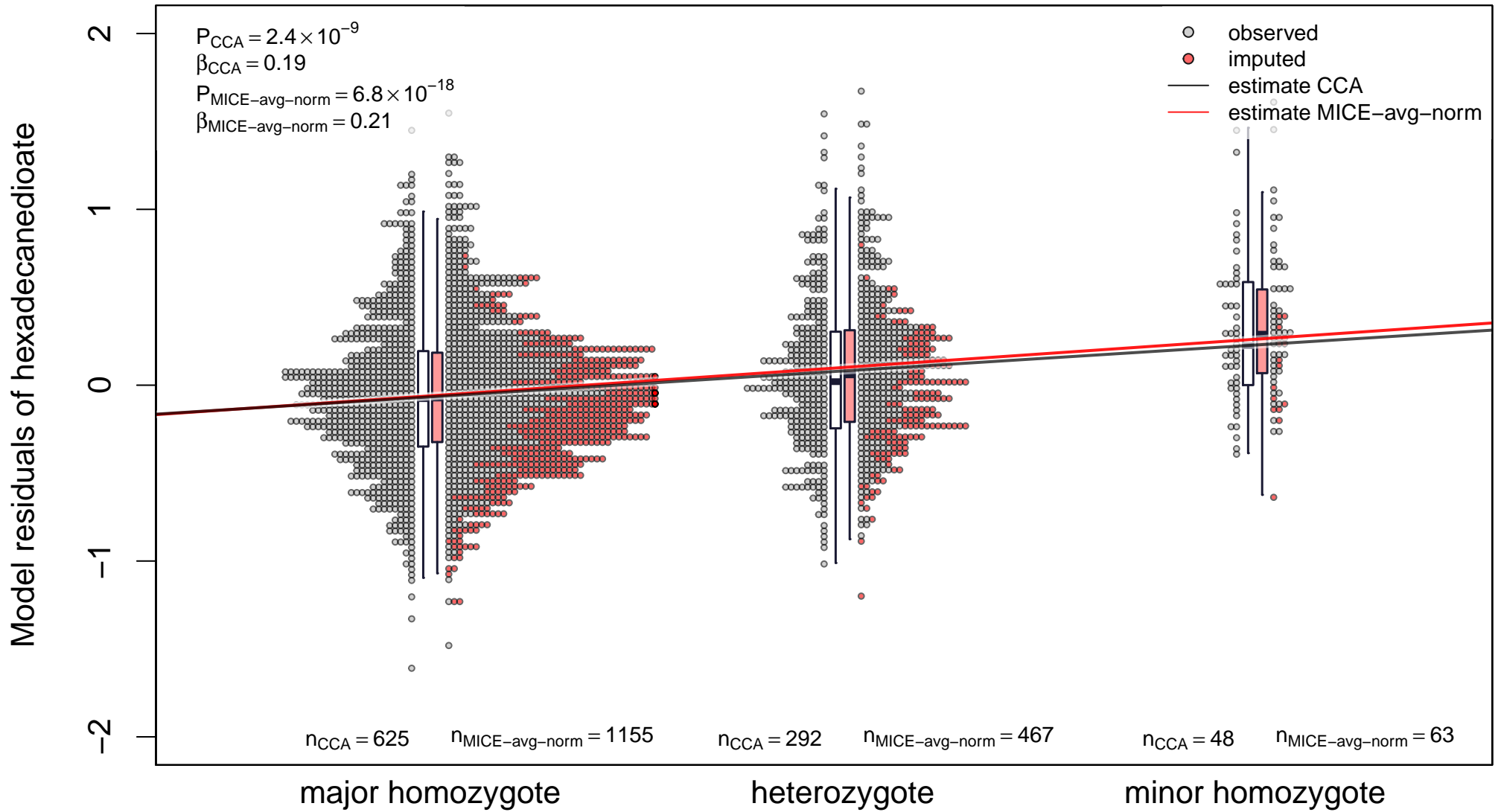


# mean



Genotype of SNP rs1871395 (SLCO1B1 (2 separate loci))

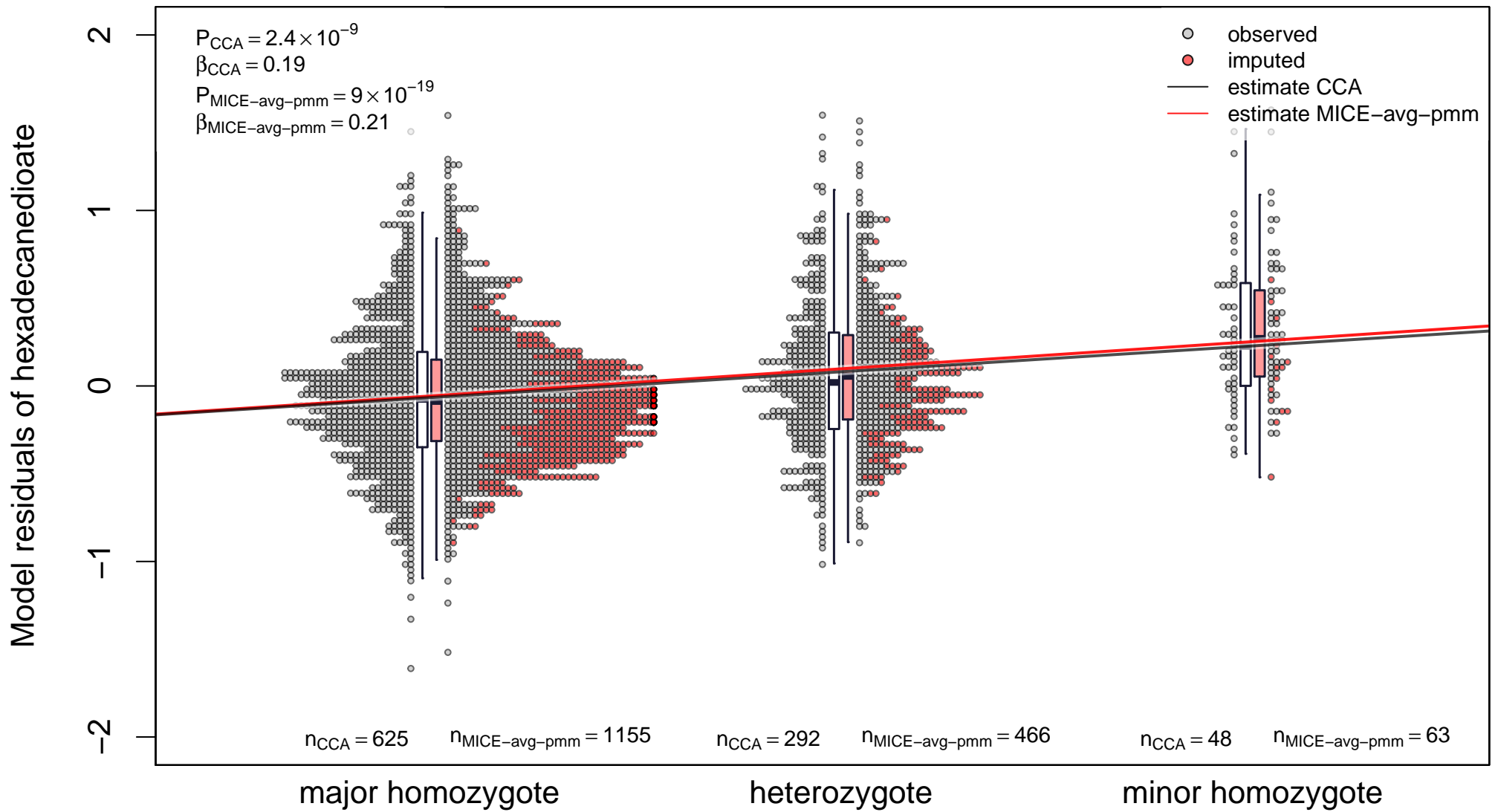
# MICE-avg-norm



Genotype of SNP rs1871395 (SLCO1B1 (2 separate loci))

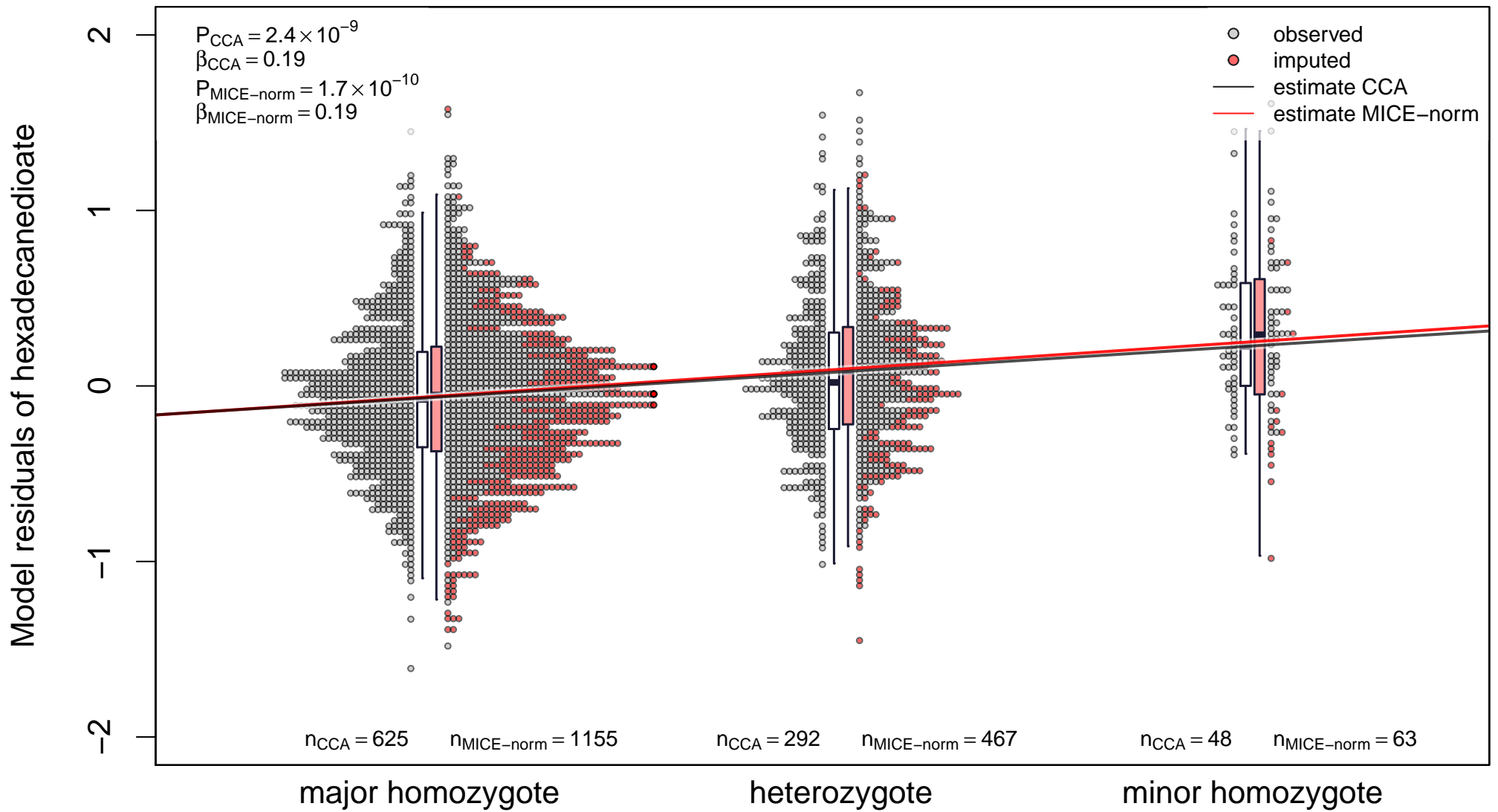


# MICE-avg-pmm

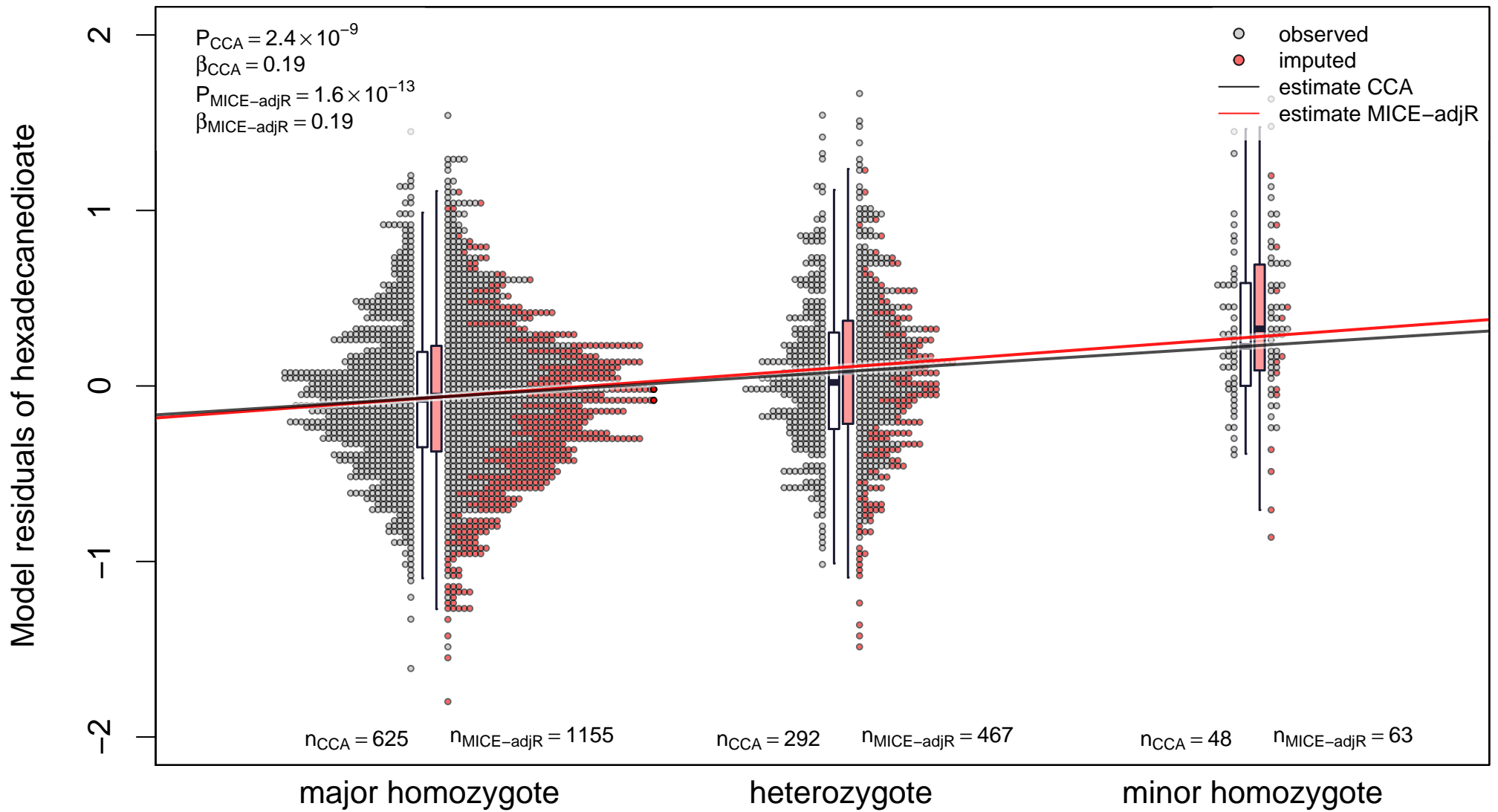


Genotype of SNP rs1871395 (SLCO1B1 (2 separate loci))

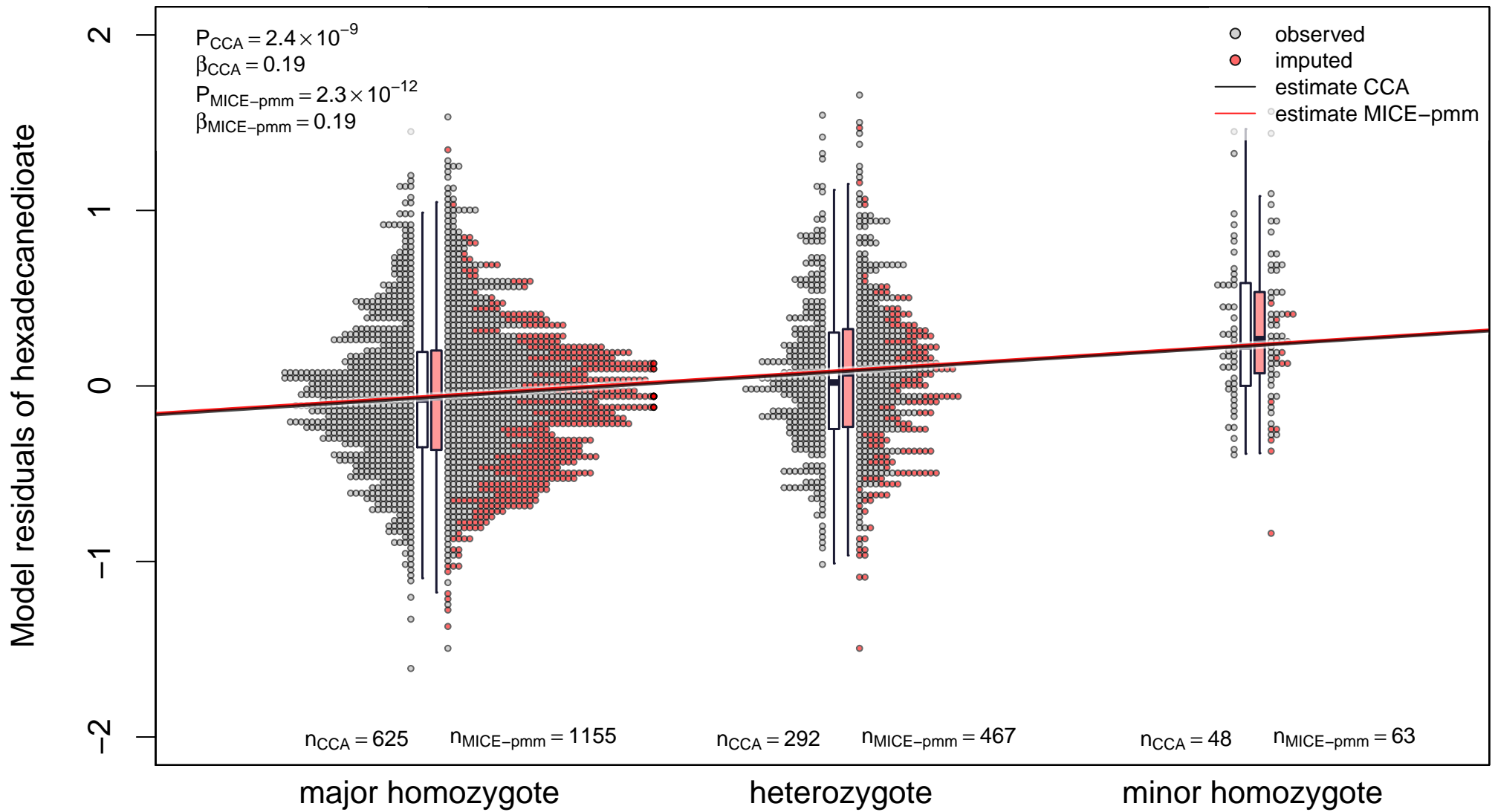
# MICE-norm



# MICE-adjR

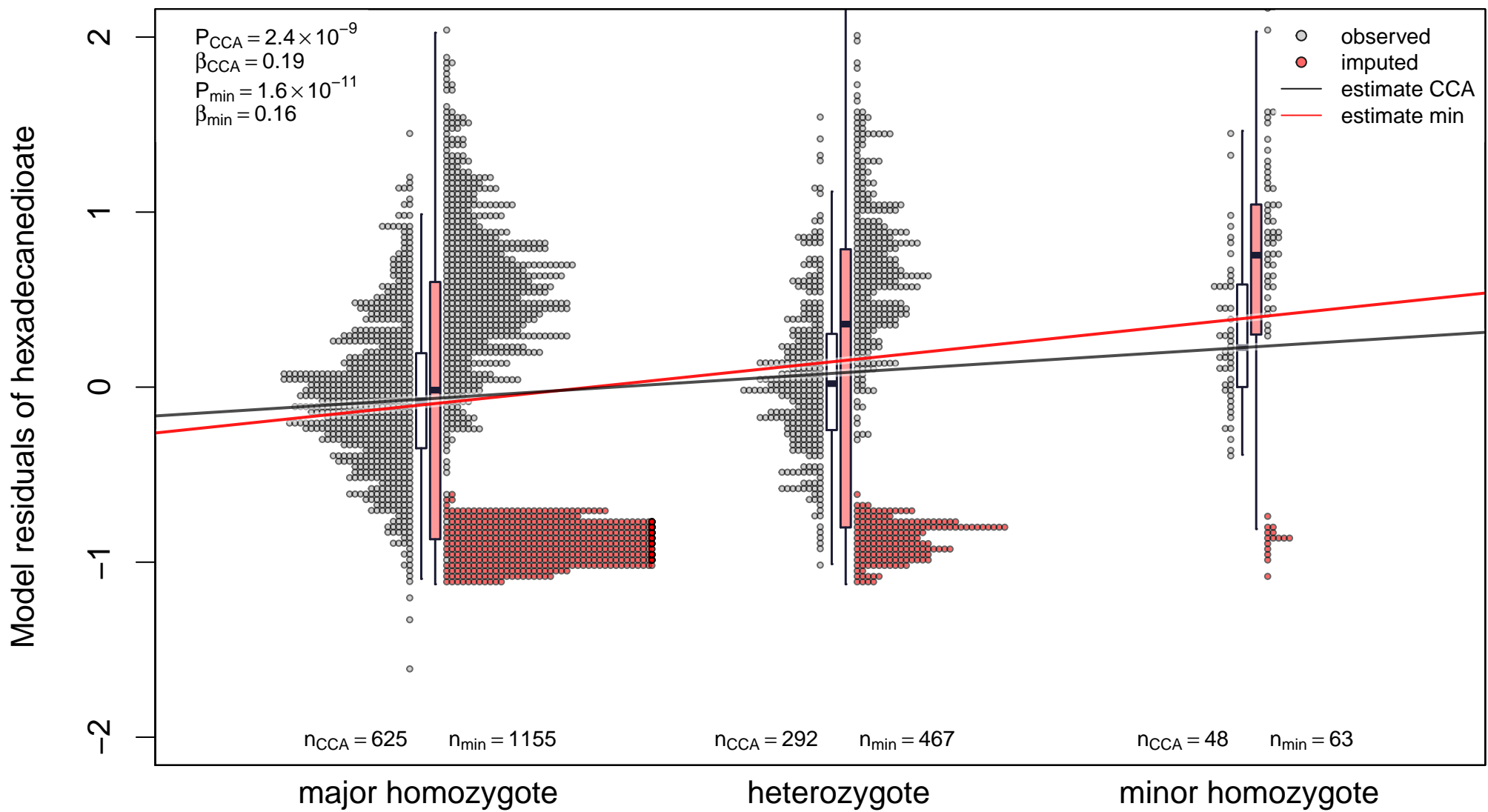


# MICE-pmm



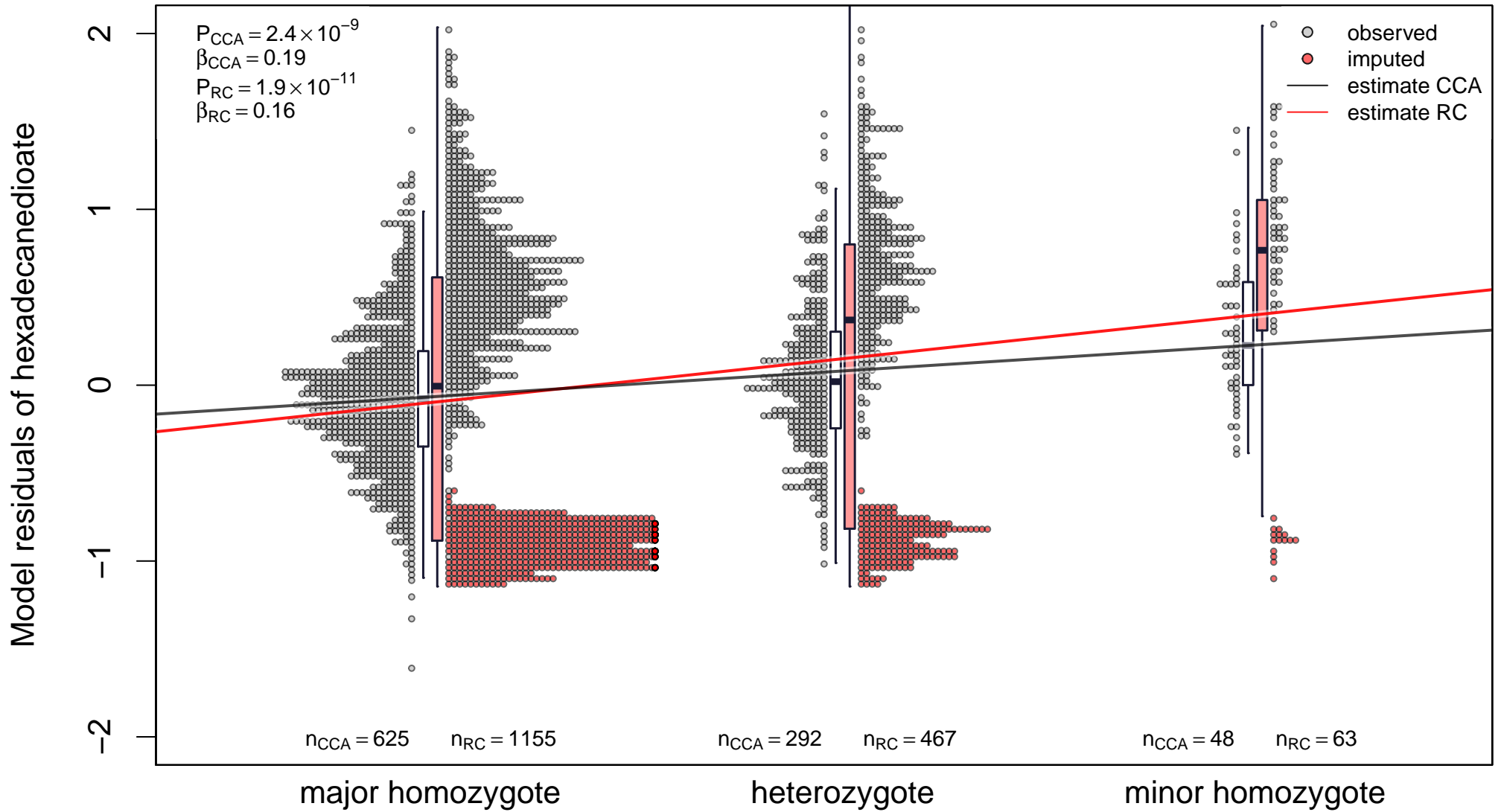
Genotype of SNP rs1871395 (SLCO1B1 (2 separate loci))

min

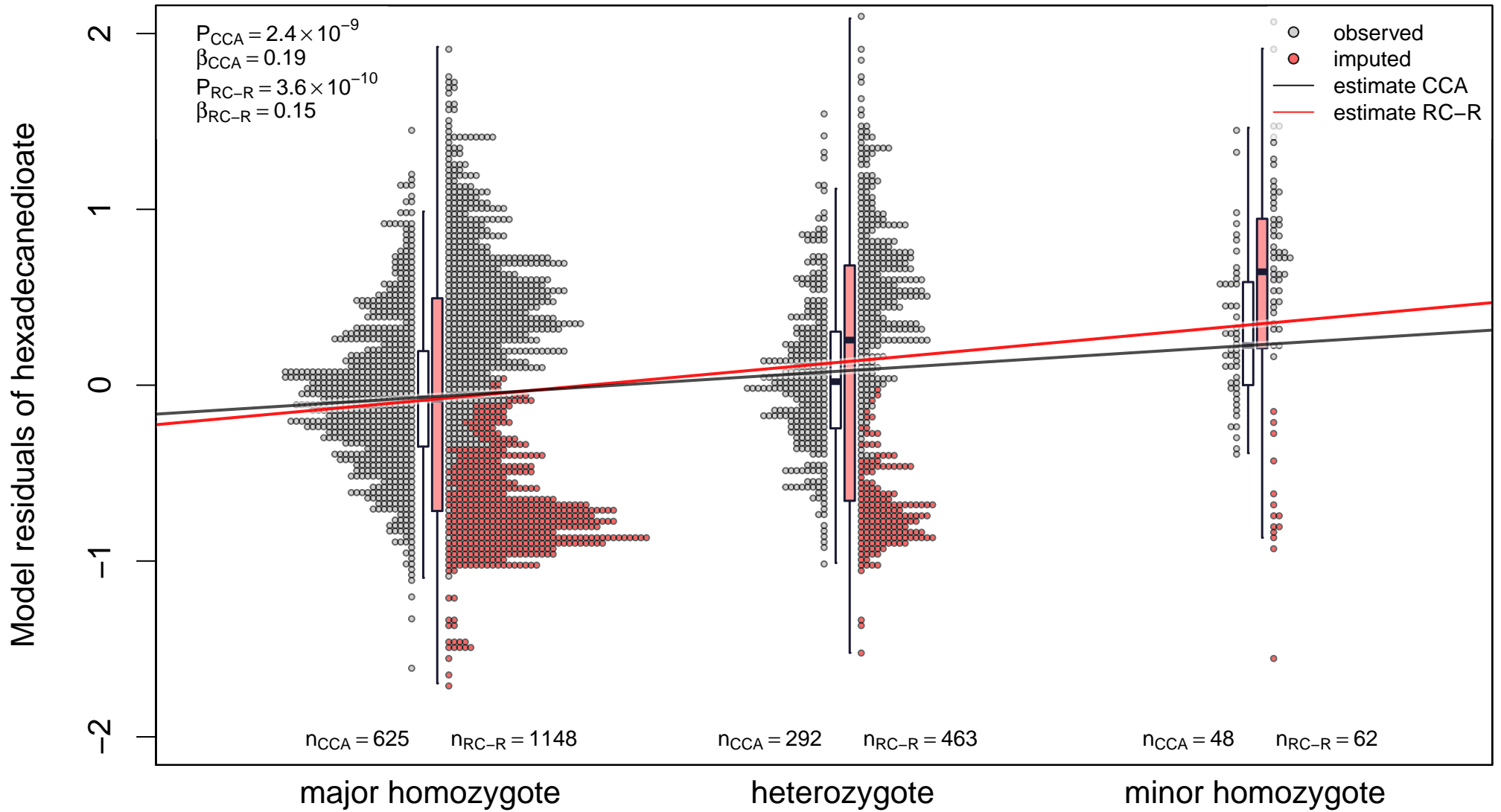


Genotype of SNP rs1871395 (SLCO1B1 (2 separate loci))

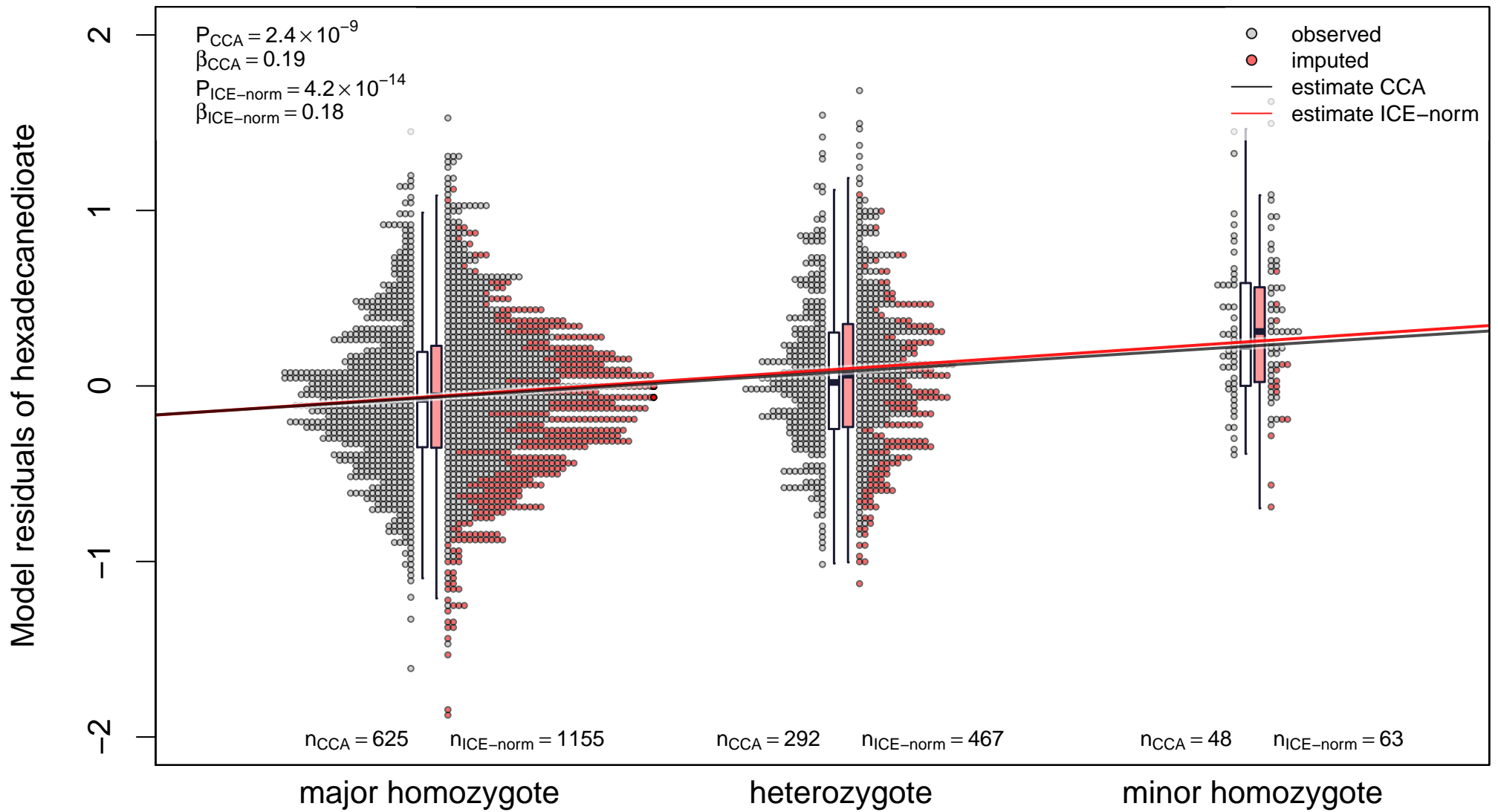
# RC



# RC-R

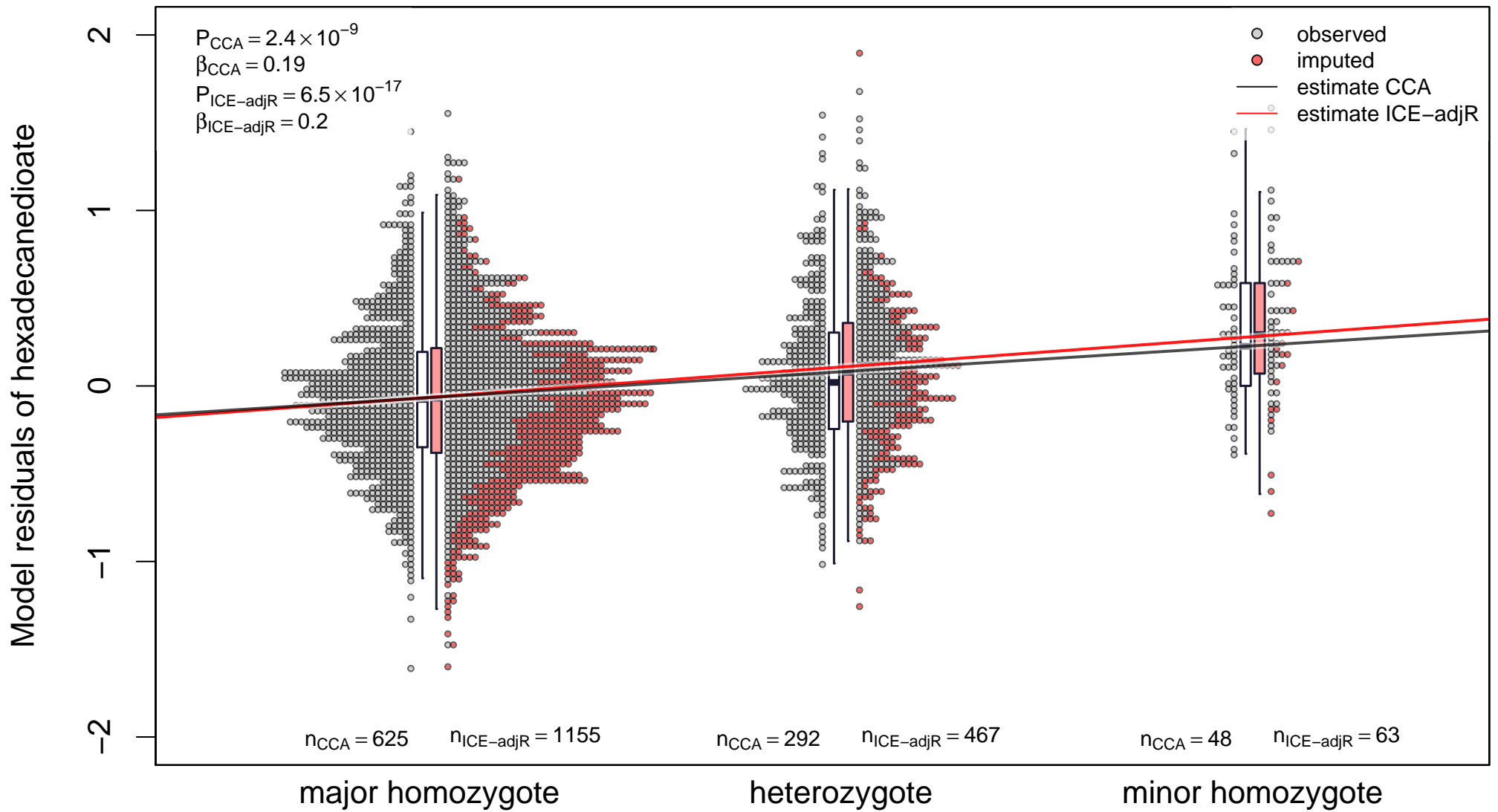


# ICE-norm



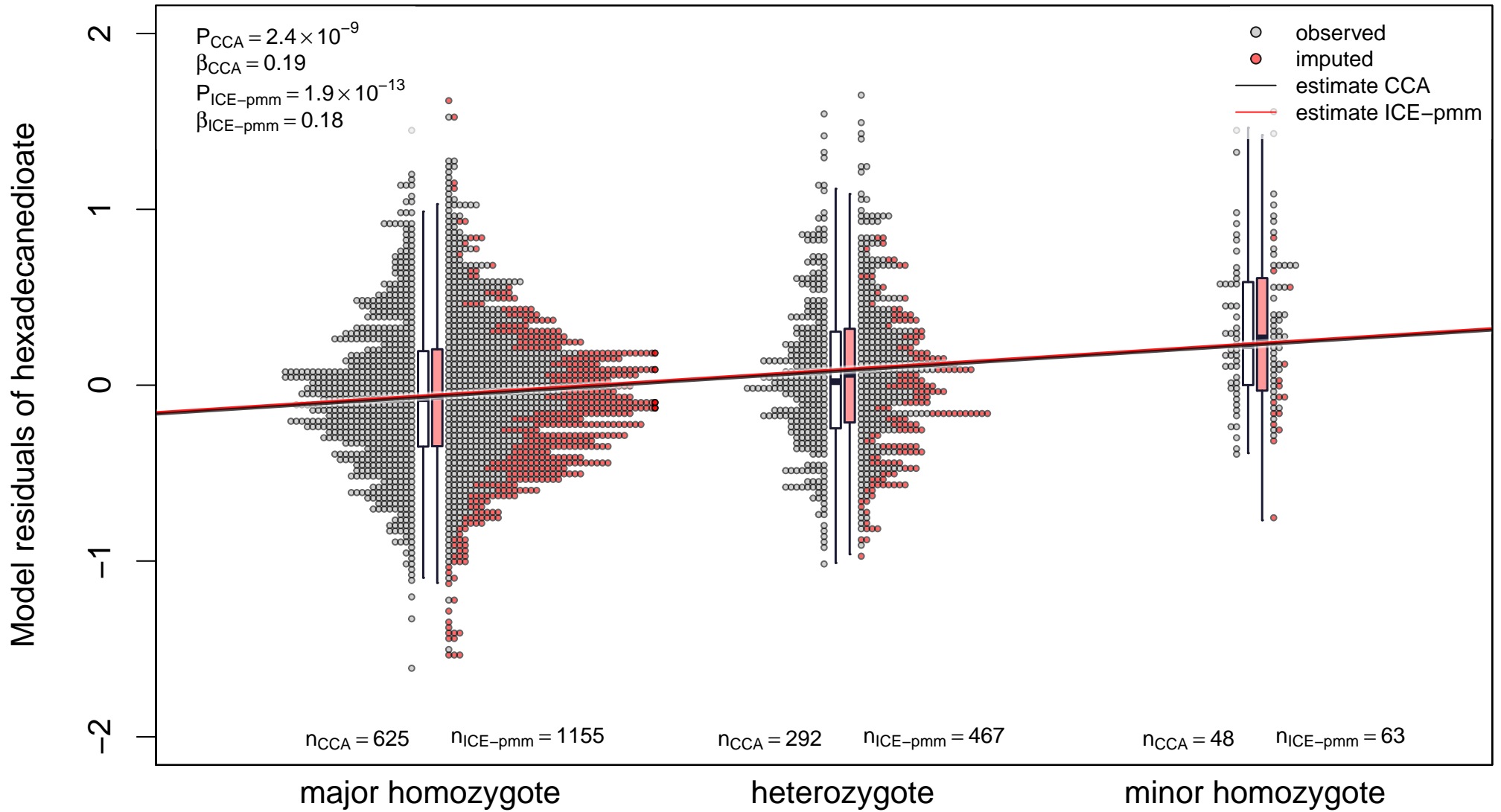


# ICE-adjR

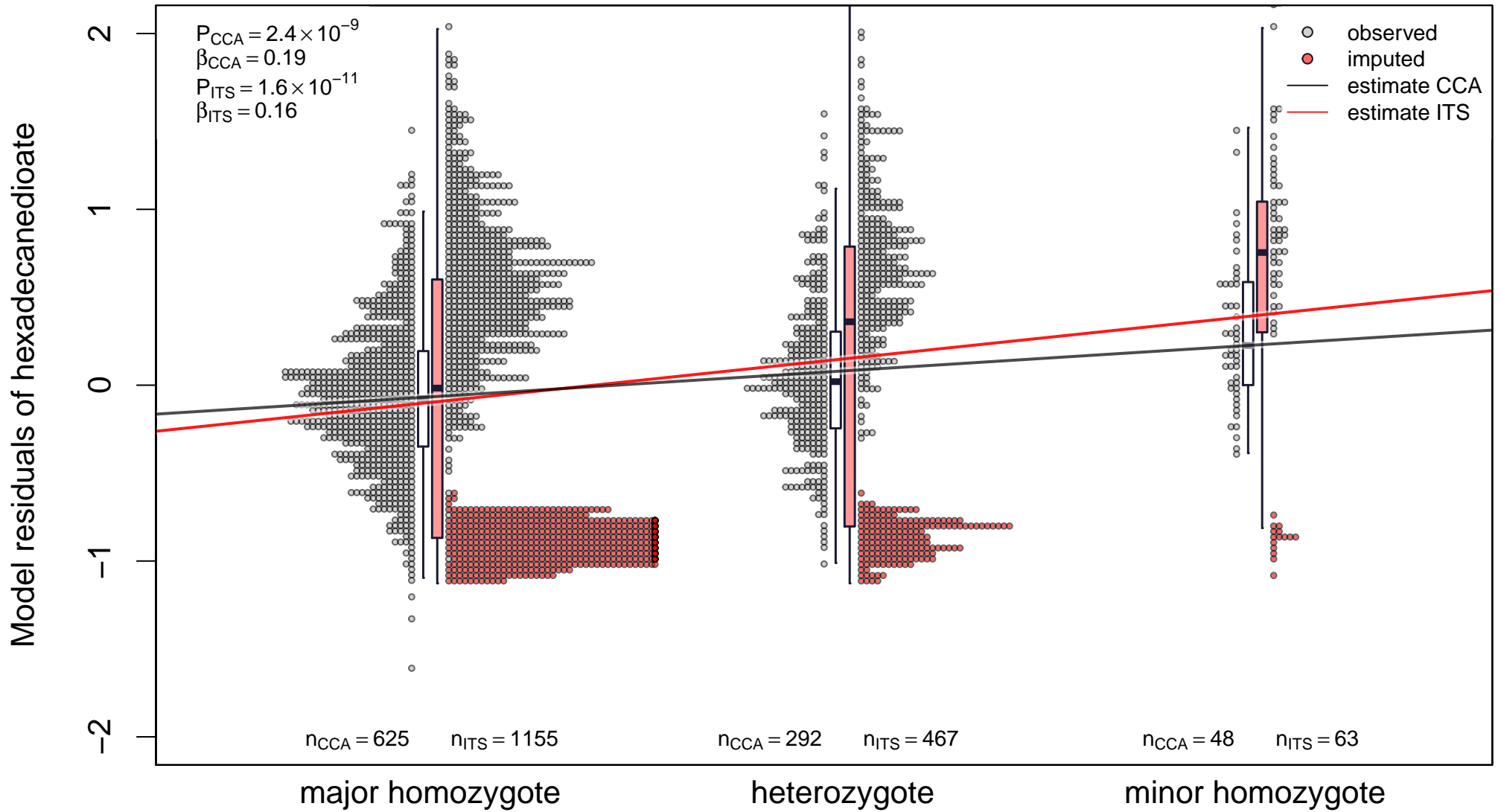


Genotype of SNP rs1871395 (SLCO1B1 (2 separate loci))

# ICE-pmm

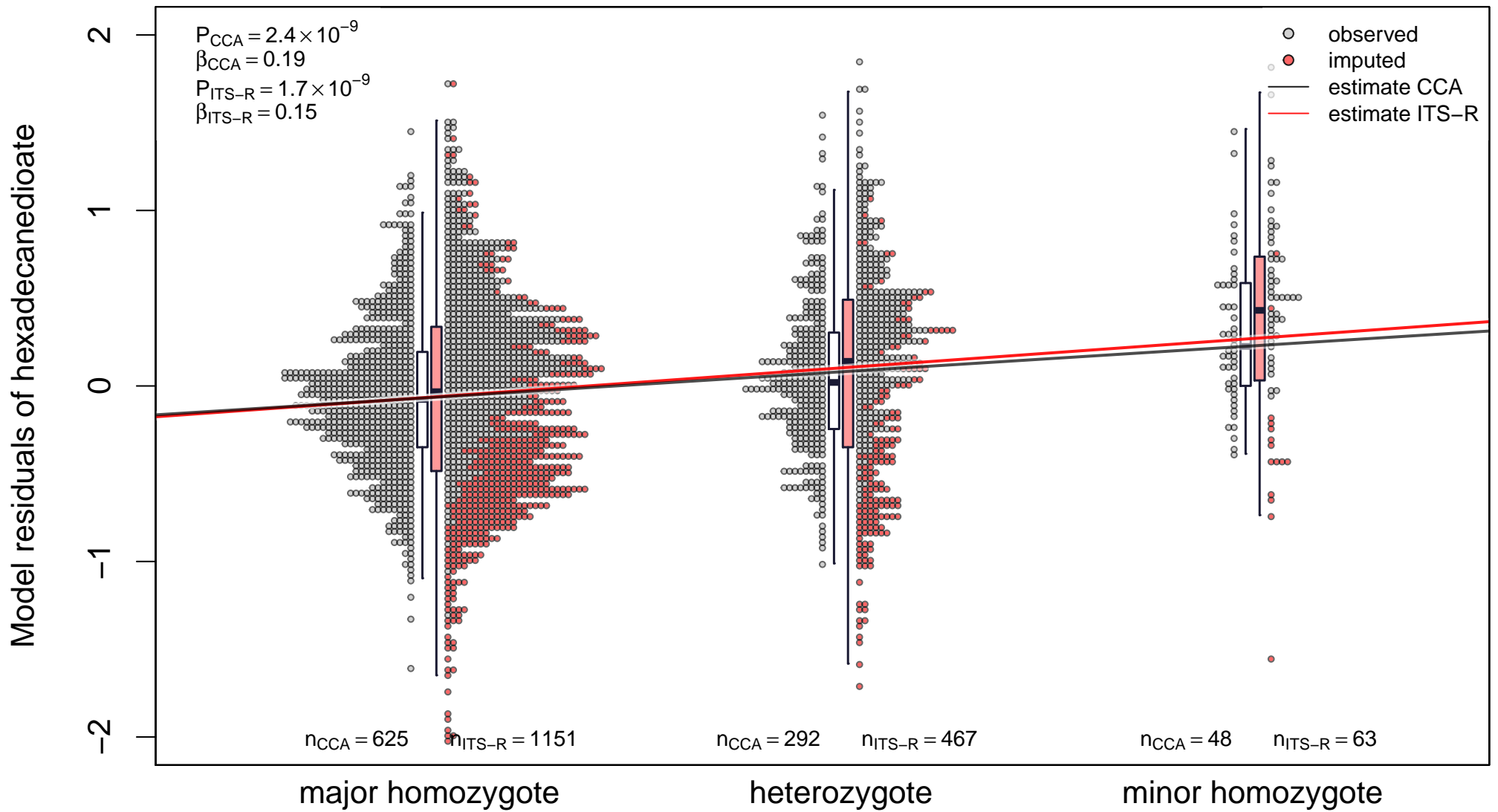


# ITS



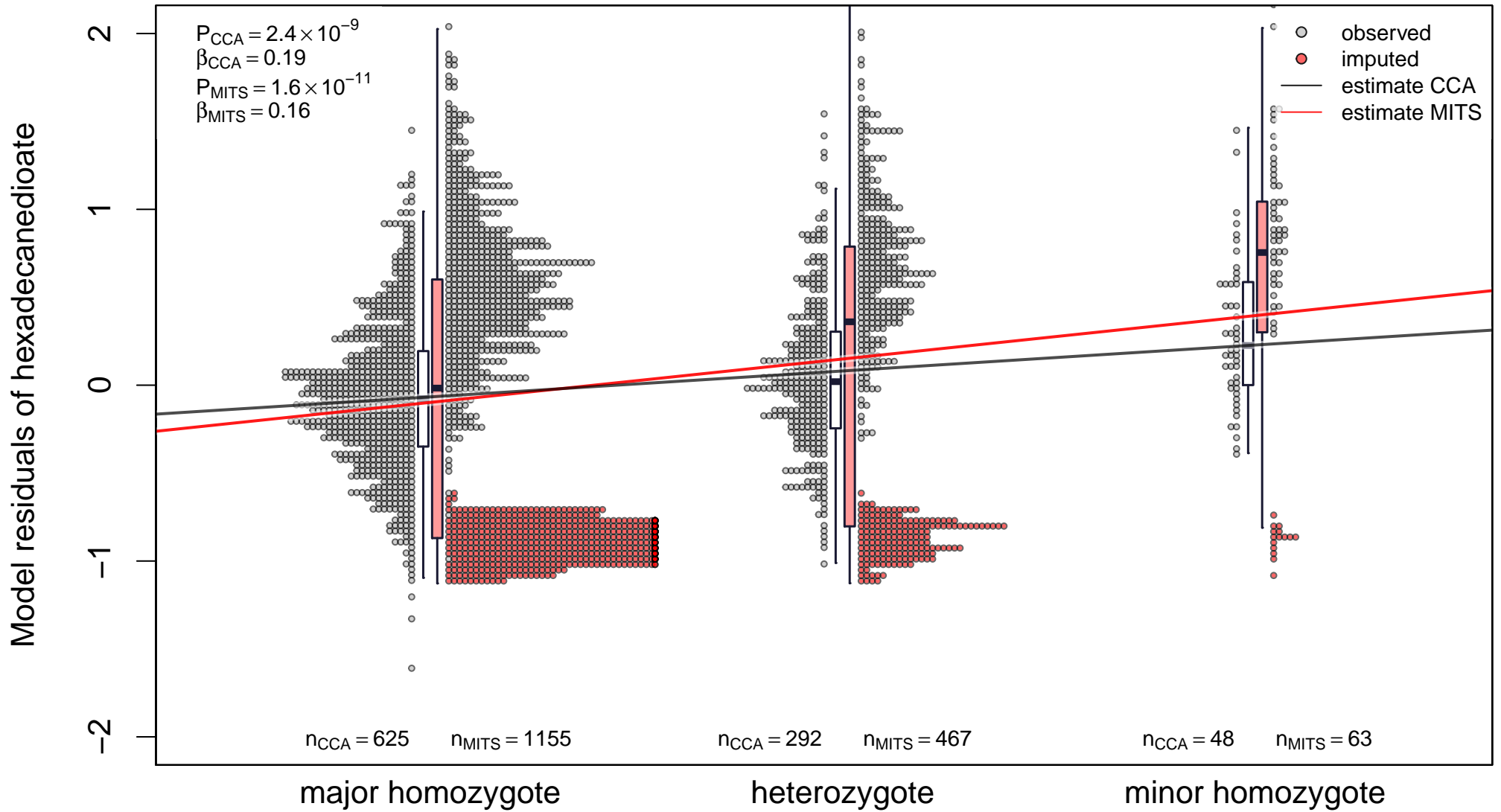
Genotype of SNP rs1871395 (SLCO1B1 (2 separate loci))

# ITS-R



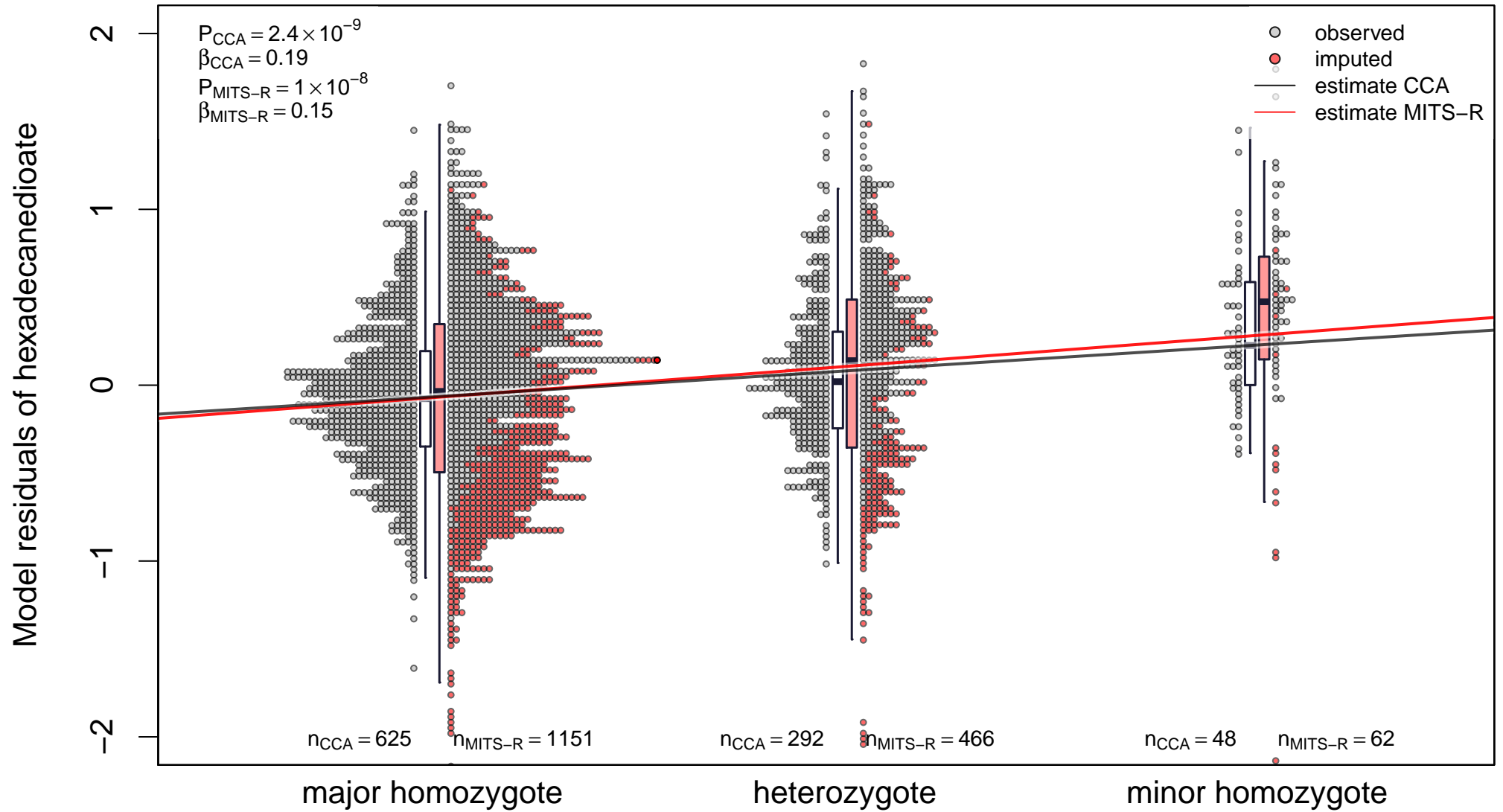
Genotype of SNP rs1871395 (SLCO1B1 (2 separate loci))

# MITS

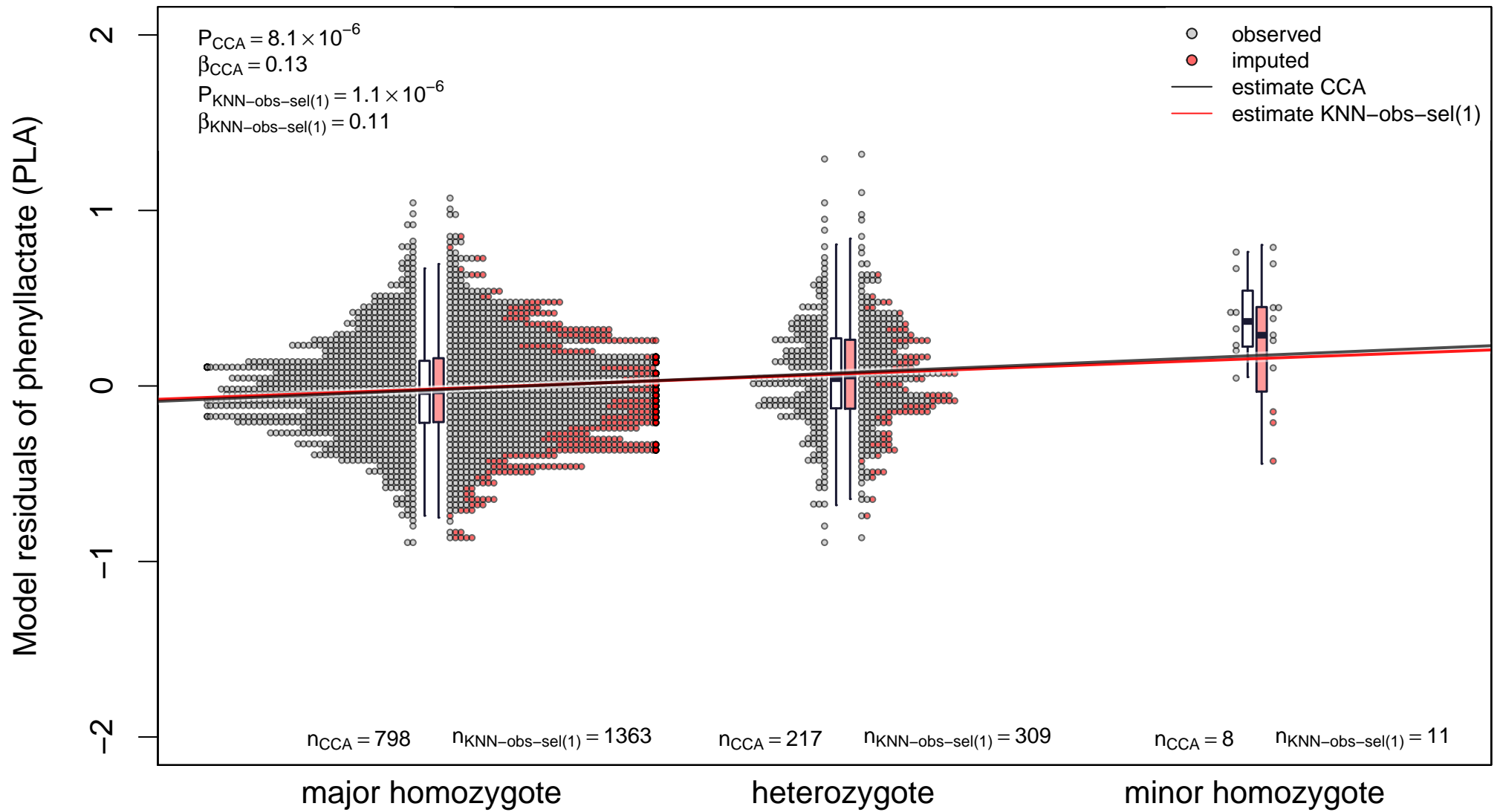


Genotype of SNP rs1871395 (SLCO1B1 (2 separate loci))

# MIT-S-R

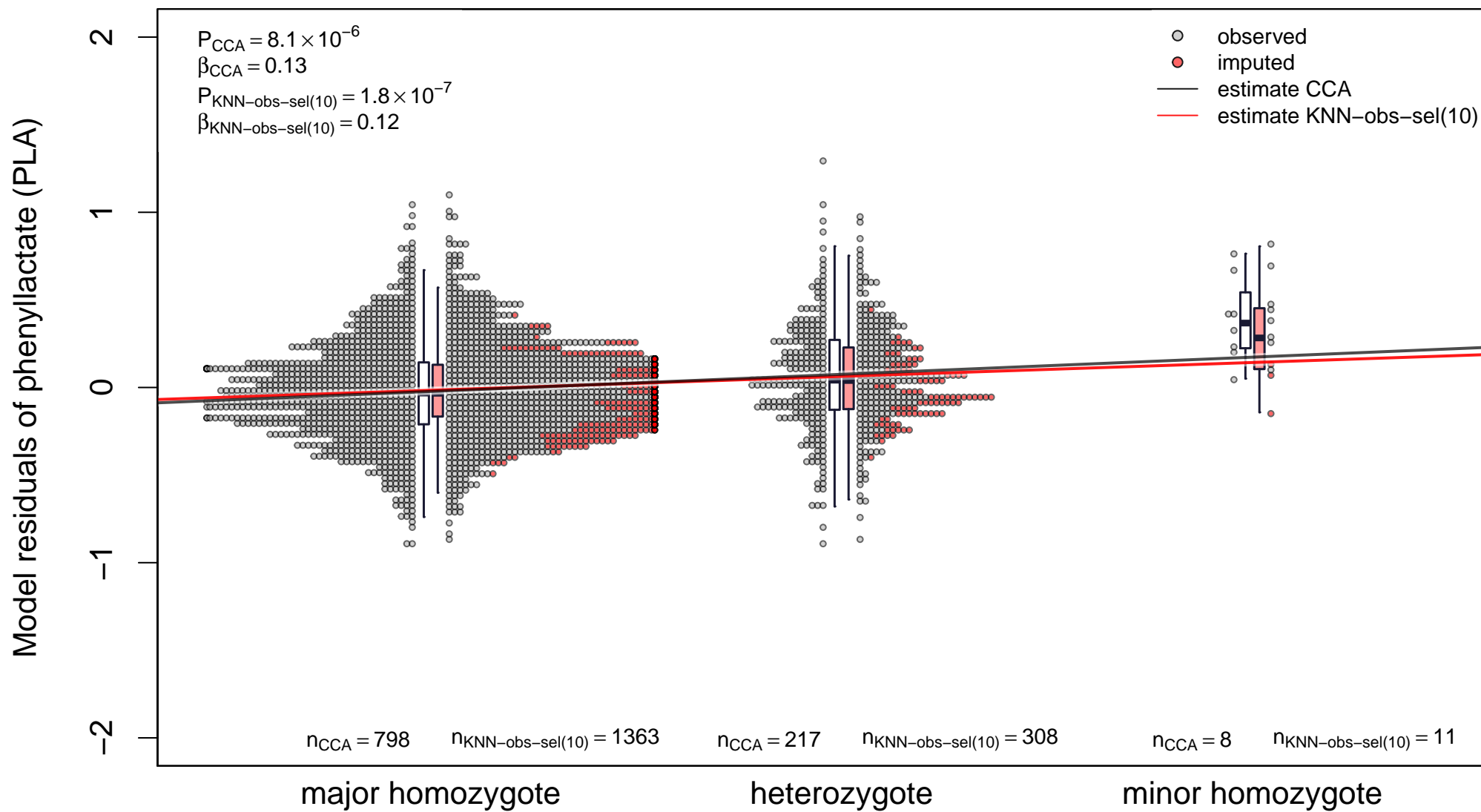


# KNN-obs-sel(1)



Genotype of SNP rs4784054 (GOT2 (2 separate loci))

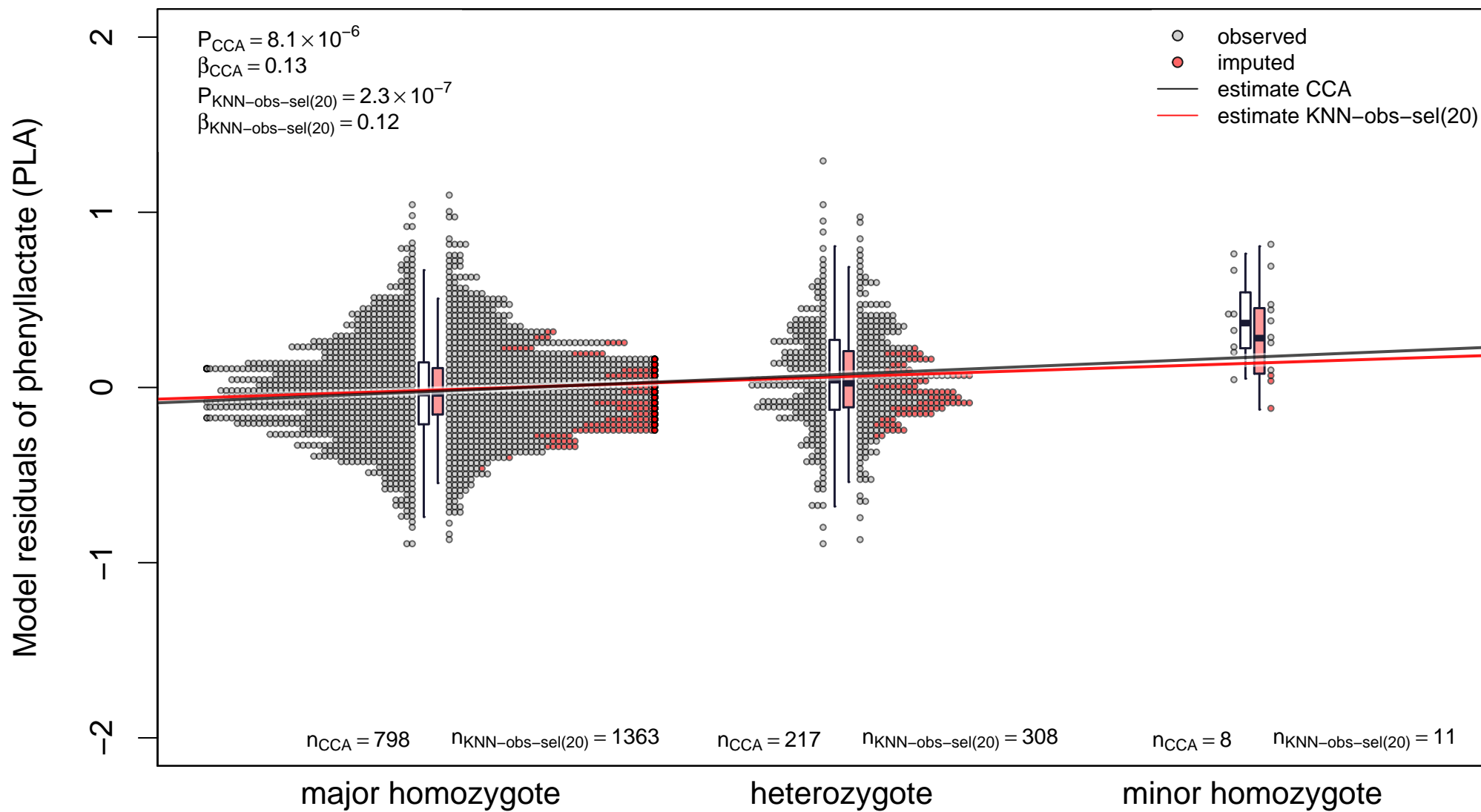
# KNN-obs-sel(10)



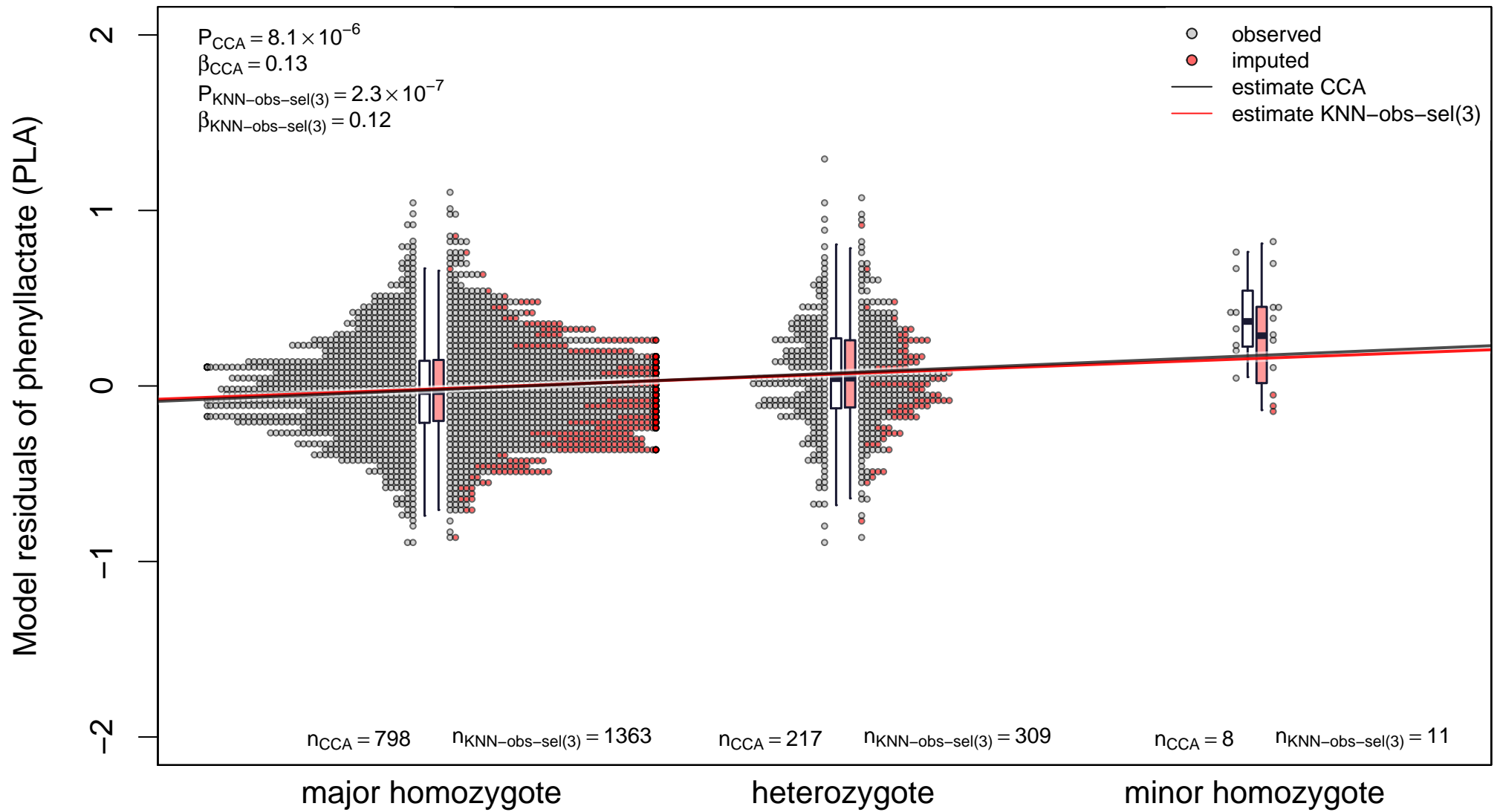
Genotype of SNP rs4784054 (GOT2 (2 separate loci))



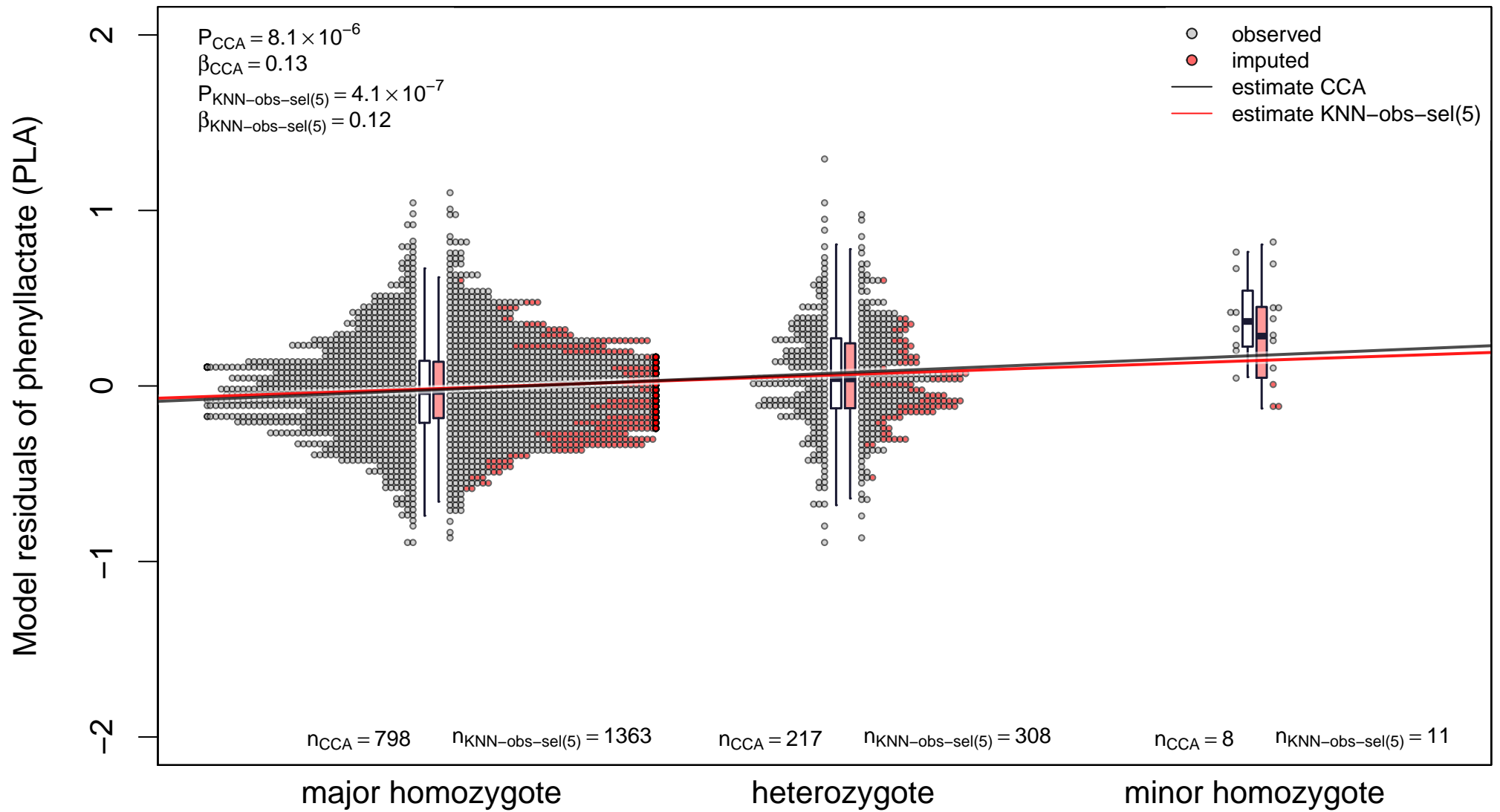
# KNN-obs-sel(20)



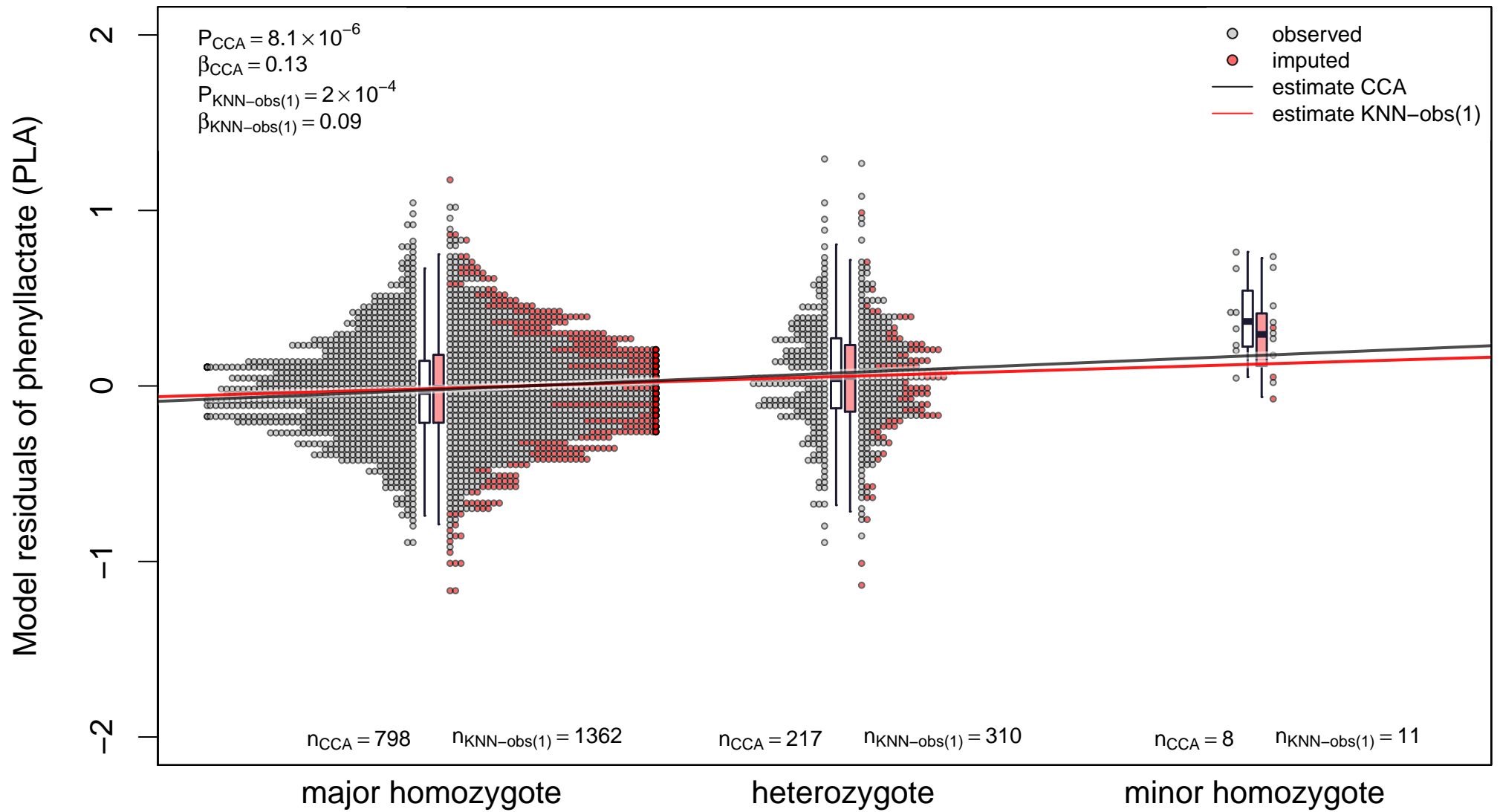
# KNN-obs-sel(3)



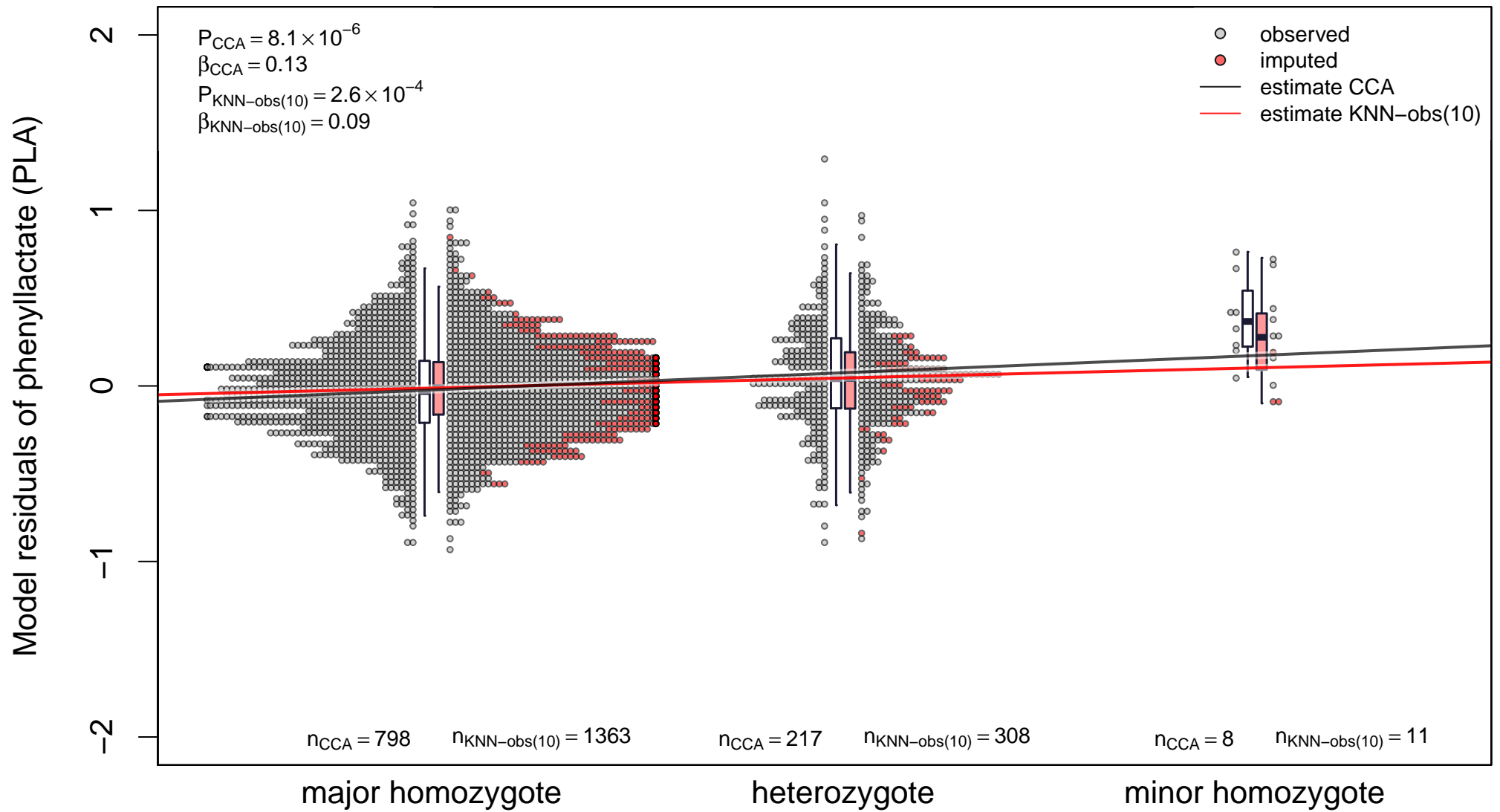
# KNN-obs-sel(5)



# KNN-obs(1)

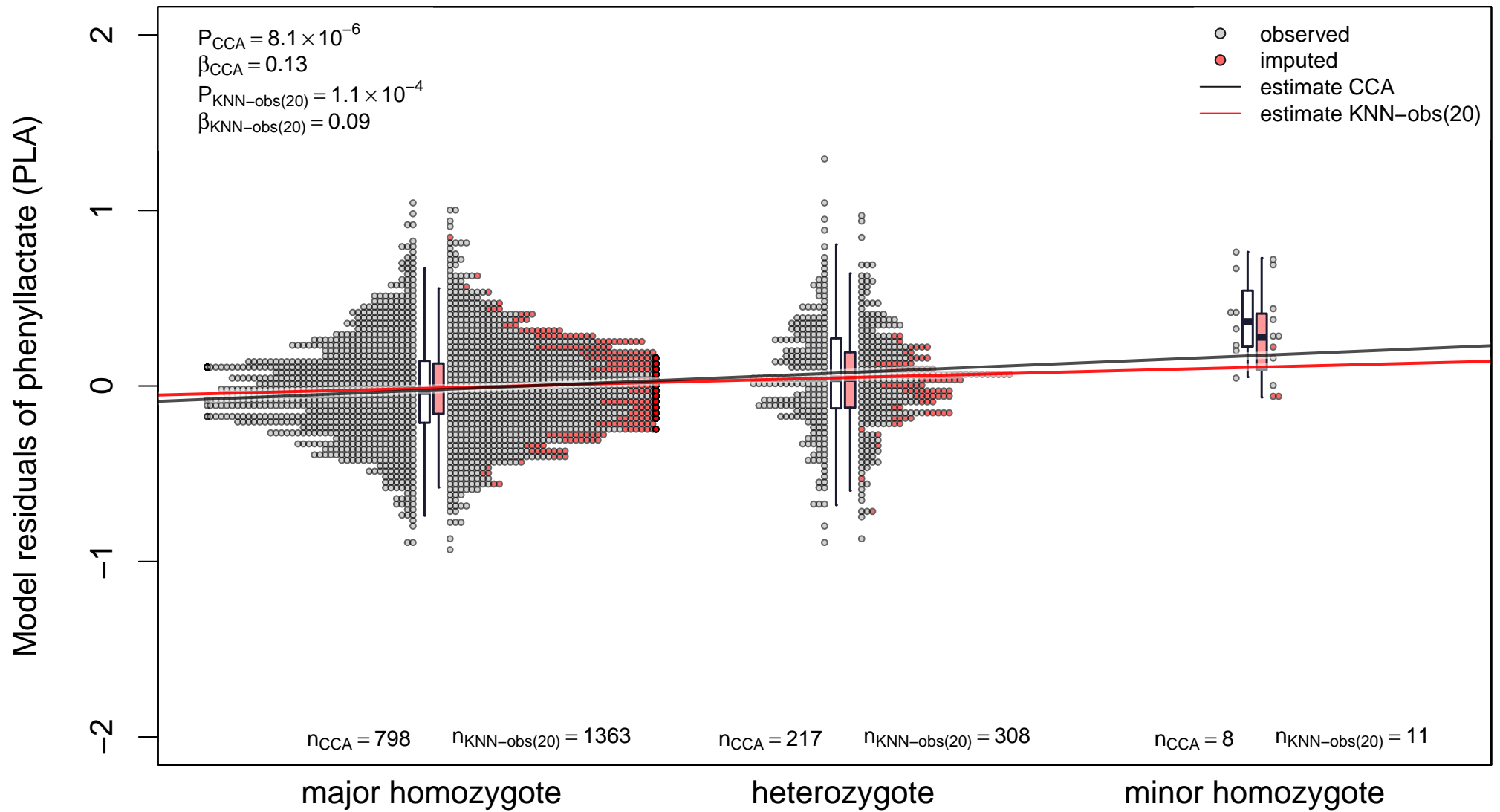


# KNN-obs(10)



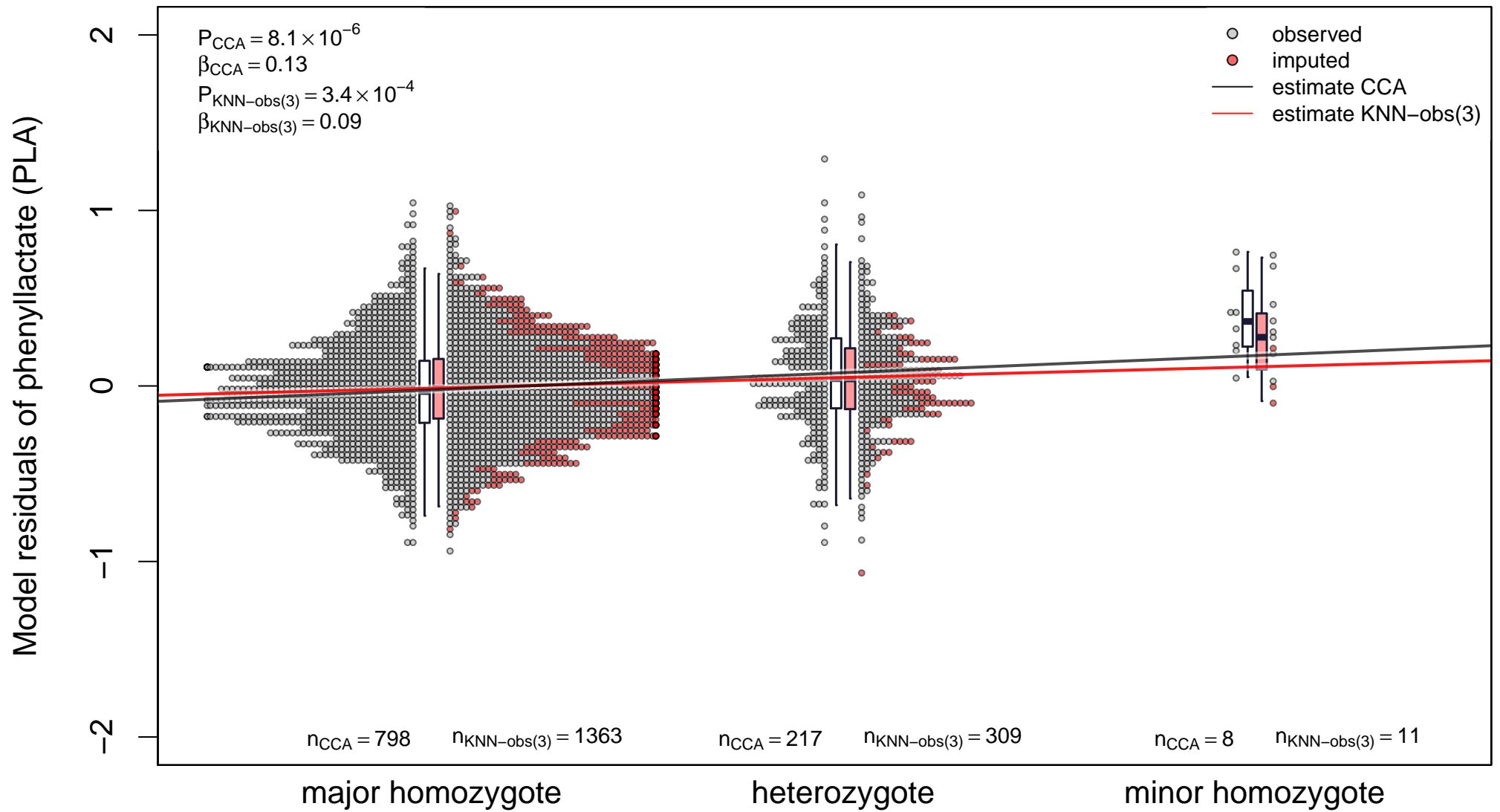
Genotype of SNP rs4784054 (GOT2 (2 separate loci))

# KNN-obs(20)



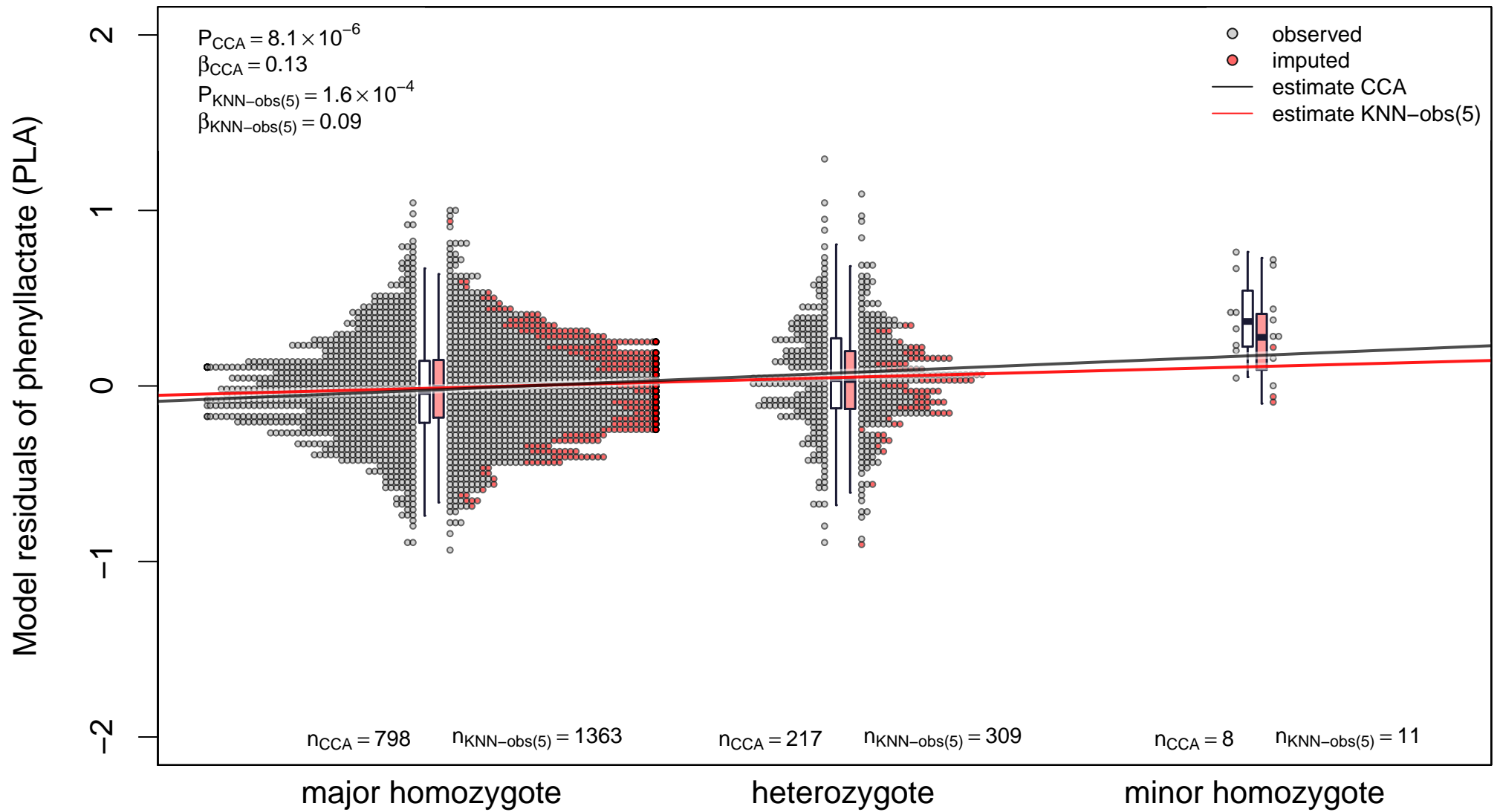
Genotype of SNP rs4784054 (GOT2 (2 separate loci))

# KNN-obs(3)



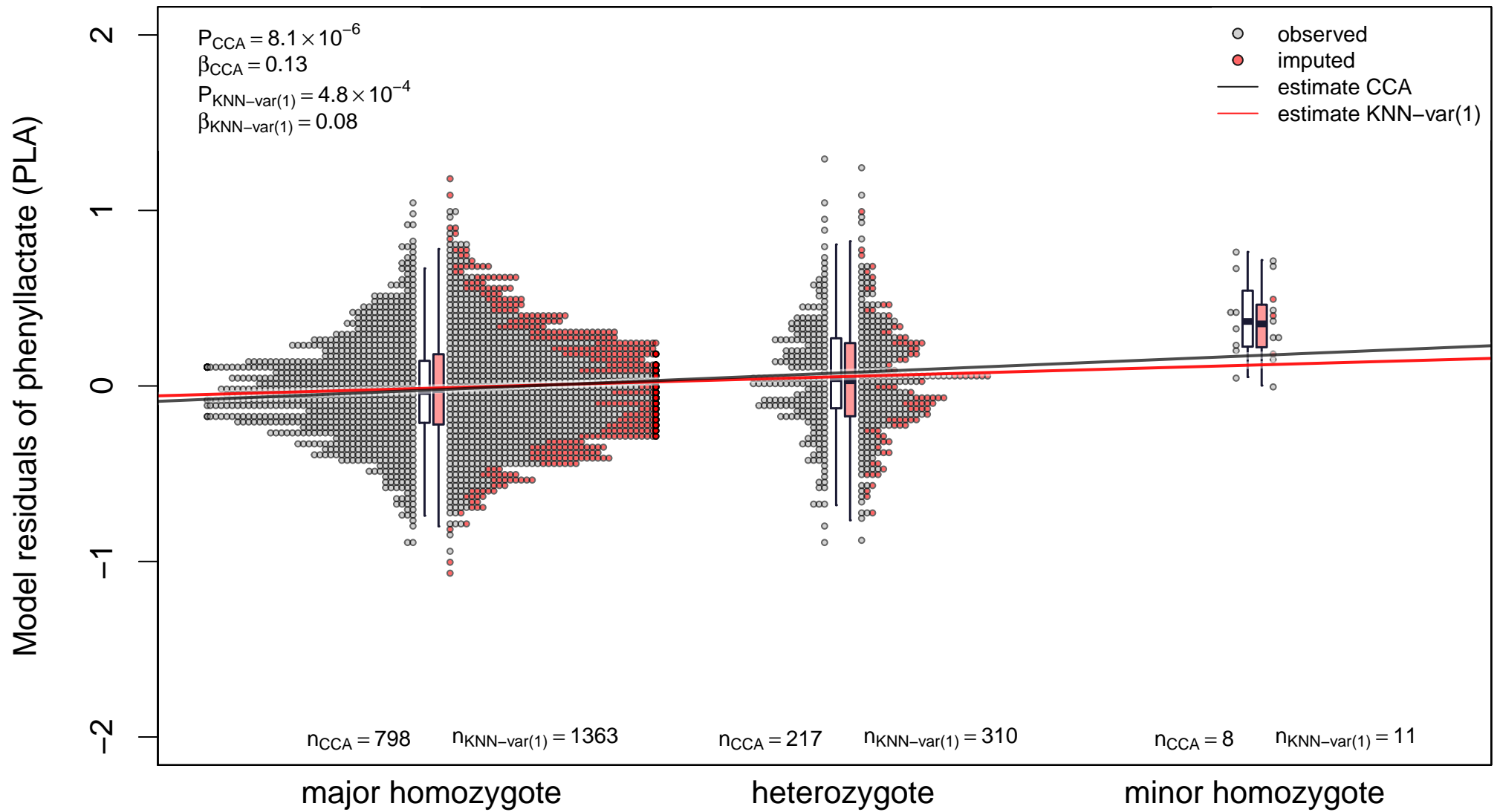
Genotype of SNP rs4784054 (GOT2 (2 separate loci))

# KNN-obs(5)

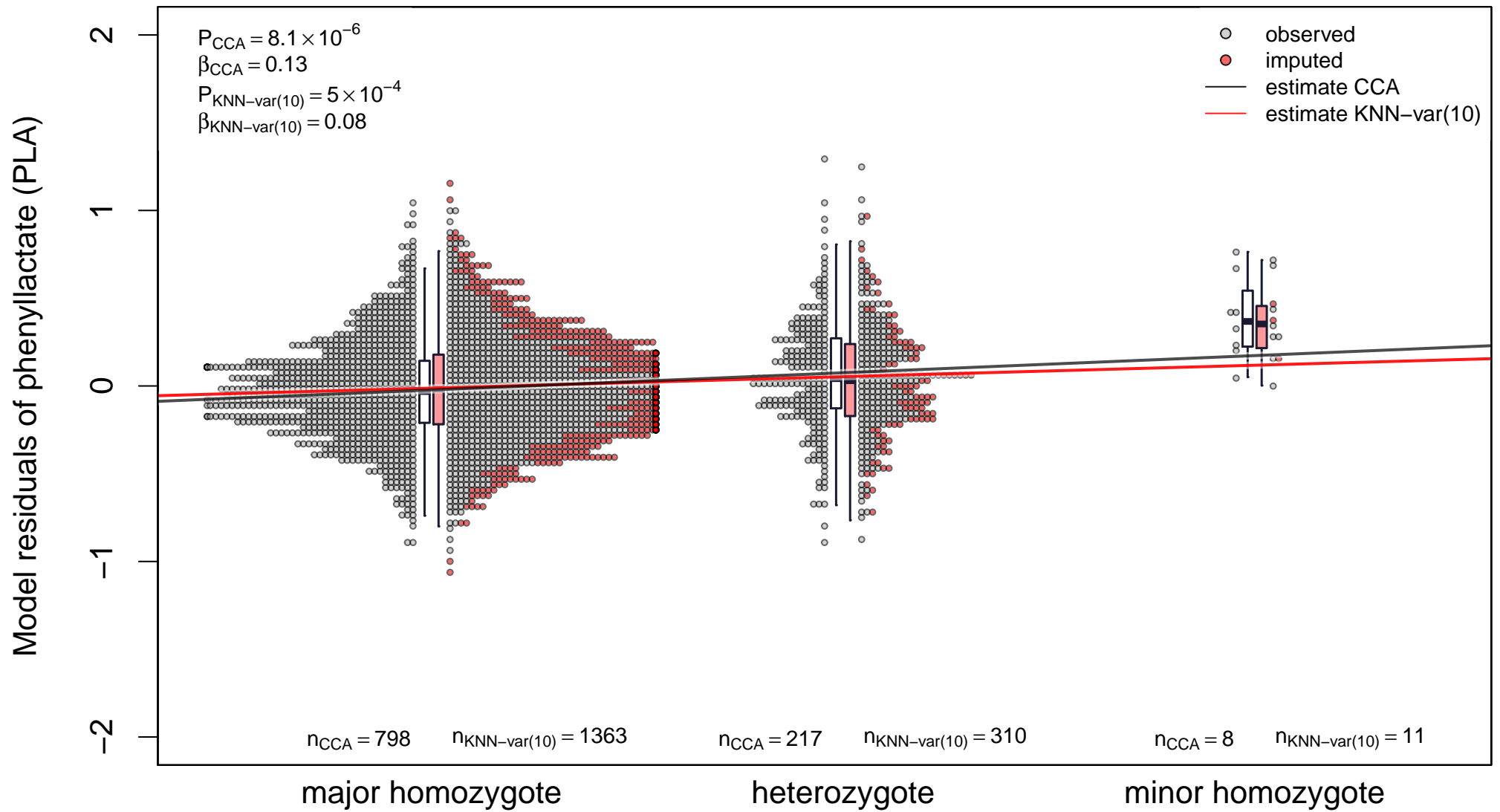




# KNN-var(1)

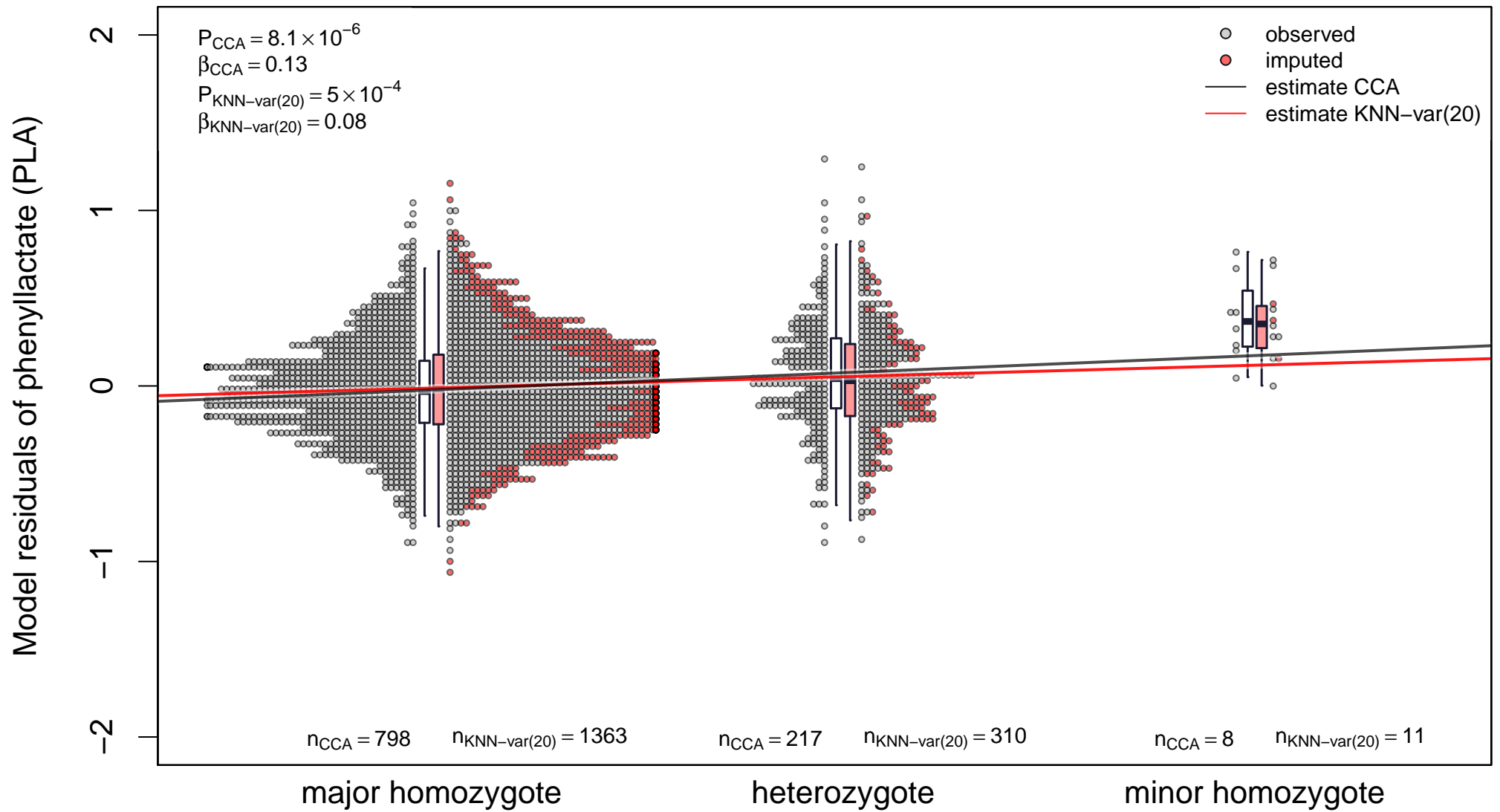


# KNN-var(10)



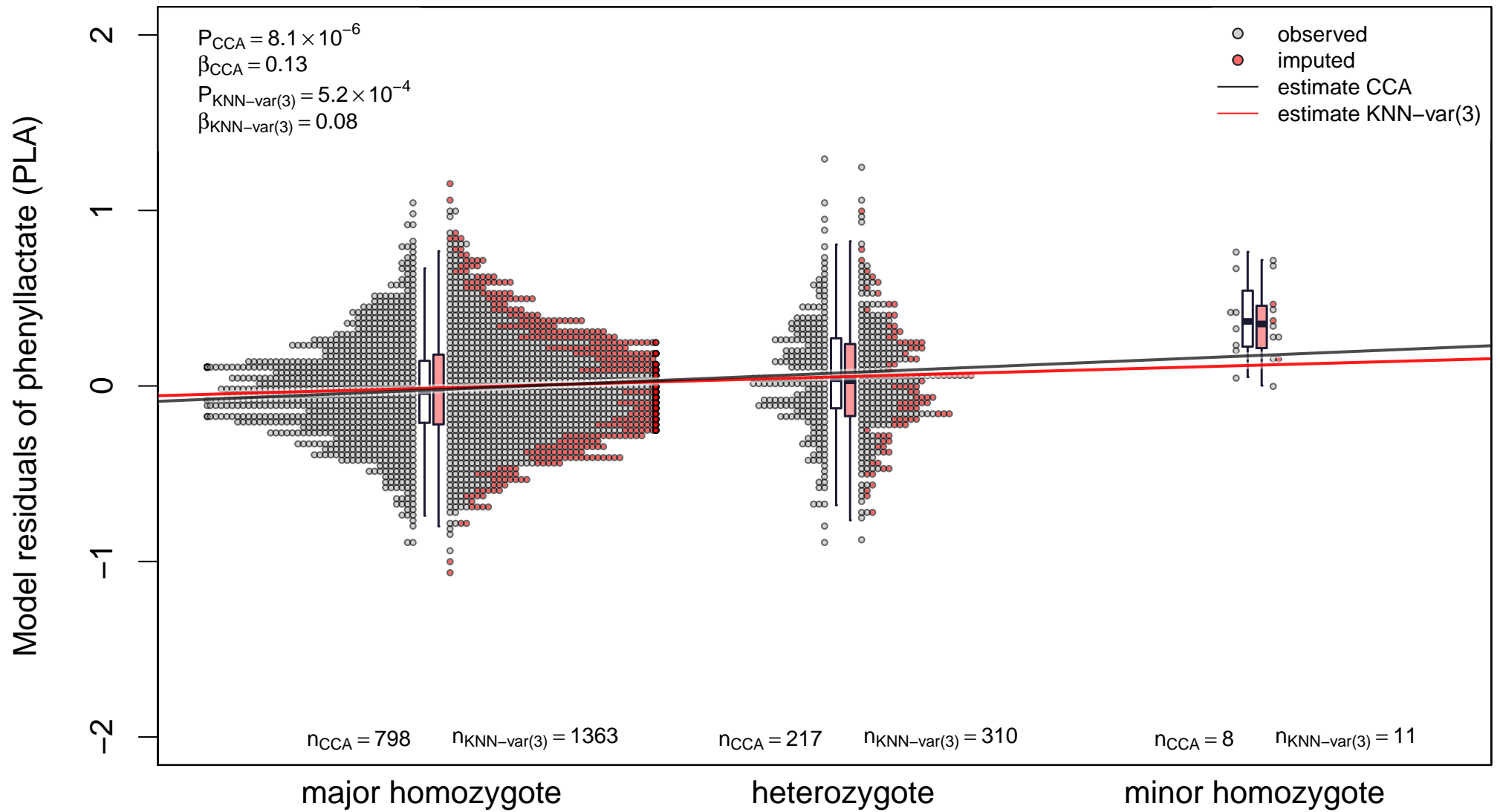
Genotype of SNP rs4784054 (GOT2 (2 separate loci))

# KNN-var(20)

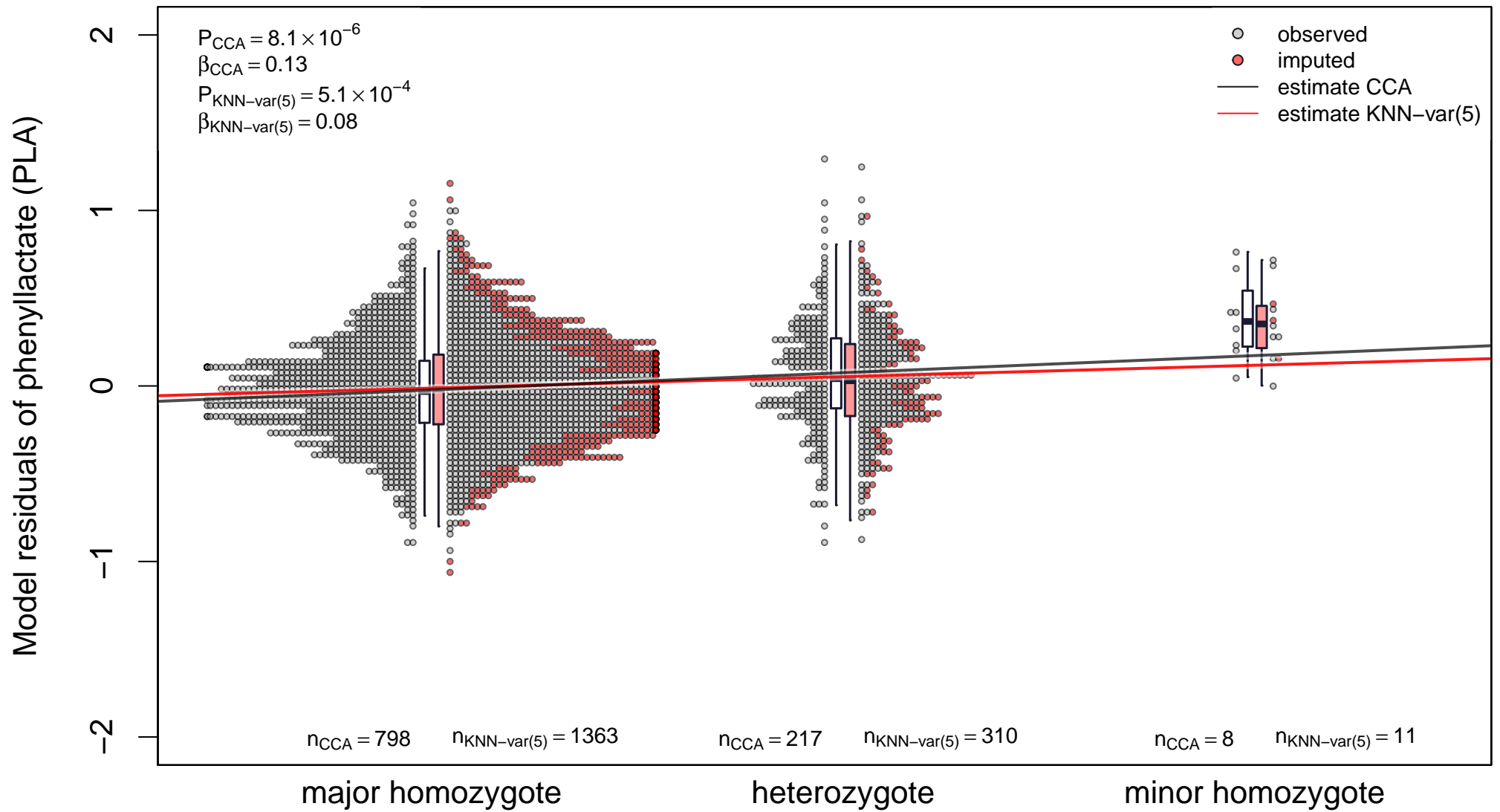


Genotype of SNP rs4784054 (GOT2 (2 separate loci))

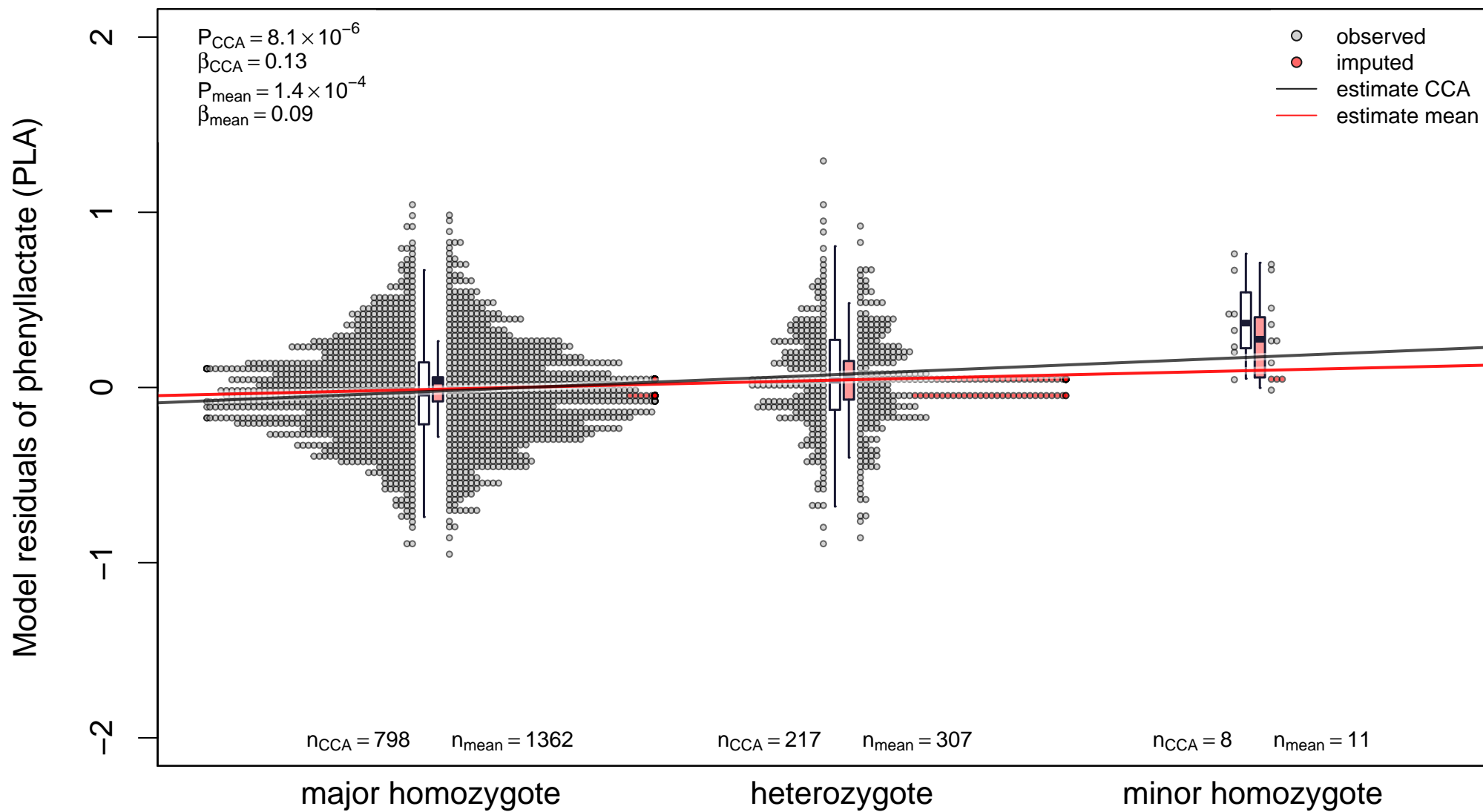
# KNN-var(3)



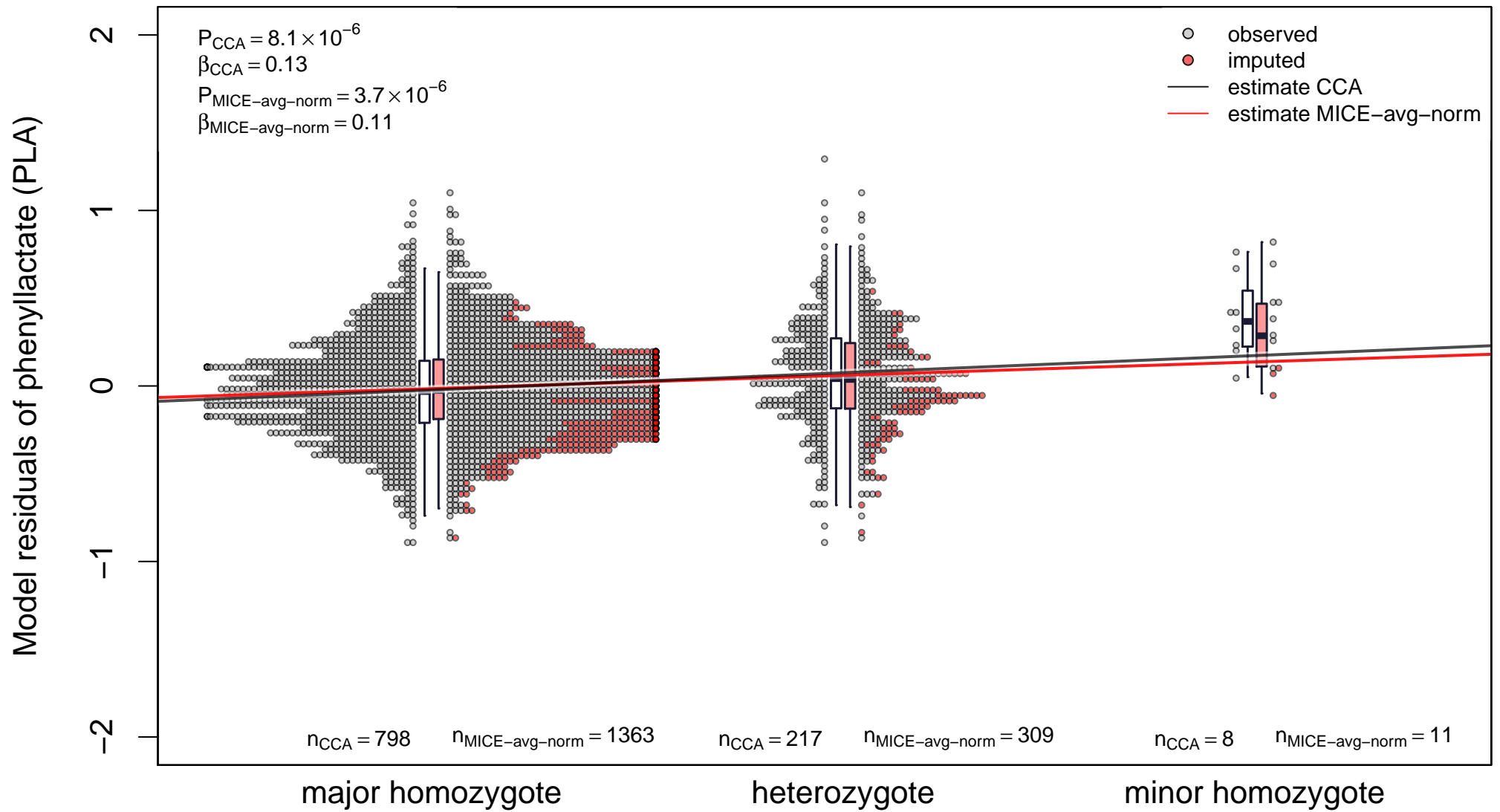
# KNN-var(5)



# mean

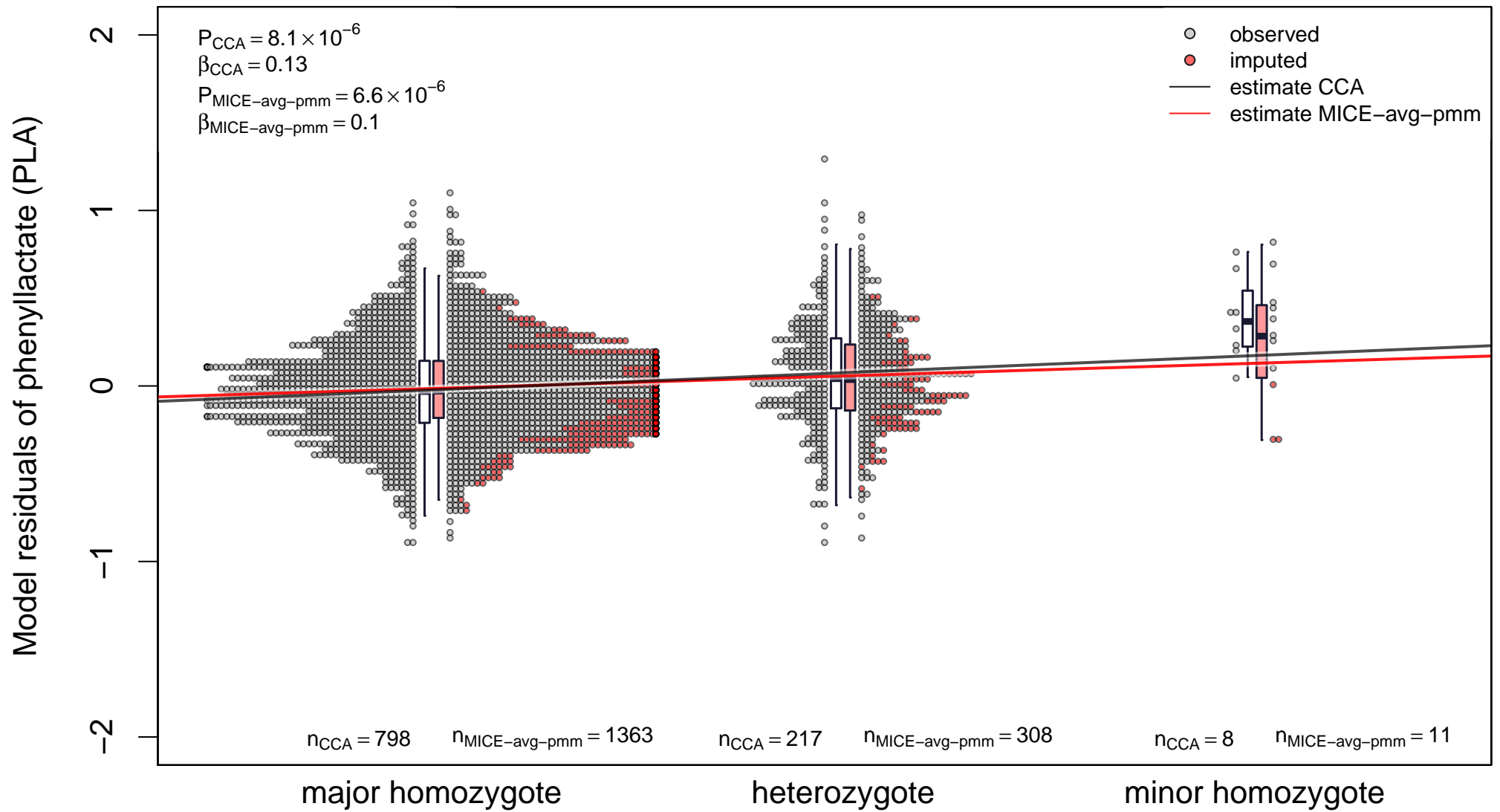


# MICE-avg-norm



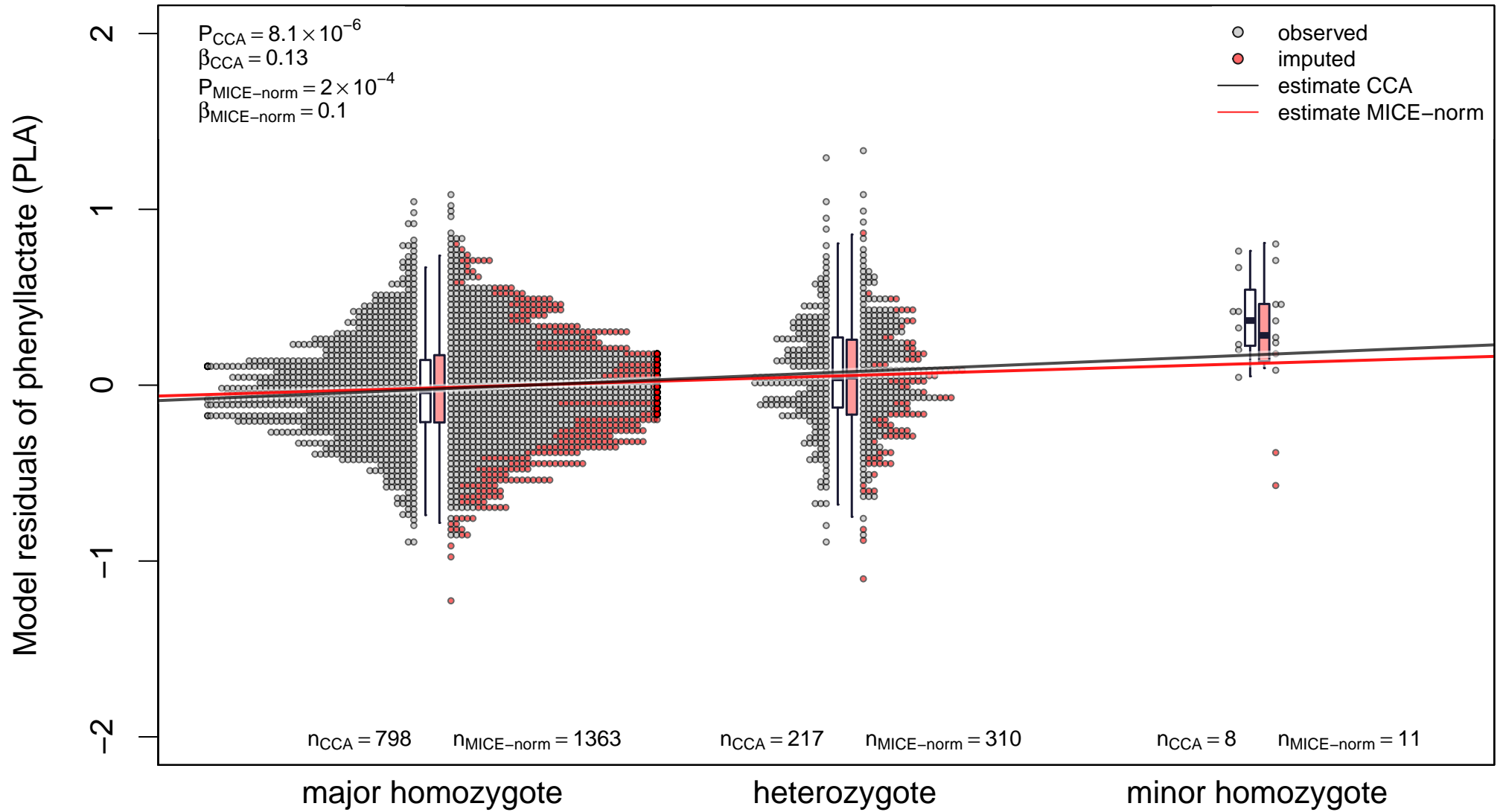
Genotype of SNP rs4784054 (GOT2 (2 separate loci))

# MICE-avg-pmm



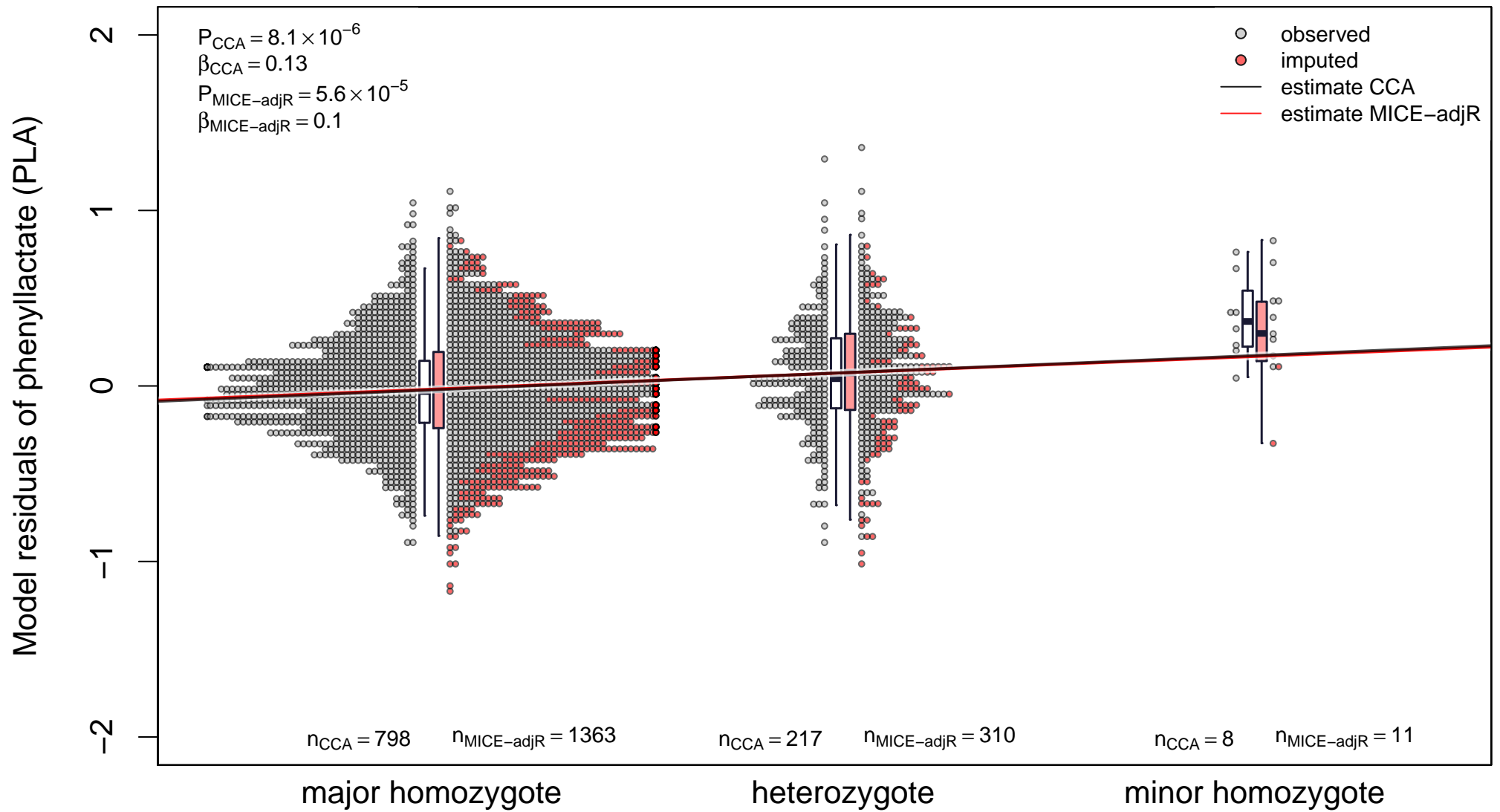


# MICE-norm

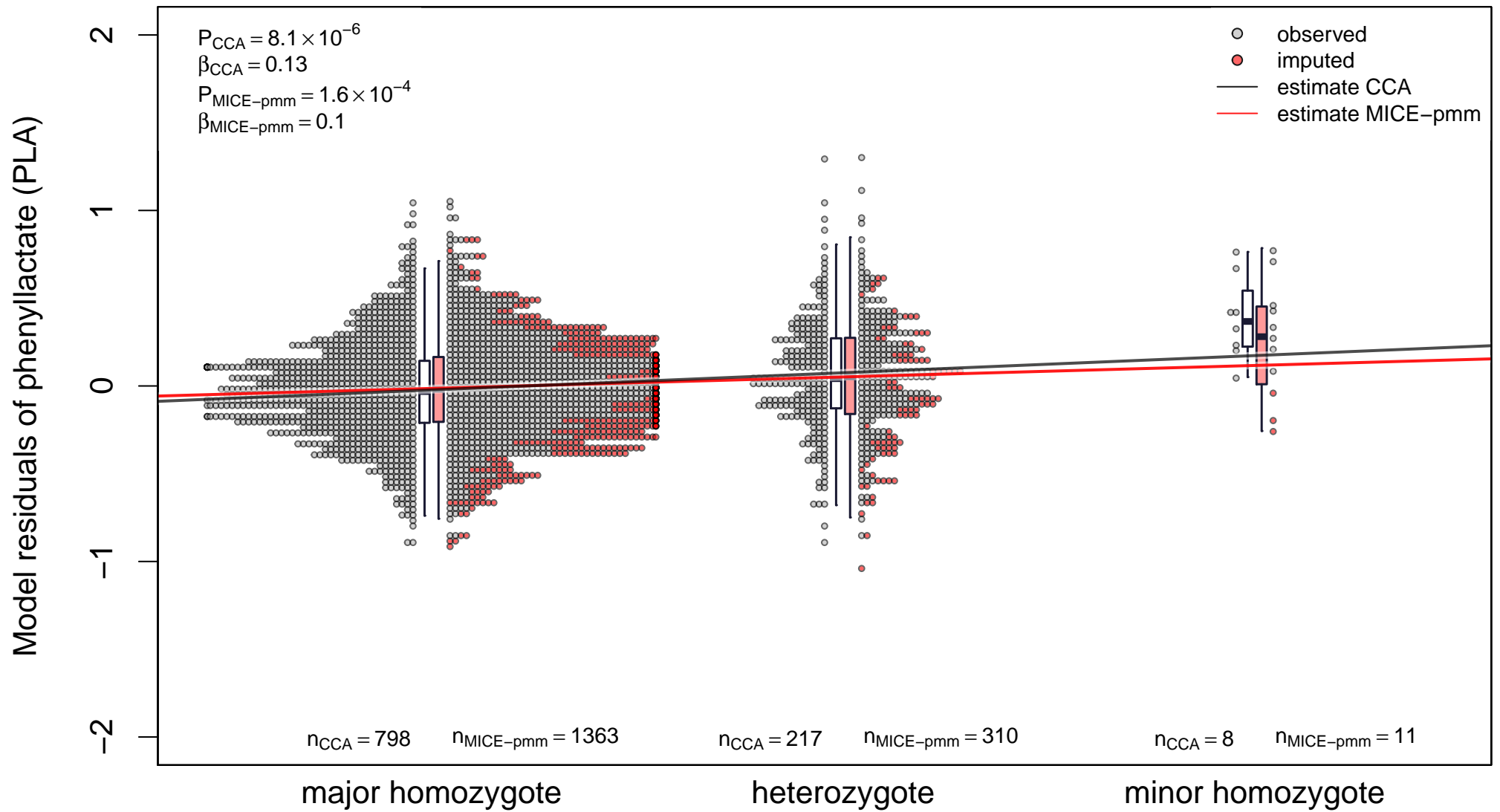


Genotype of SNP rs4784054 (GOT2 (2 separate loci))

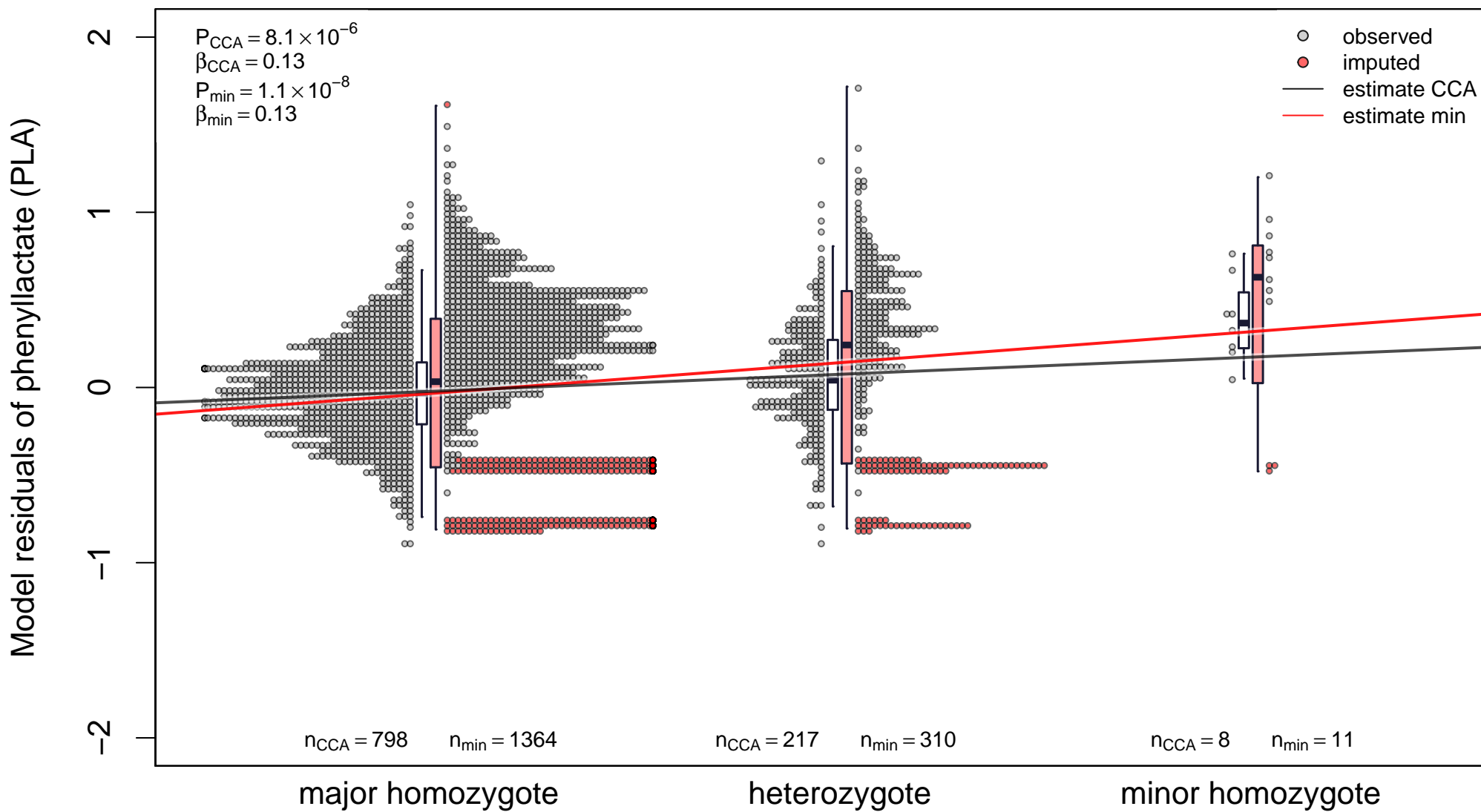
# MICE-adjR



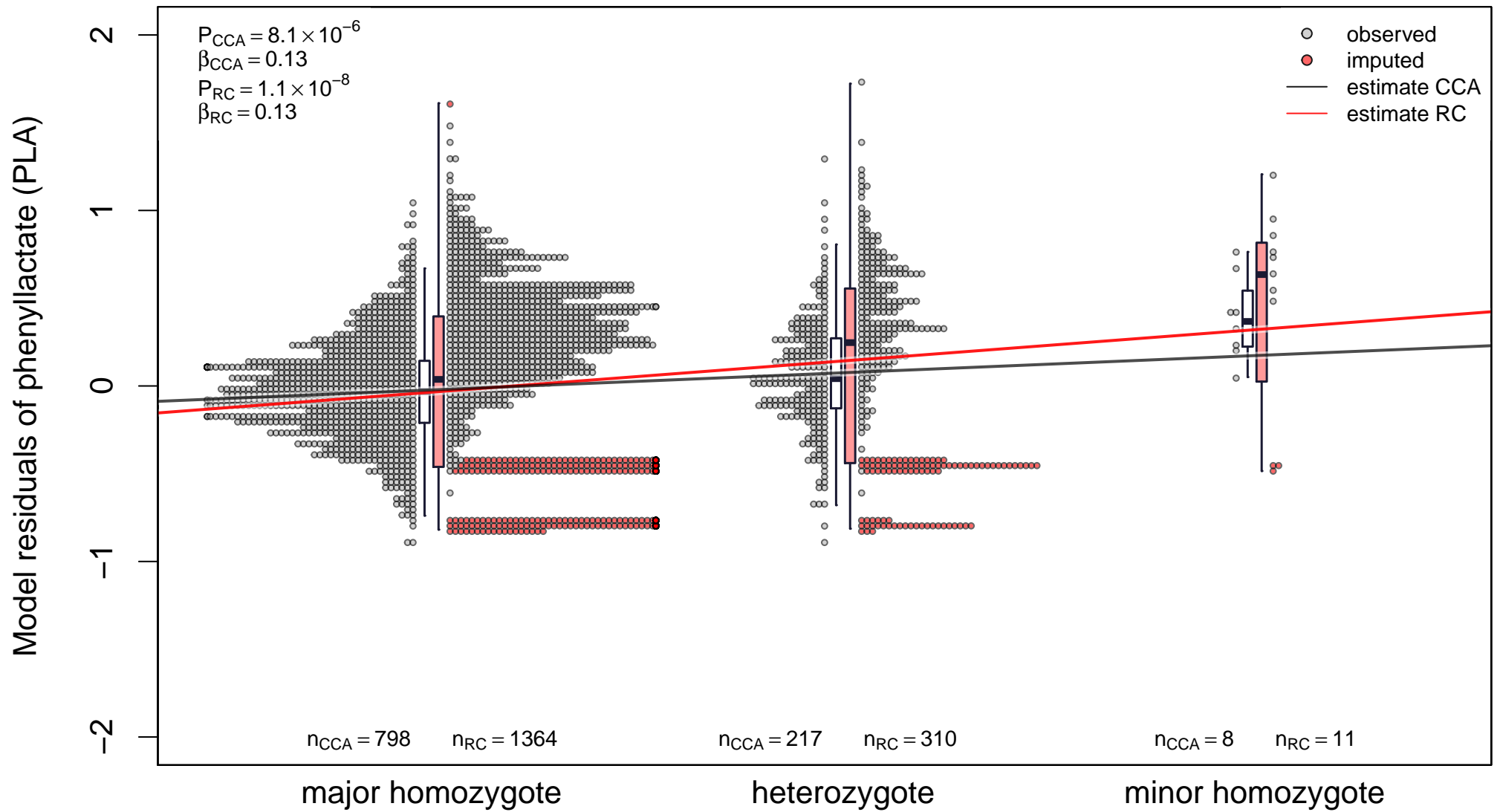
# MICE-pmm



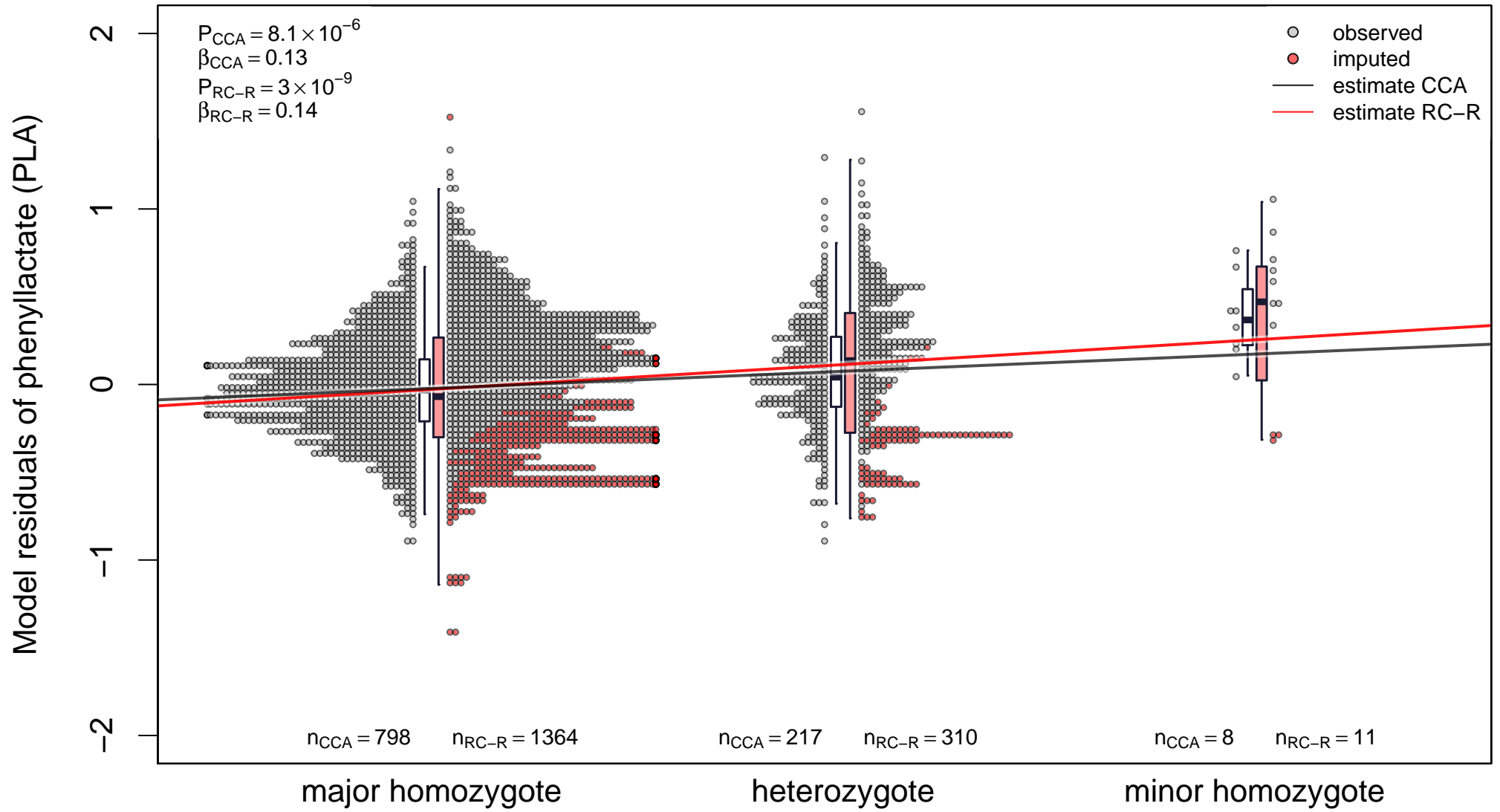
min



# RC

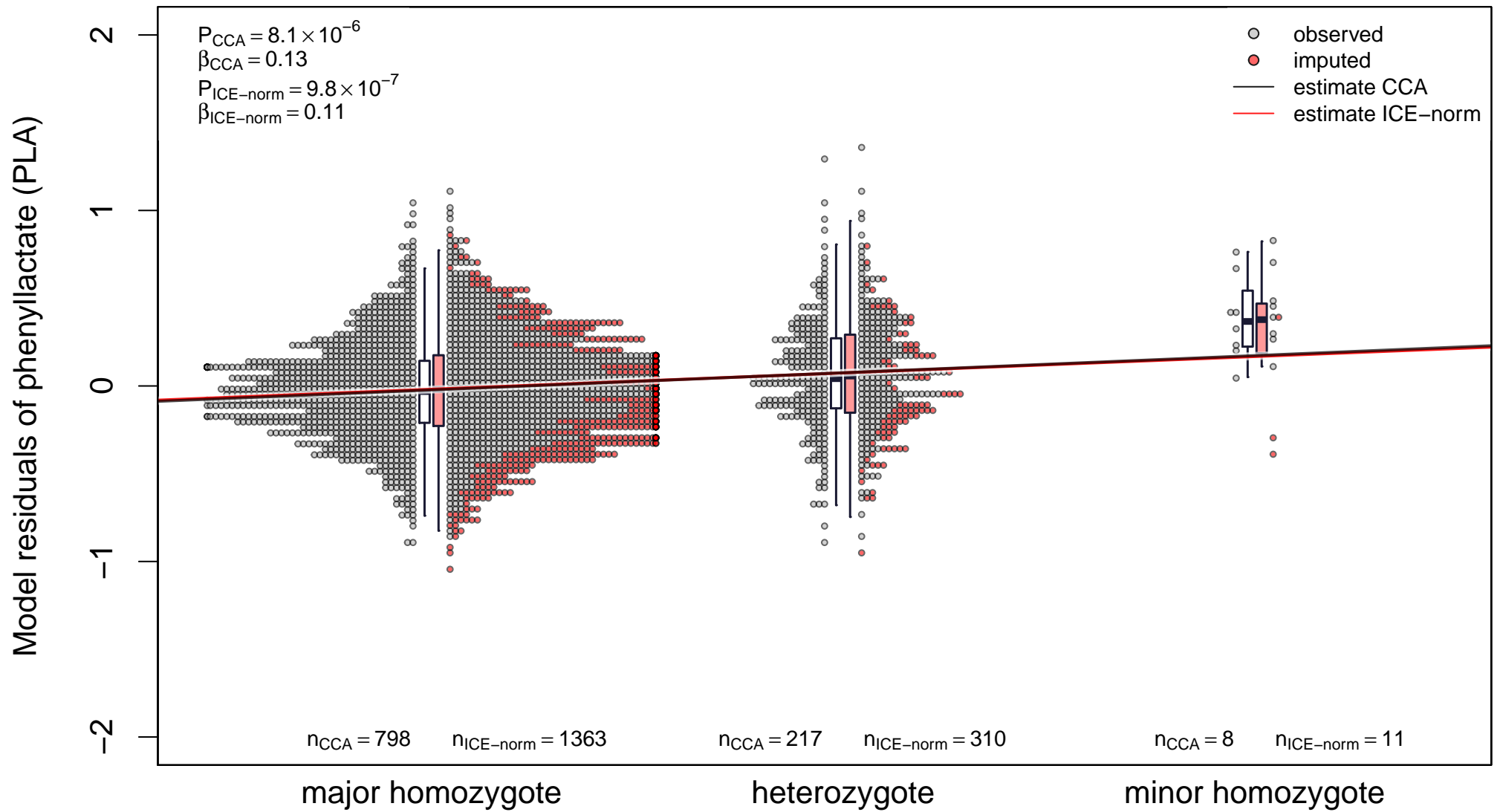


# RC-R

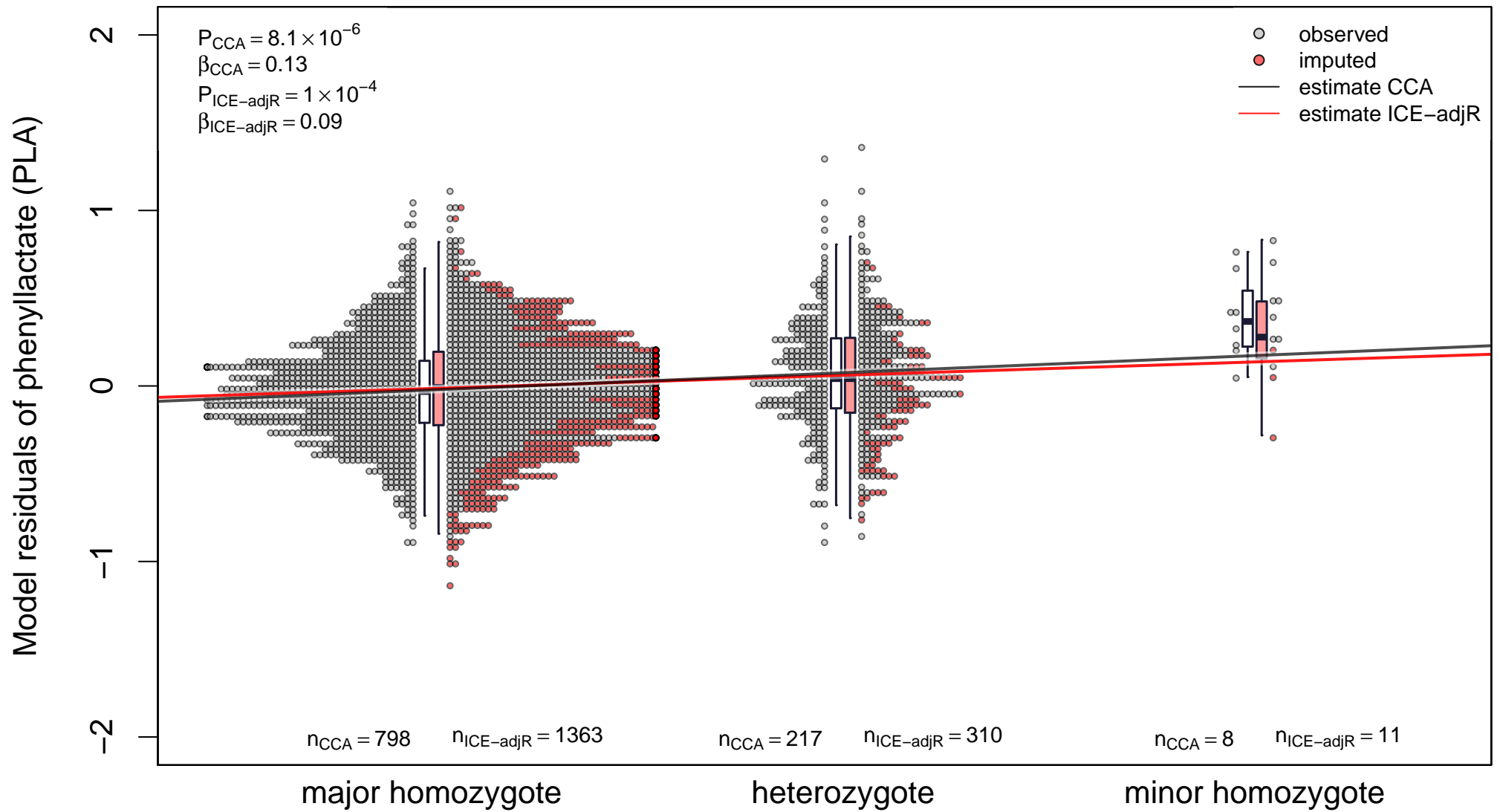


Genotype of SNP rs4784054 (GOT2 (2 separate loci))

# ICE-norm



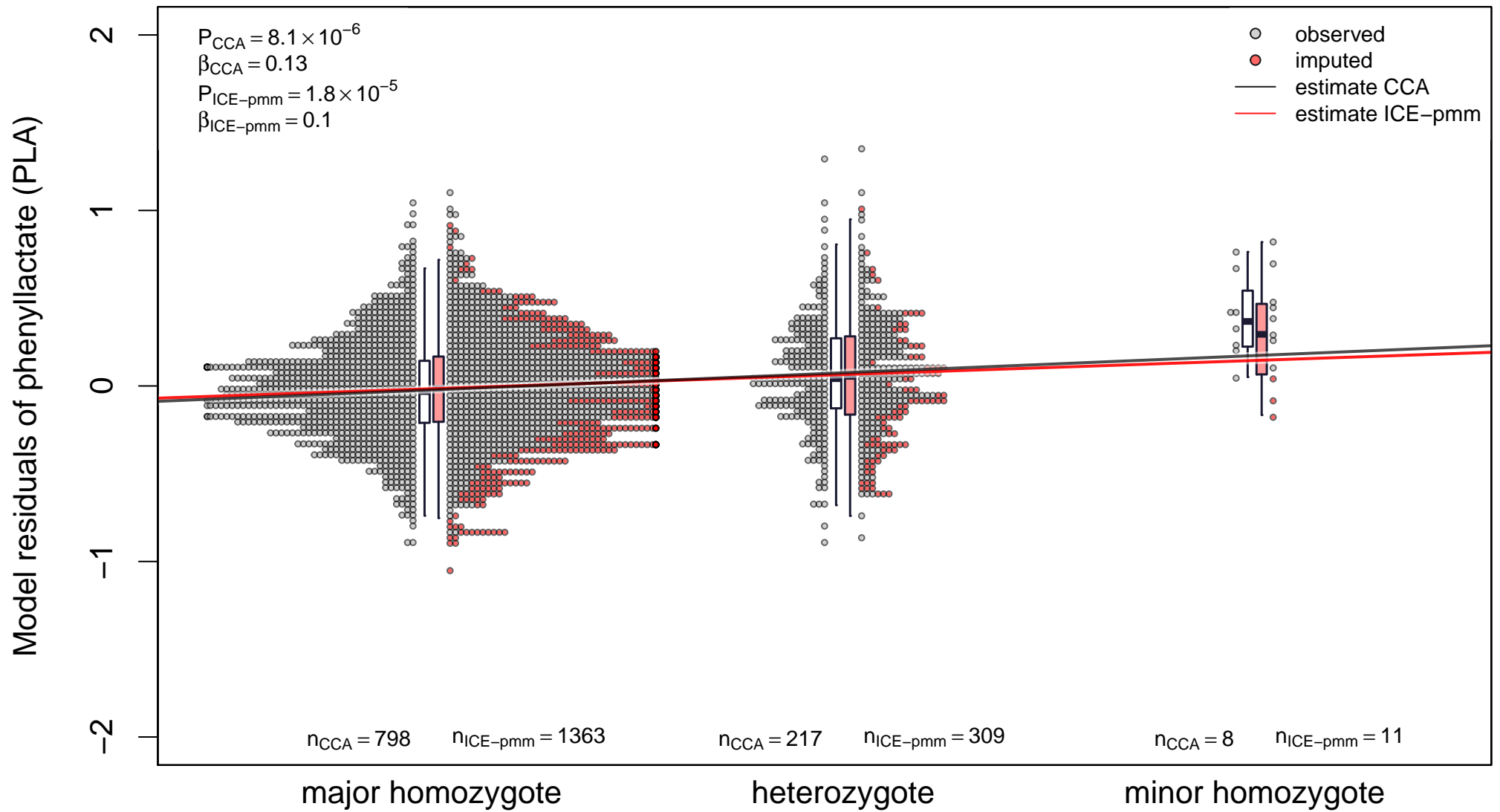
# ICE-adjR



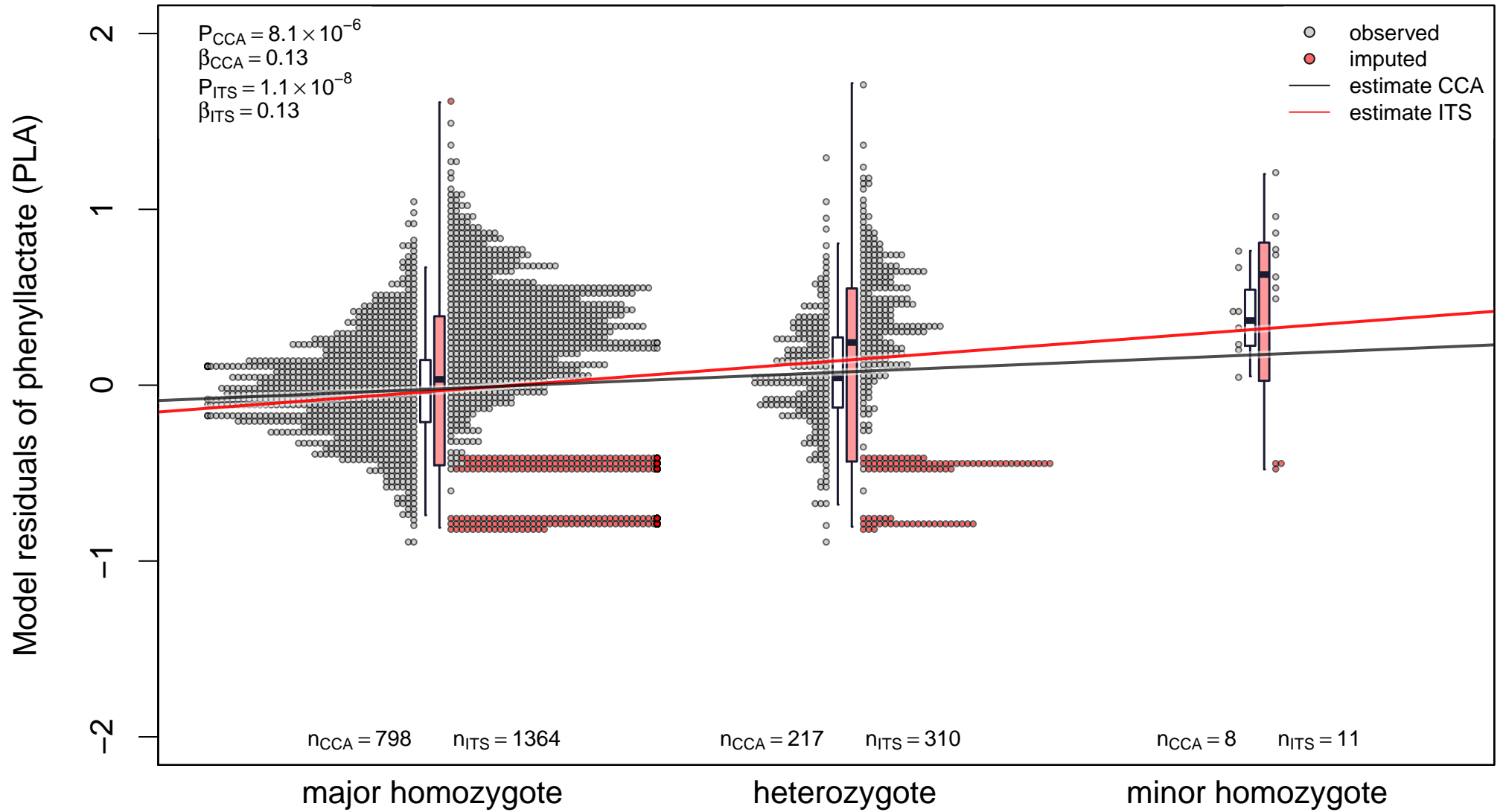
Genotype of SNP rs4784054 (GOT2 (2 separate loci))



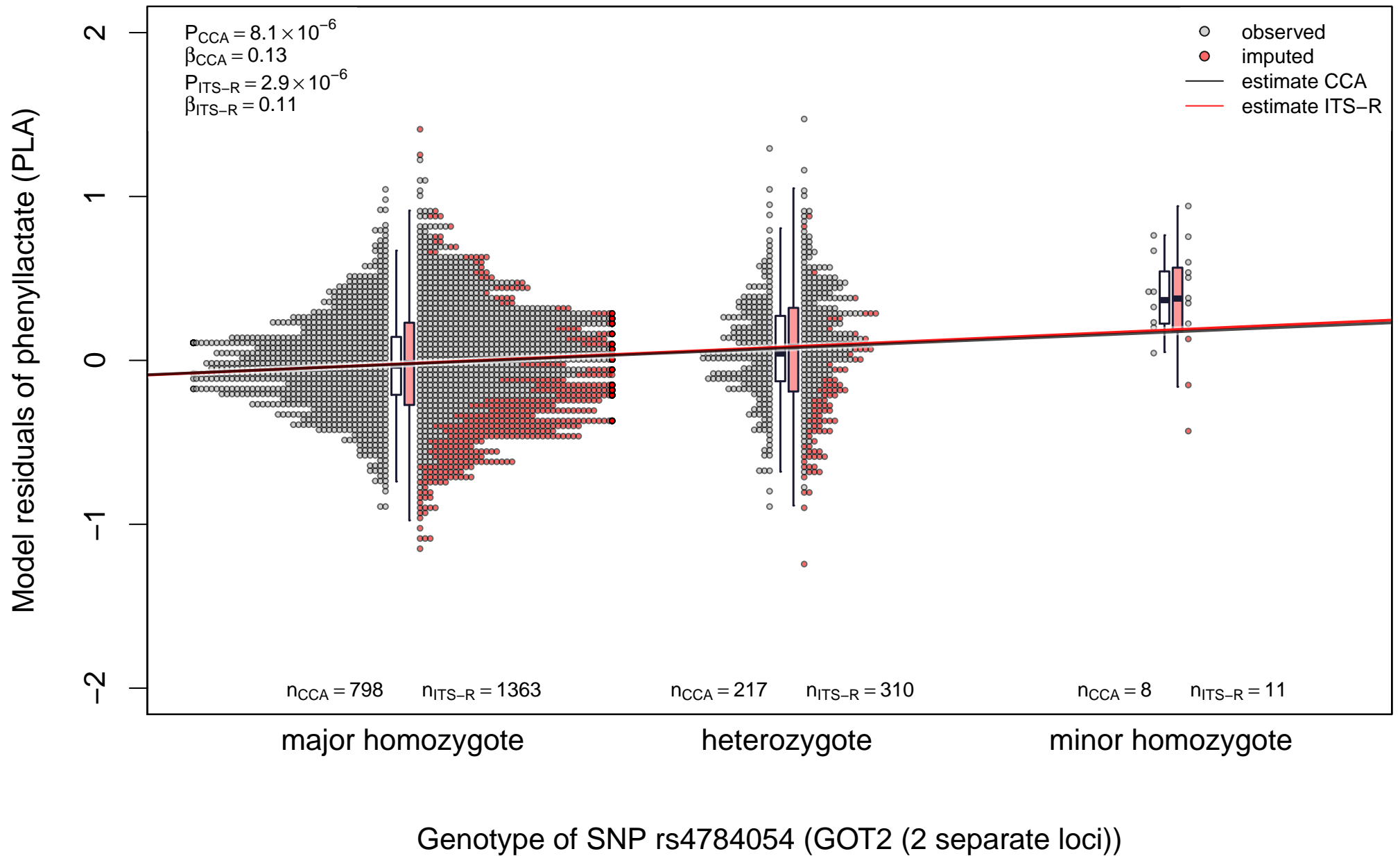
# ICE-pmm



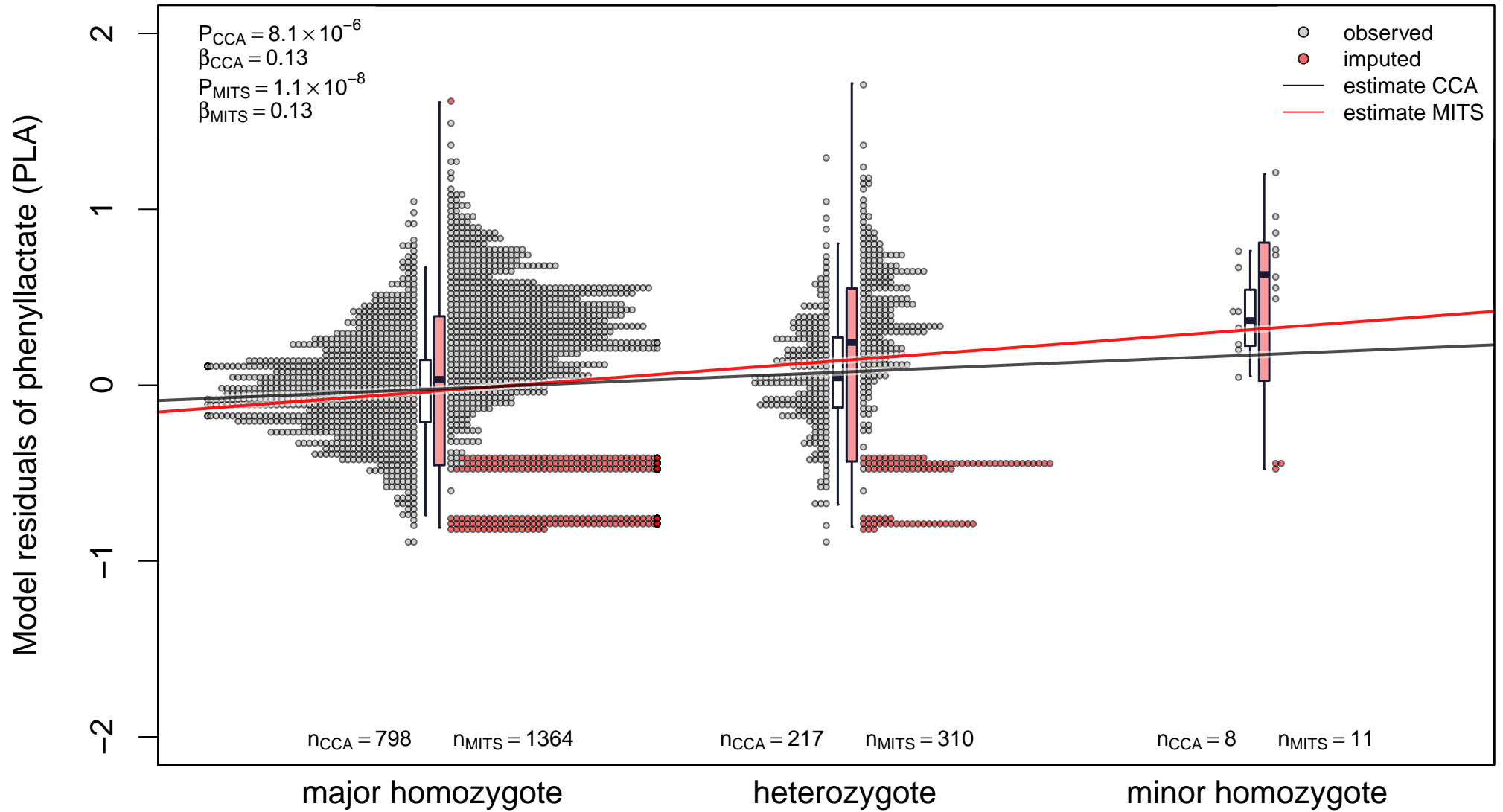
# ITS



# ITS-R

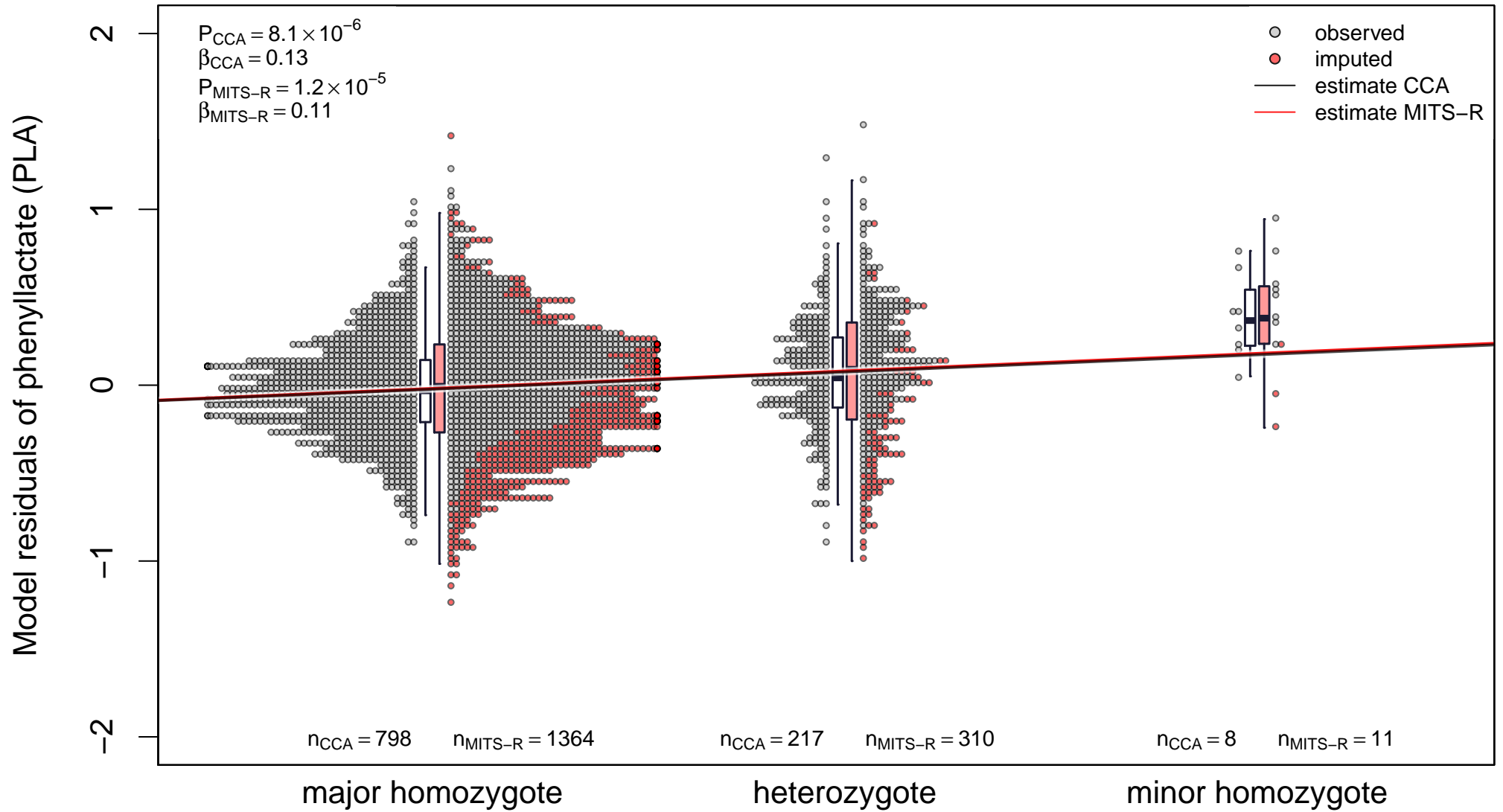


# MITS

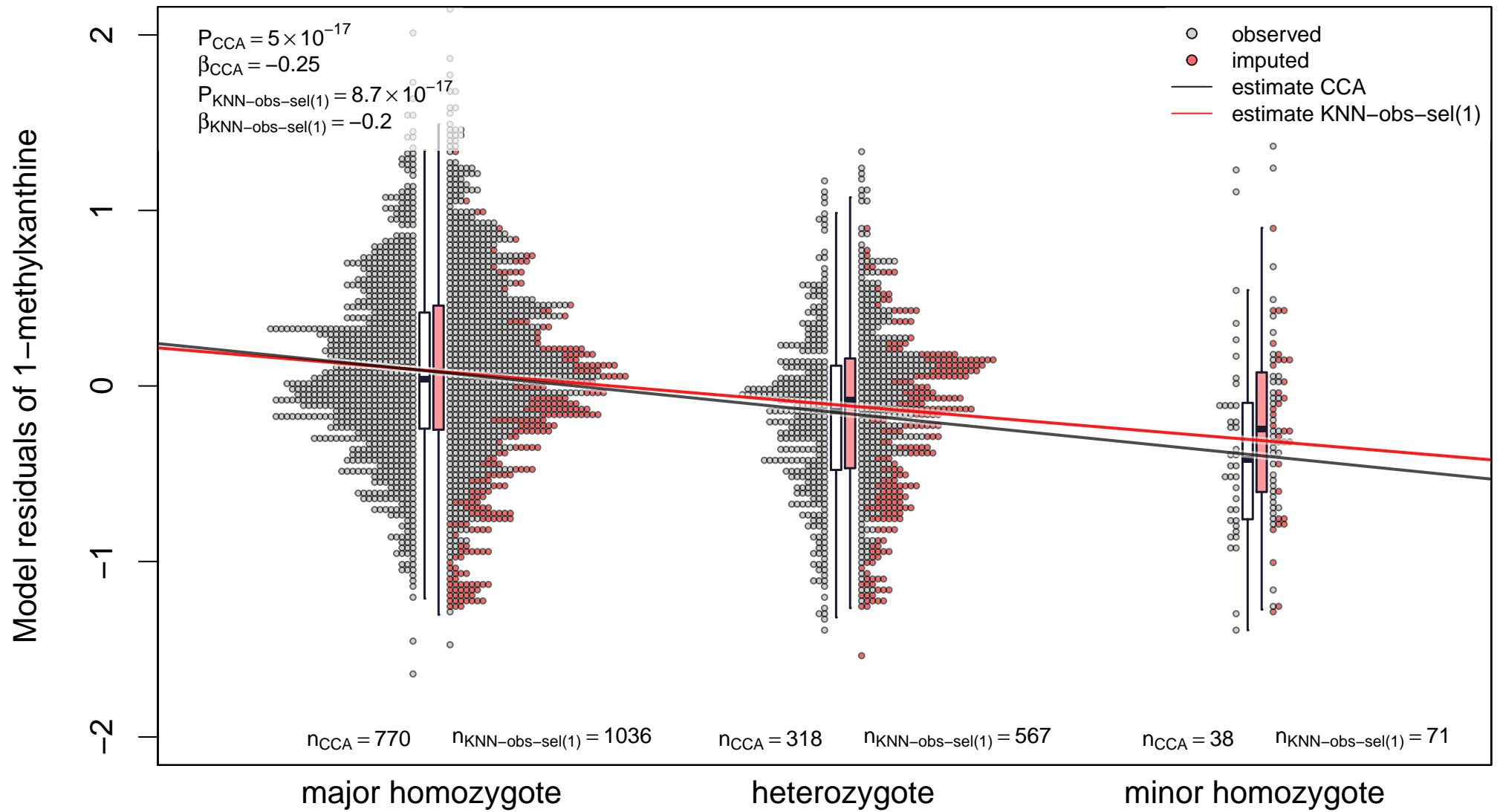


Genotype of SNP rs4784054 (GOT2 (2 separate loci))

# MITS-R

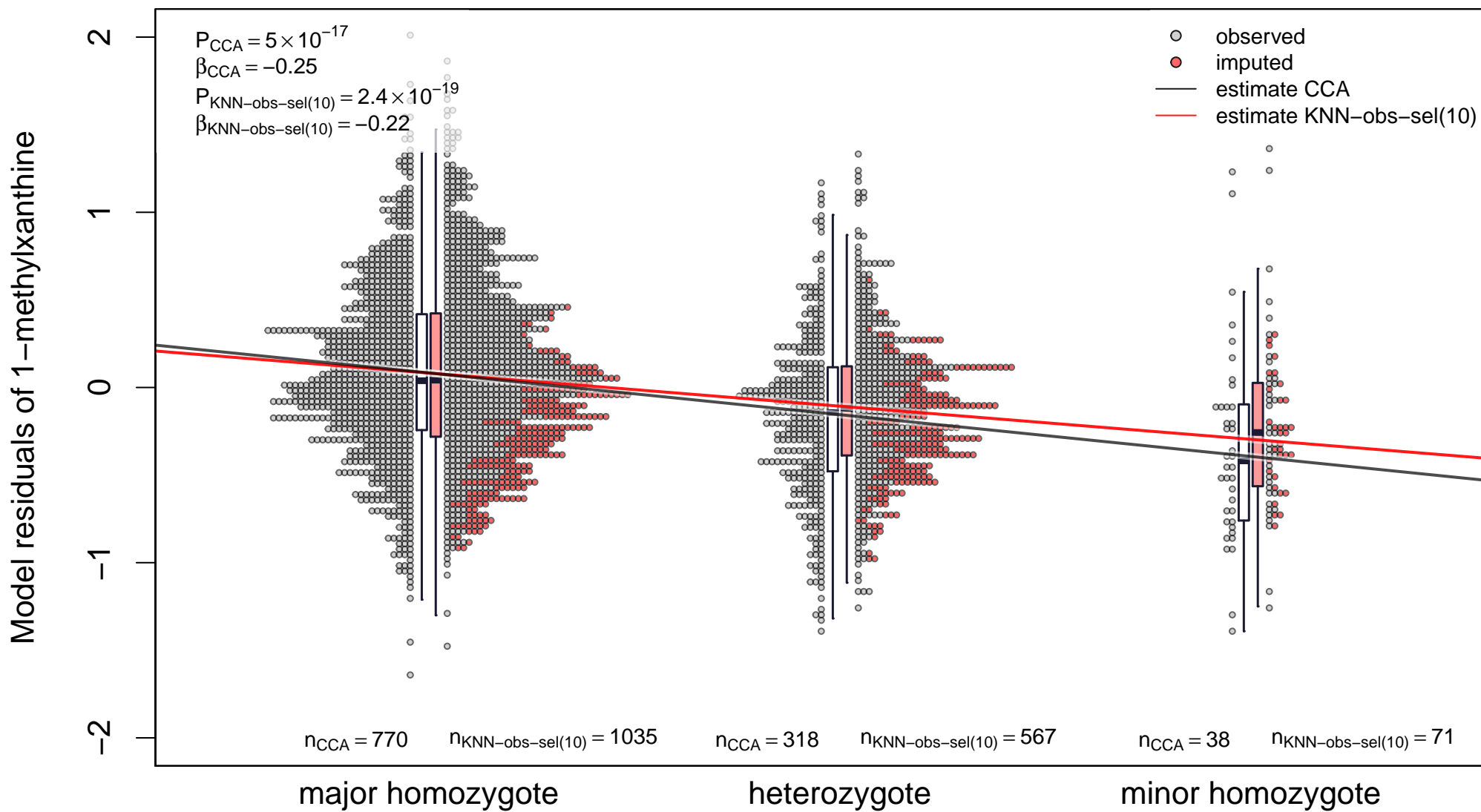


# KNN-obs-sel(1)



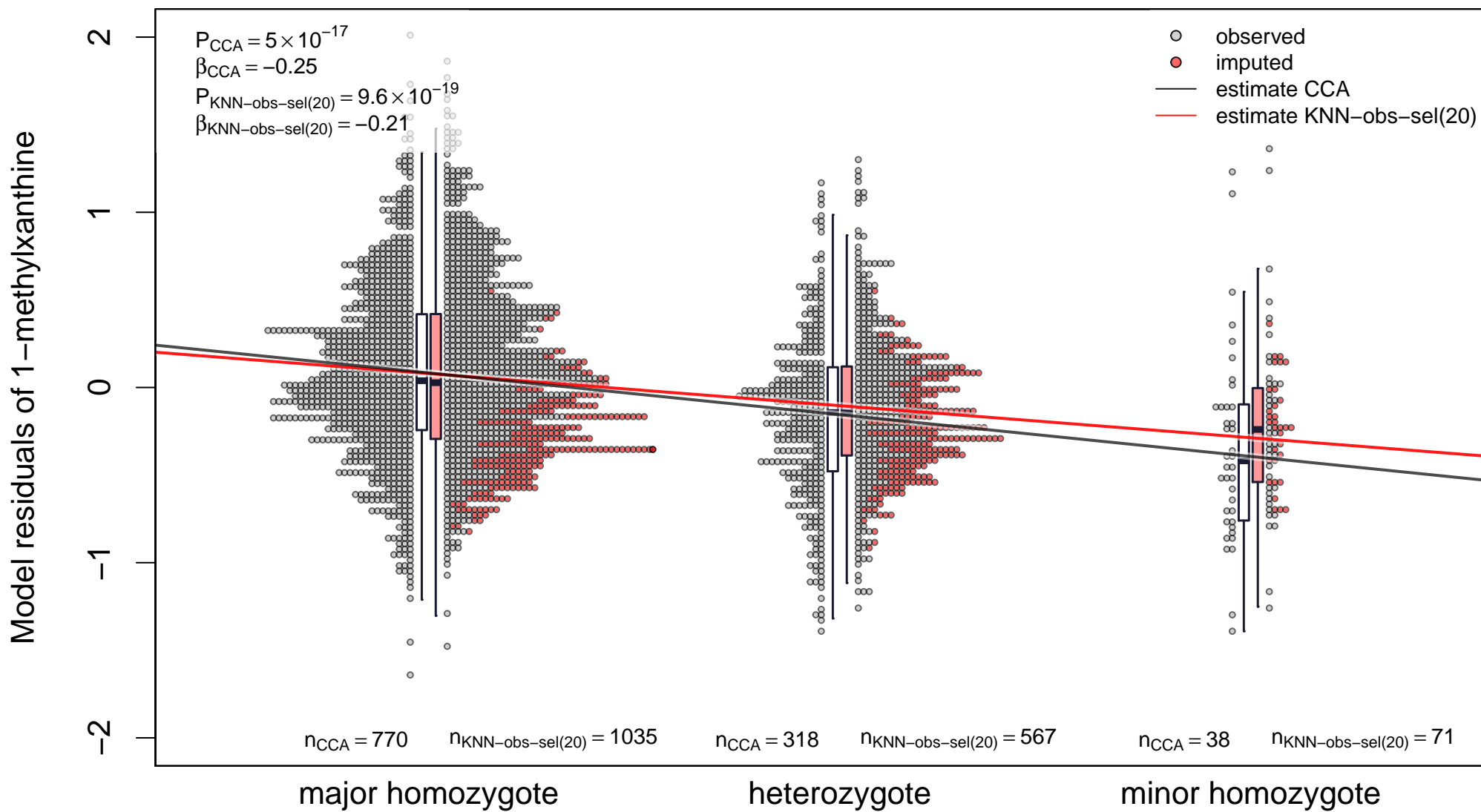
Genotype of SNP rs4921914 (NAT2)

# KNN-obs-sel(10)



Genotype of SNP rs4921914 (NAT2)

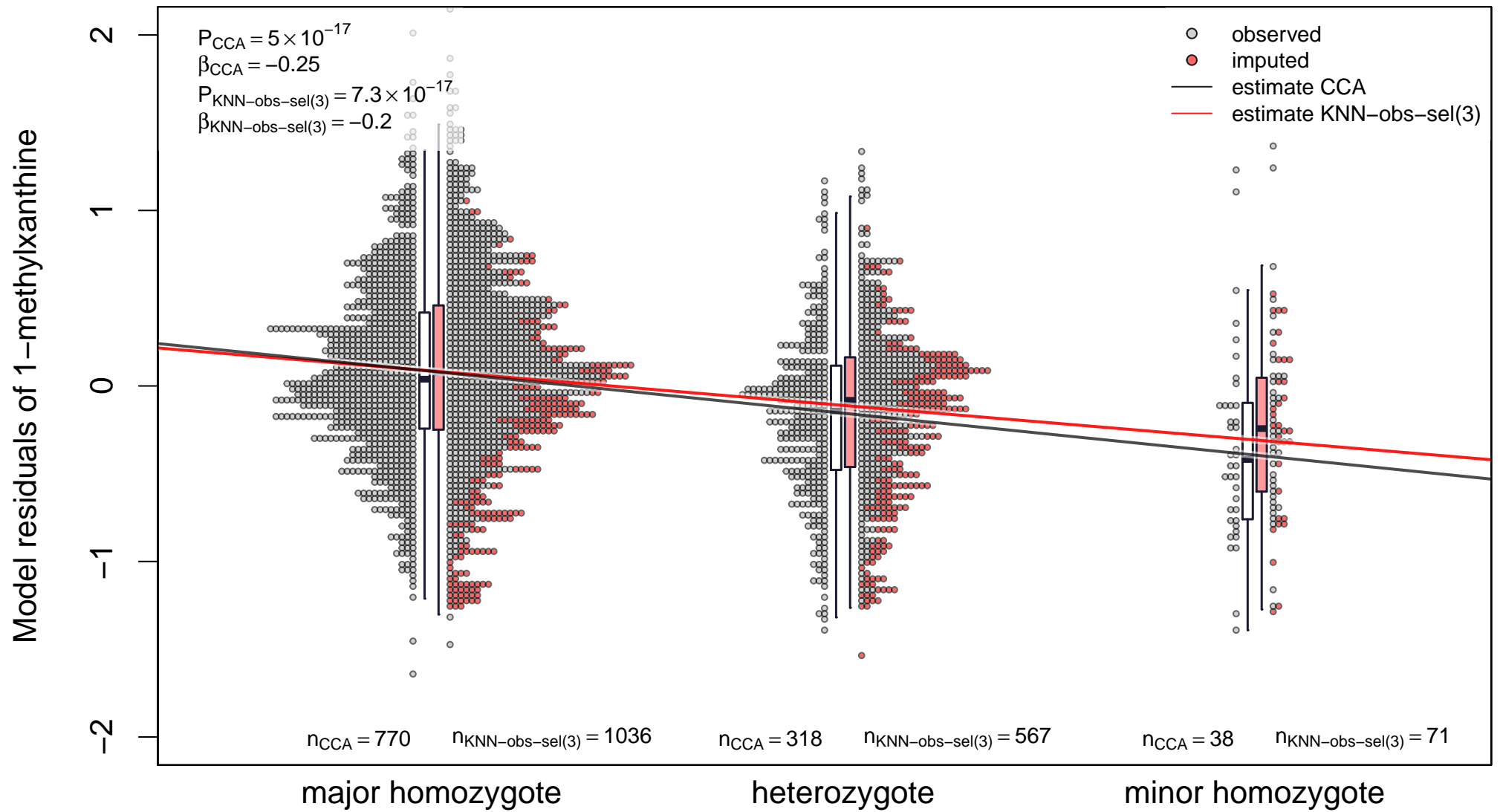
# KNN-obs-sel(20)



Genotype of SNP rs4921914 (NAT2)

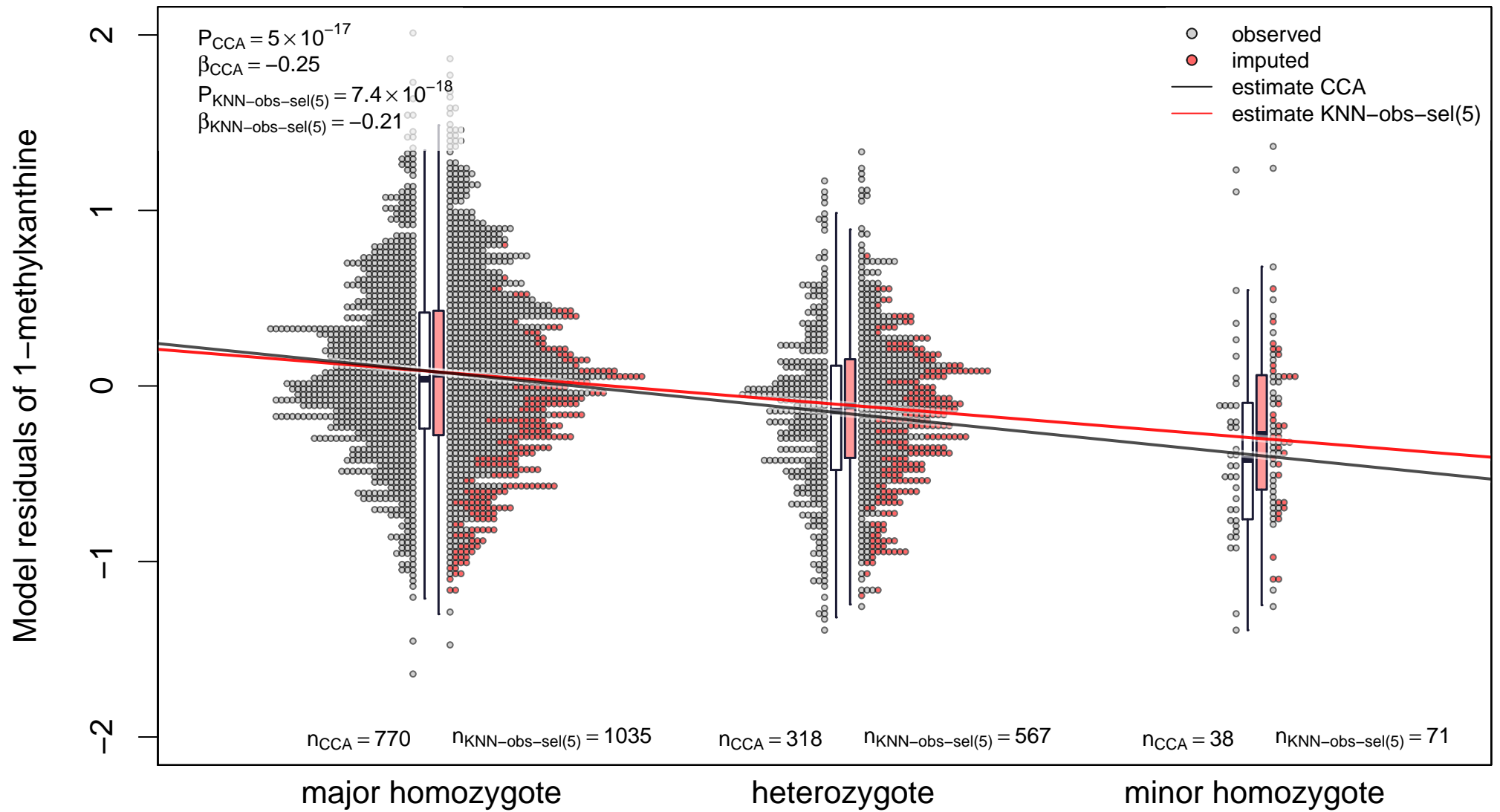


# KNN-obs-sel(3)



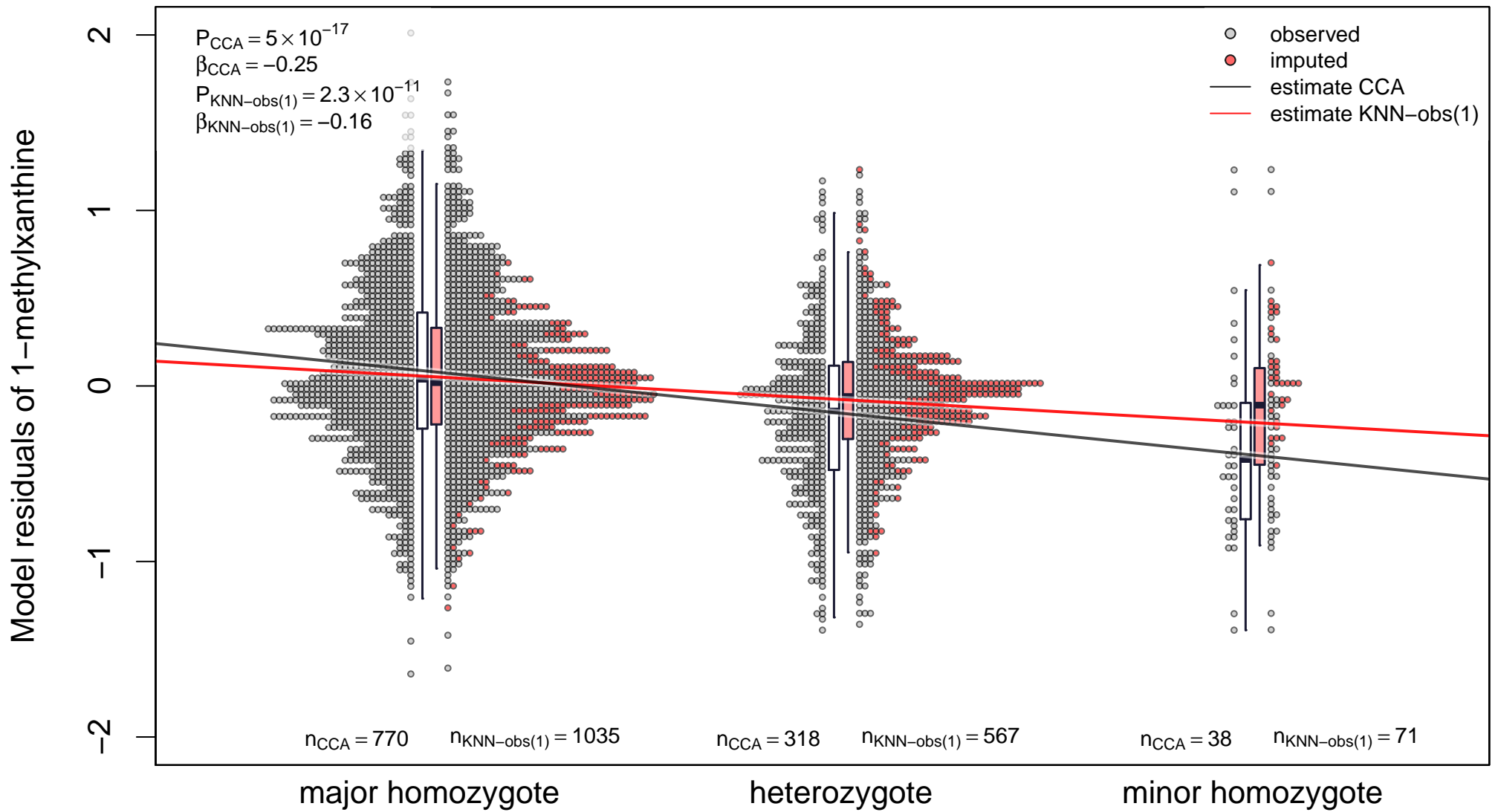
Genotype of SNP rs4921914 (NAT2)

# KNN-obs-sel(5)



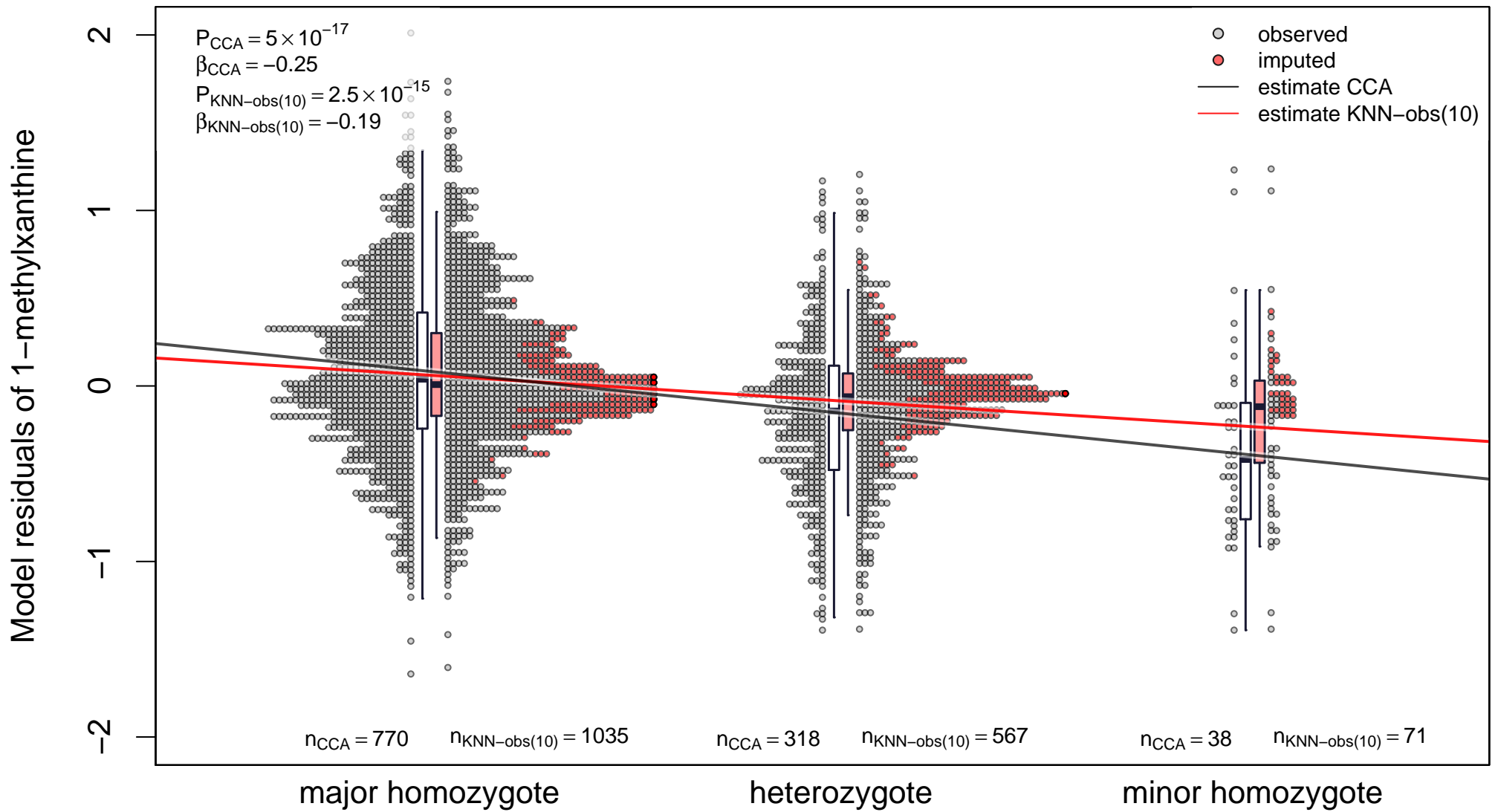
Genotype of SNP rs4921914 (NAT2)

# KNN-obs(1)



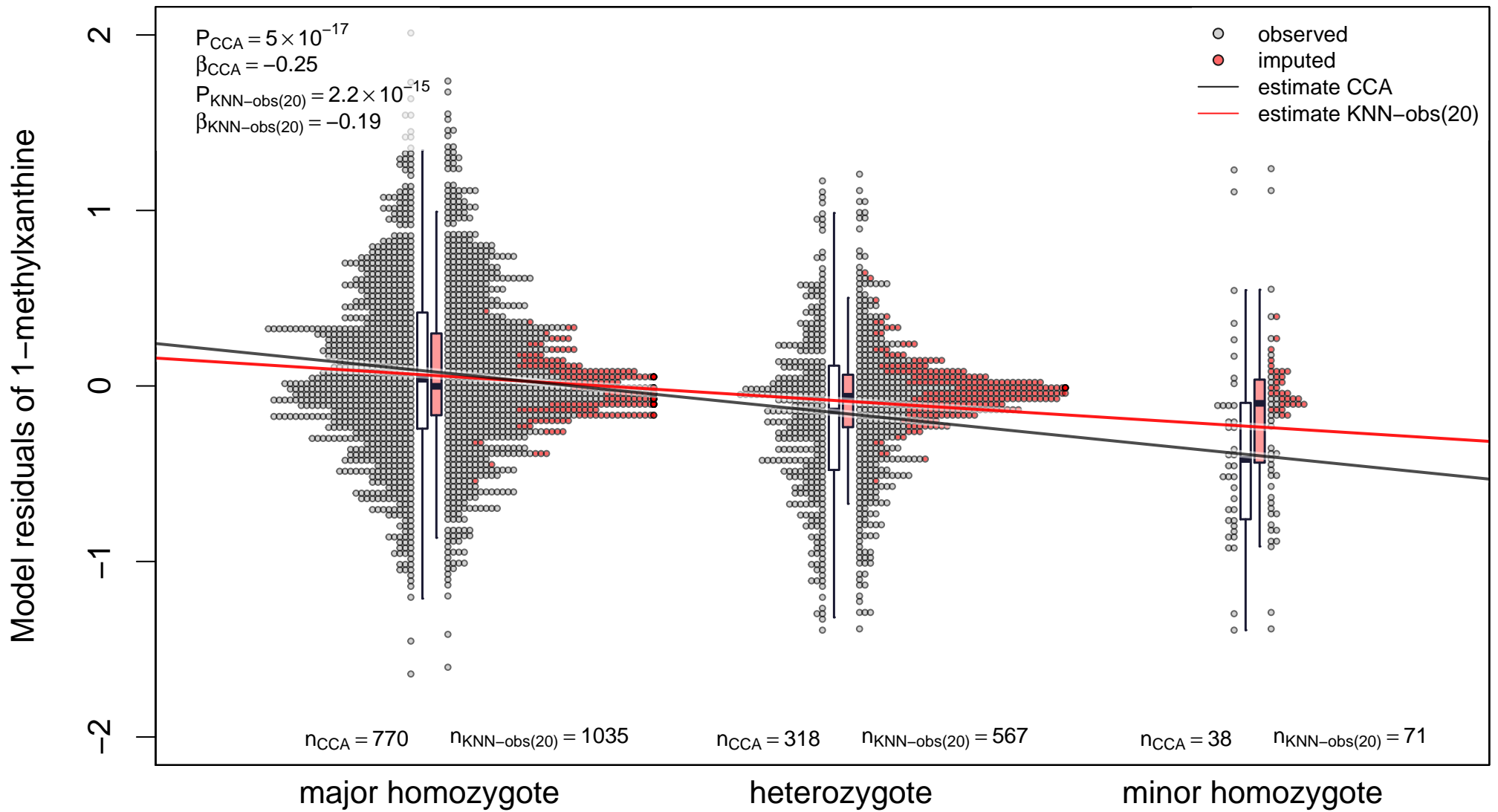
Genotype of SNP rs4921914 (NAT2)

# KNN-obs(10)



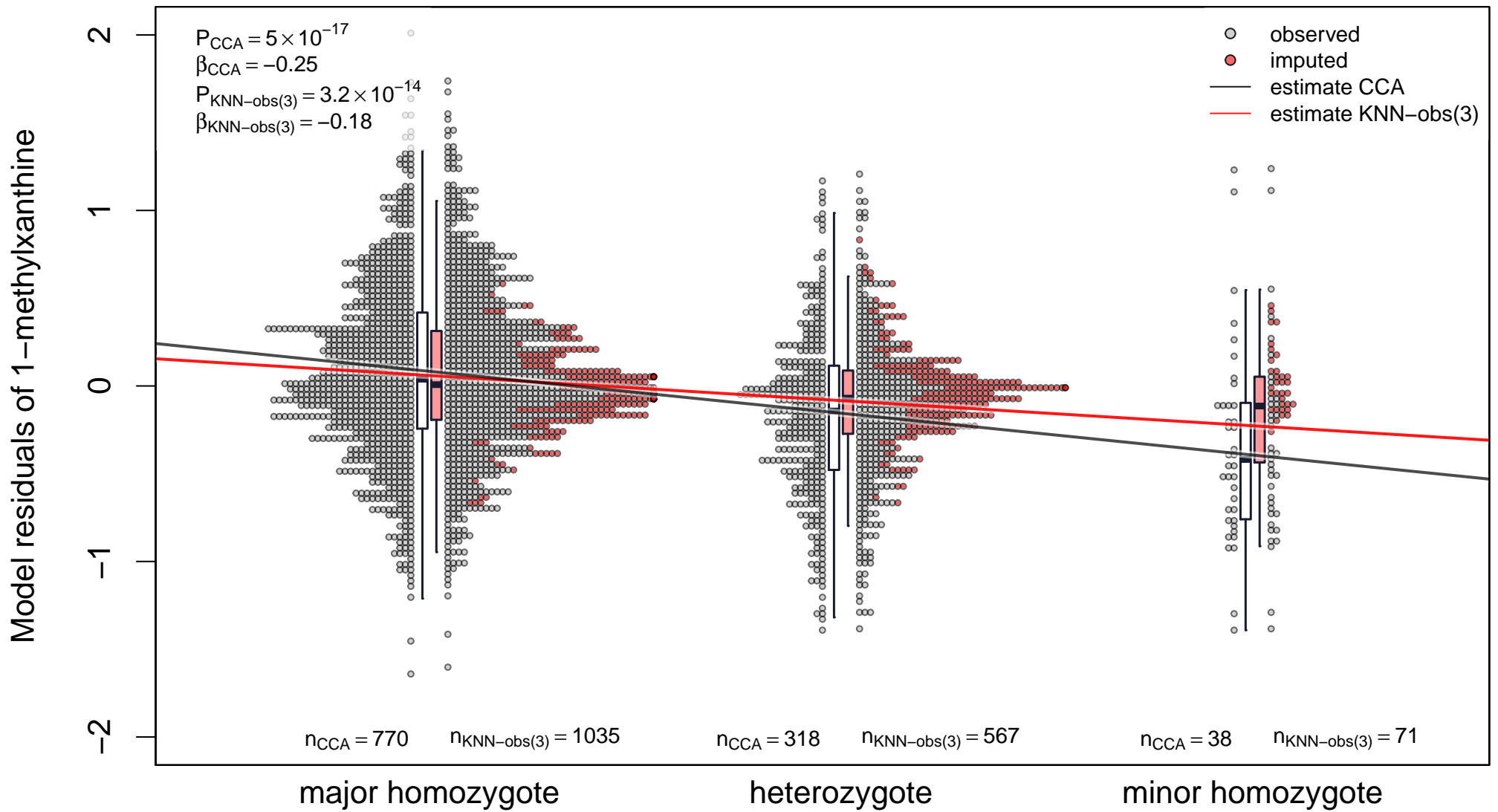
Genotype of SNP rs4921914 (NAT2)

# KNN-obs(20)

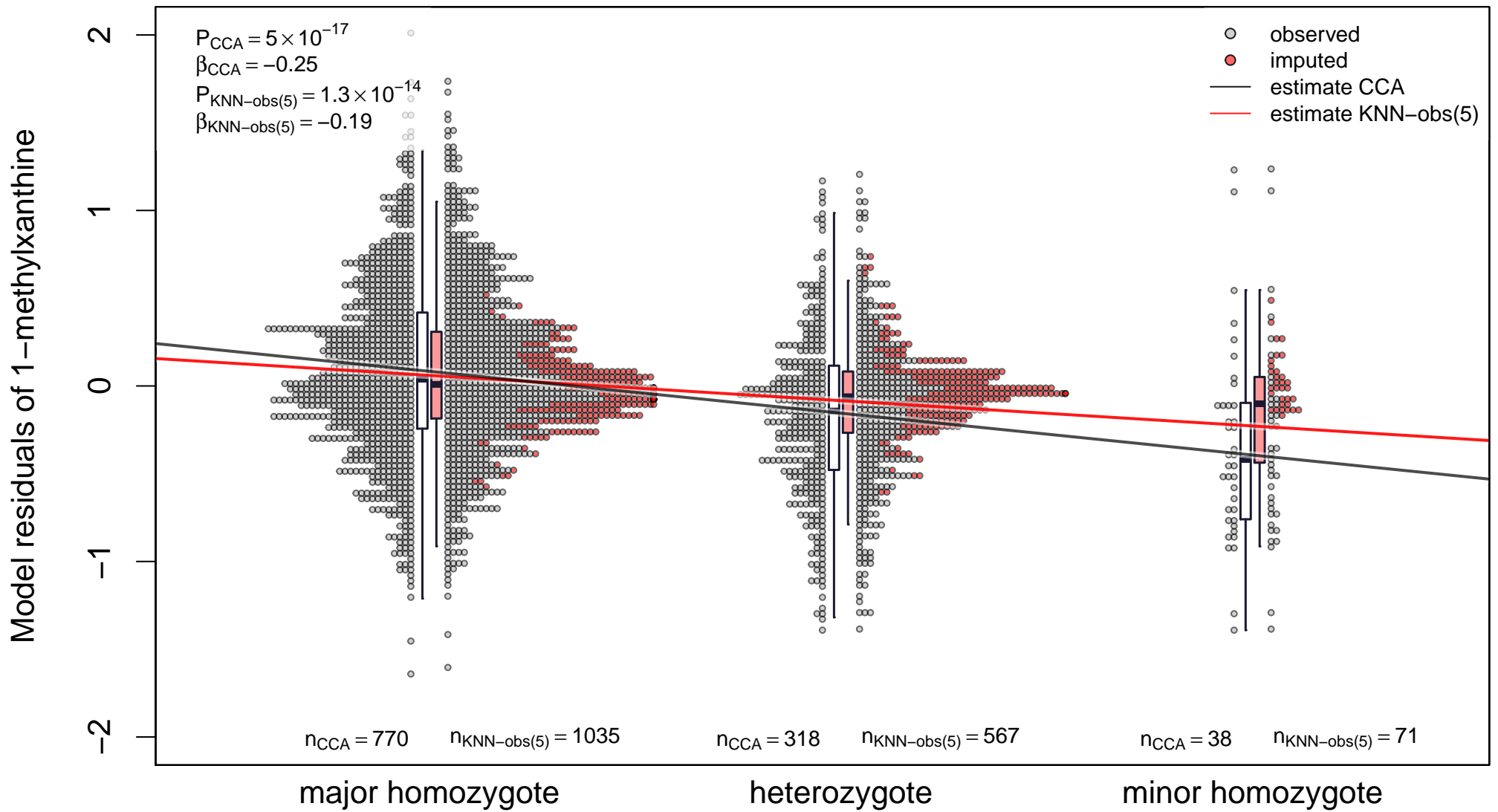


Genotype of SNP rs4921914 (NAT2)

# KNN-obs(3)

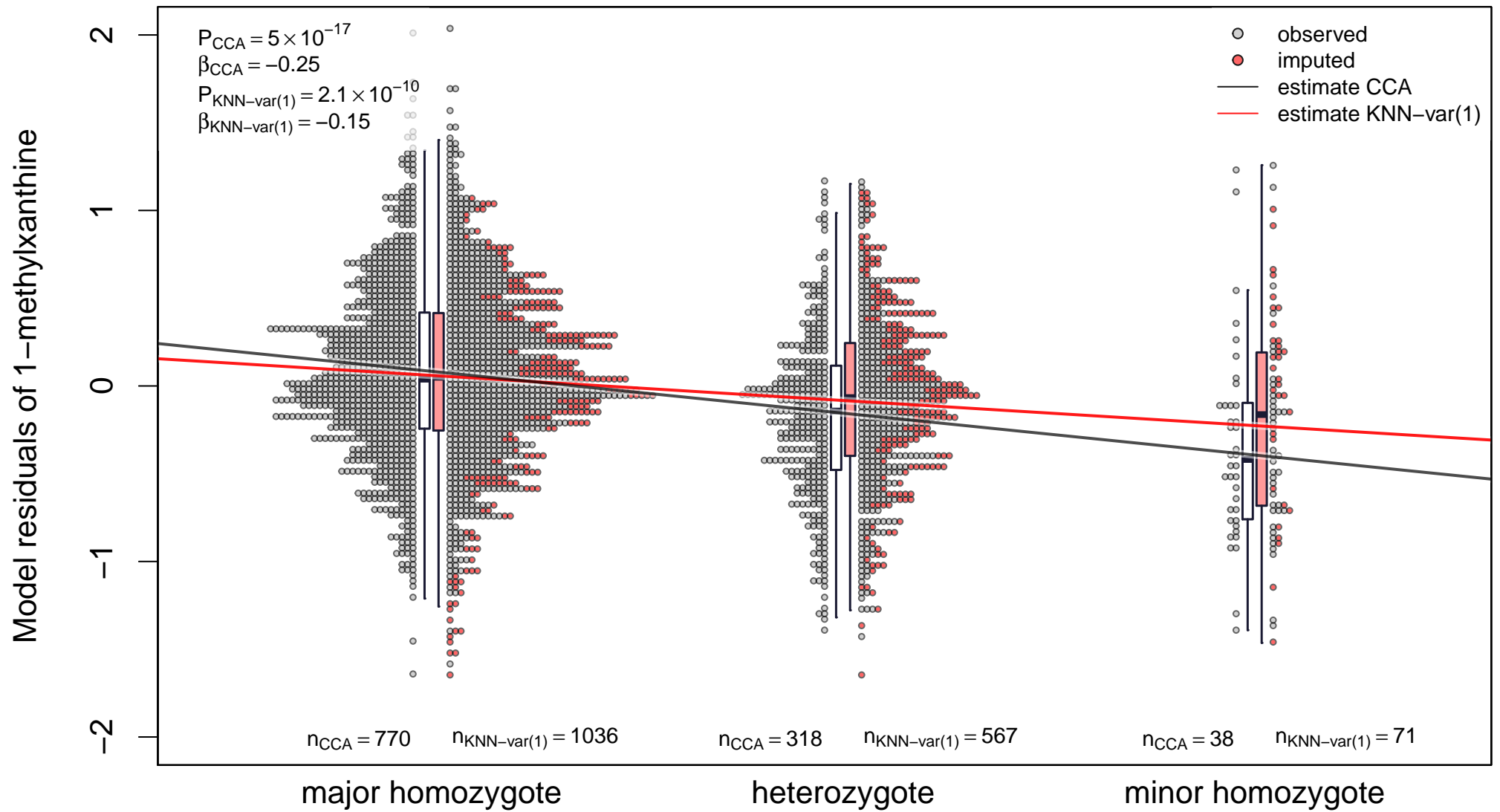


# KNN-obs(5)



Genotype of SNP rs4921914 (NAT2)

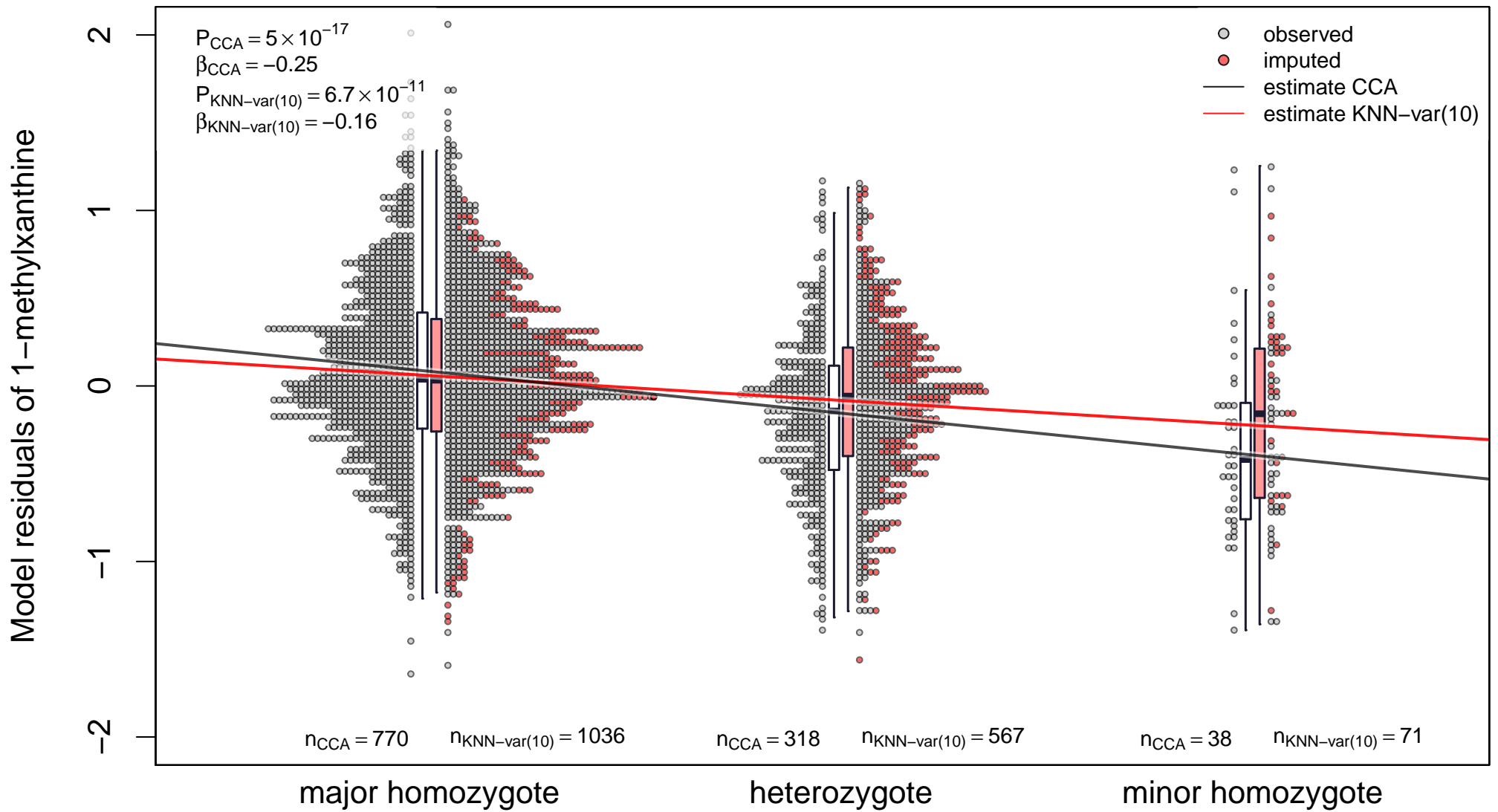
# KNN-var(1)



Genotype of SNP rs4921914 (NAT2)

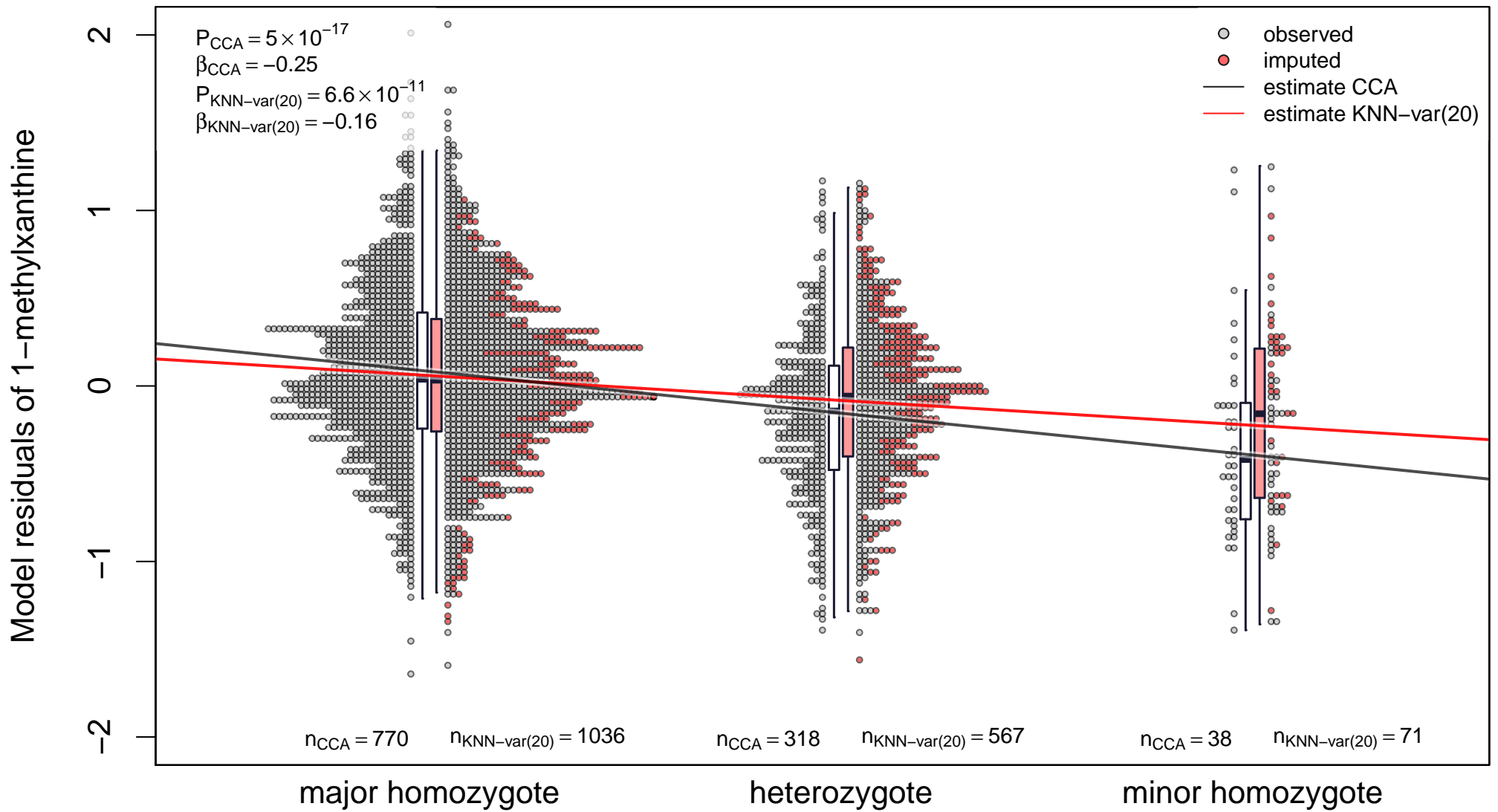


# KNN-var(10)



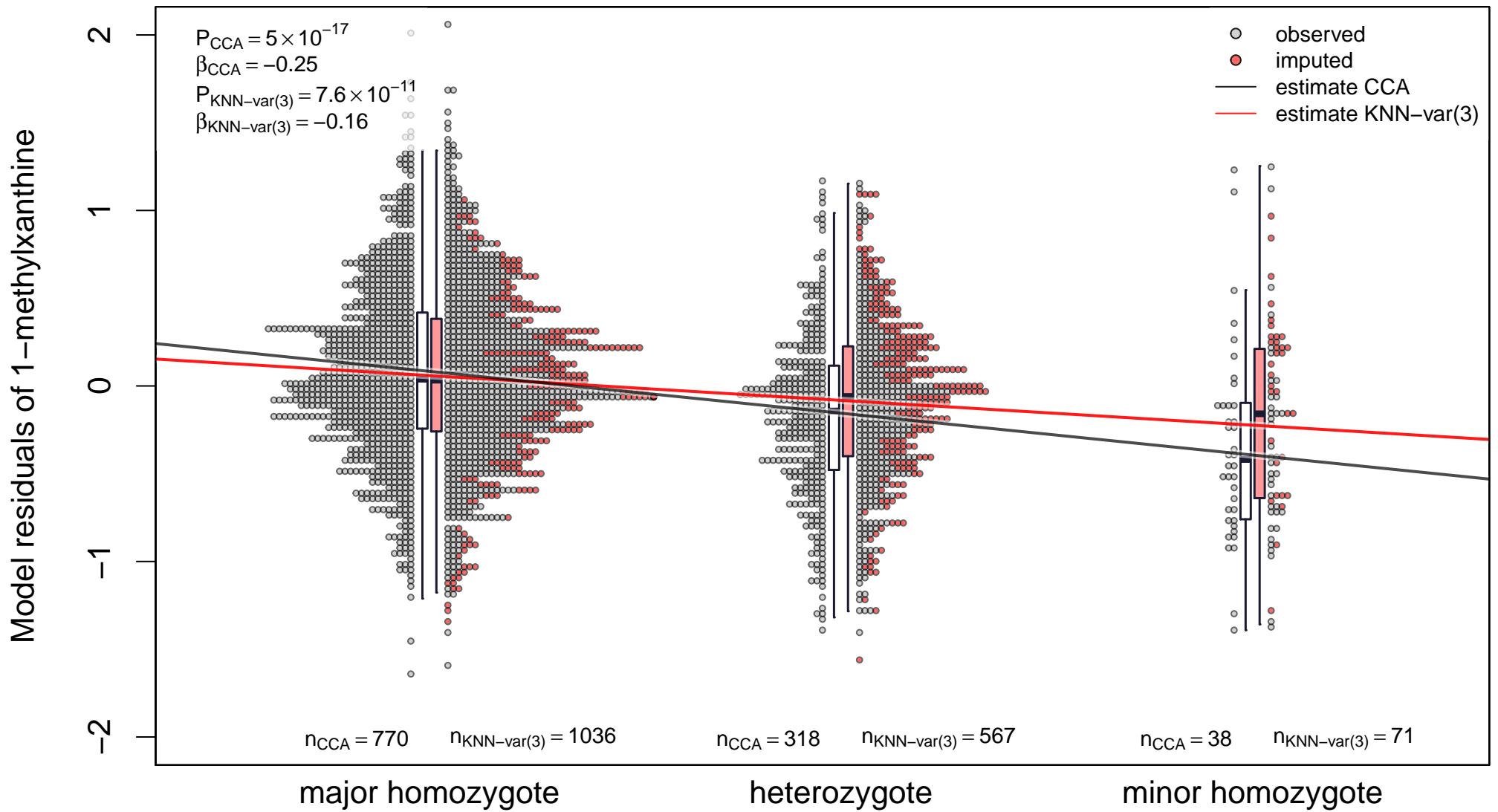
Genotype of SNP rs4921914 (NAT2)

# KNN-var(20)



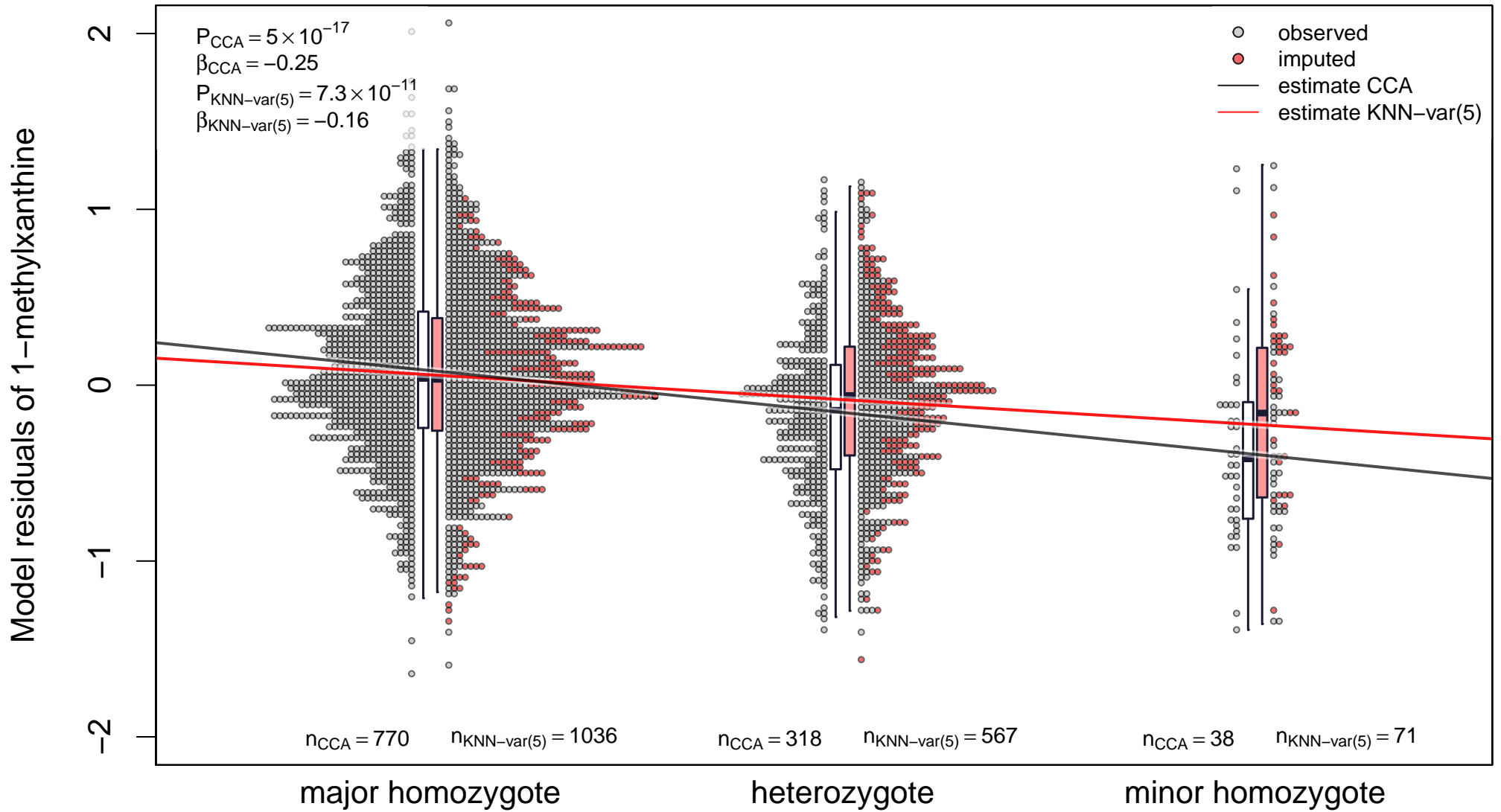
Genotype of SNP rs4921914 (NAT2)

# KNN-var(3)



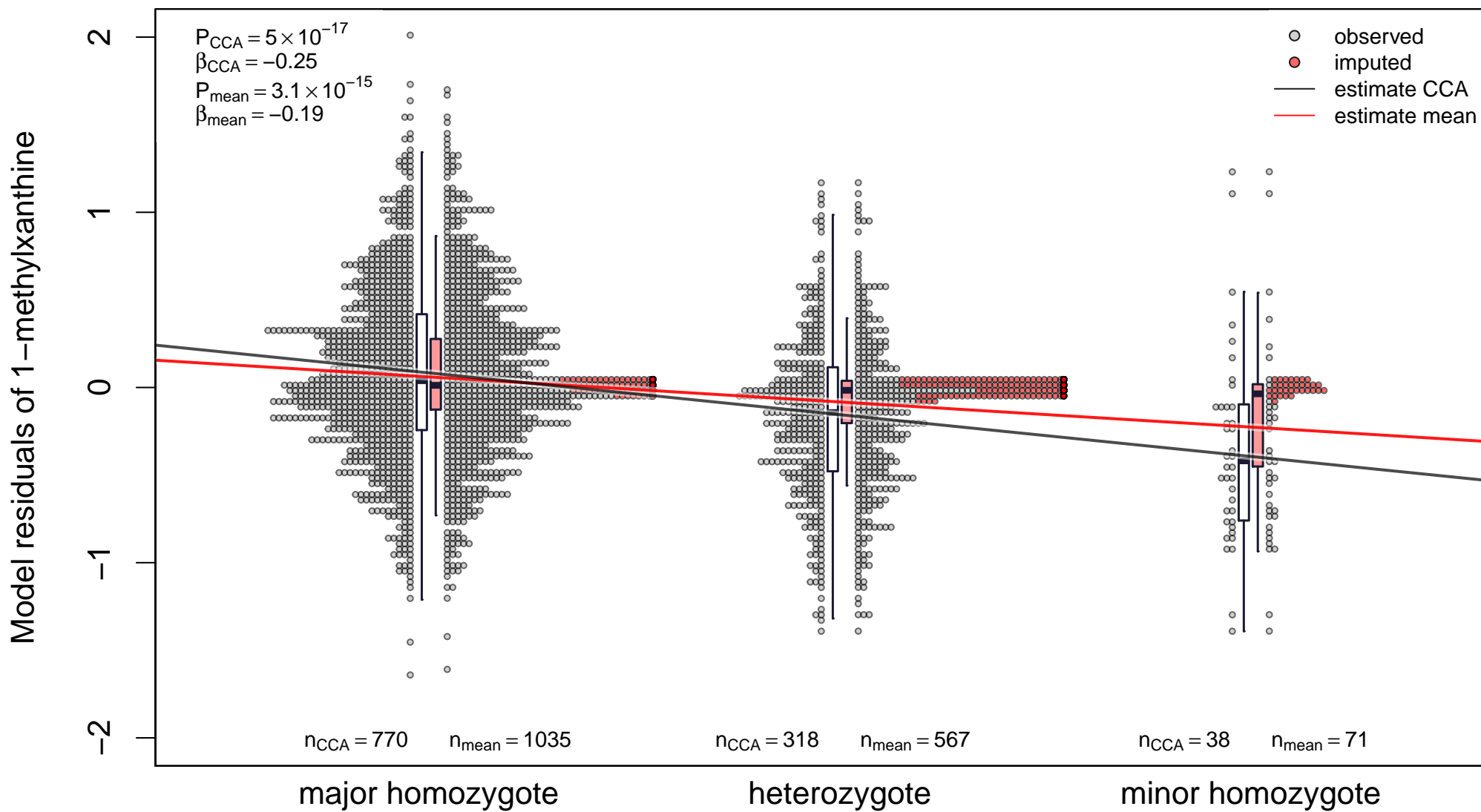
Genotype of SNP rs4921914 (NAT2)

# KNN-var(5)



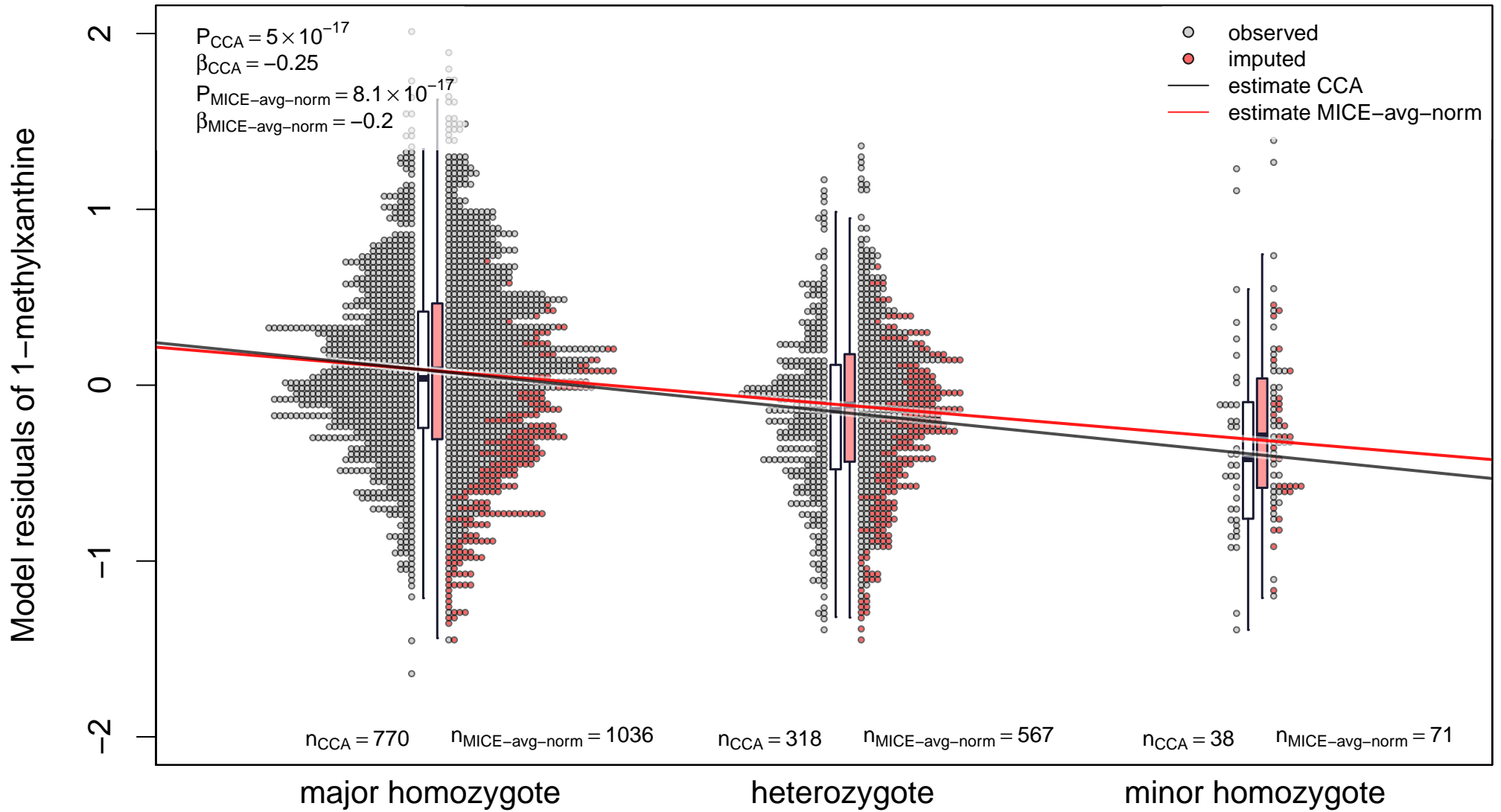
Genotype of SNP rs4921914 (NAT2)

# mean



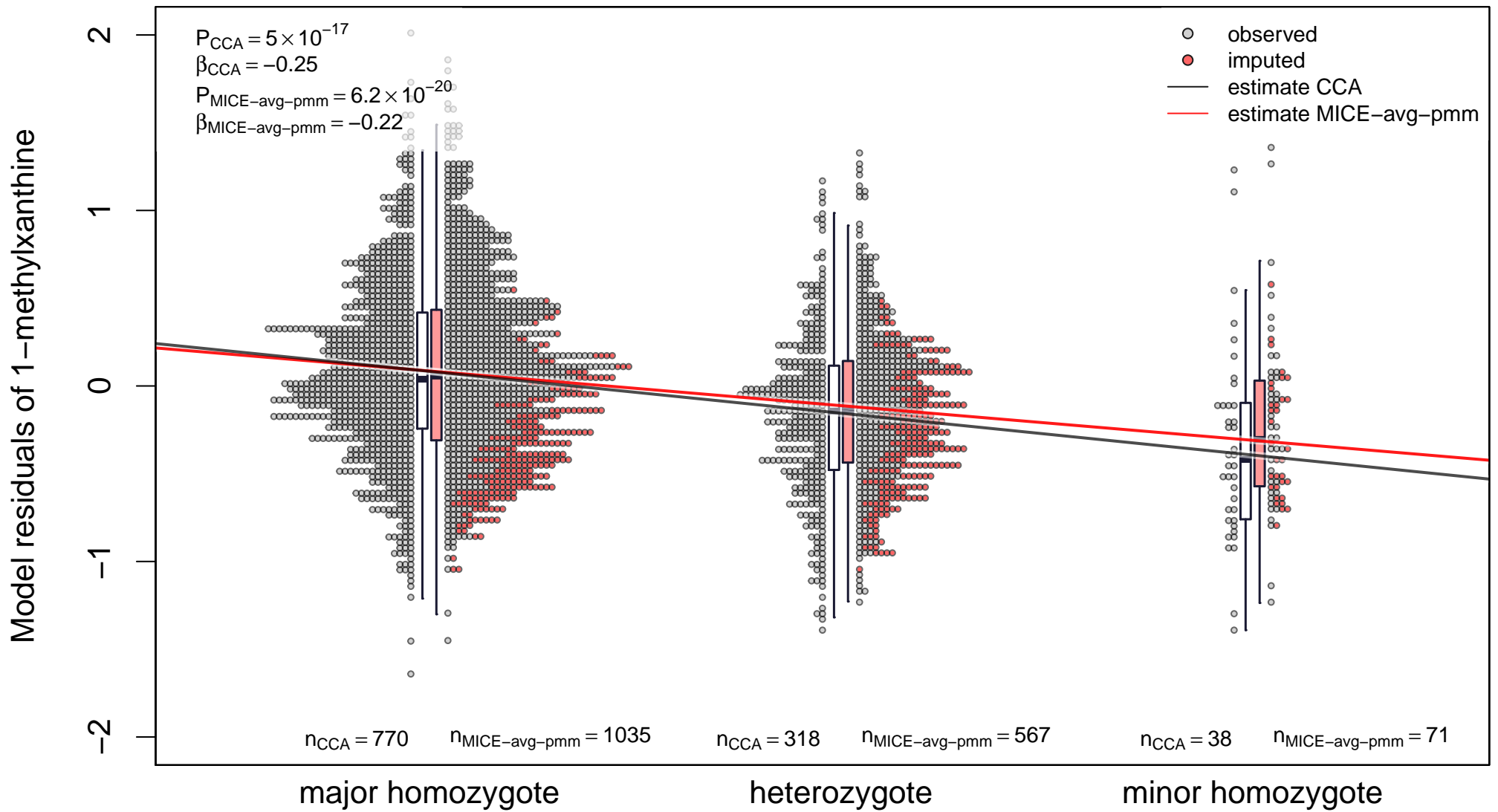
Genotype of SNP rs4921914 (NAT2)

# MICE-avg-norm



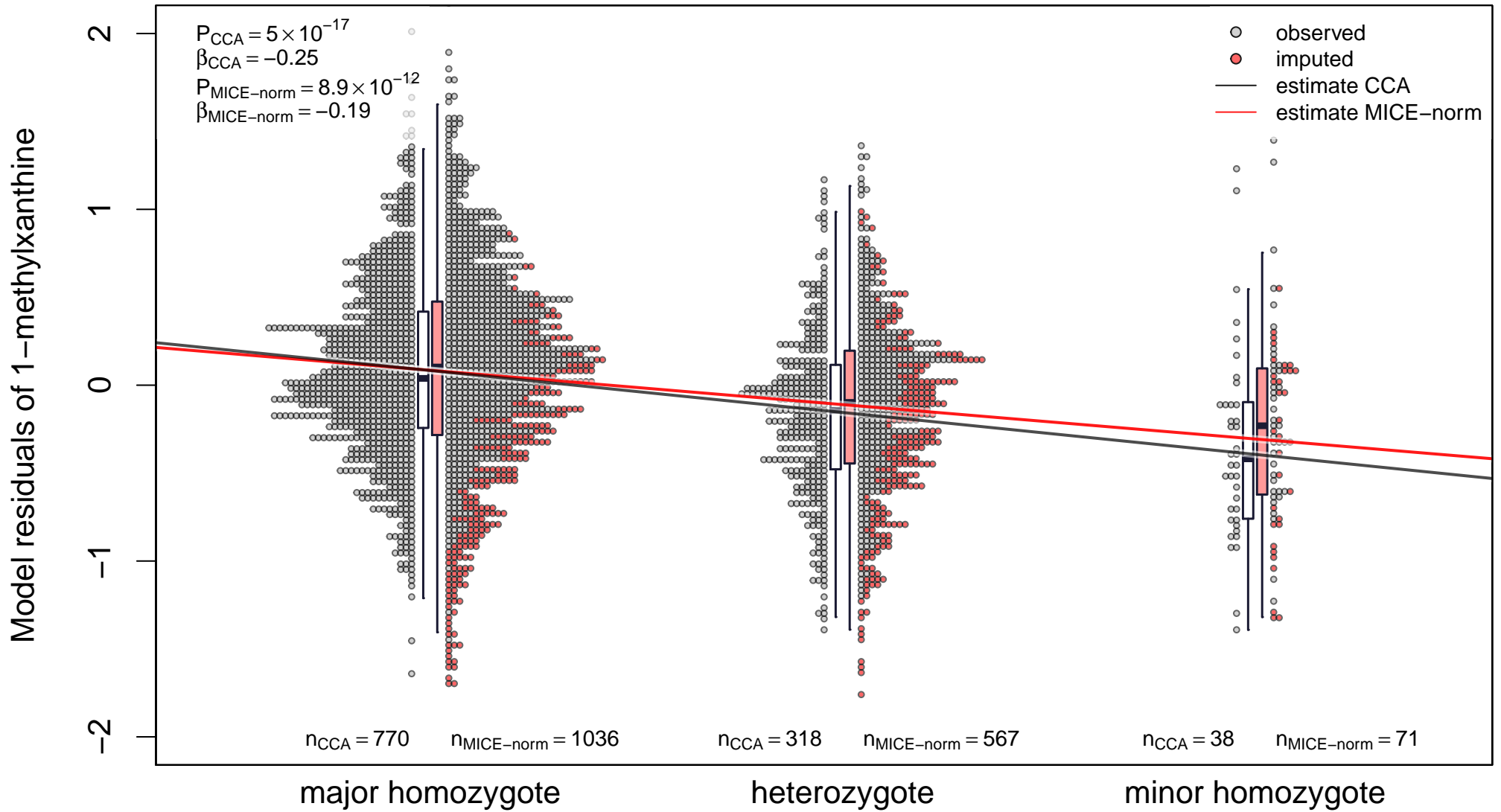
Genotype of SNP rs4921914 (NAT2)

# MICE-avg-pmm



Genotype of SNP rs4921914 (NAT2)

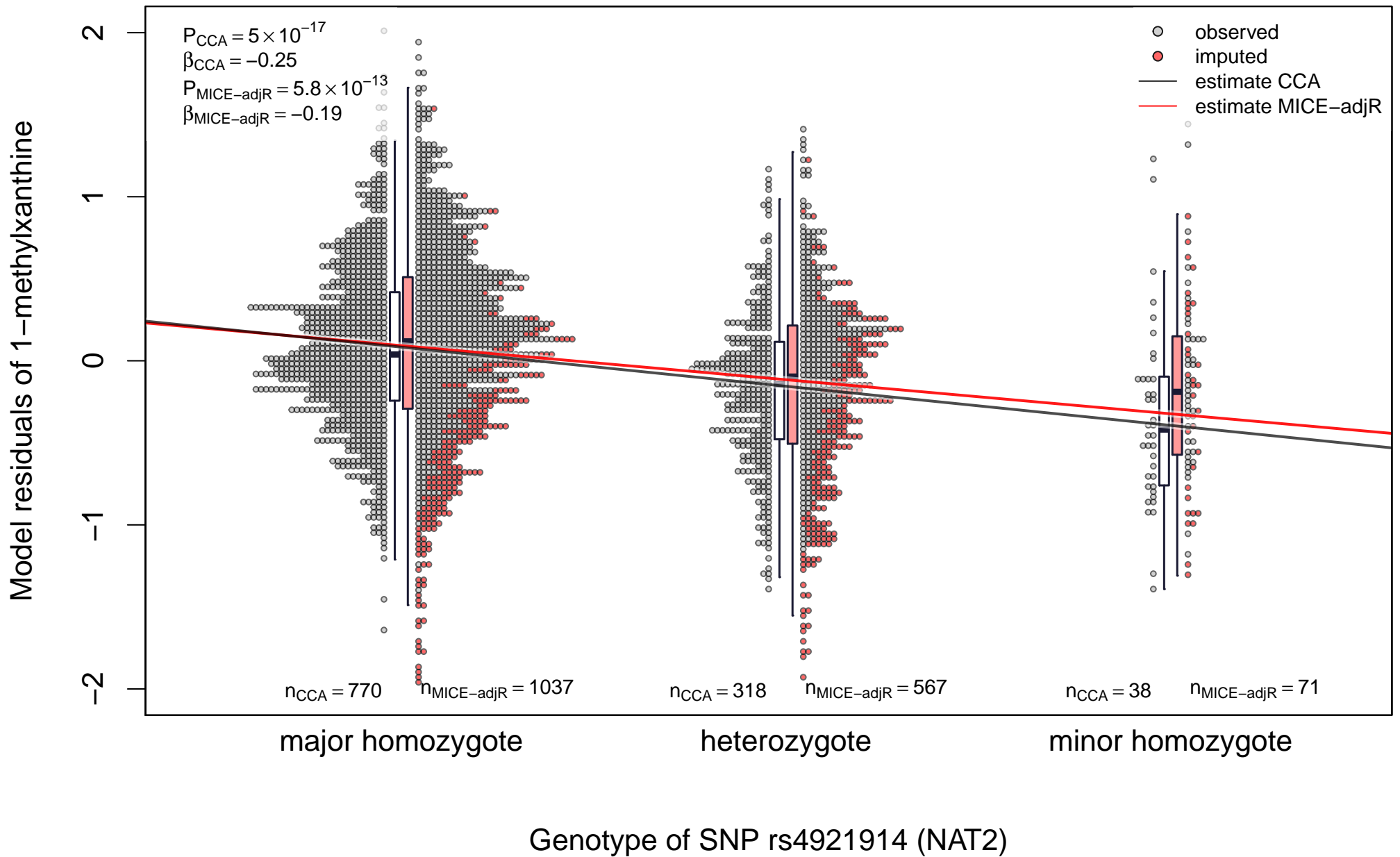
# MICE-norm



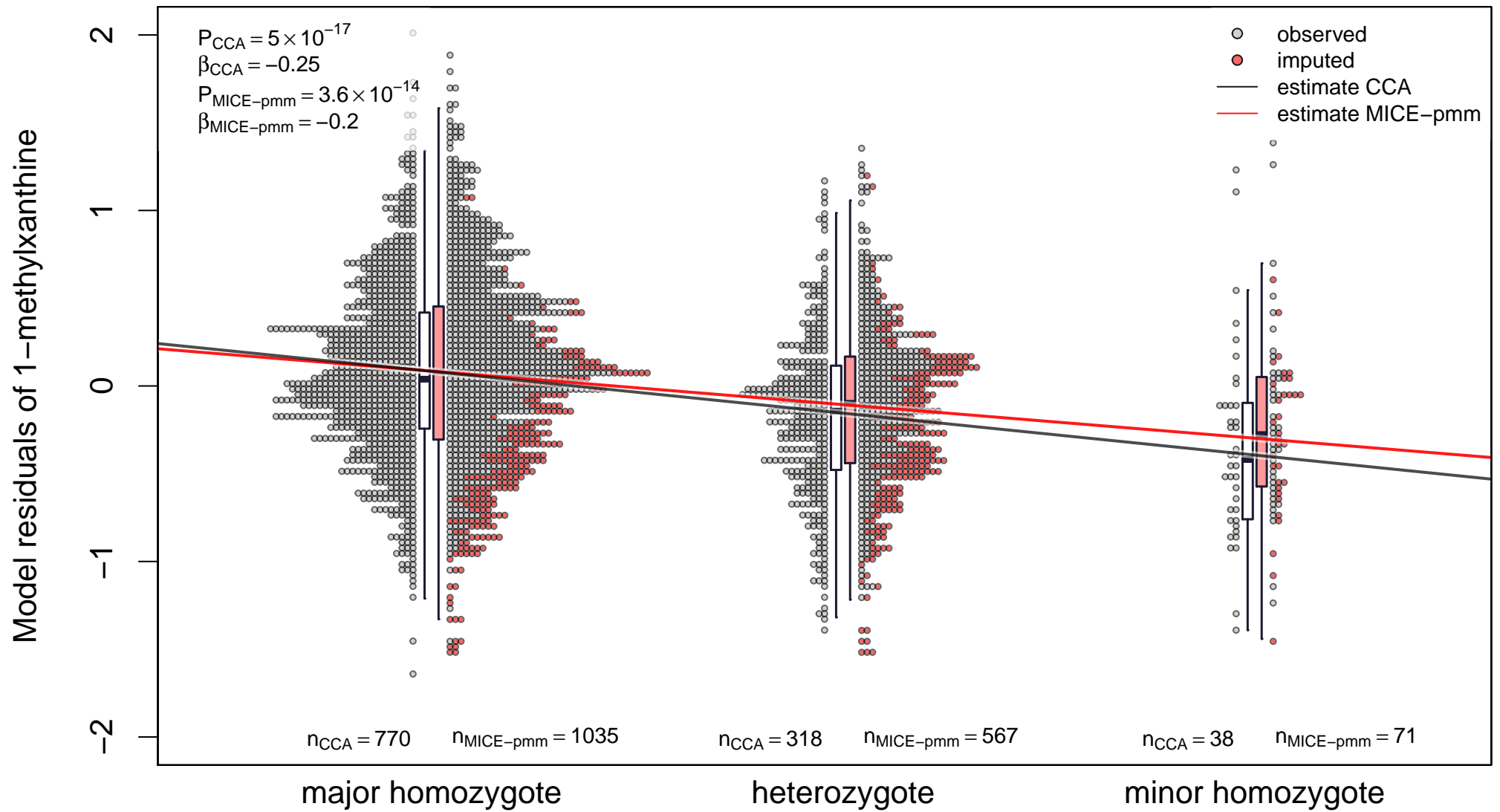
Genotype of SNP rs4921914 (NAT2)



# MICE-adjR

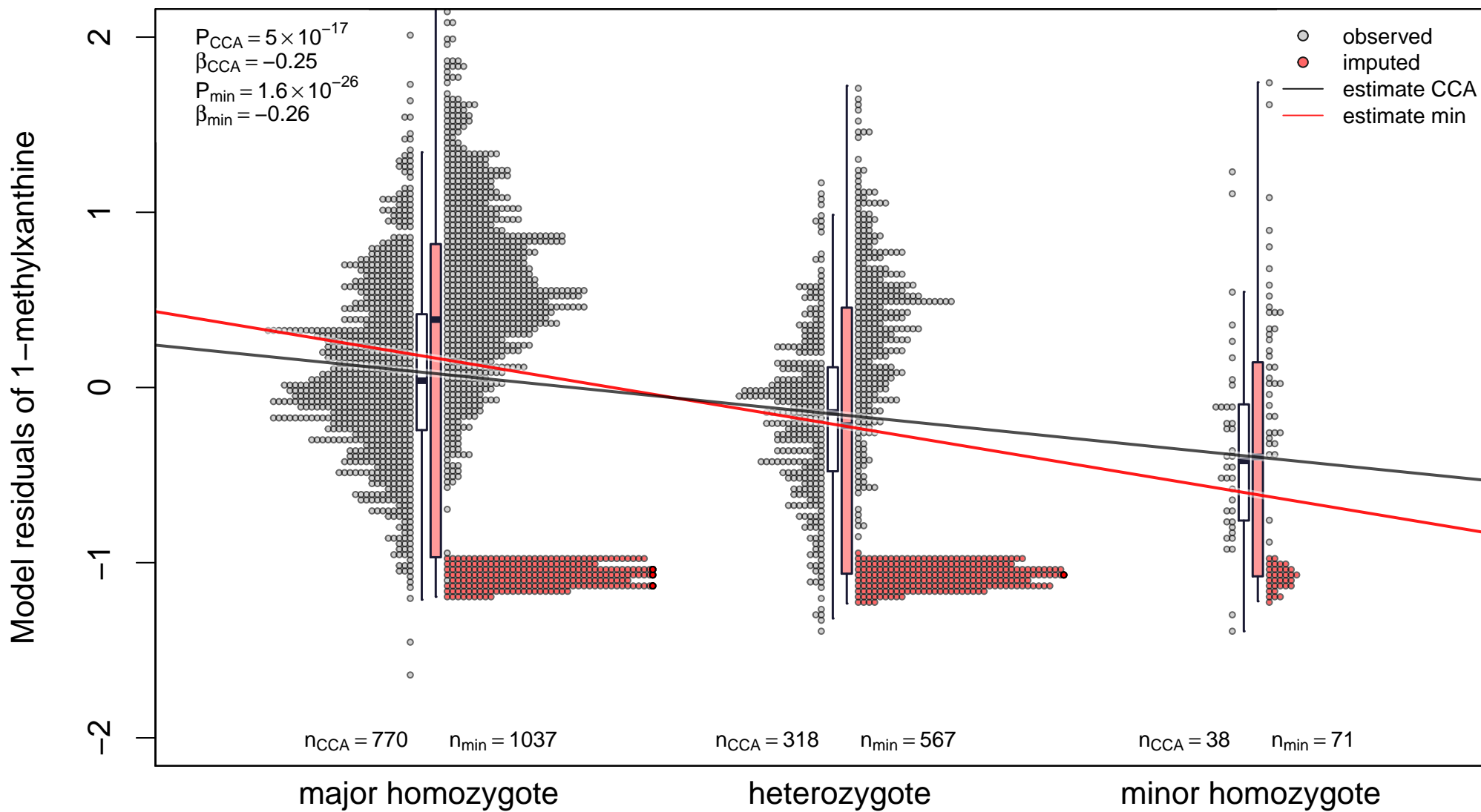


# MICE-pmm



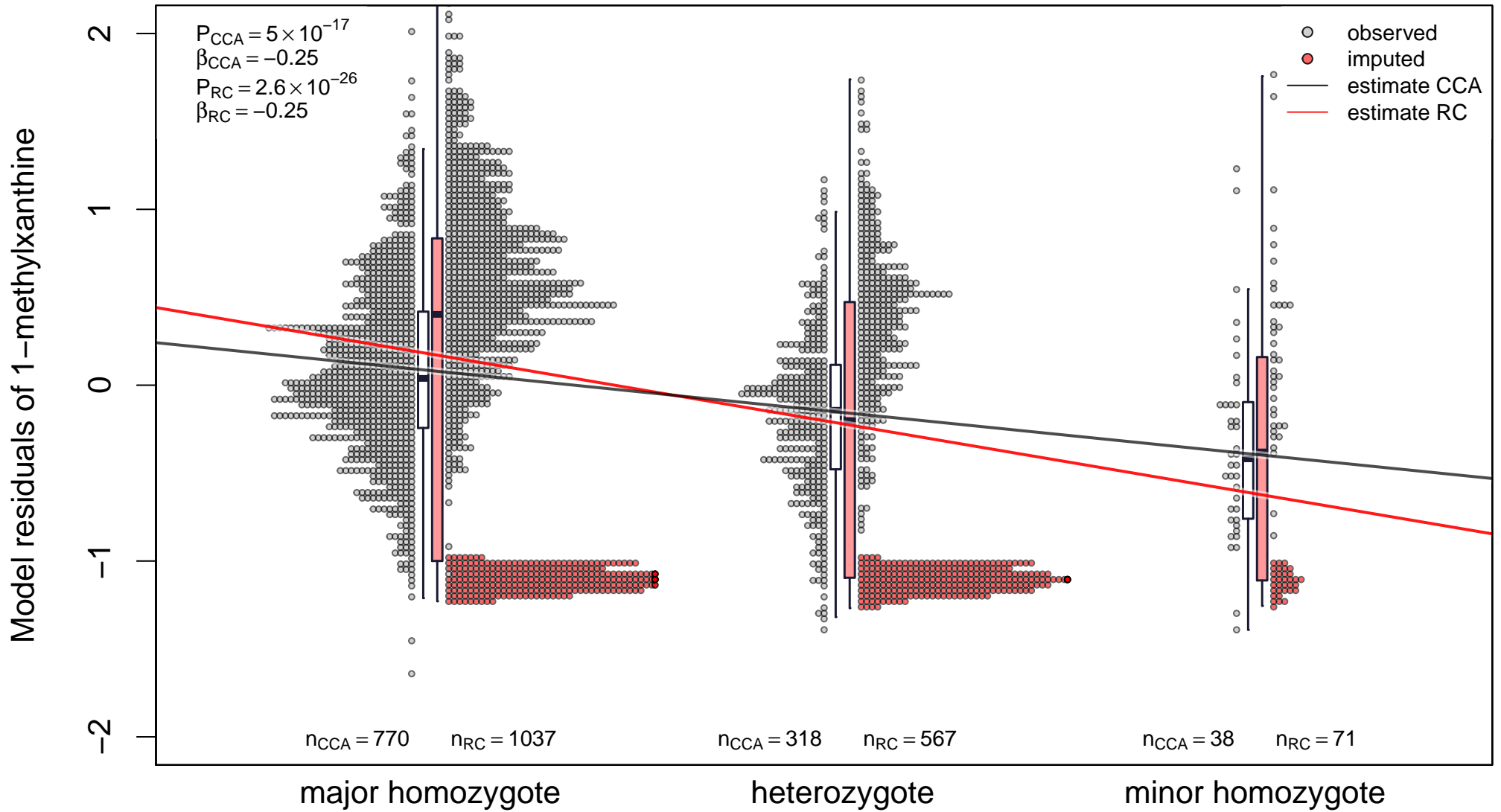
Genotype of SNP rs4921914 (NAT2)

min



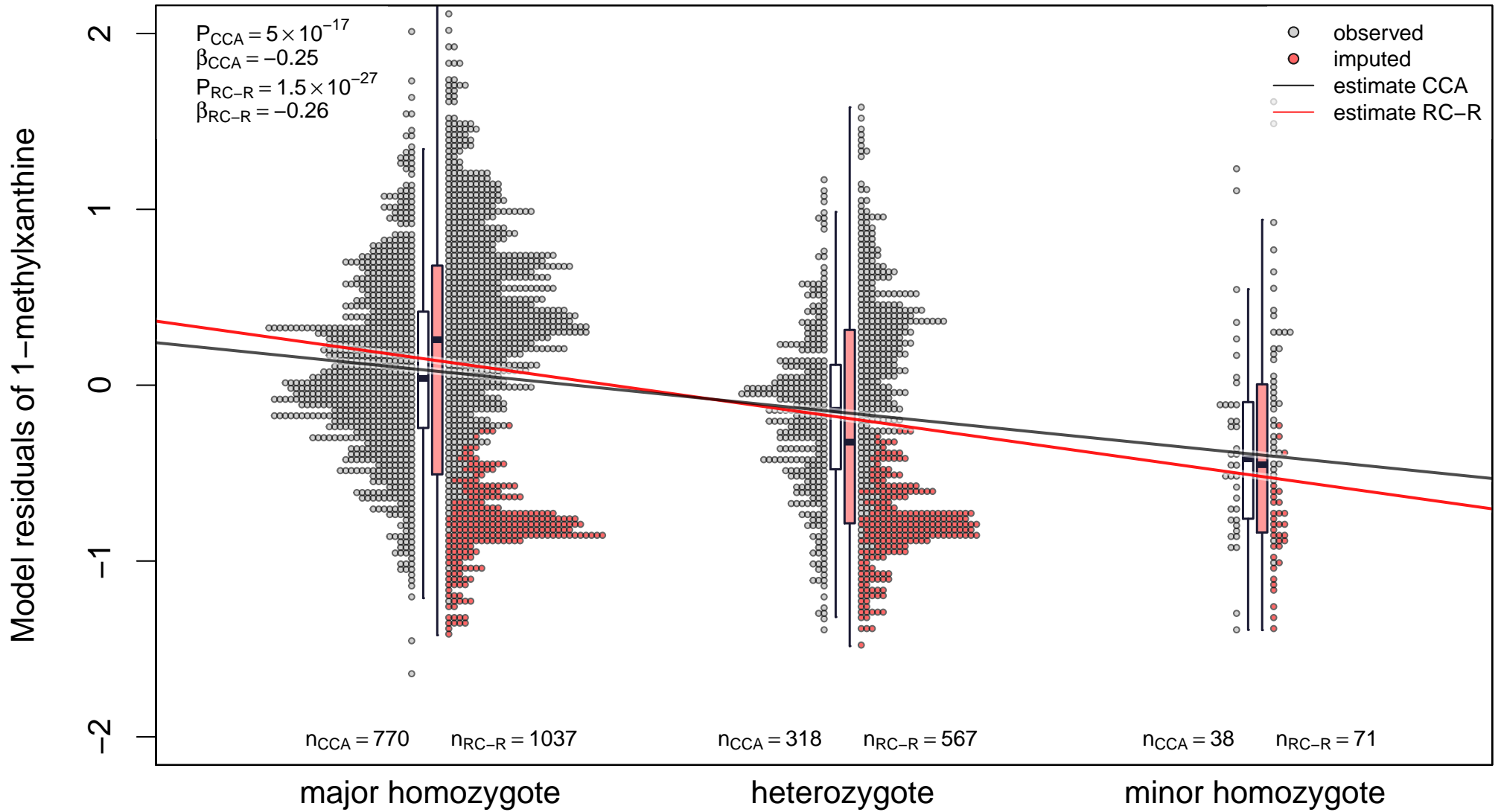
Genotype of SNP rs4921914 (NAT2)

# RC



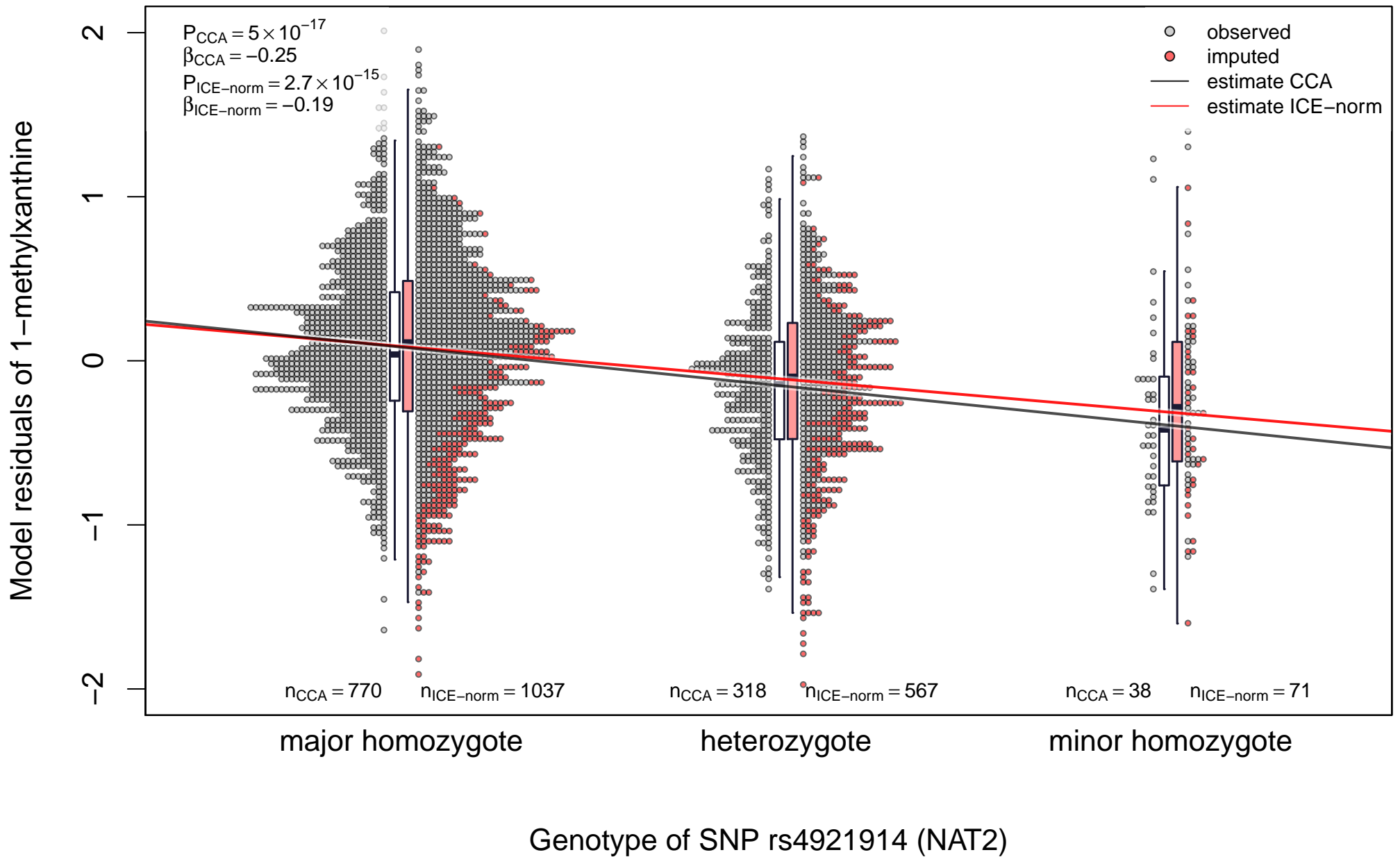
Genotype of SNP rs4921914 (NAT2)

# RC-R

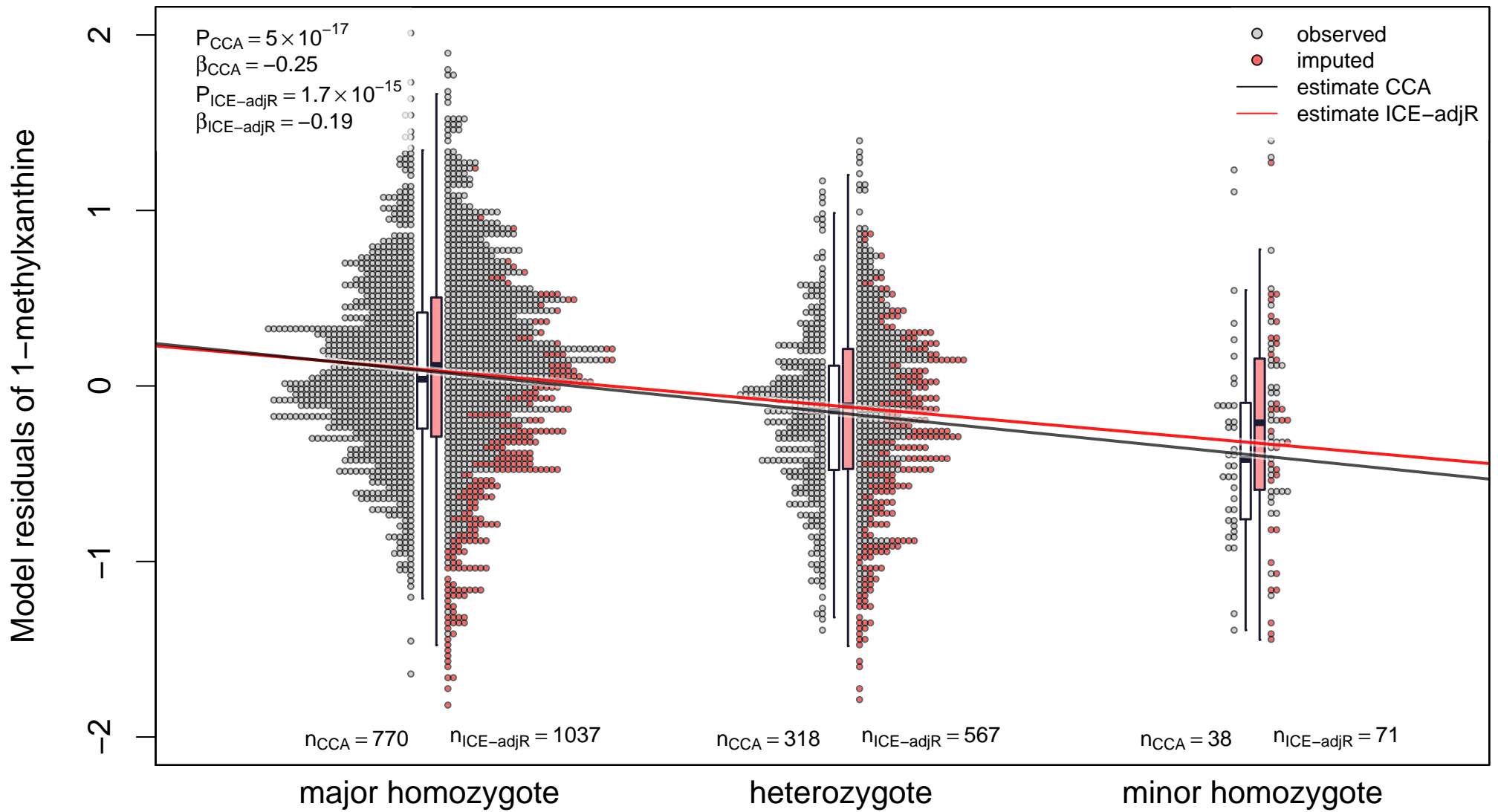


Genotype of SNP rs4921914 (NAT2)

# ICE-norm

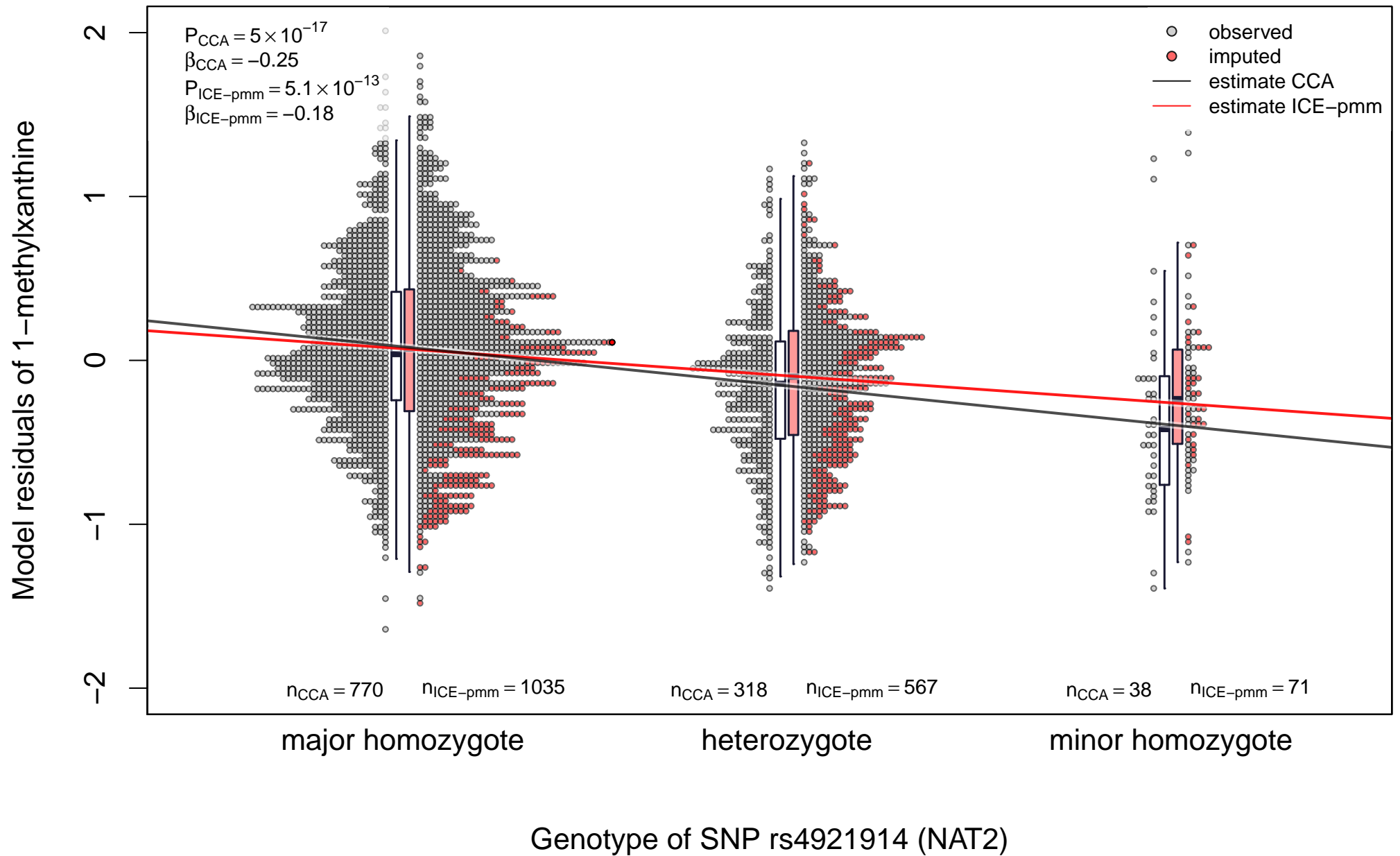


# ICE-adjR



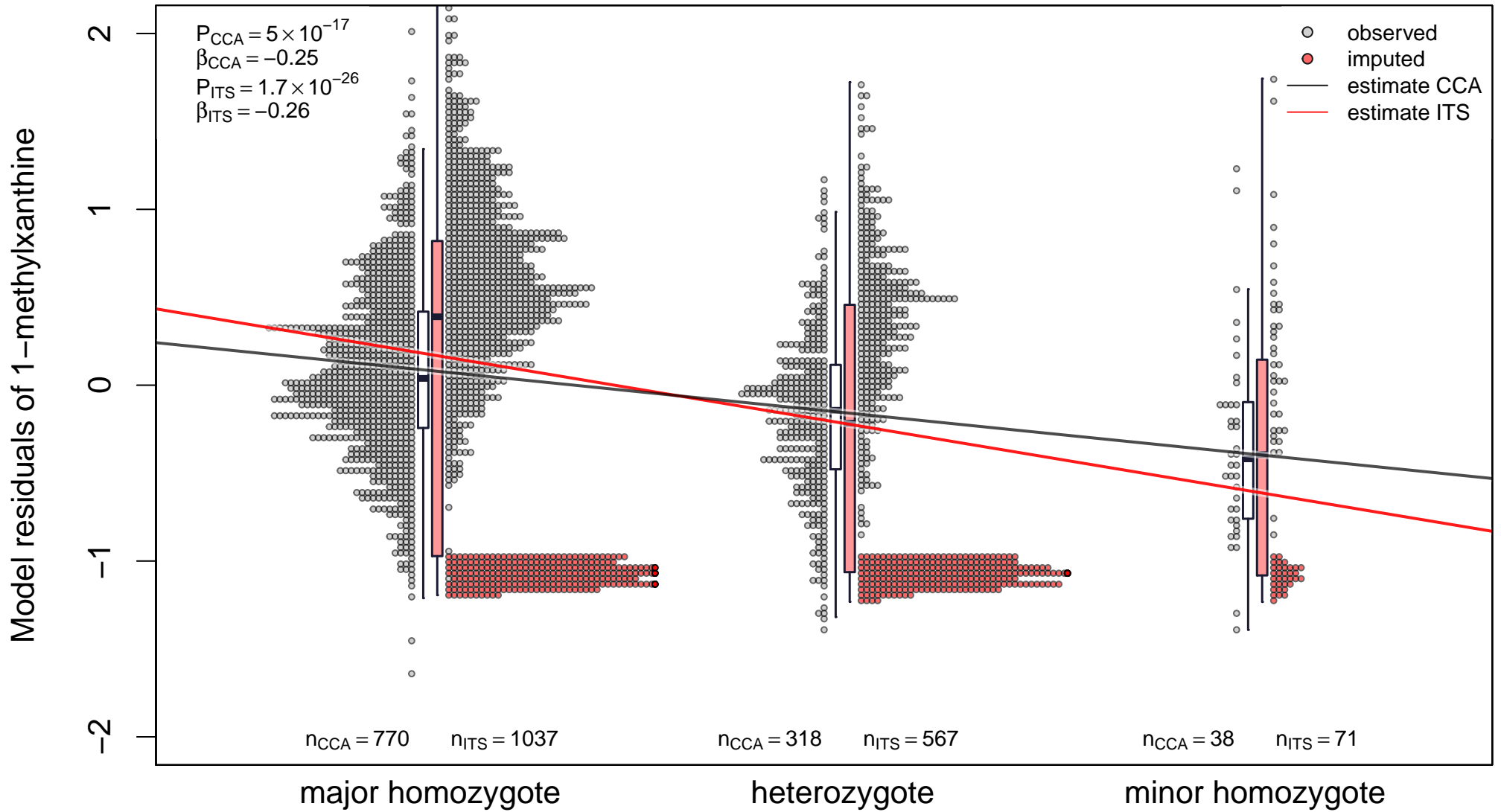
Genotype of SNP rs4921914 (NAT2)

# ICE-pmm



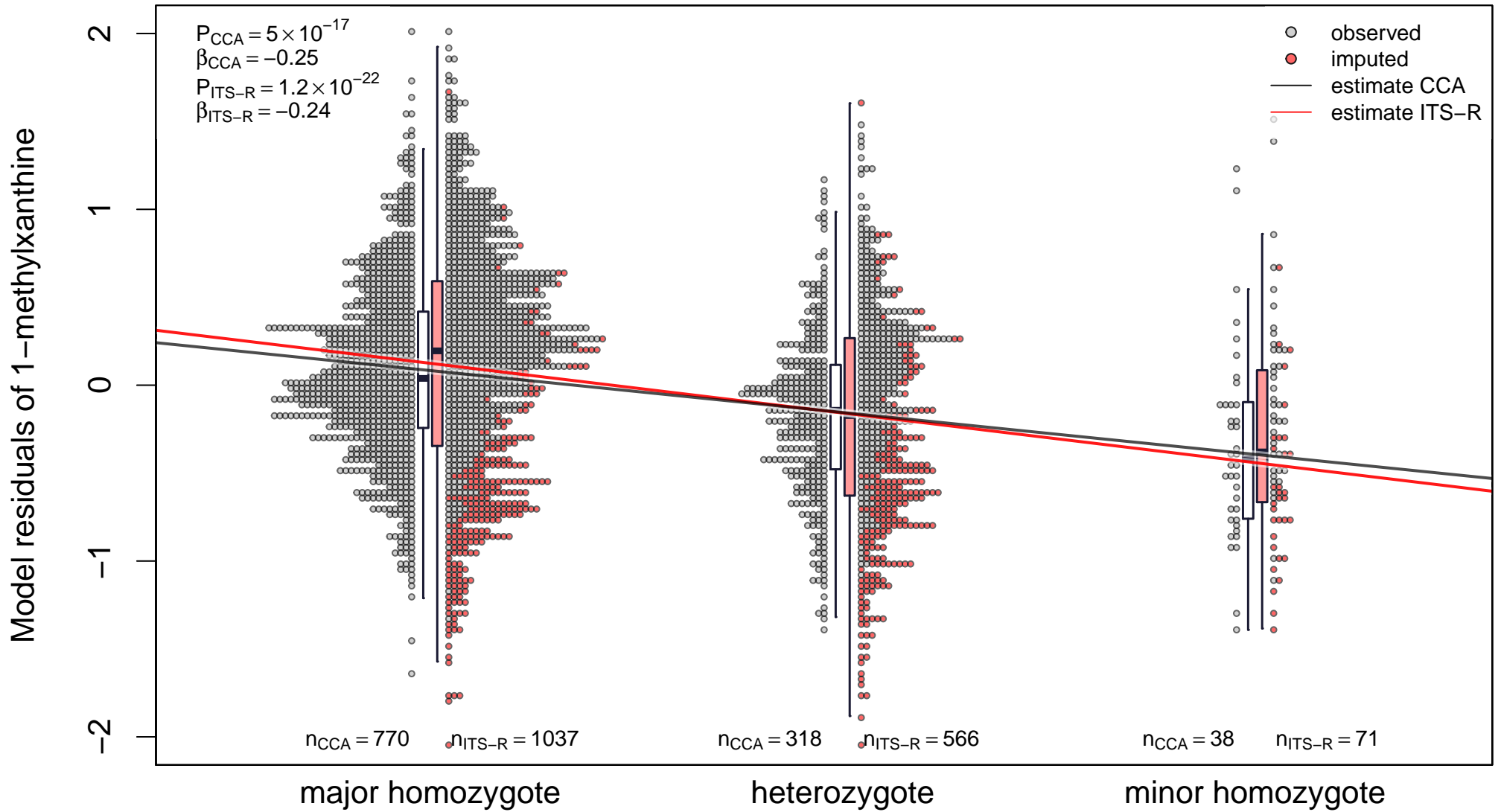


# ITS



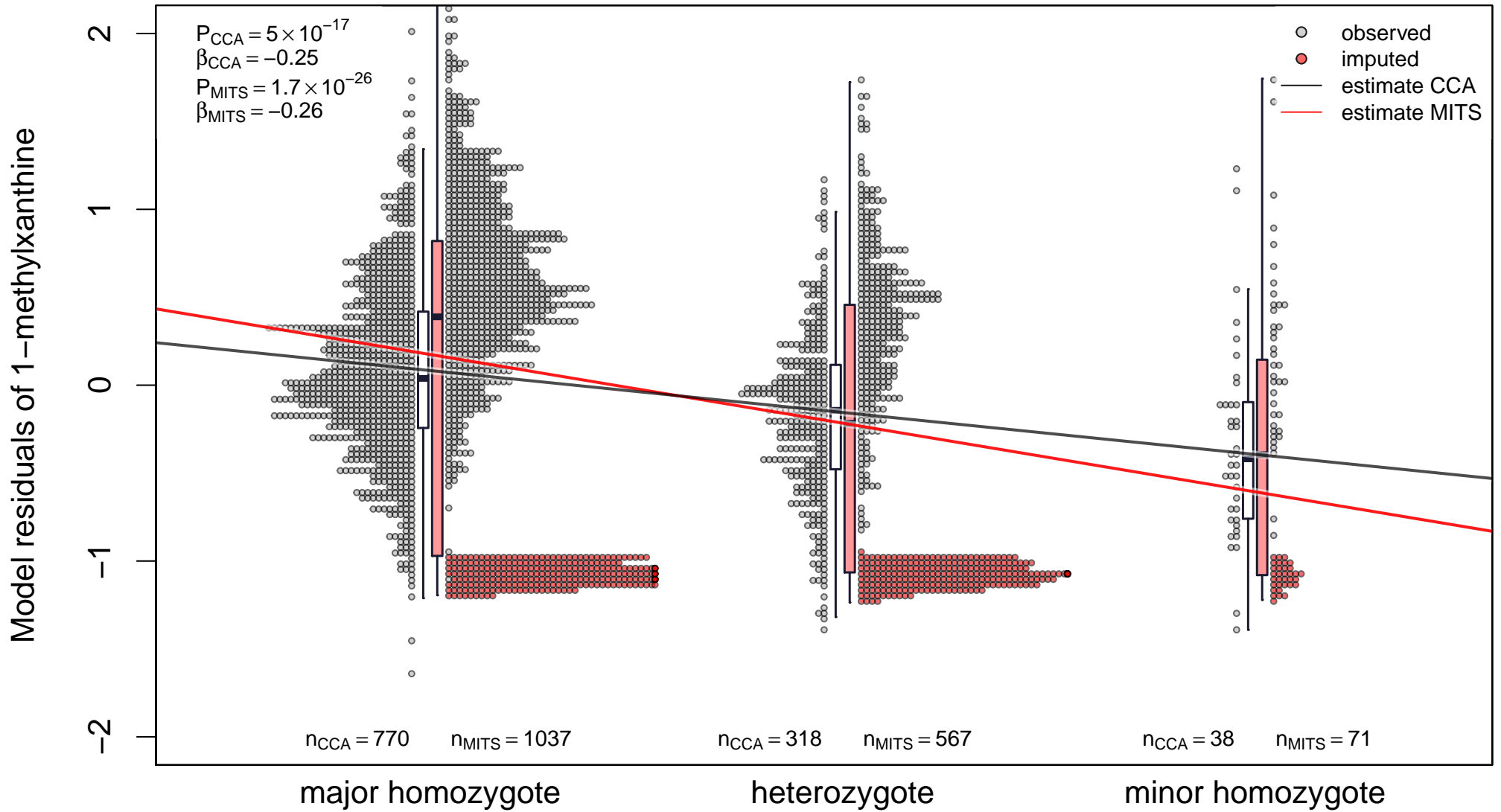
Genotype of SNP rs4921914 (NAT2)

# ITS-R



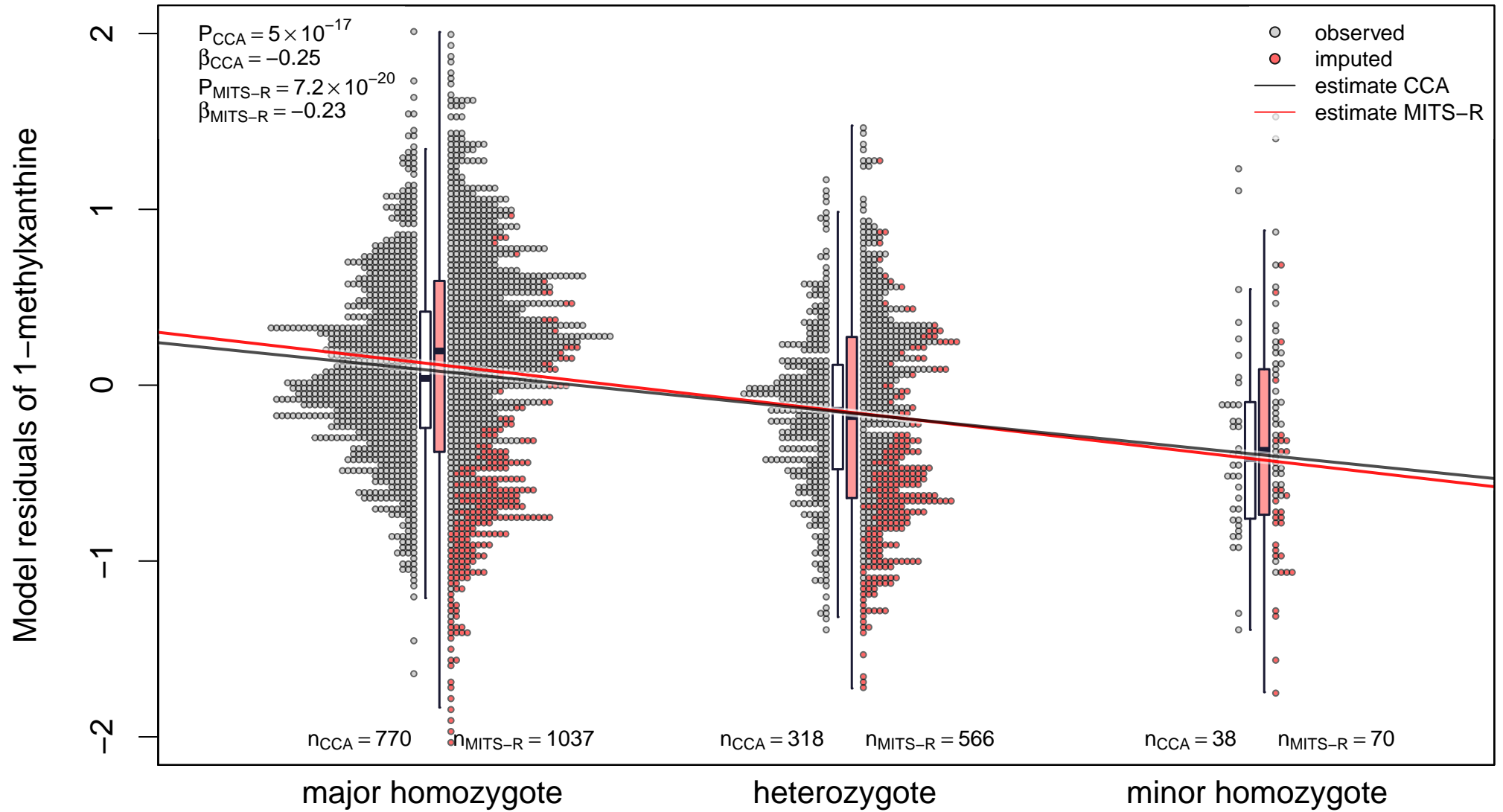
Genotype of SNP rs4921914 (NAT2)

# MITS



Genotype of SNP rs4921914 (NAT2)

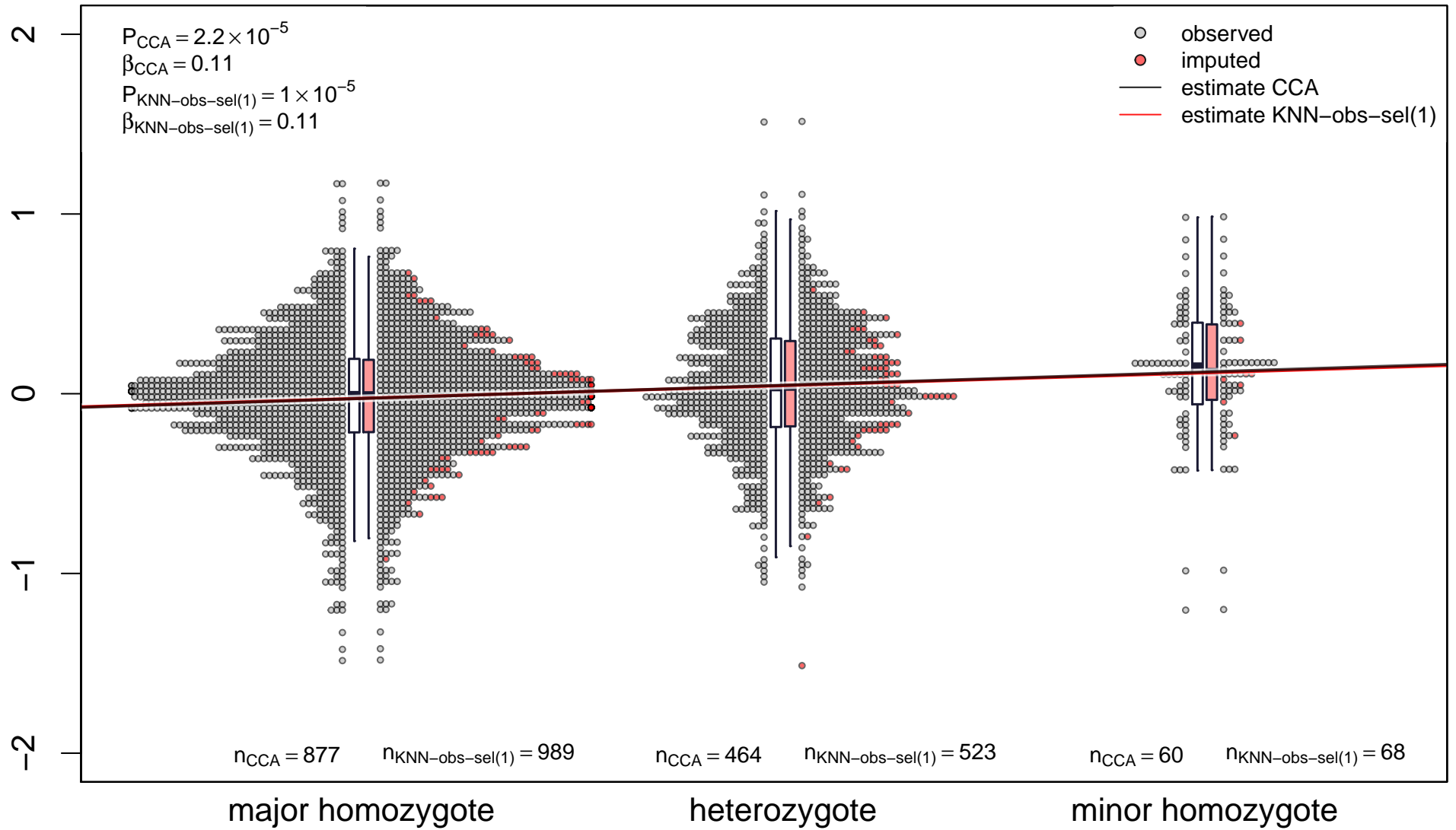
# MITS-R



Genotype of SNP rs4921914 (NAT2)

# KNN-obs-sel(1)

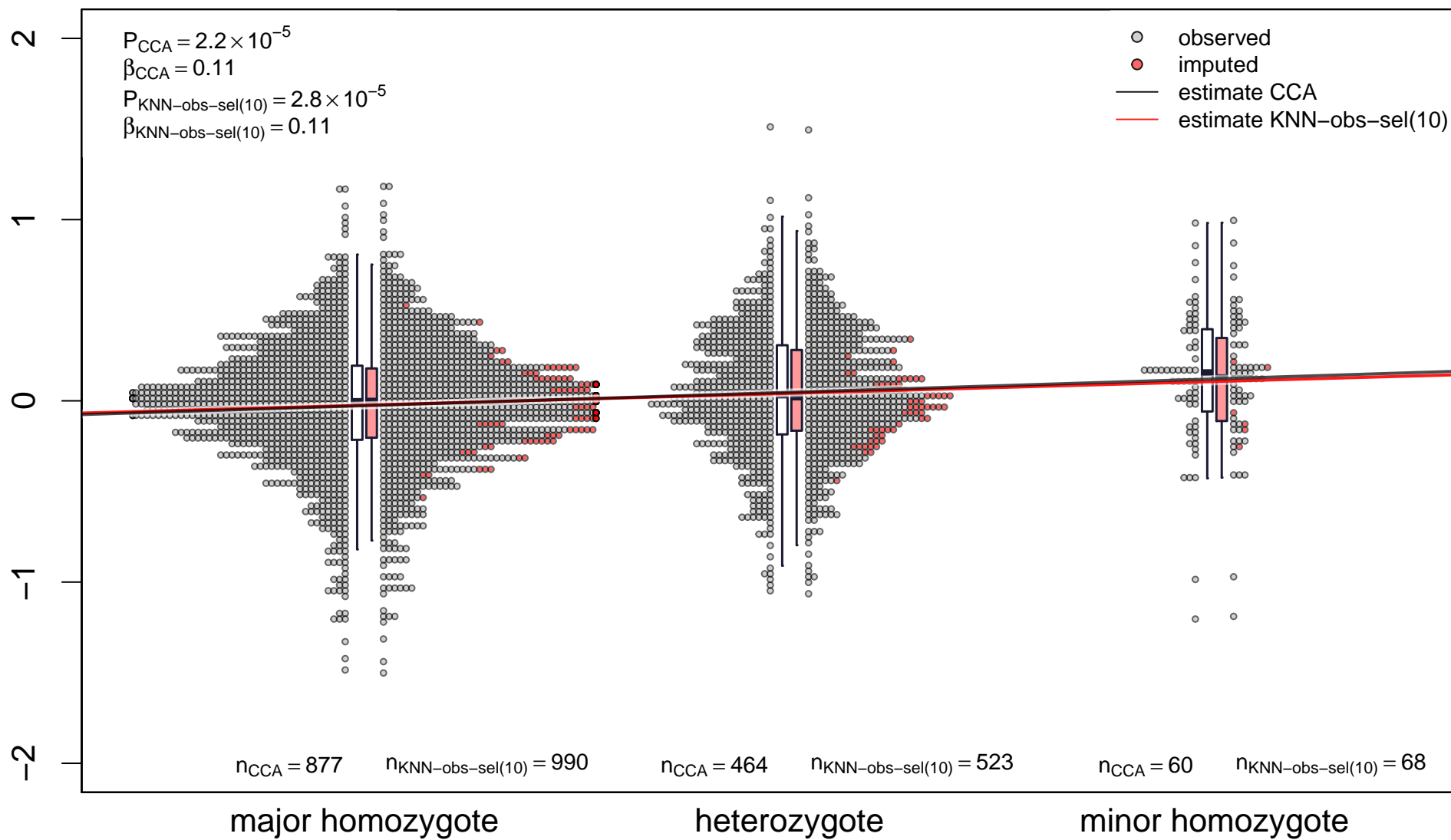
Model residuals of 1-stearoyl glycerophosphoethanolamine



Genotype of SNP rs588136 (LIPC (2 separate loci))

# KNN-obs-sel(10)

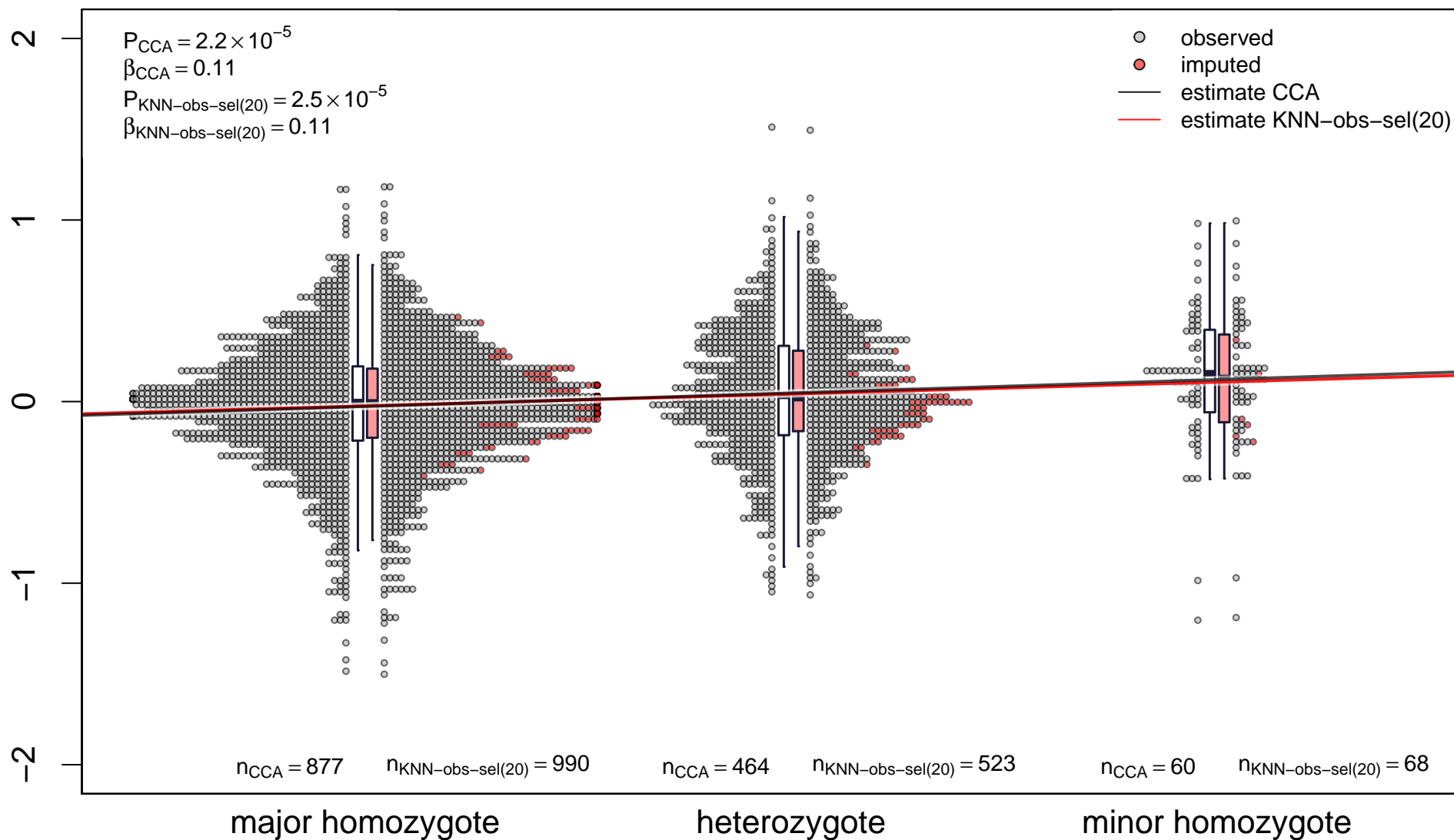
Model residuals of 1-stearoylglycerophosphoethanolamine



Genotype of SNP rs588136 (LIPC (2 separate loci))

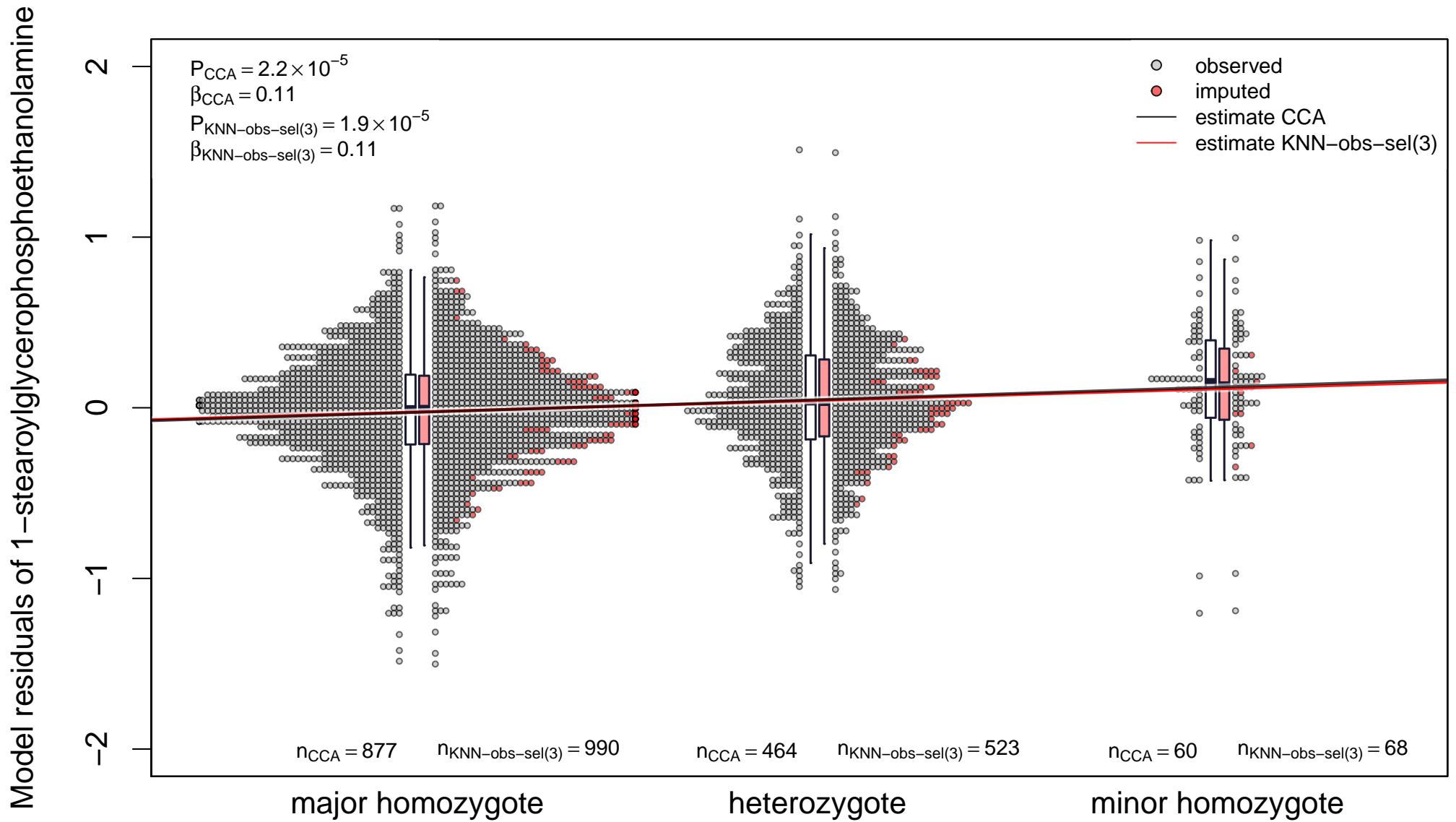
# KNN-obs-sel(20)

Model residuals of 1-stearoylglycerophosphoethanolamine



Genotype of SNP rs588136 (LIPC (2 separate loci))

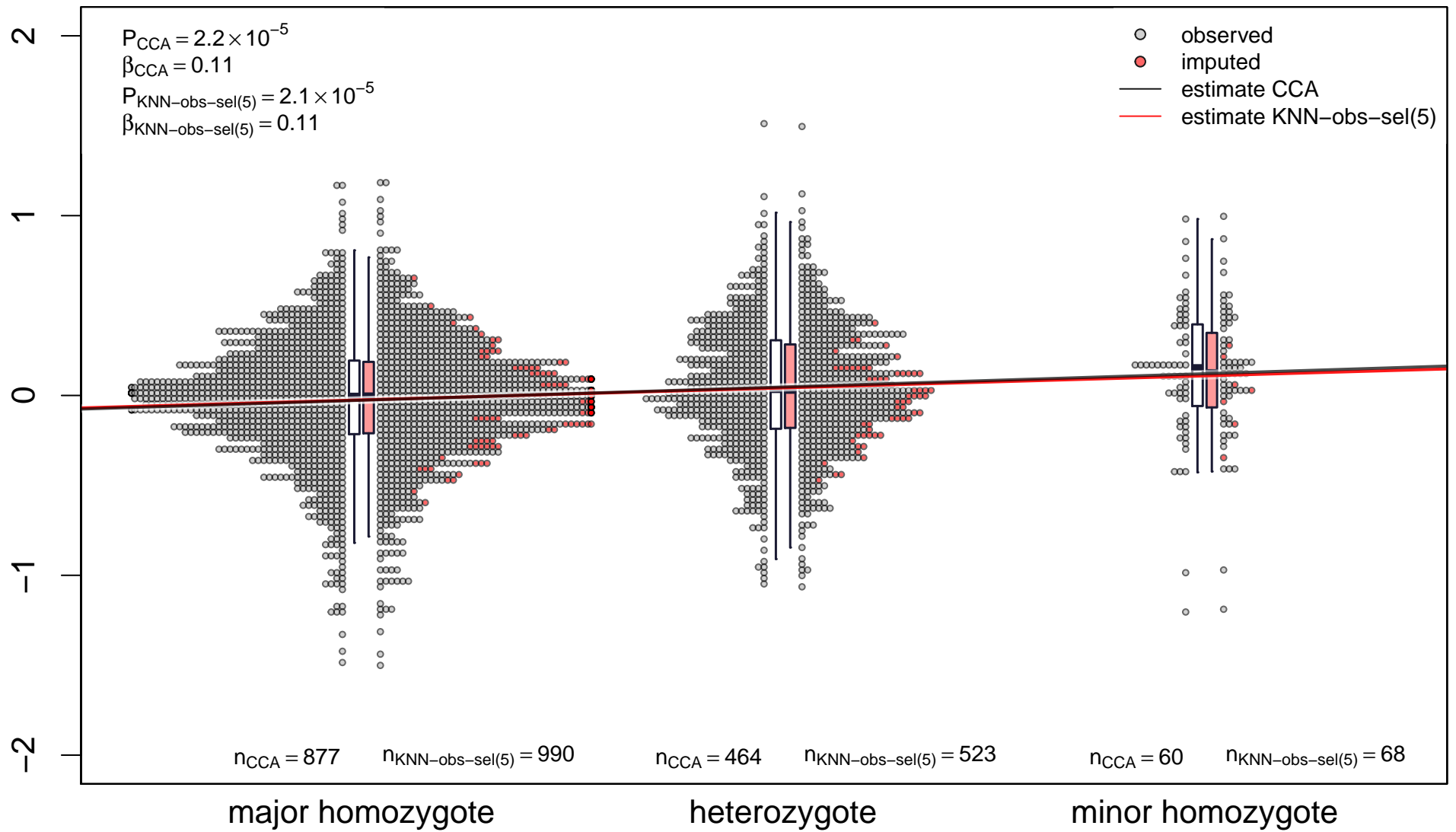
# KNN-obs-sel(3)





# KNN-obs-sel(5)

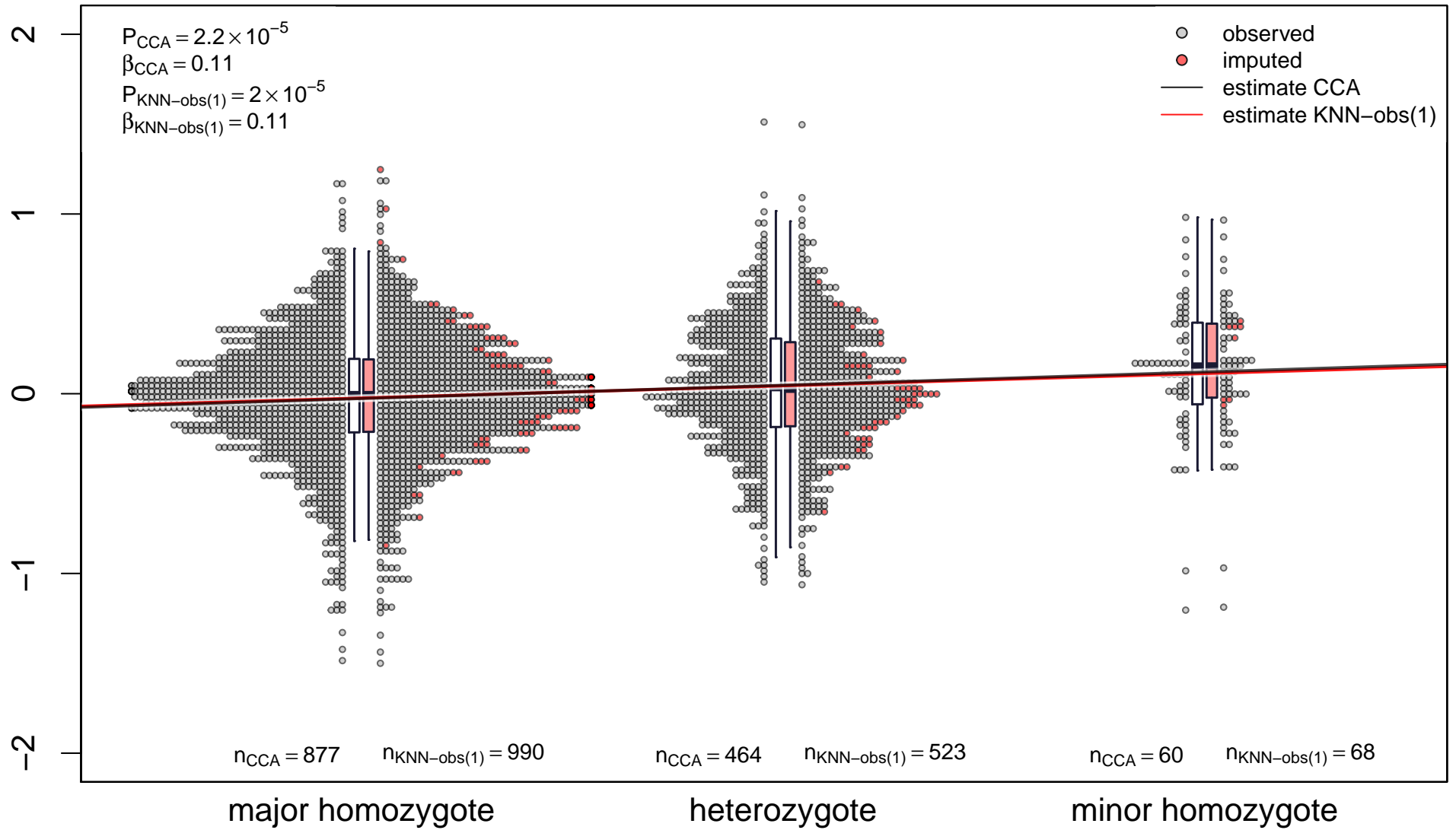
Model residuals of 1-stearoylglycerophosphoethanolamine



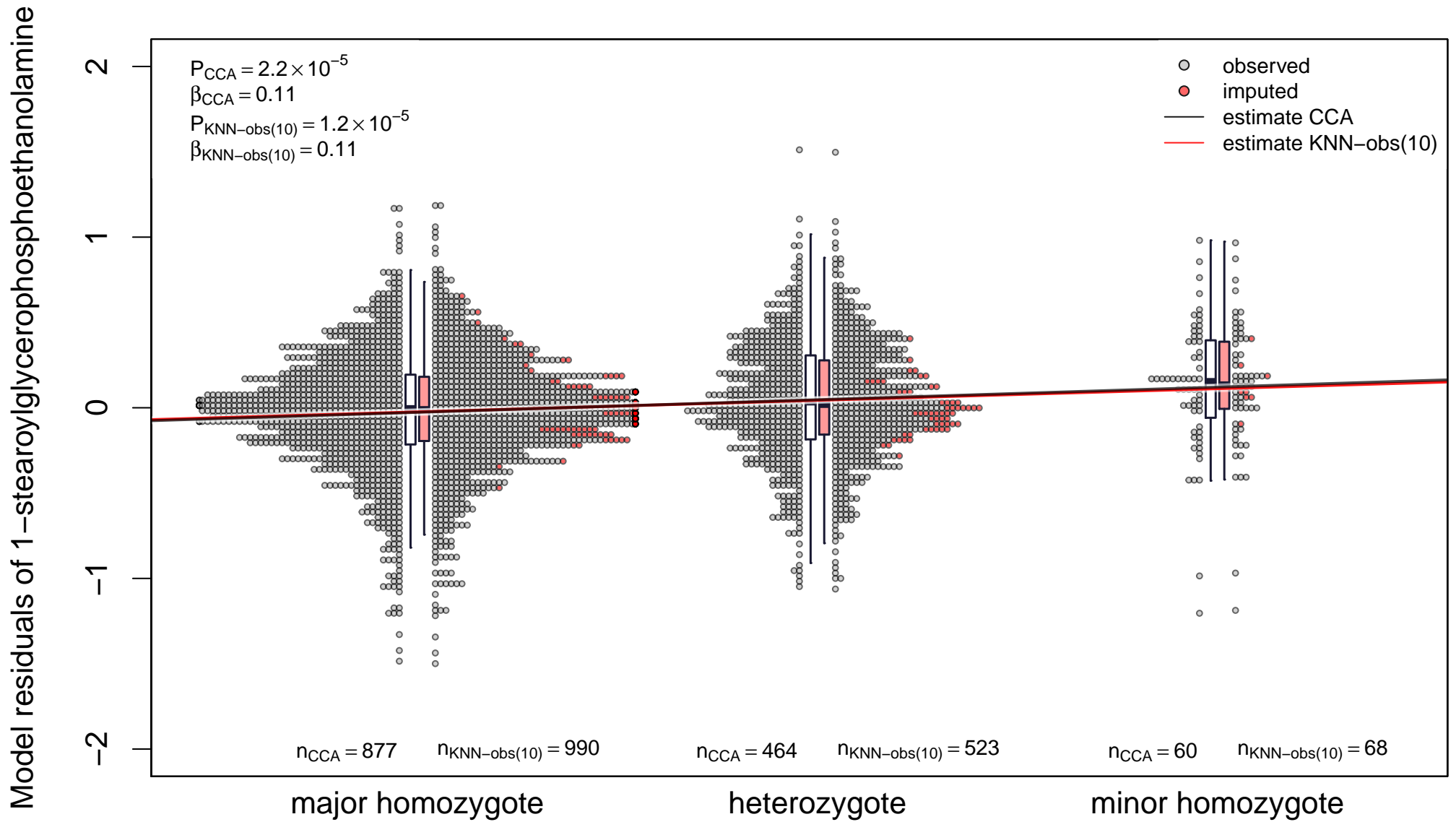
Genotype of SNP rs588136 (LIPC (2 separate loci))

# KNN-obs(1)

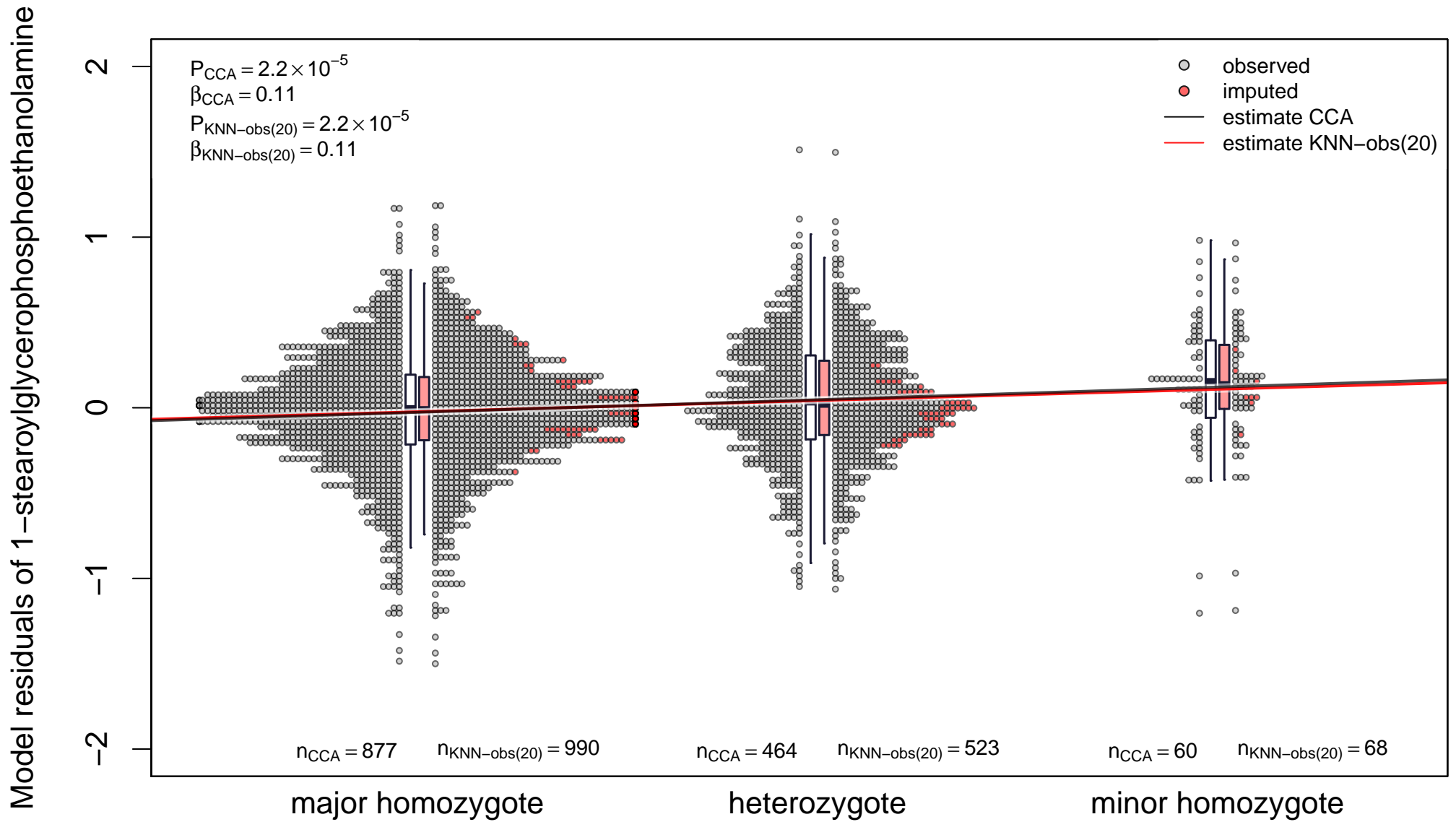
Model residuals of 1-stearoylglycerophosphoethanolamine



# KNN-obs(10)



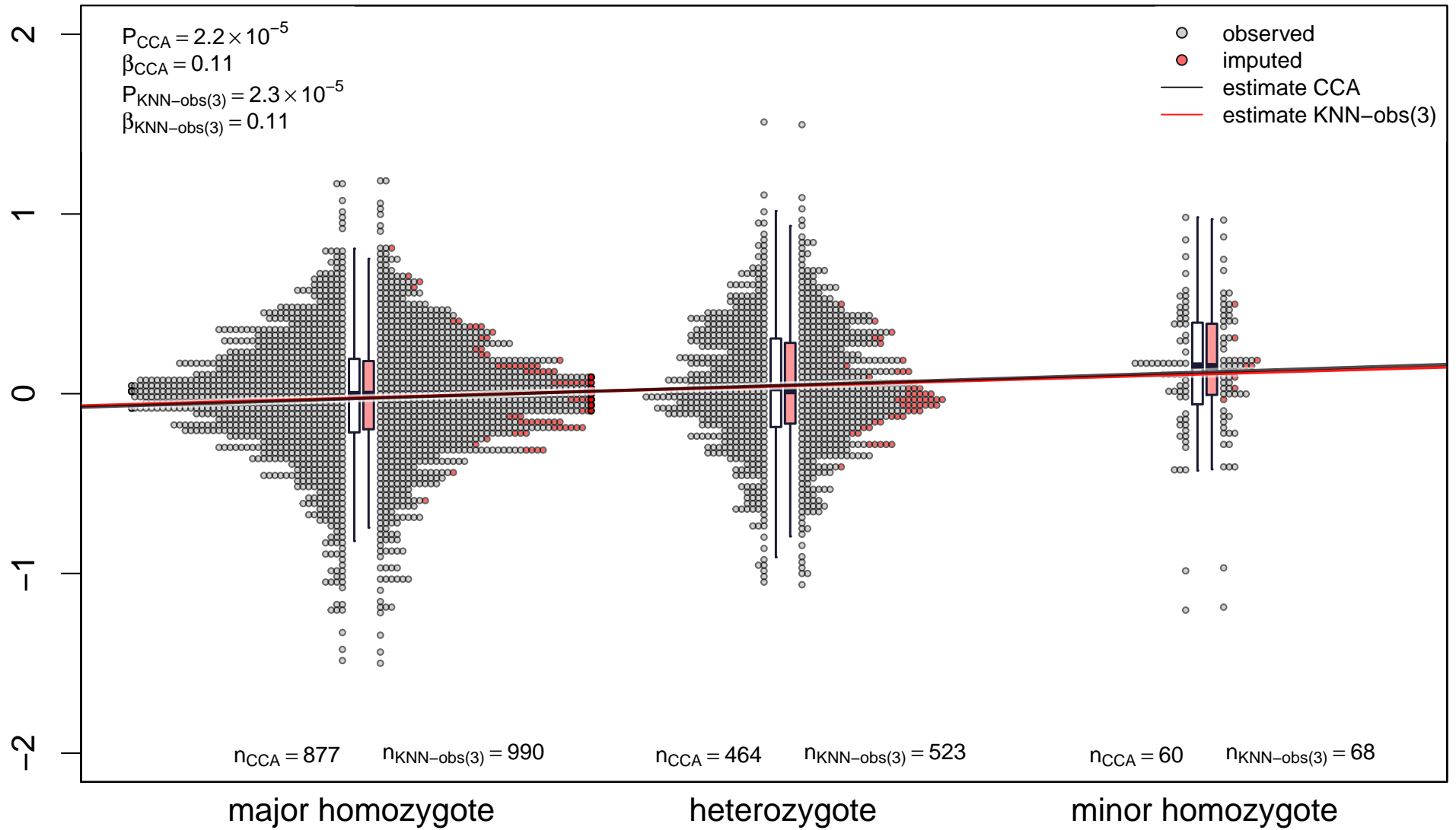
# KNN-obs(20)



Genotype of SNP rs588136 (LIPC (2 separate loci))

# KNN-obs(3)

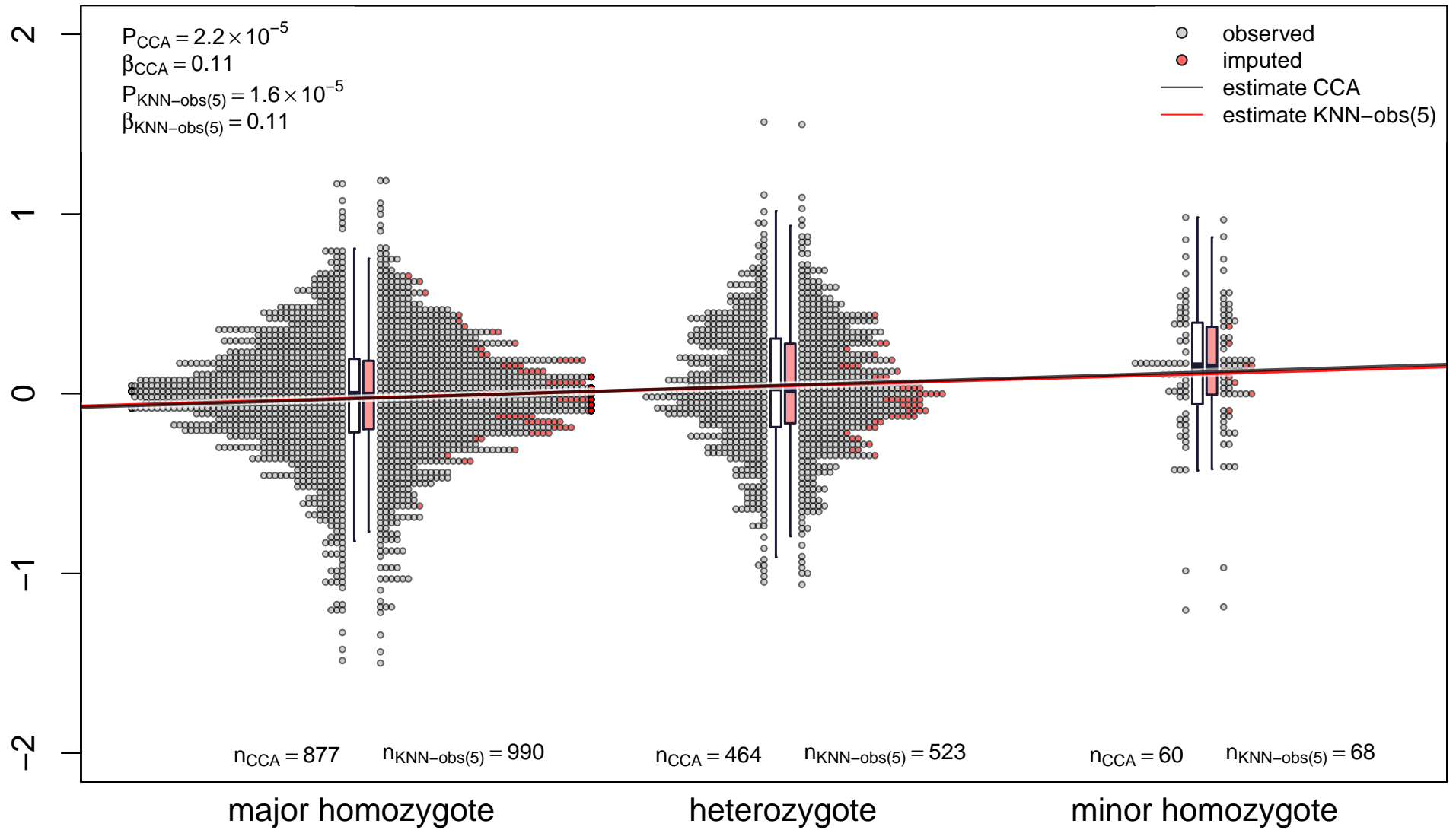
Model residuals of 1-stearoylglycerophosphoethanolamine



Genotype of SNP rs588136 (LIPC (2 separate loci))

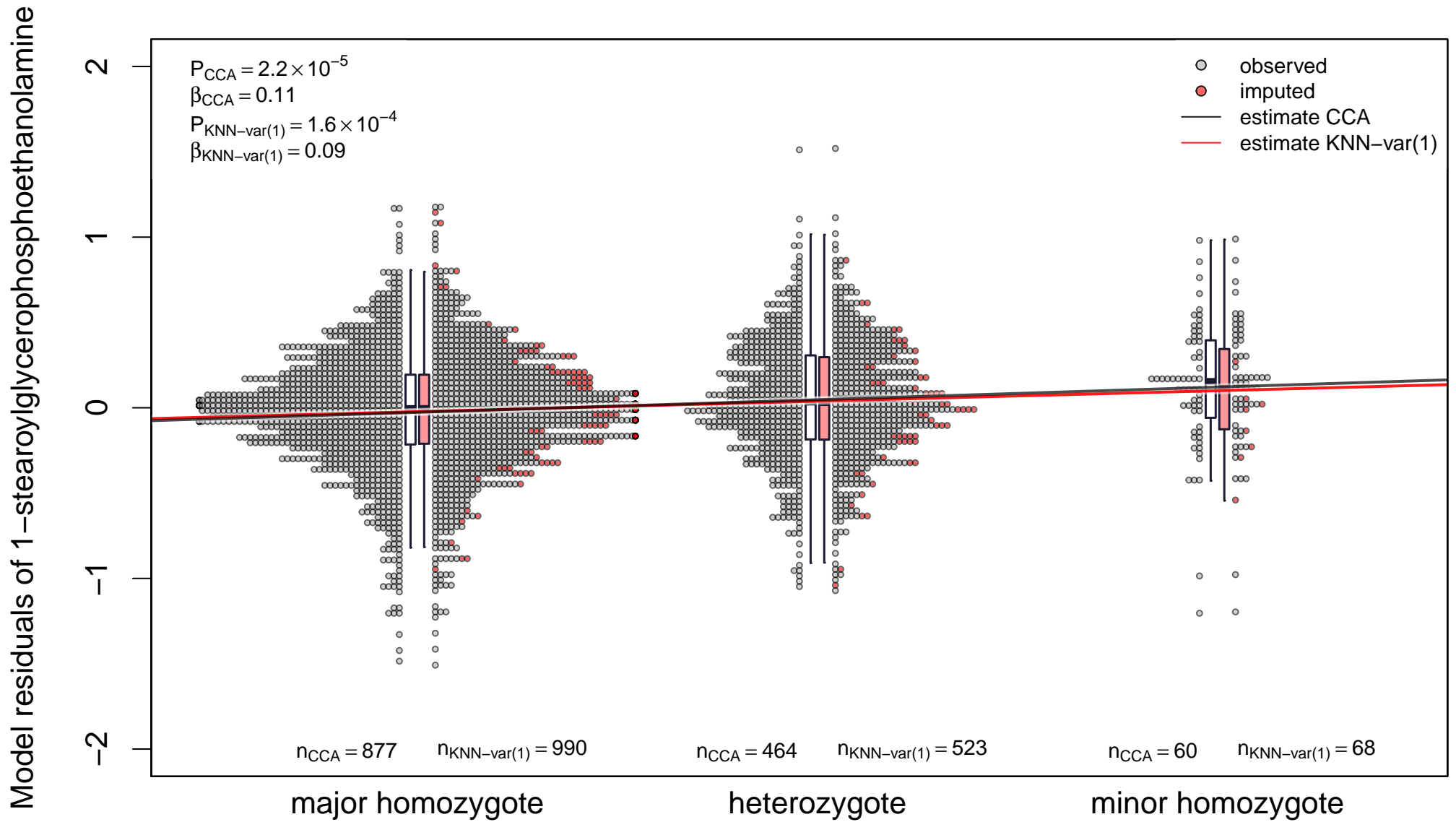
# KNN-obs(5)

Model residuals of 1-stearoylglycerophosphoethanolamine



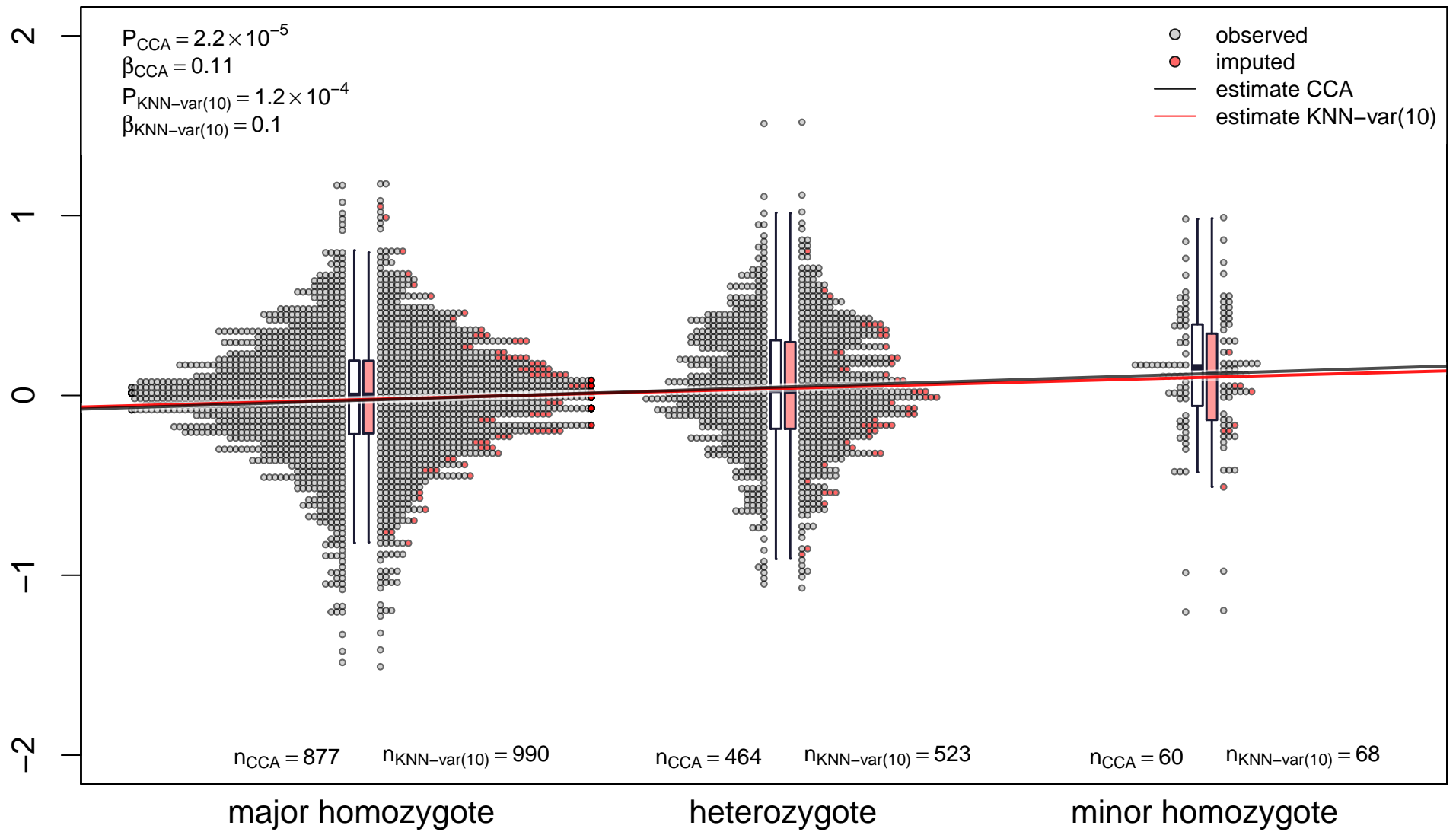
Genotype of SNP rs588136 (LIPC (2 separate loci))

# KNN-var(1)



# KNN-var(10)

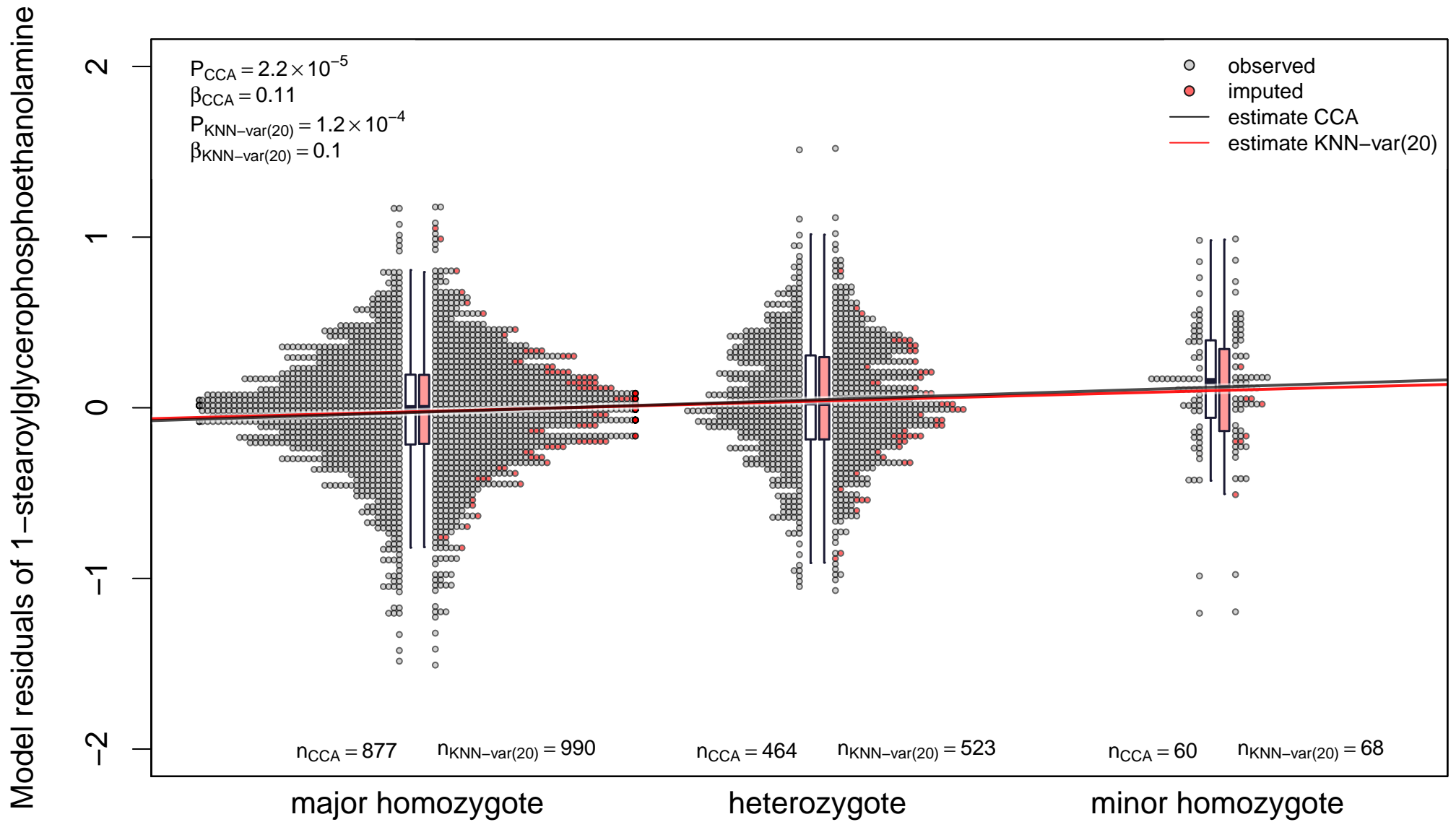
Model residuals of 1-stearoylglycerophosphoethanolamine



Genotype of SNP rs588136 (LIPC (2 separate loci))

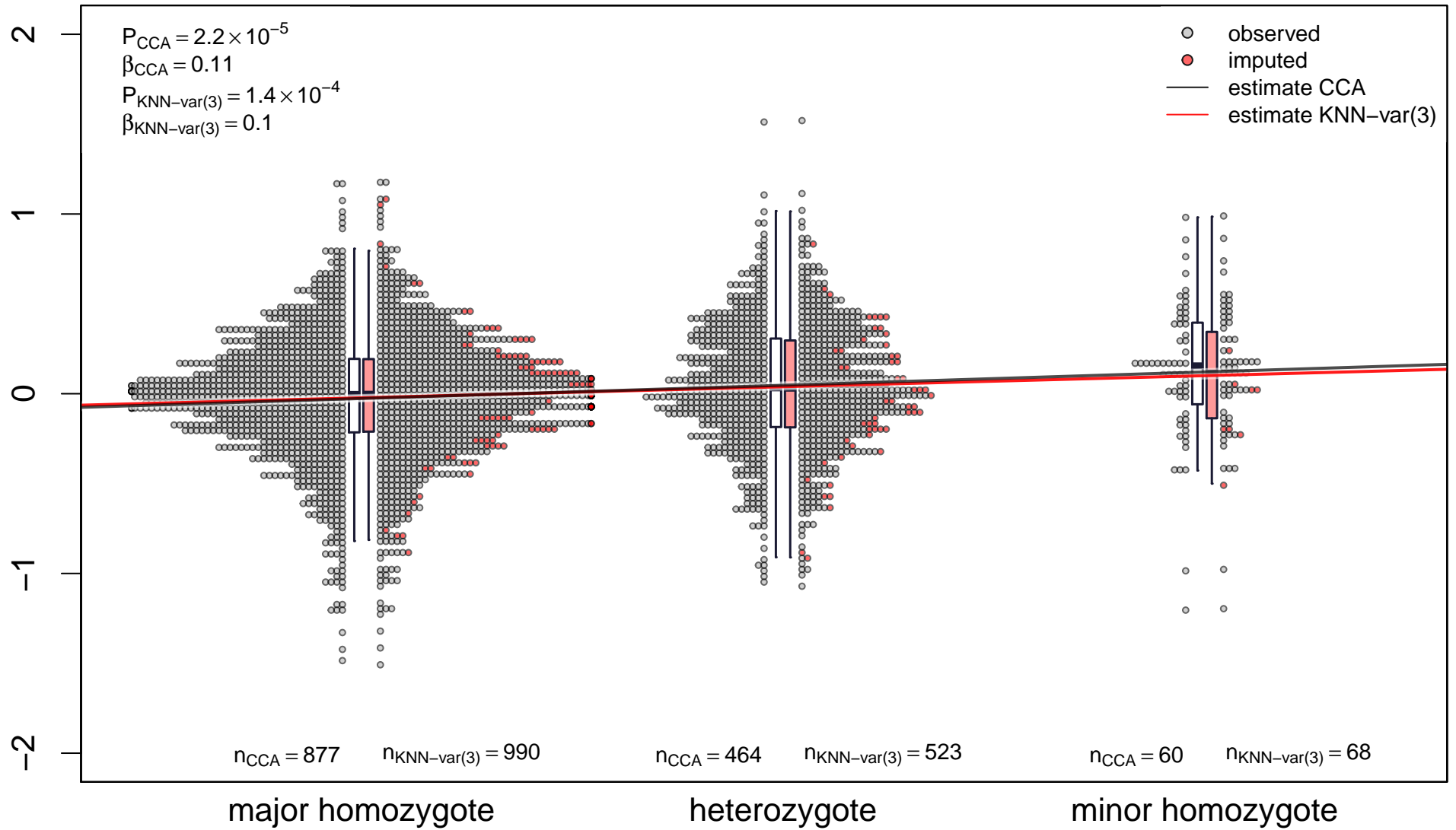


# KNN-var(20)



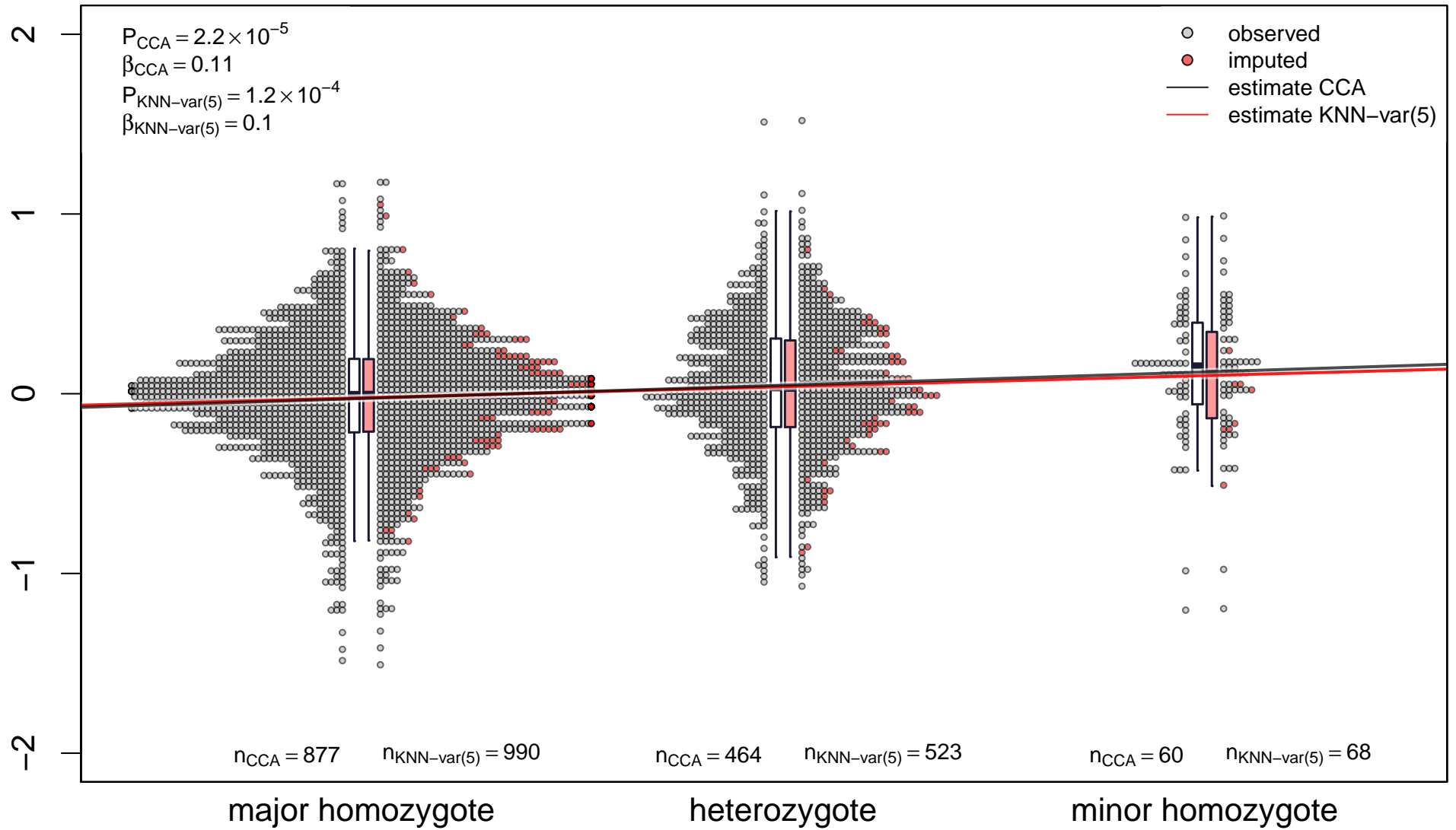
# KNN-var(3)

Model residuals of 1-stearoylglycerophosphoethanolamine



# KNN-var(5)

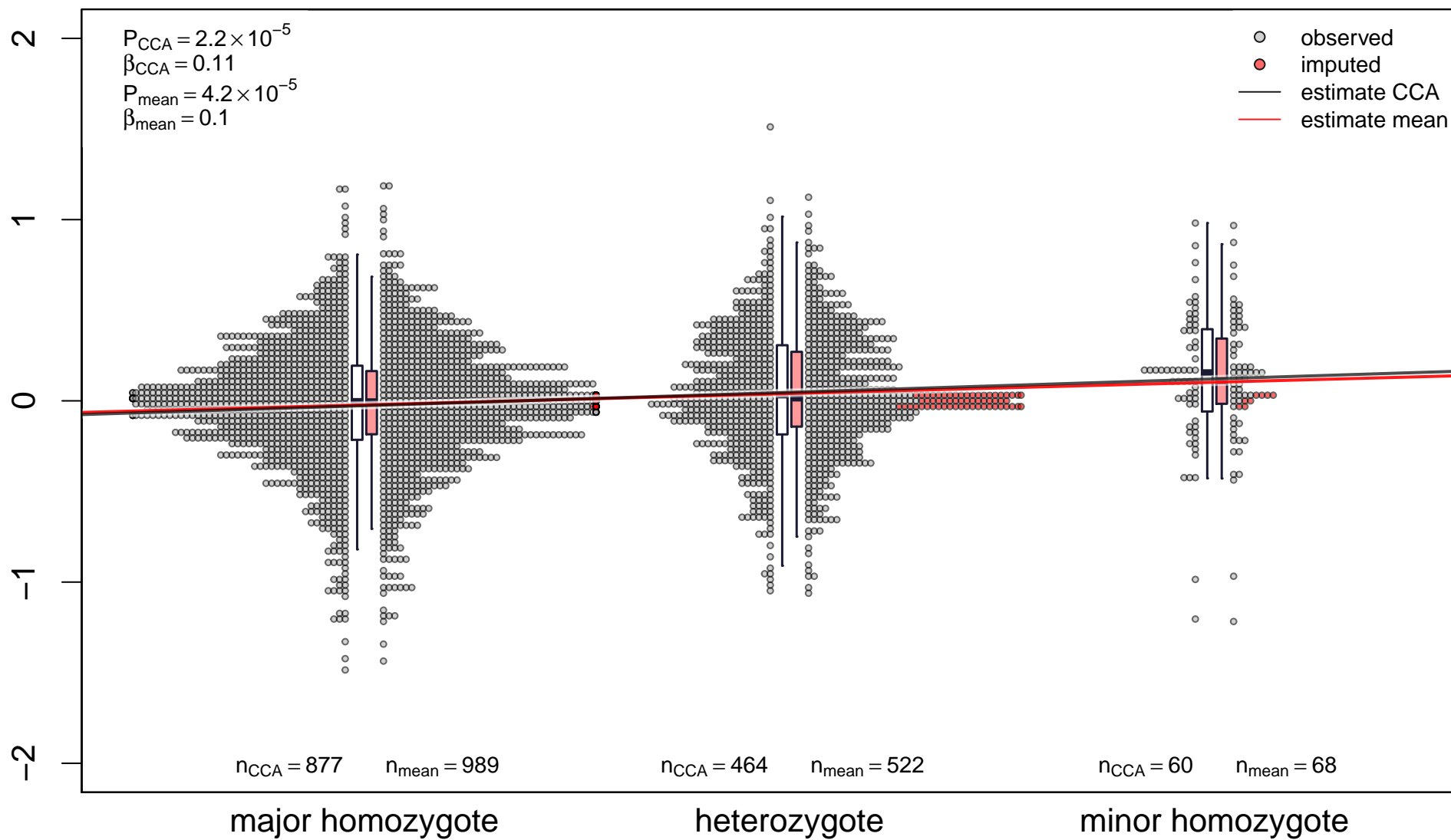
Model residuals of 1-stearoylglycerophosphoethanolamine



Genotype of SNP rs588136 (LIPC (2 separate loci))

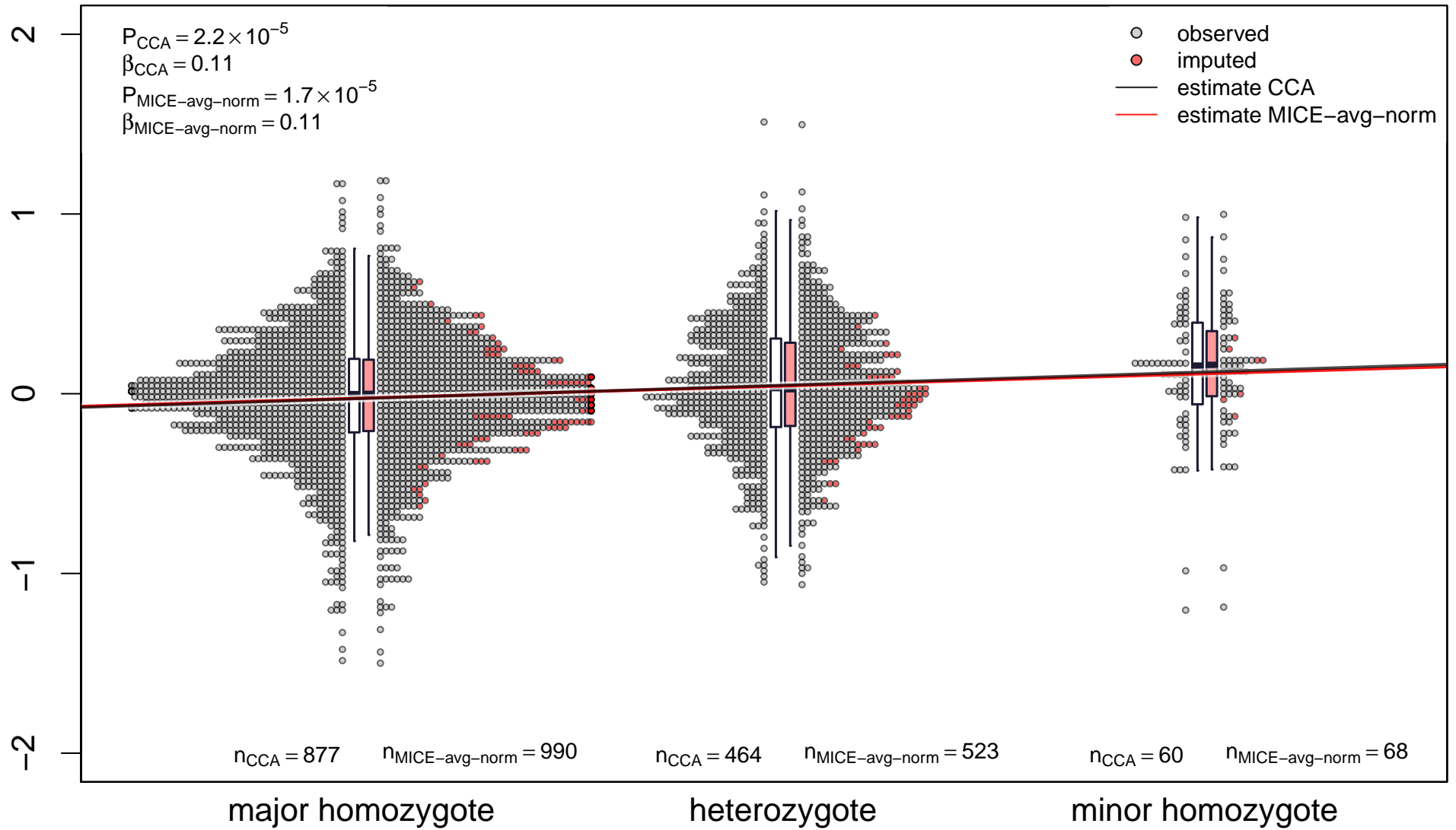
# mean

Model residuals of 1-stearoylglycerophosphoethanolamine



# MICE-avg-norm

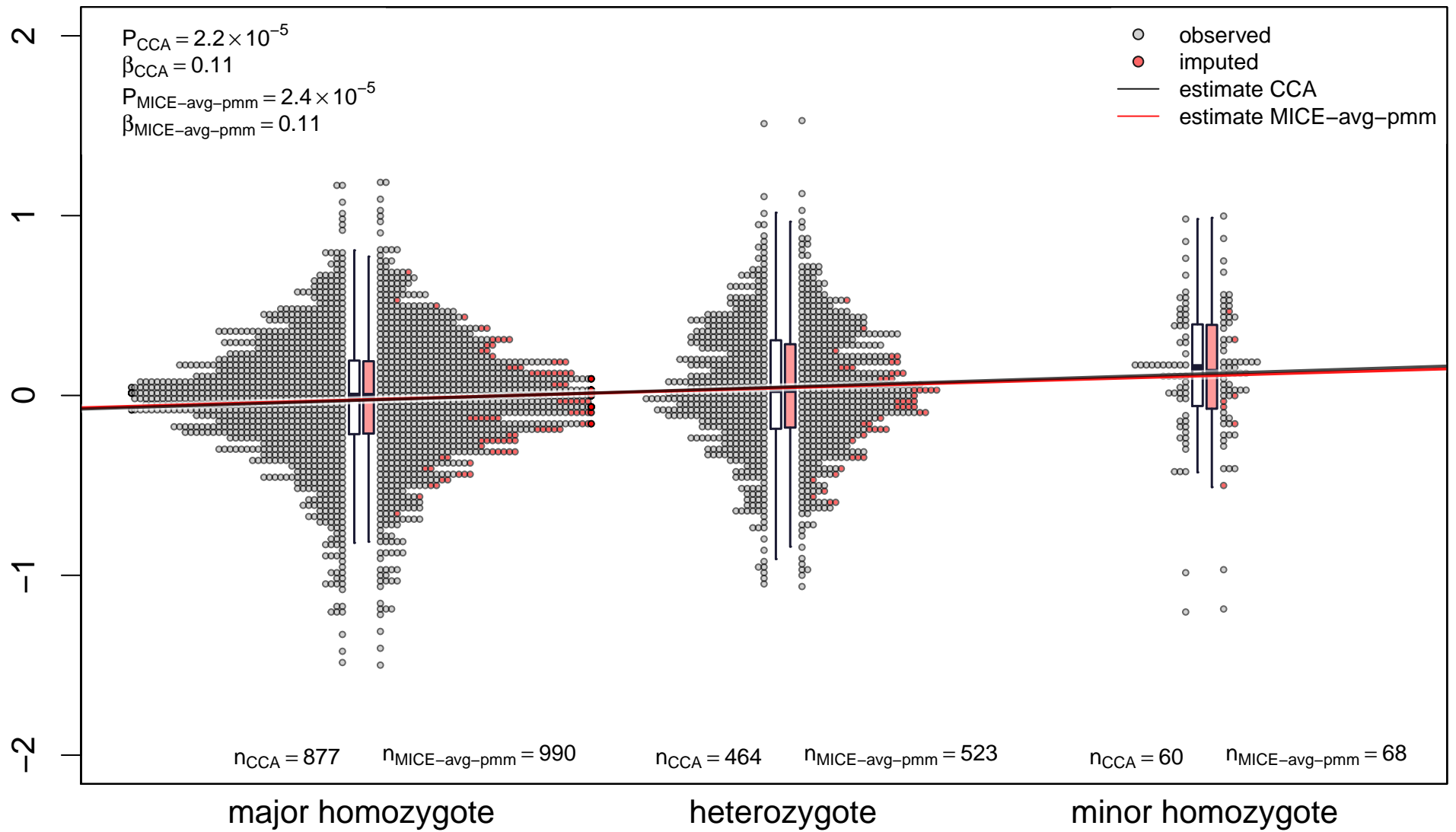
Model residuals of 1-stearoylglycerophosphoethanolamine



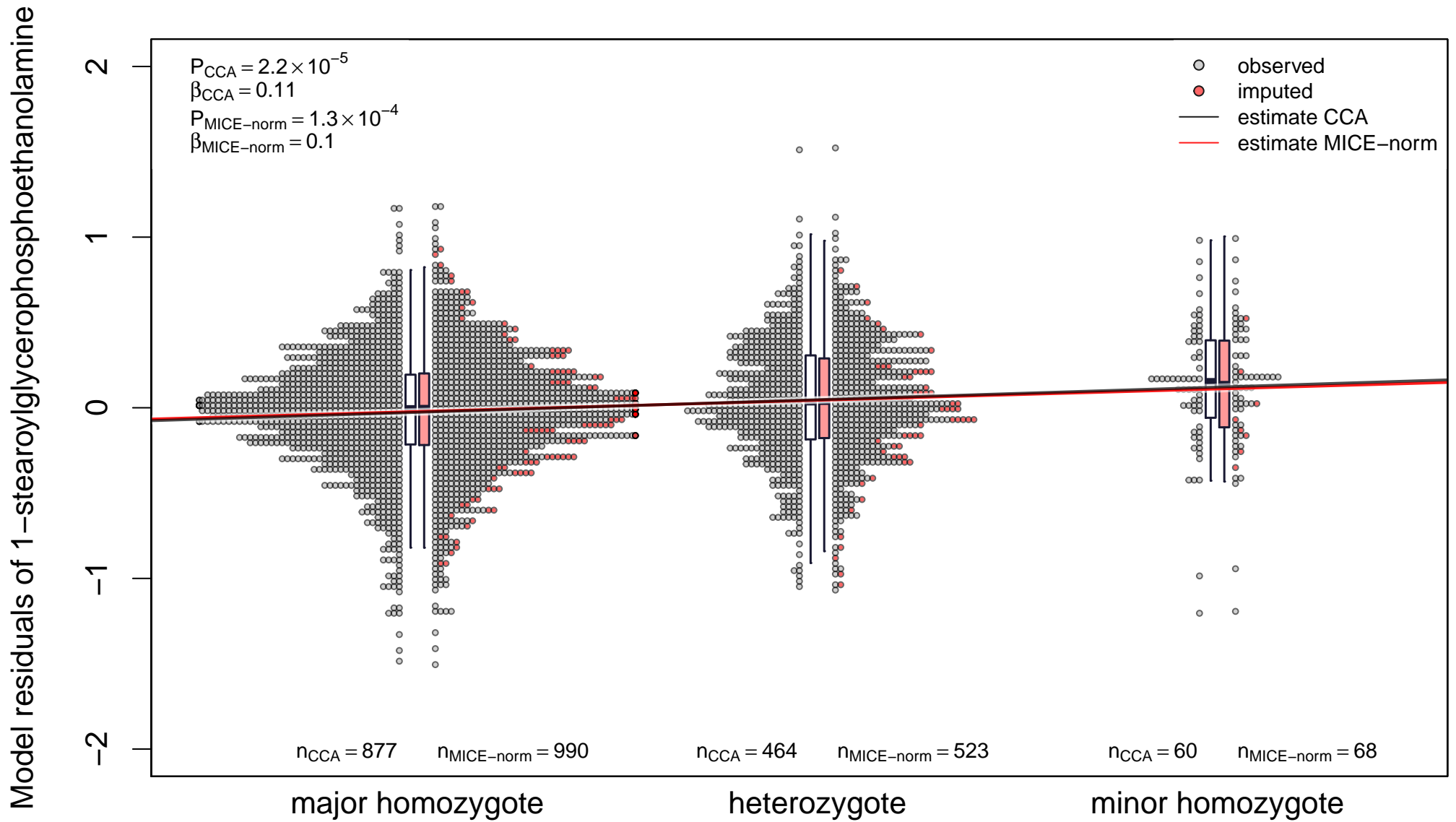
Genotype of SNP rs588136 (LIPC (2 separate loci))

# MICE-avg-pmm

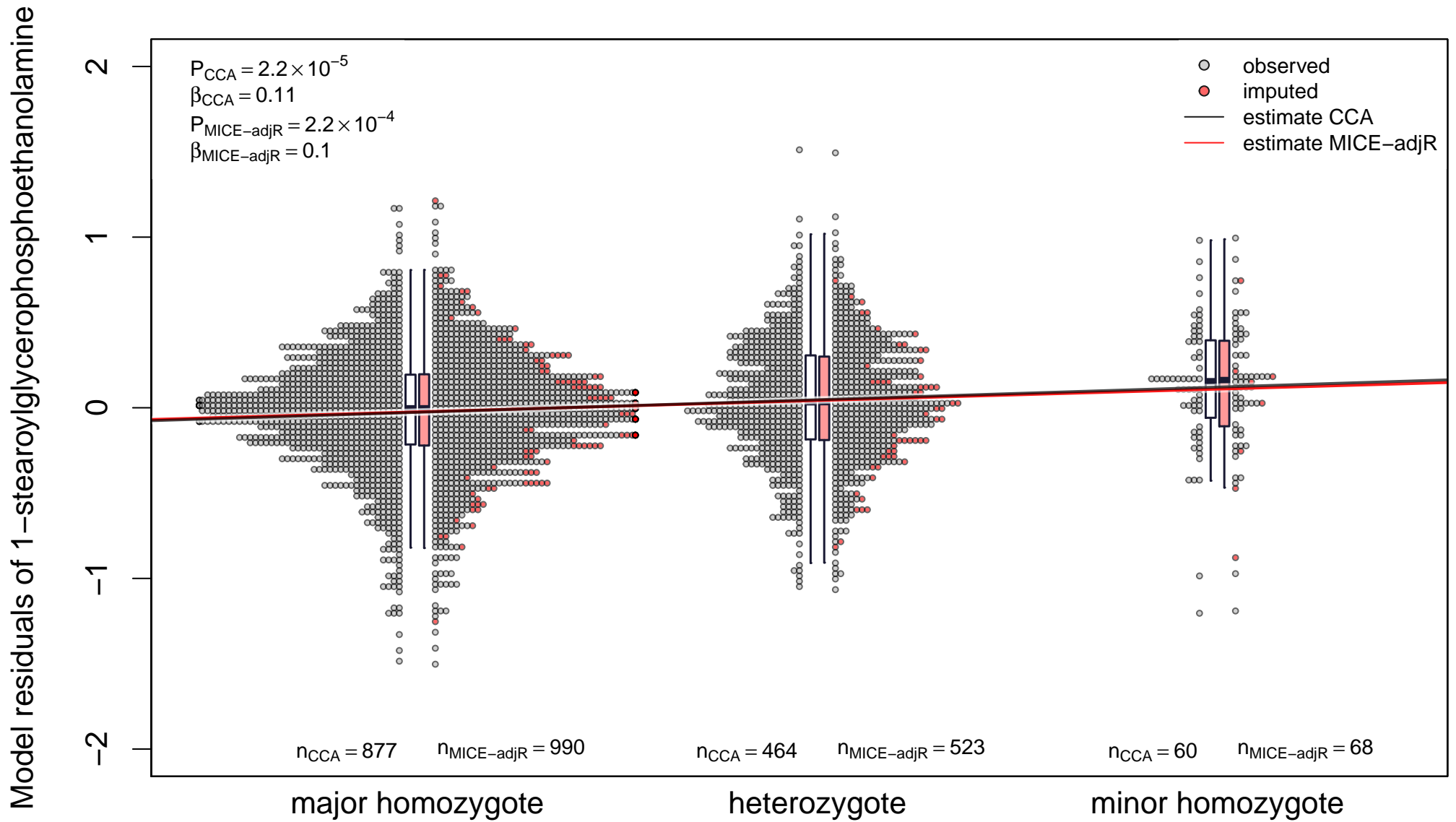
Model residuals of 1-stearoylglycerophosphoethanolamine



# MICE-norm



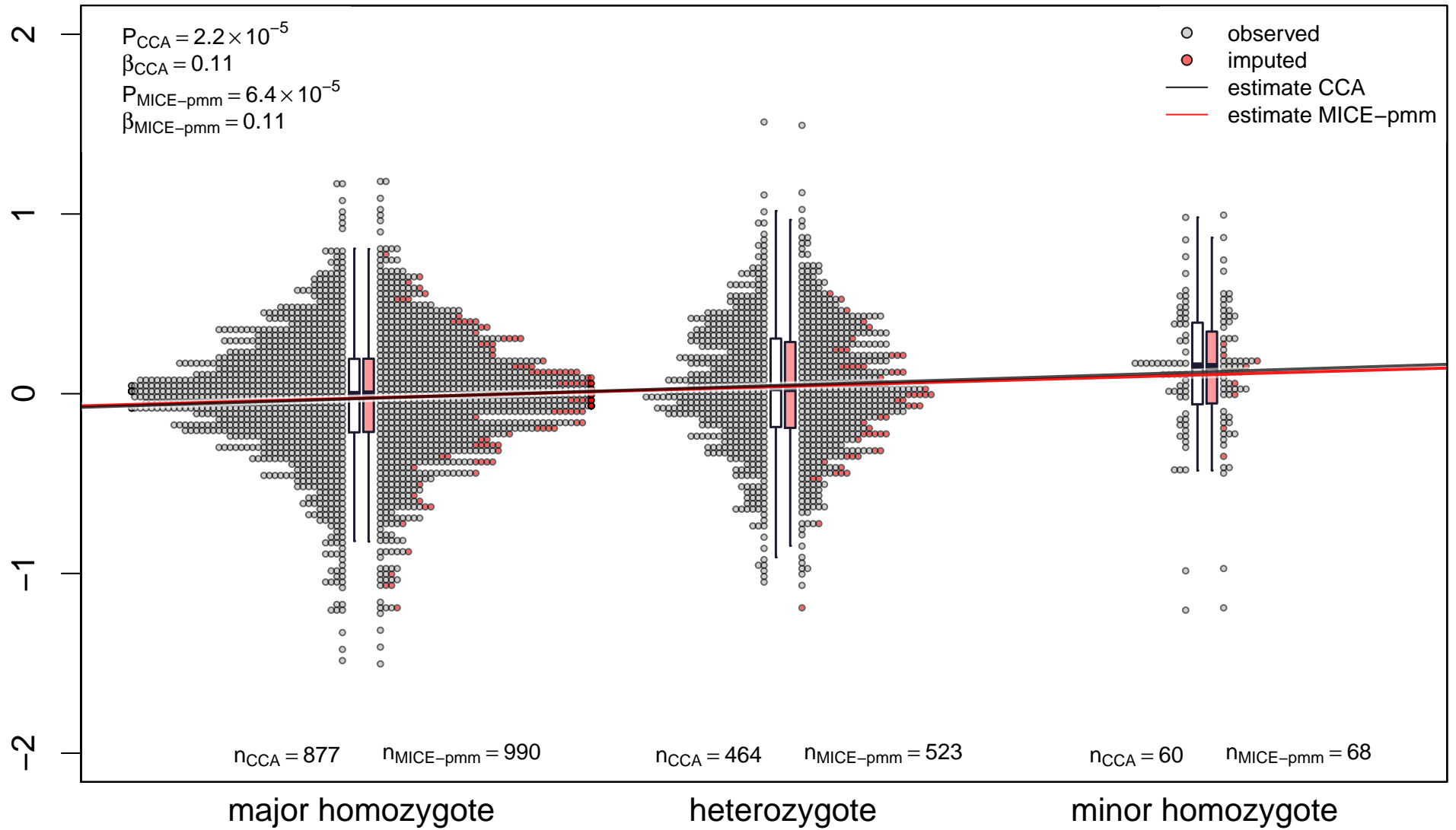
# MICE-adjR





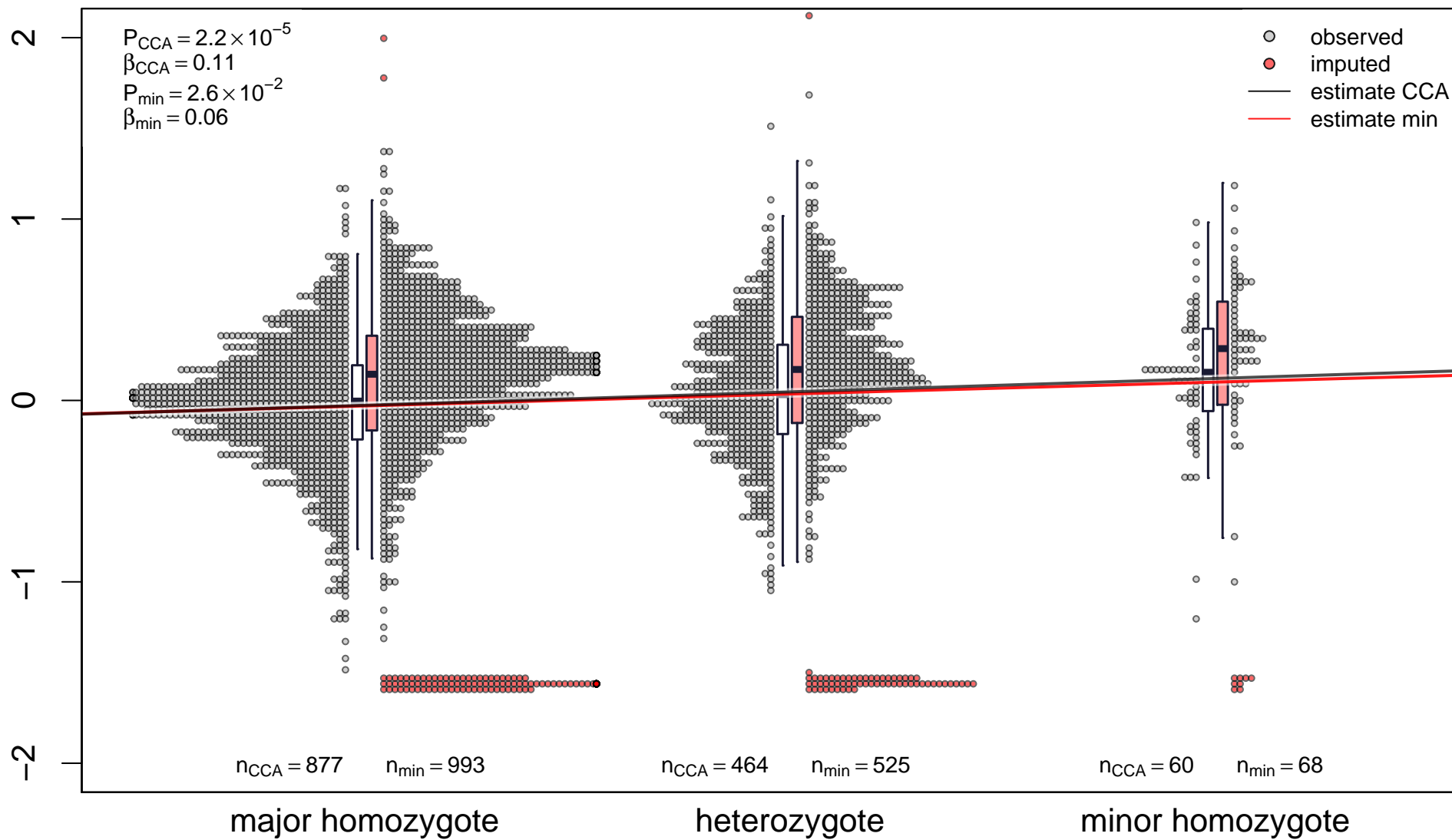
# MICE-pmm

Model residuals of 1-stearoylglycerophosphoethanolamine

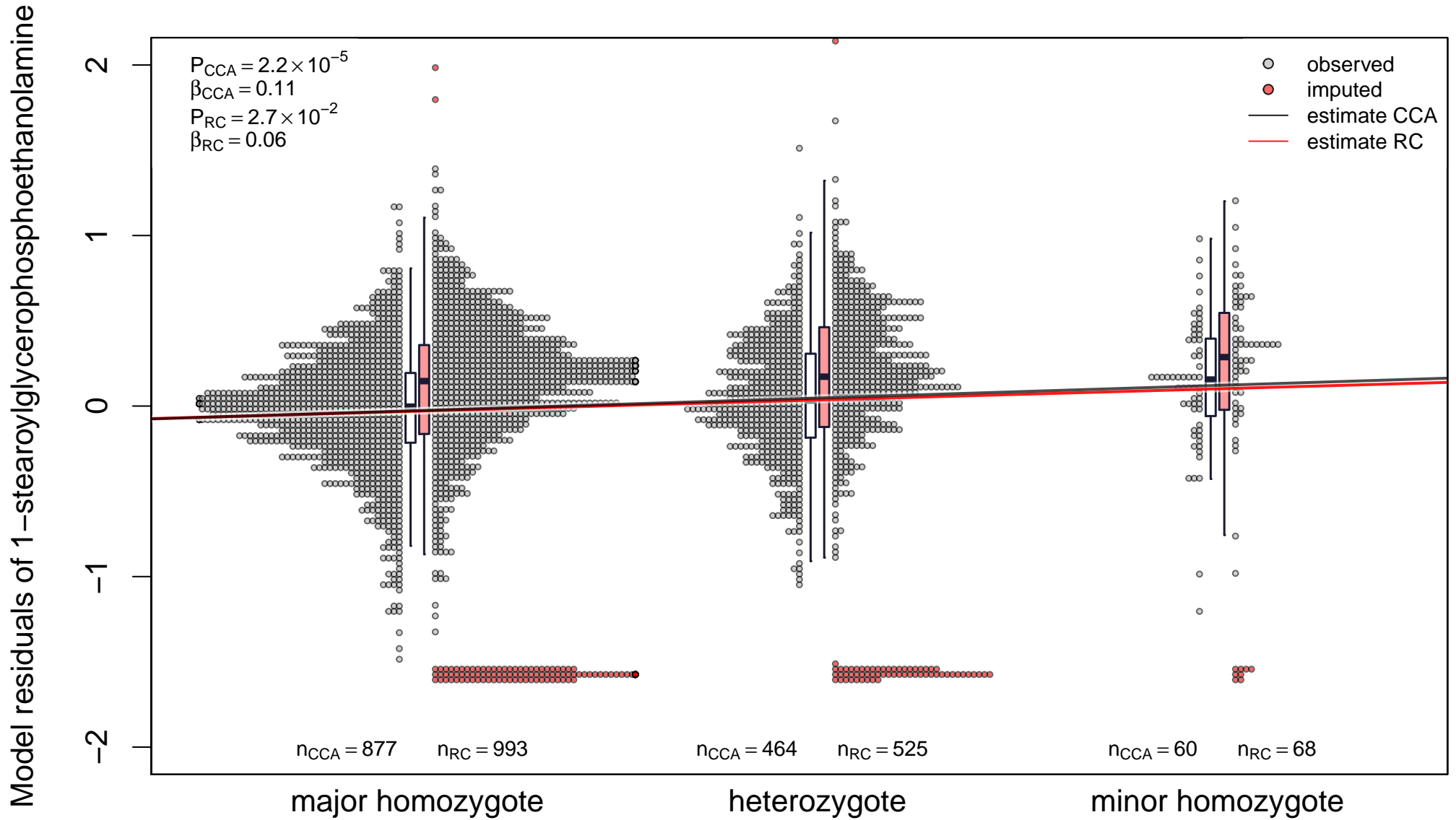


Model residuals of 1-stearoylglycerophosphoethanolamine

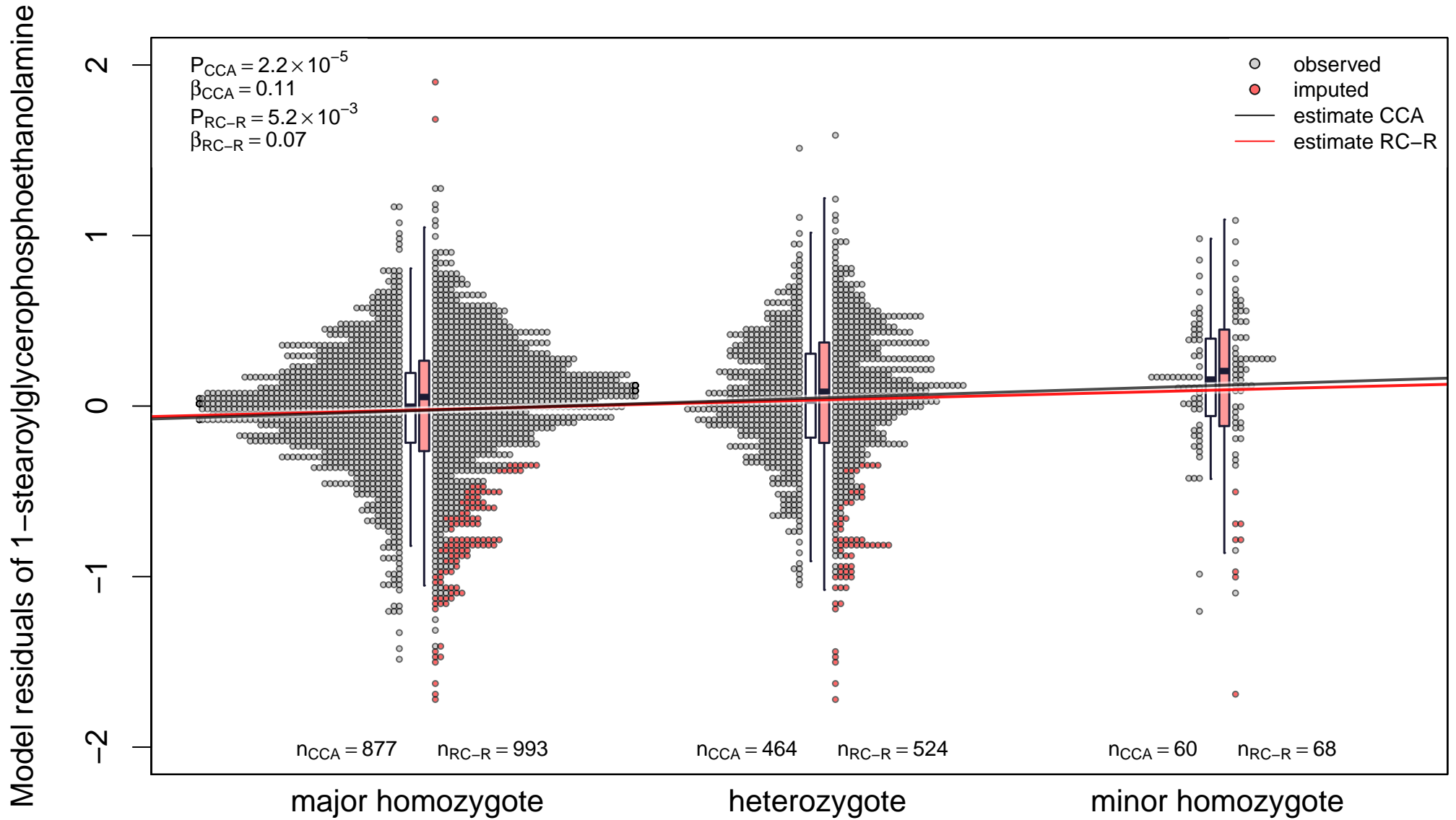
min



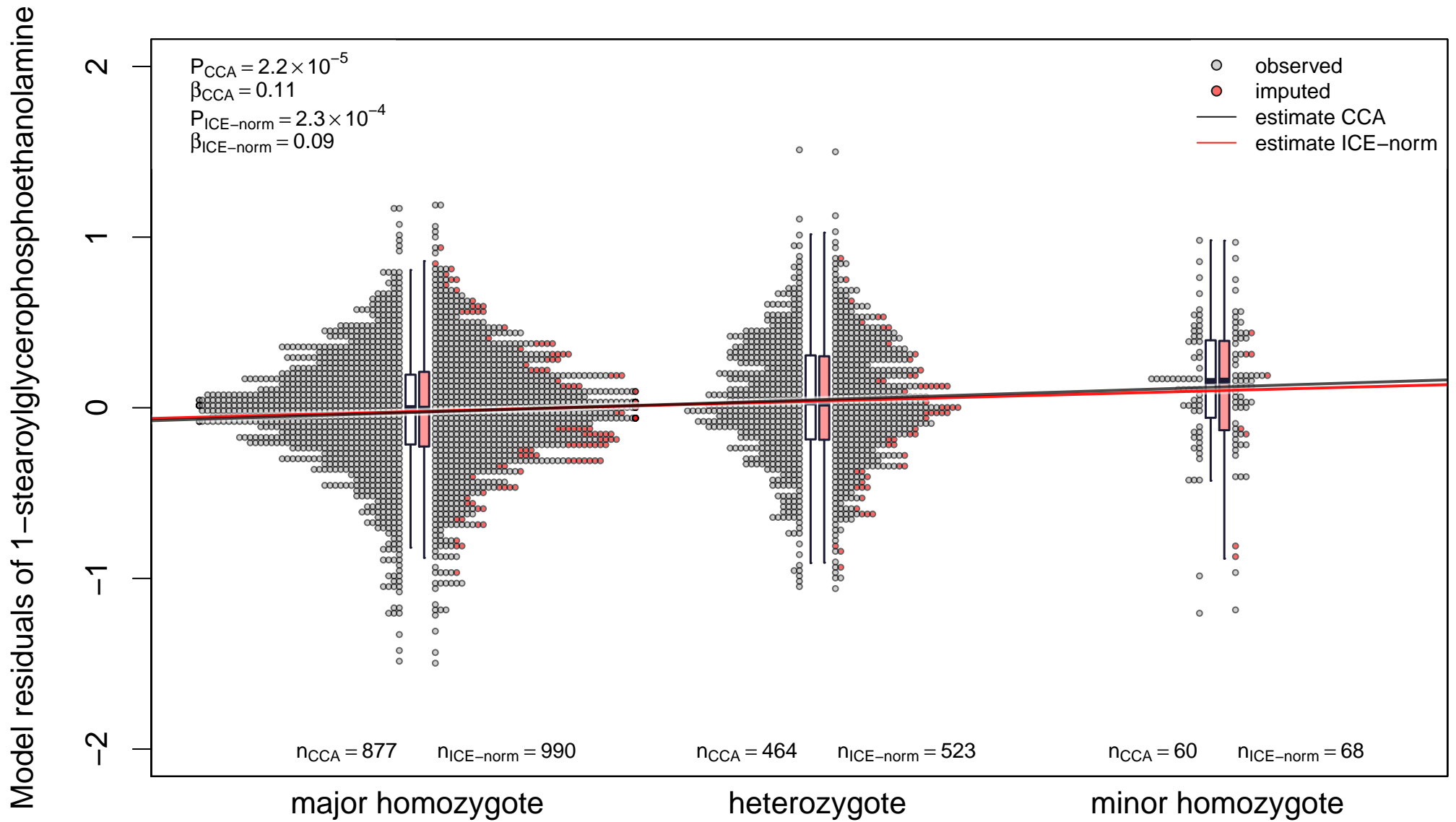
# RC



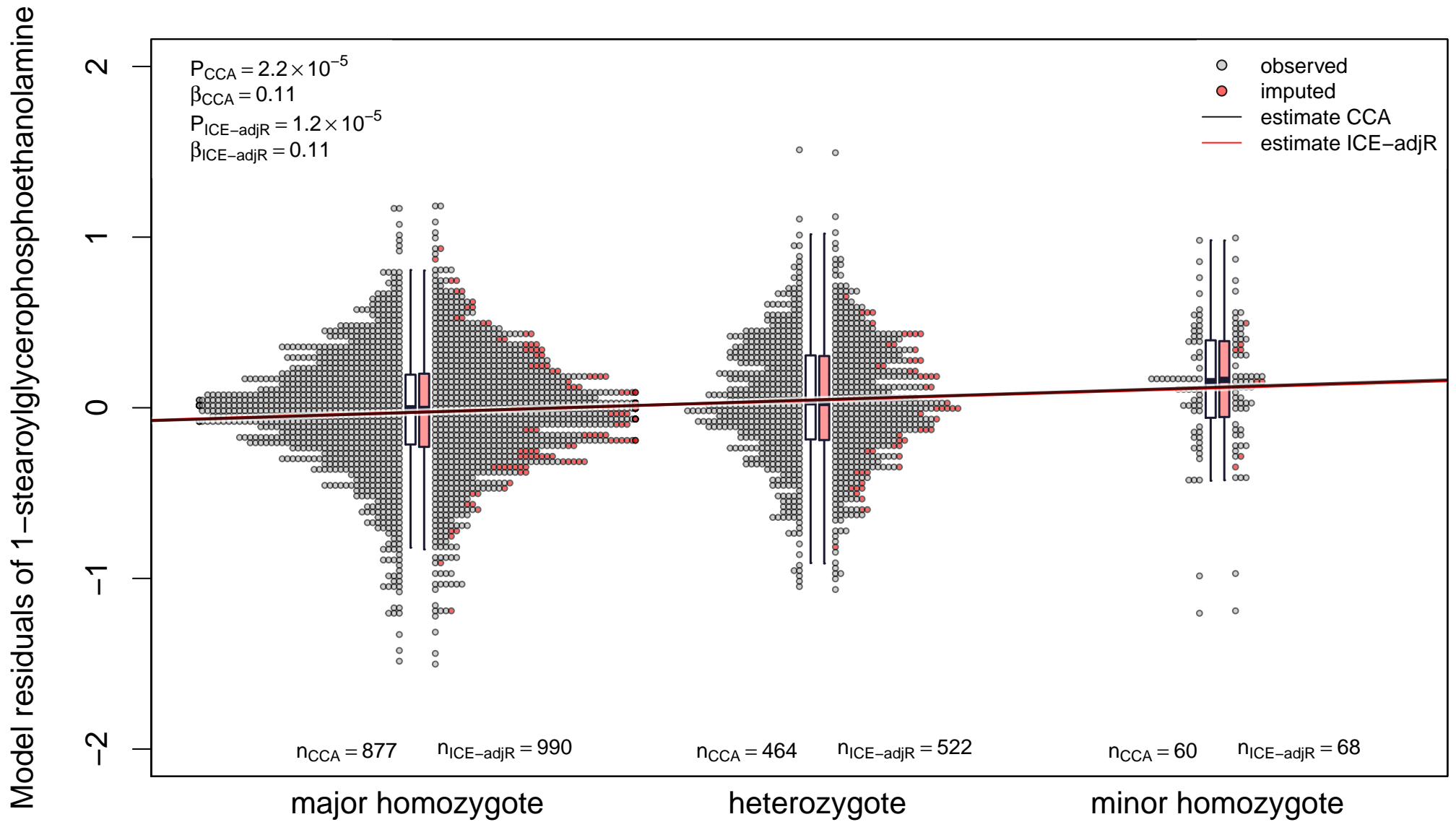
# RC-R



# ICE-norm



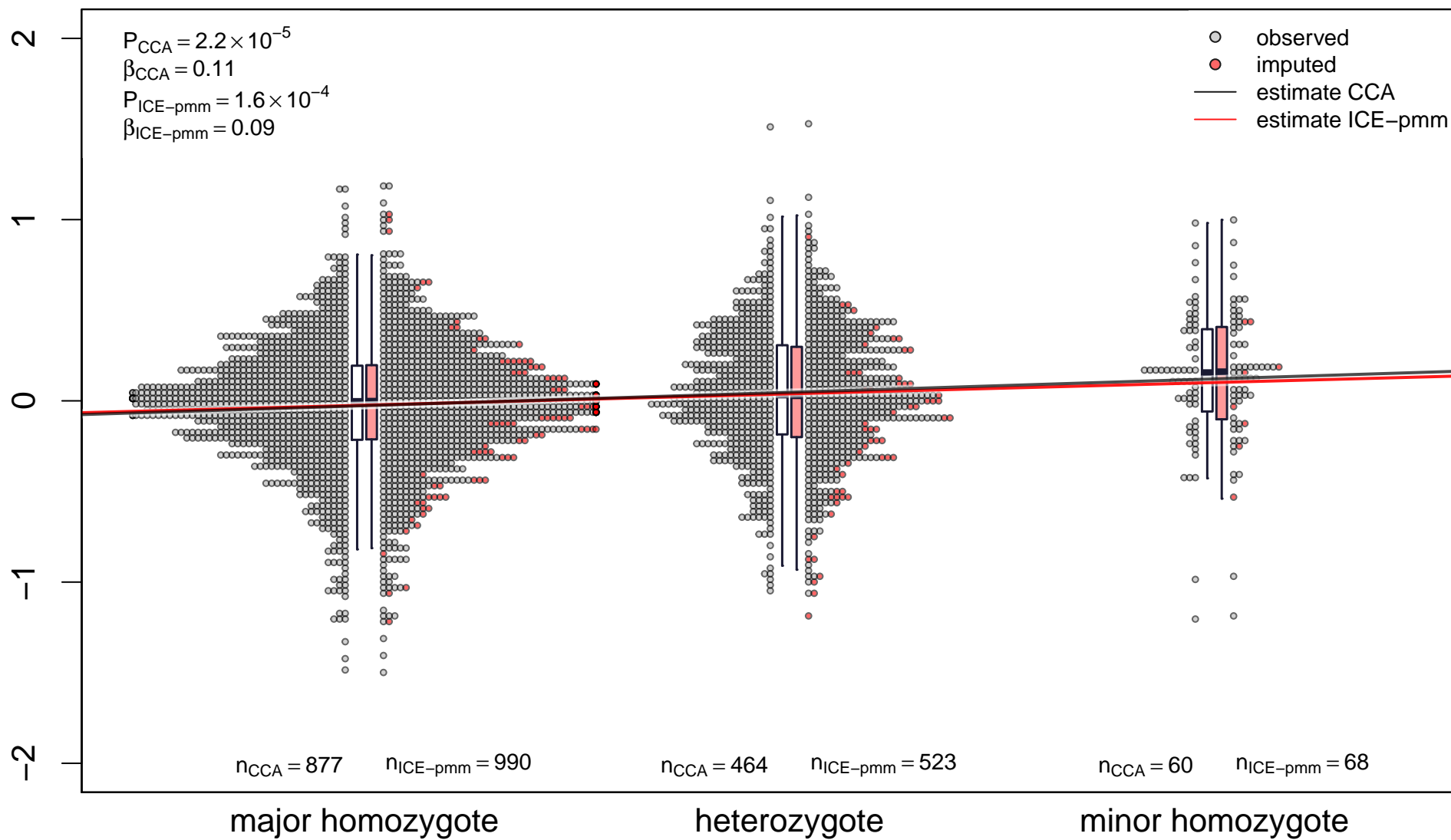
# ICE-adjR



Genotype of SNP rs588136 (LIPC (2 separate loci))

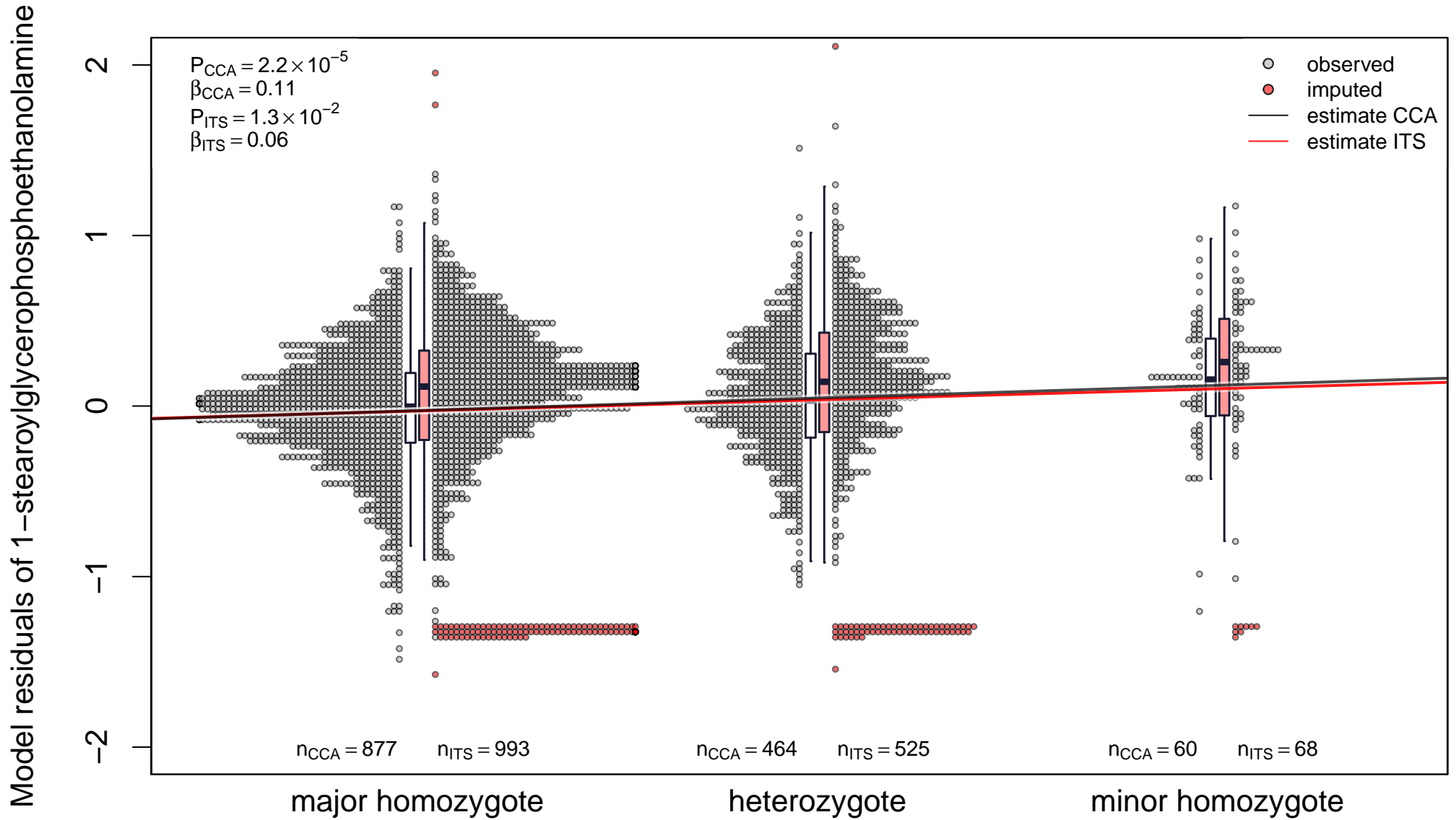
# ICE-pmm

Model residuals of 1-stearoylglycerophosphoethanolamine



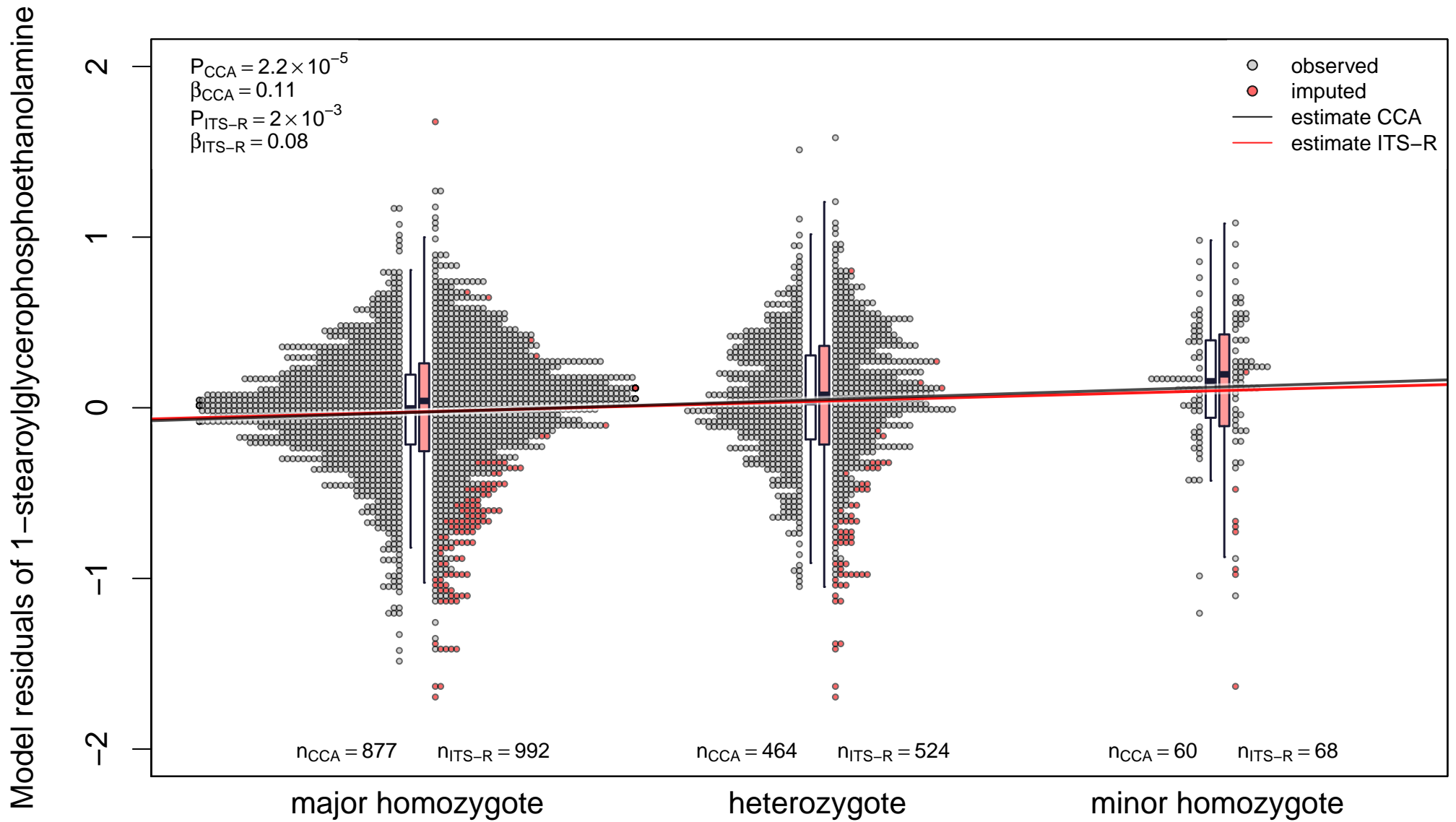
Genotype of SNP rs588136 (LIPC (2 separate loci))

# ITS



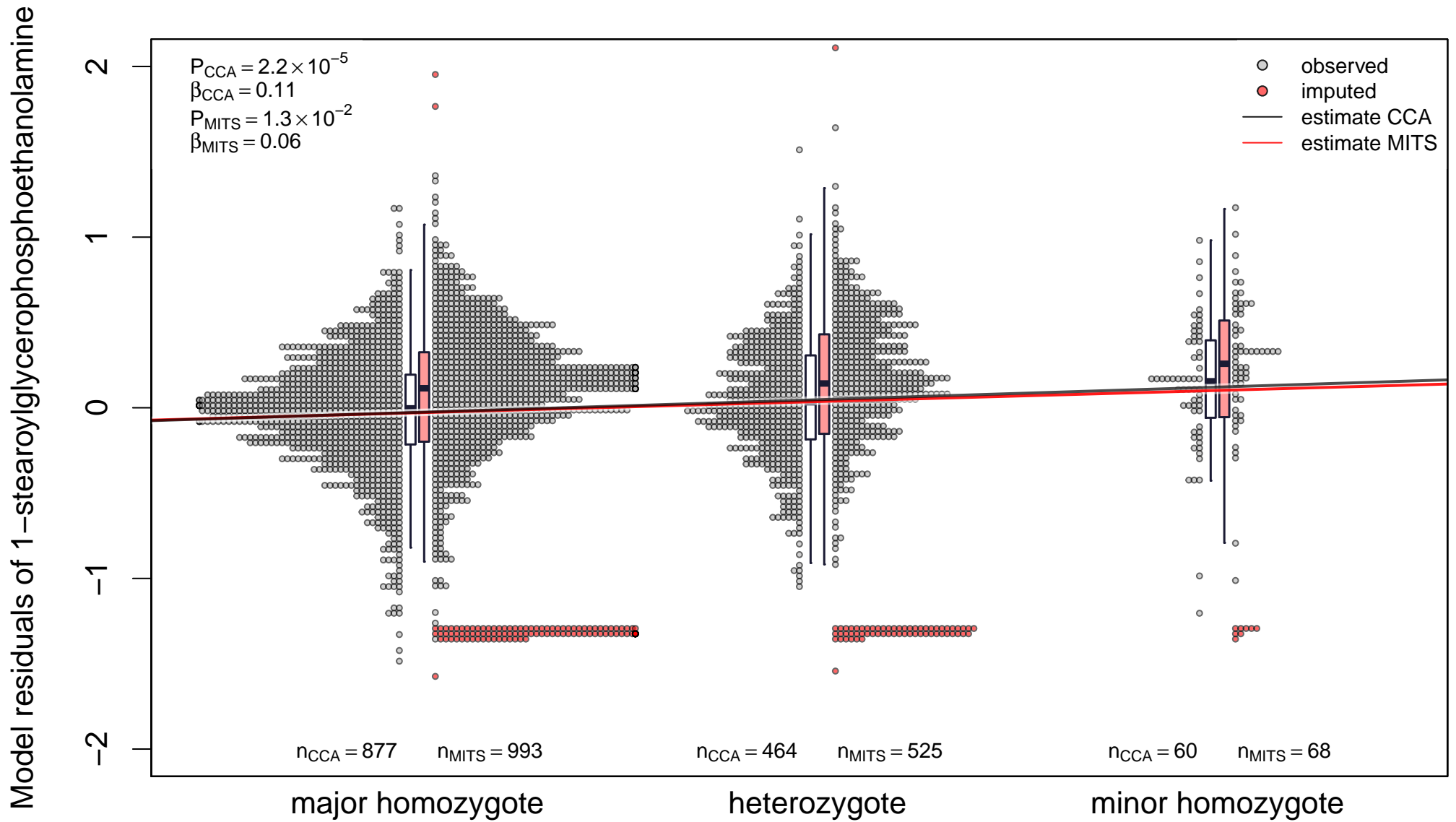


# ITS-R

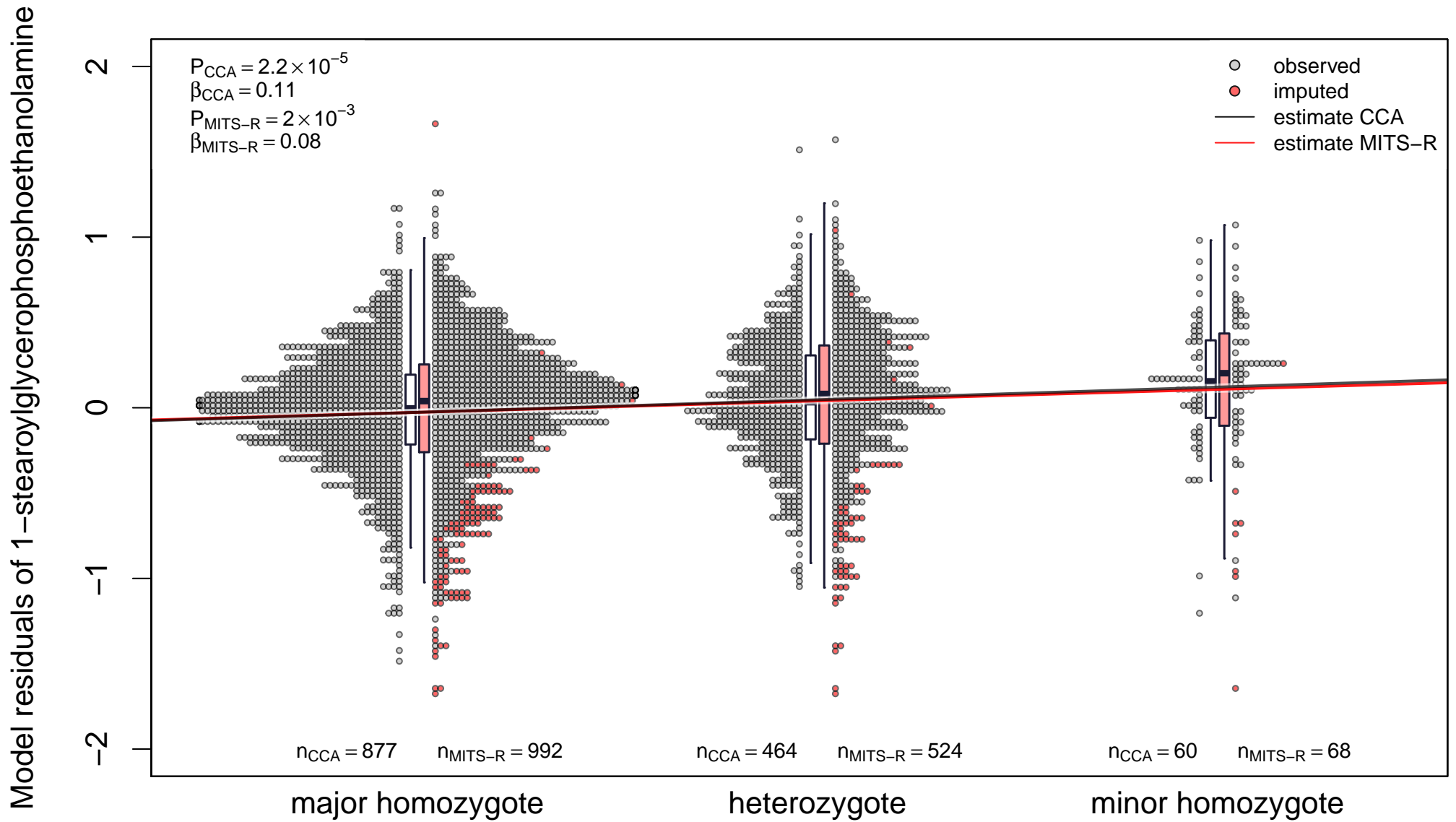


Genotype of SNP rs588136 (LIPC (2 separate loci))

# MITS

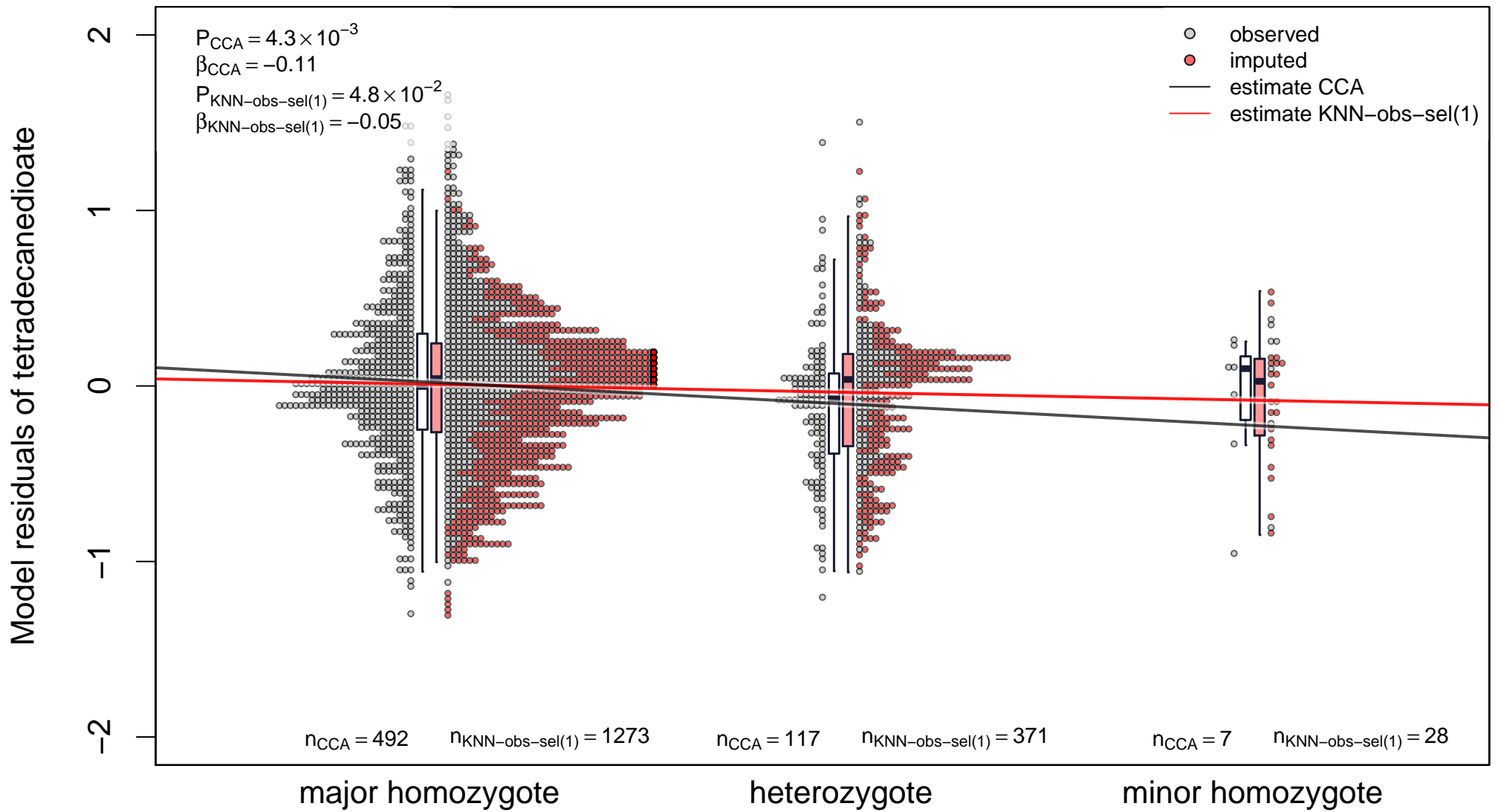


# MIT-S-R

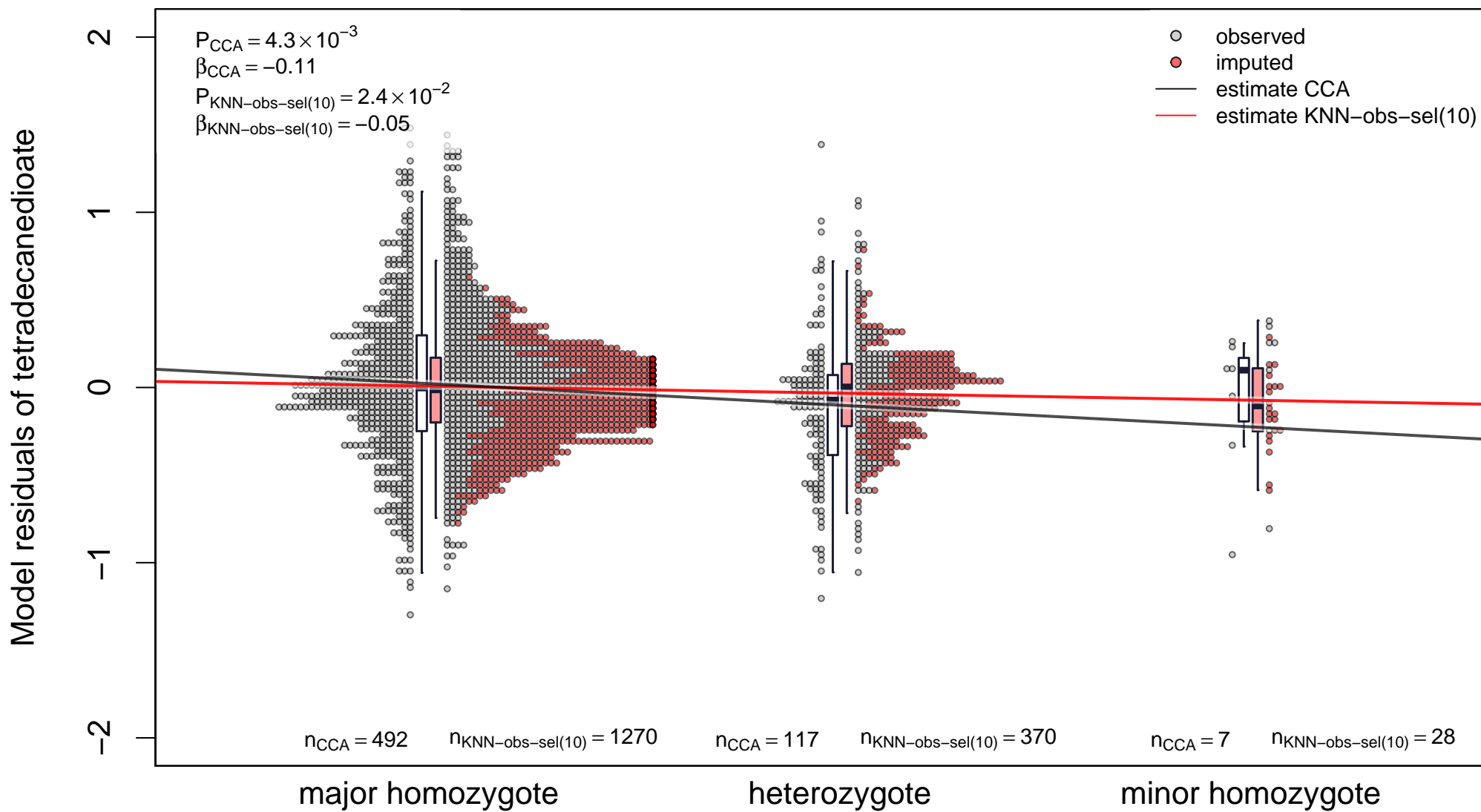


Genotype of SNP rs588136 (LIPC (2 separate loci))

# KNN-obs-sel(1)

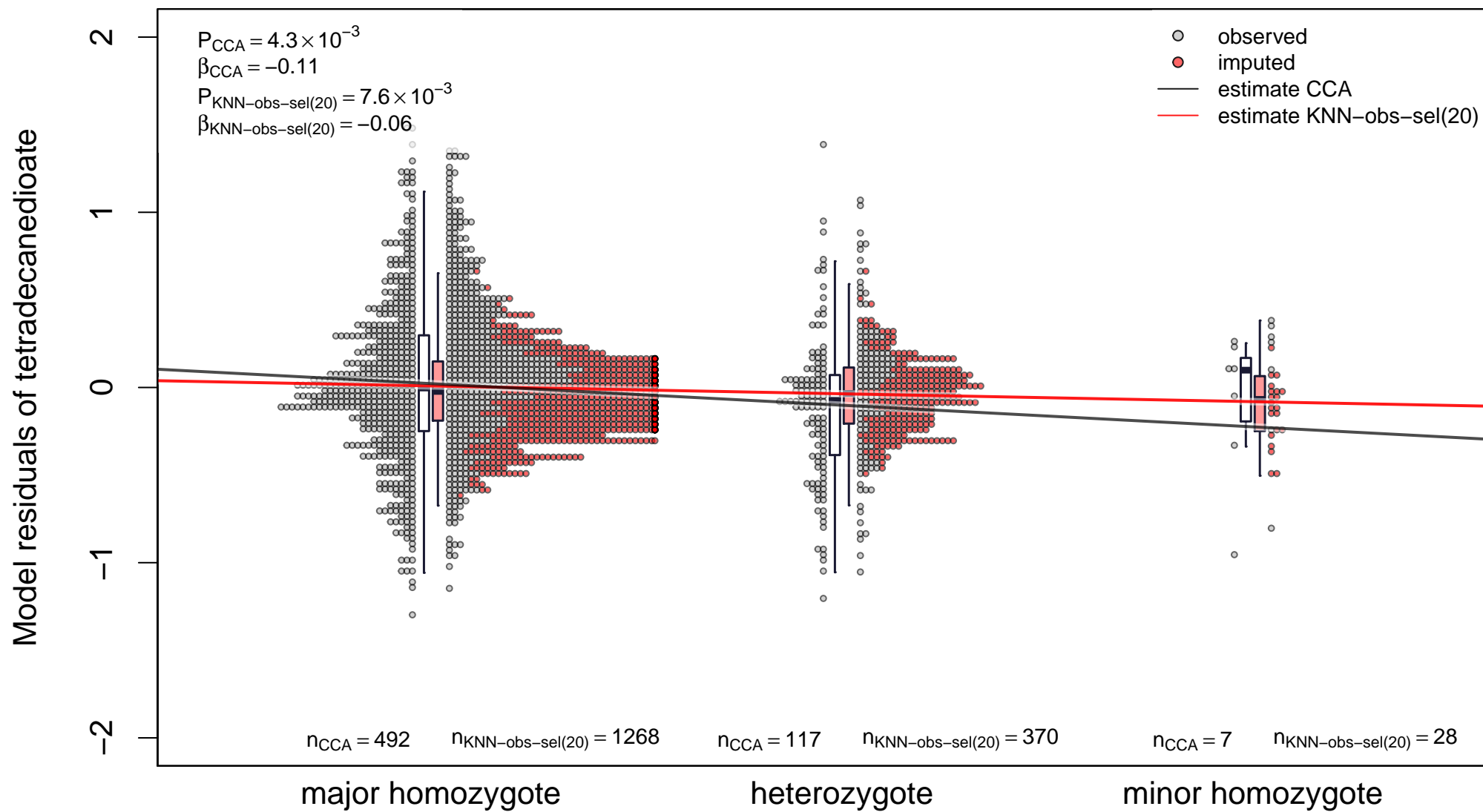


# KNN-obs-sel(10)



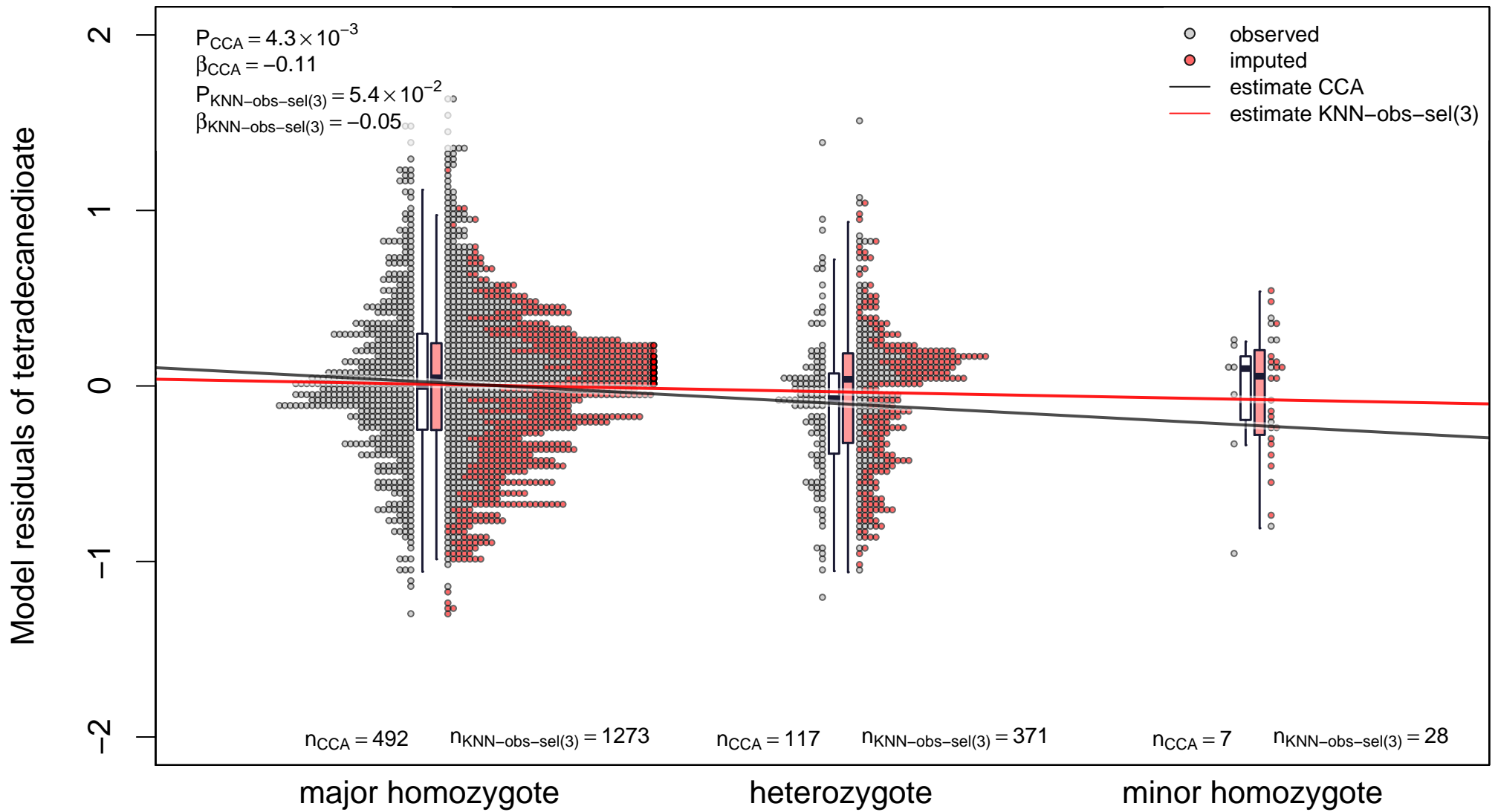
Genotype of SNP rs6663731 (CYP4A11)

# KNN-obs-sel(20)

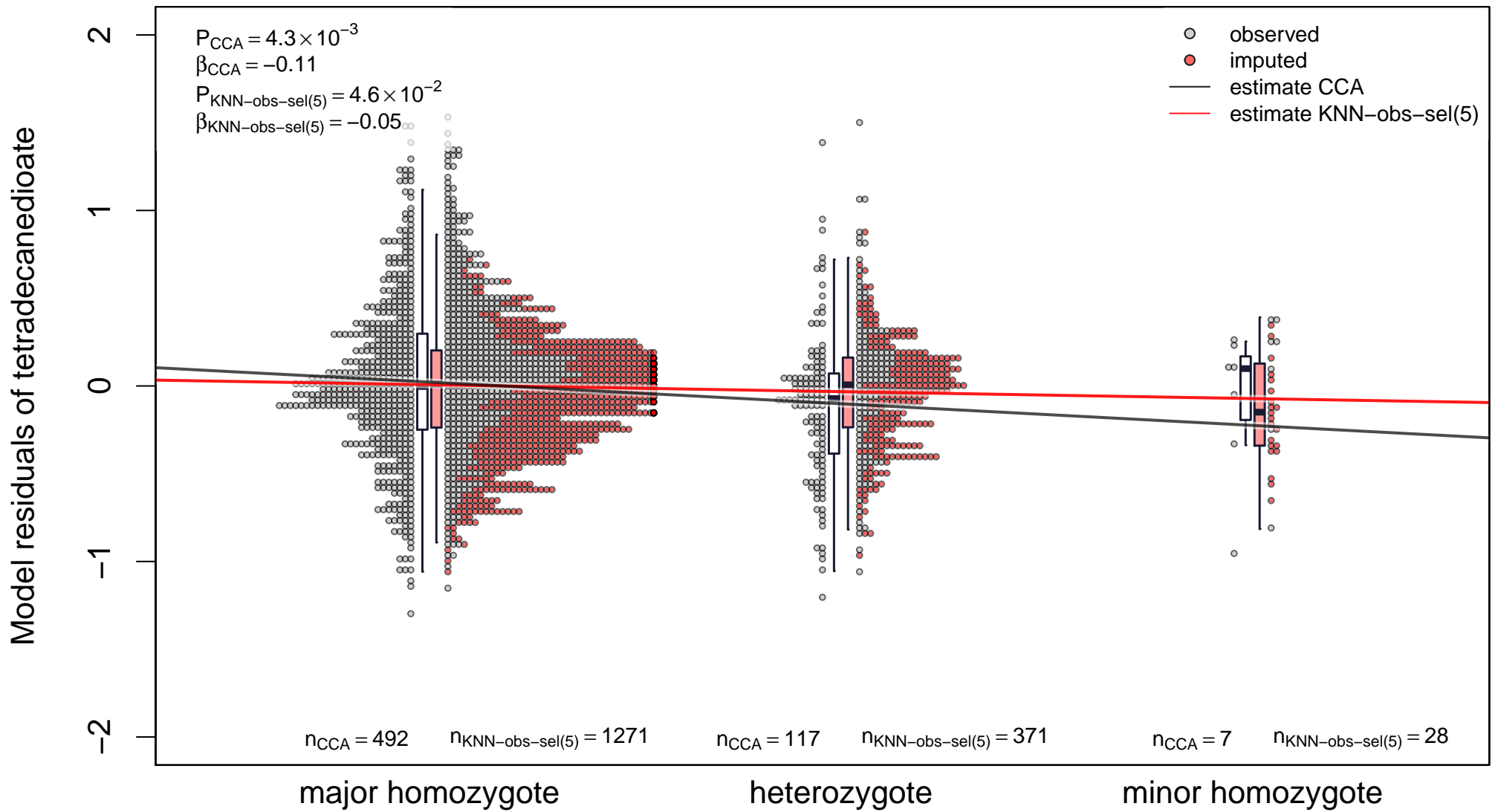


Genotype of SNP rs6663731 (CYP4A11)

# KNN-obs-sel(3)

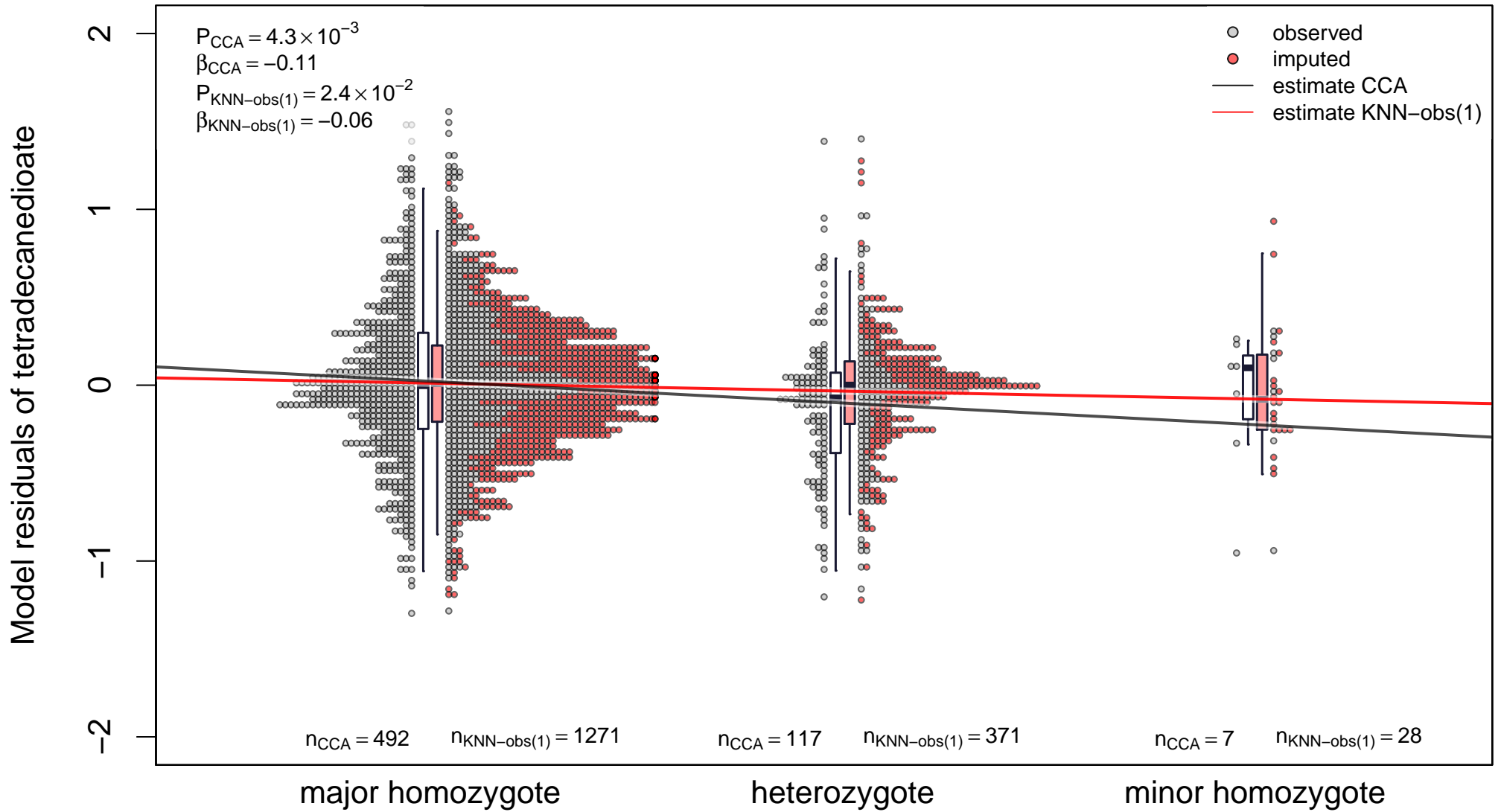


# KNN-obs-sel(5)

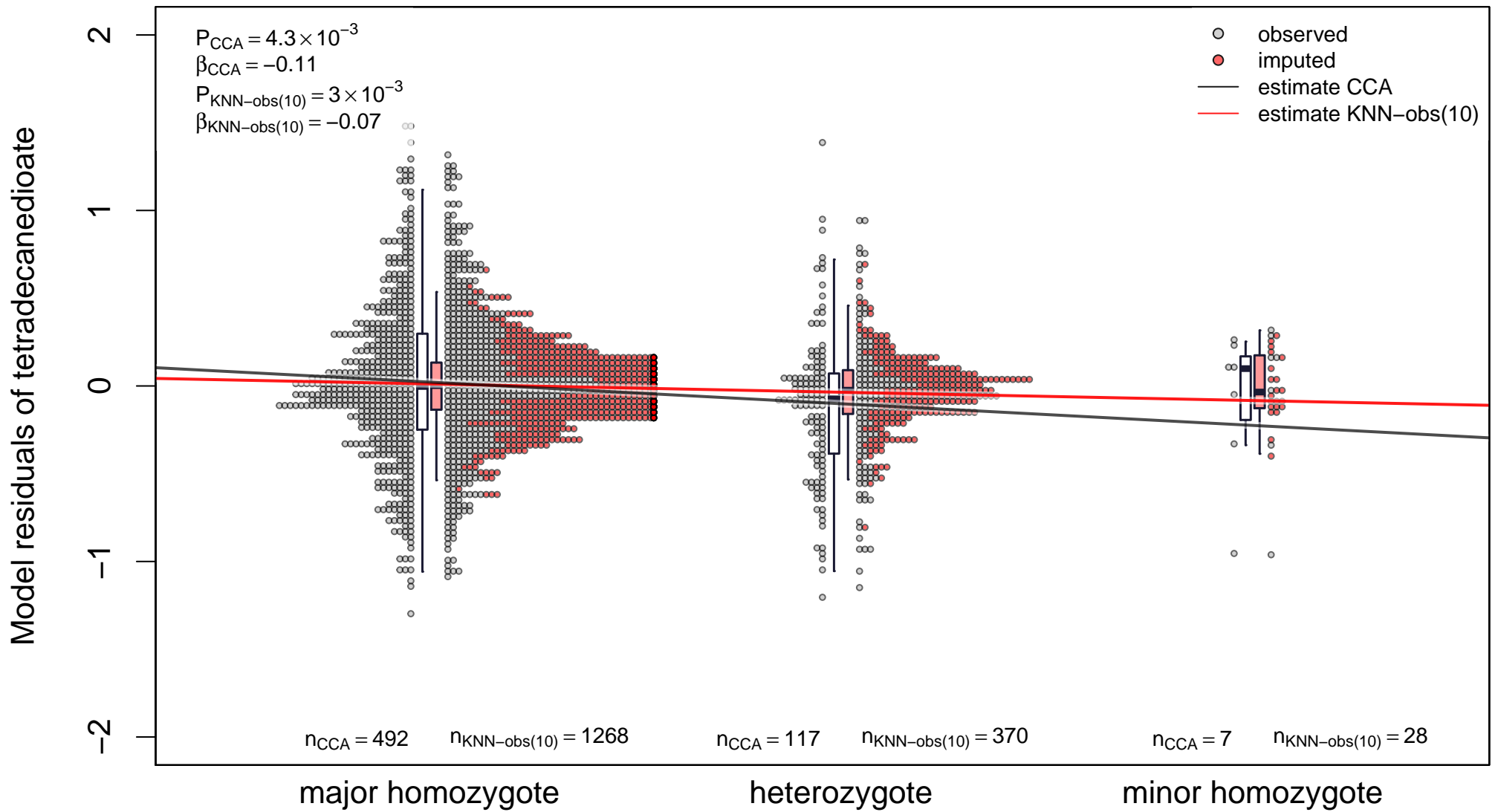




# KNN-obs(1)

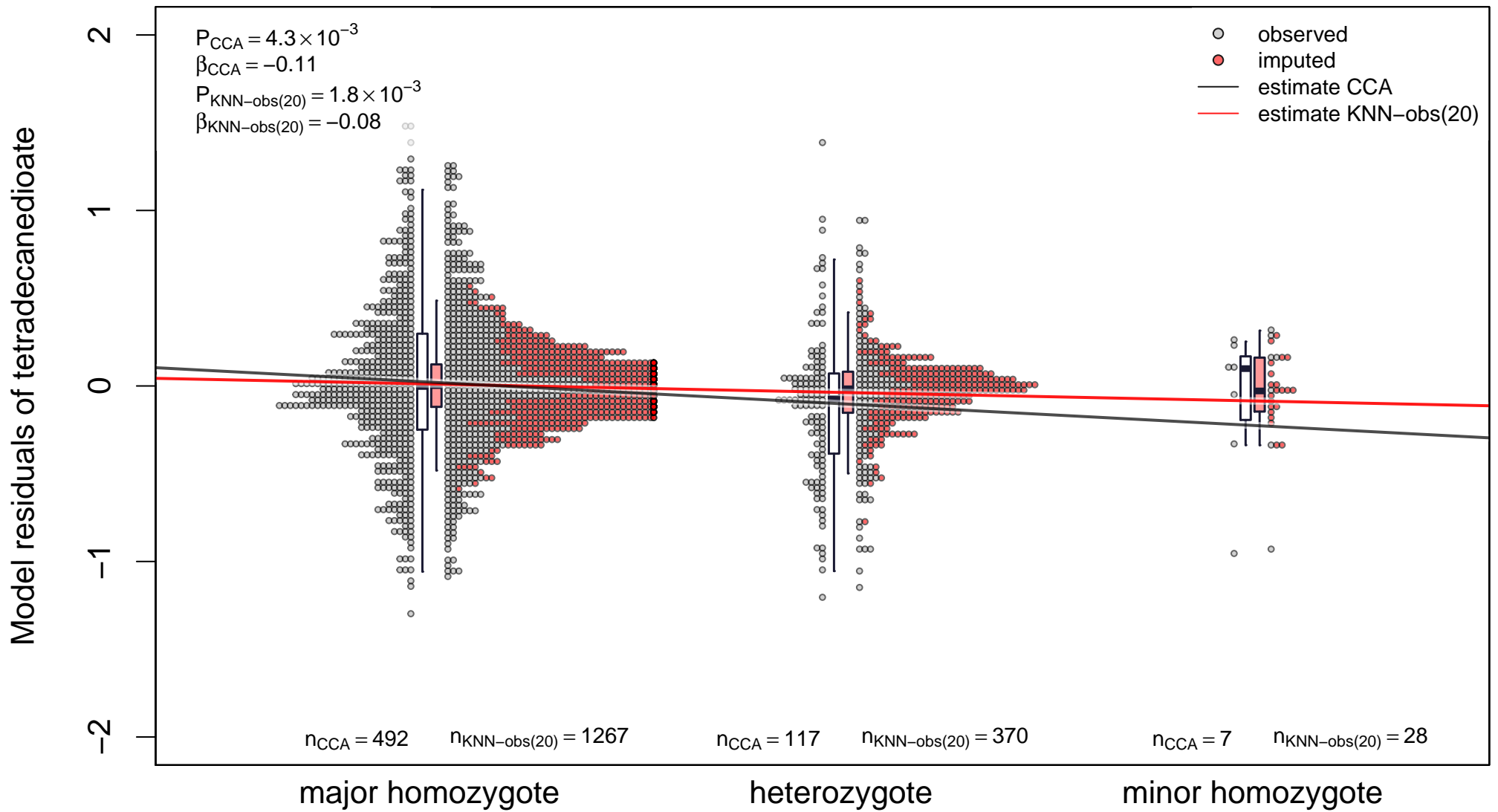


# KNN-obs(10)



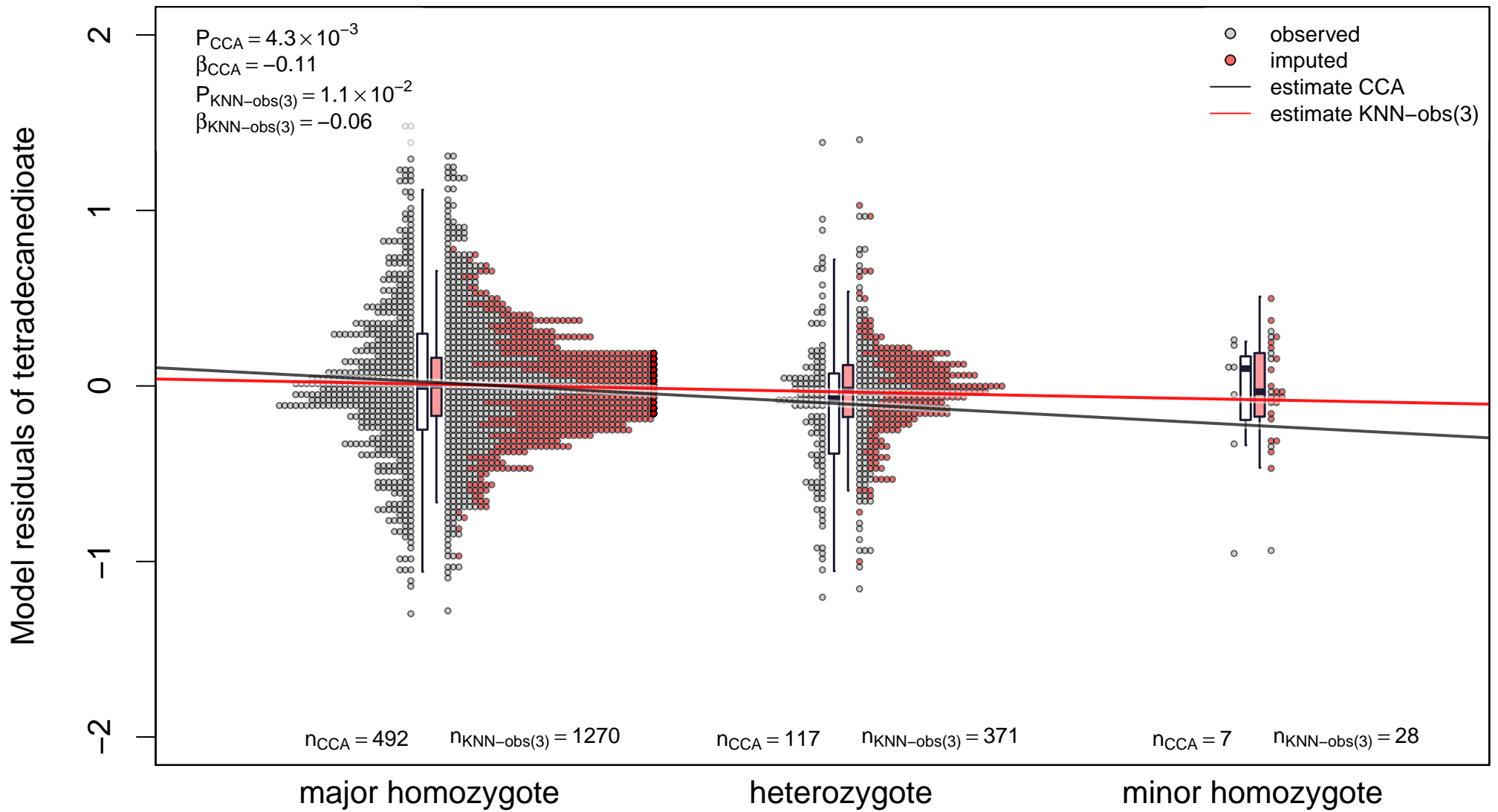
Genotype of SNP rs6663731 (CYP4A11)

# KNN-obs(20)



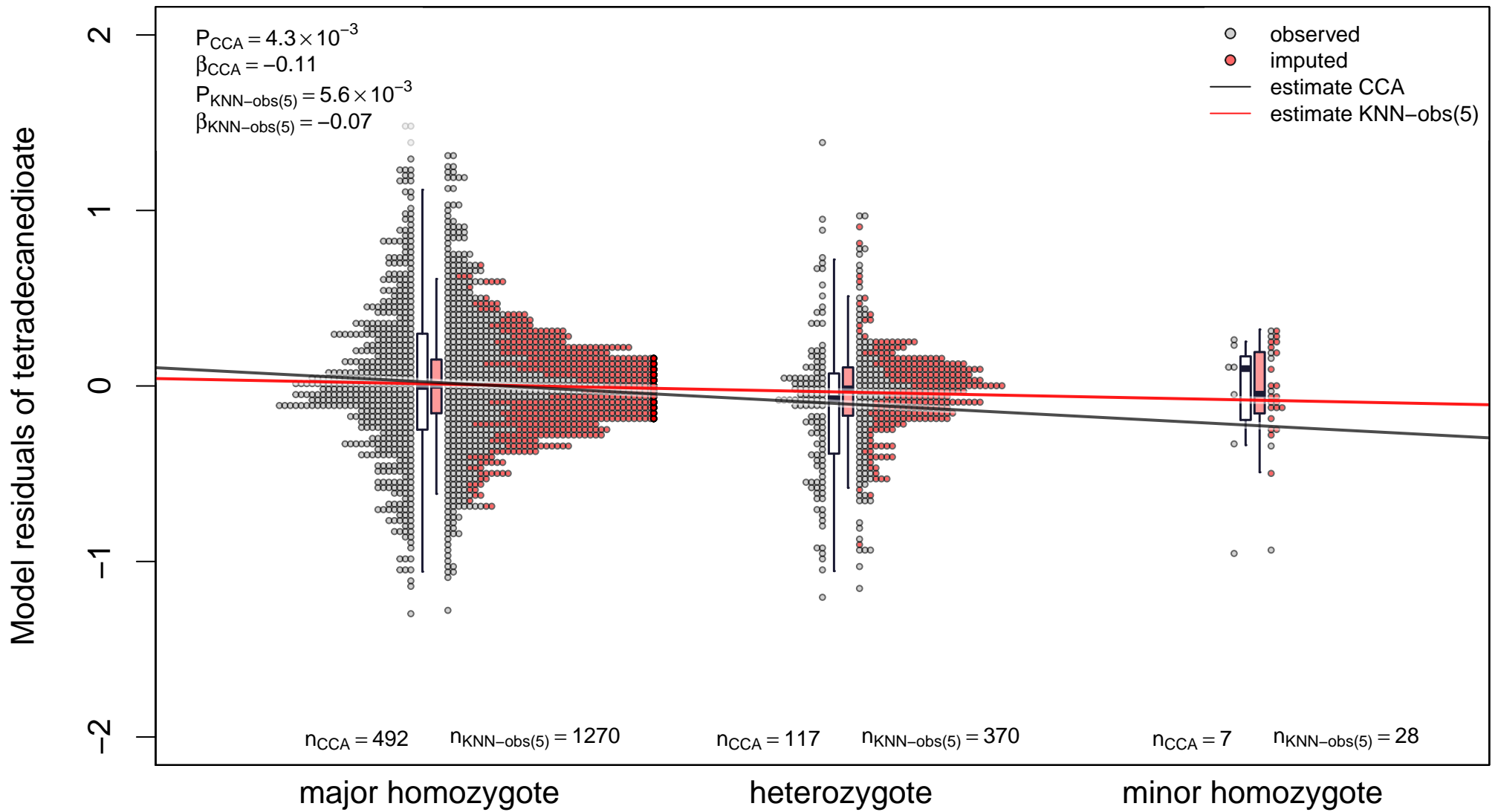
Genotype of SNP rs6663731 (CYP4A11)

# KNN-obs(3)



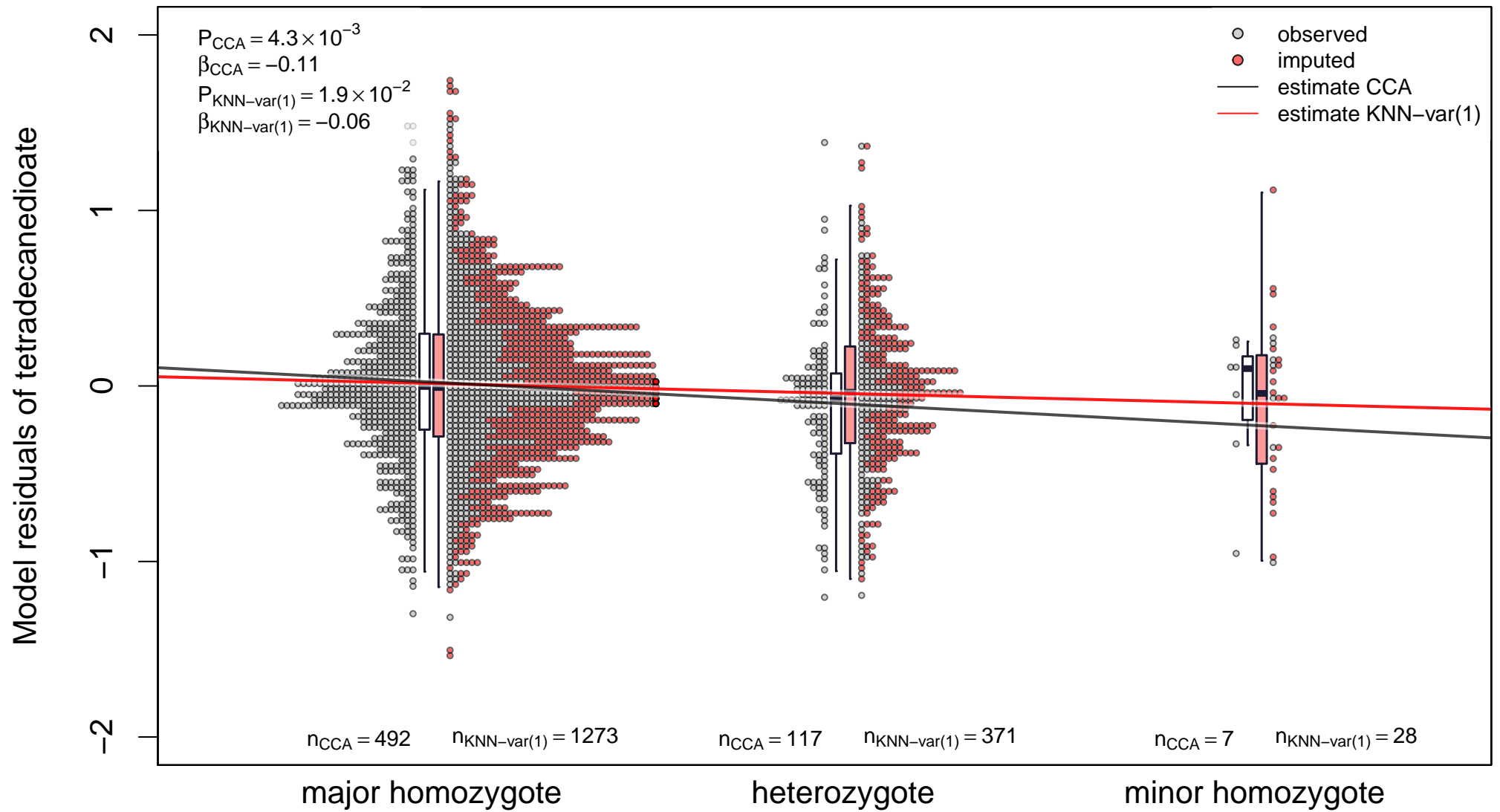
Genotype of SNP rs6663731 (CYP4A11)

# KNN-obs(5)



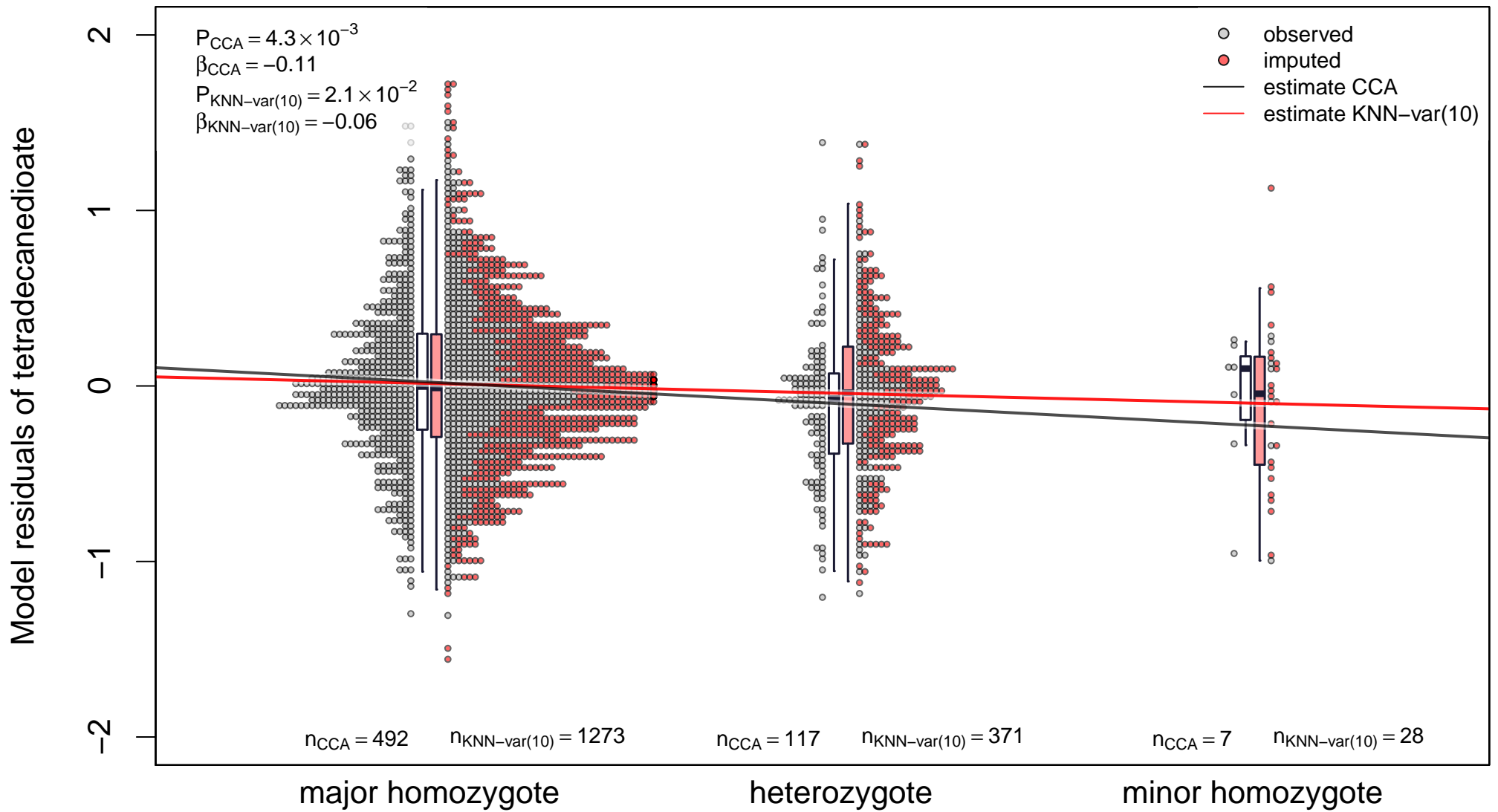
Genotype of SNP rs6663731 (CYP4A11)

# KNN-var(1)



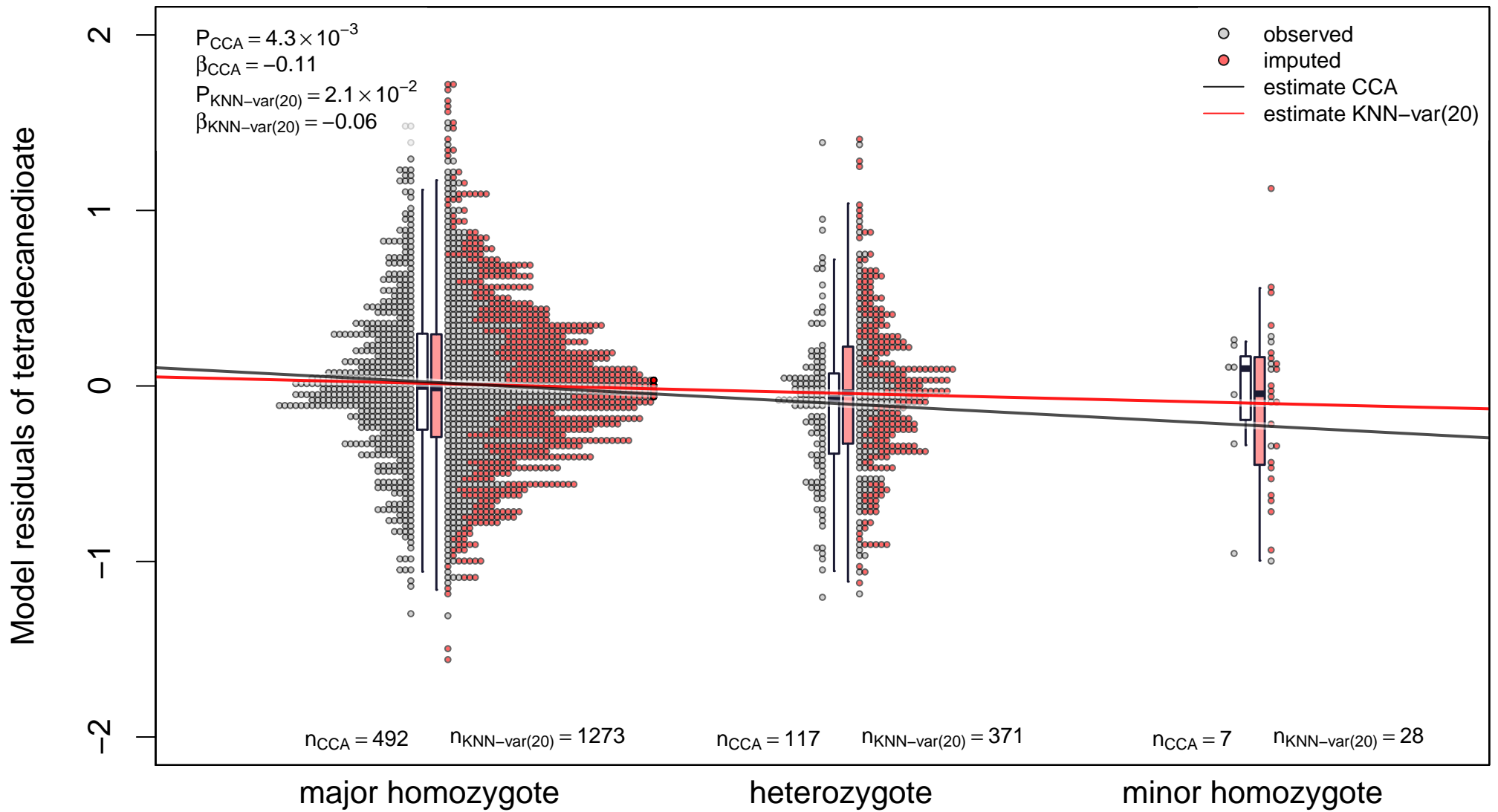
Genotype of SNP rs6663731 (CYP4A11)

# KNN-var(10)



Genotype of SNP rs6663731 (CYP4A11)

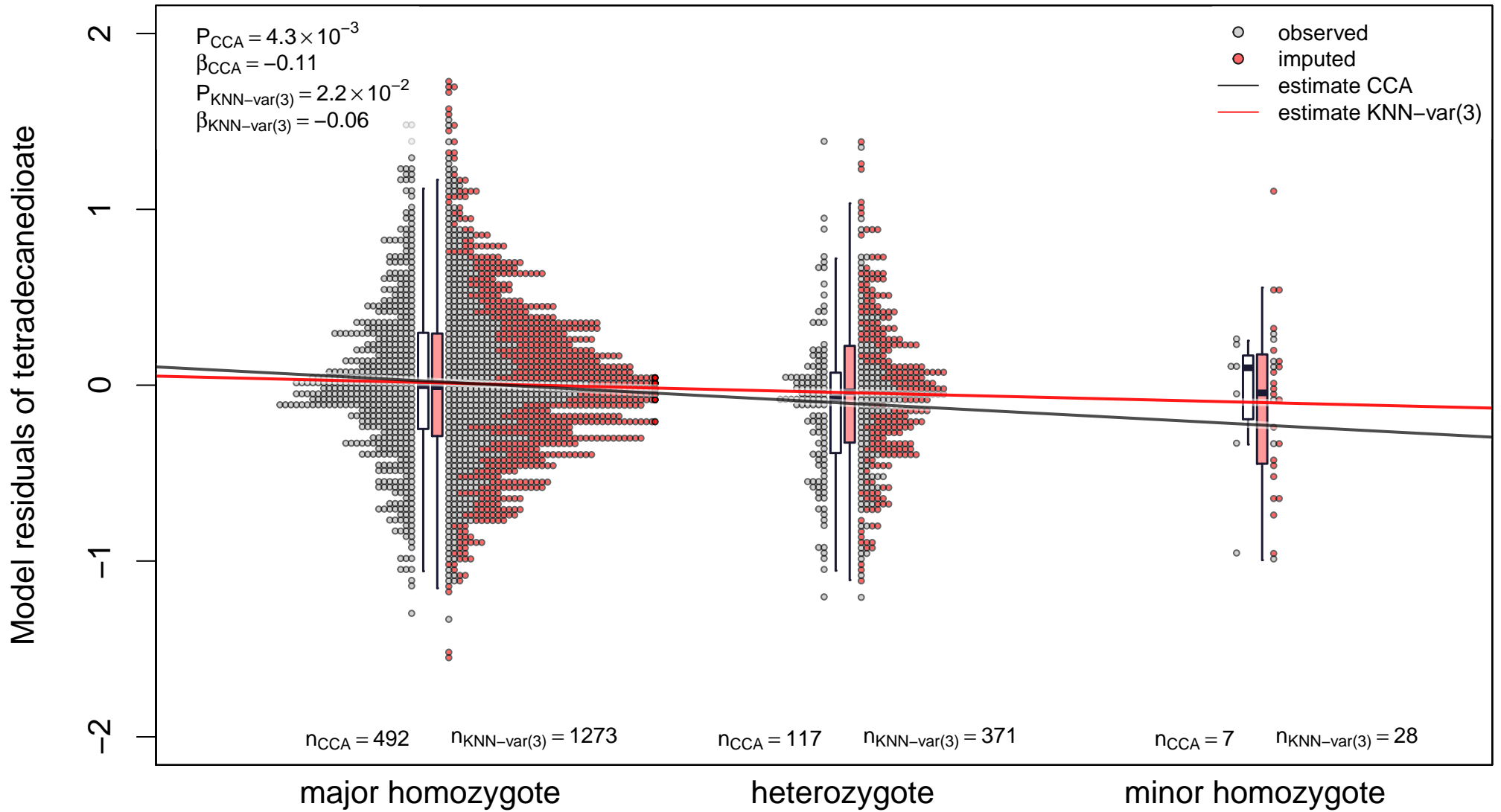
# KNN-var(20)



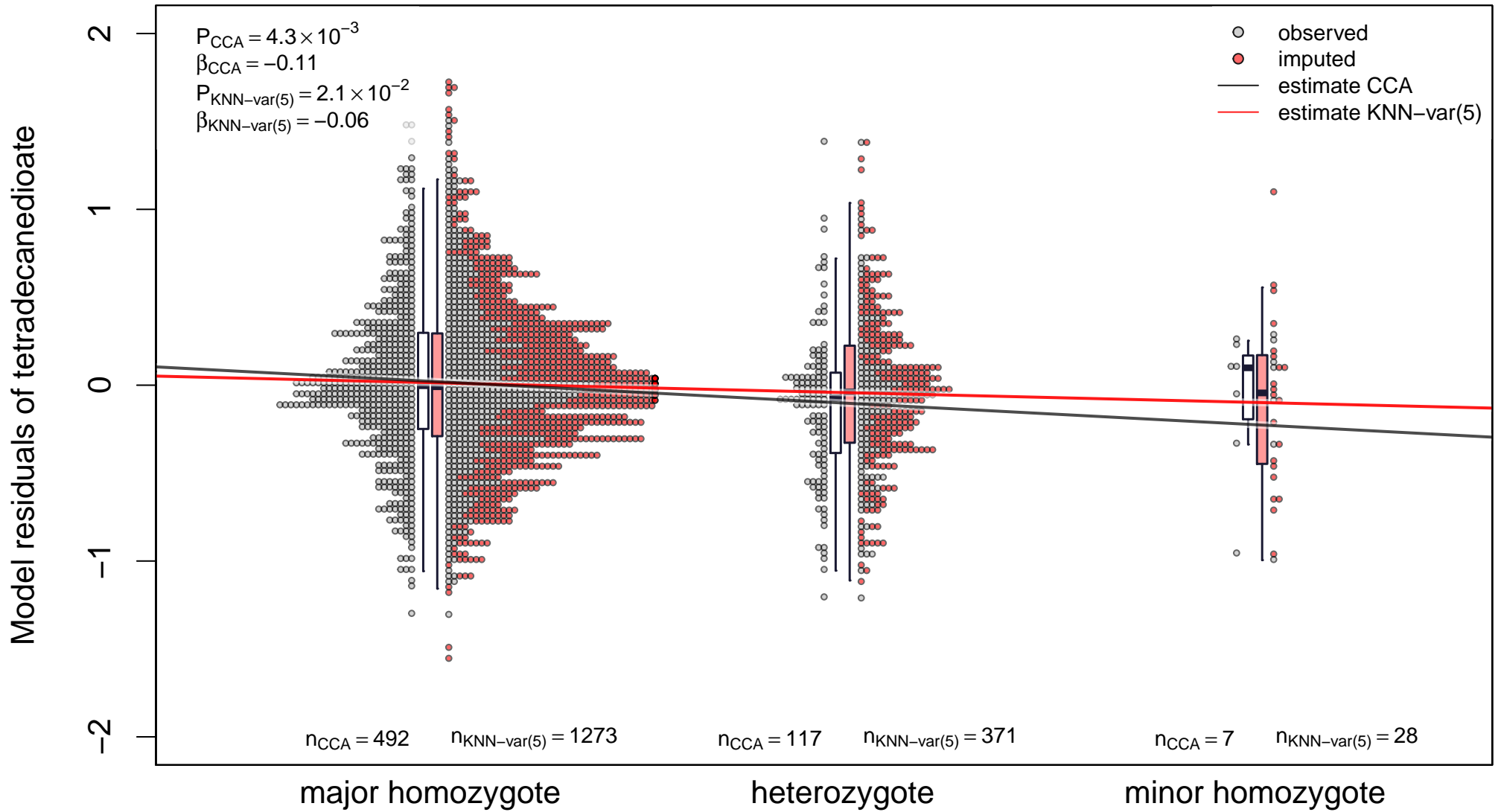
Genotype of SNP rs6663731 (CYP4A11)



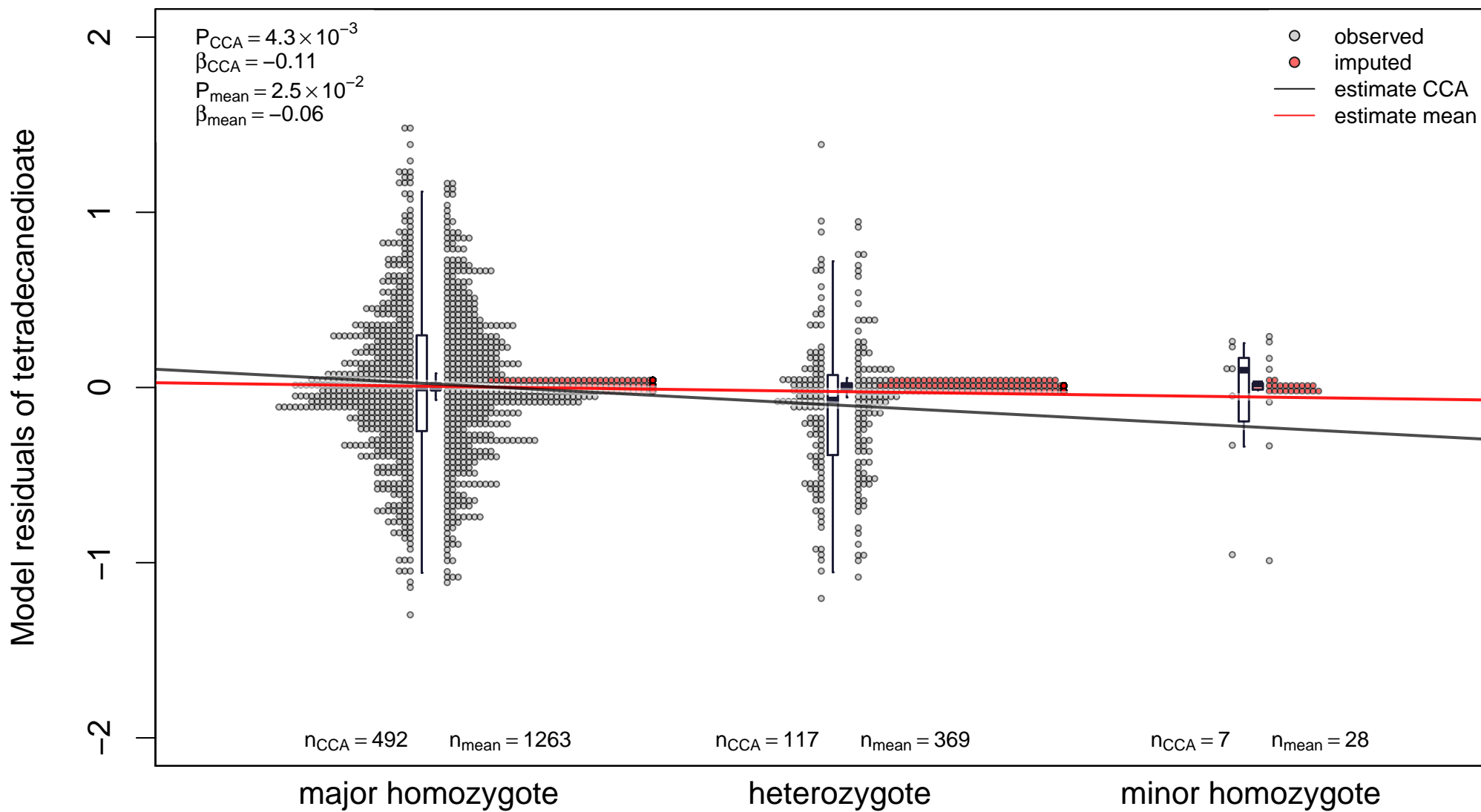
# KNN-var(3)



# KNN-var(5)

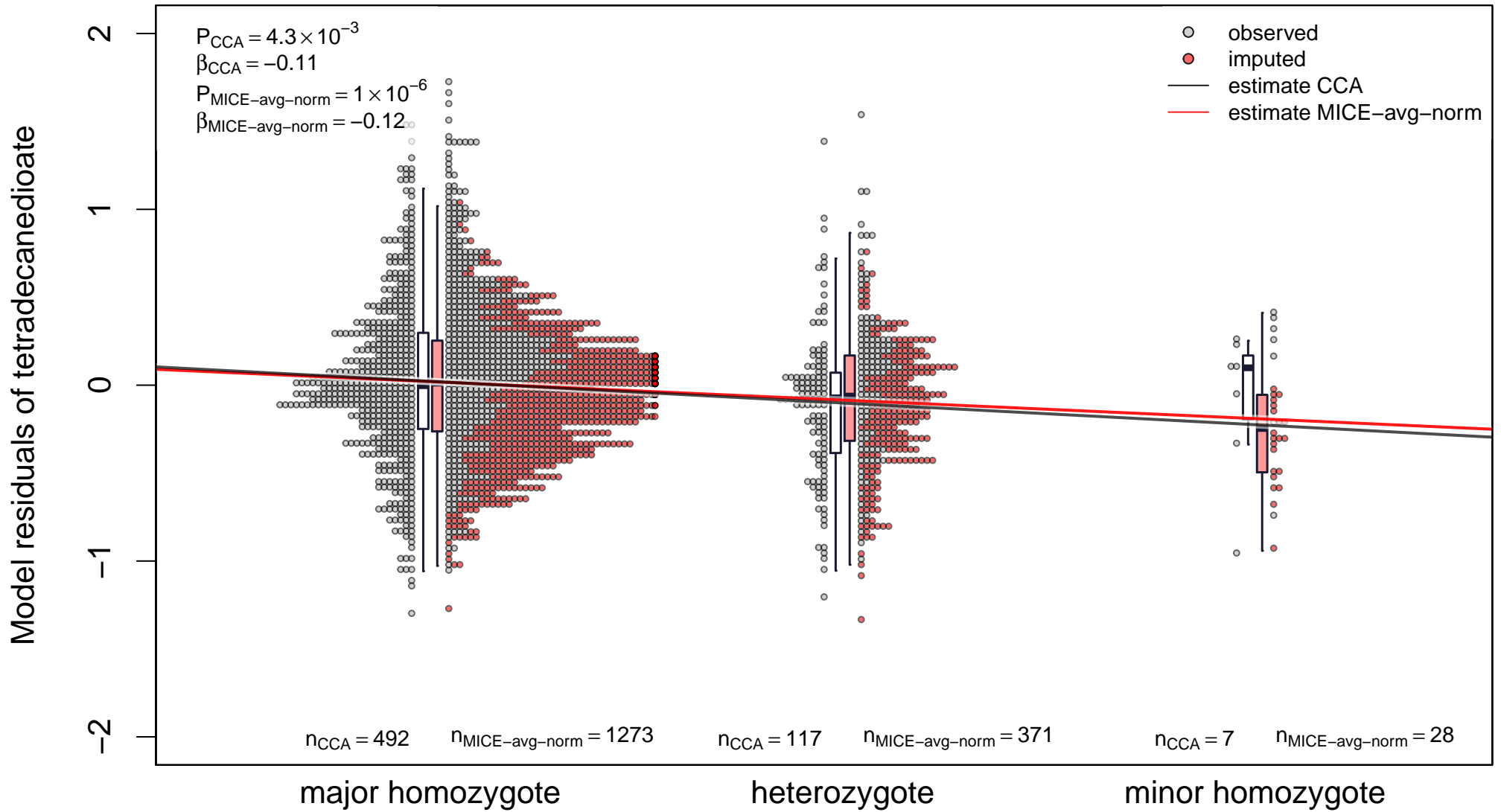


# mean



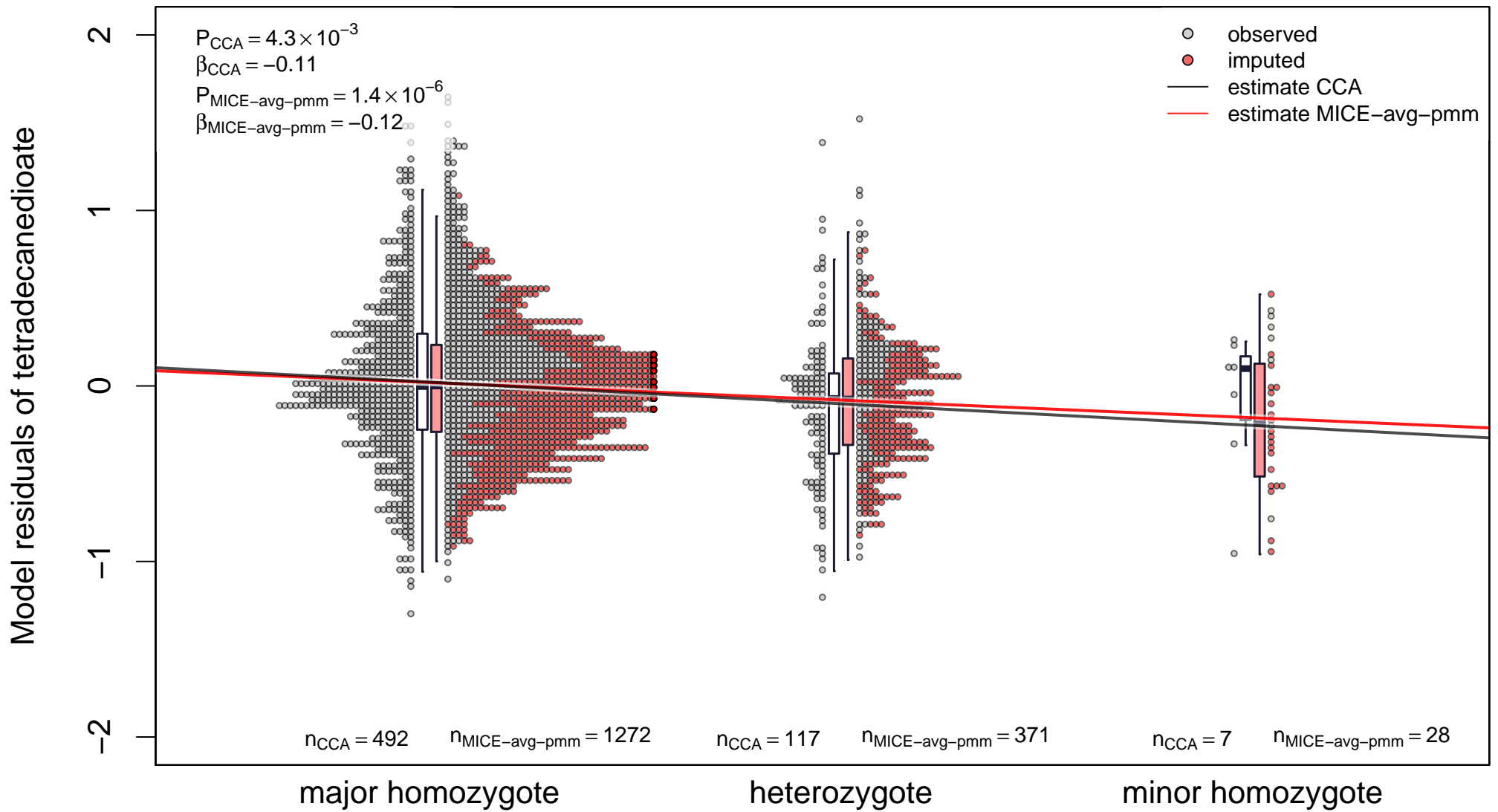
Genotype of SNP rs6663731 (CYP4A11)

# MICE-avg-norm



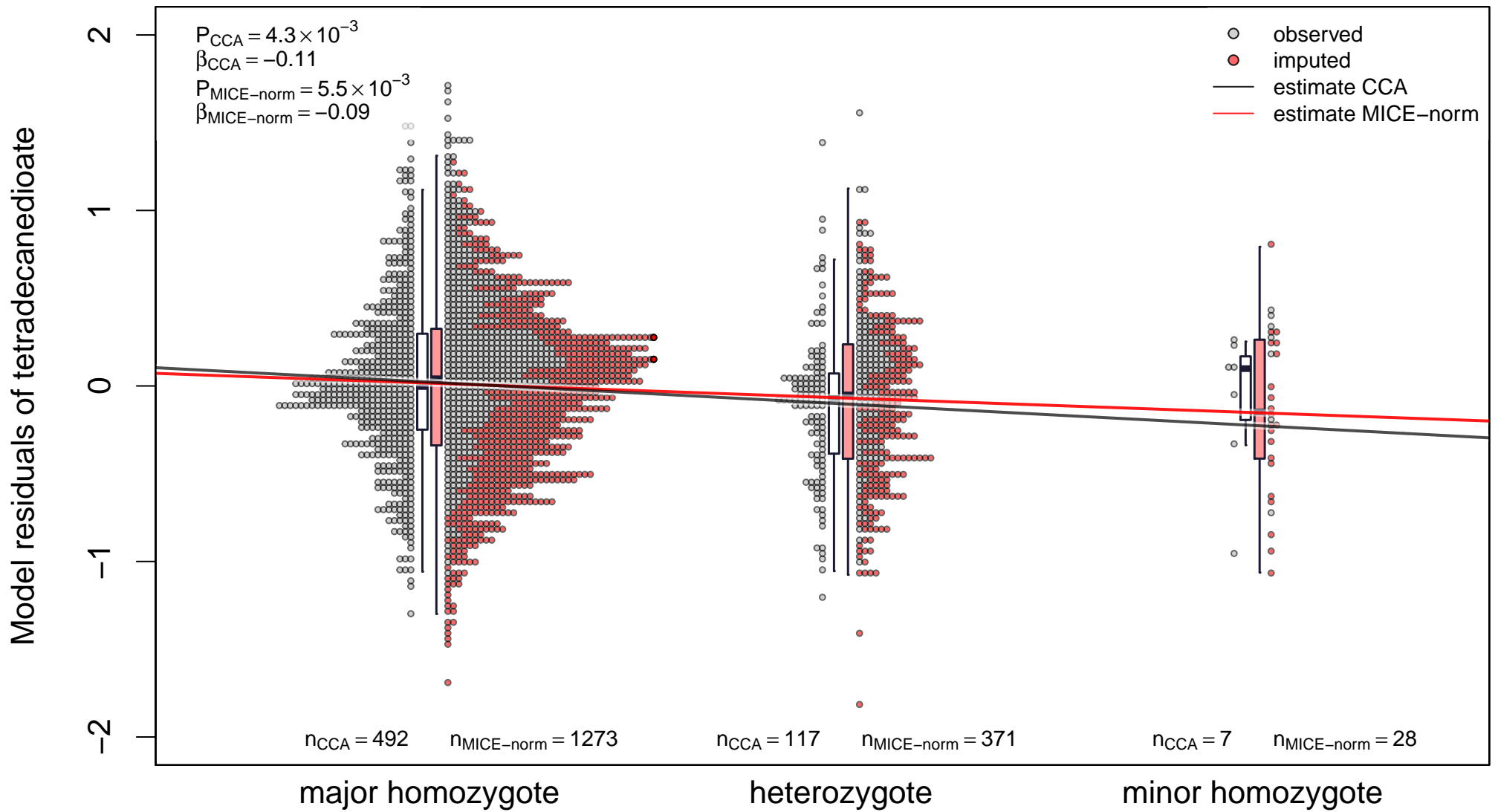
Genotype of SNP rs6663731 (CYP4A11)

# MICE-avg-pmm



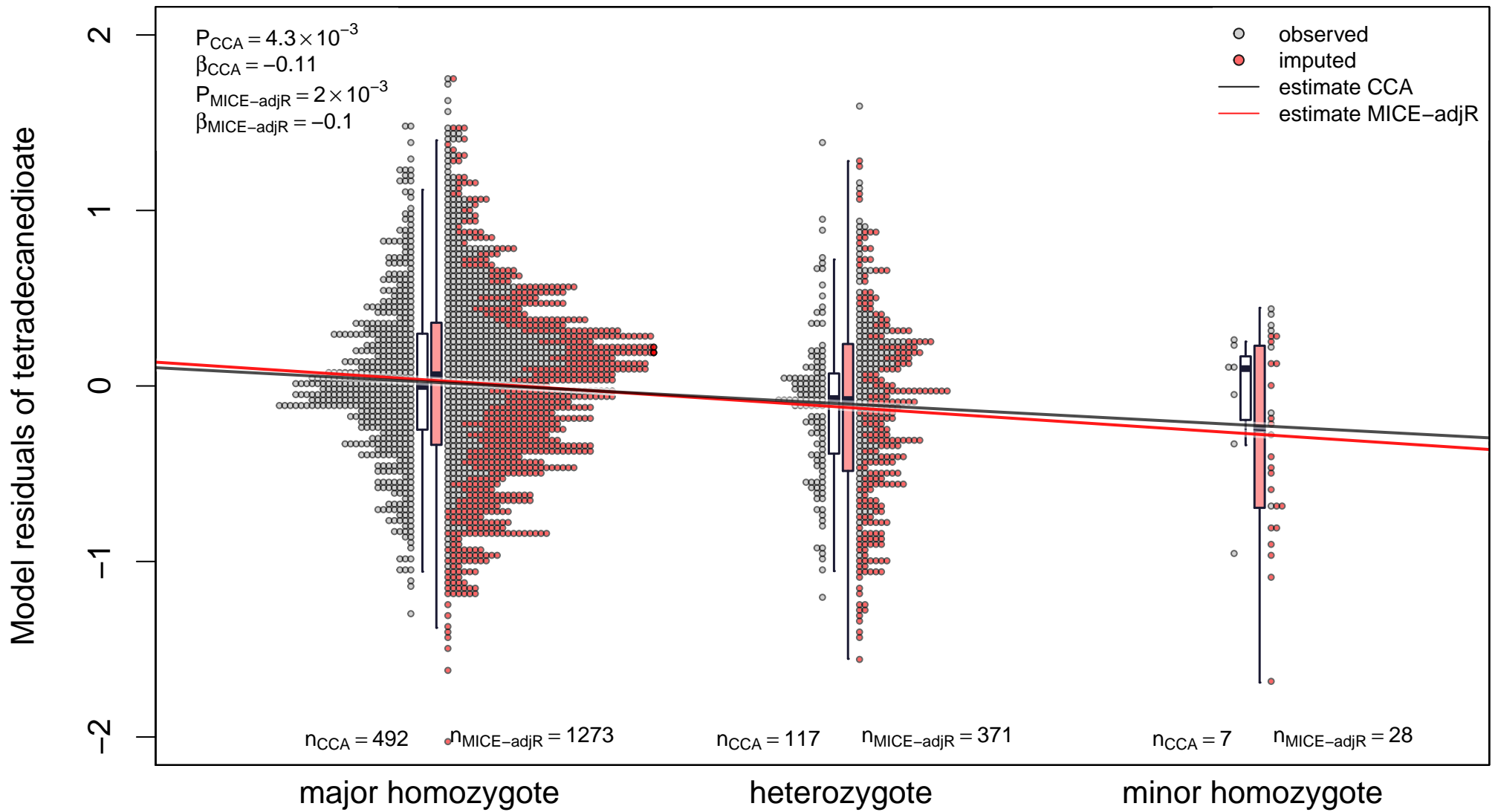
Genotype of SNP rs6663731 (CYP4A11)

# MICE-norm

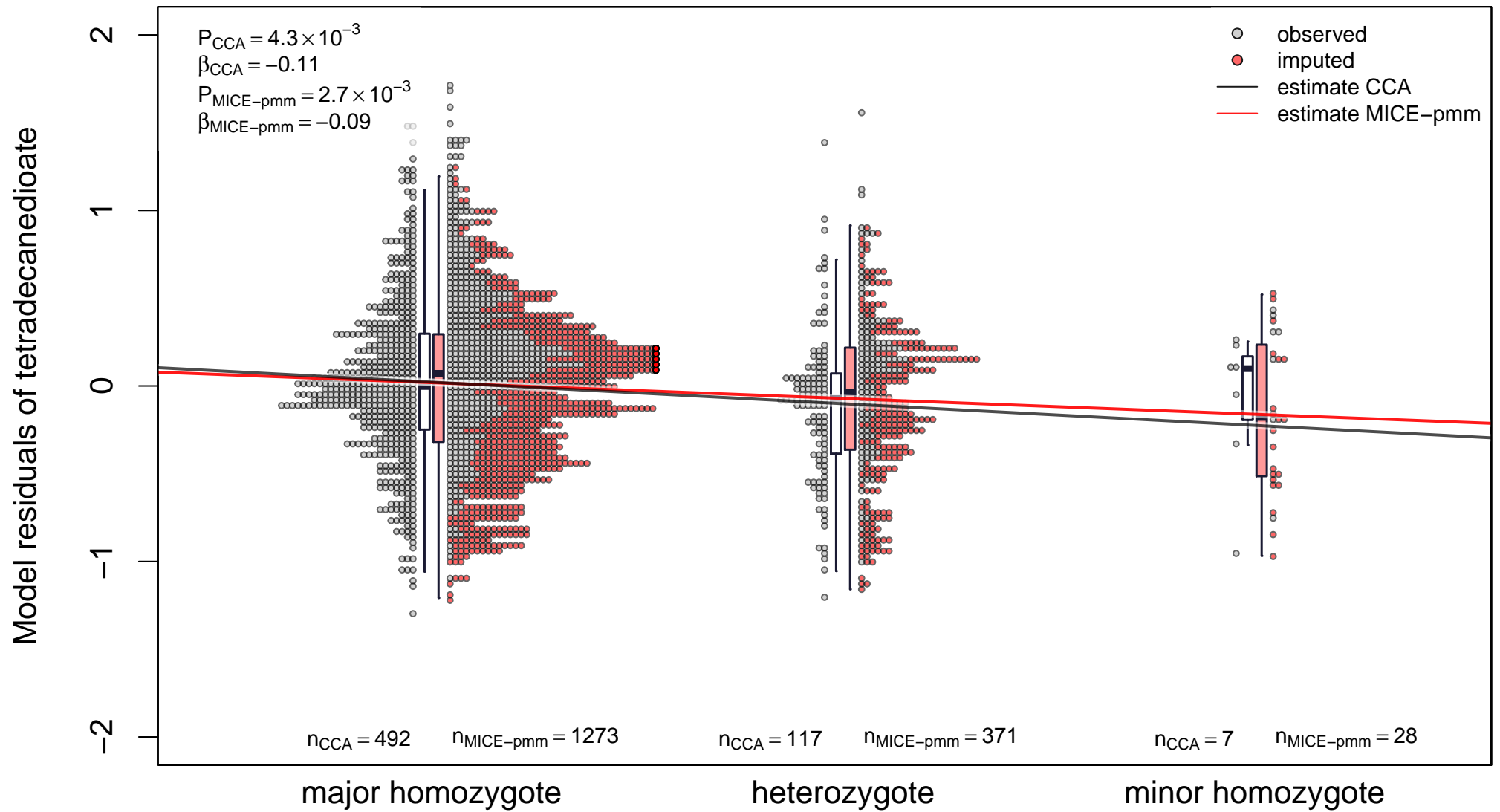


Genotype of SNP rs6663731 (CYP4A11)

# MICE-adjR



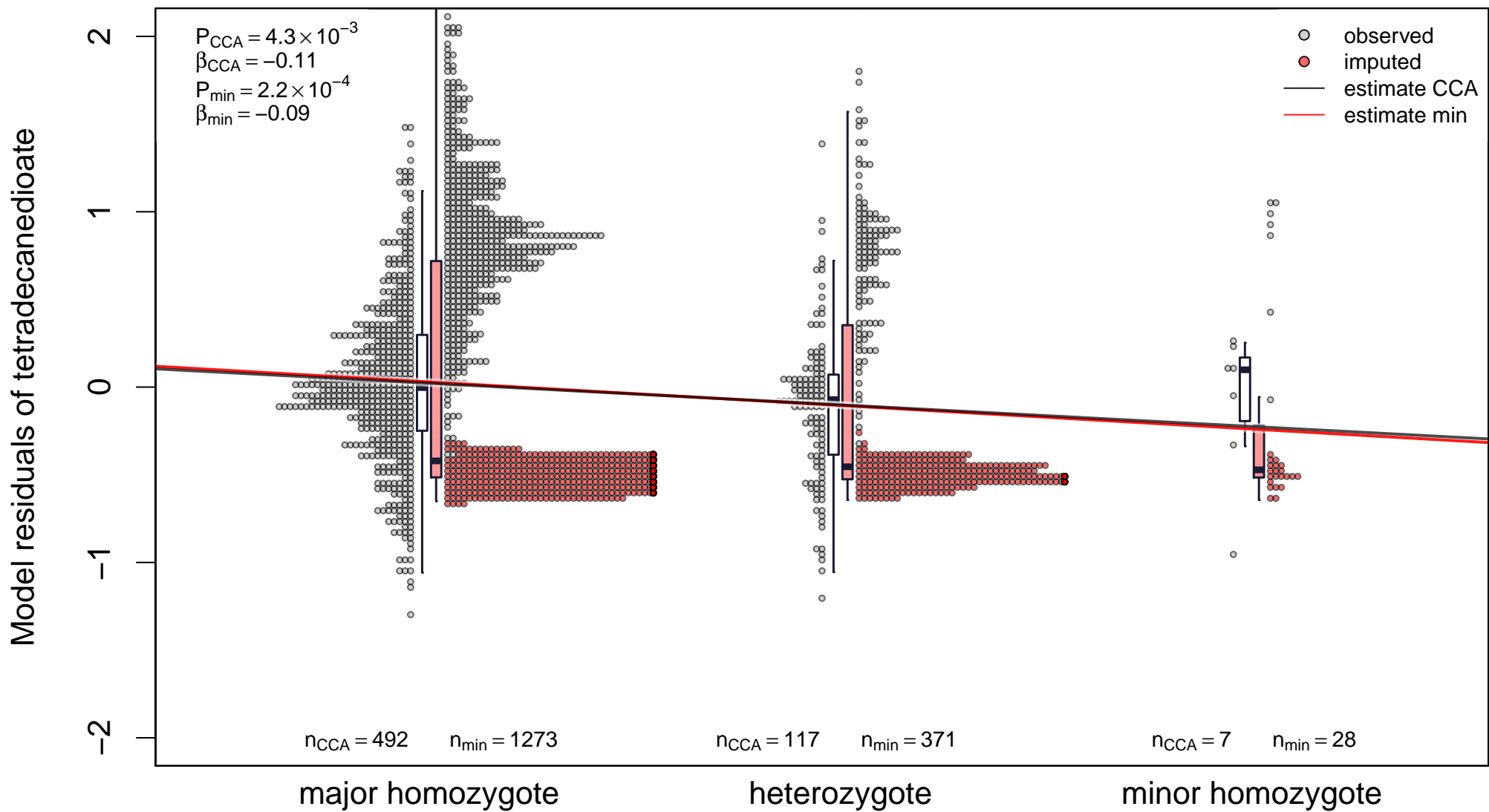
# MICE-pmm



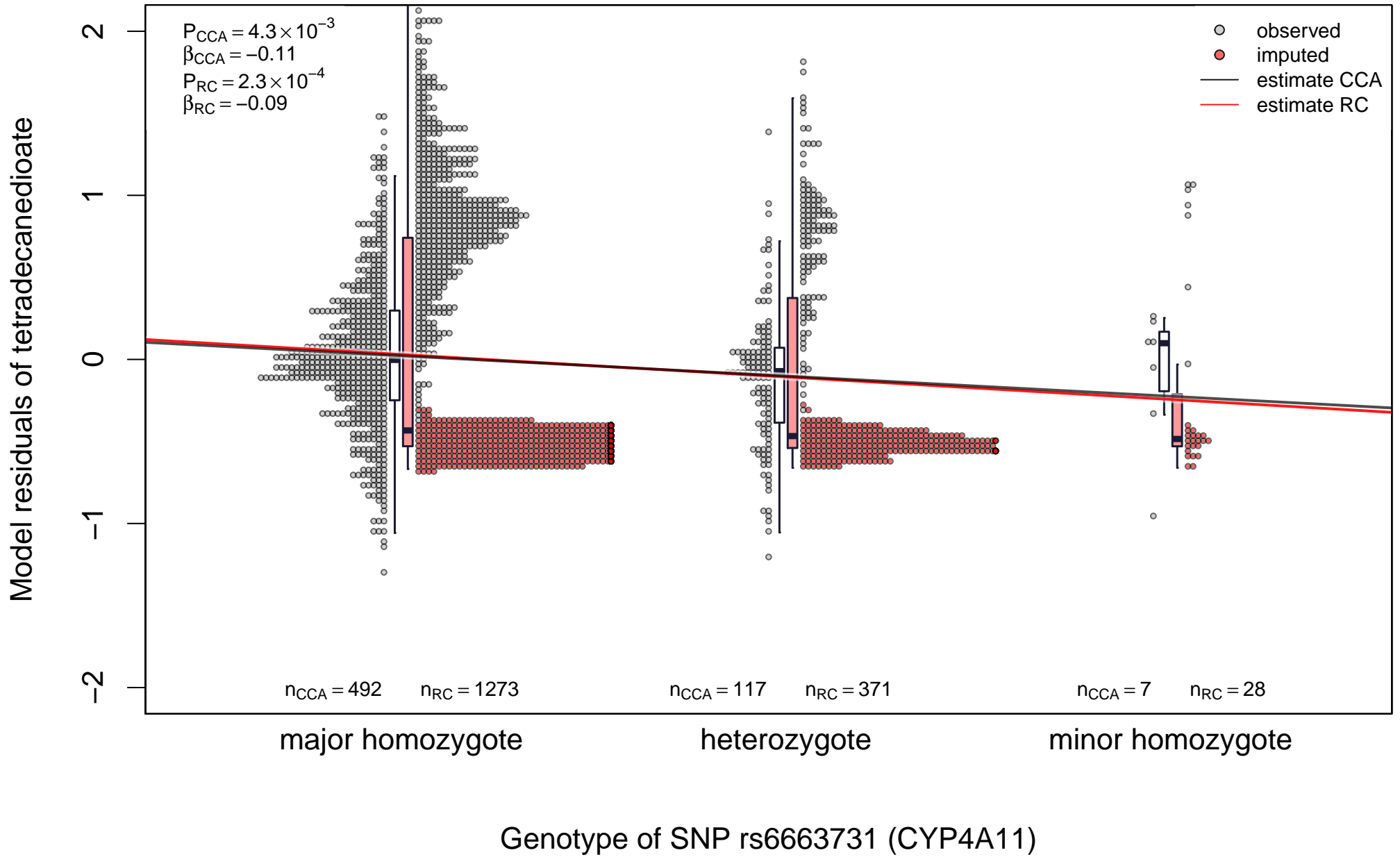
Genotype of SNP rs6663731 (CYP4A11)



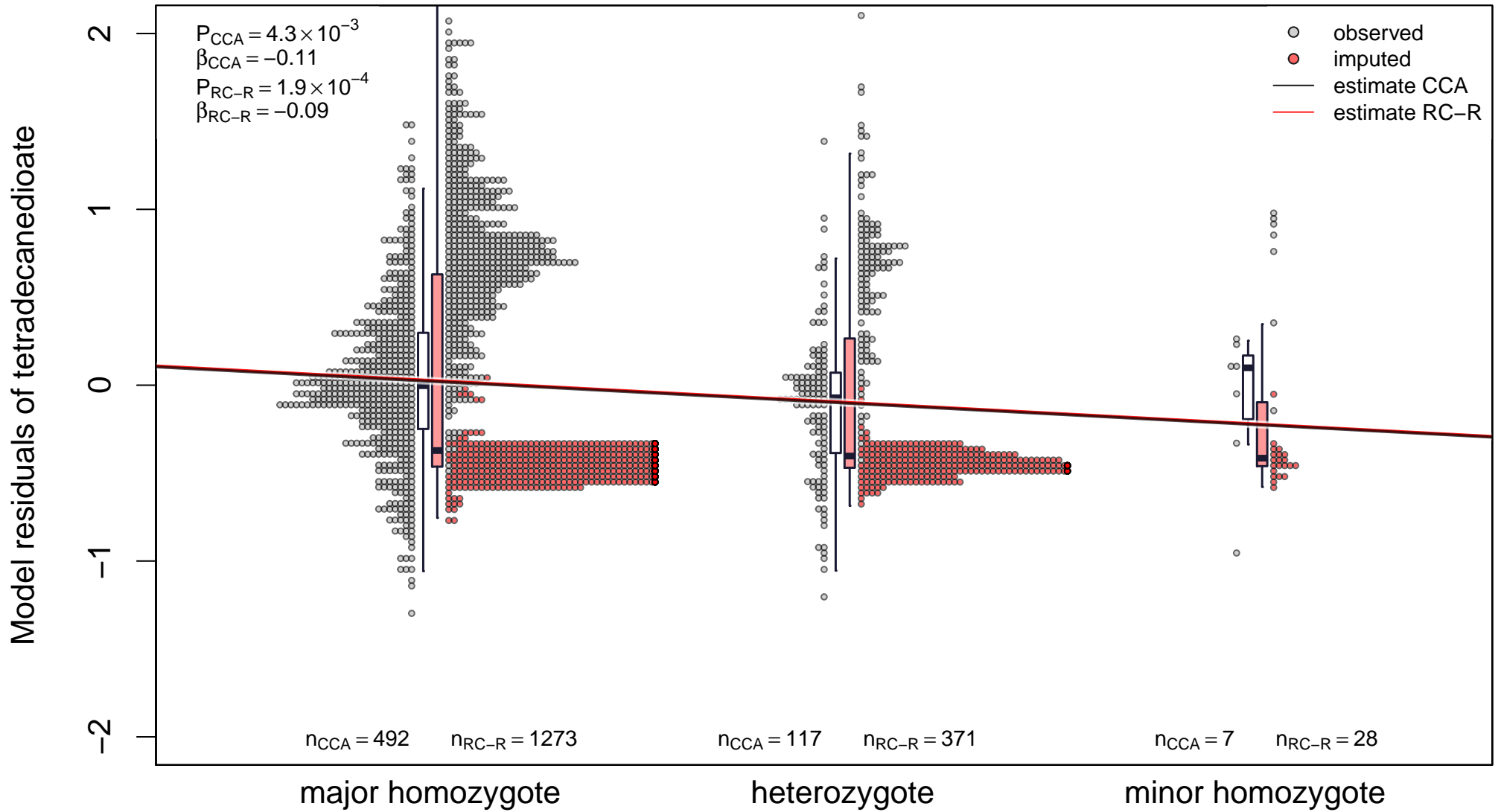
min



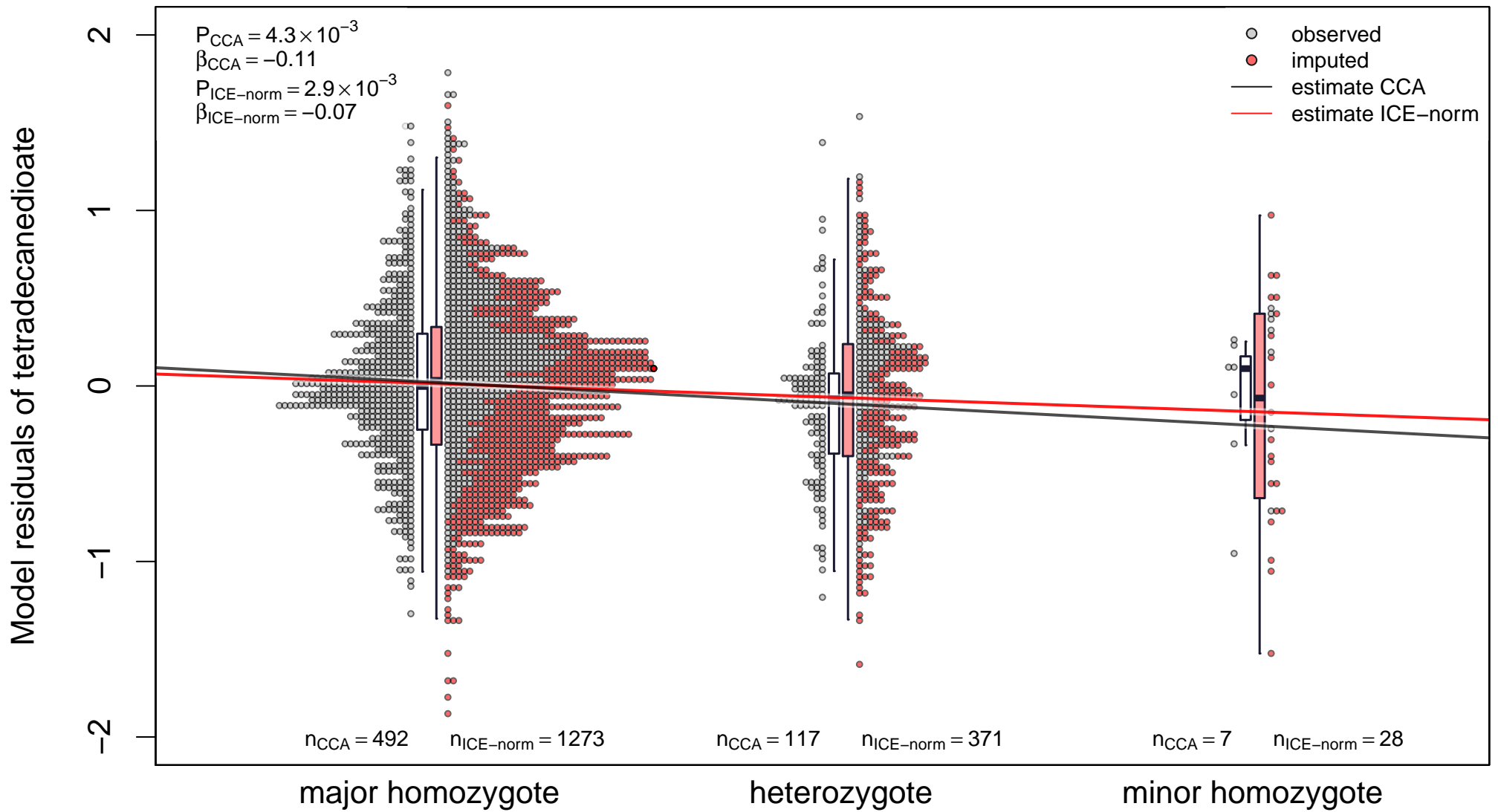
# RC



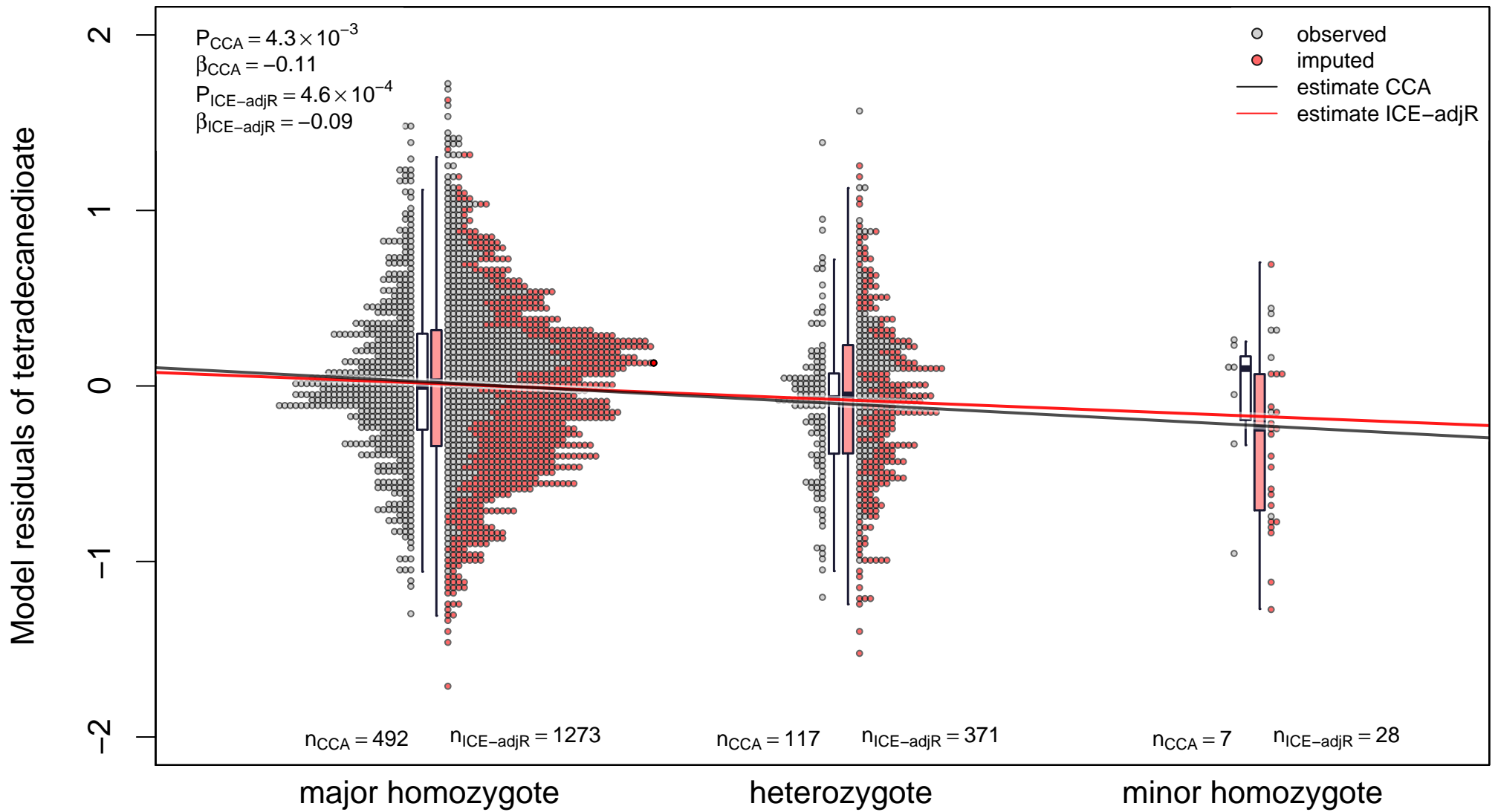
# RC-R



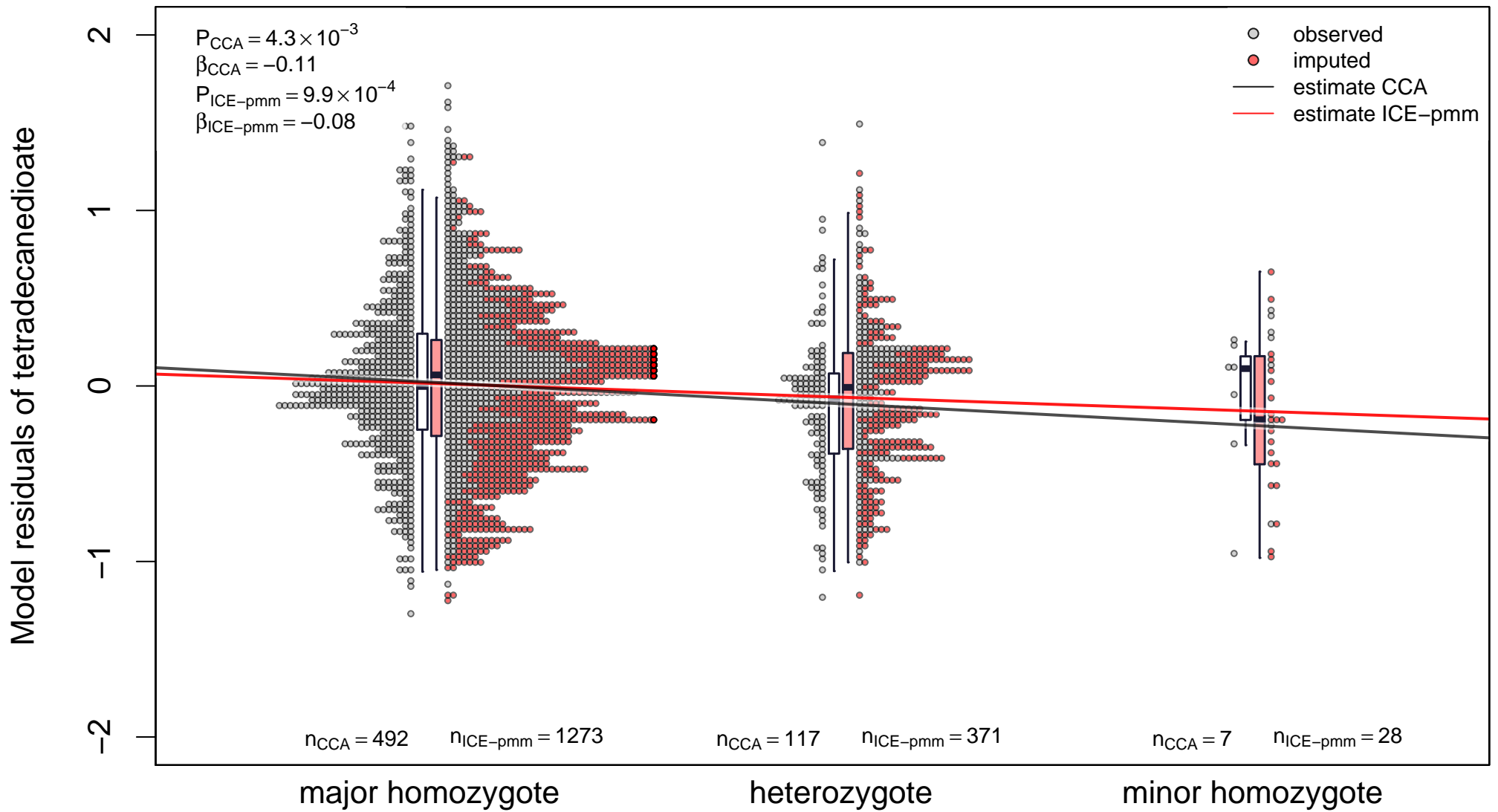
# ICE-norm



# ICE-adjR

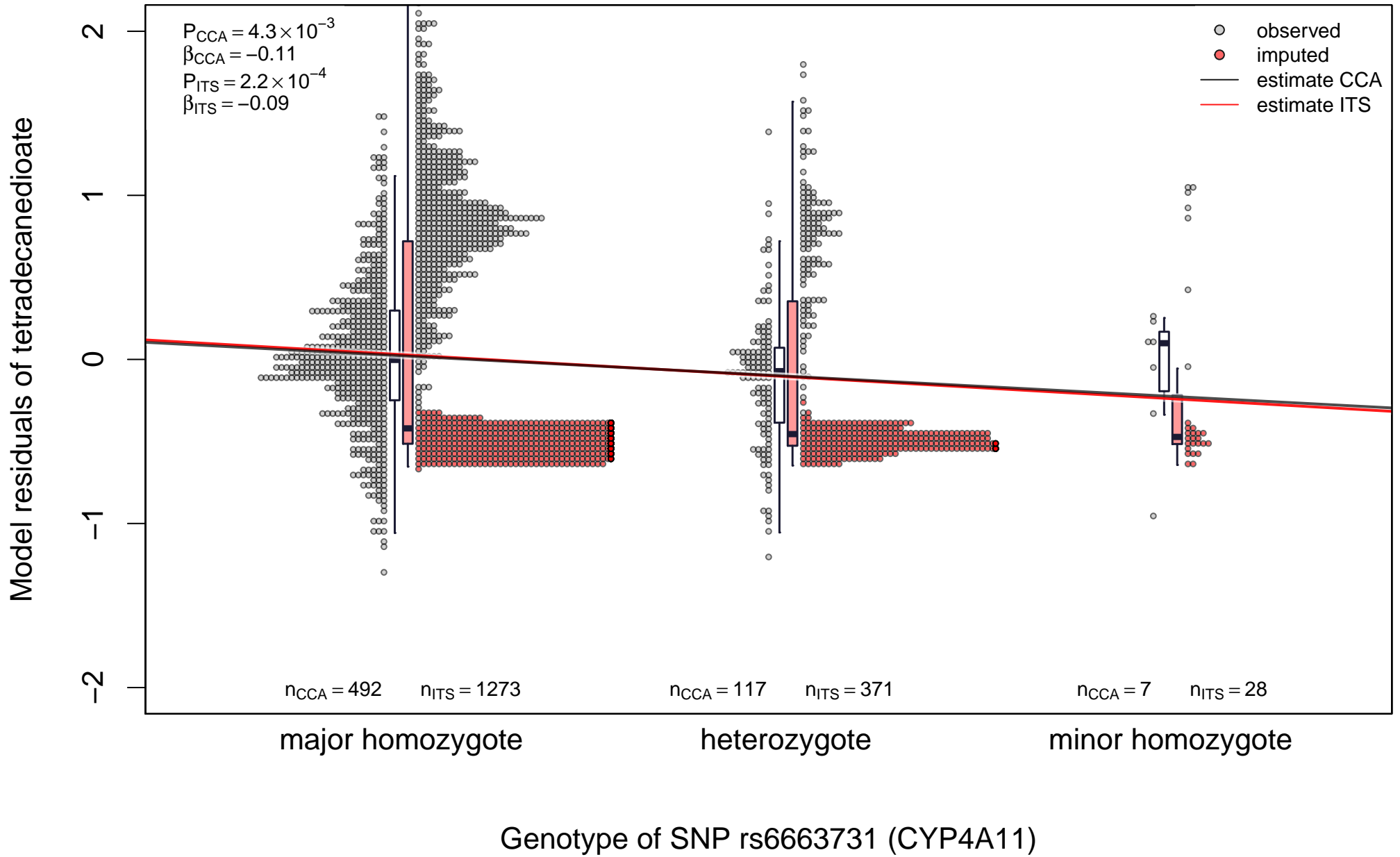


# ICE-pmm

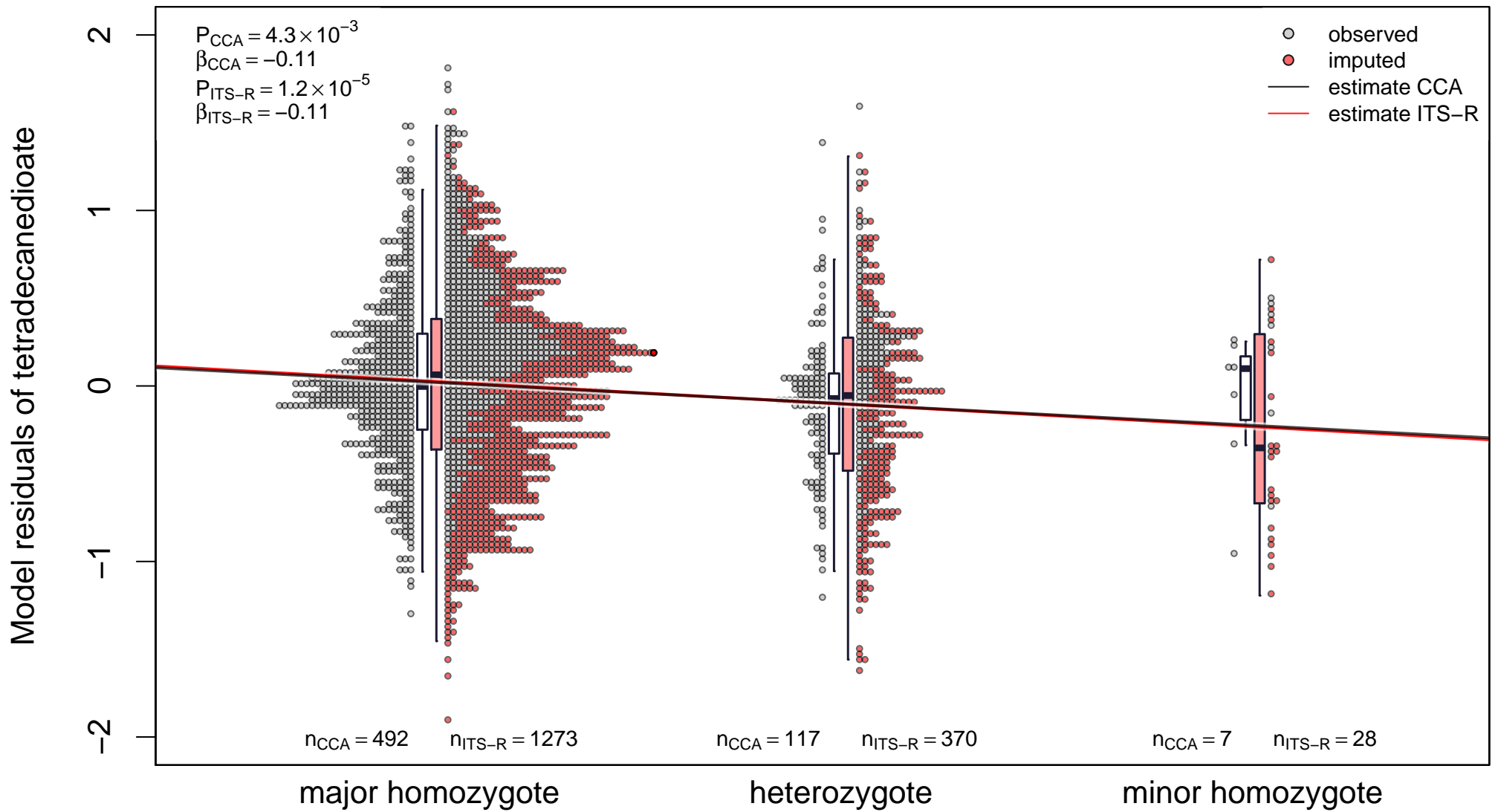


Genotype of SNP rs6663731 (CYP4A11)

# ITS

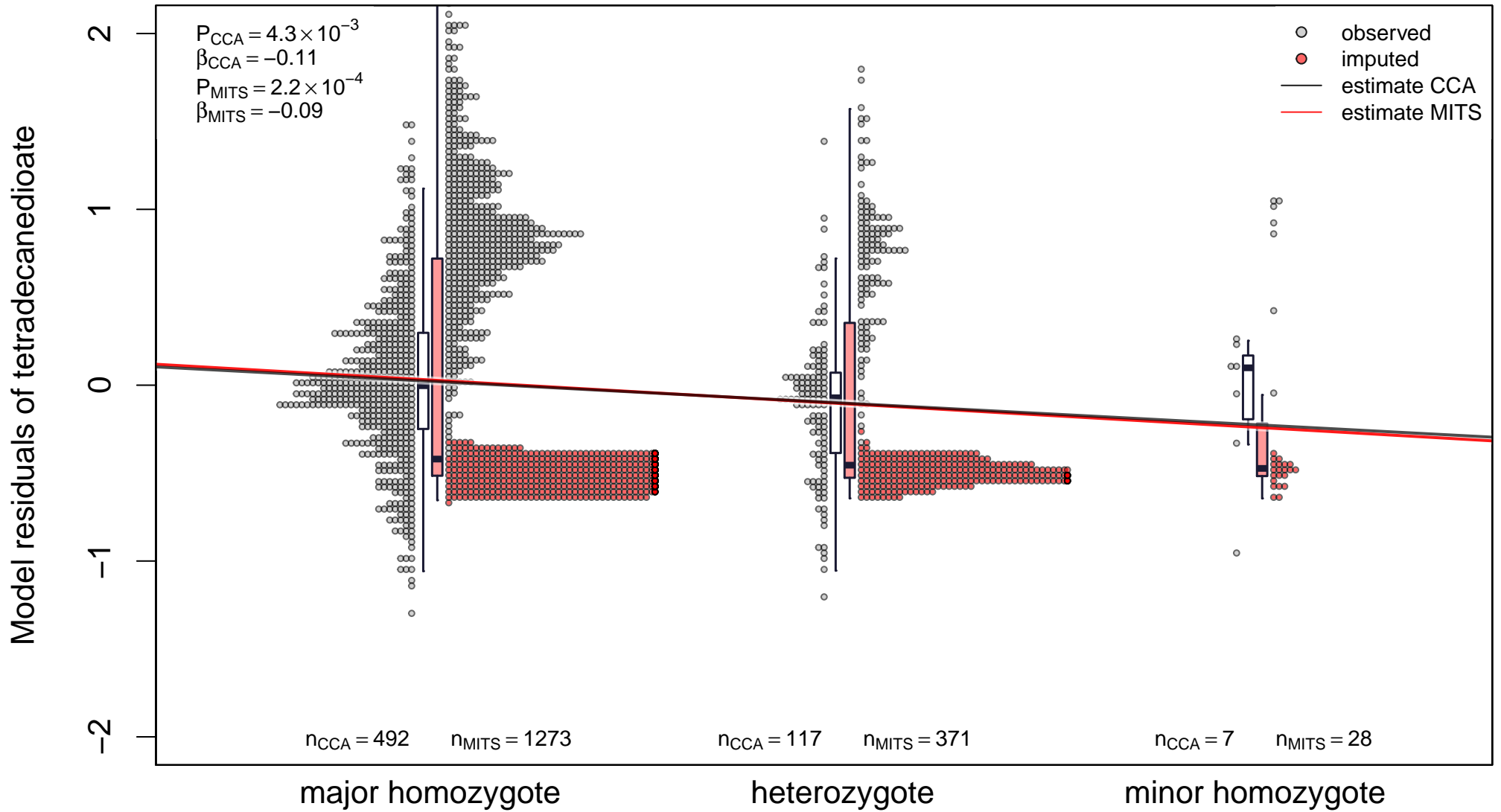


# ITS-R



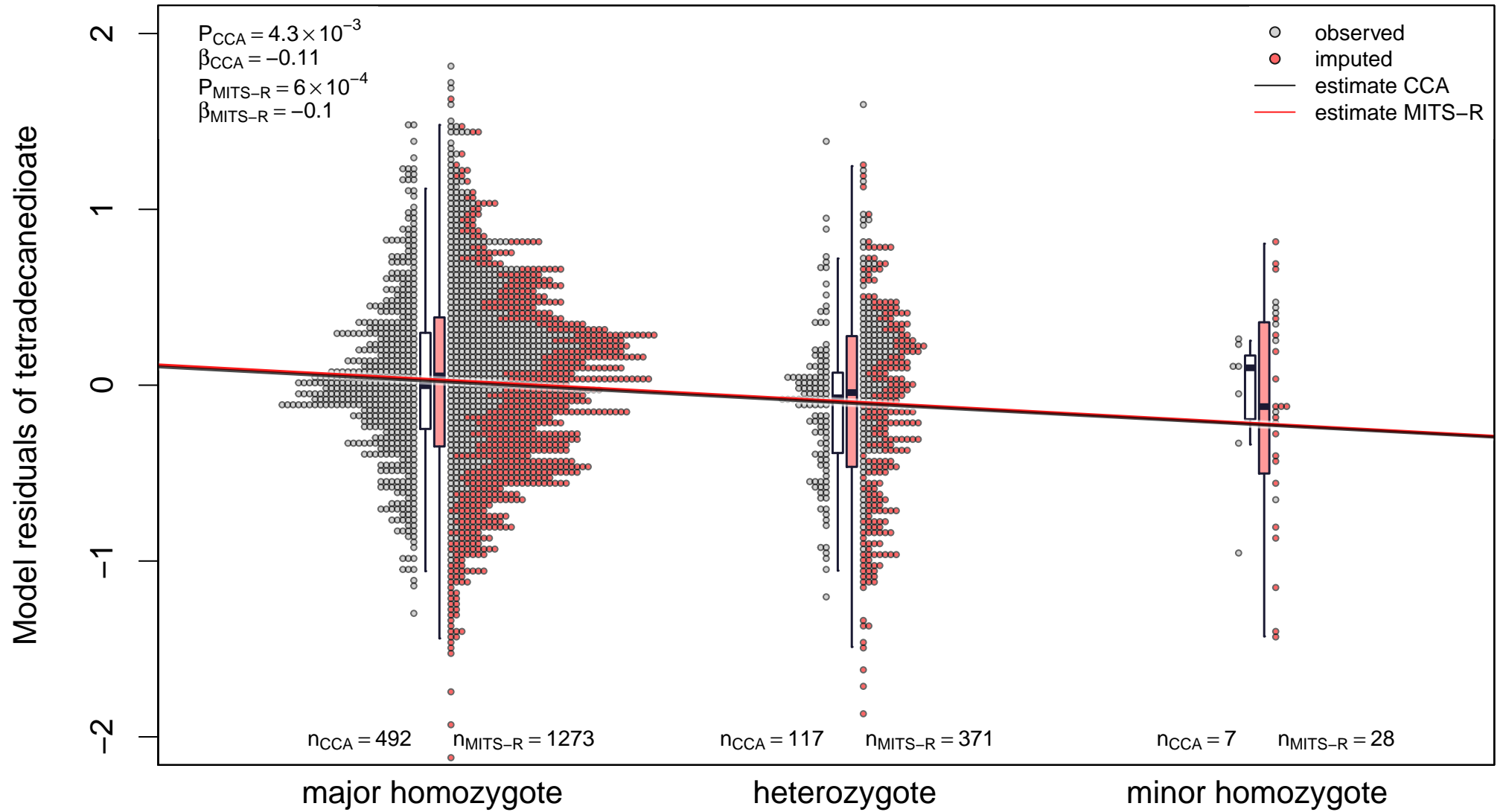


# MITS

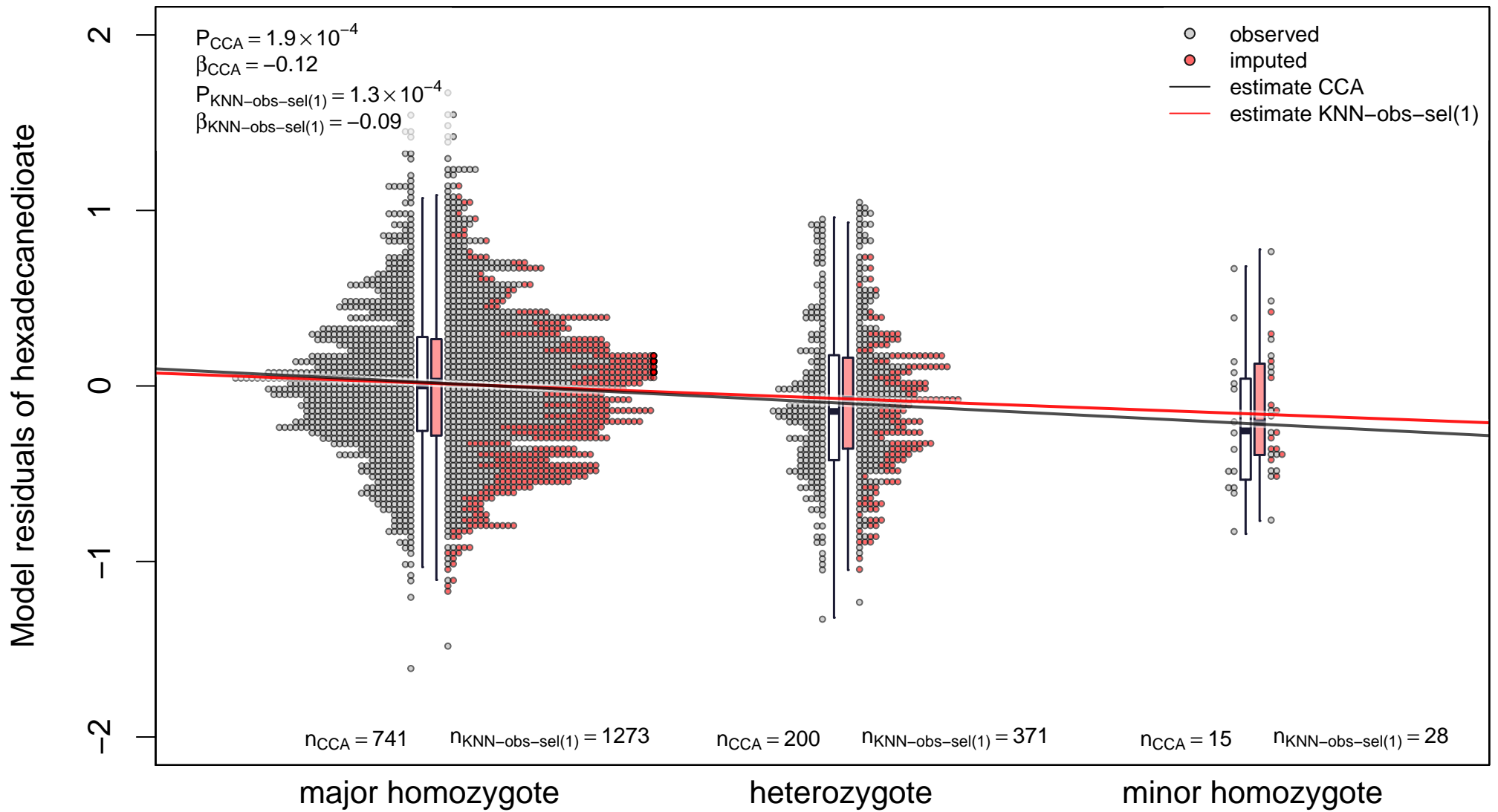


Genotype of SNP rs6663731 (CYP4A11)

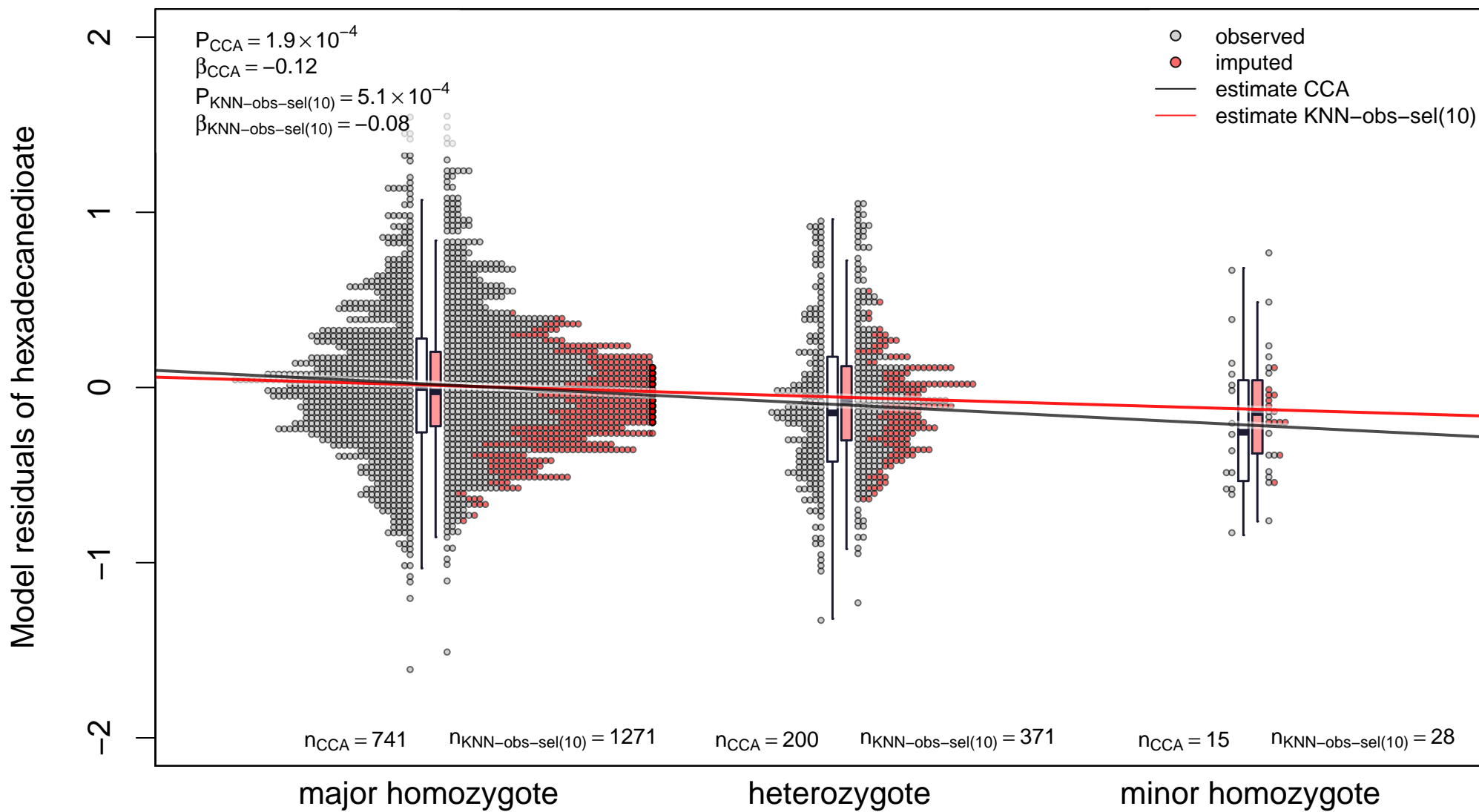
# MITS-R



# KNN-obs-sel(1)

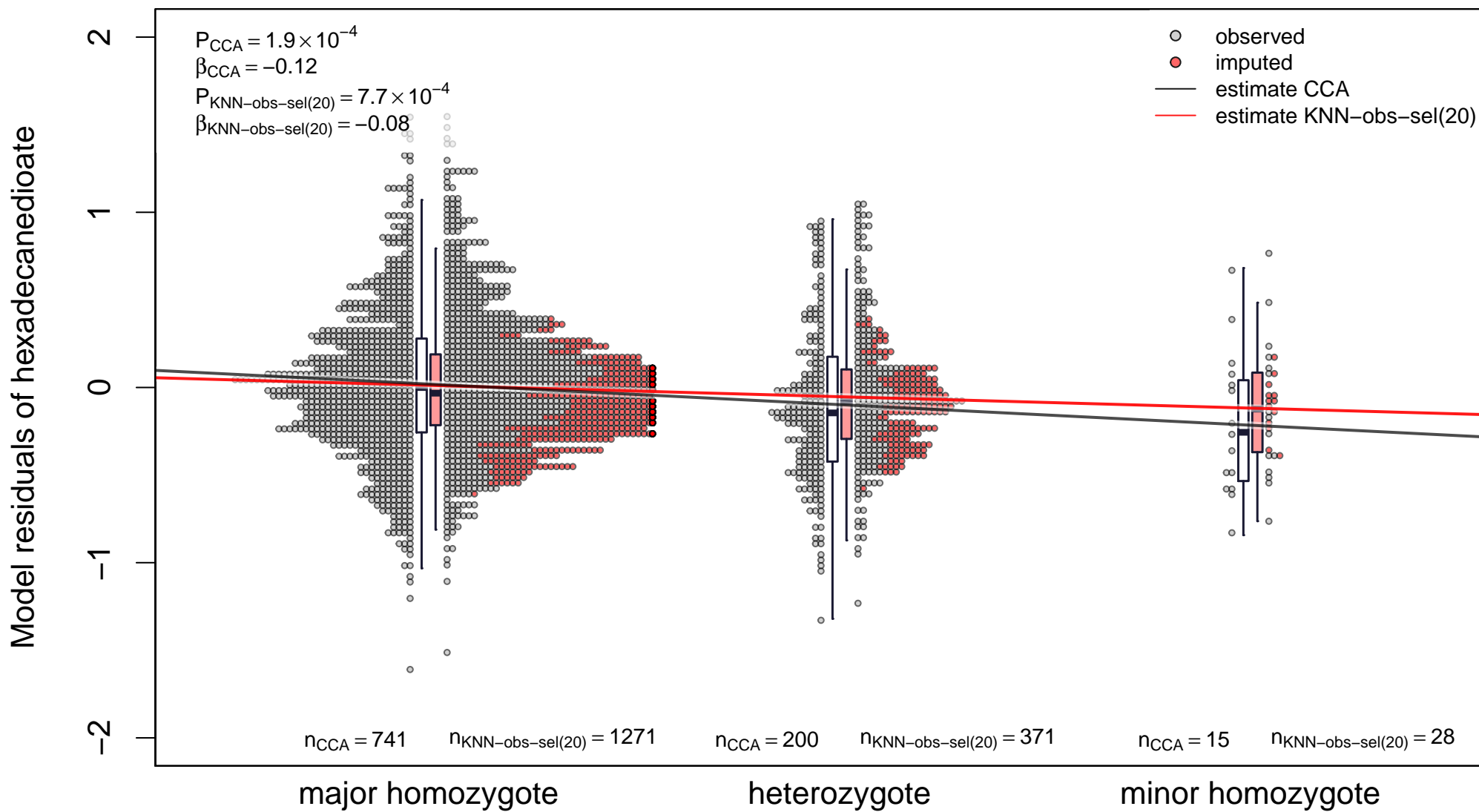


# KNN-obs-sel(10)



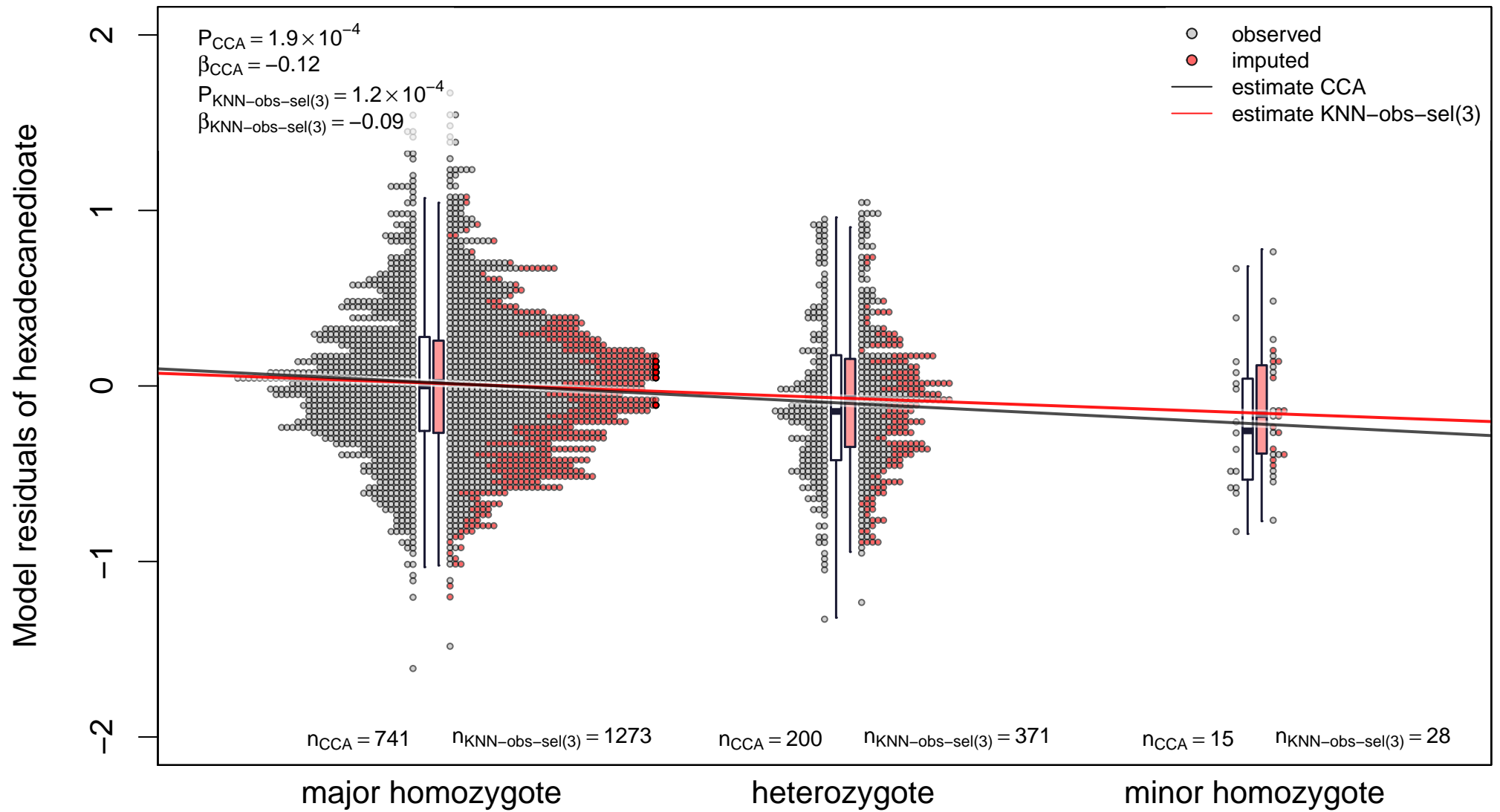
Genotype of SNP rs6663731 (CYP4A11)

# KNN-obs-sel(20)



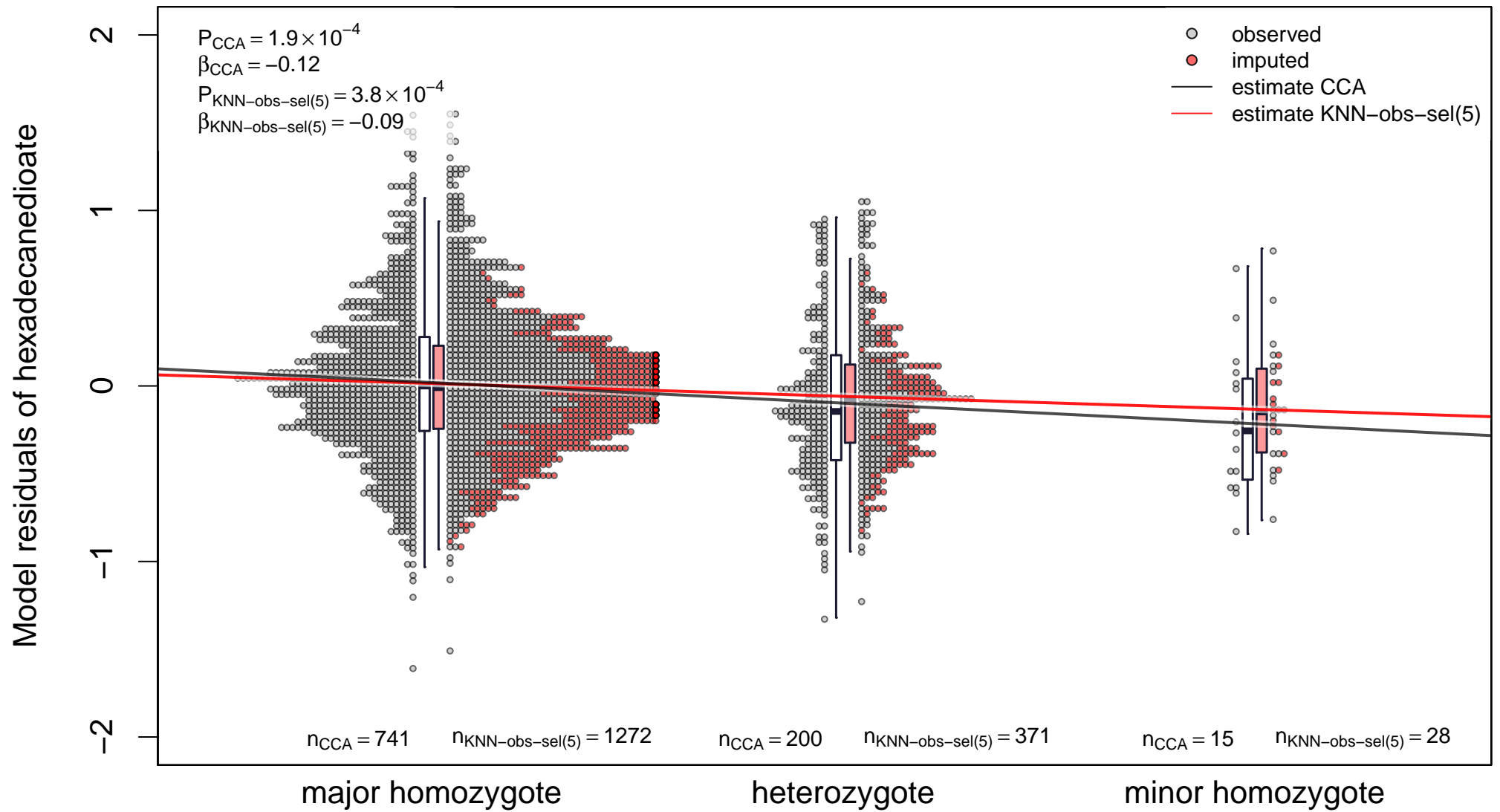
Genotype of SNP rs6663731 (CYP4A11)

# KNN-obs-sel(3)



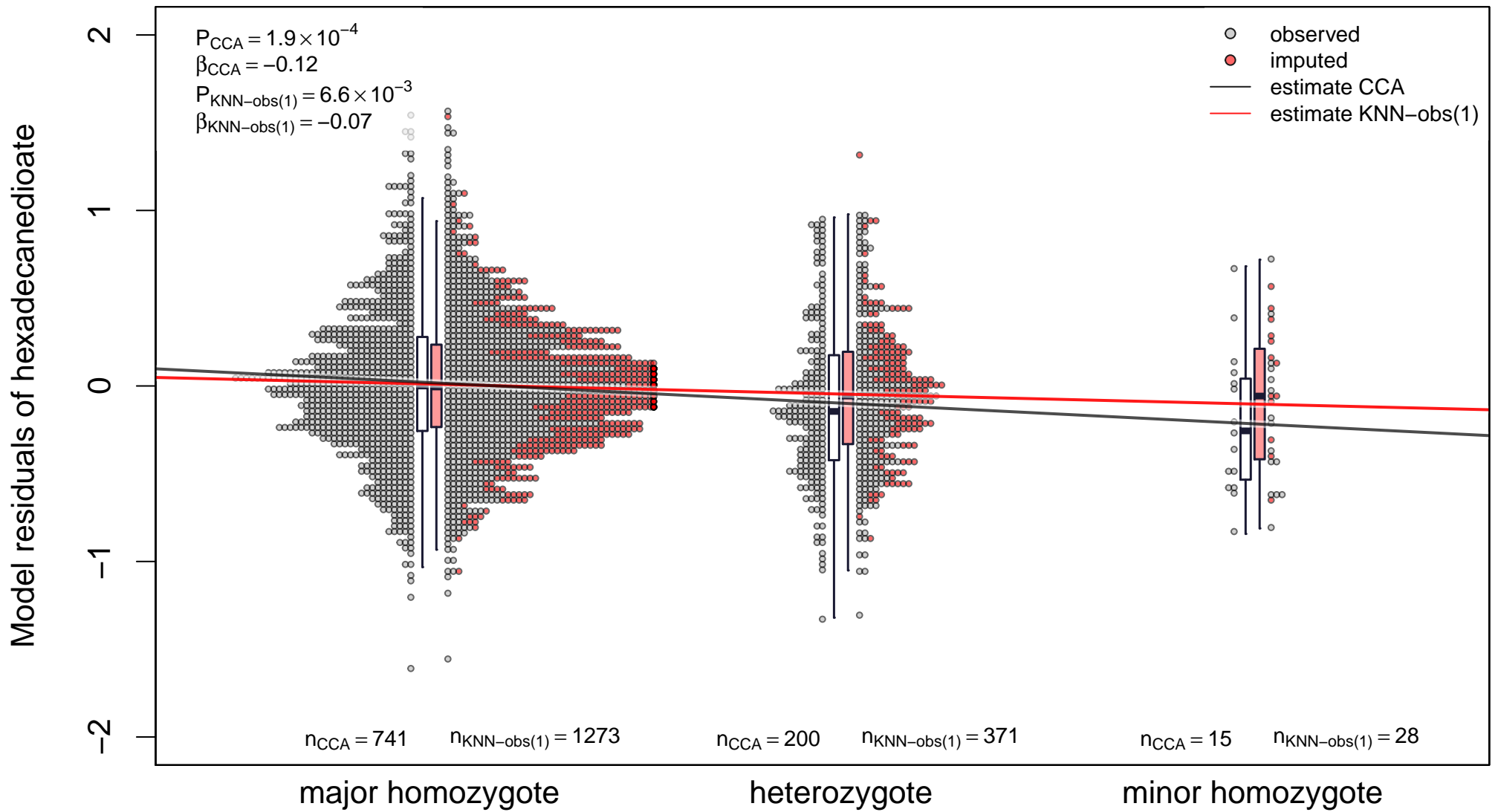
Genotype of SNP rs6663731 (CYP4A11)

# KNN-obs-sel(5)



Genotype of SNP rs6663731 (CYP4A11)

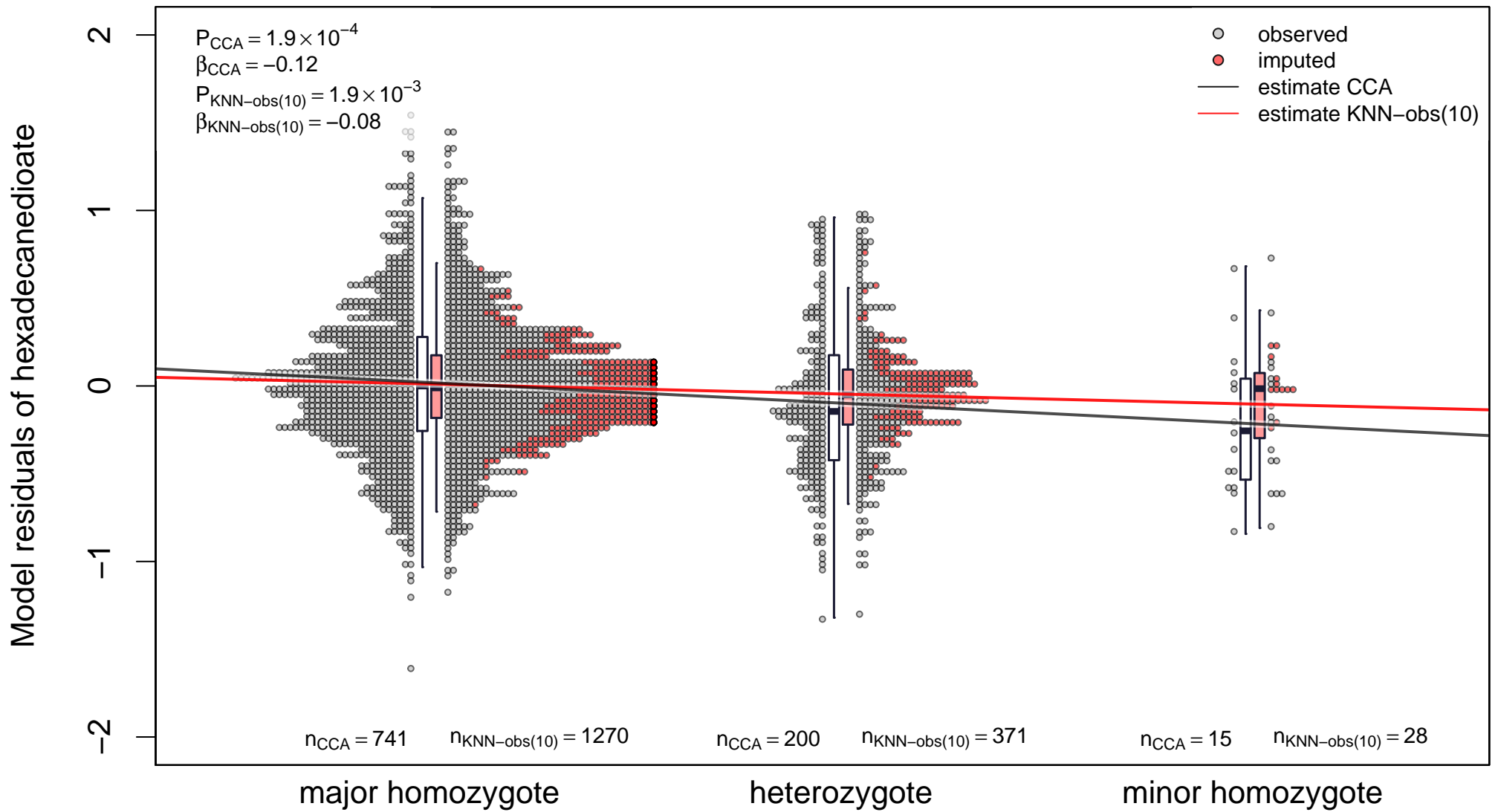
# KNN-obs(1)



Genotype of SNP rs6663731 (CYP4A11)

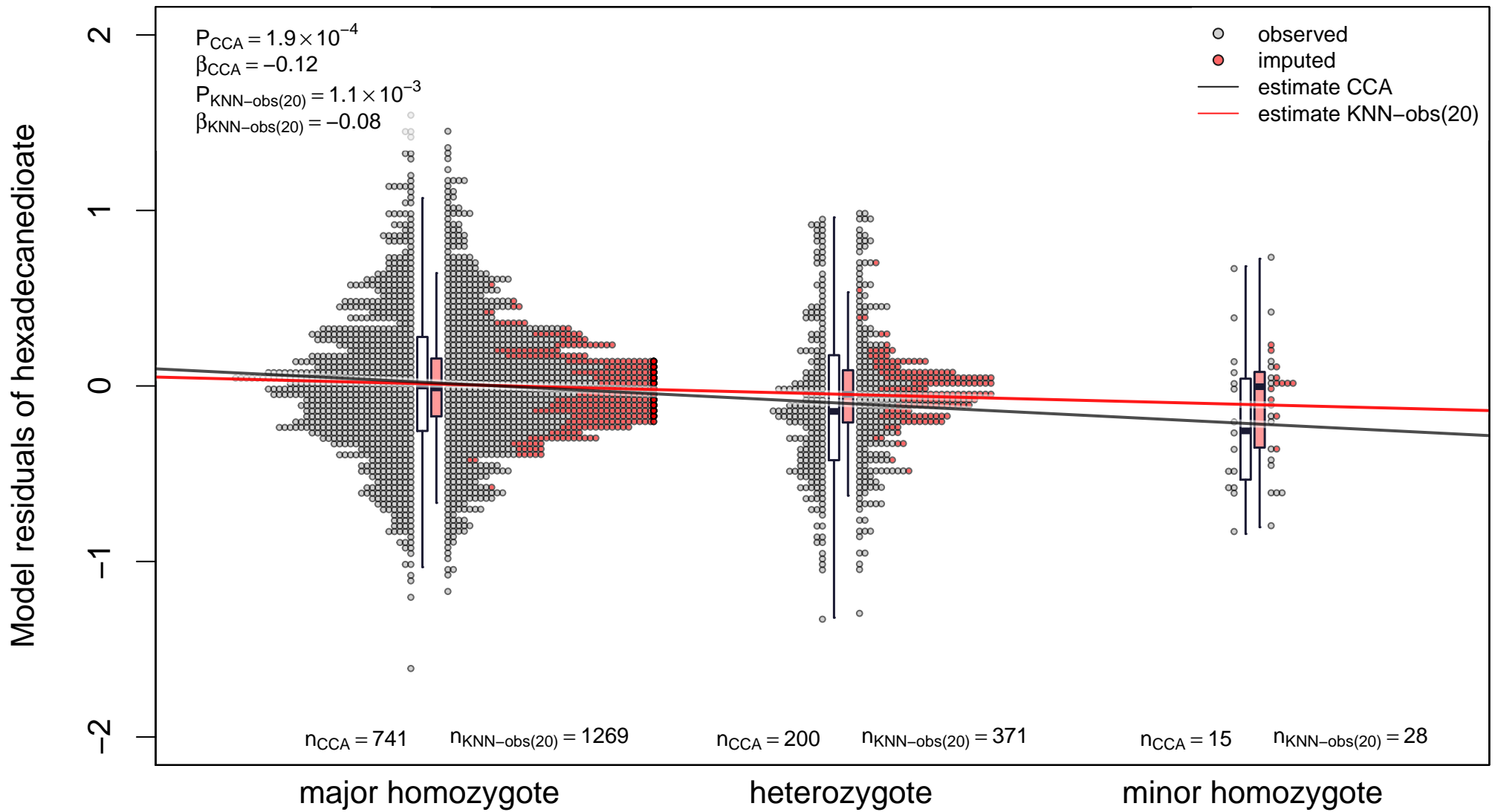


# KNN-obs(10)



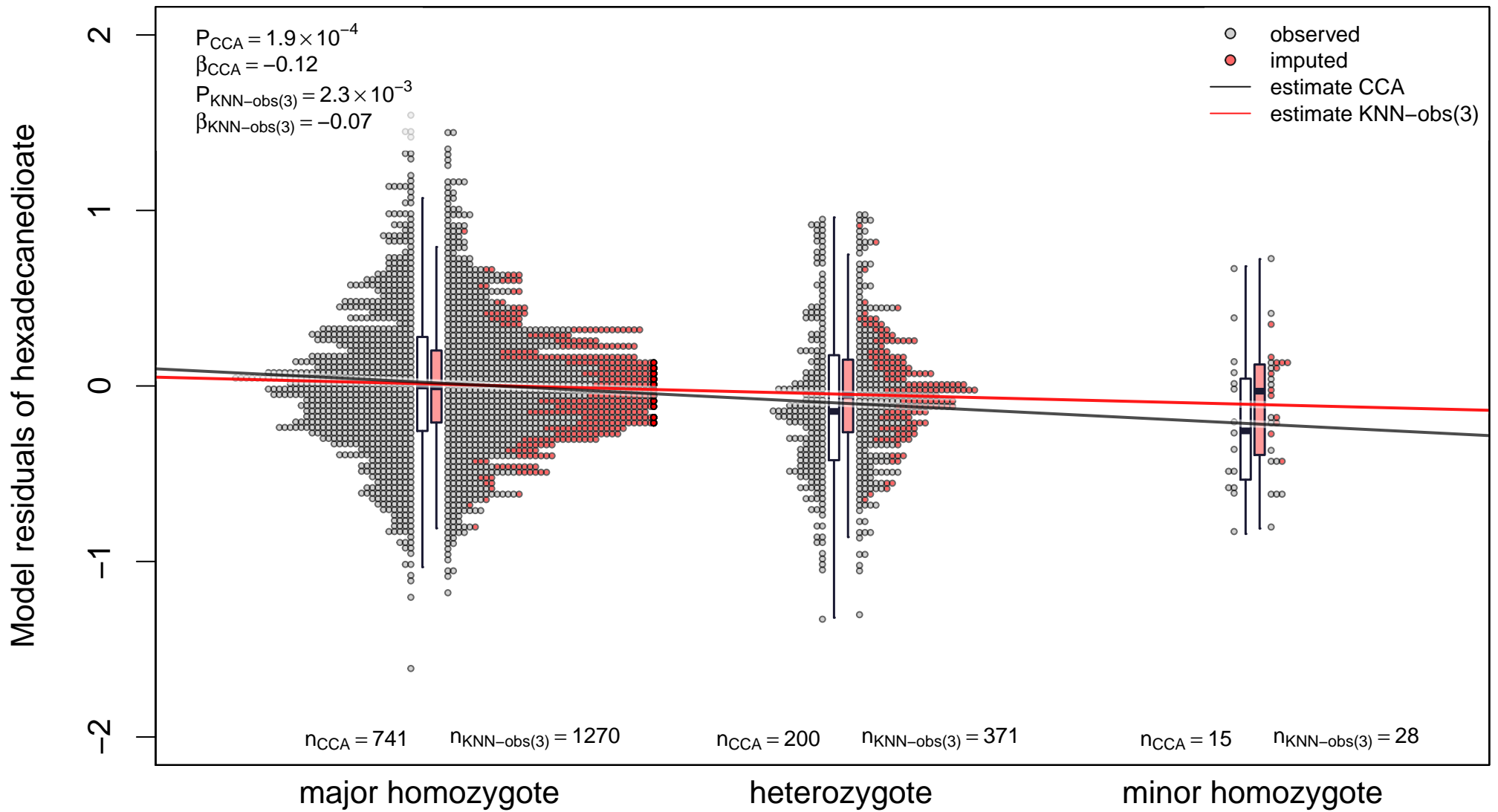
Genotype of SNP rs6663731 (CYP4A11)

# KNN-obs(20)

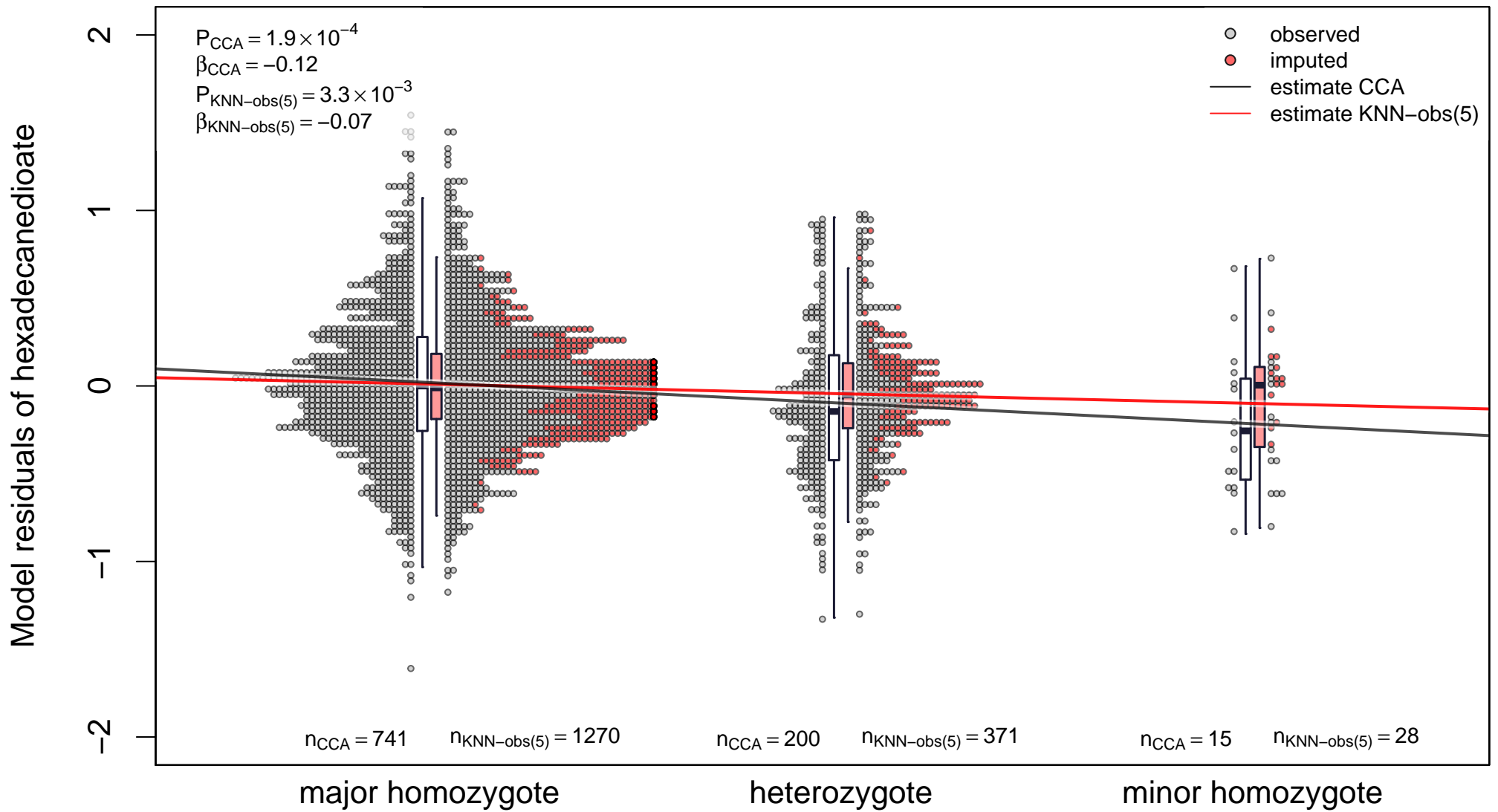


Genotype of SNP rs6663731 (CYP4A11)

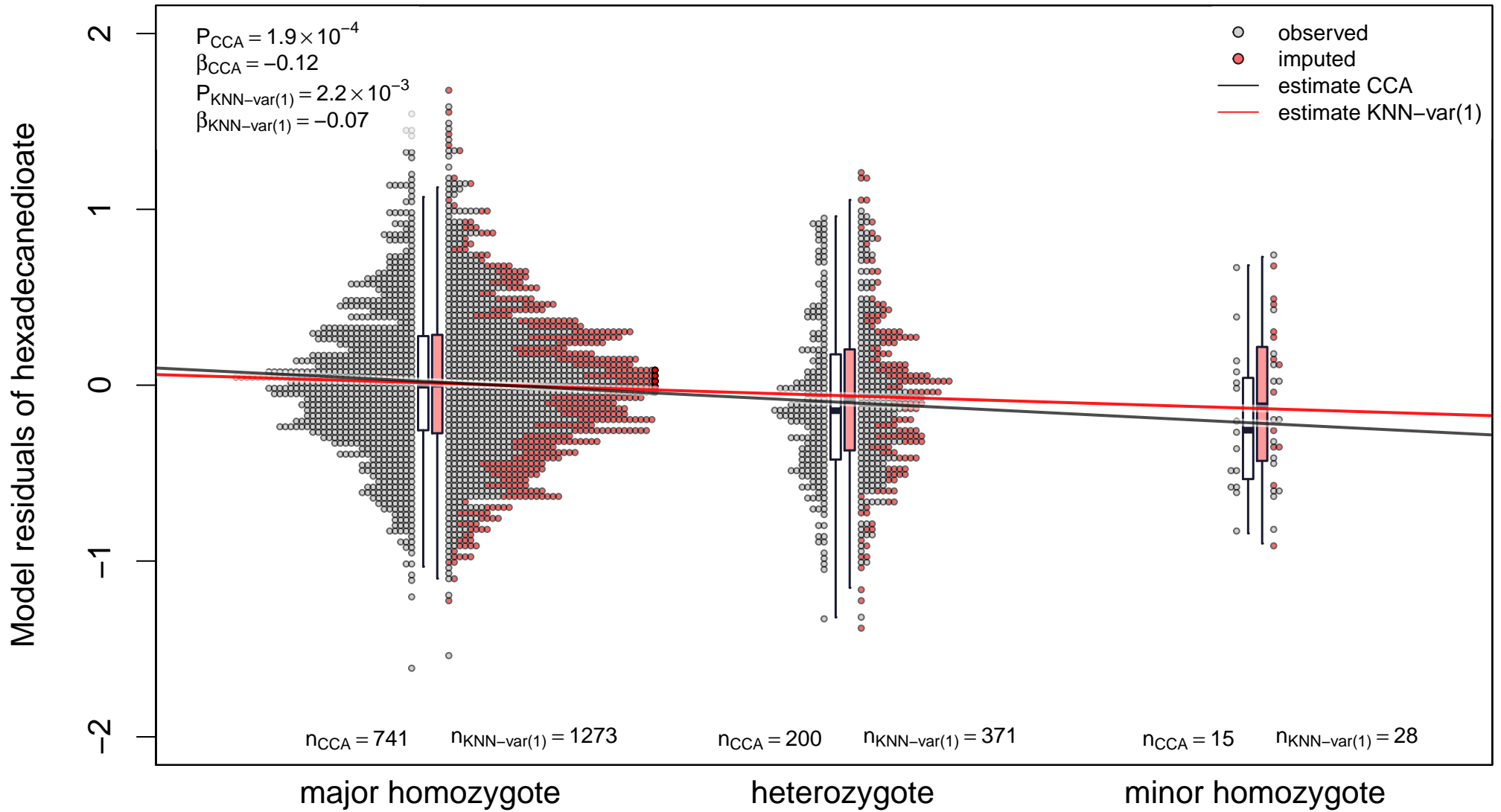
# KNN-obs(3)



# KNN-obs(5)

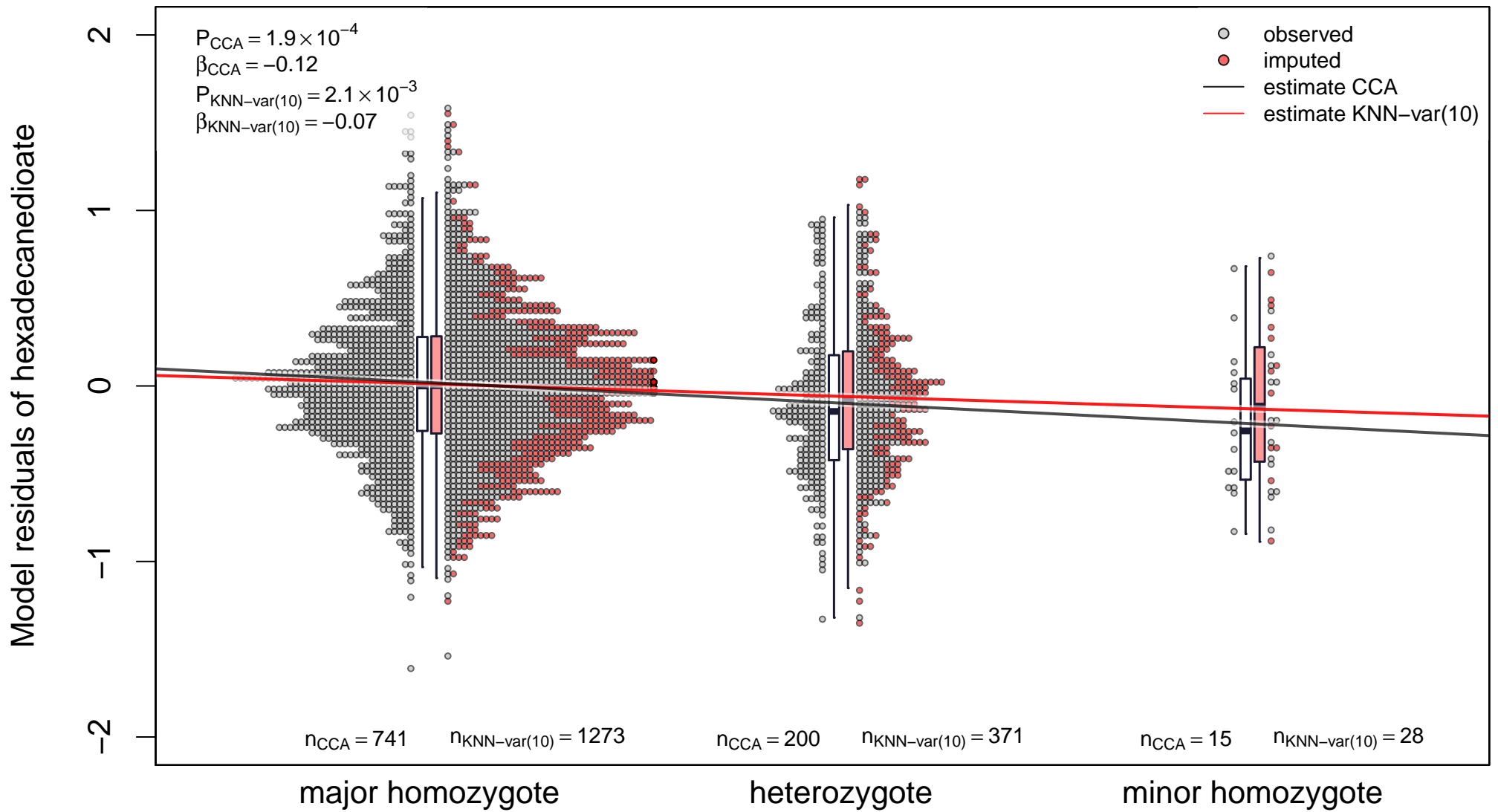


# KNN-var(1)



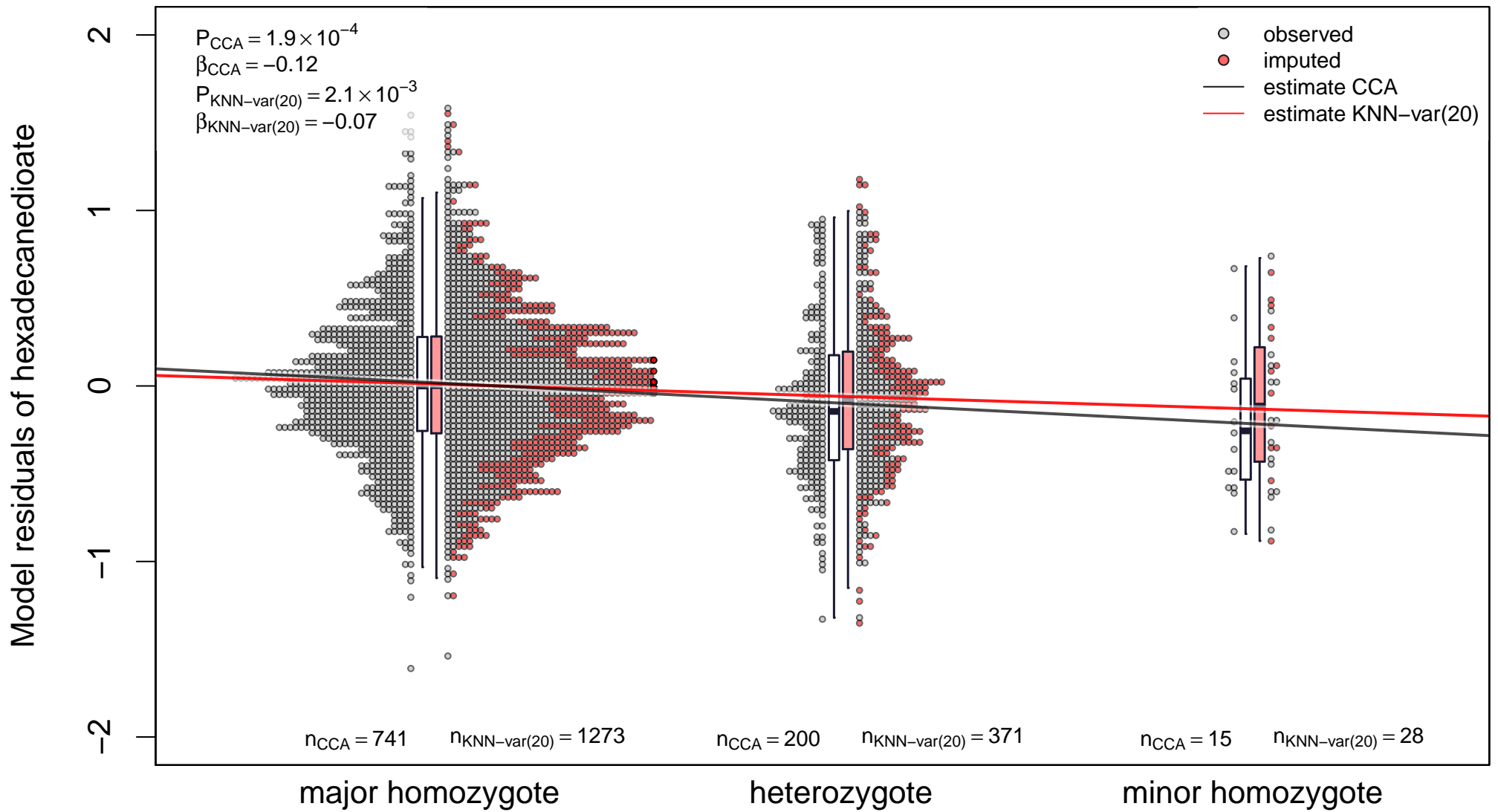
Genotype of SNP rs6663731 (CYP4A11)

# KNN-var(10)



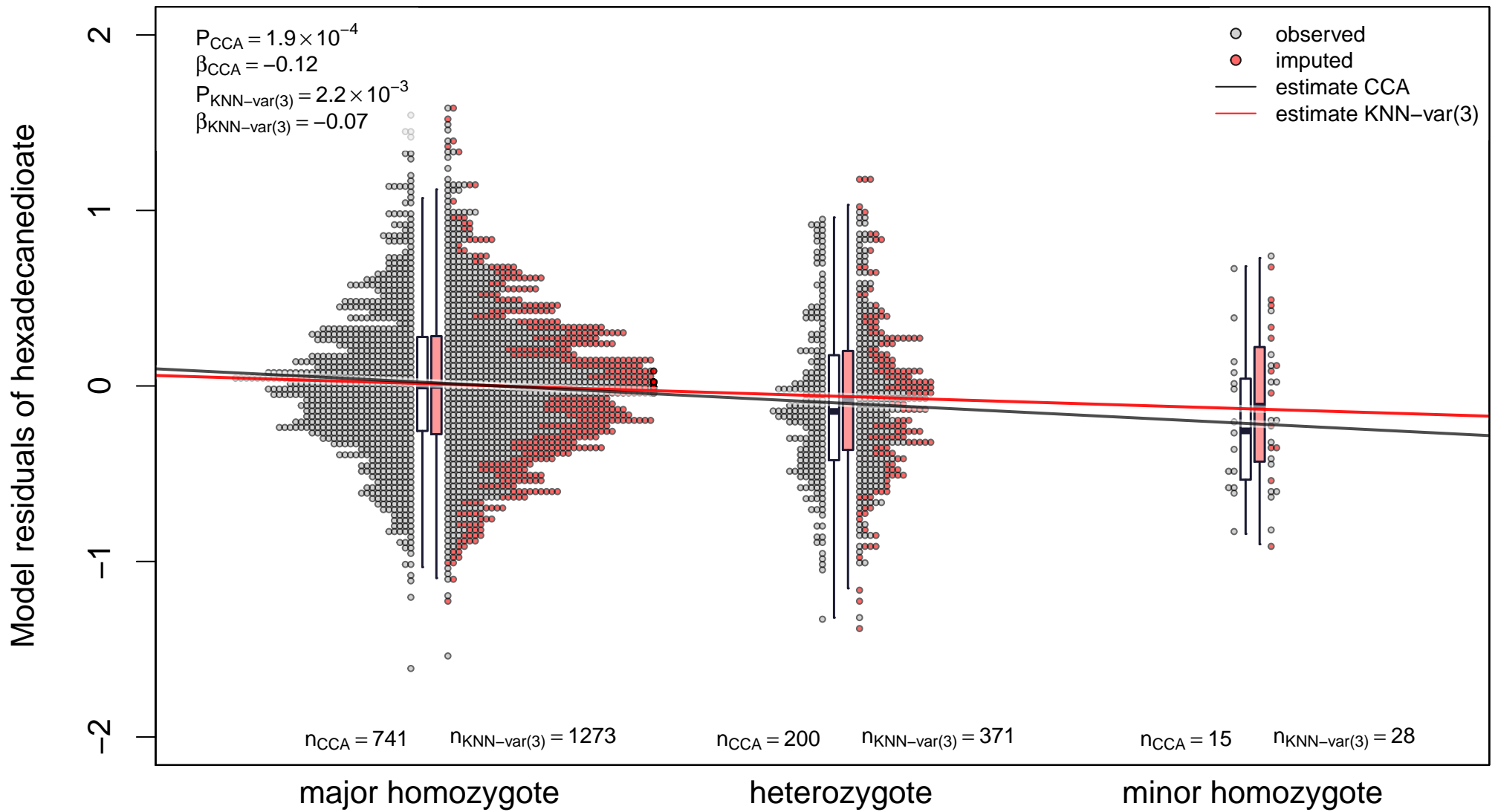
Genotype of SNP rs6663731 (CYP4A11)

# KNN-var(20)



Genotype of SNP rs6663731 (CYP4A11)

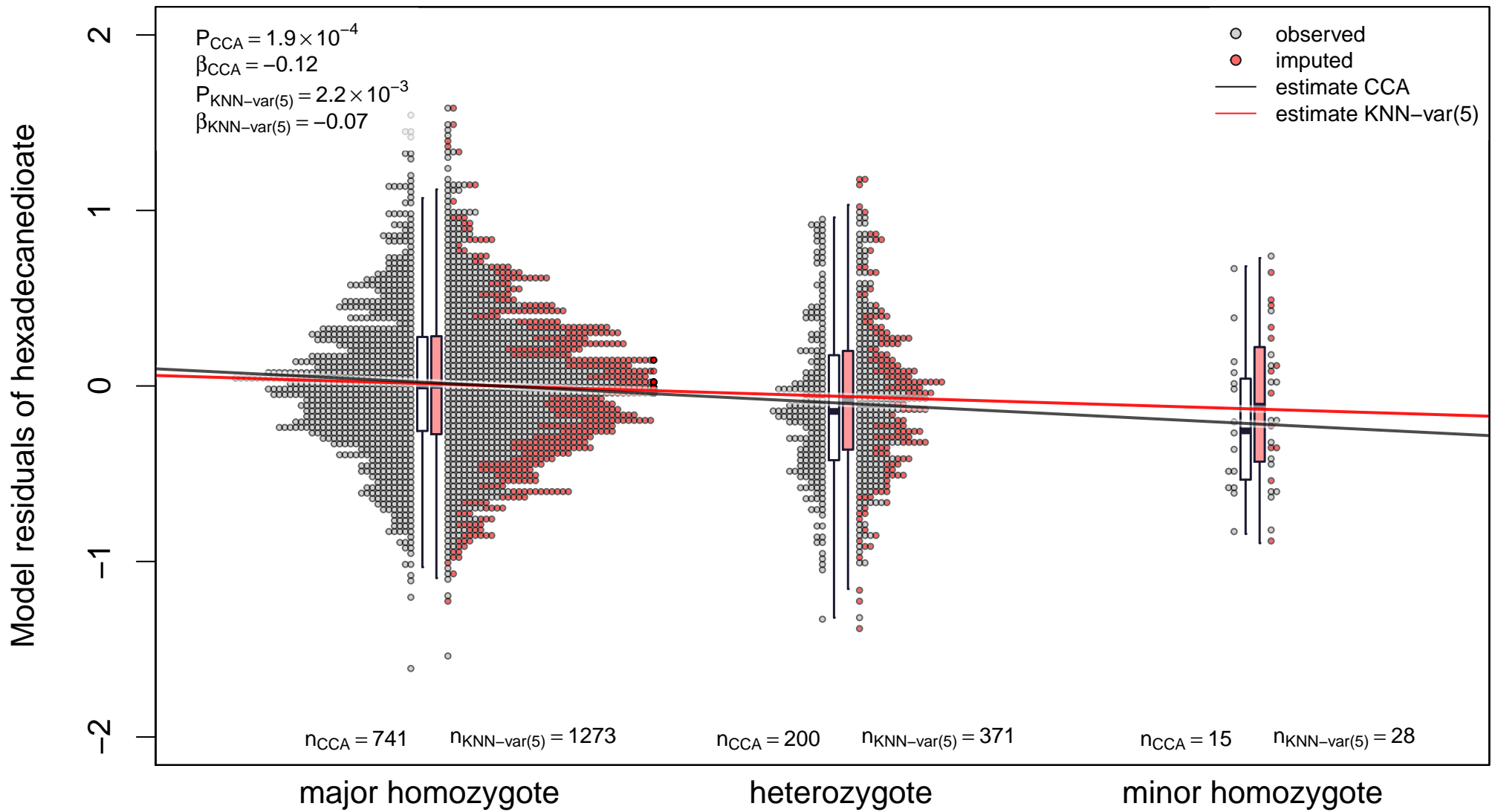
# KNN-var(3)



Genotype of SNP rs6663731 (CYP4A11)

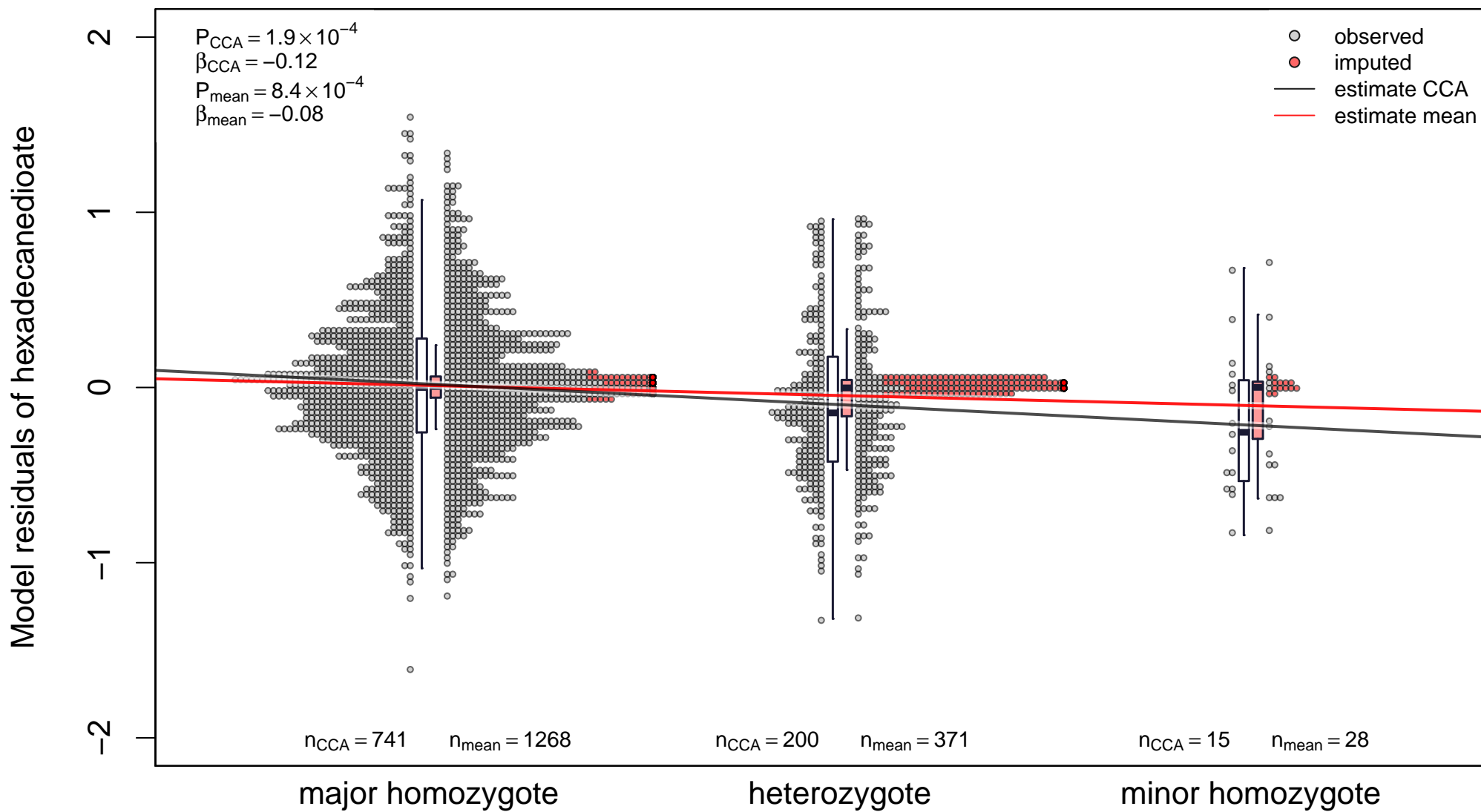


# KNN-var(5)



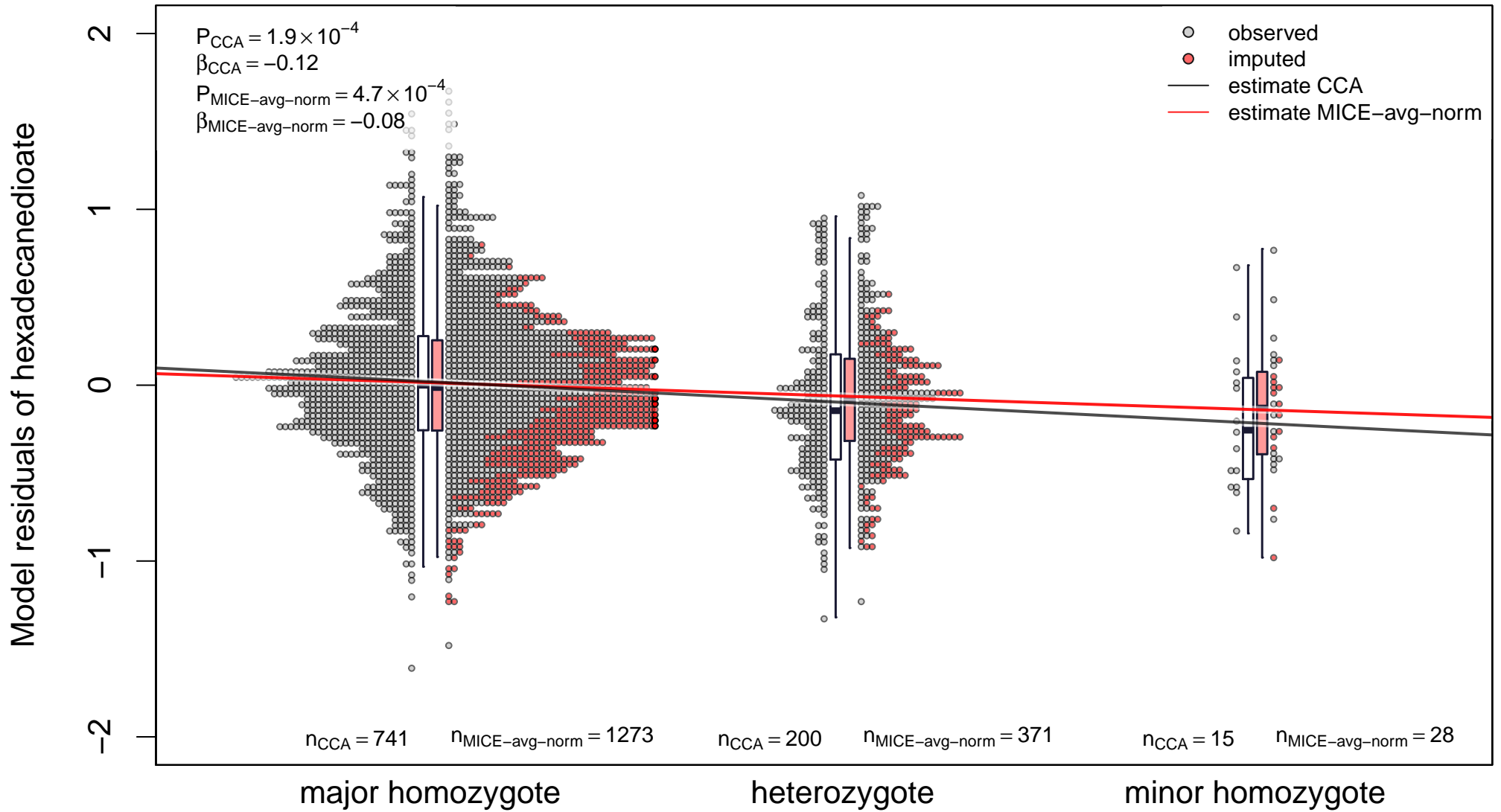
Genotype of SNP rs6663731 (CYP4A11)

# mean



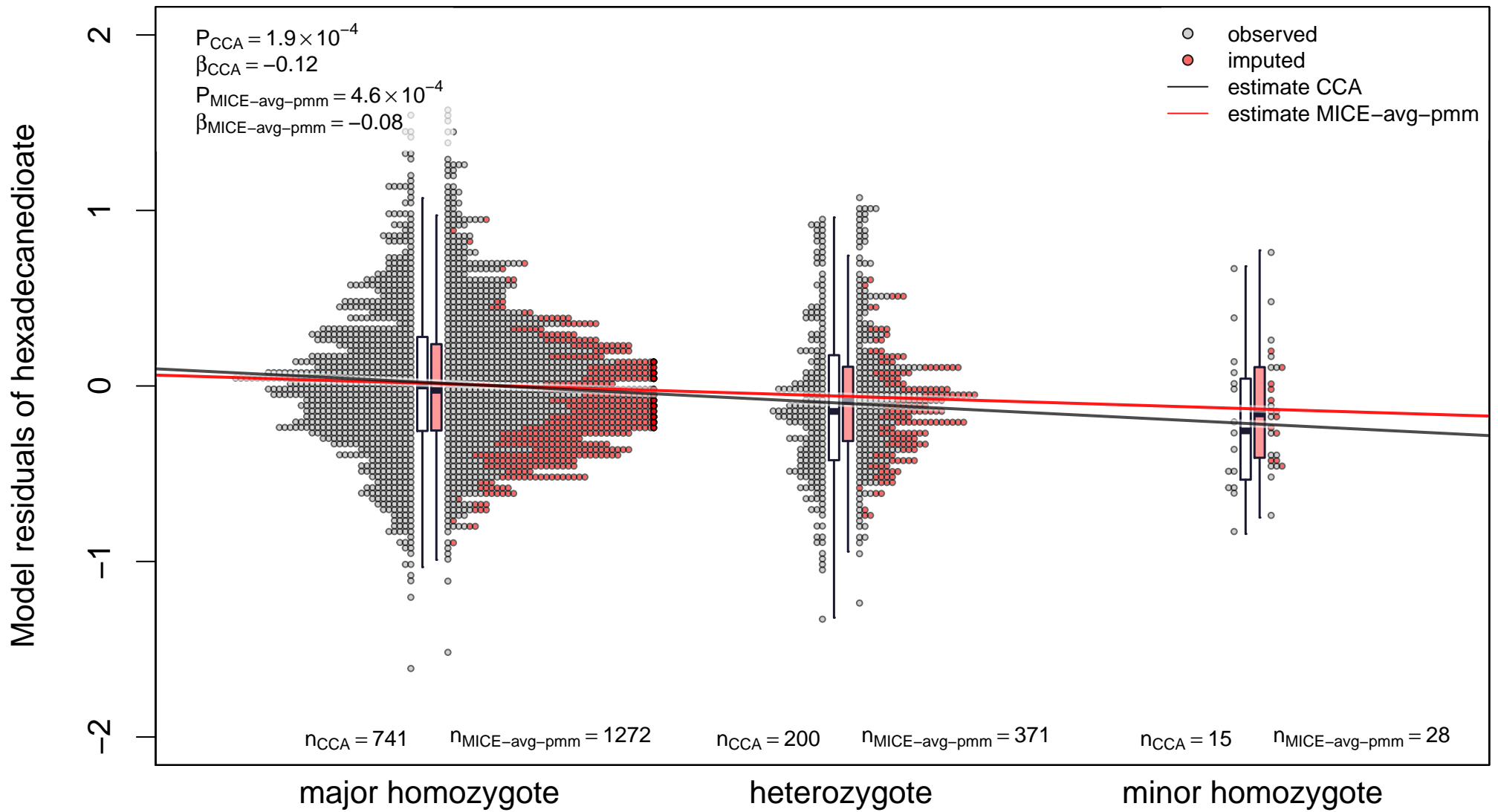
Genotype of SNP rs6663731 (CYP4A11)

# MICE-avg-norm



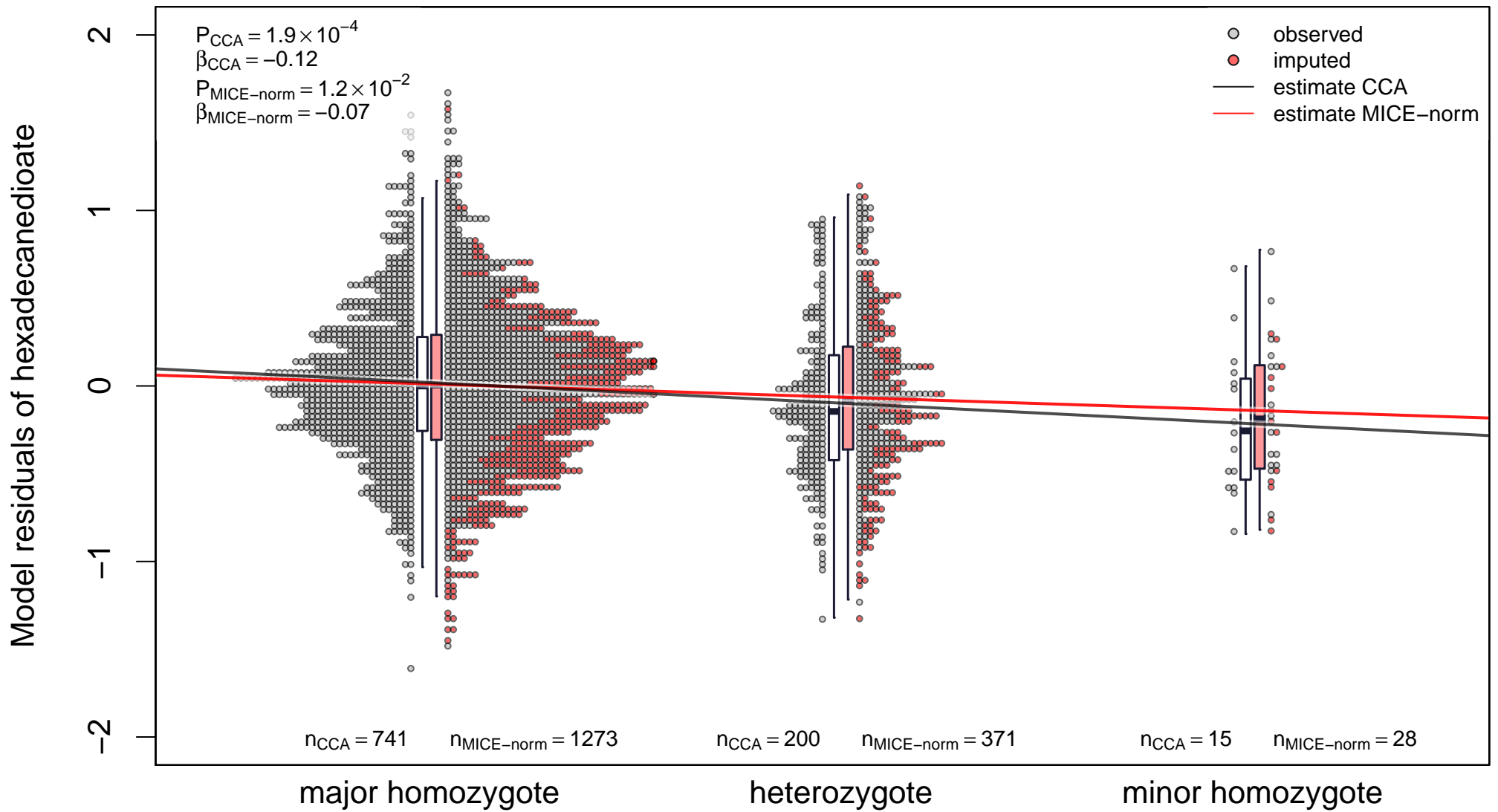
Genotype of SNP rs6663731 (CYP4A11)

# MICE-avg-pmm



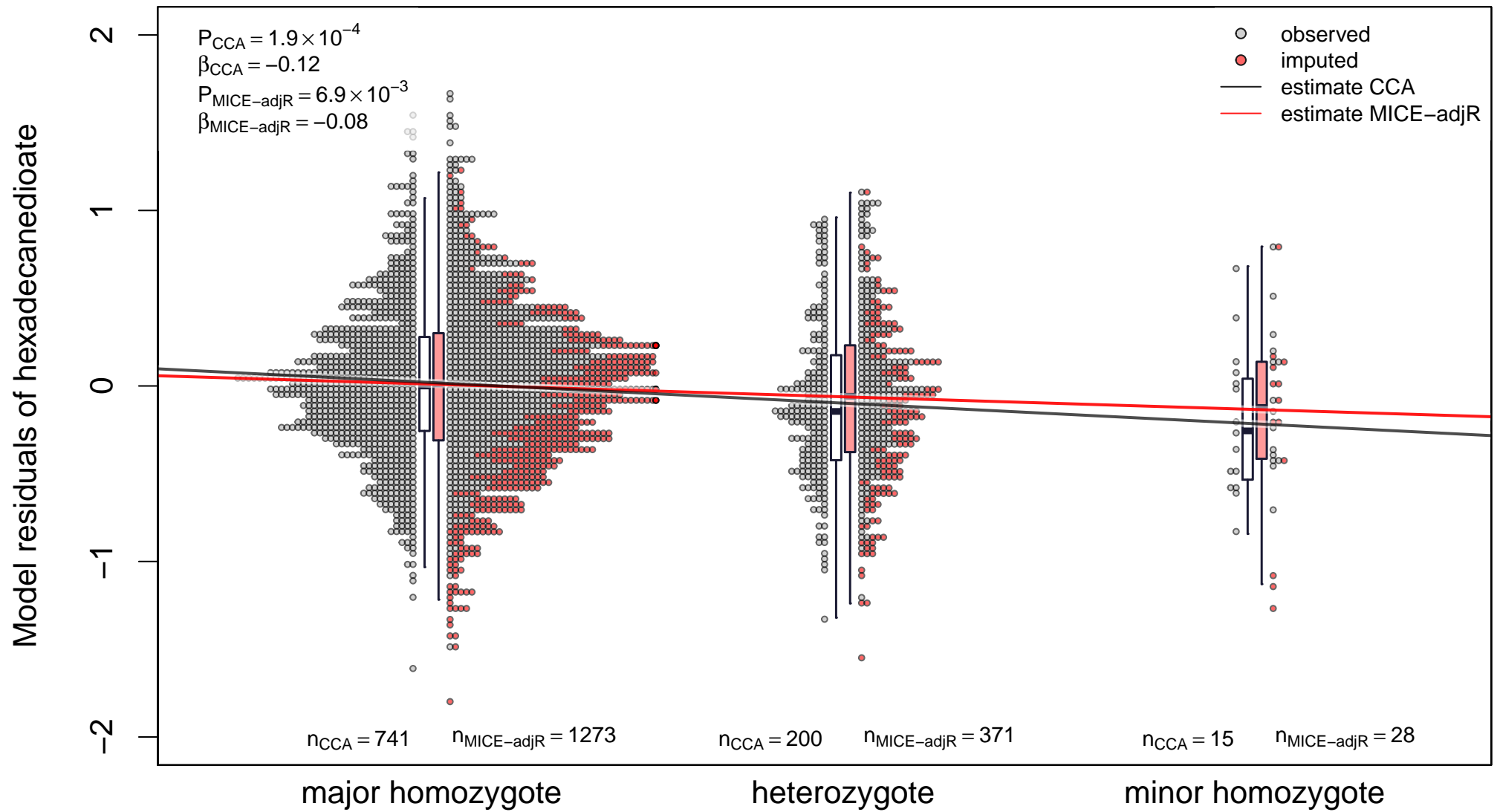
Genotype of SNP rs6663731 (CYP4A11)

# MICE-norm



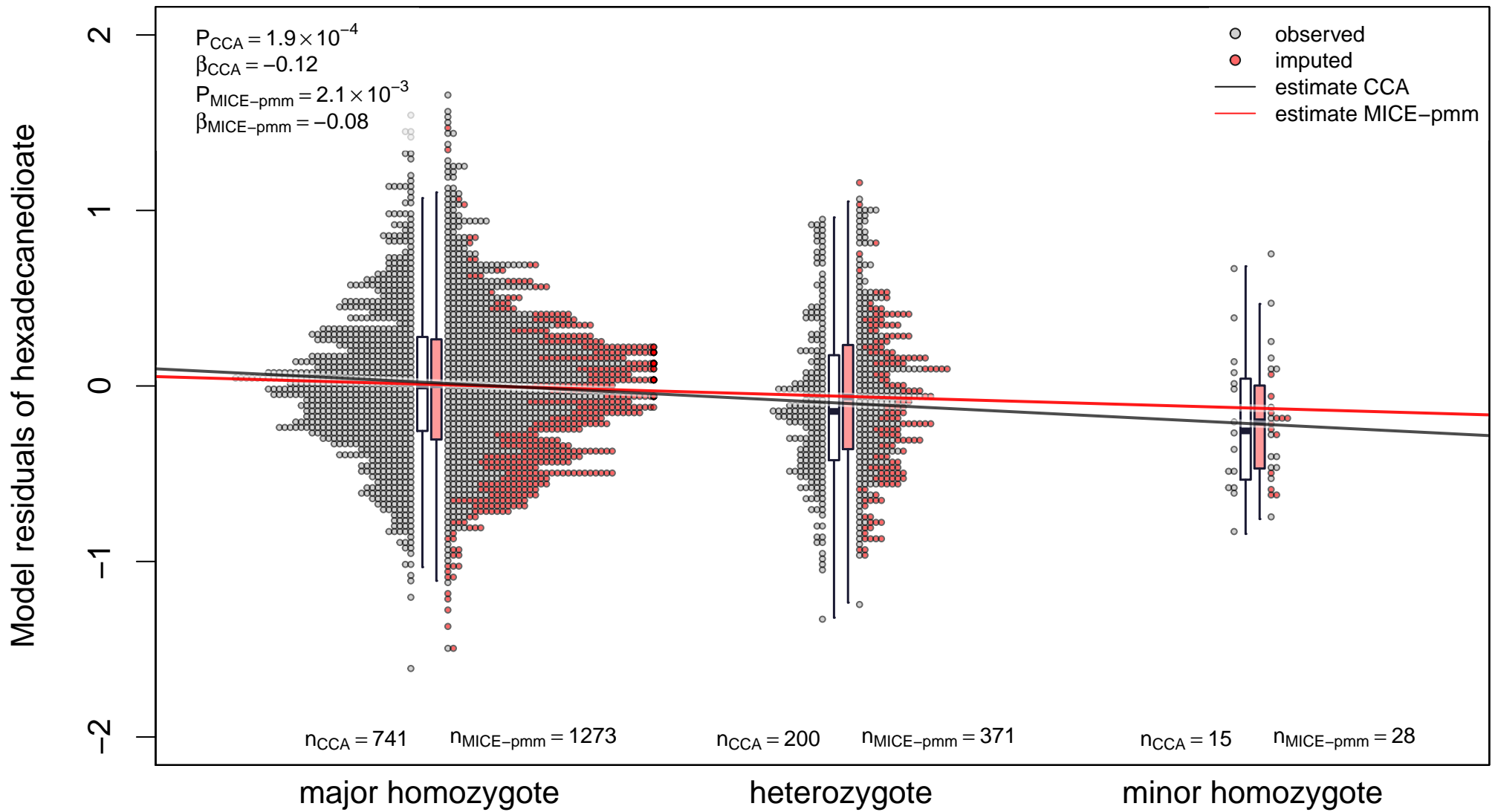
Genotype of SNP rs6663731 (CYP4A11)

# MICE-adjR



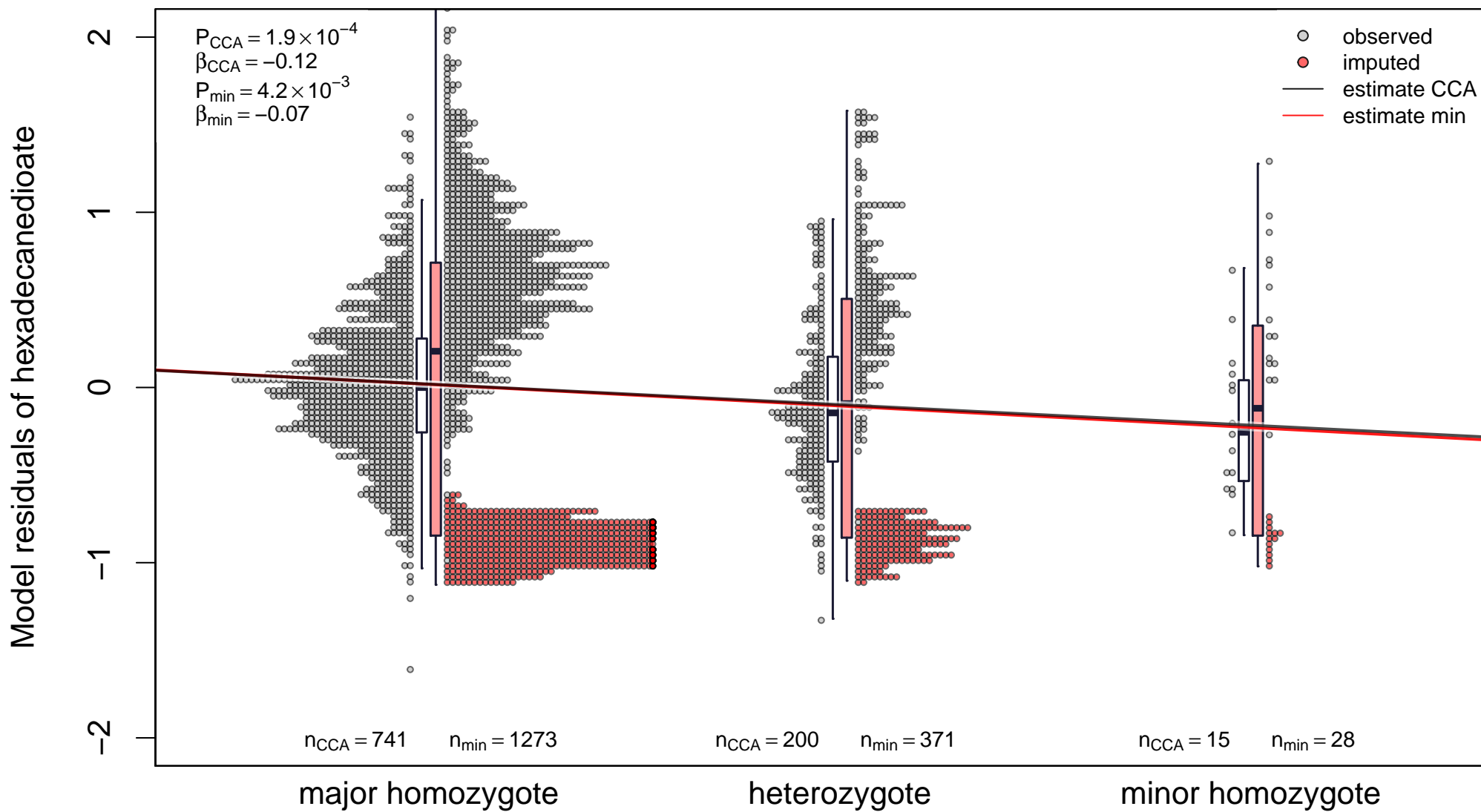
Genotype of SNP rs6663731 (CYP4A11)

# MICE-pmm



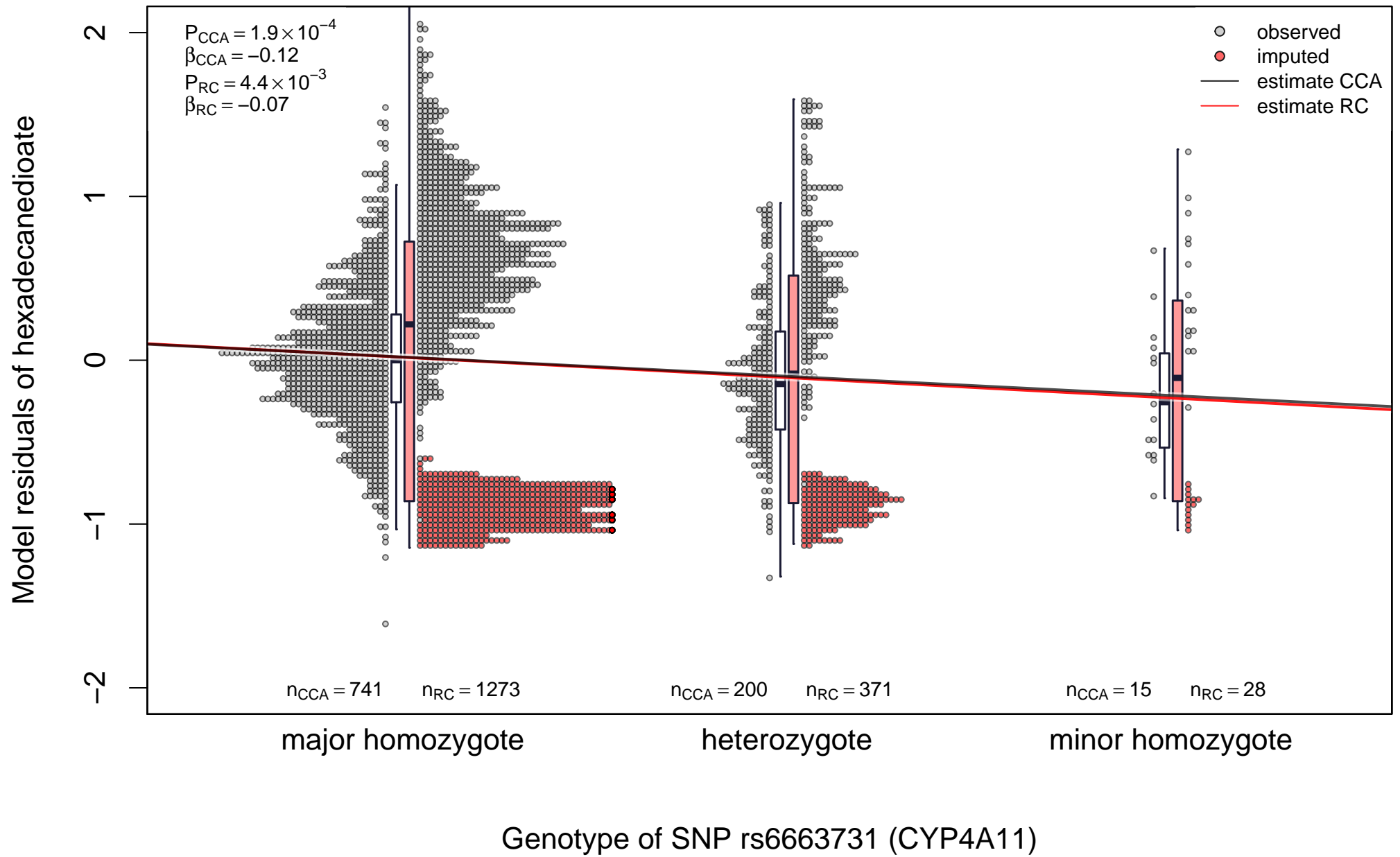
Genotype of SNP rs6663731 (CYP4A11)

min

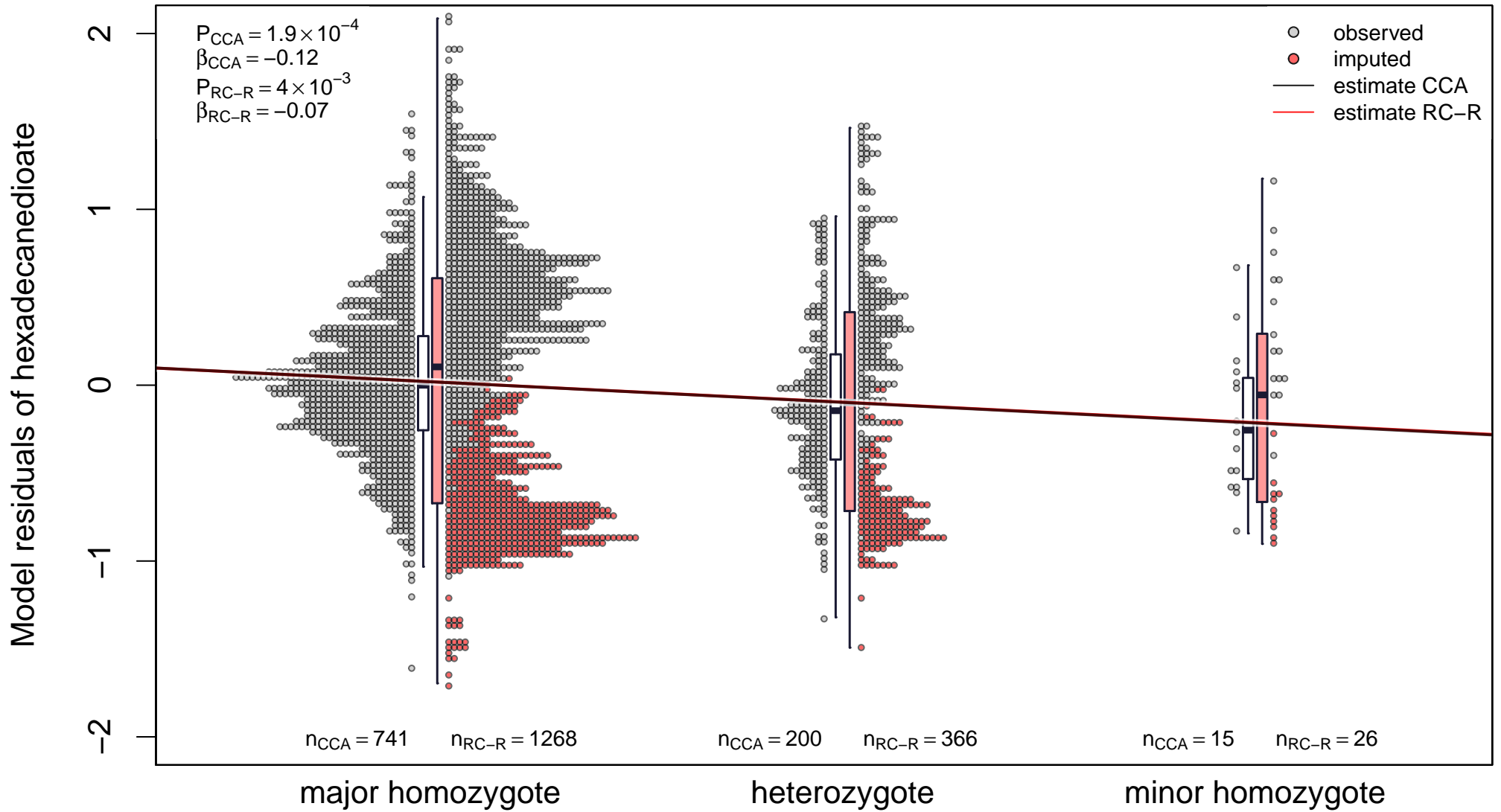




# RC

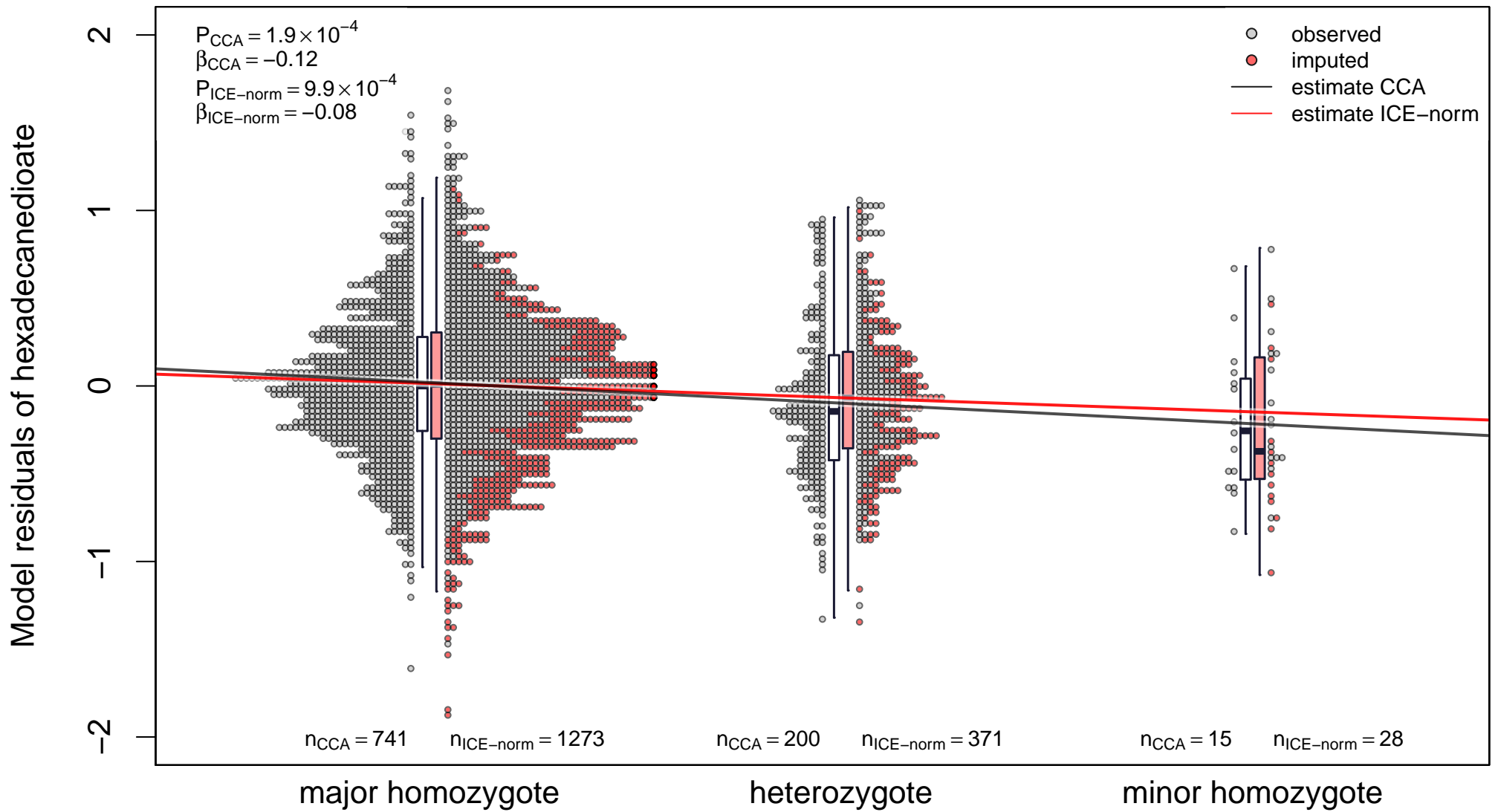


# RC-R



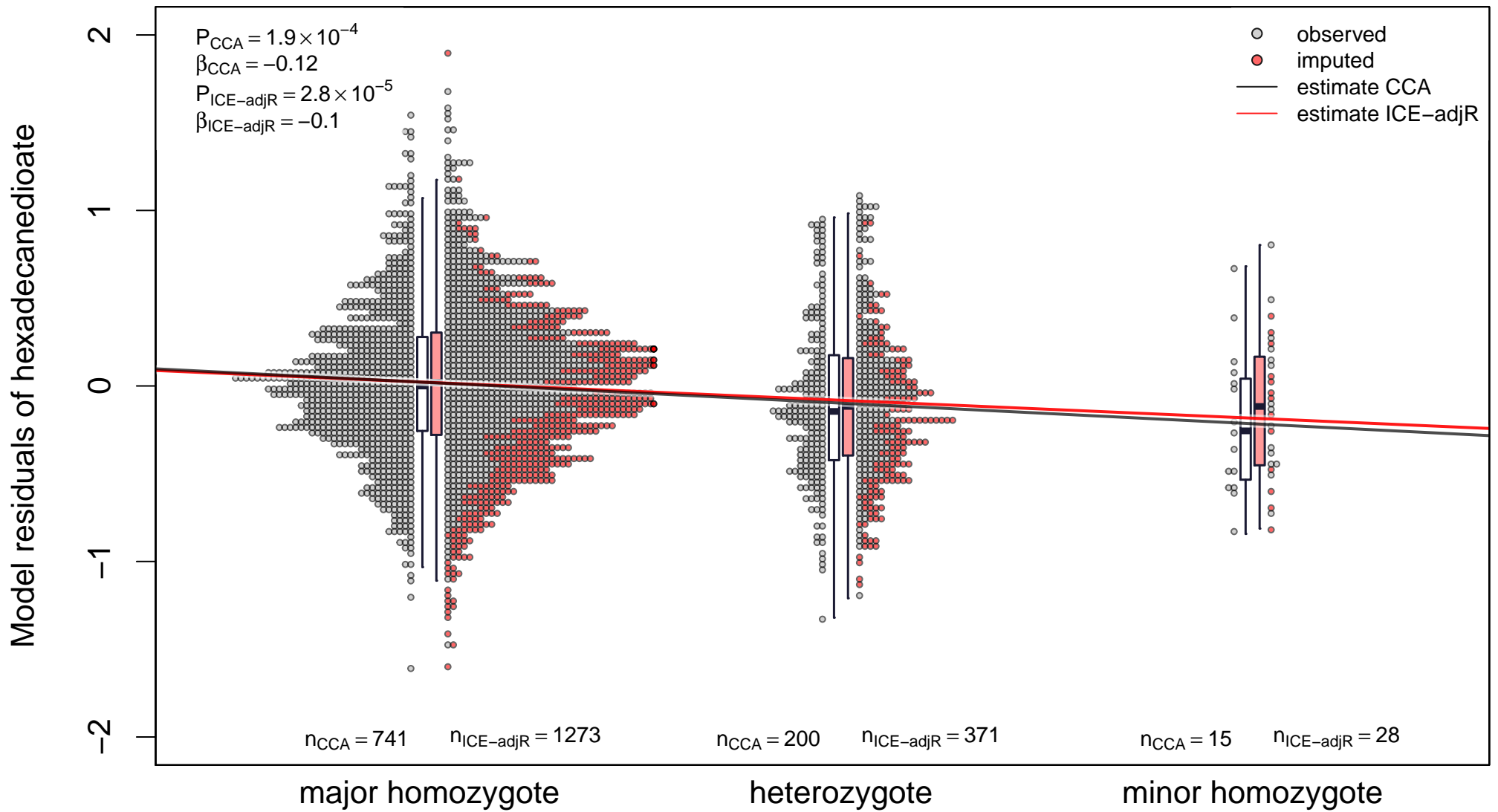
Genotype of SNP rs6663731 (CYP4A11)

# ICE-norm



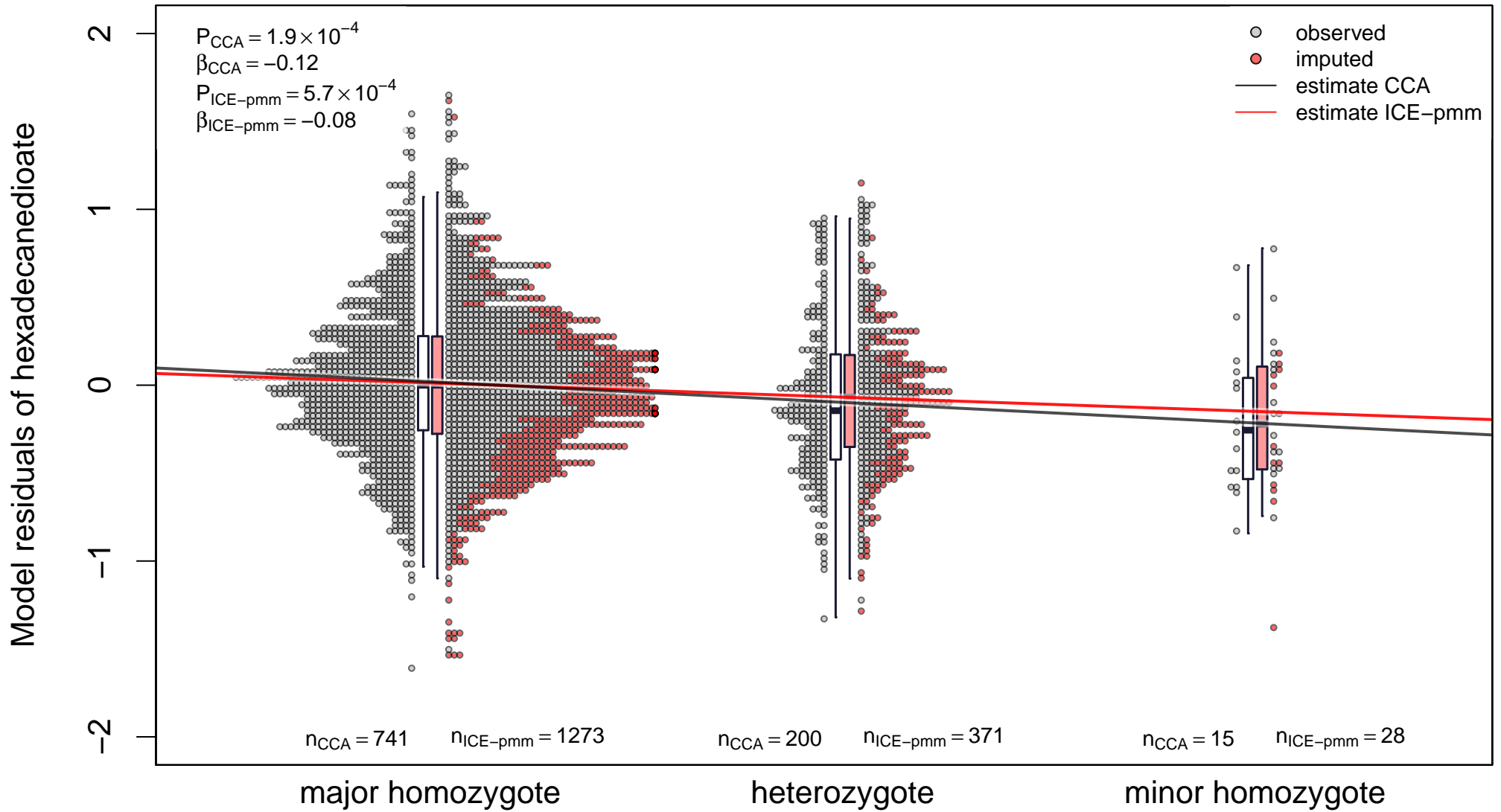
Genotype of SNP rs6663731 (CYP4A11)

# ICE-adjR



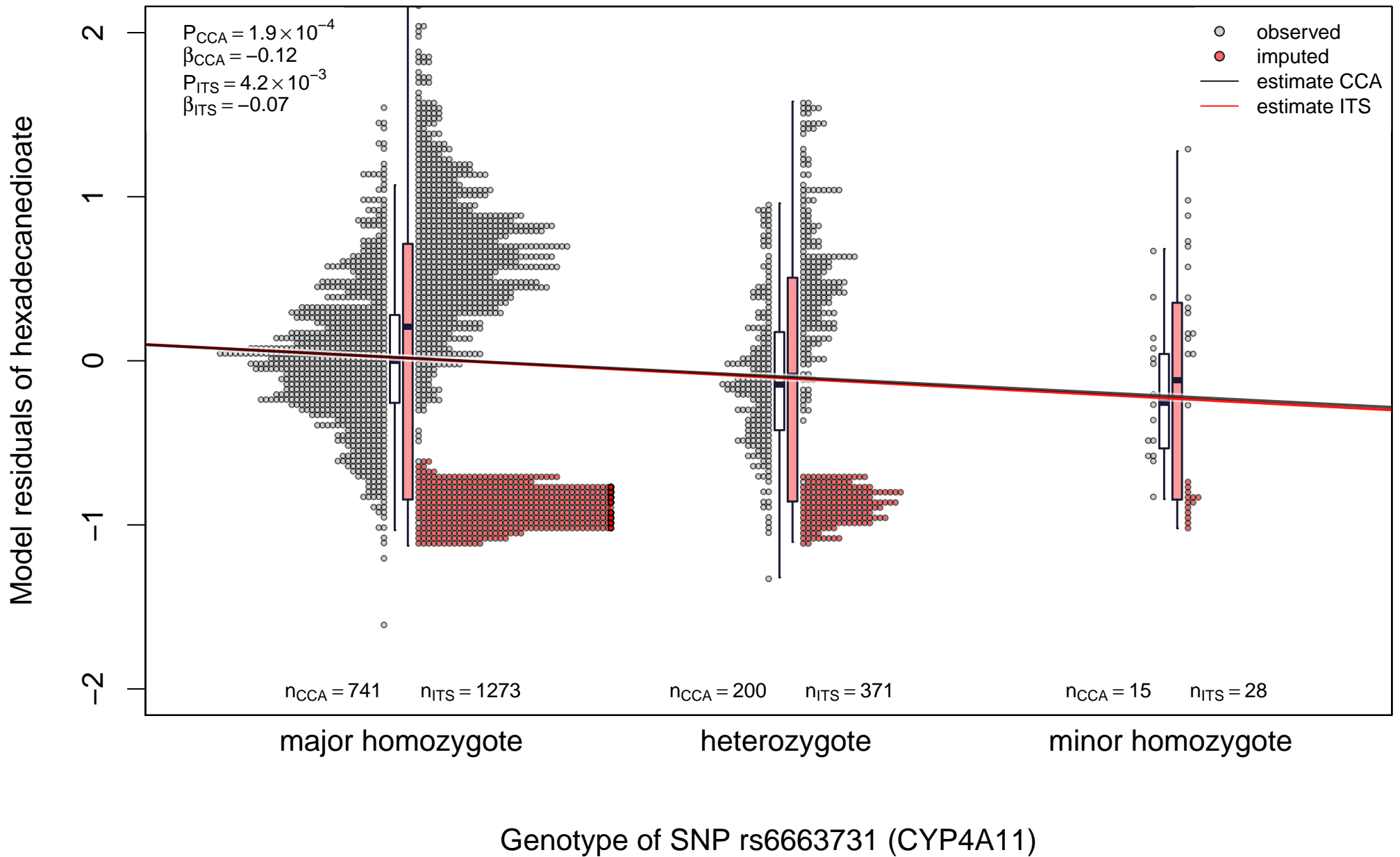
Genotype of SNP rs6663731 (CYP4A11)

# ICE-pmm

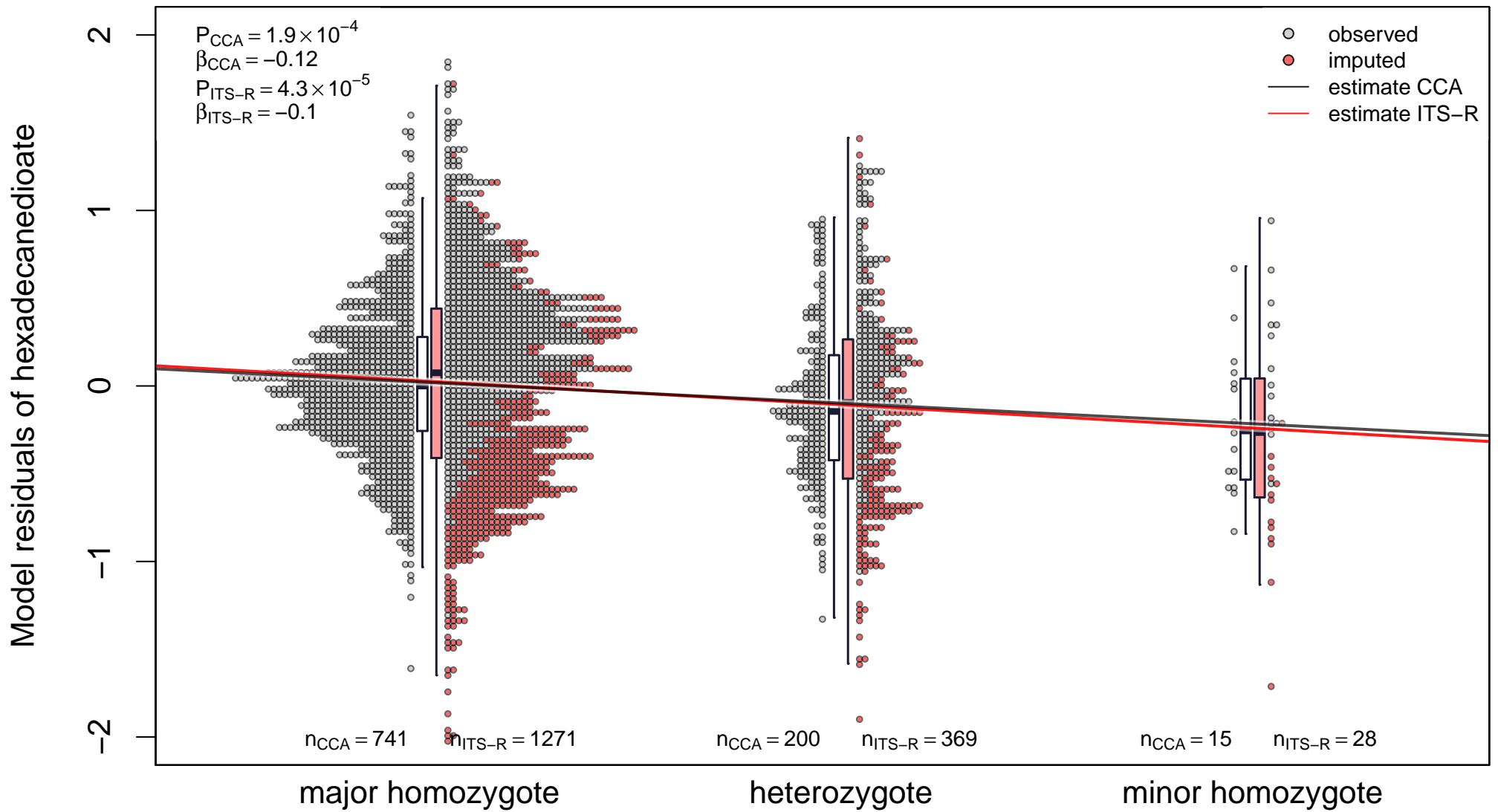


Genotype of SNP rs6663731 (CYP4A11)

# ITS

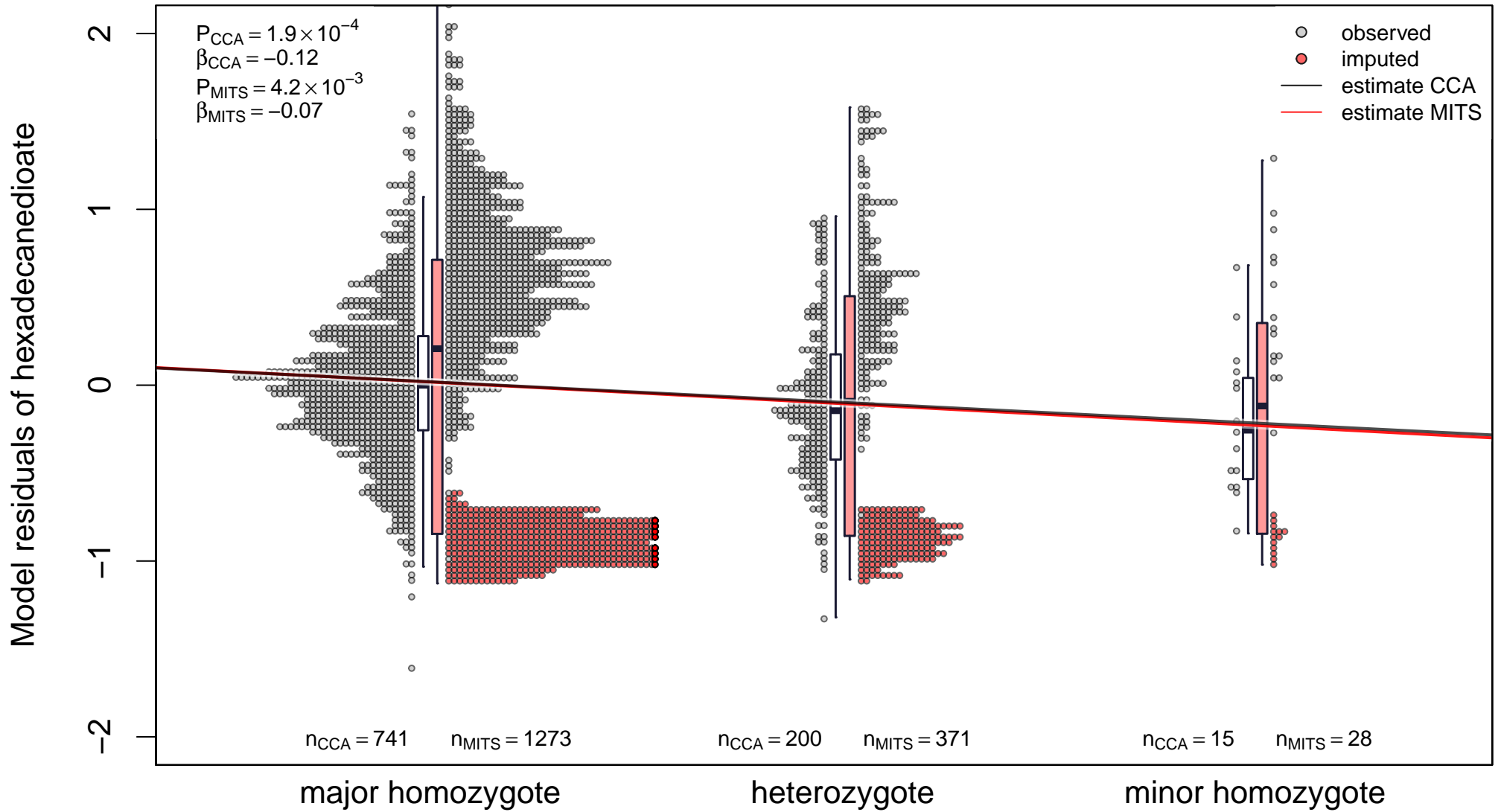


# ITS-R



Genotype of SNP rs6663731 (CYP4A11)

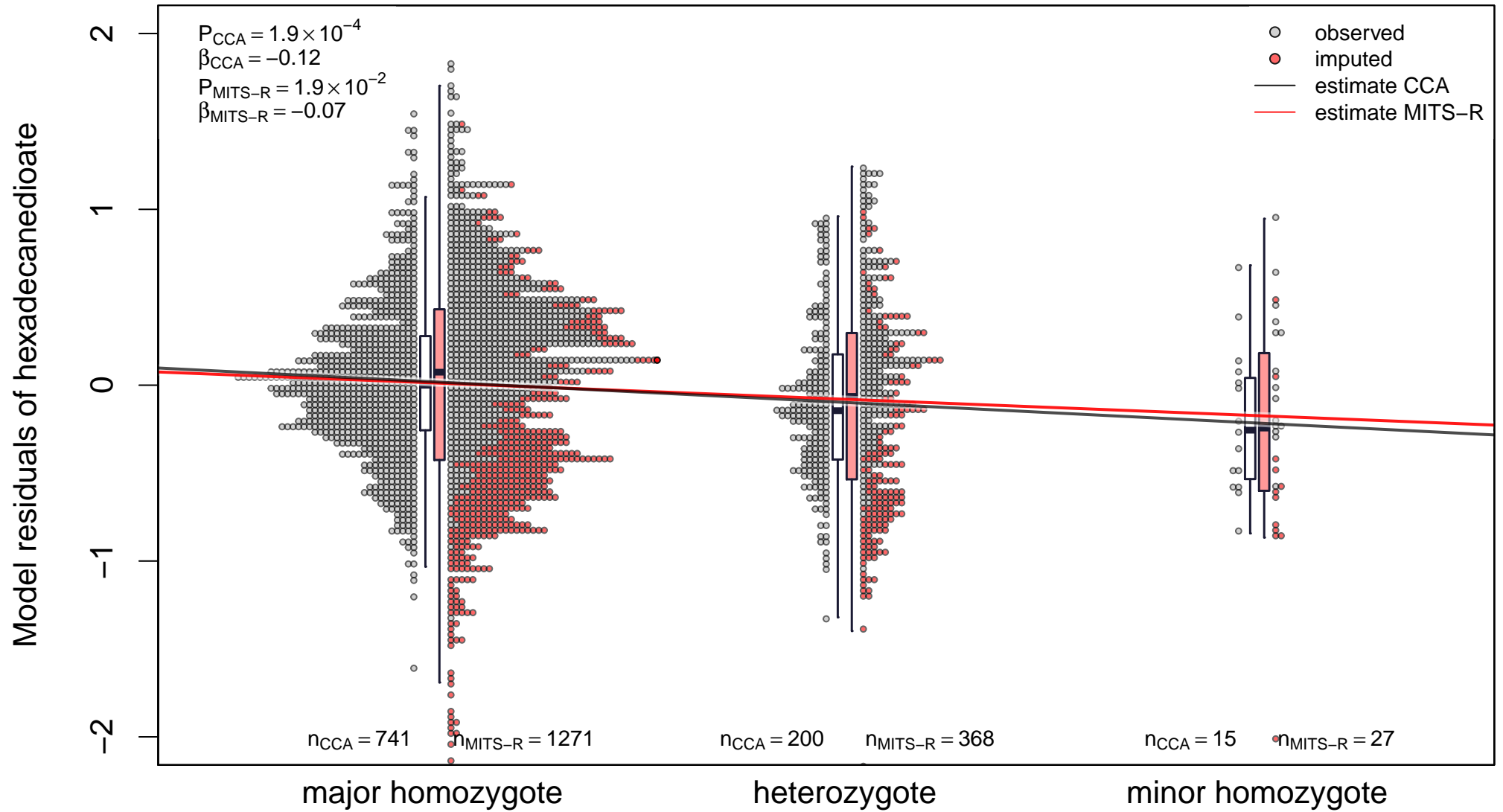
# MITS



Genotype of SNP rs6663731 (CYP4A11)

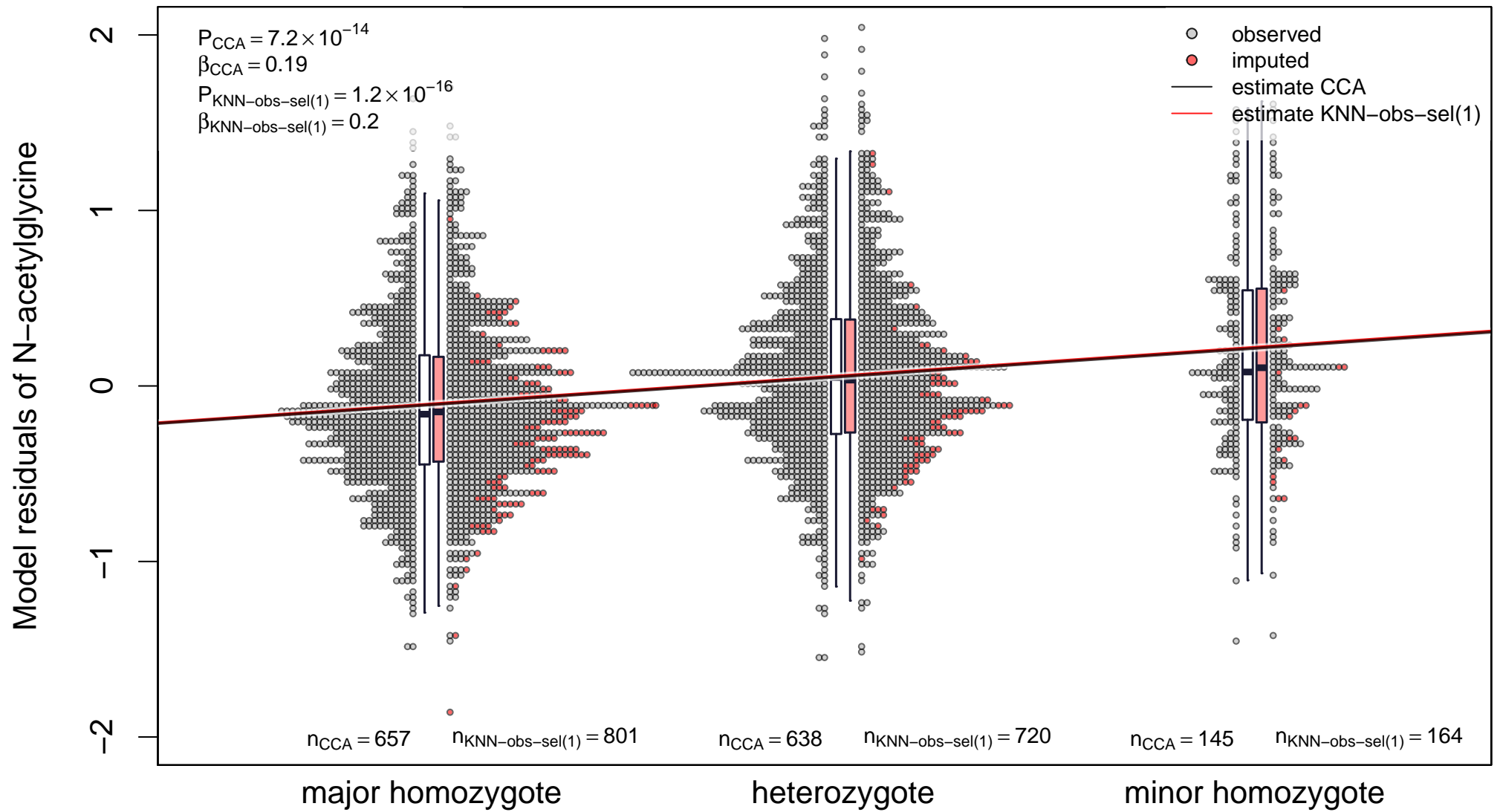


# MIT5-R



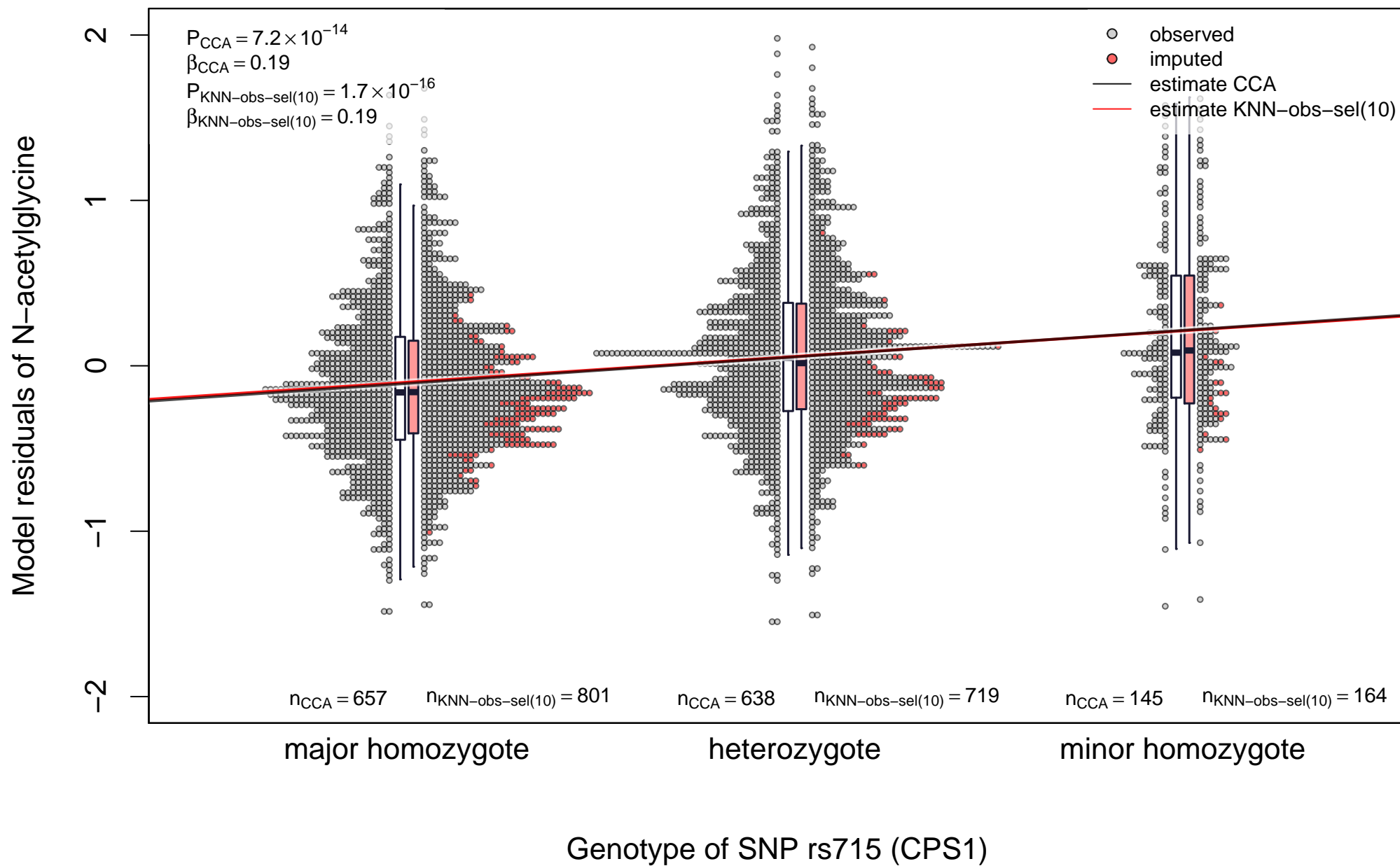
Genotype of SNP rs6663731 (CYP4A11)

# KNN-obs-sel(1)

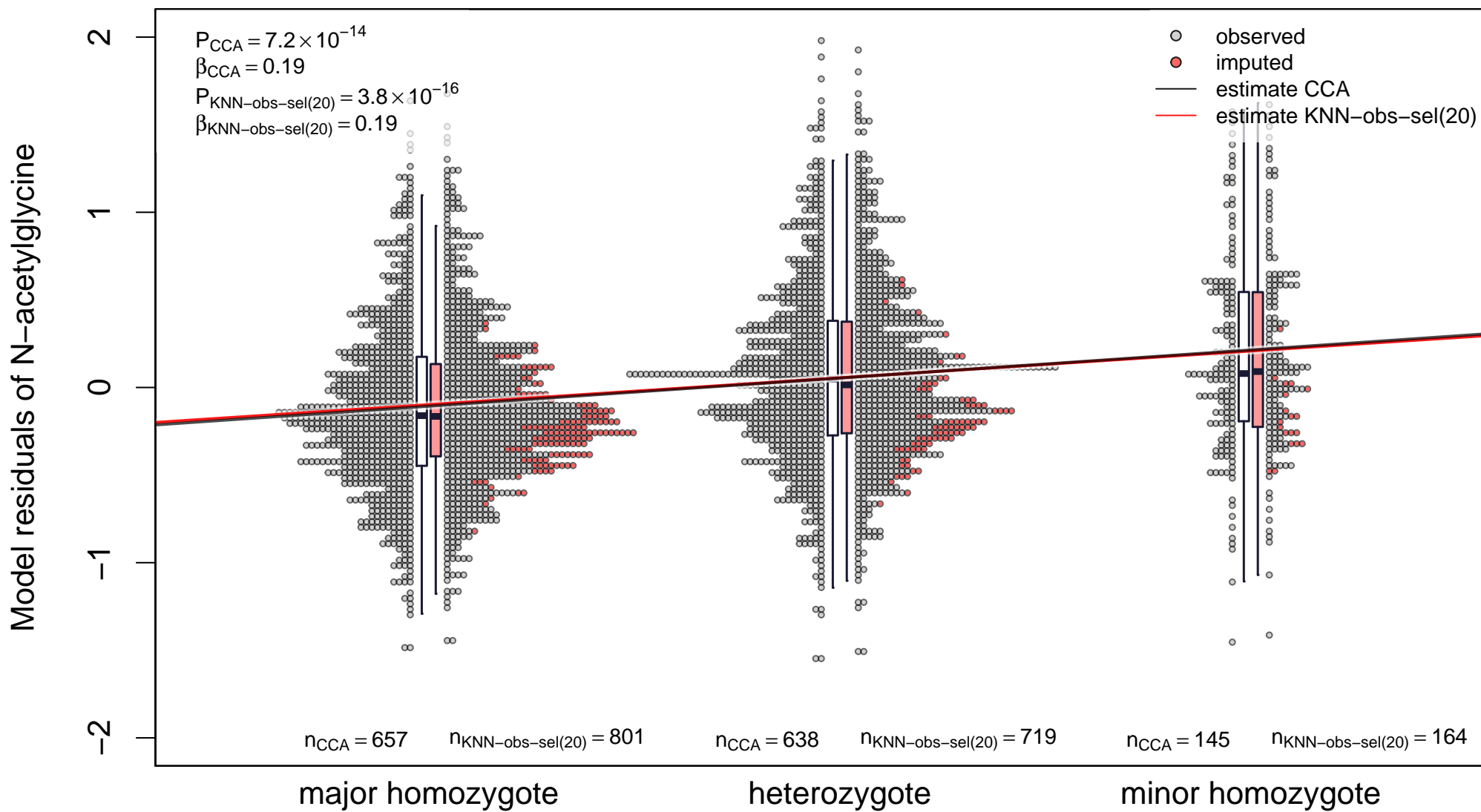


Genotype of SNP rs715 (CPS1)

# KNN-obs-sel(10)

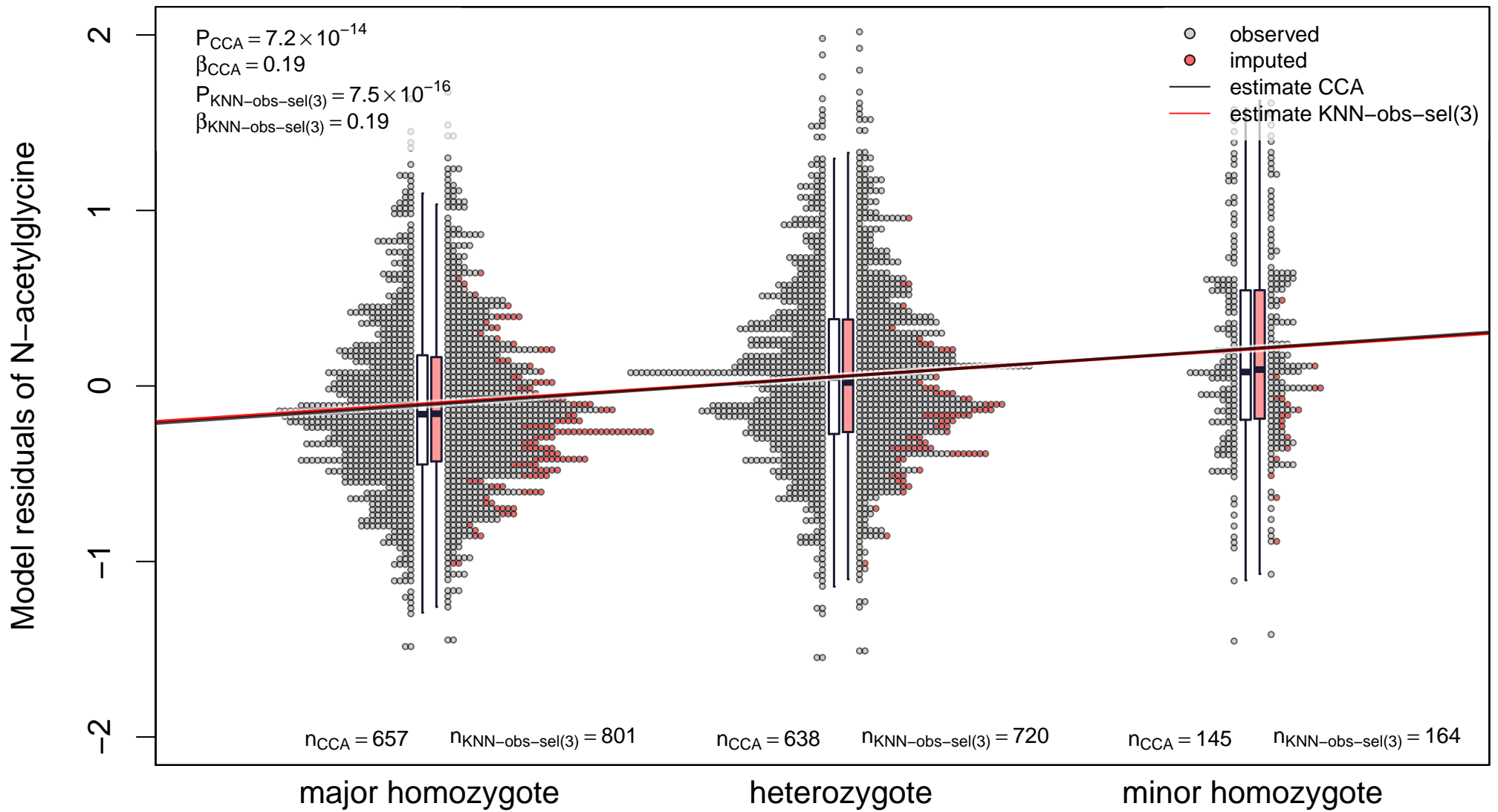


# KNN-obs-sel(20)



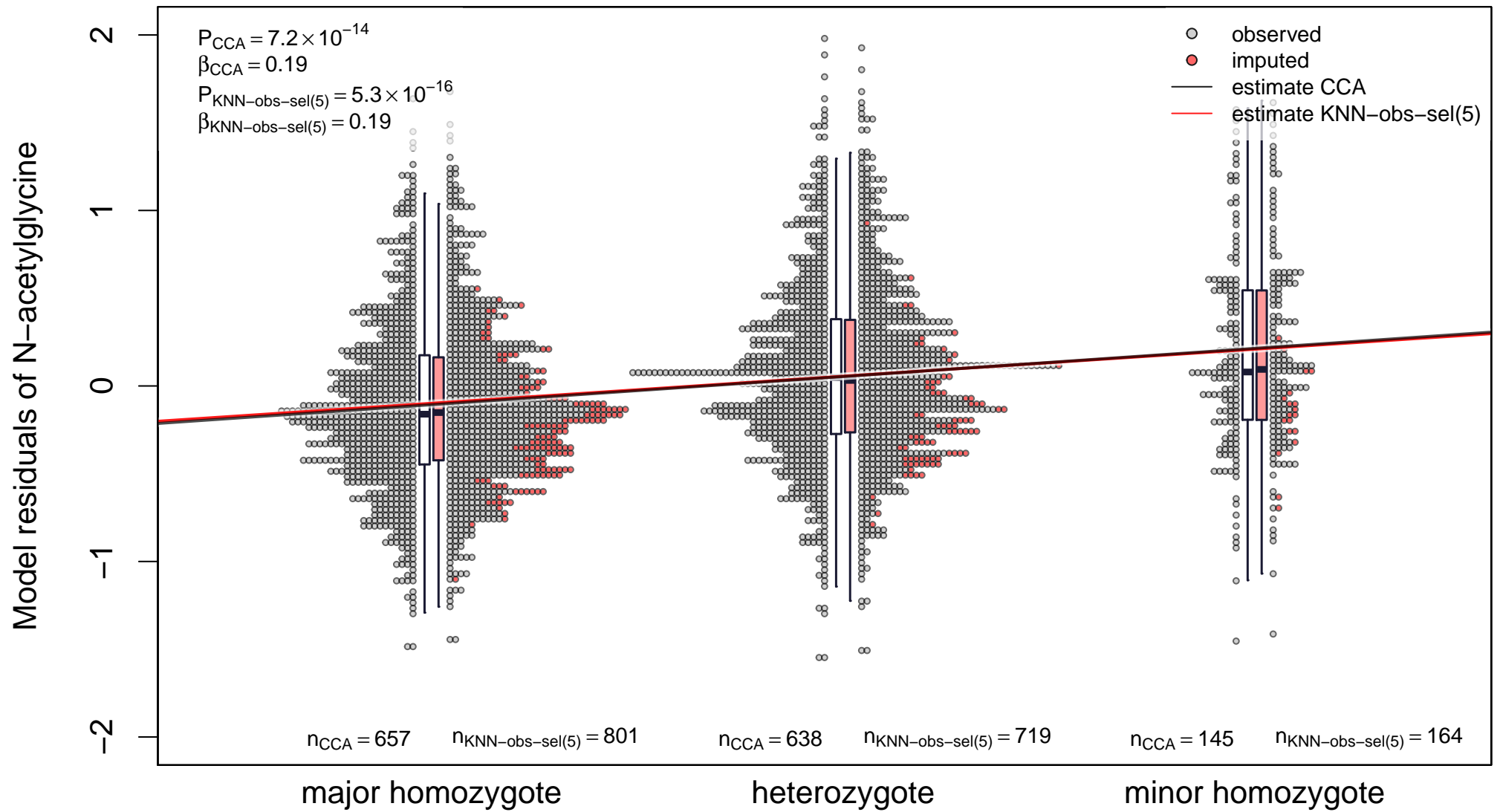
Genotype of SNP rs715 (CPS1)

# KNN-obs-sel(3)

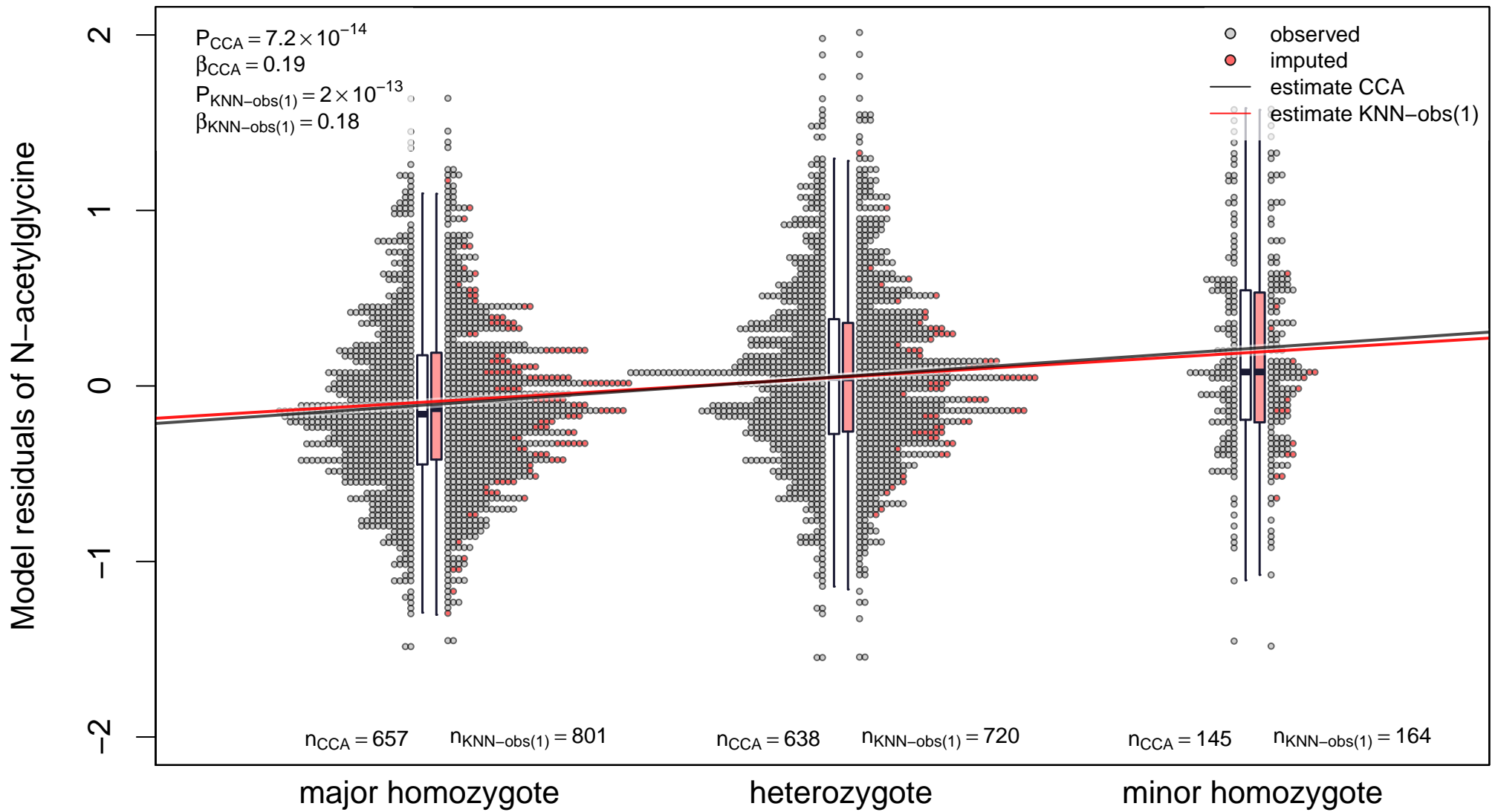


Genotype of SNP rs715 (CPS1)

# KNN-obs-sel(5)



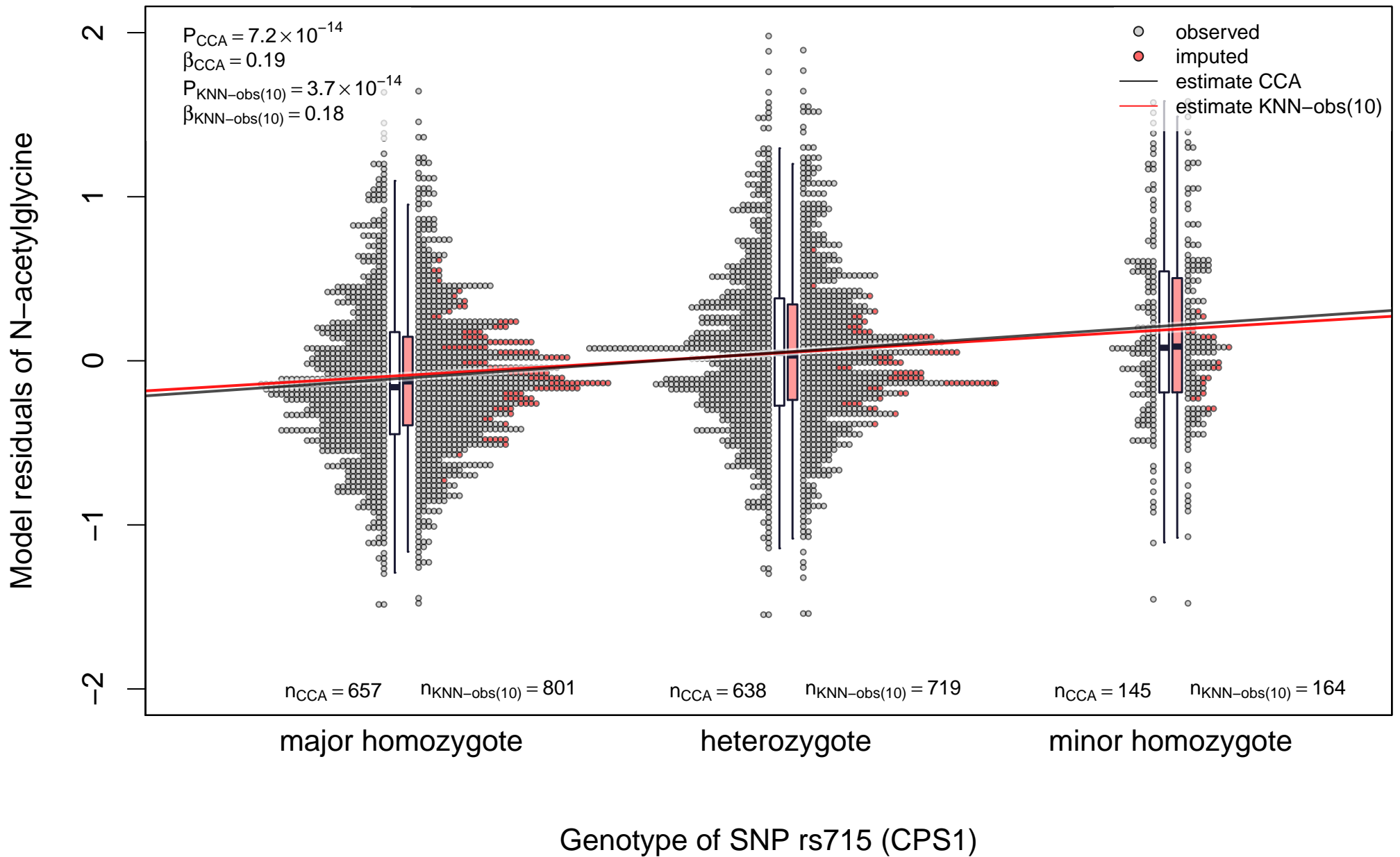
# KNN-obs(1)



Genotype of SNP rs715 (CPS1)

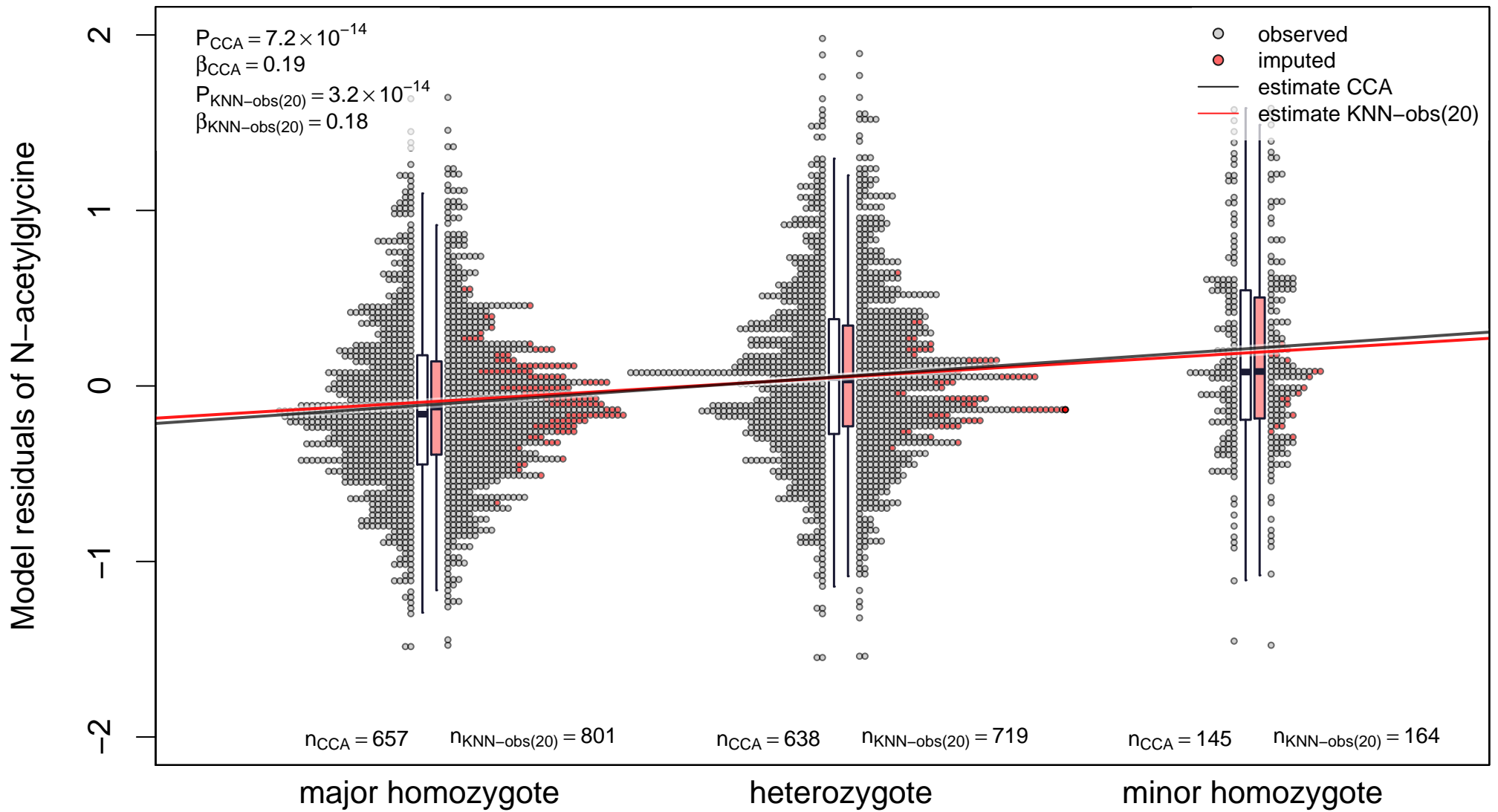


# KNN-obs(10)



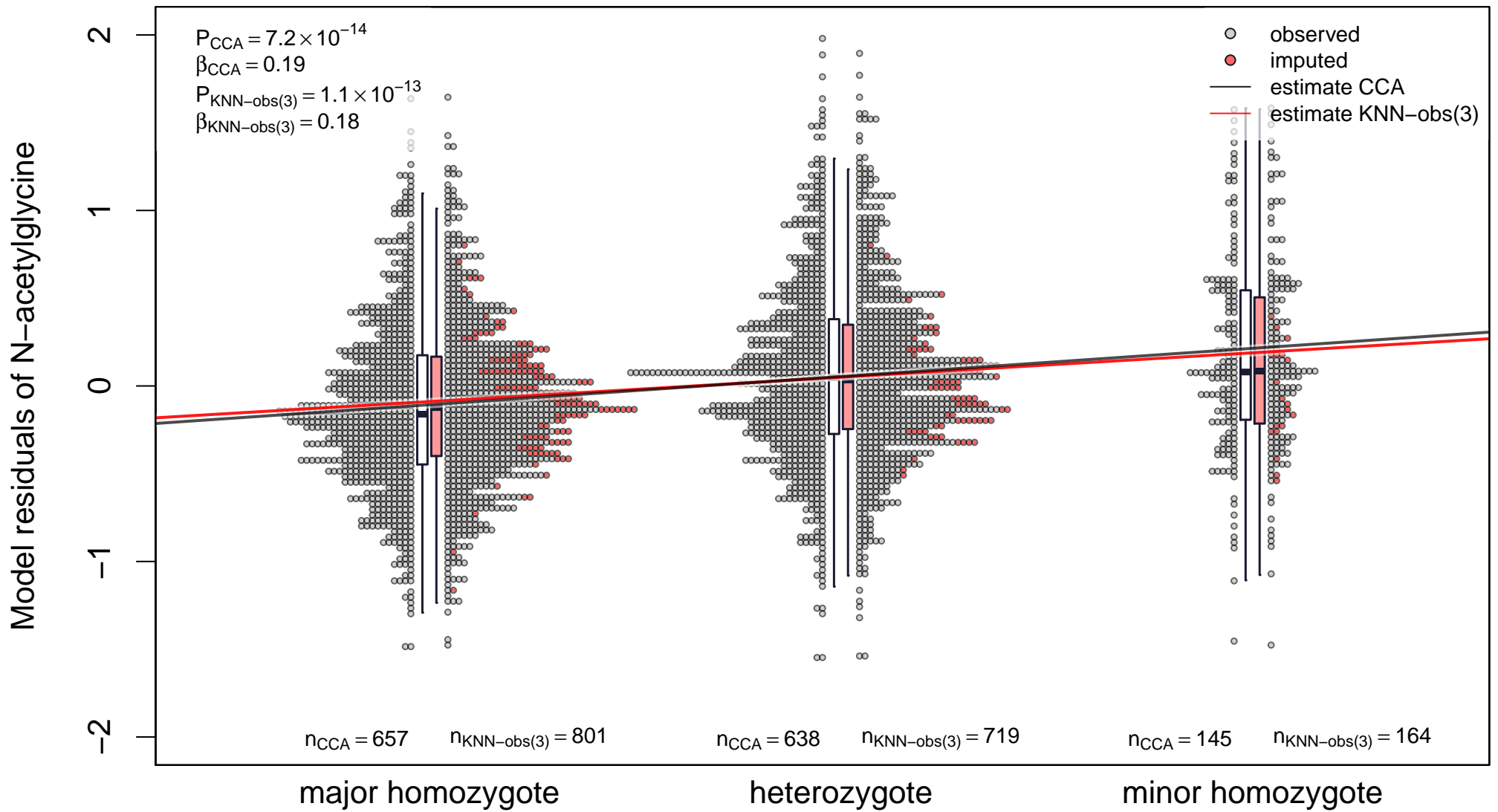


# KNN-obs(20)



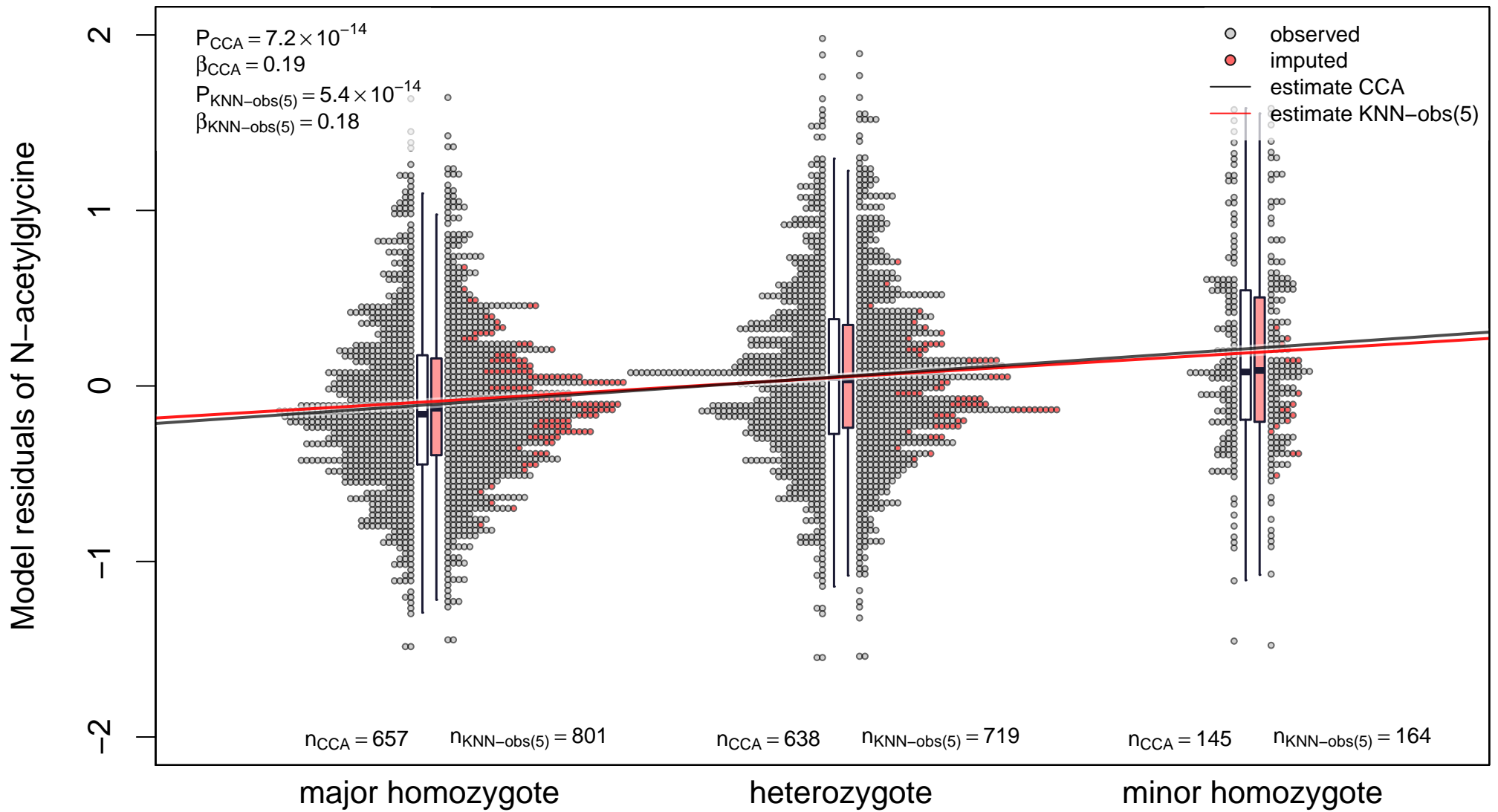
Genotype of SNP rs715 (CPS1)

# KNN-obs(3)



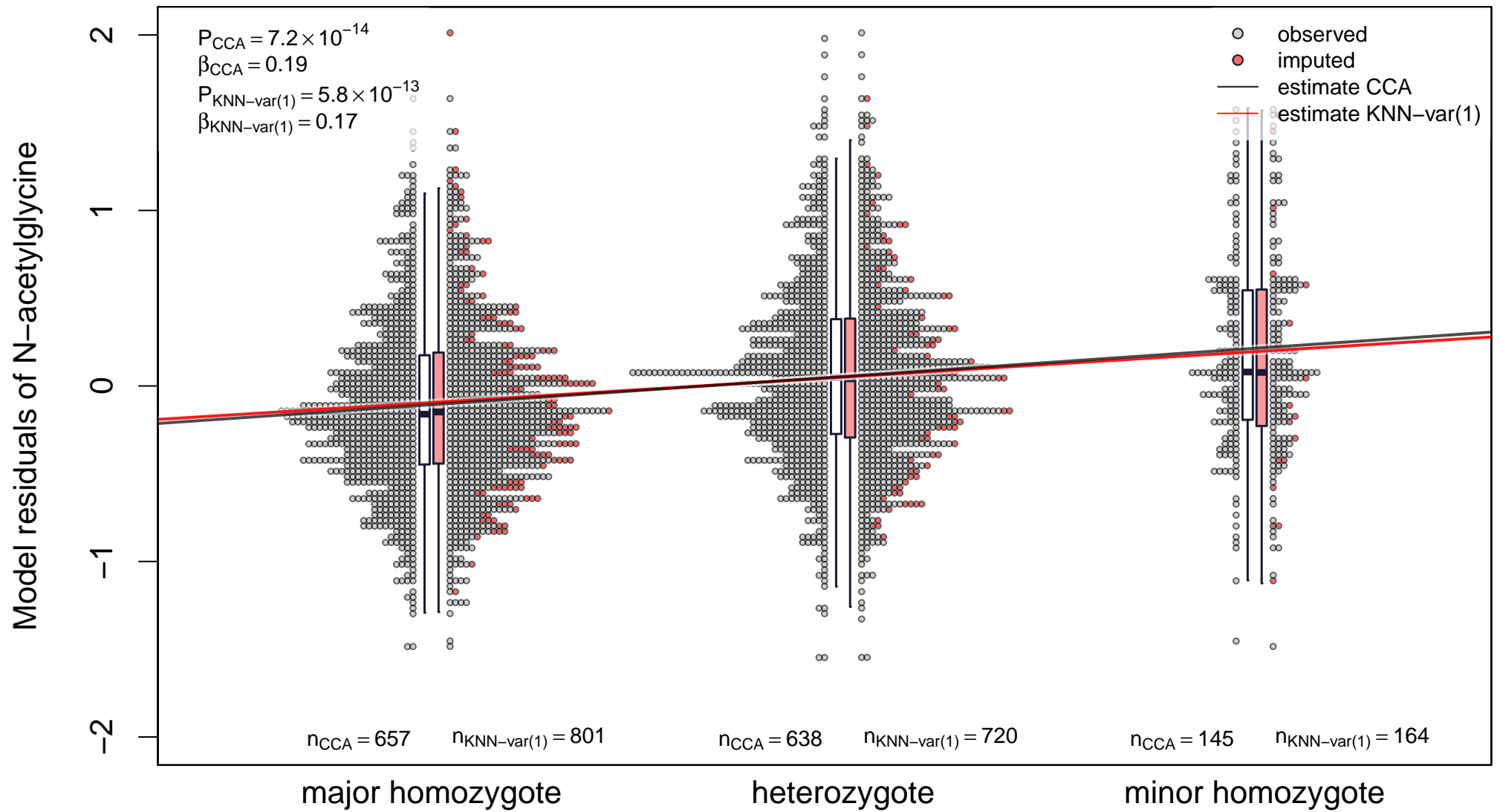
Genotype of SNP rs715 (CPS1)

# KNN-obs(5)



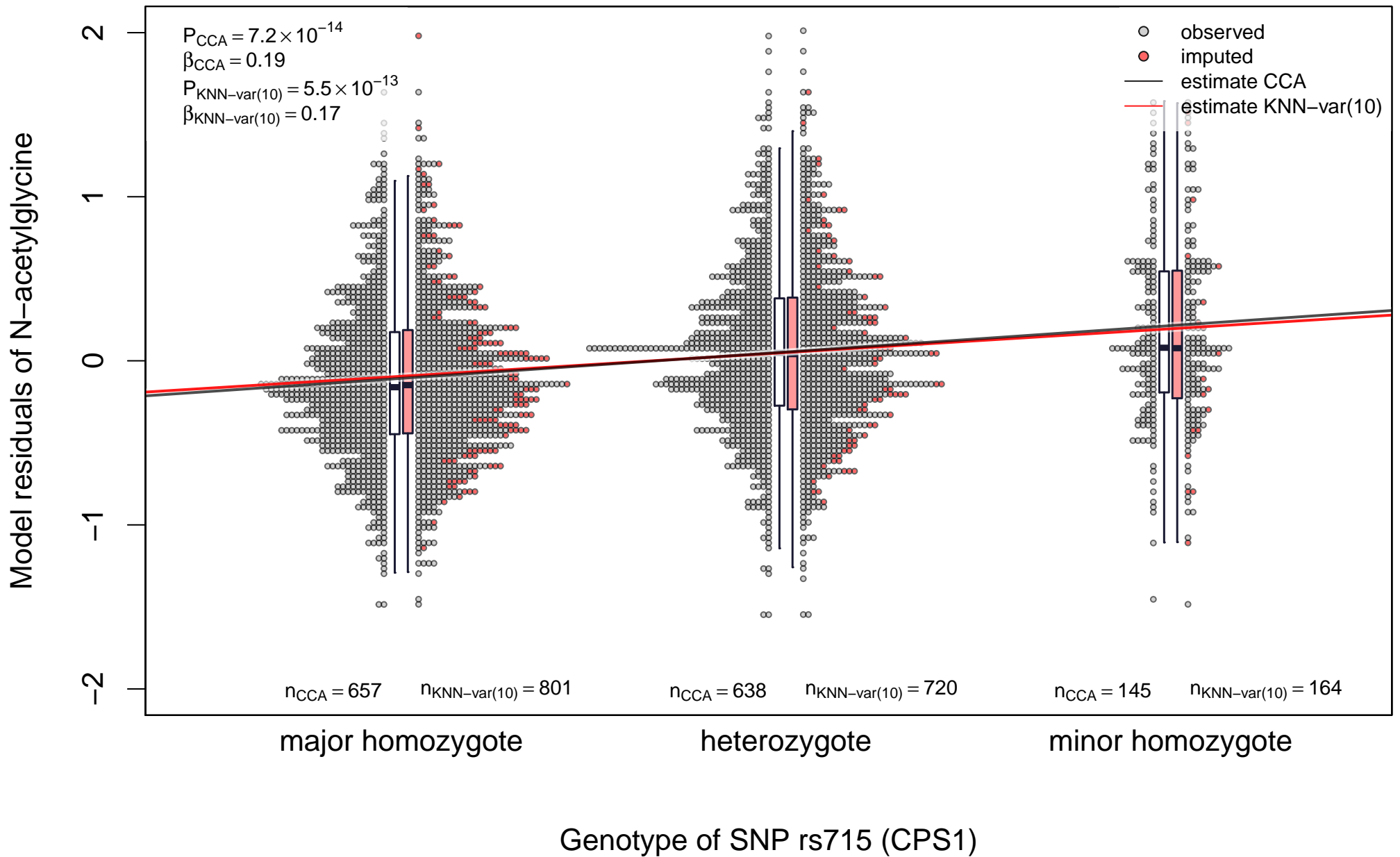
Genotype of SNP rs715 (CPS1)

# KNN-var(1)

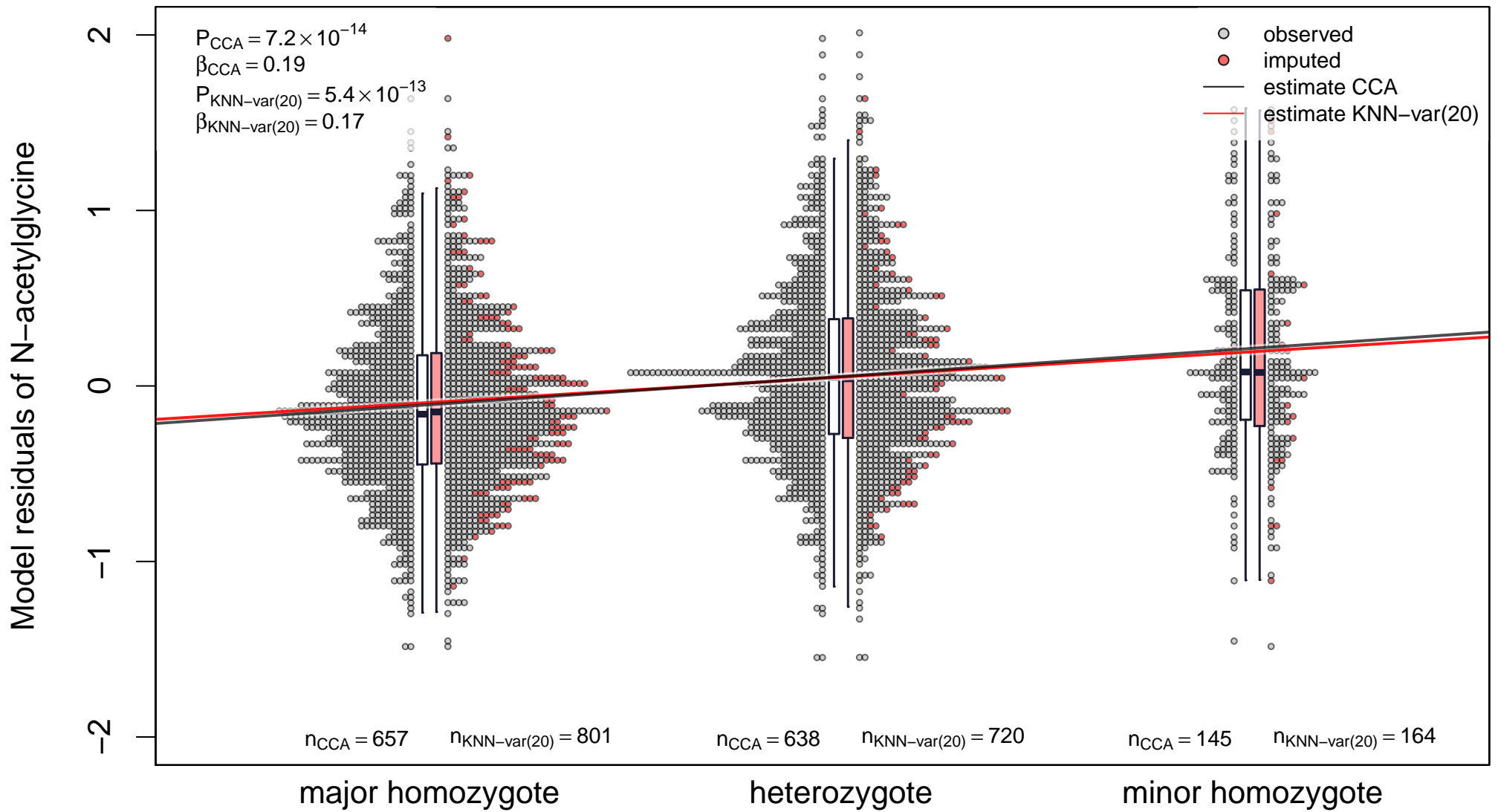


Genotype of SNP rs715 (CPS1)

# KNN-var(10)

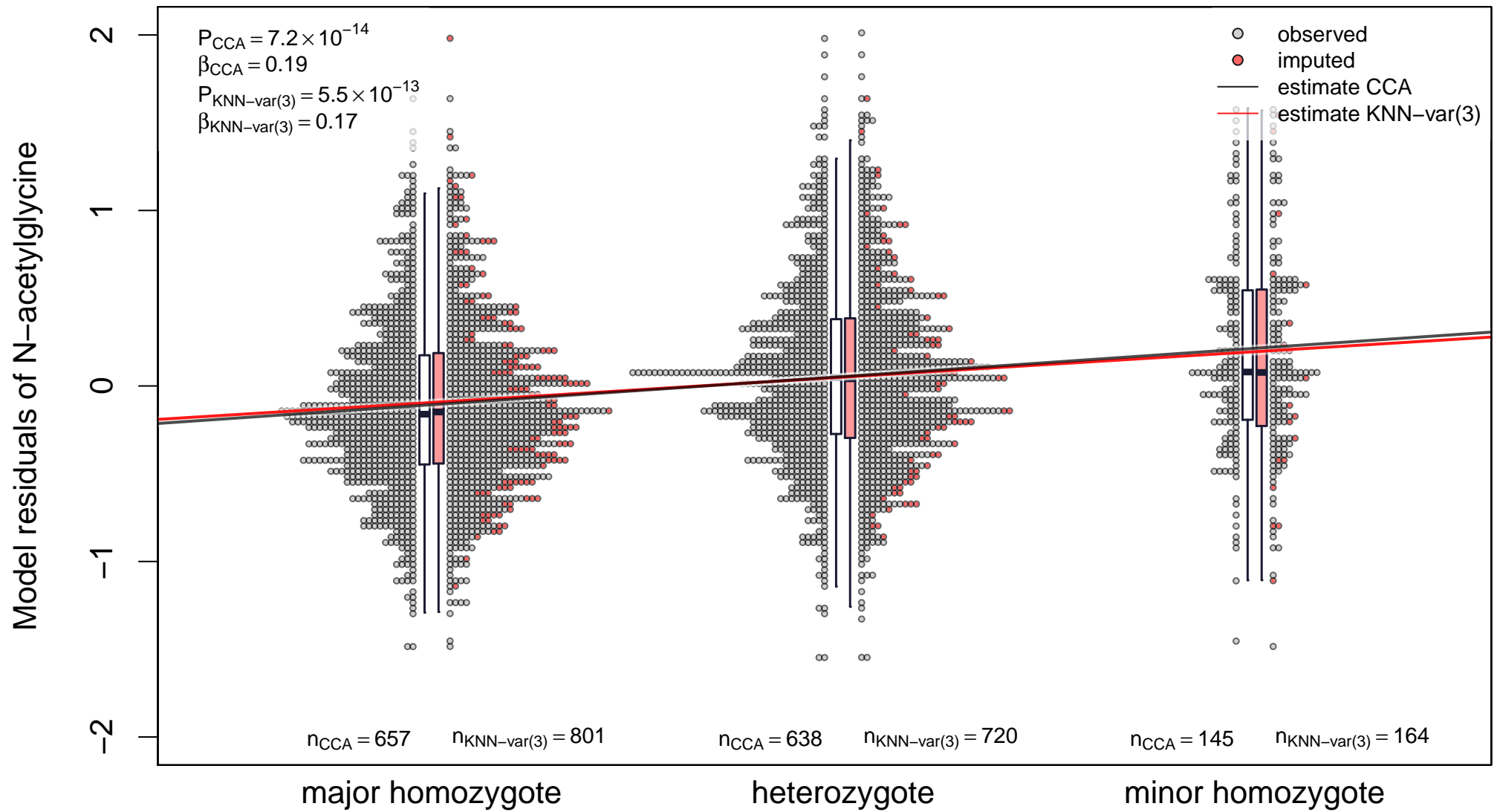


# KNN-var(20)



Genotype of SNP rs715 (CPS1)

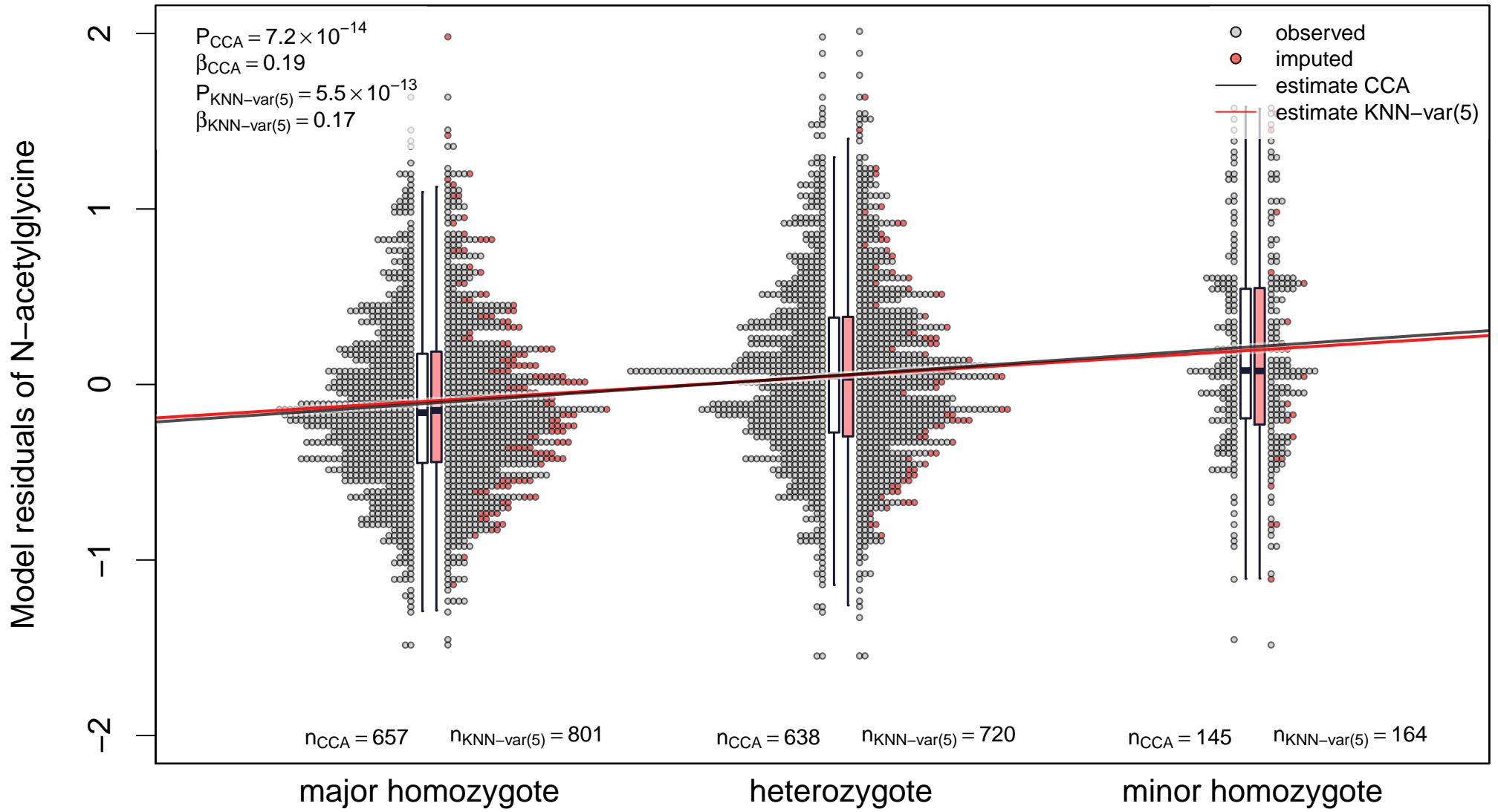
# KNN-var(3)



Genotype of SNP rs715 (CPS1)



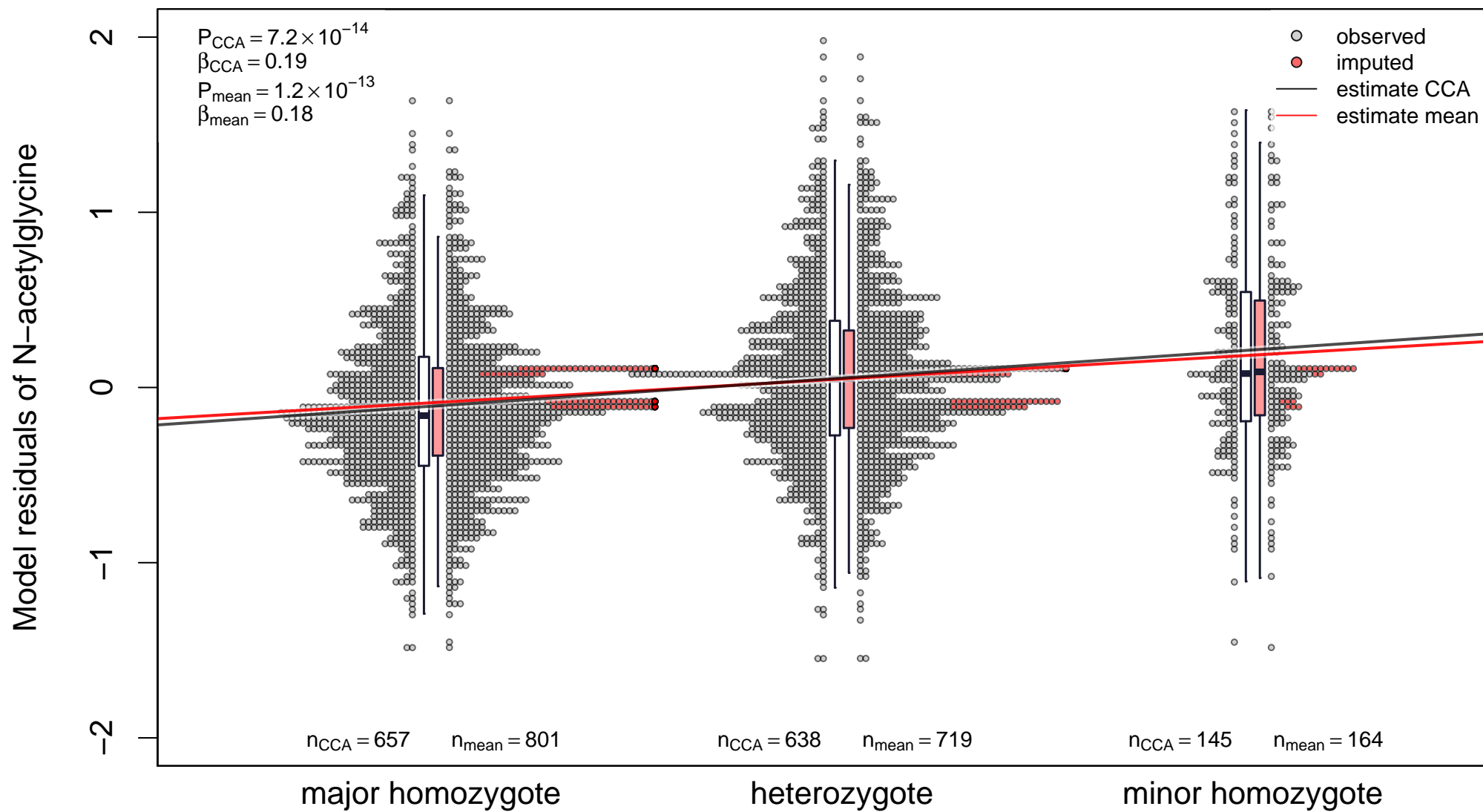
# KNN-var(5)



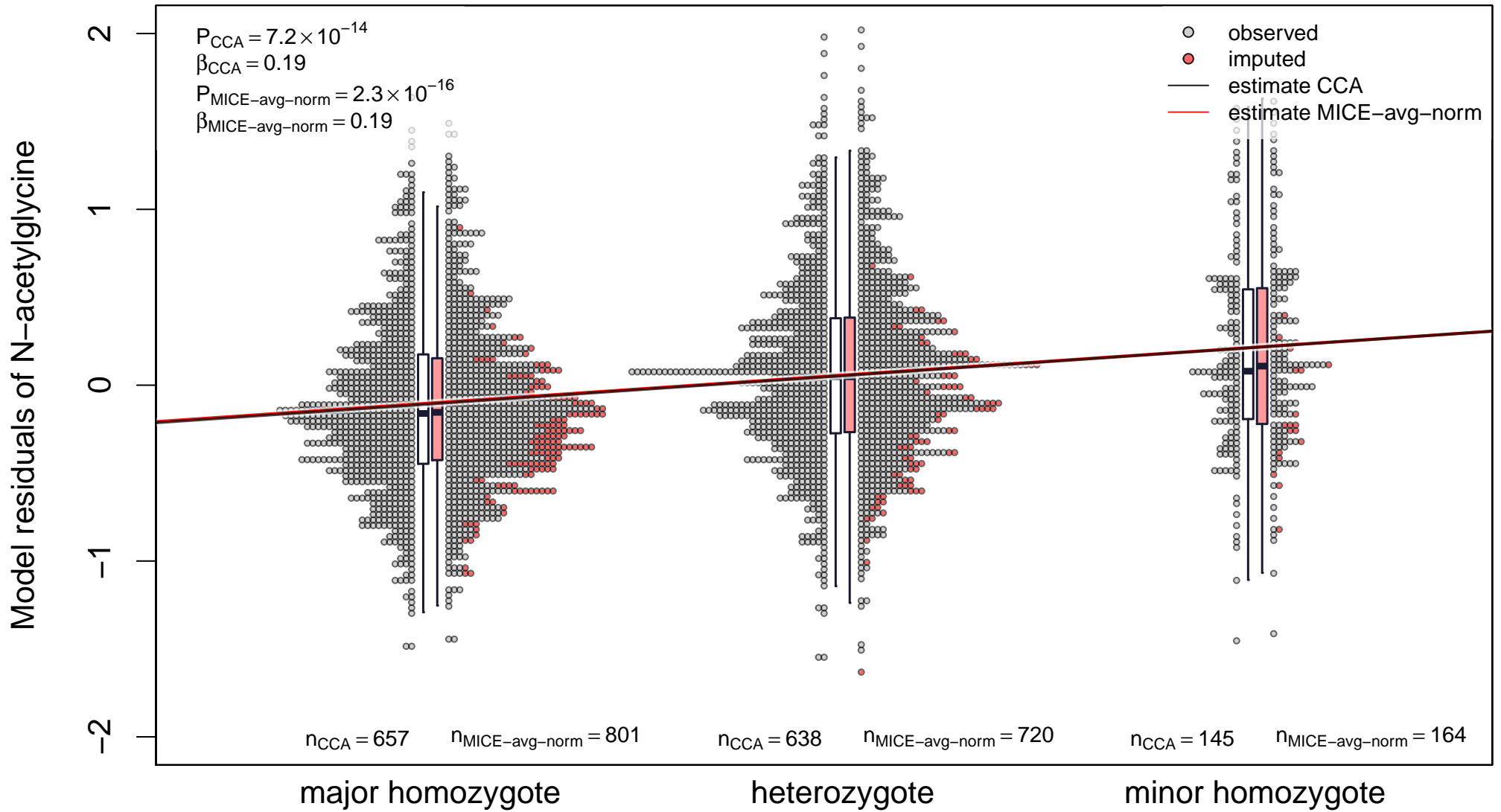
Genotype of SNP rs715 (CPS1)



mean

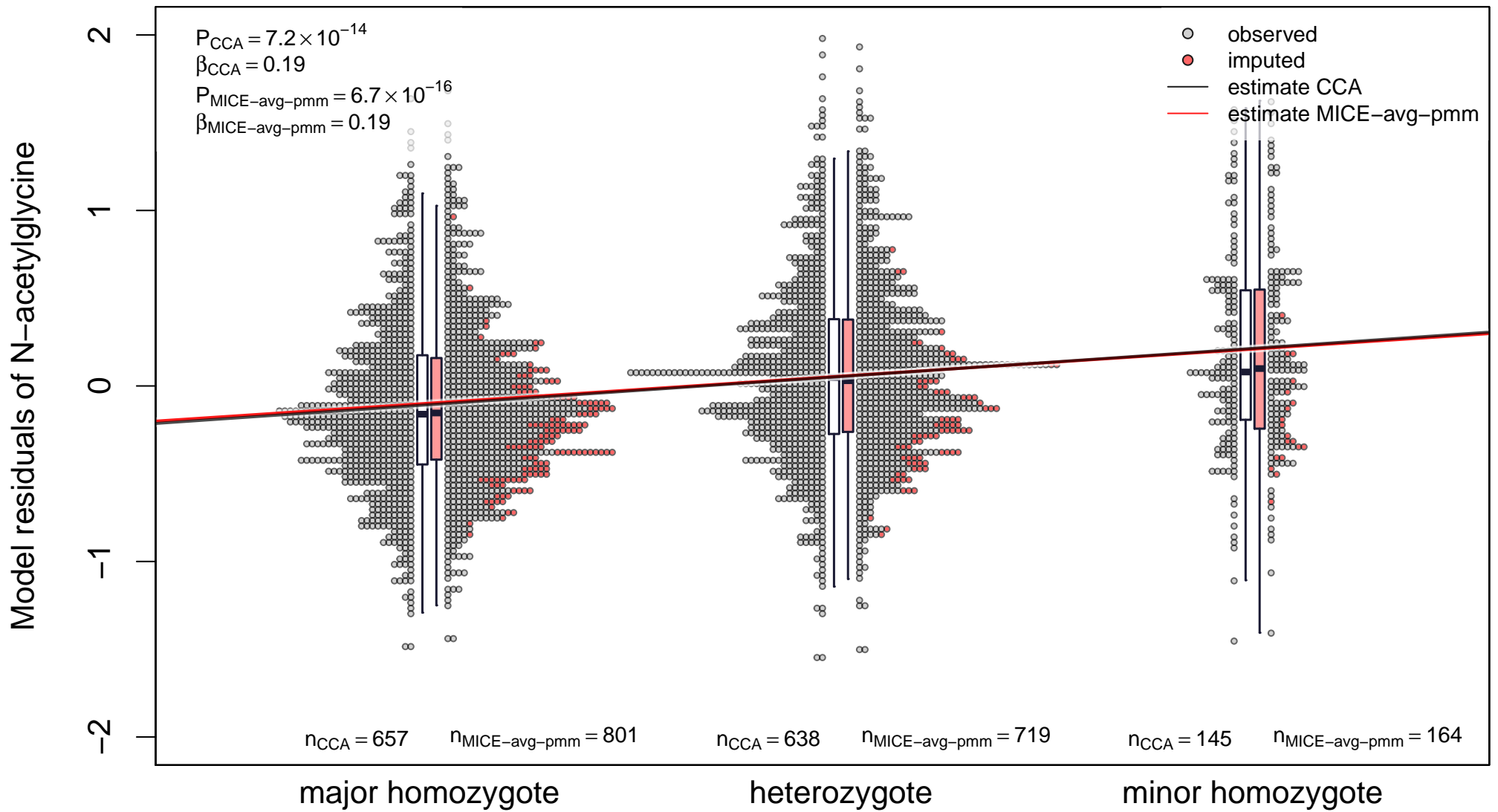


# MICE-avg-norm



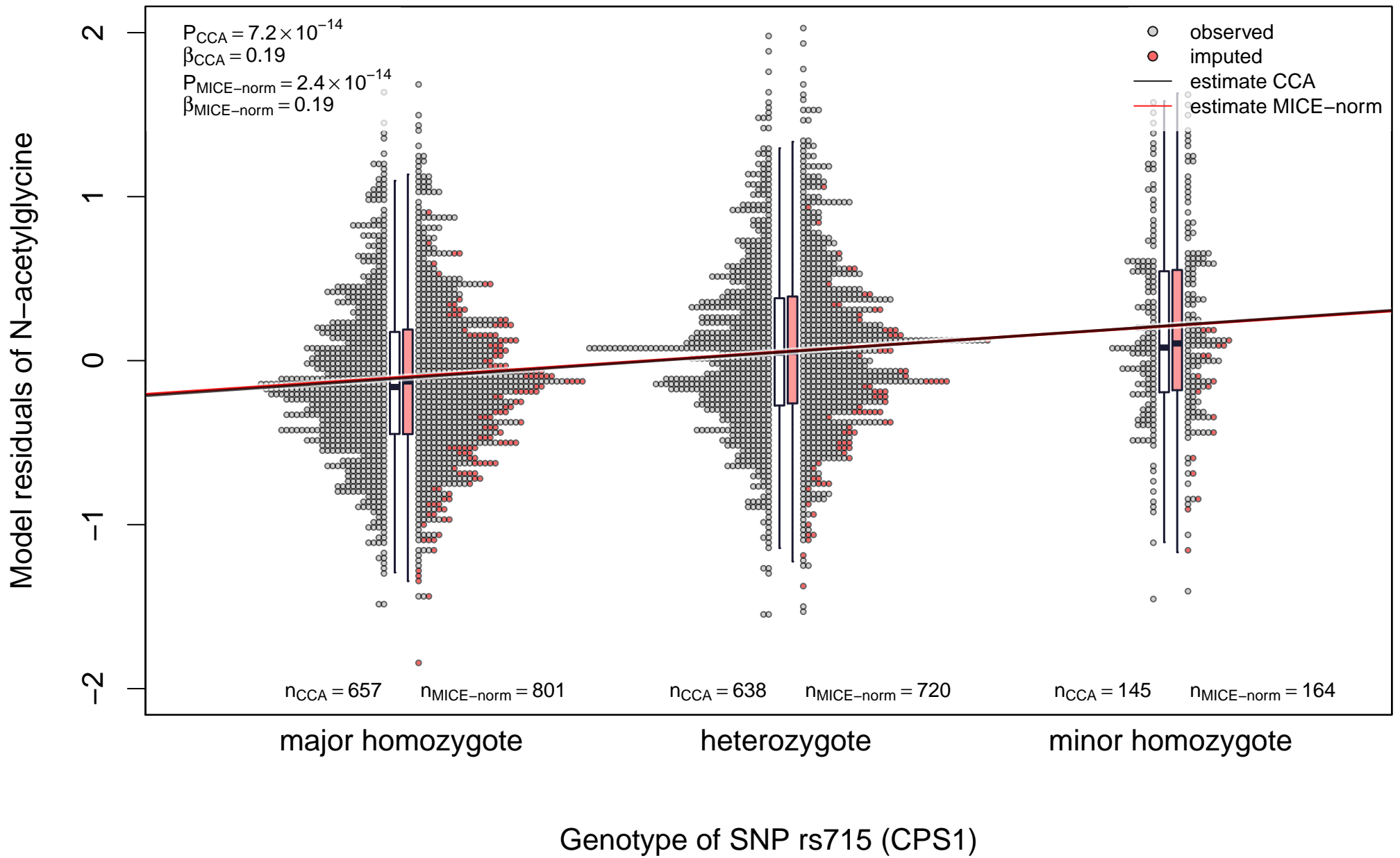
Genotype of SNP rs715 (CPS1)

# MICE-avg-pmm

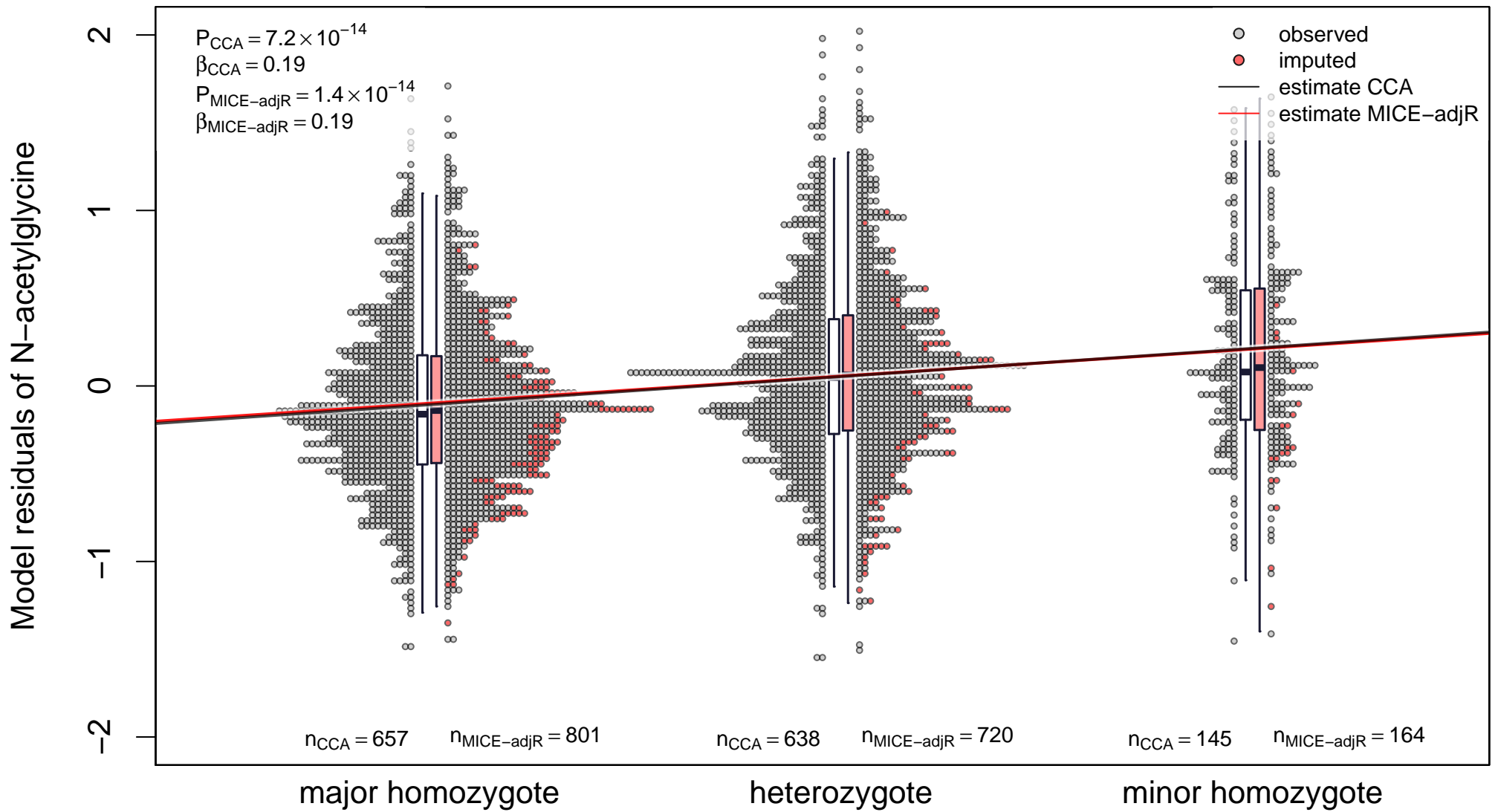


Genotype of SNP rs715 (CPS1)

# MICE-norm

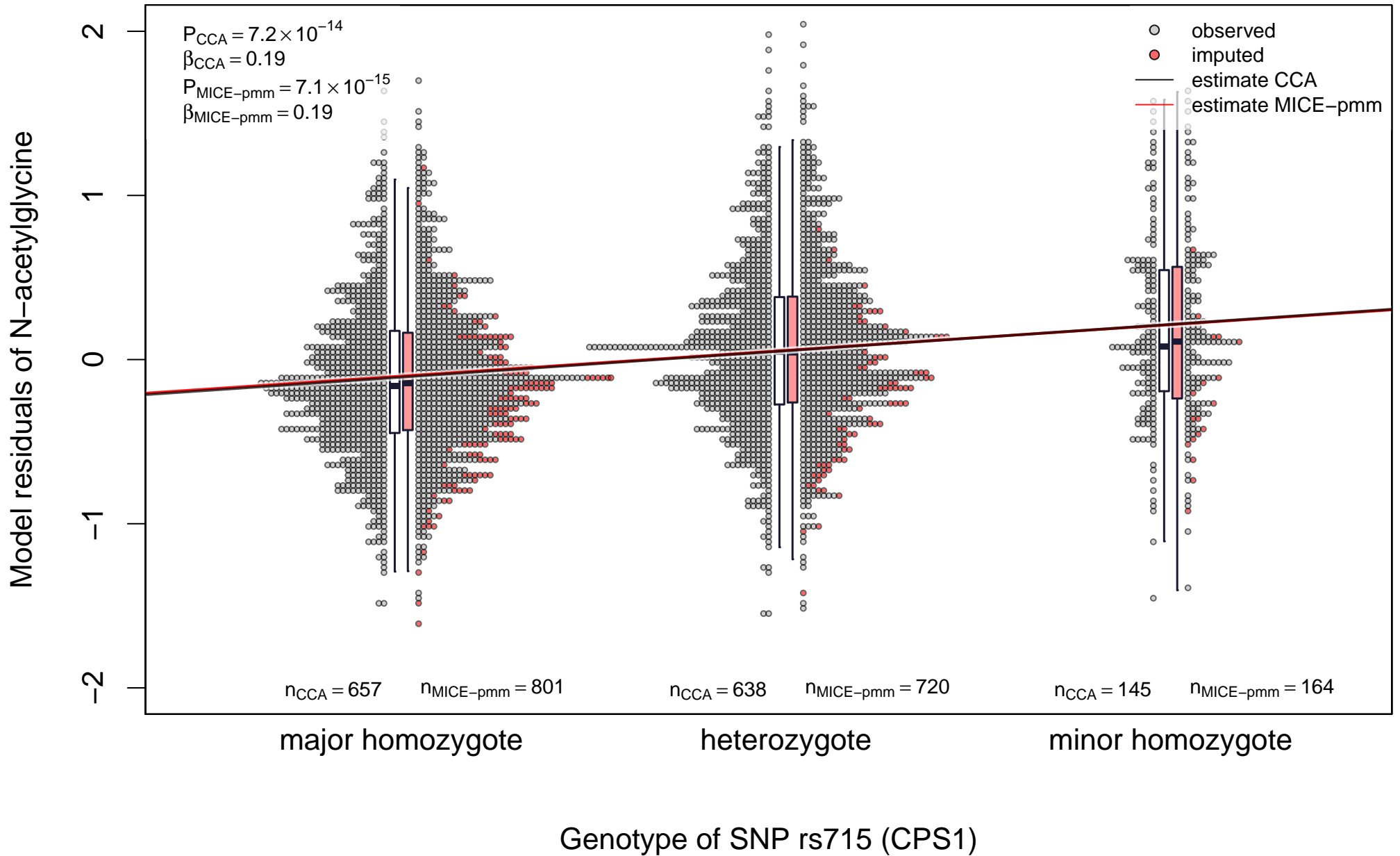


# MICE-adjR

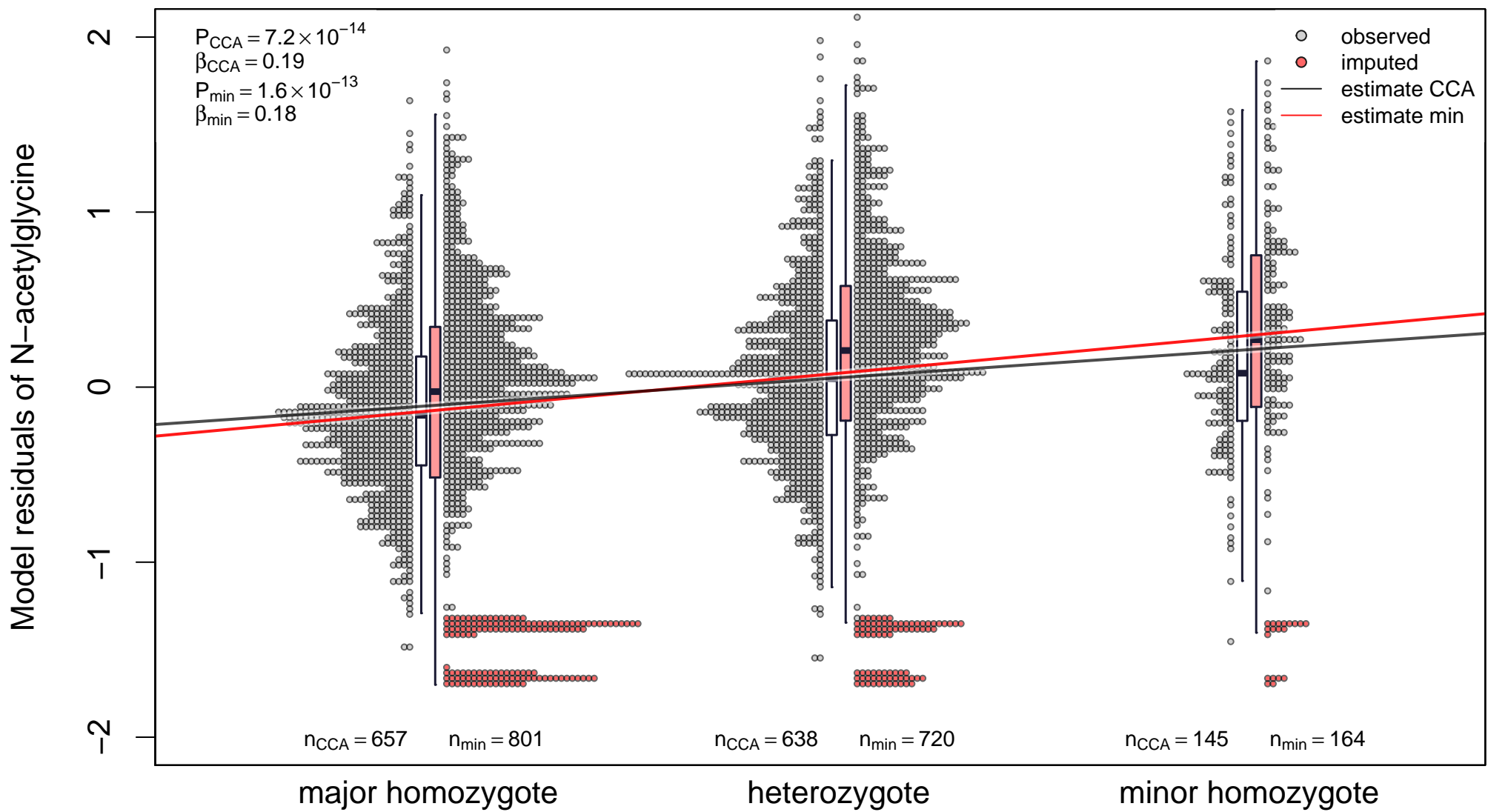


Genotype of SNP rs715 (CPS1)

# MICE-pmm



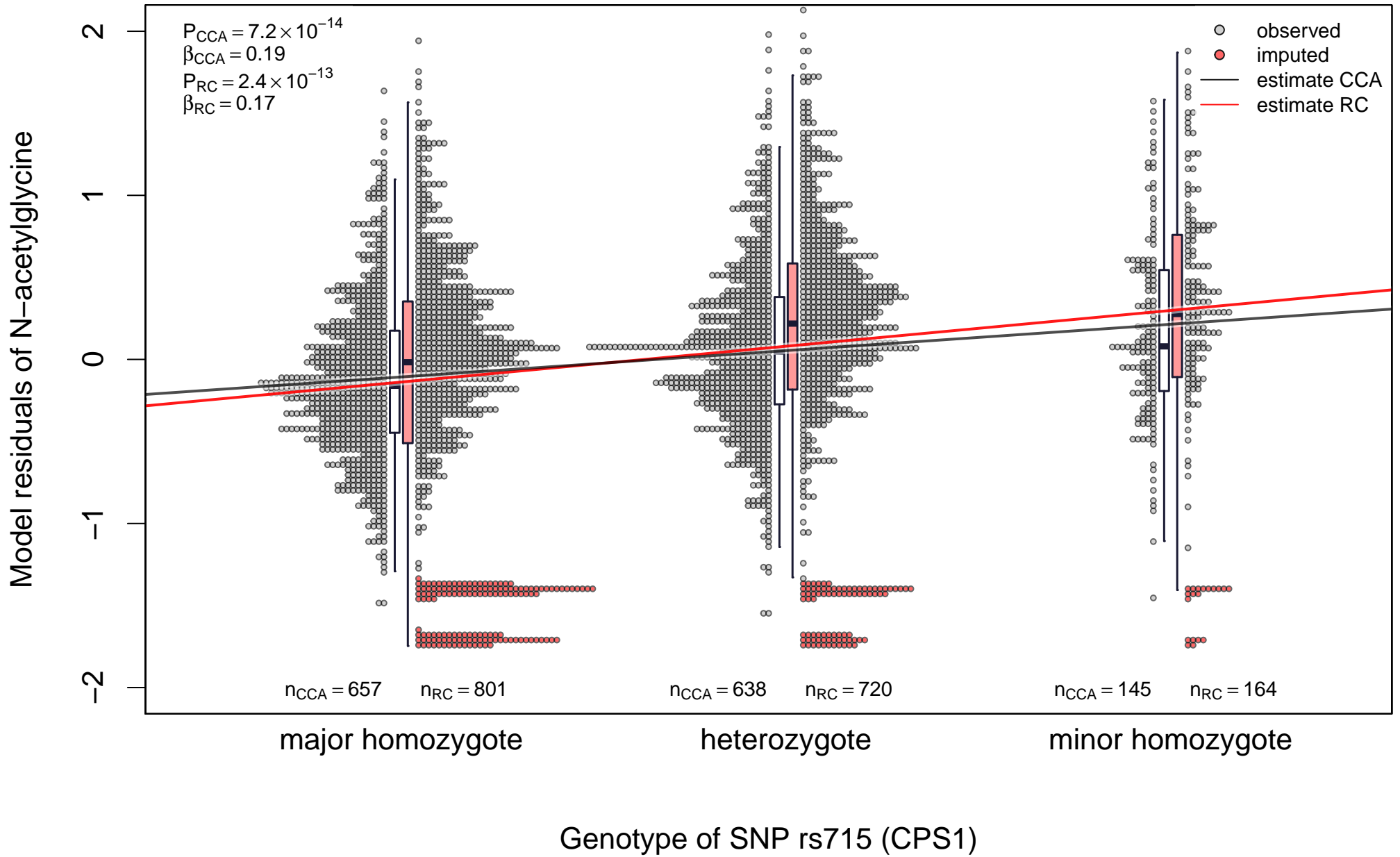
min



Genotype of SNP rs715 (CPS1)

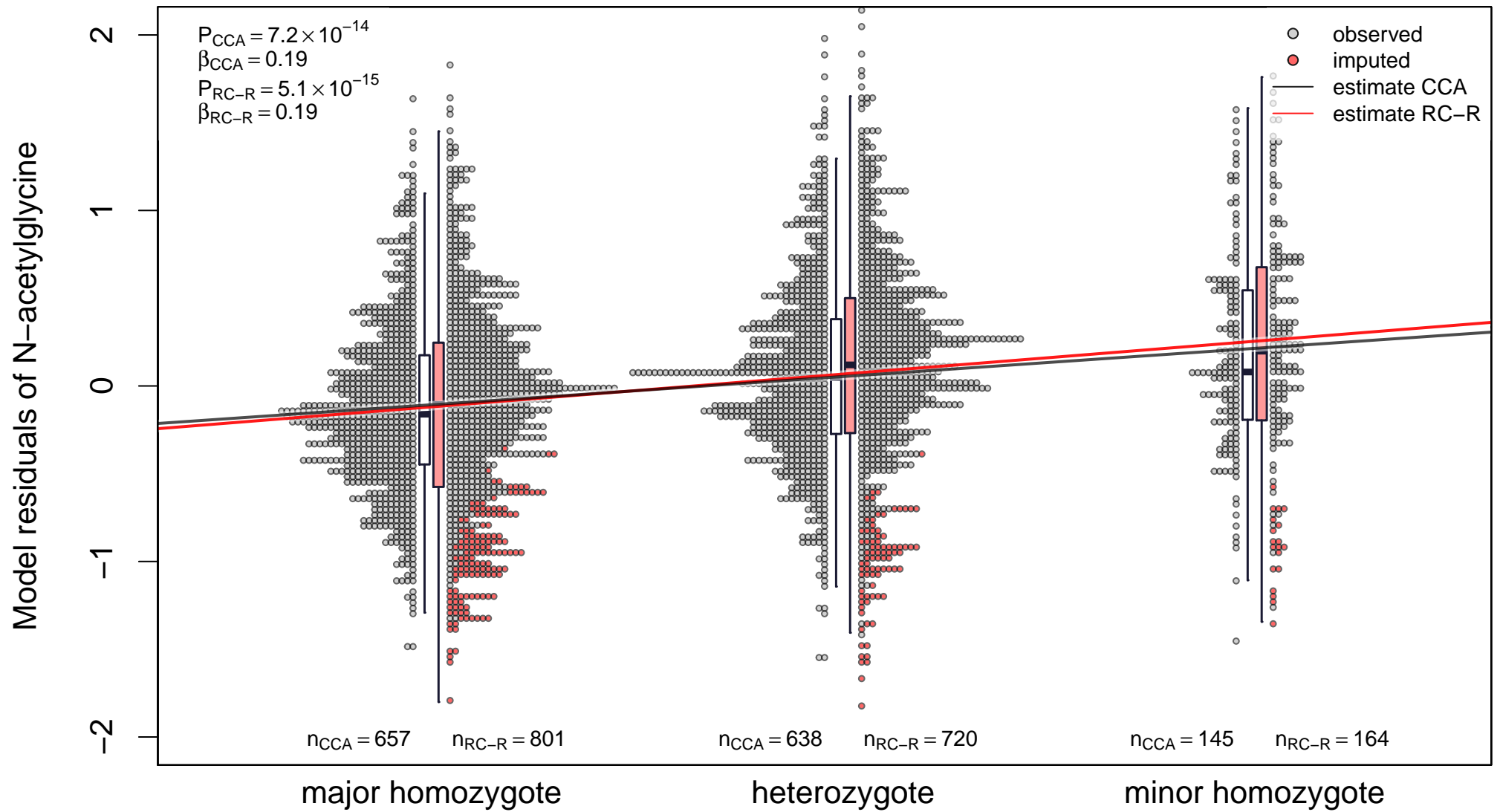


# RC



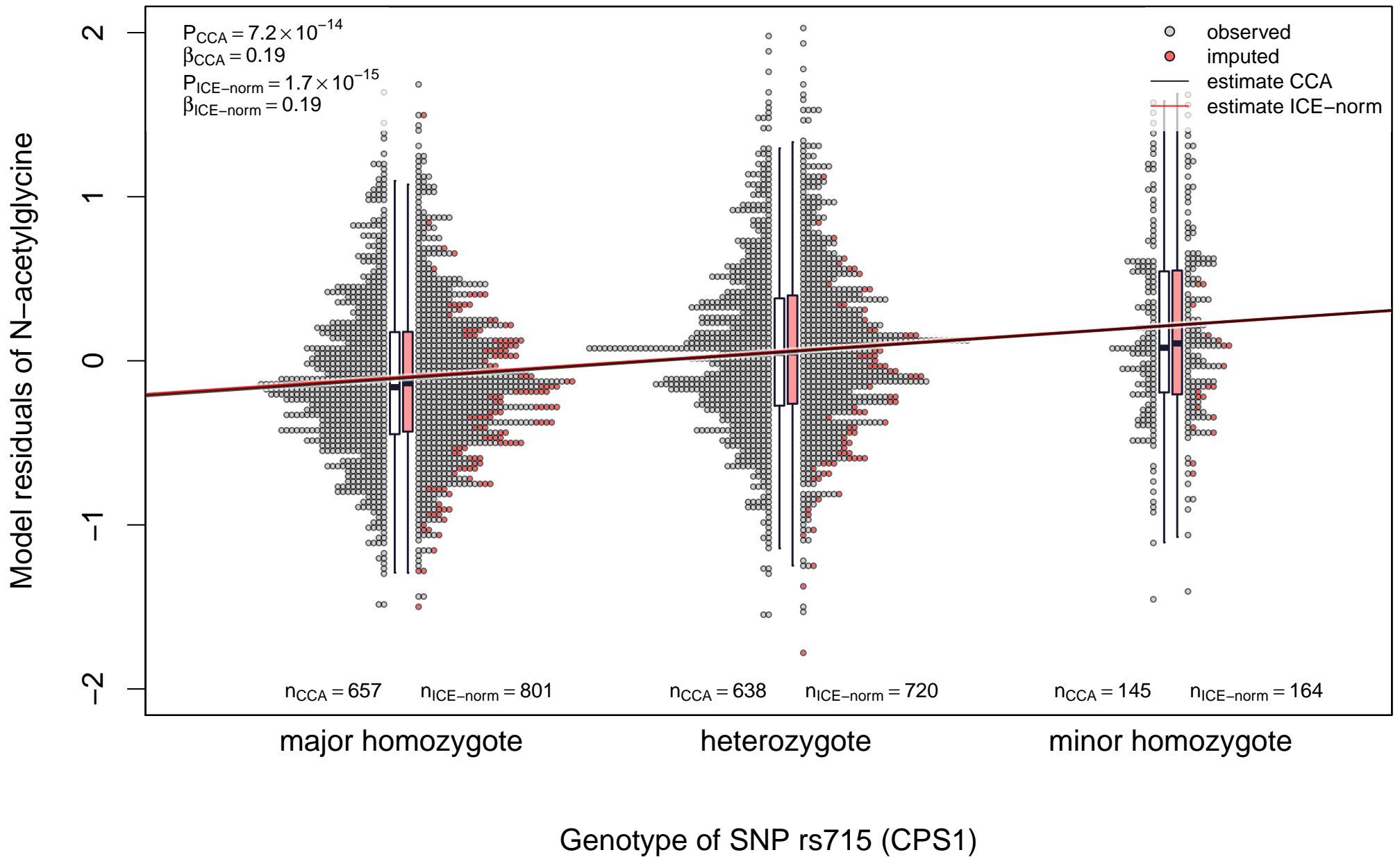


# RC-R

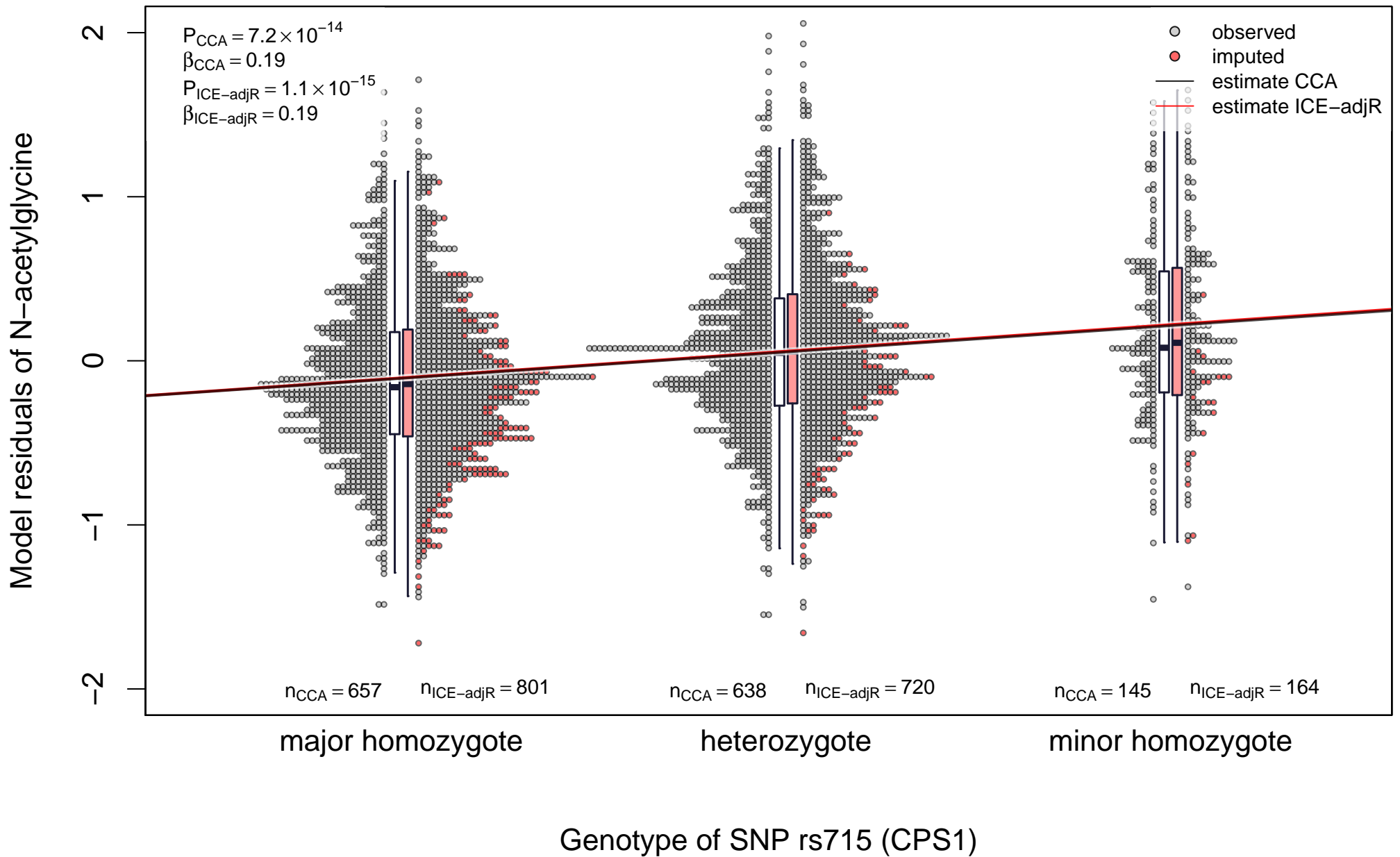


Genotype of SNP rs715 (CPS1)

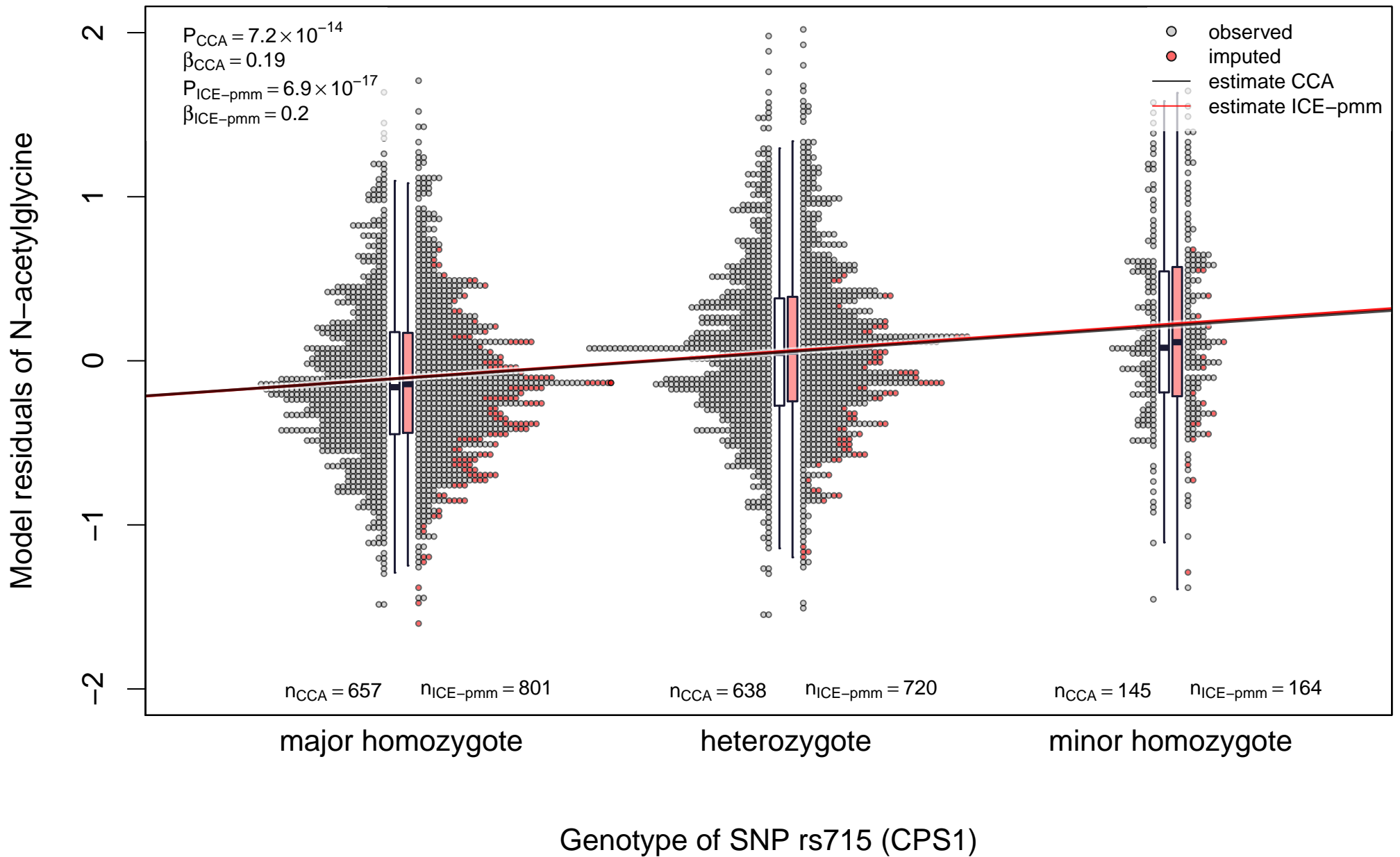
# ICE-norm



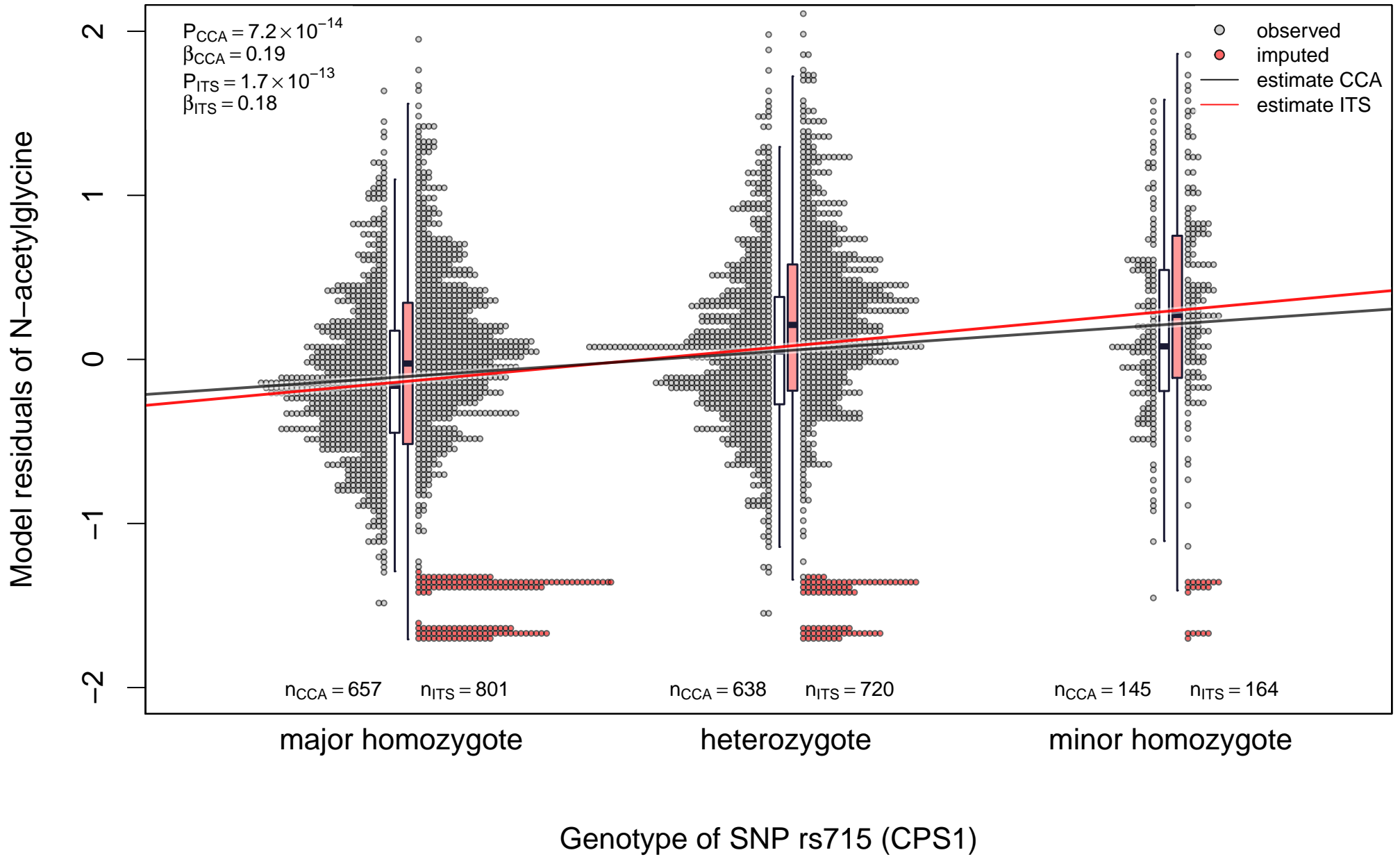
# ICE-adjR



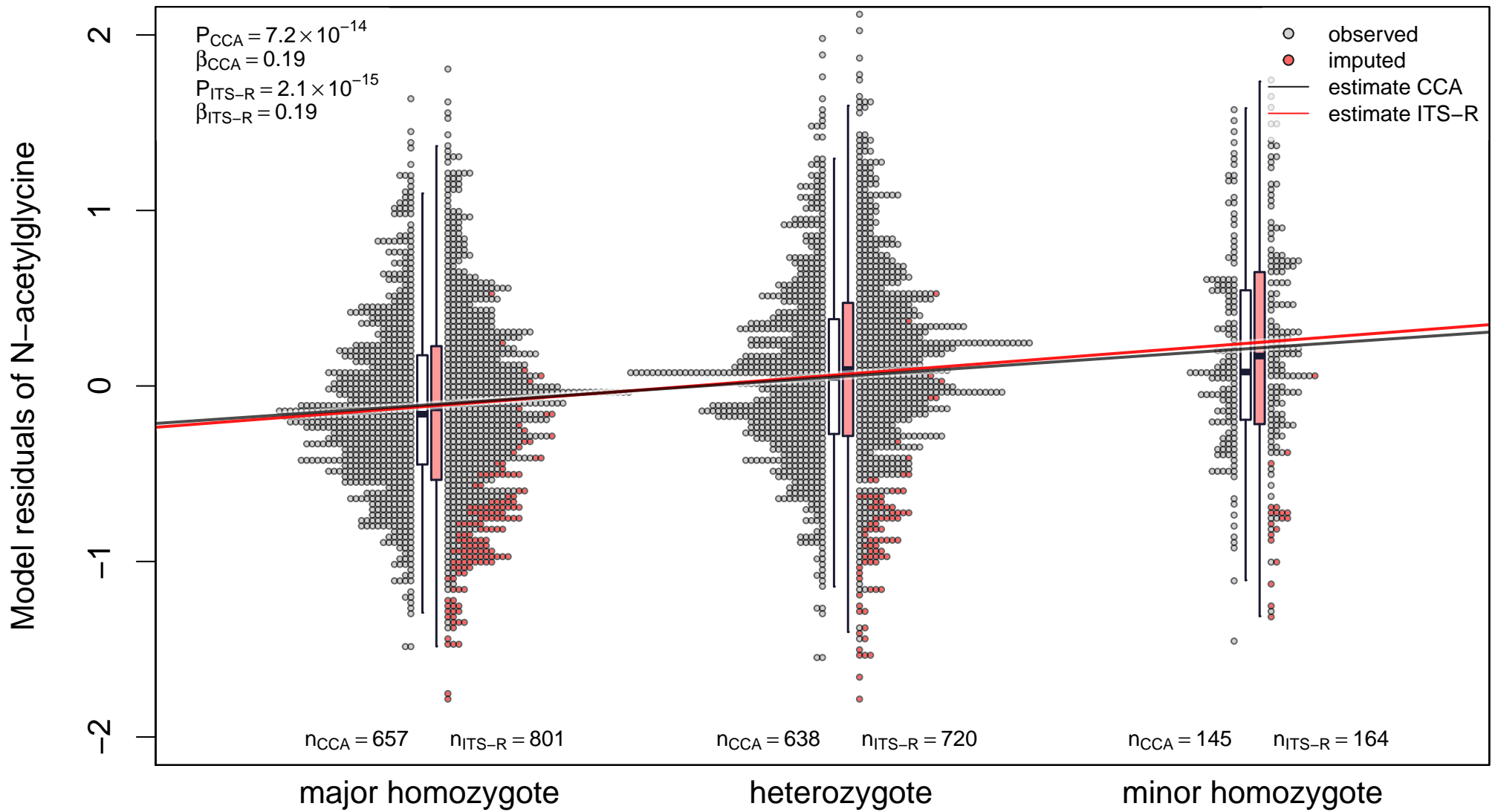
# ICE-pmm



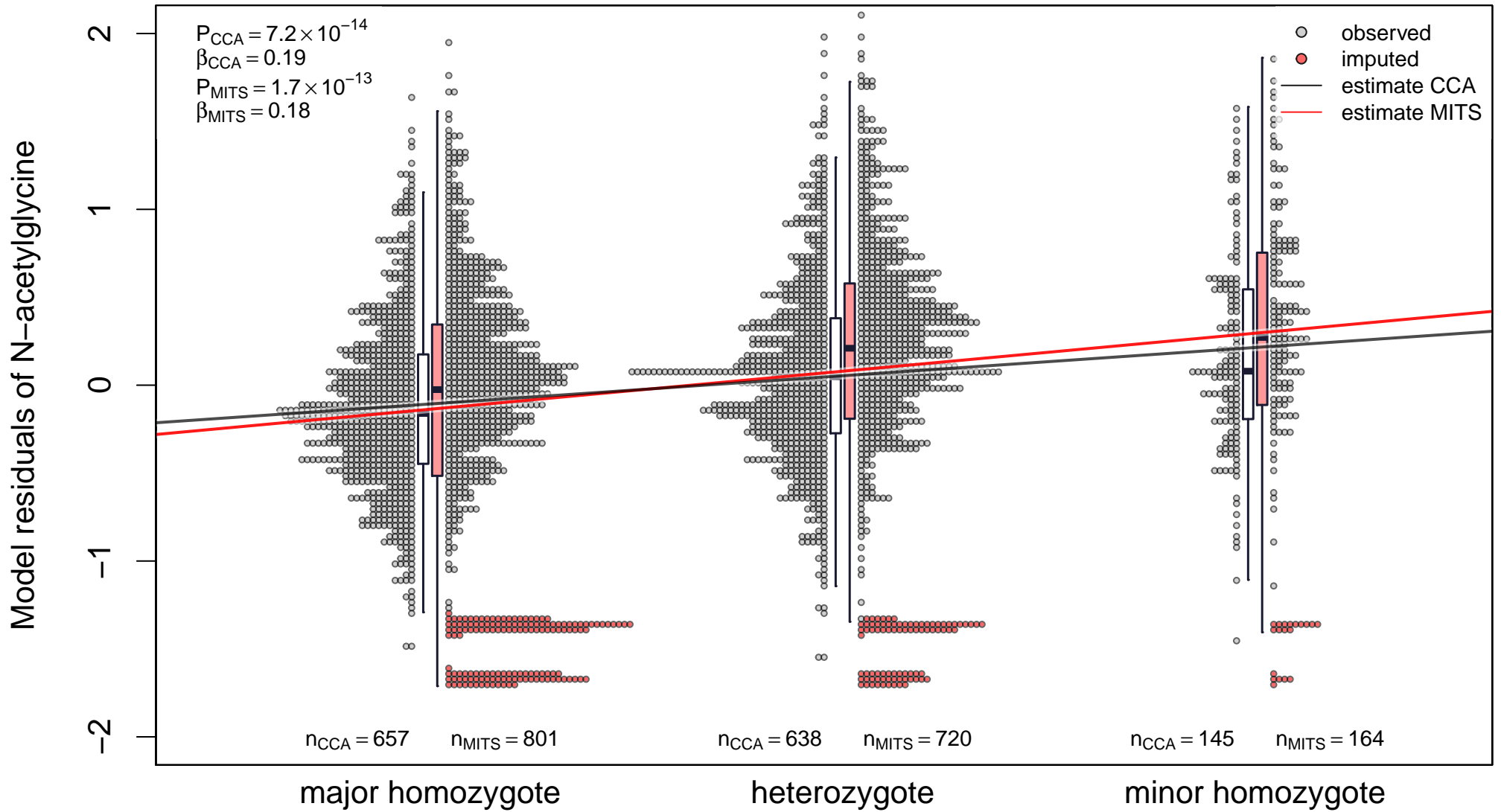
# ITS



# ITS-R



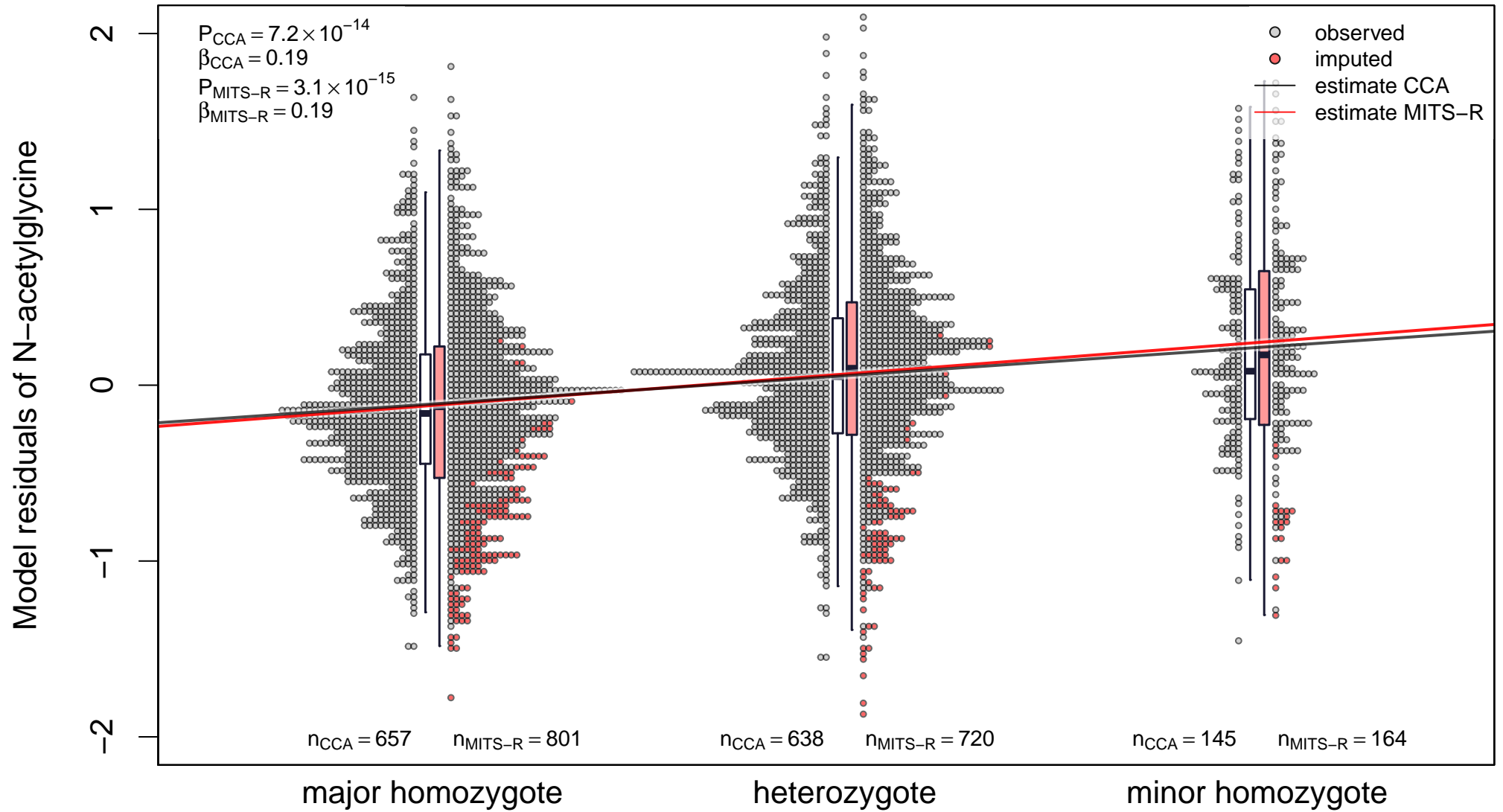
# MITS



Genotype of SNP rs715 (CPS1)



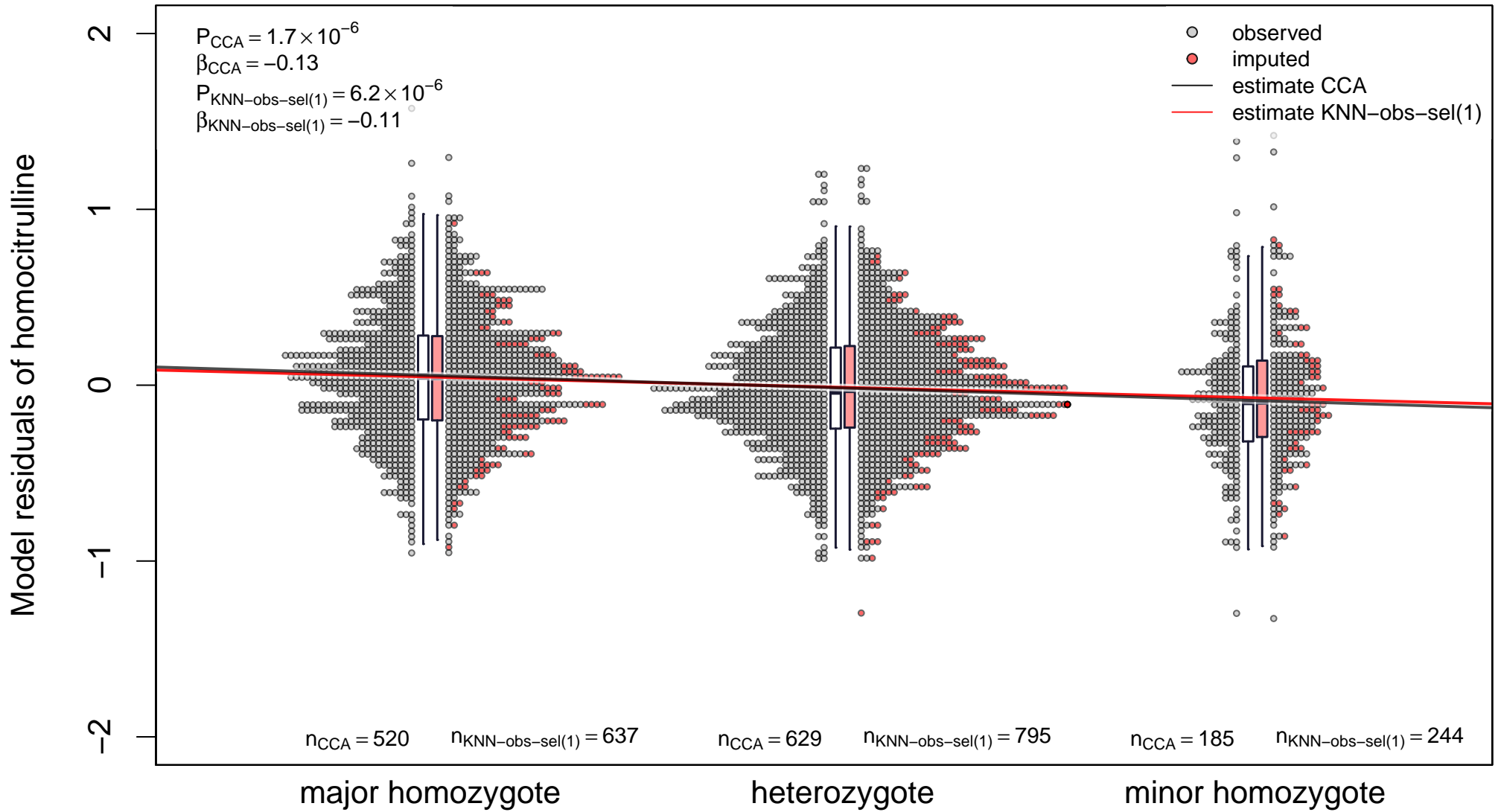
# MITS-R



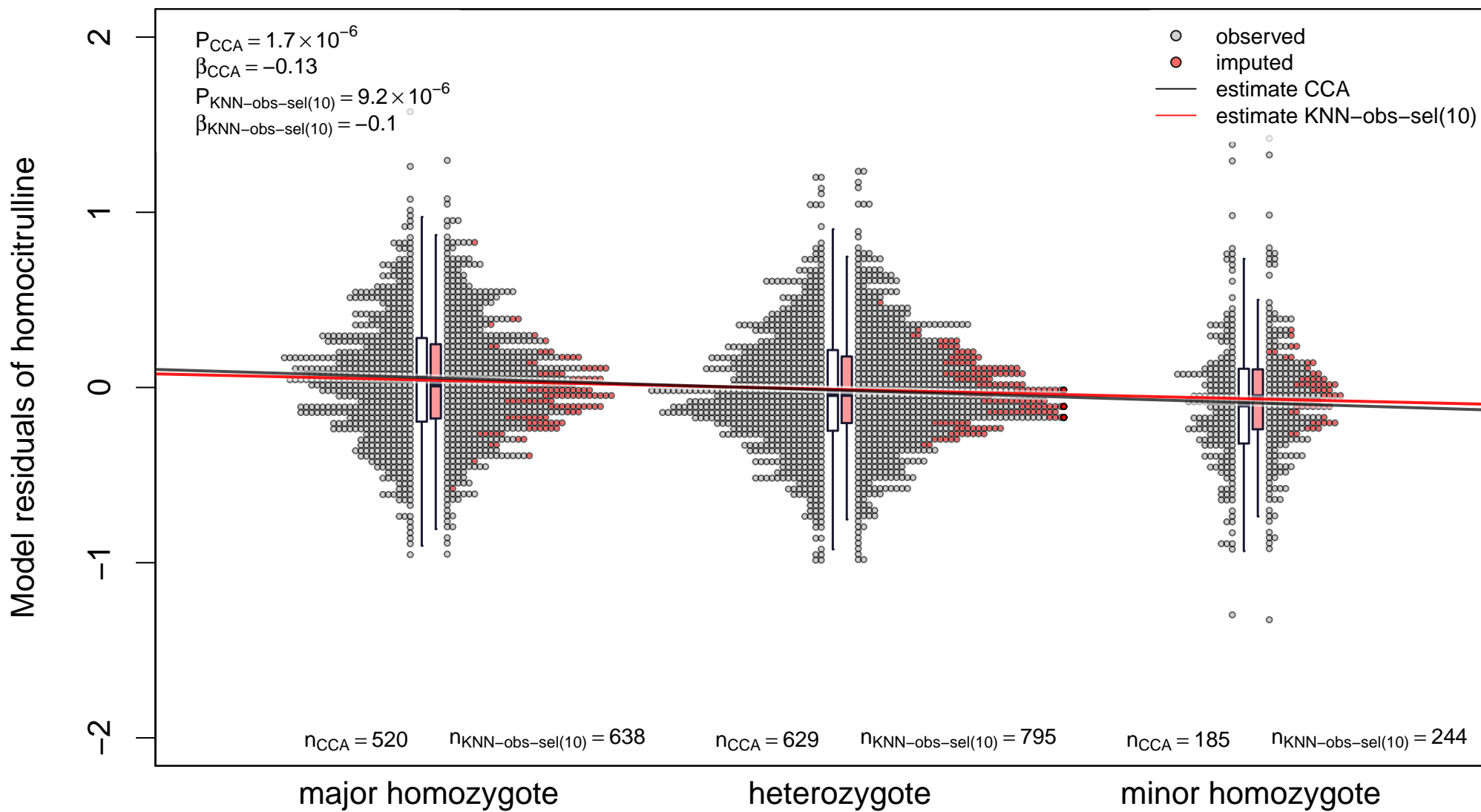
Genotype of SNP rs715 (CPS1)



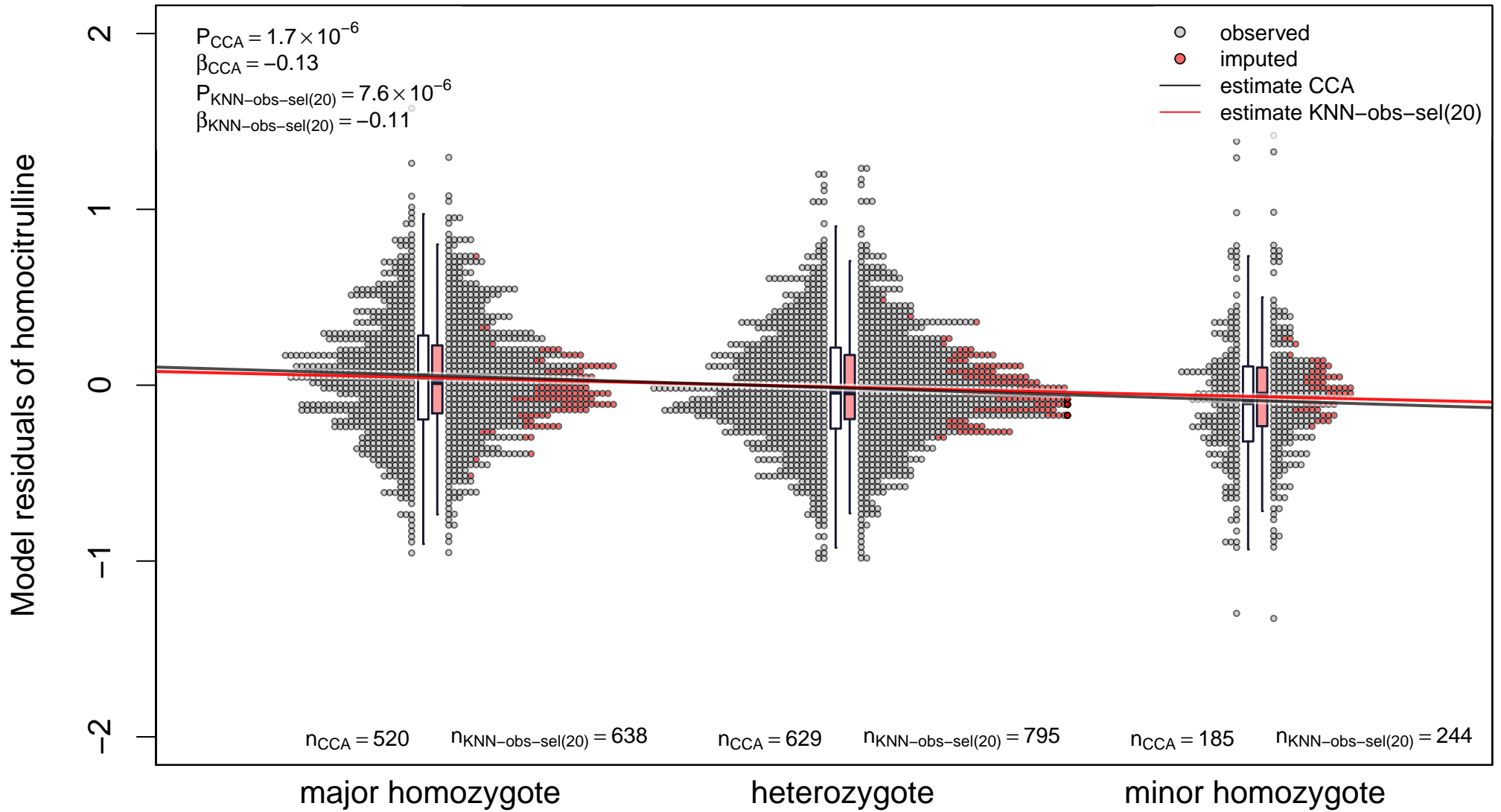
# KNN-obs-sel(1)



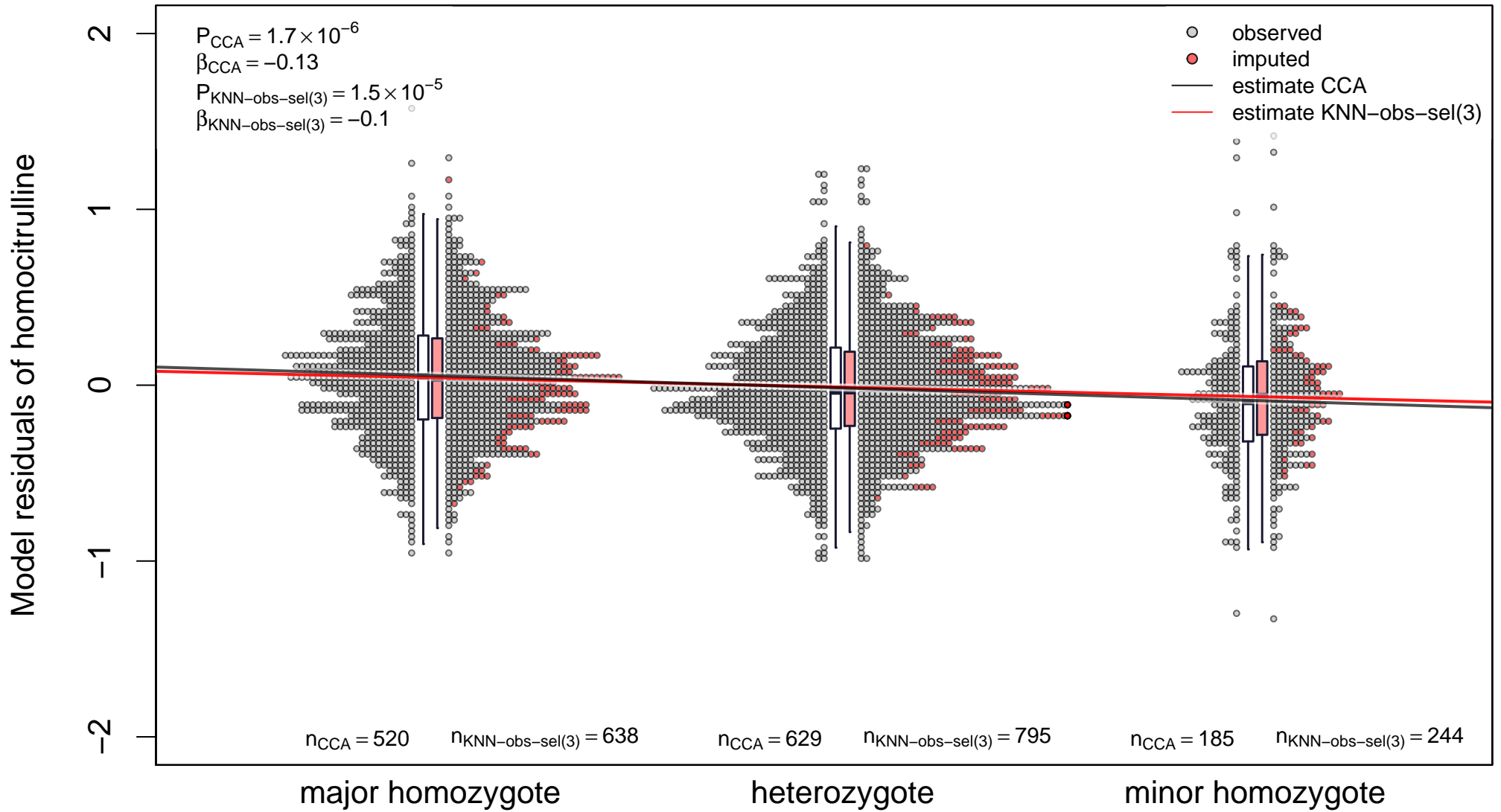
# KNN-obs-sel(10)



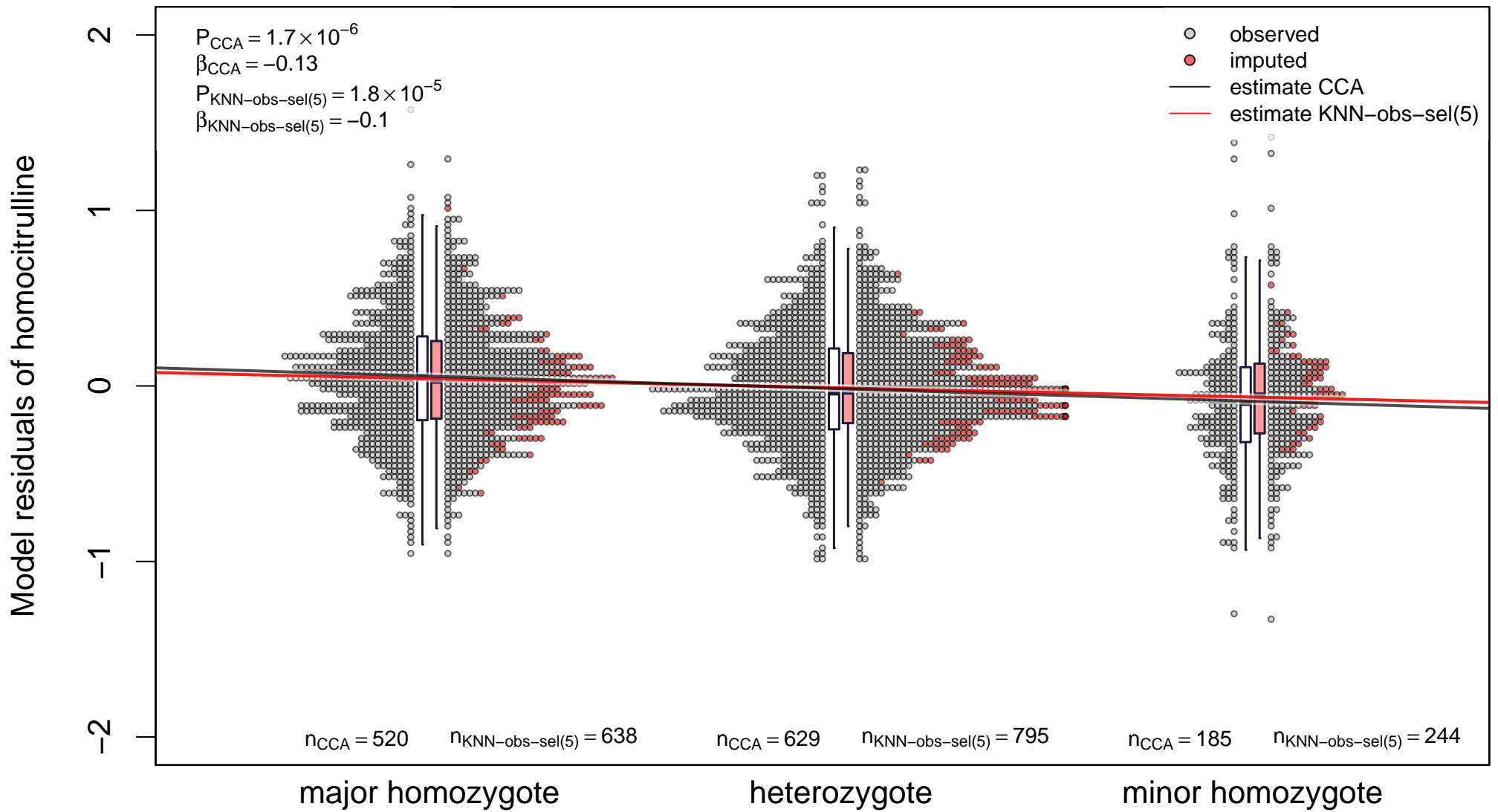
# KNN-obs-sel(20)



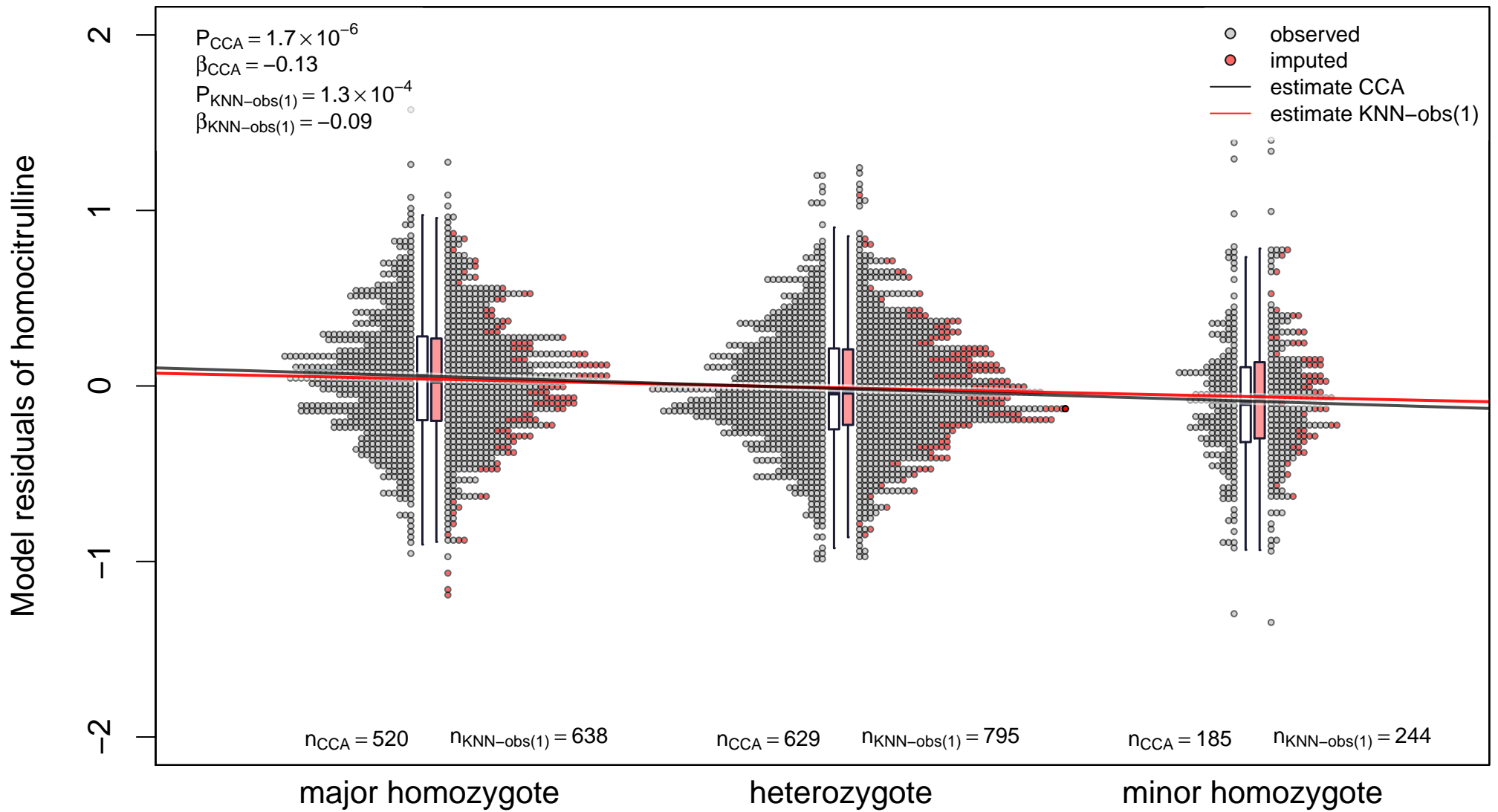
# KNN-obs-sel(3)



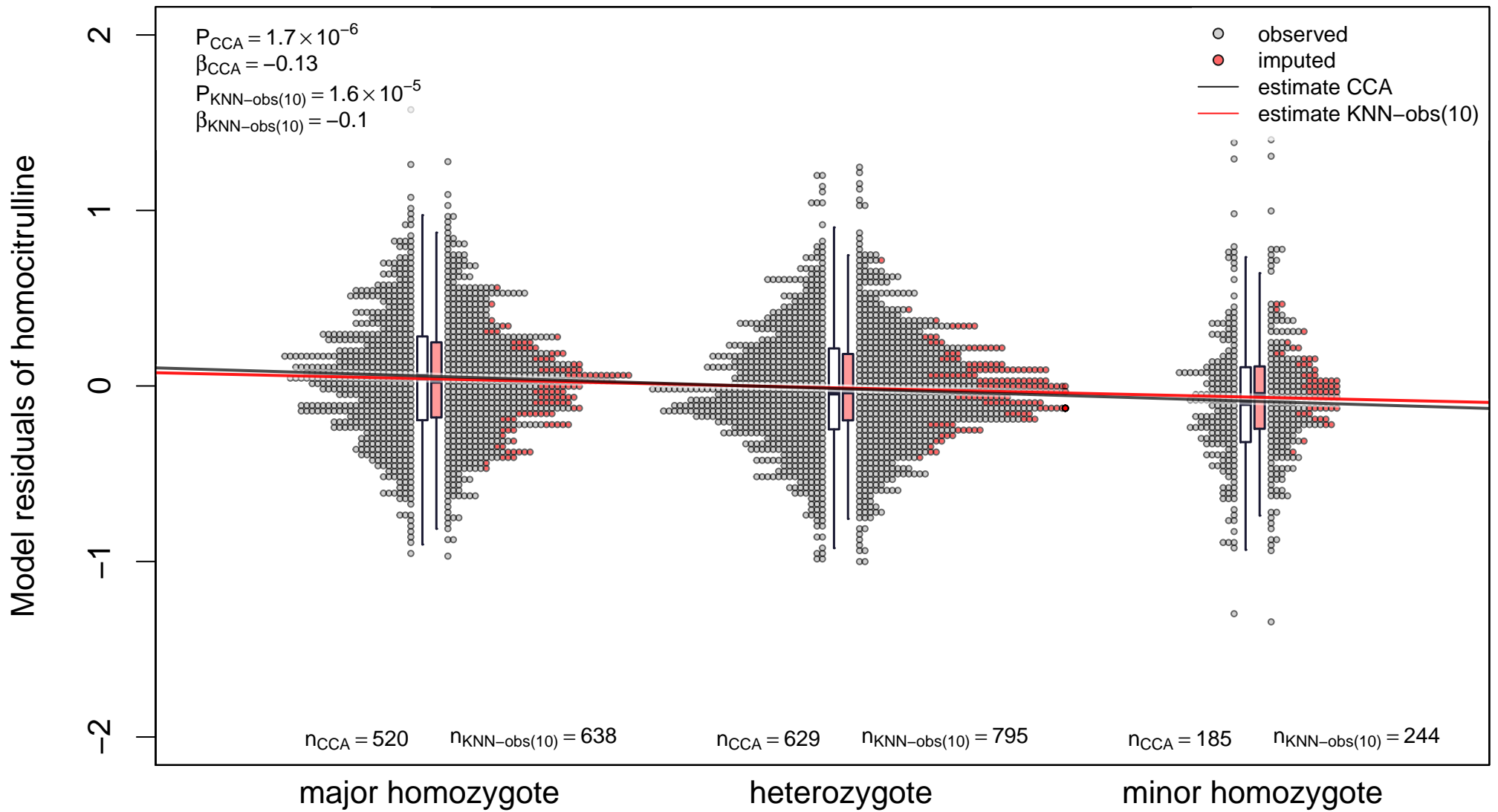
# KNN-obs-sel(5)



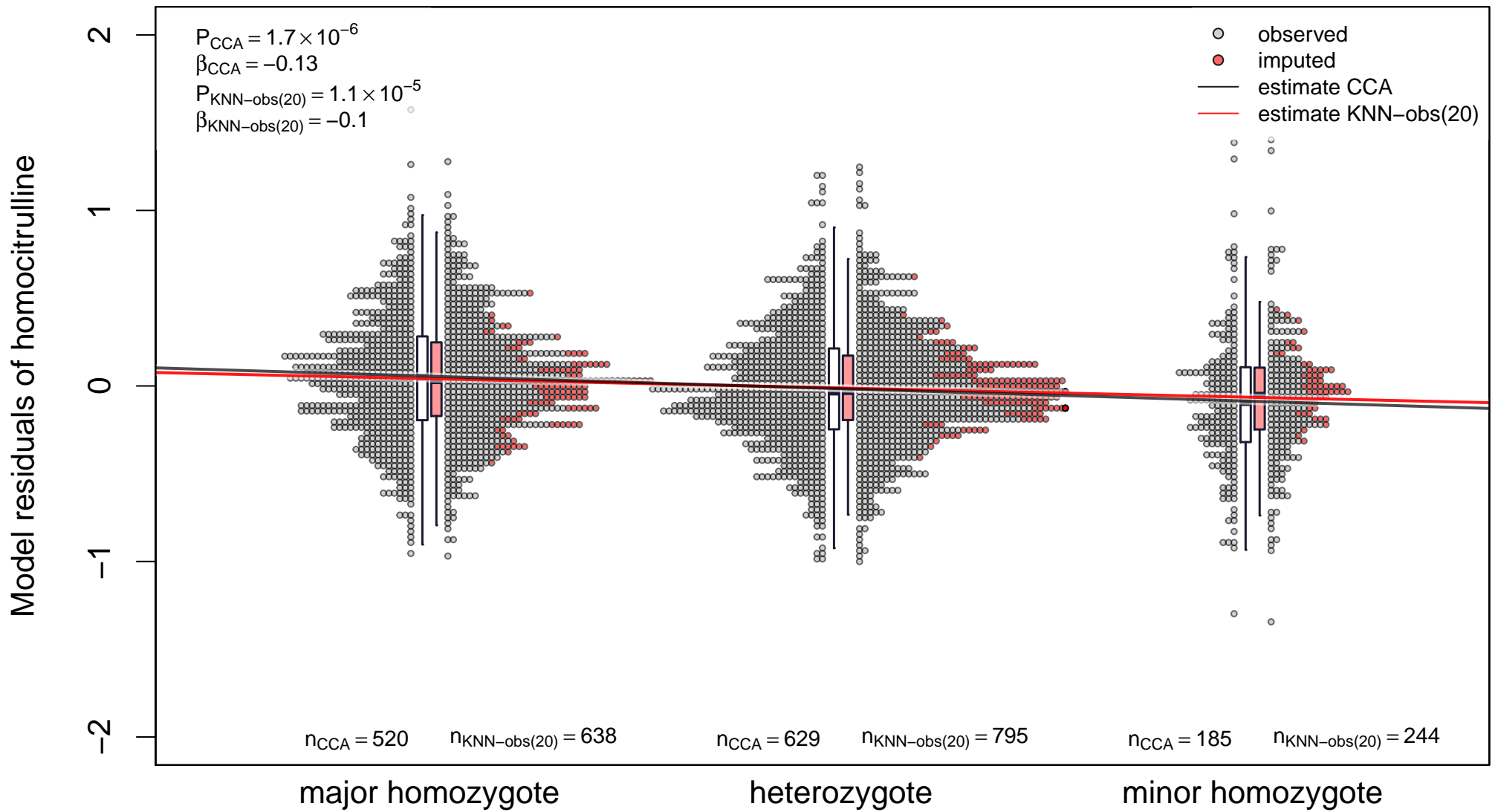
# KNN-obs(1)



# KNN-obs(10)

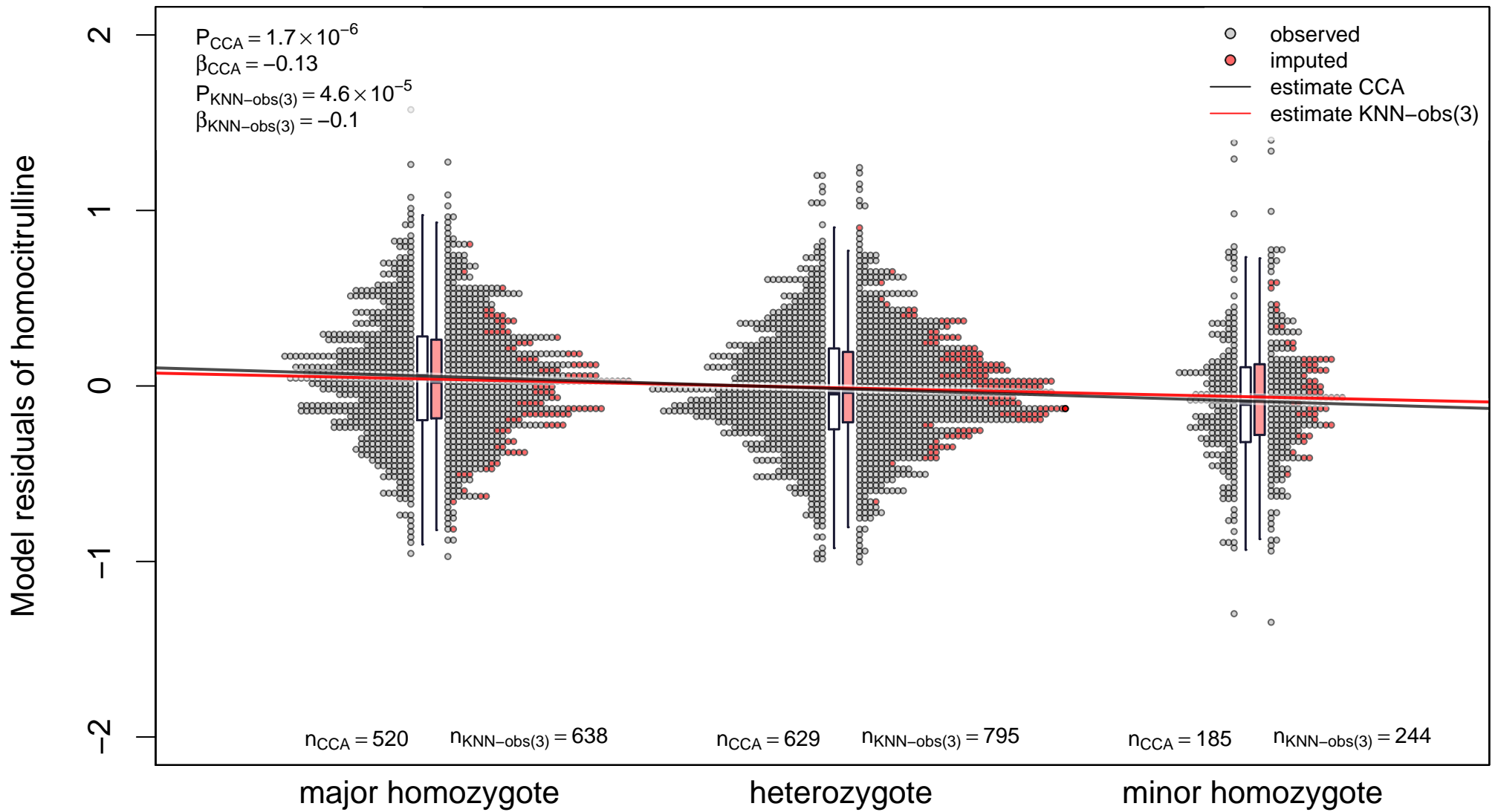


# KNN-obs(20)

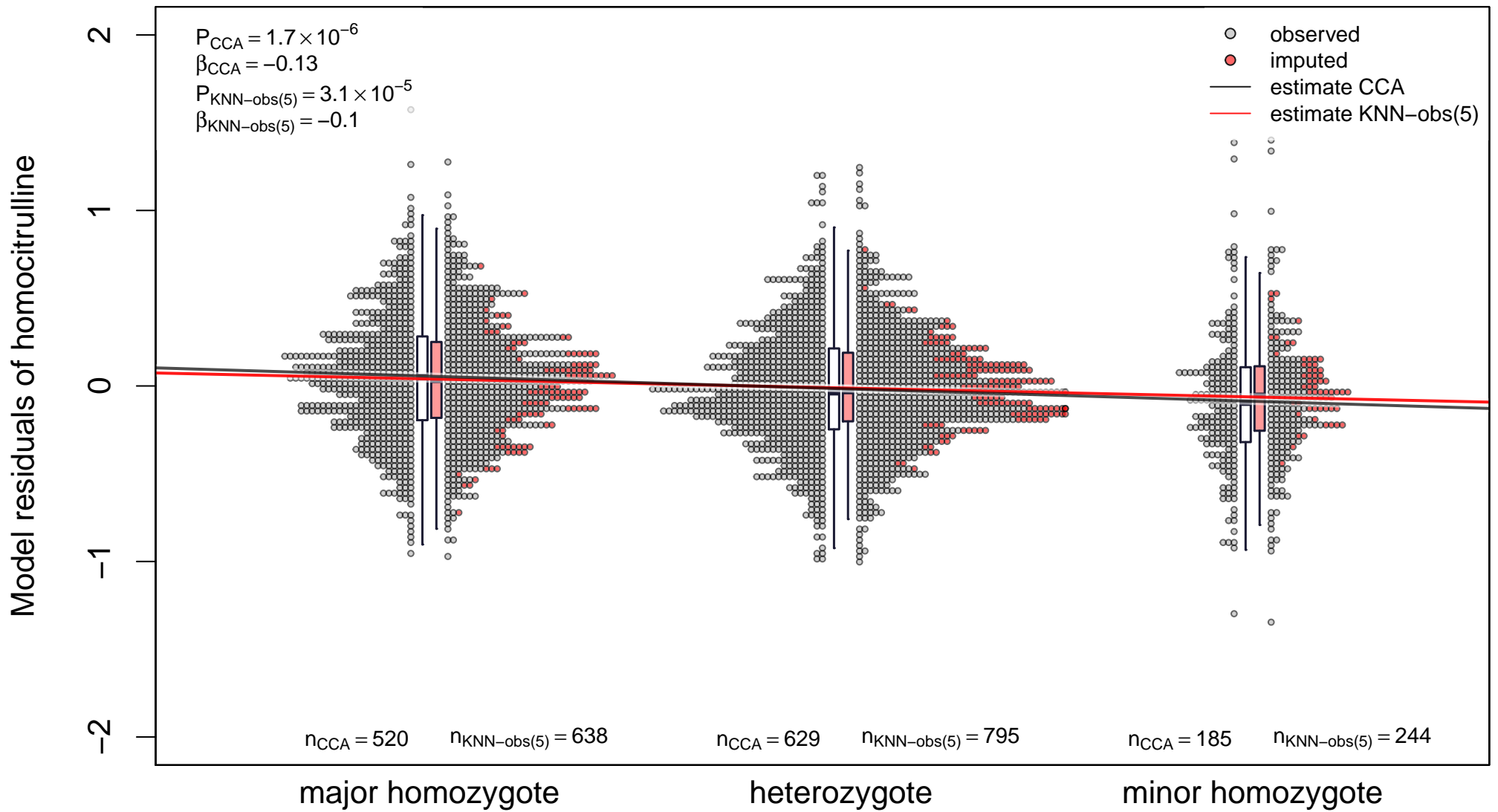




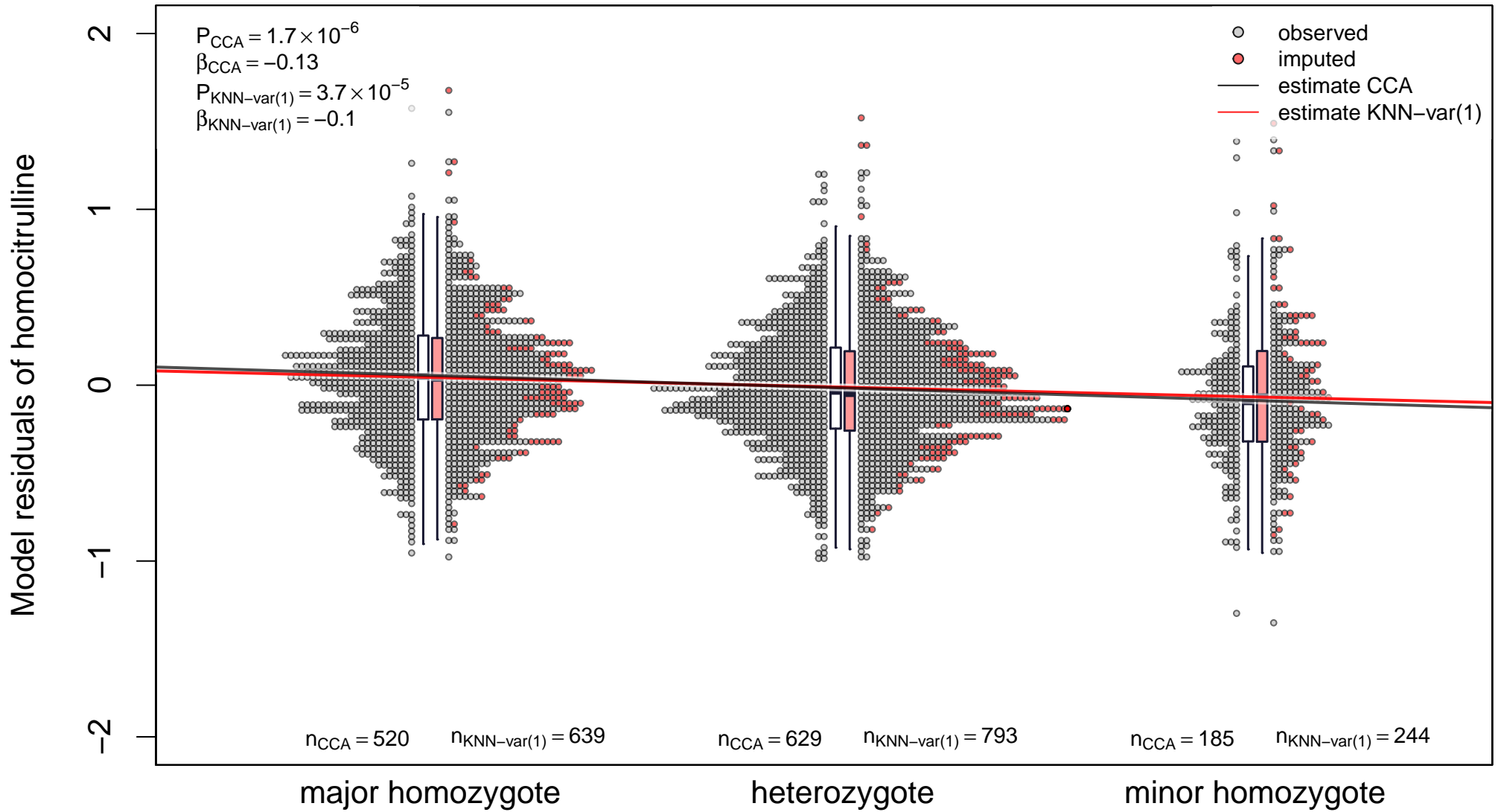
# KNN-obs(3)



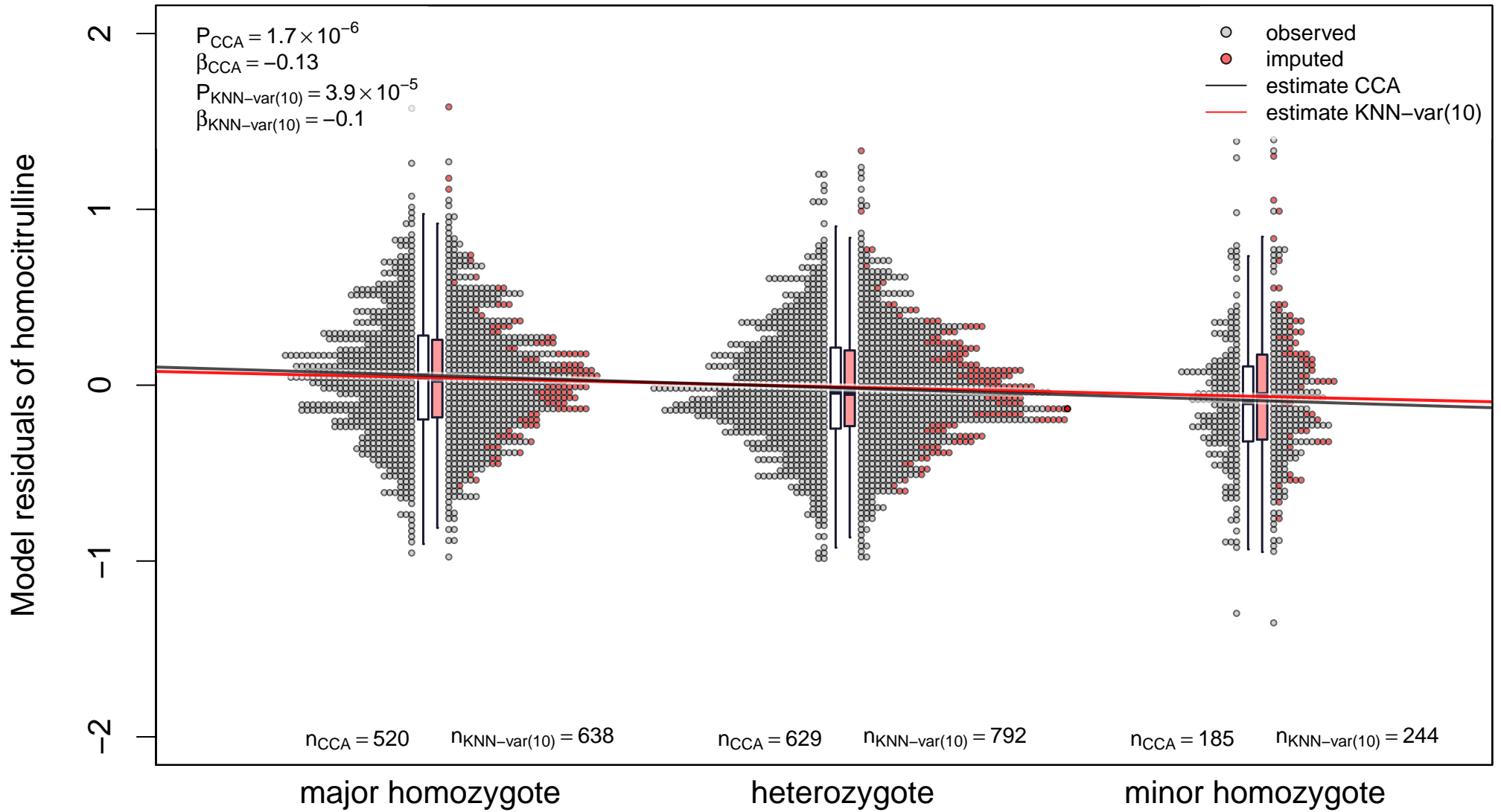
# KNN-obs(5)



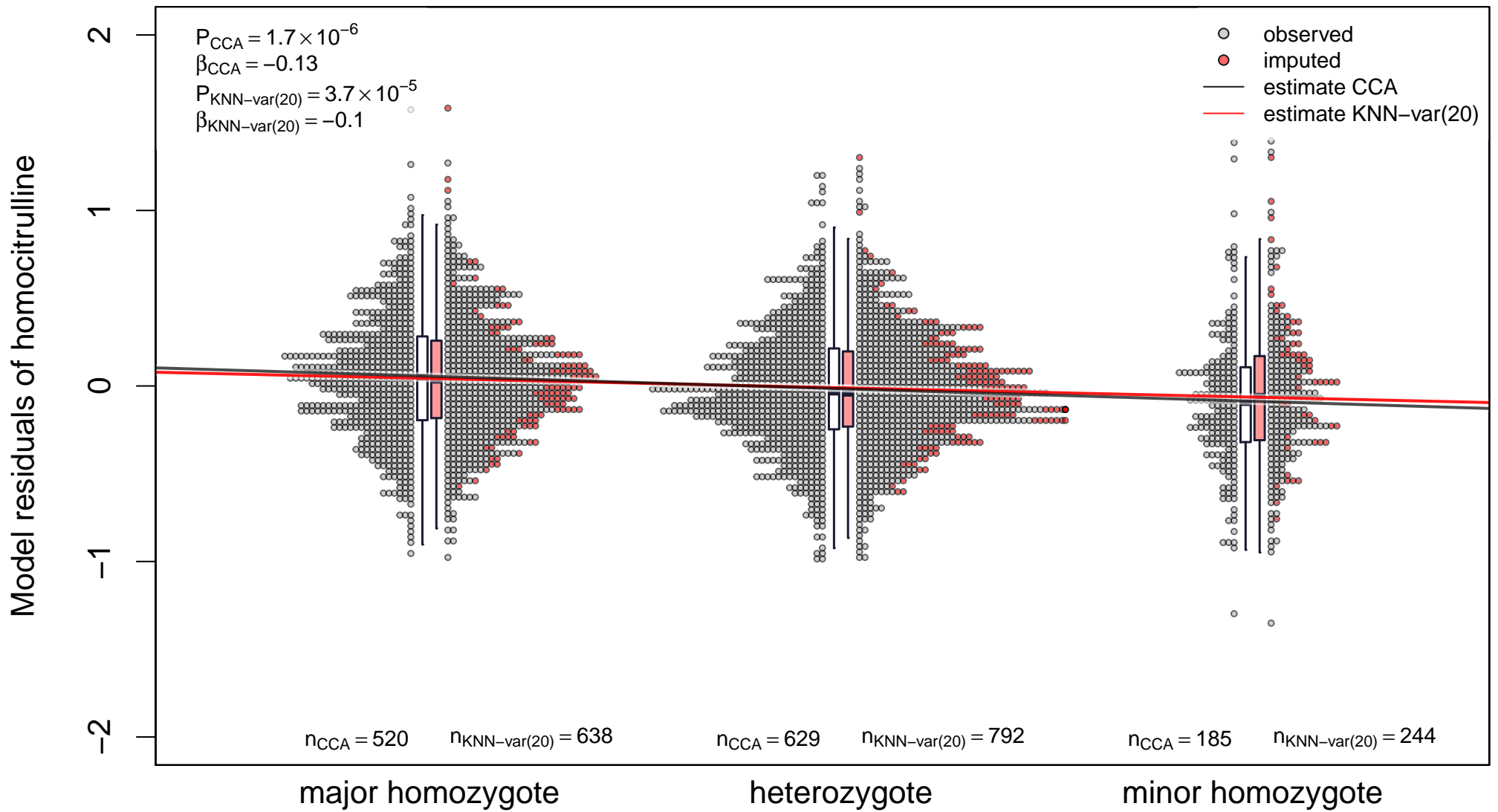
# KNN-var(1)



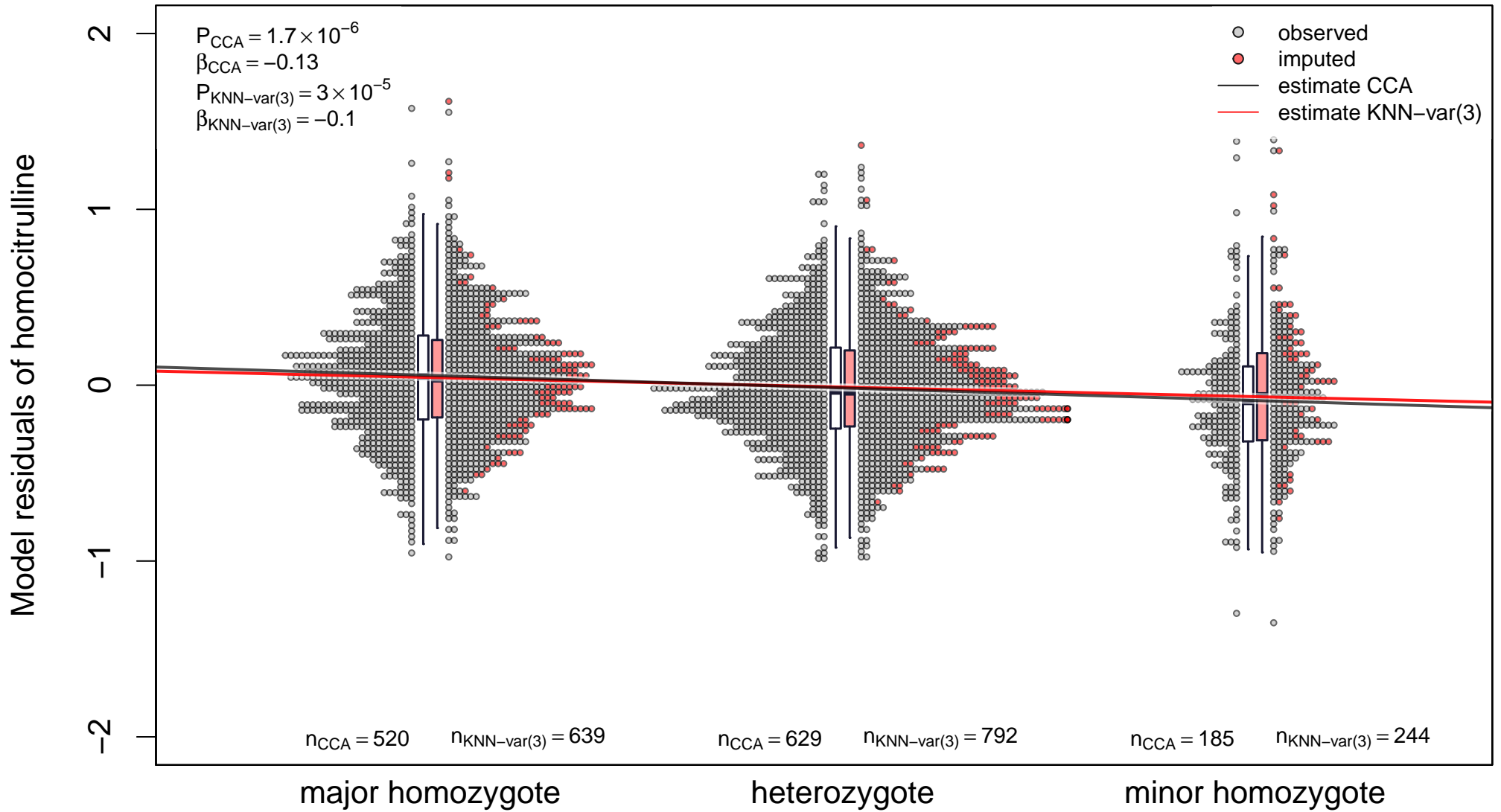
# KNN-var(10)



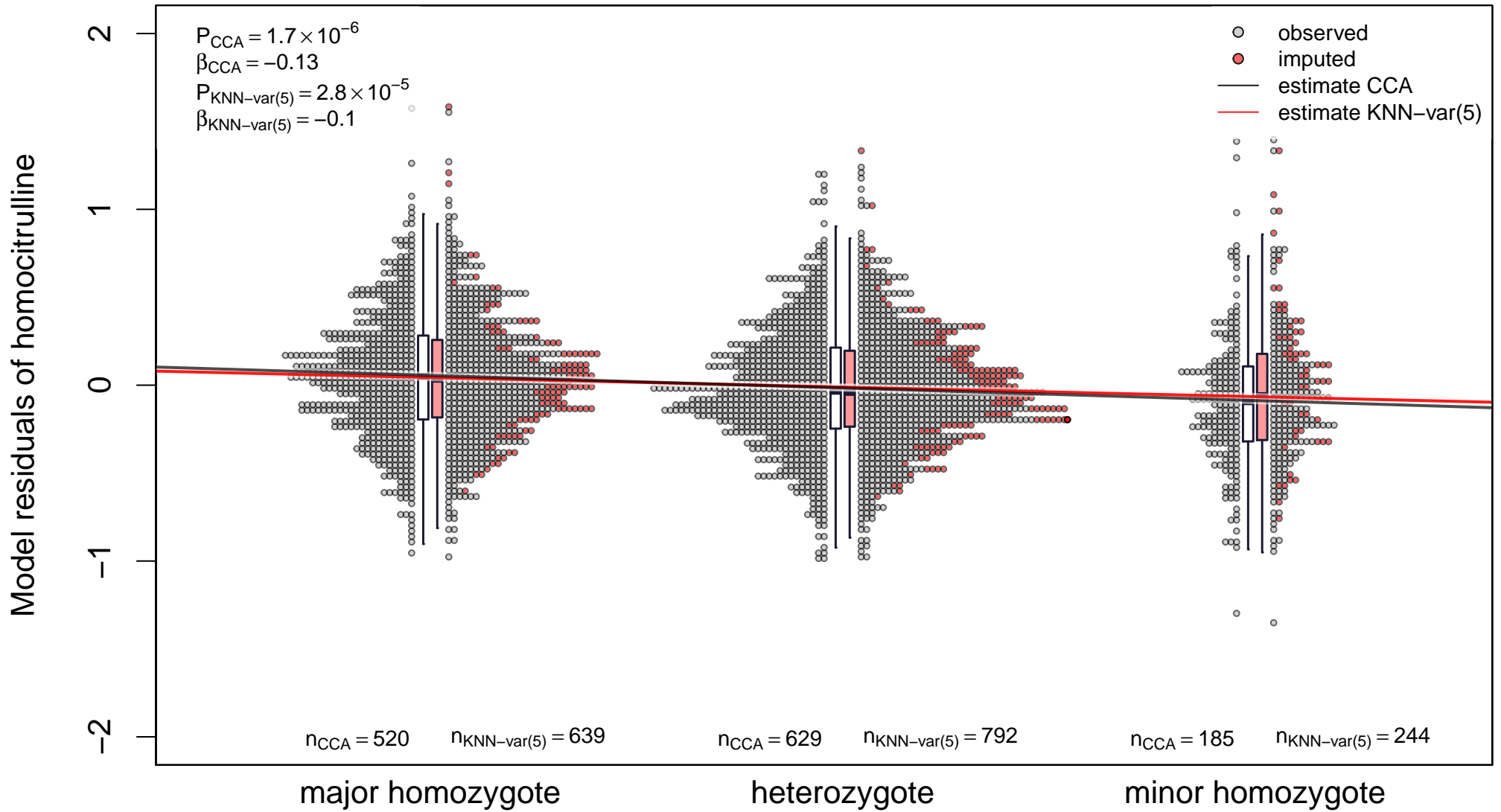
# KNN-var(20)



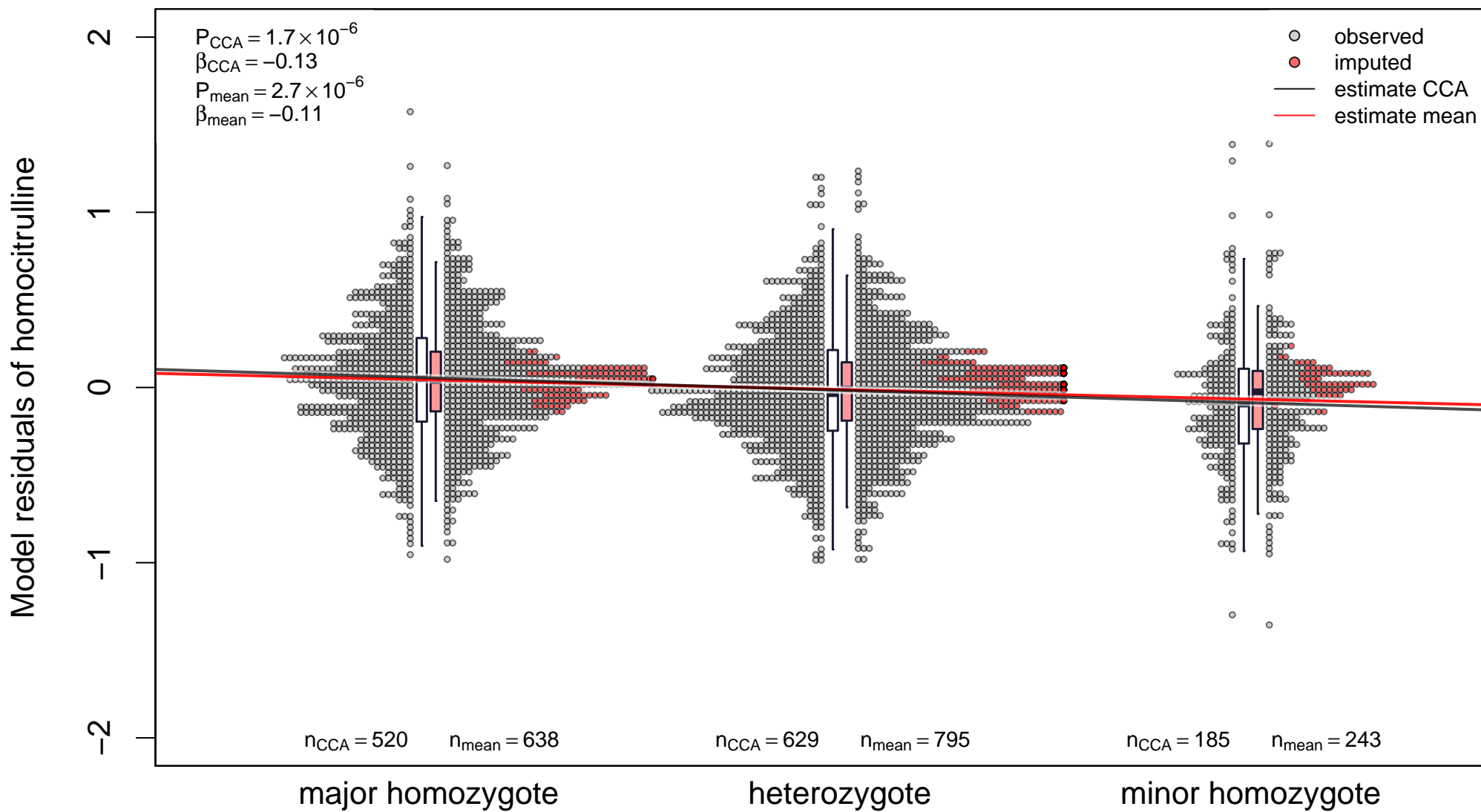
# KNN-var(3)



# KNN-var(5)



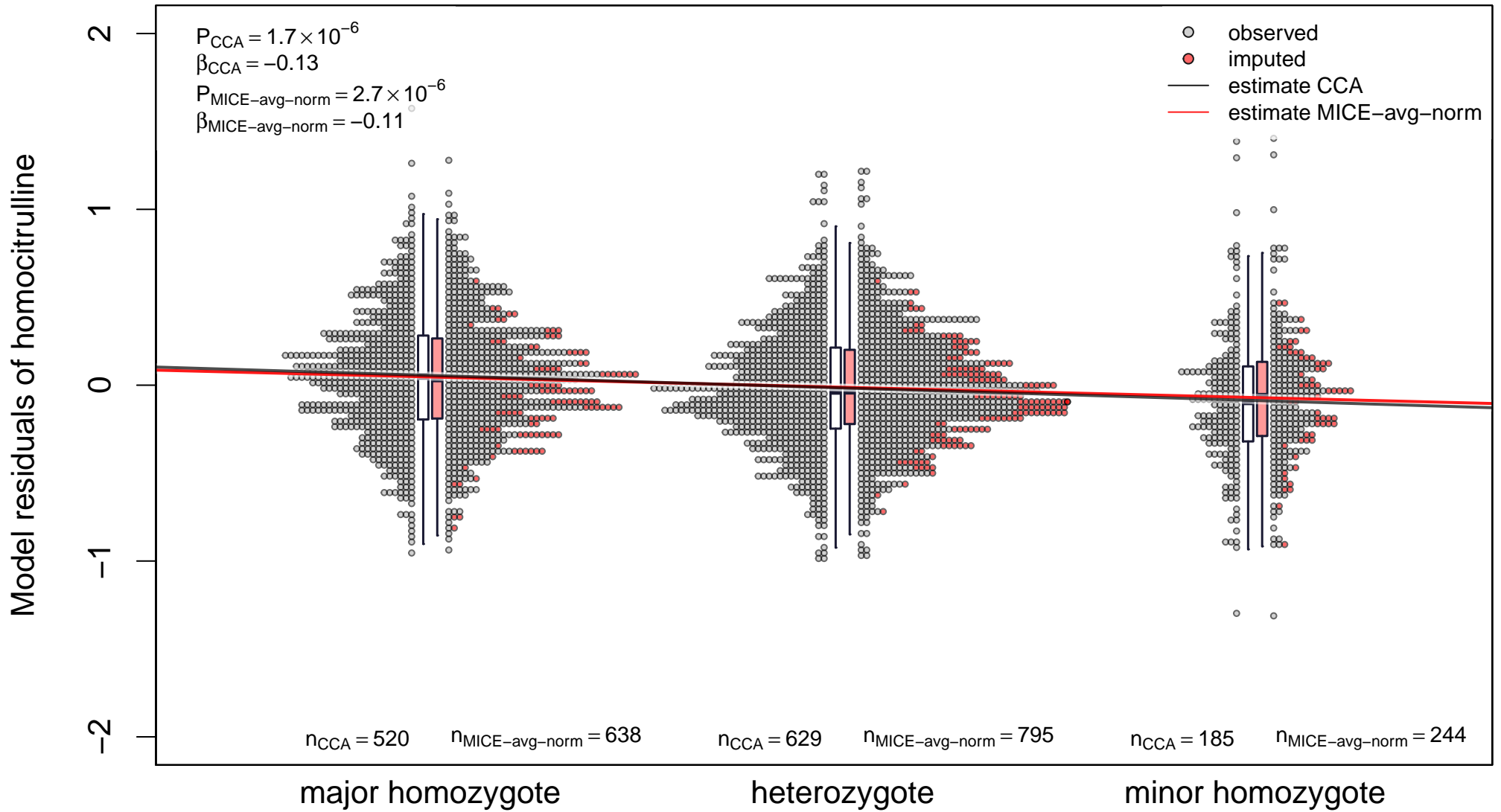
# mean



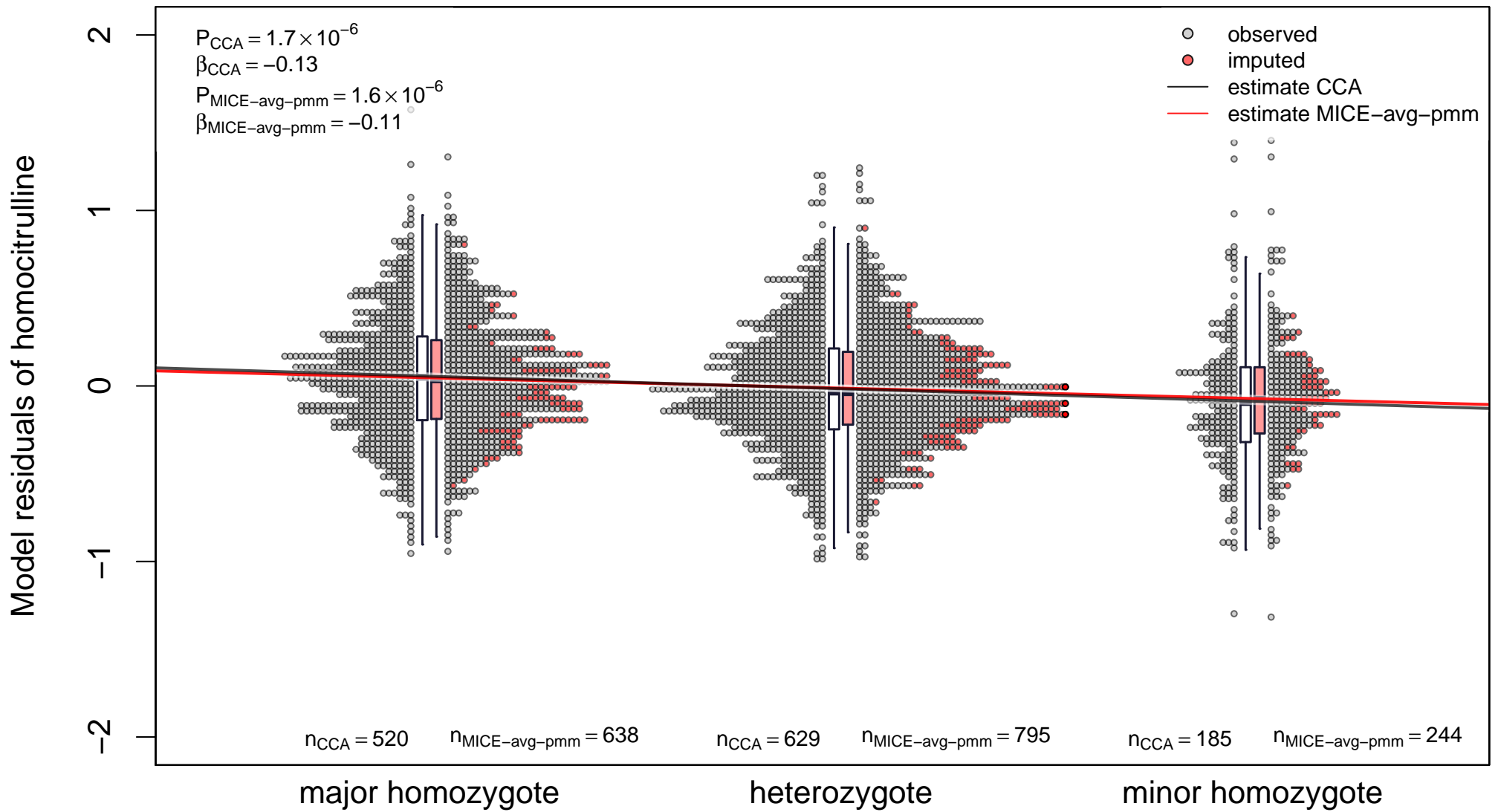
Genotype of SNP rs8101881 (SLC7A9)



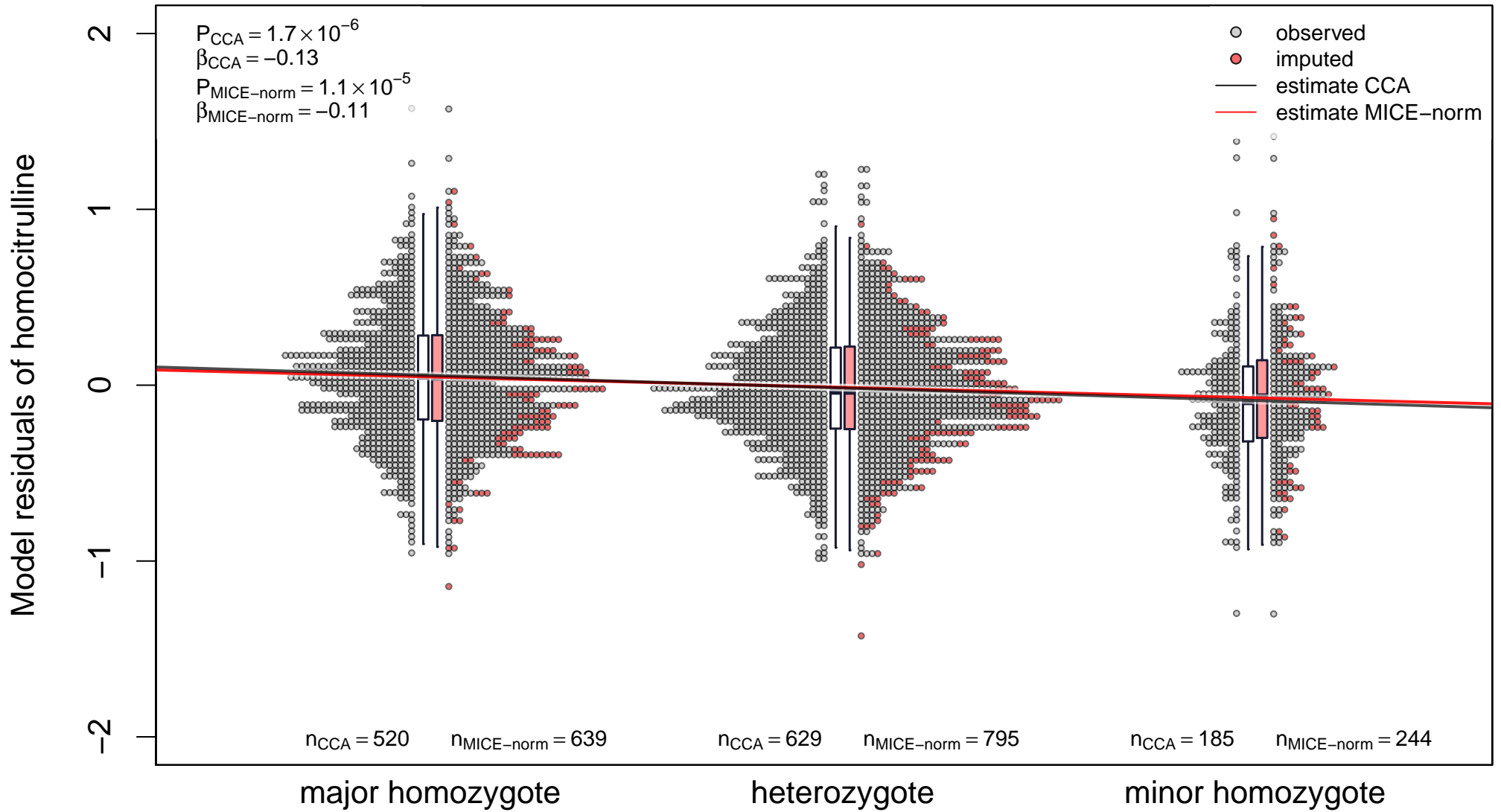
# MICE-avg-norm



# MICE-avg-pmm

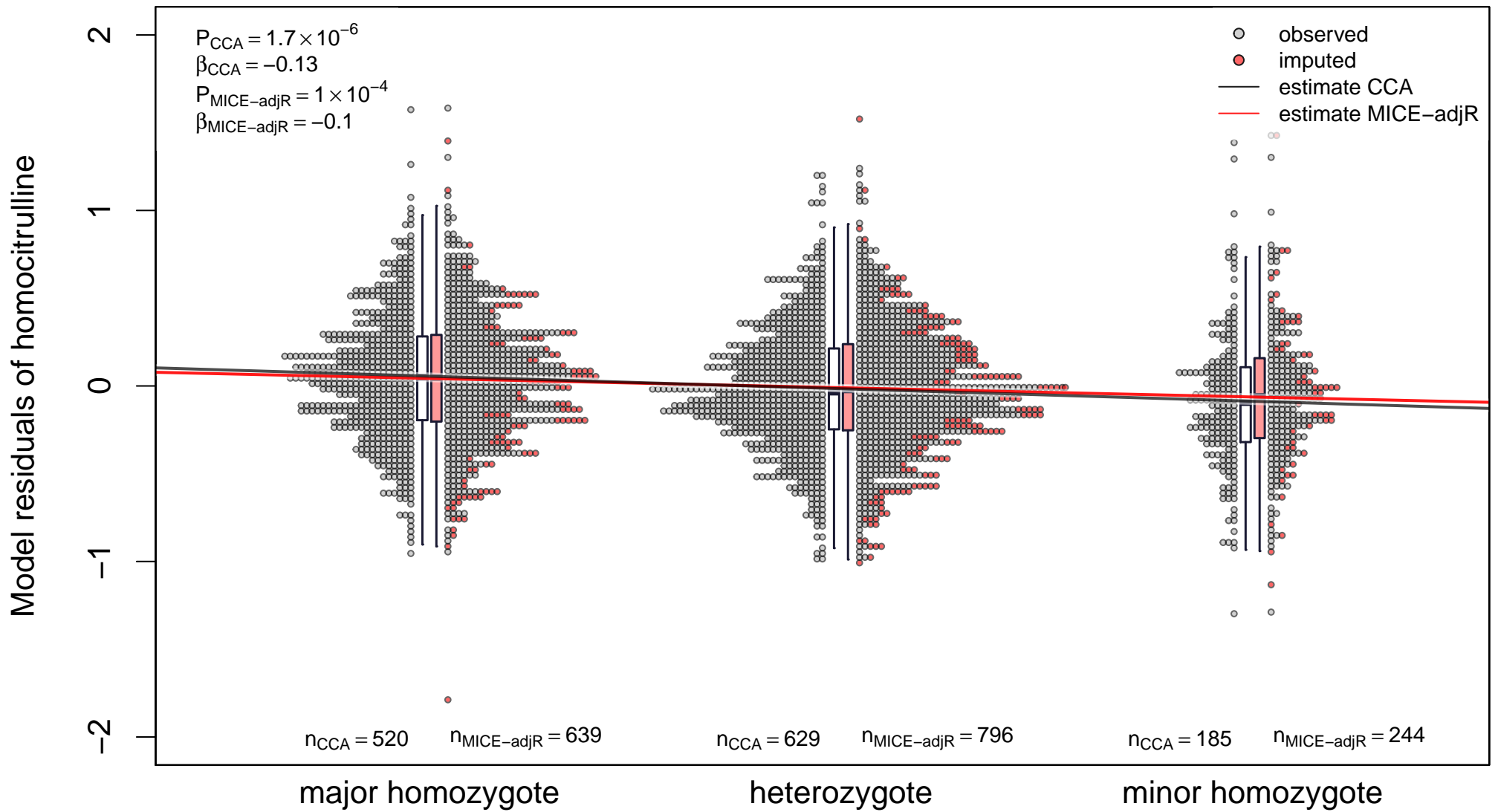


# MICE-norm

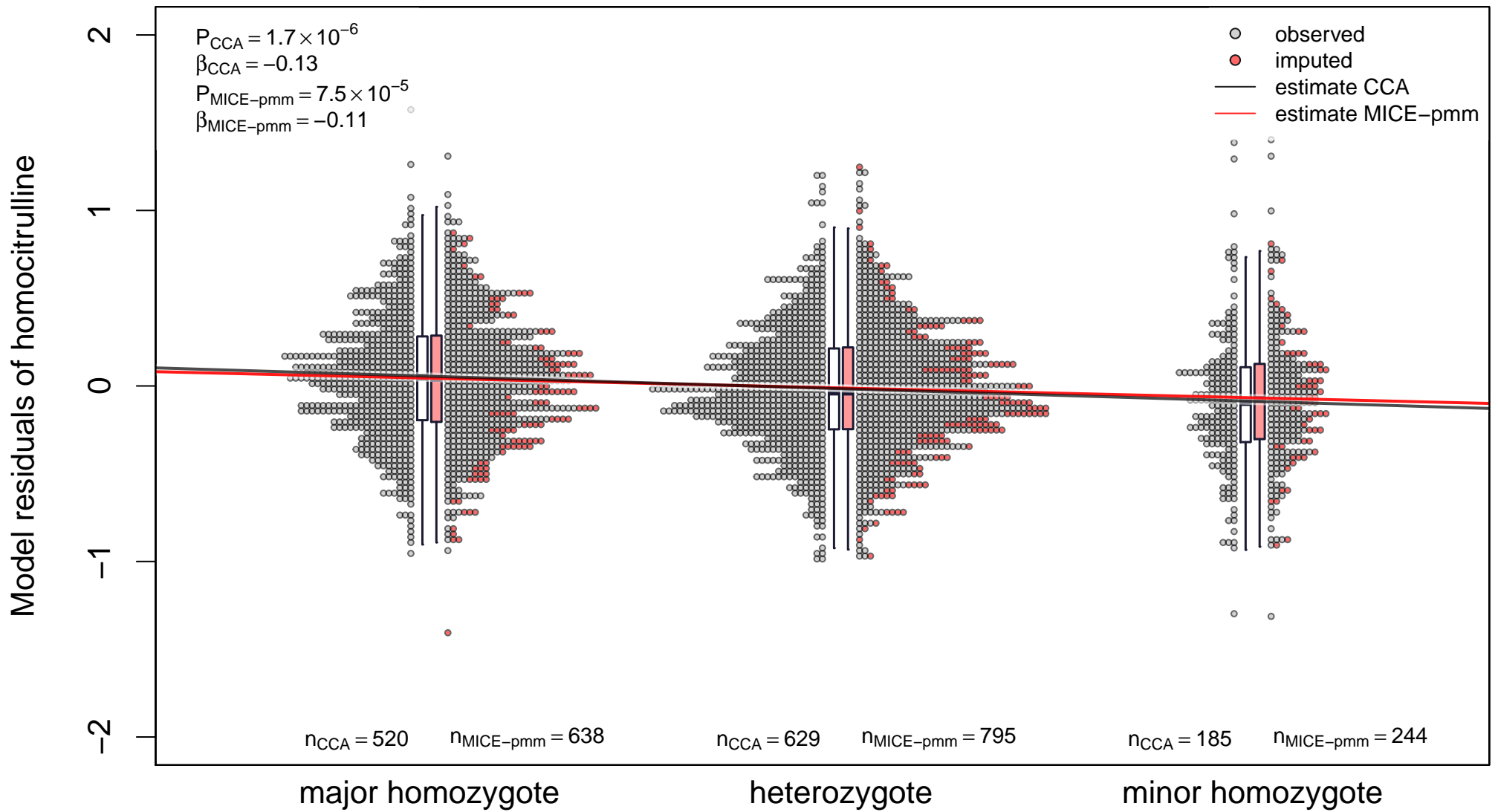


Genotype of SNP rs8101881 (SLC7A9)

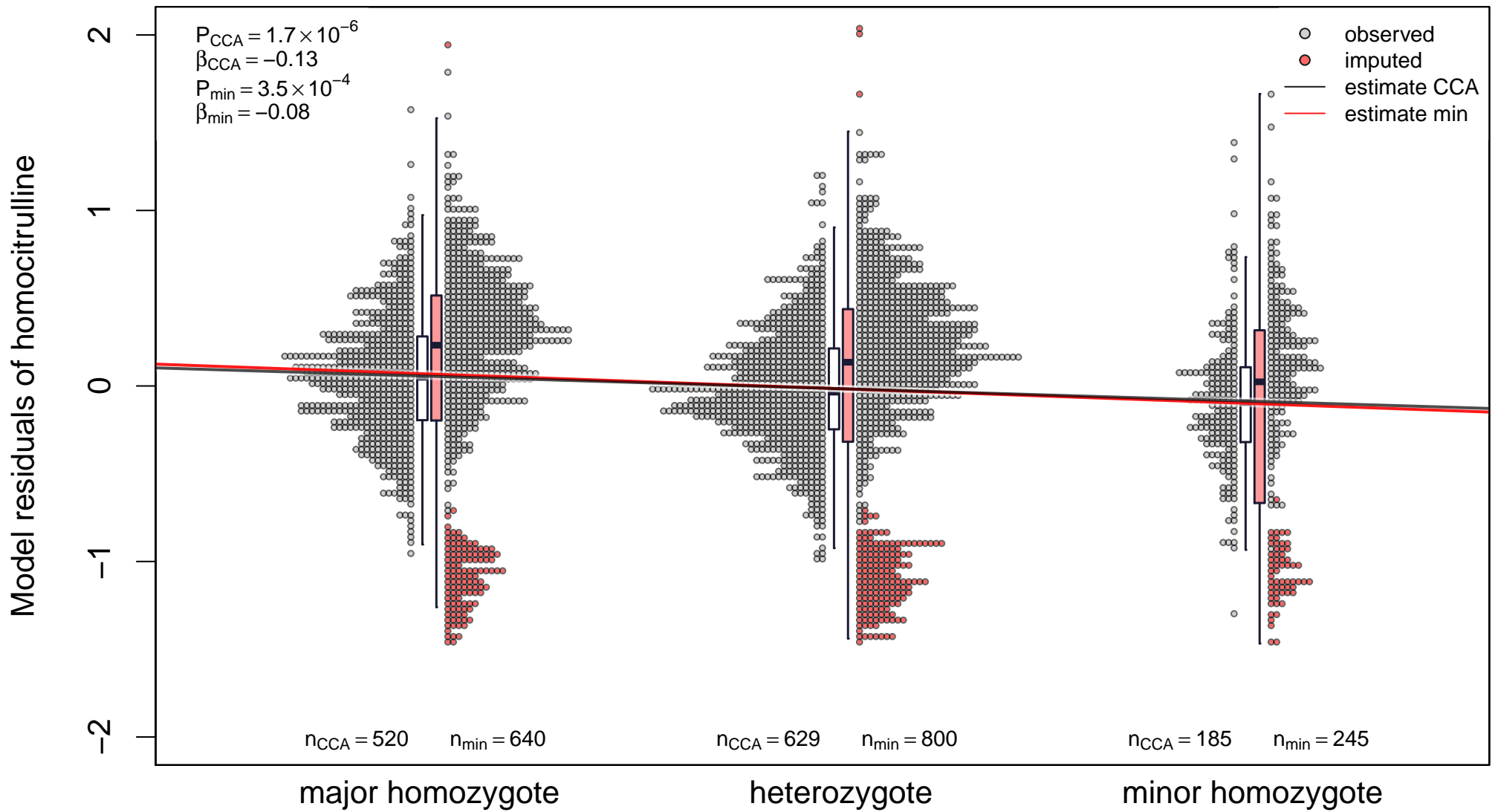
# MICE-adjR



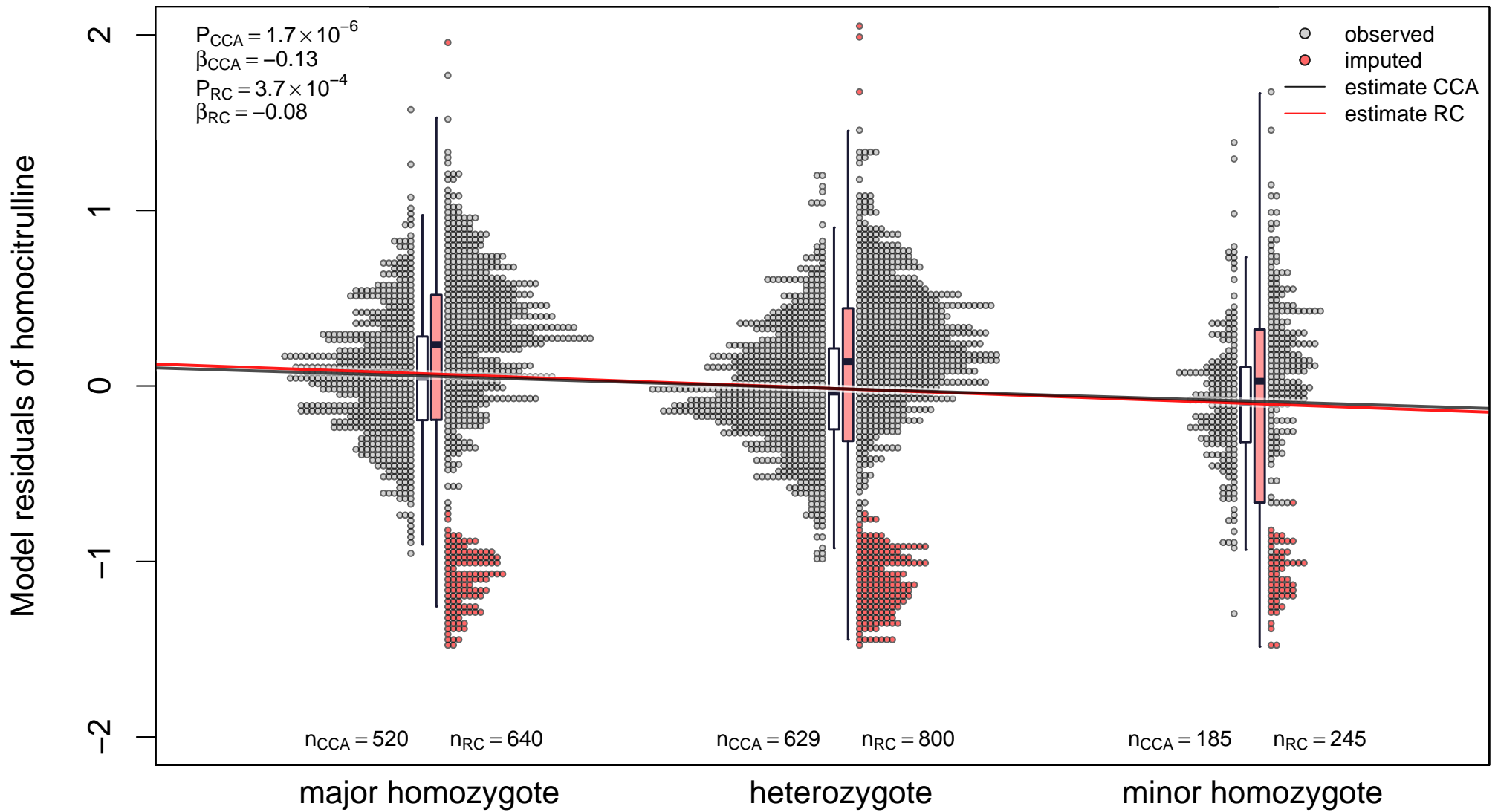
# MICE-pmm



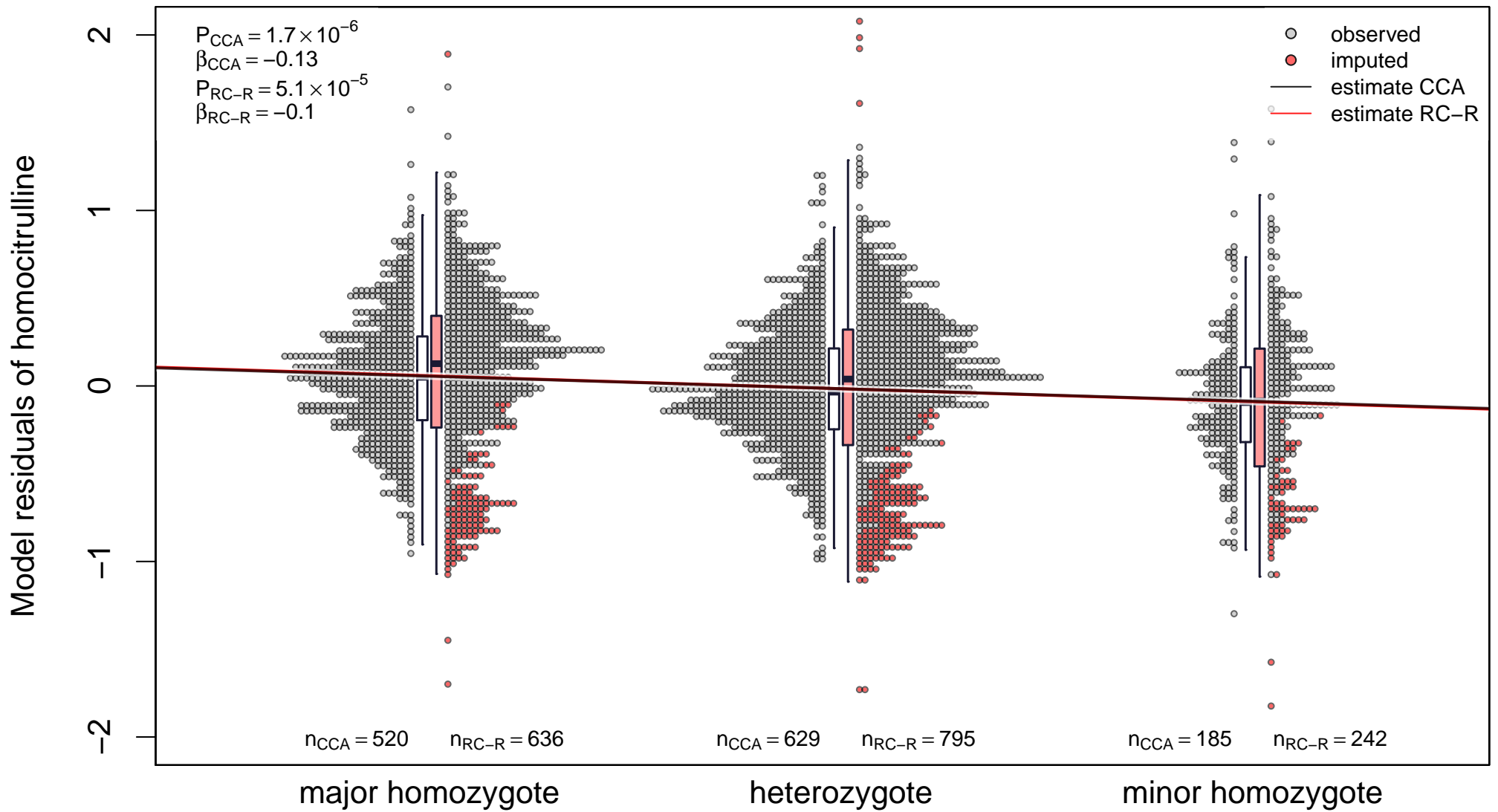
min



# RC

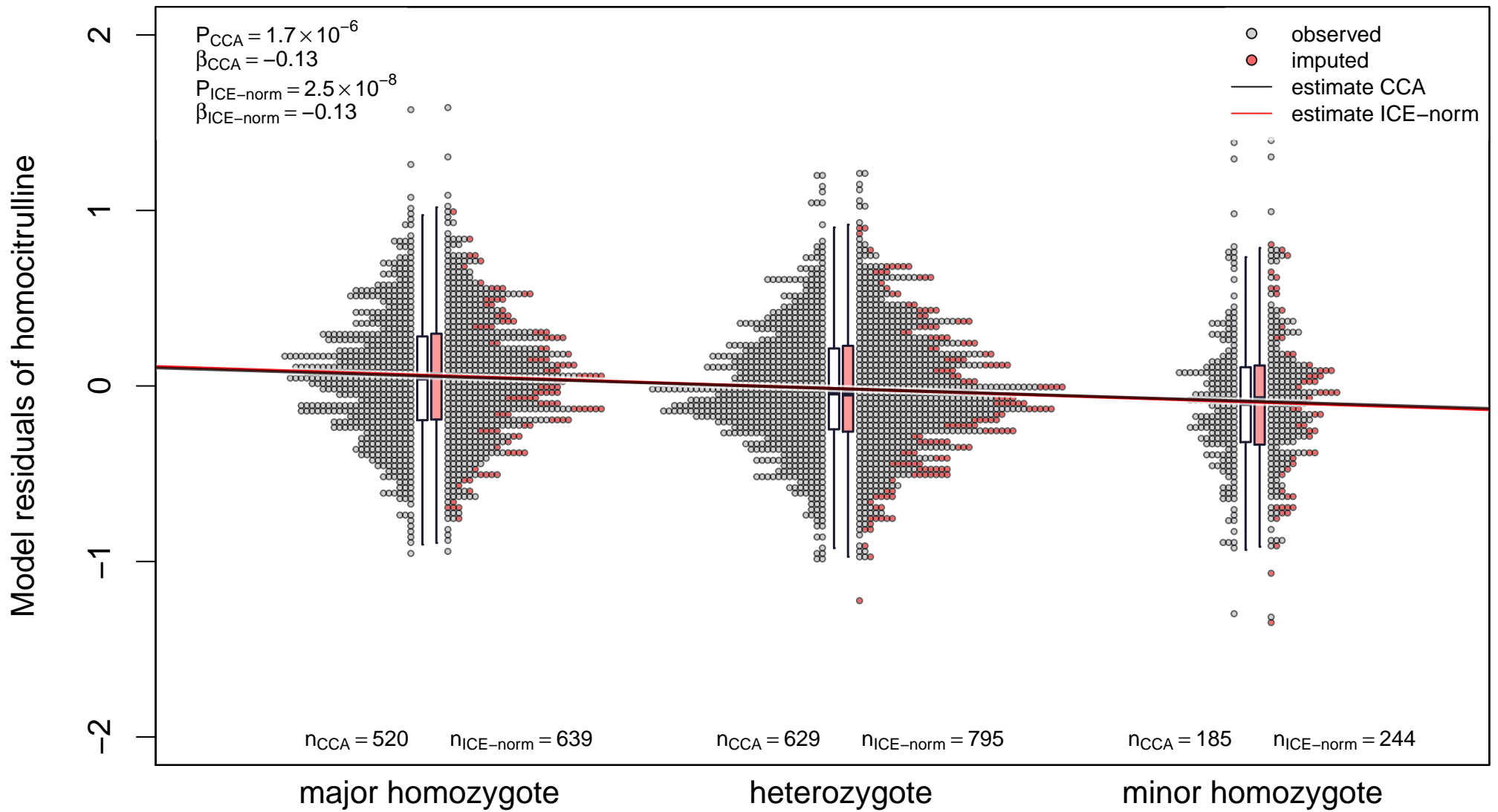


# RC-R



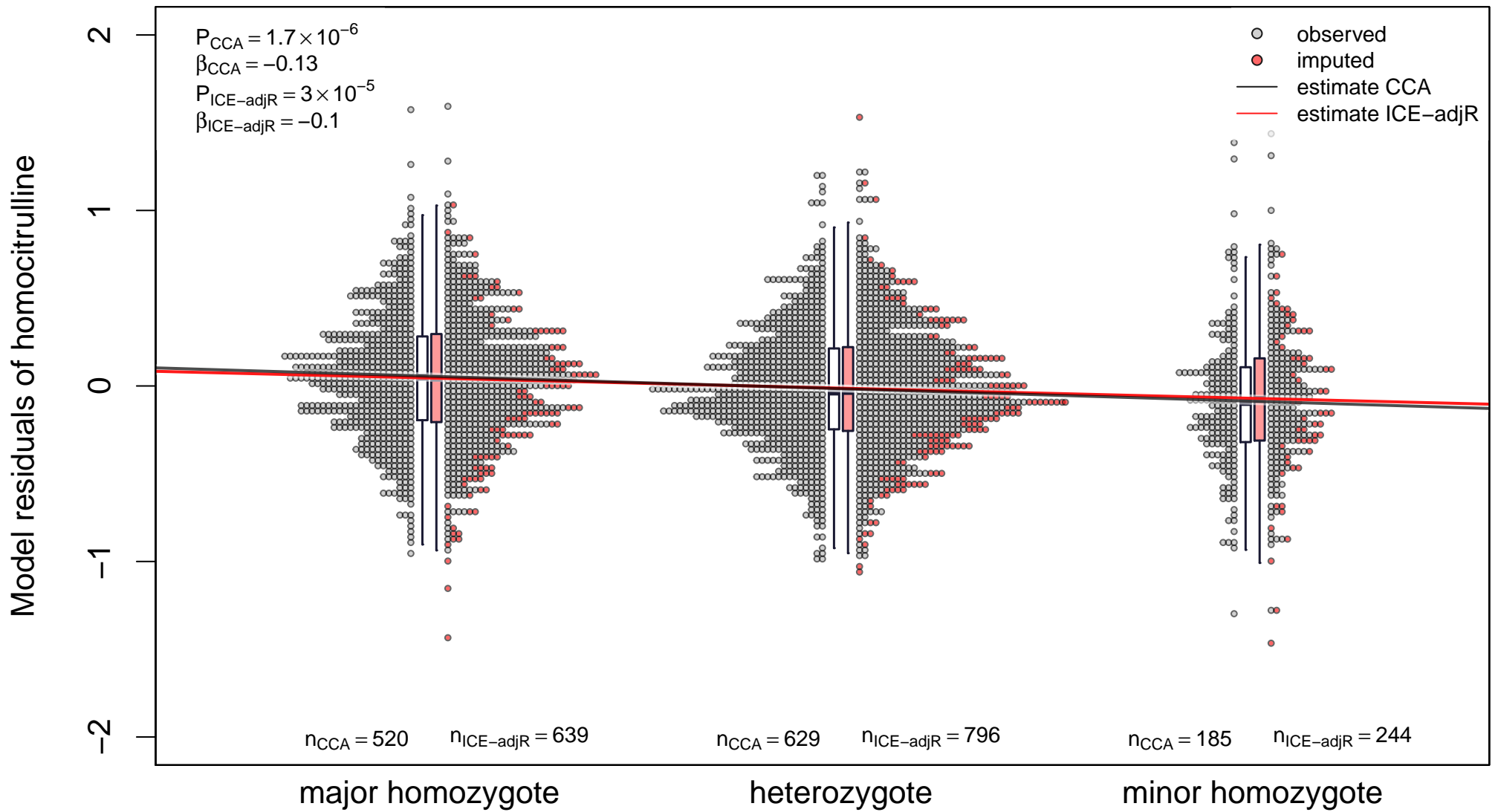


# ICE-norm

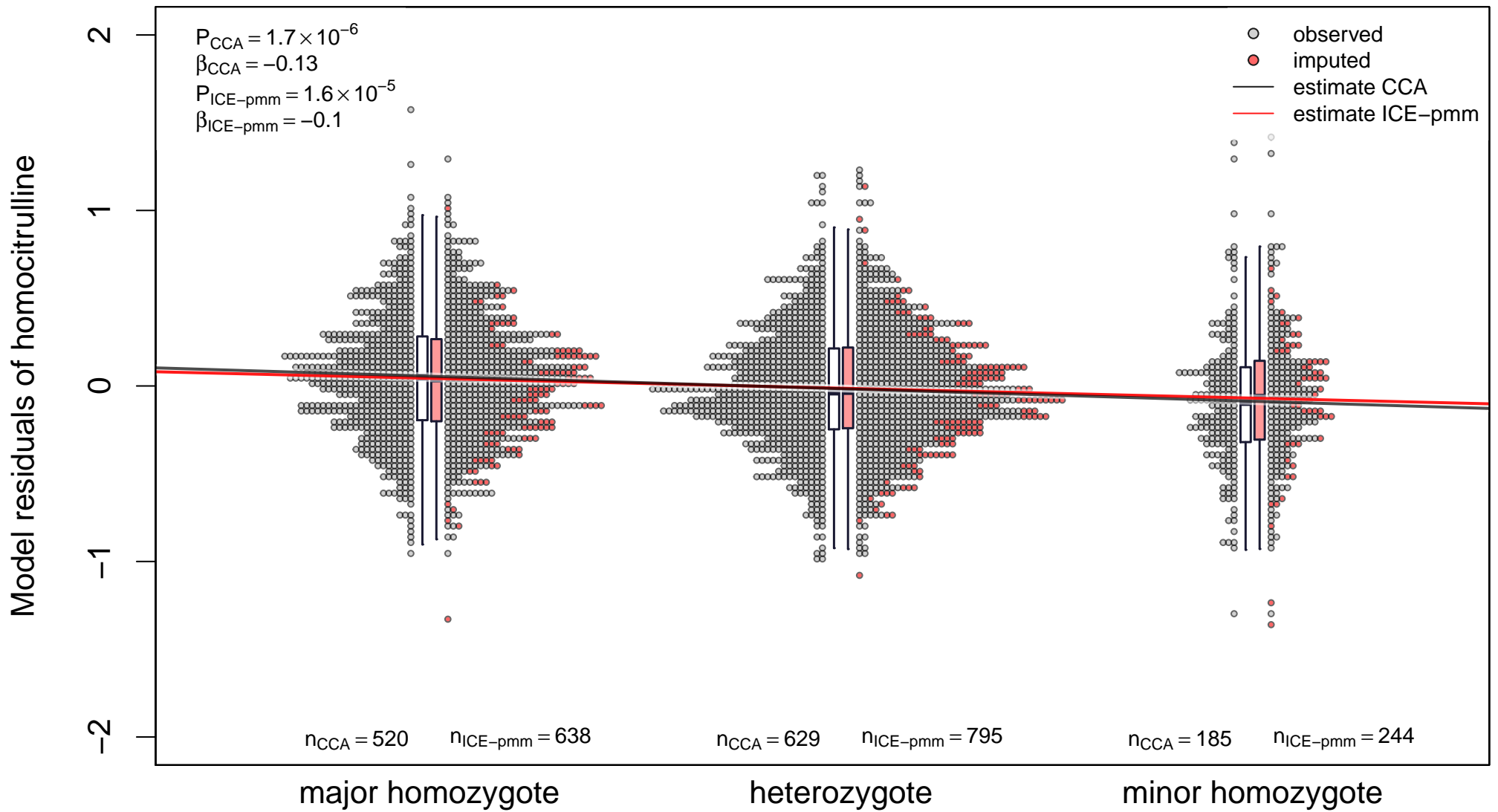


Genotype of SNP rs8101881 (SLC7A9)

# ICE-adjR

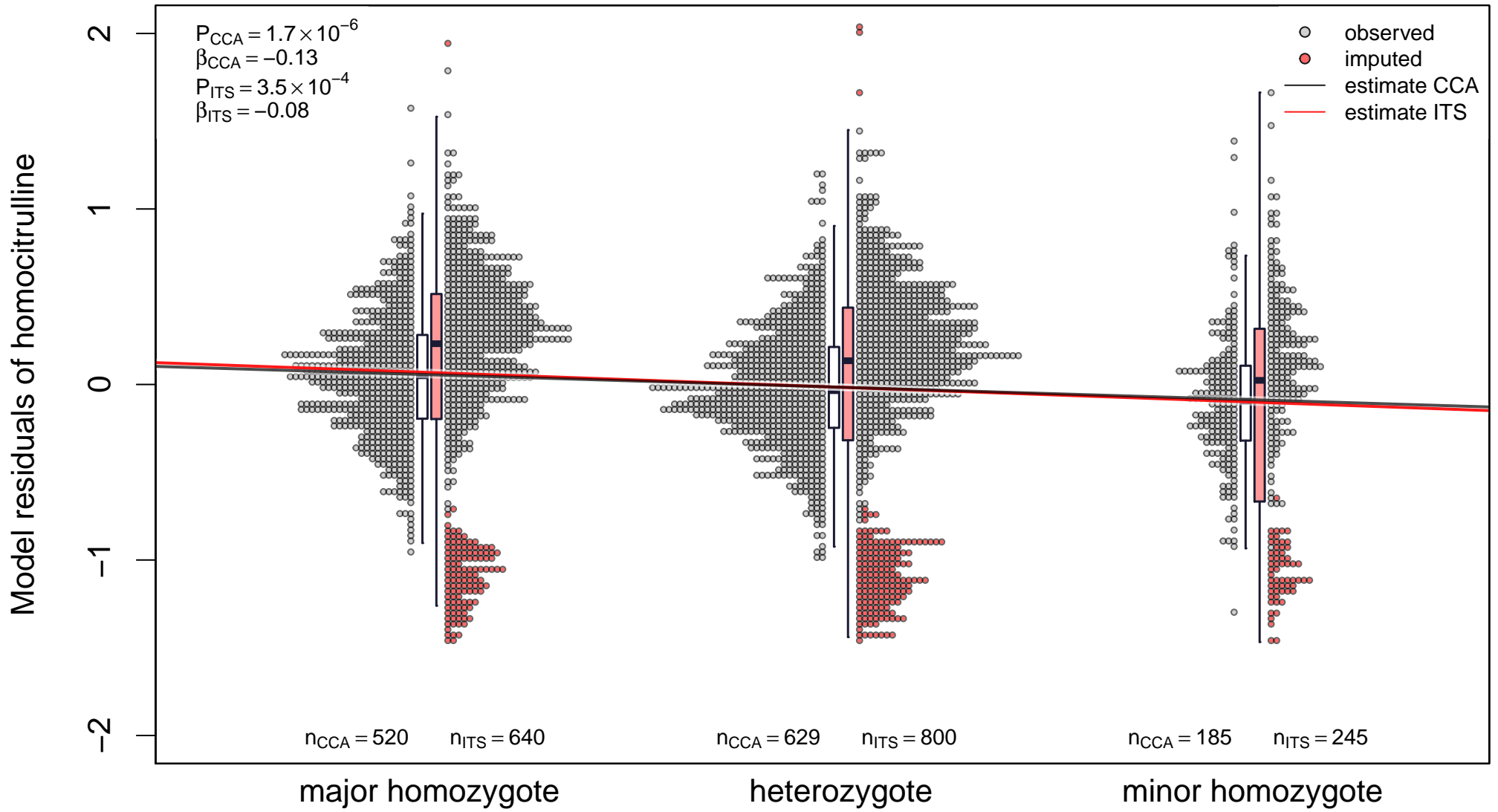


# ICE-pmm

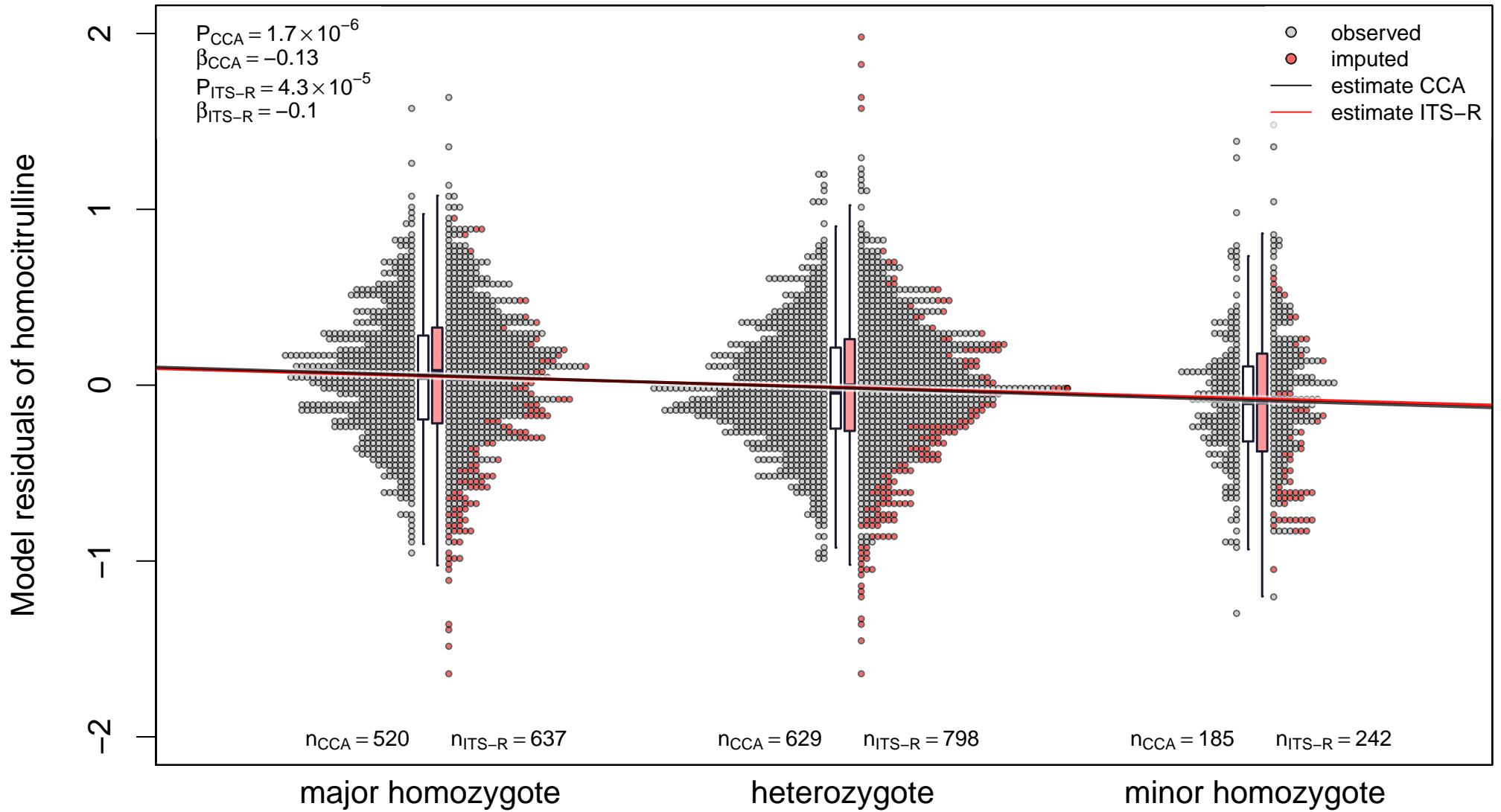


Genotype of SNP rs8101881 (SLC7A9)

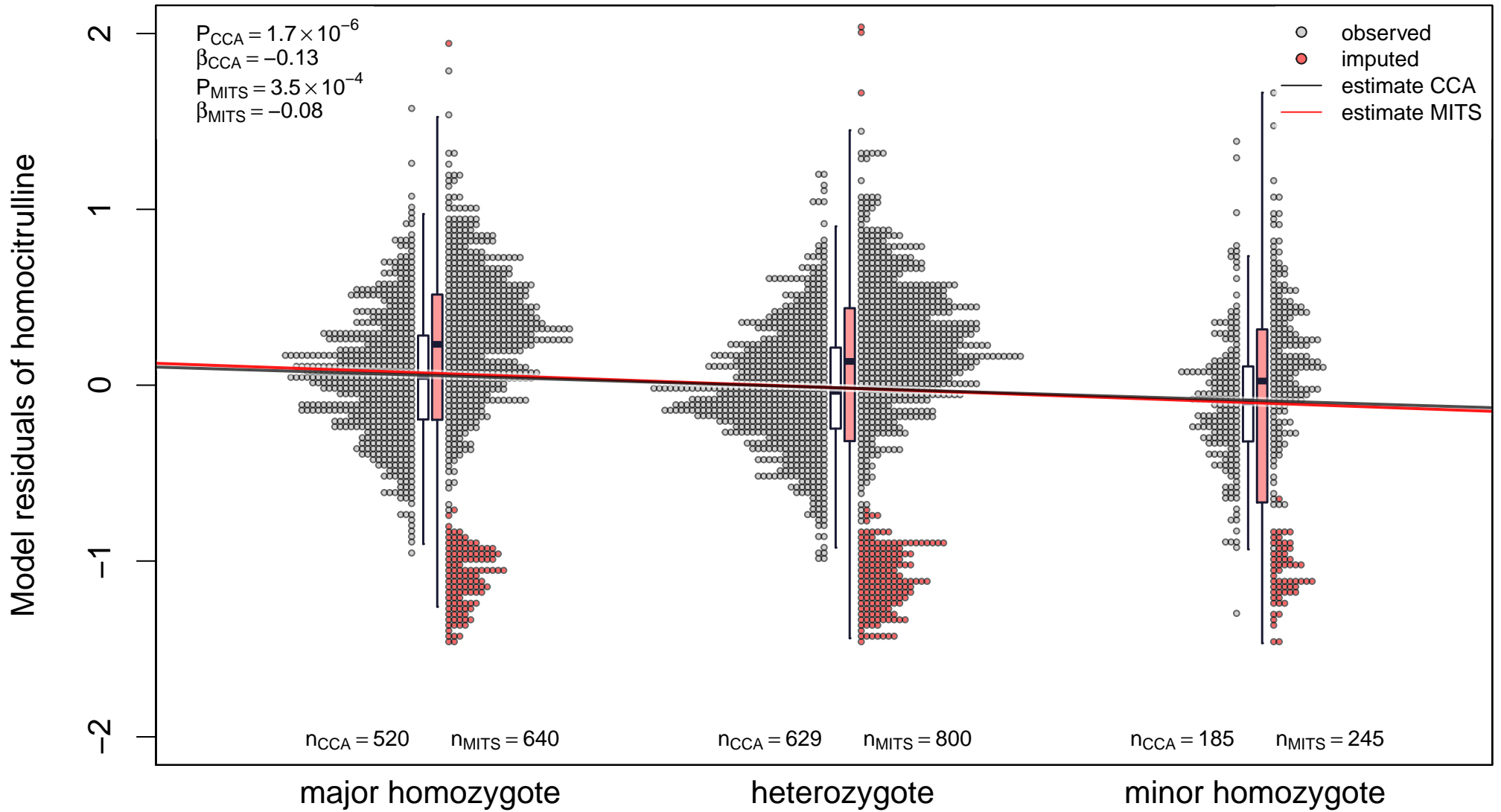
# ITS



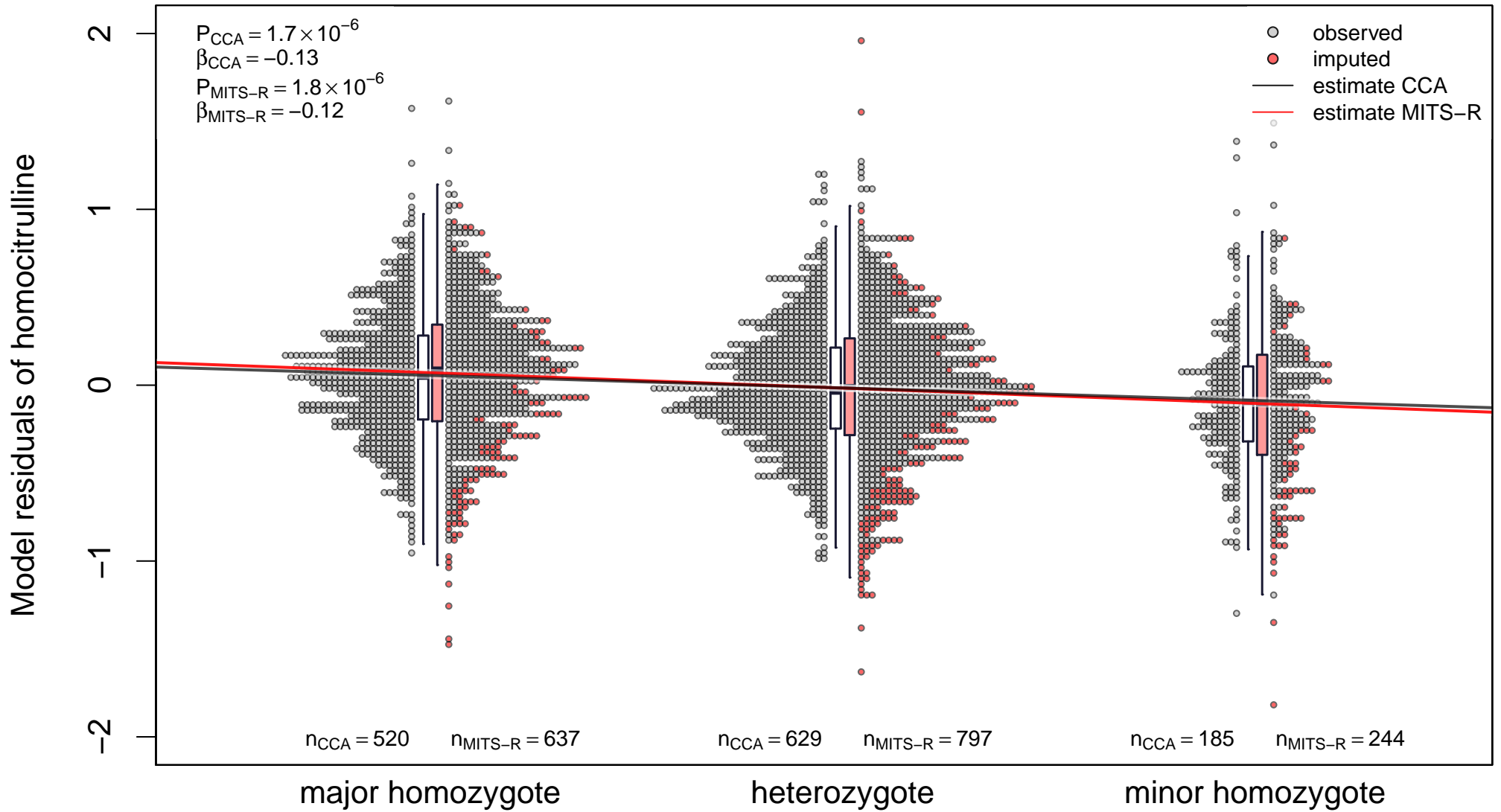
# ITS-R



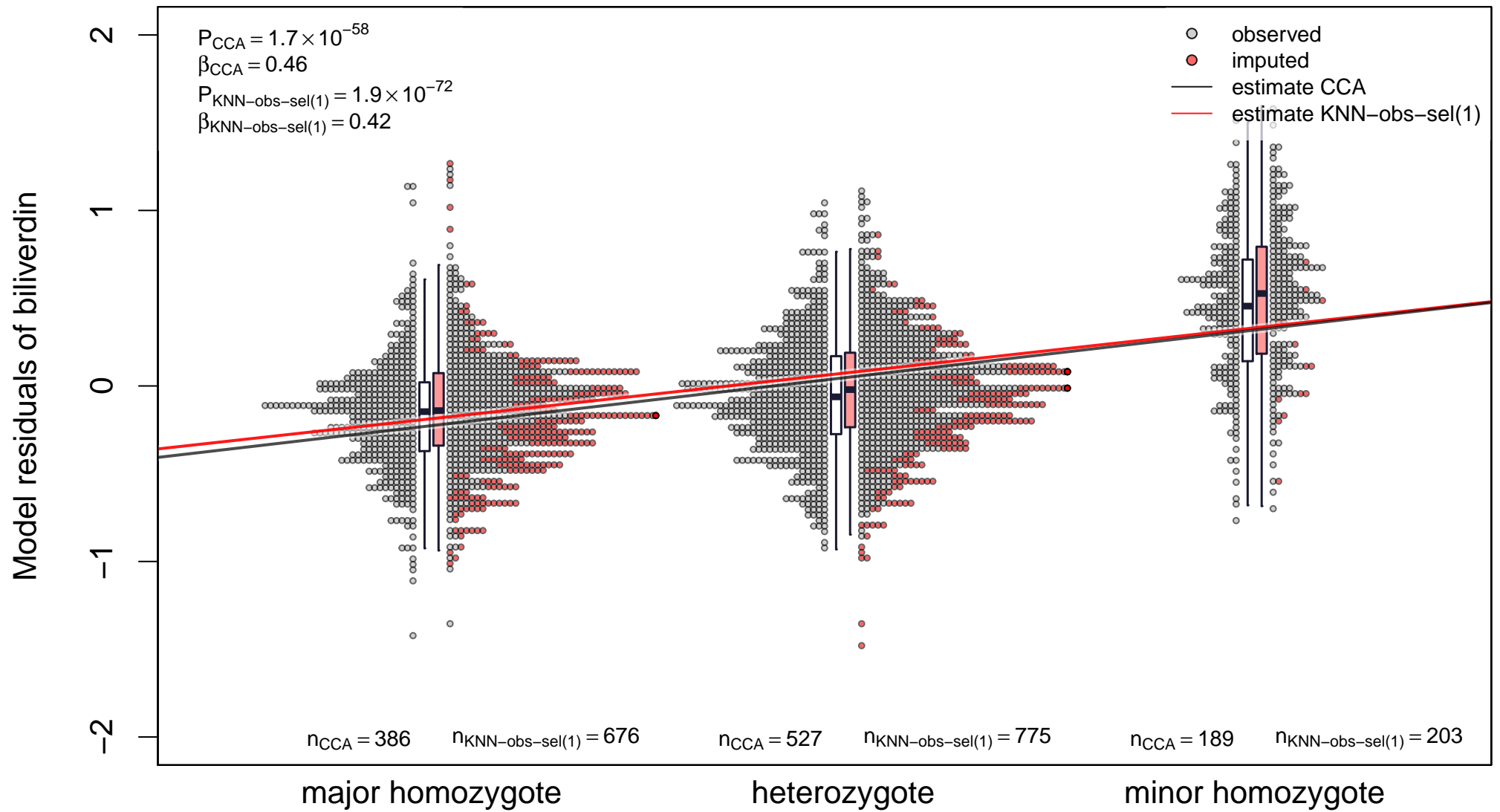
# MITS



# MIT-S-R



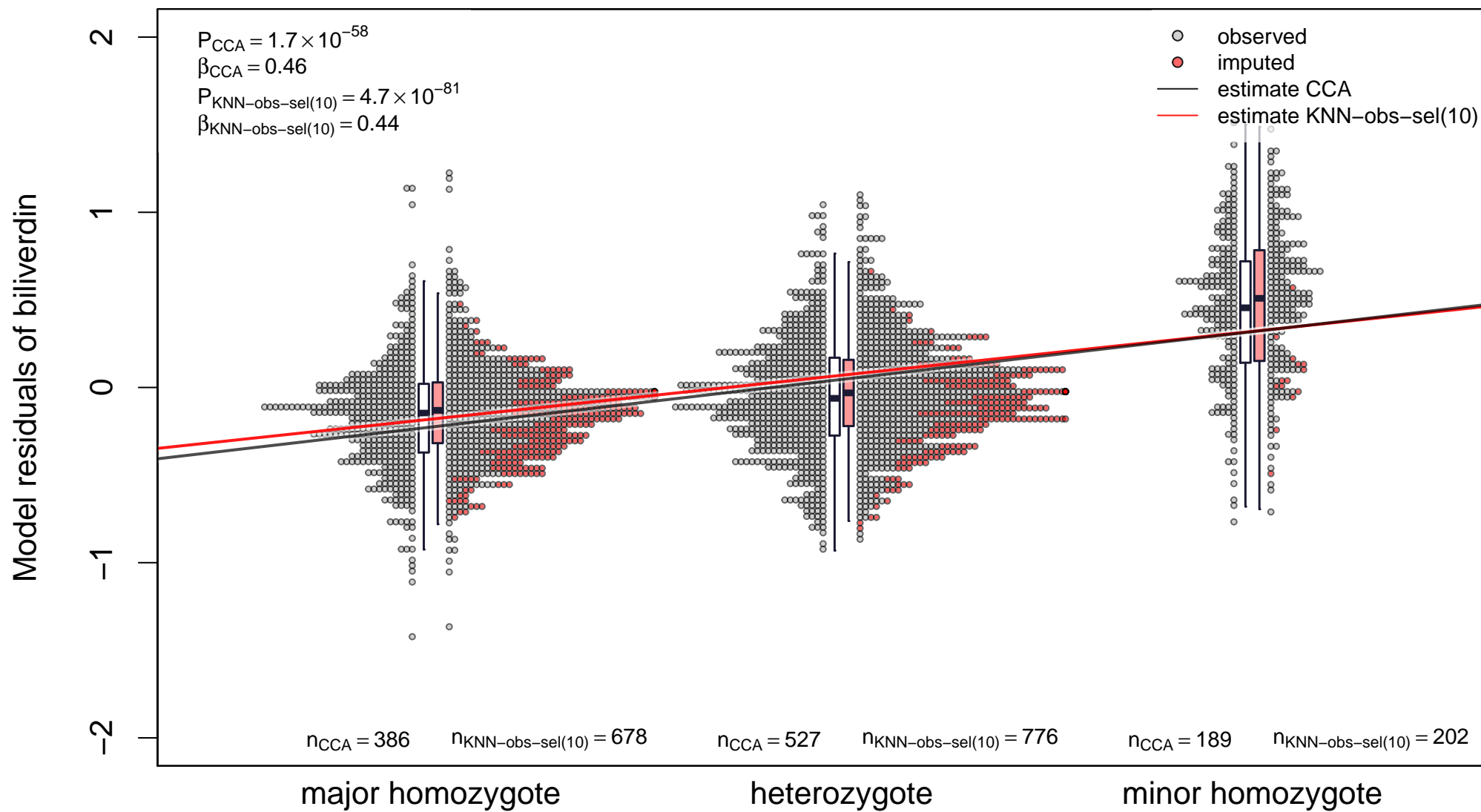
# KNN-obs-sel(1)



Genotype of SNP rs887829 (UGT1A1)

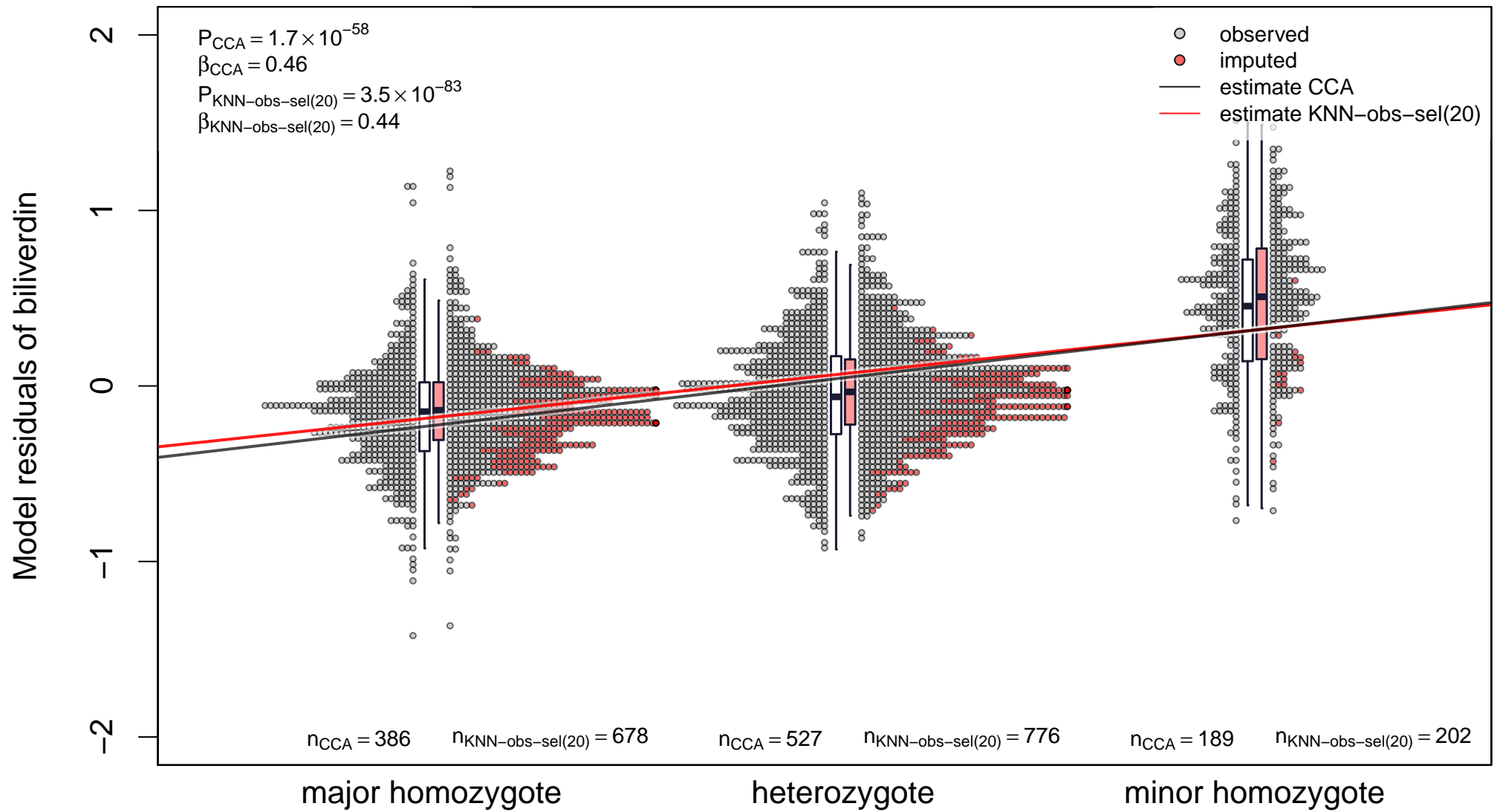


# KNN-obs-sel(10)



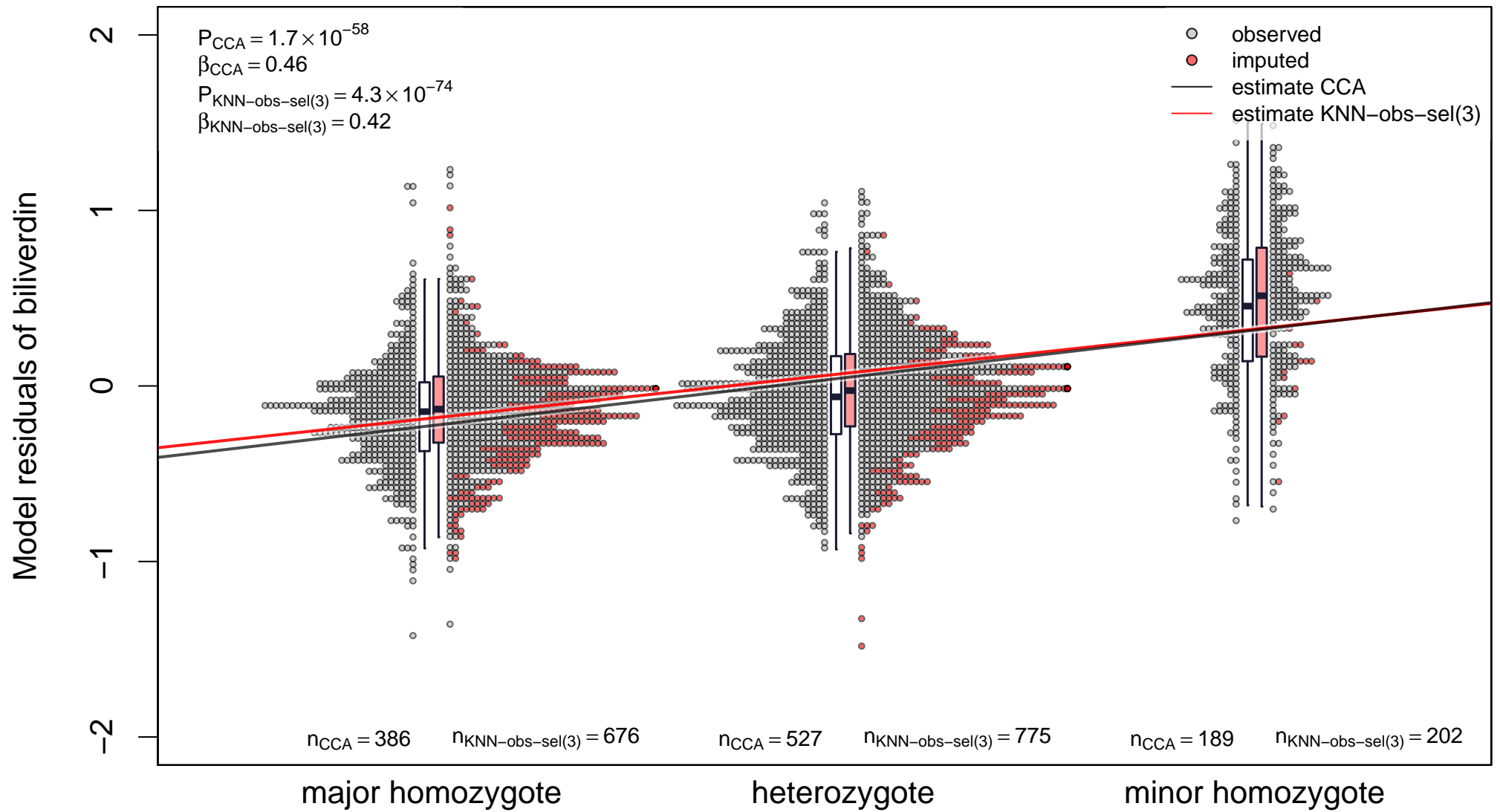
Genotype of SNP rs887829 (UGT1A1)

# KNN-obs-sel(20)



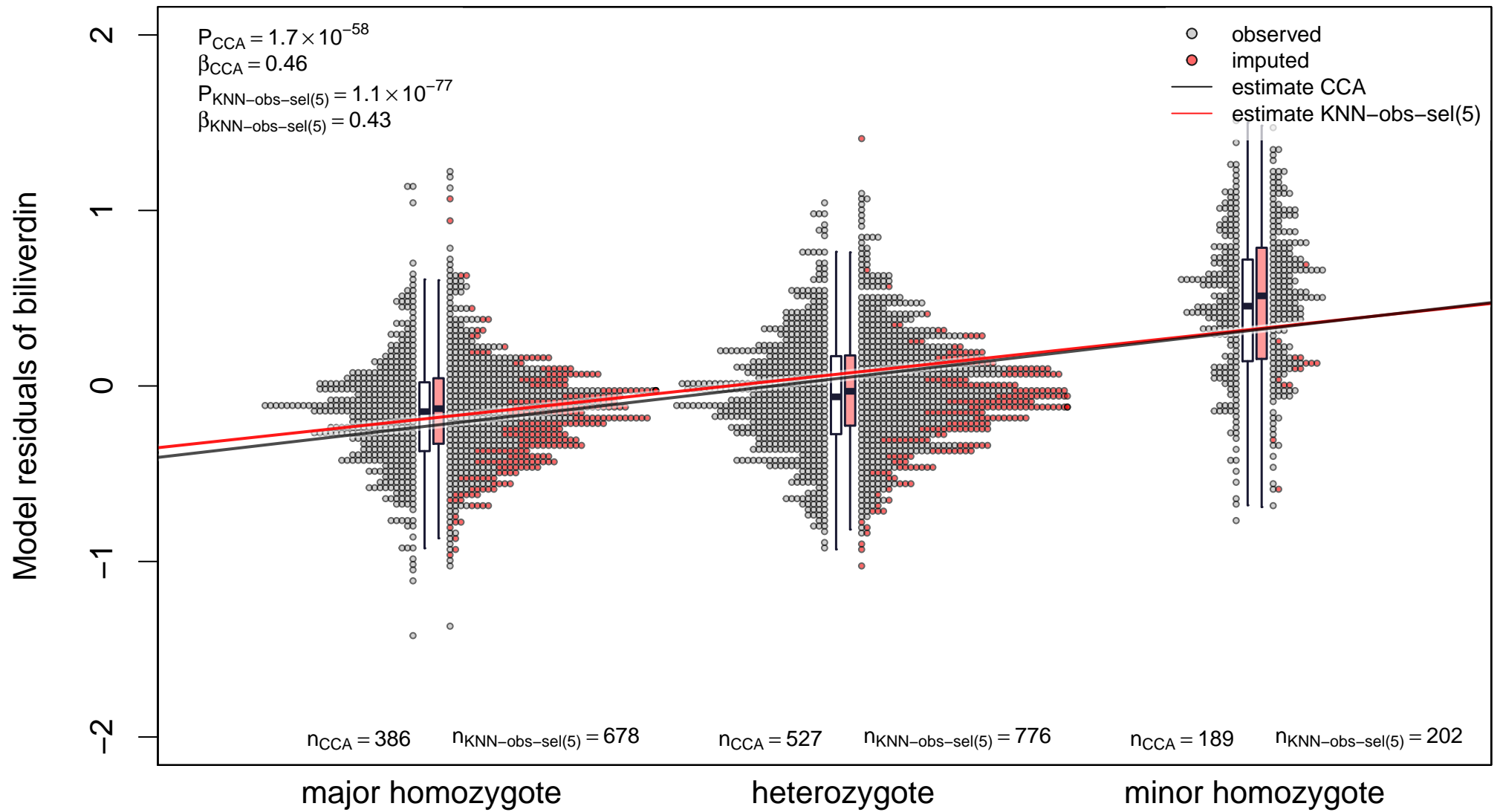
Genotype of SNP rs887829 (UGT1A1)

# KNN-obs-sel(3)



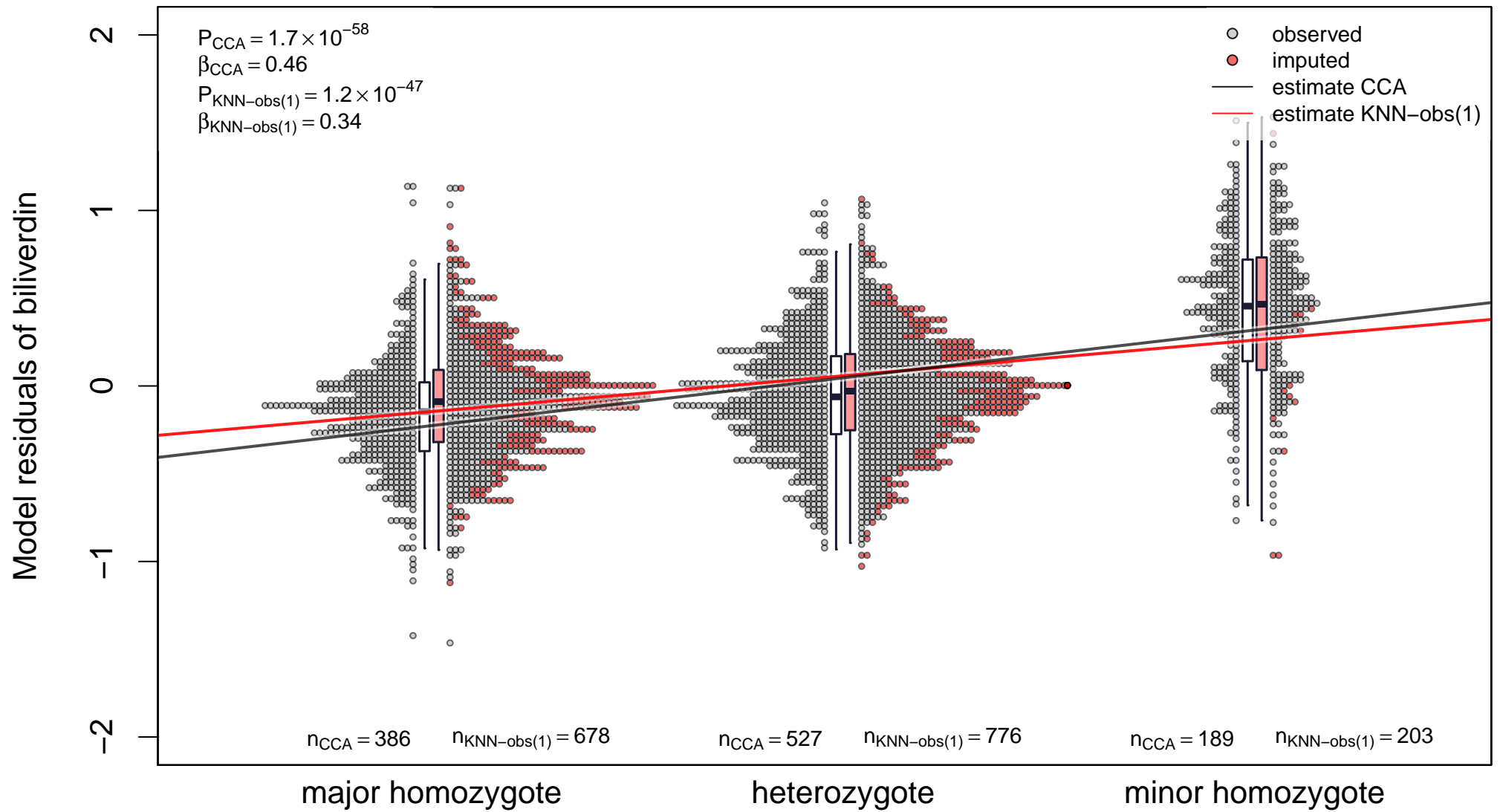
Genotype of SNP rs887829 (UGT1A1)

# KNN-obs-sel(5)



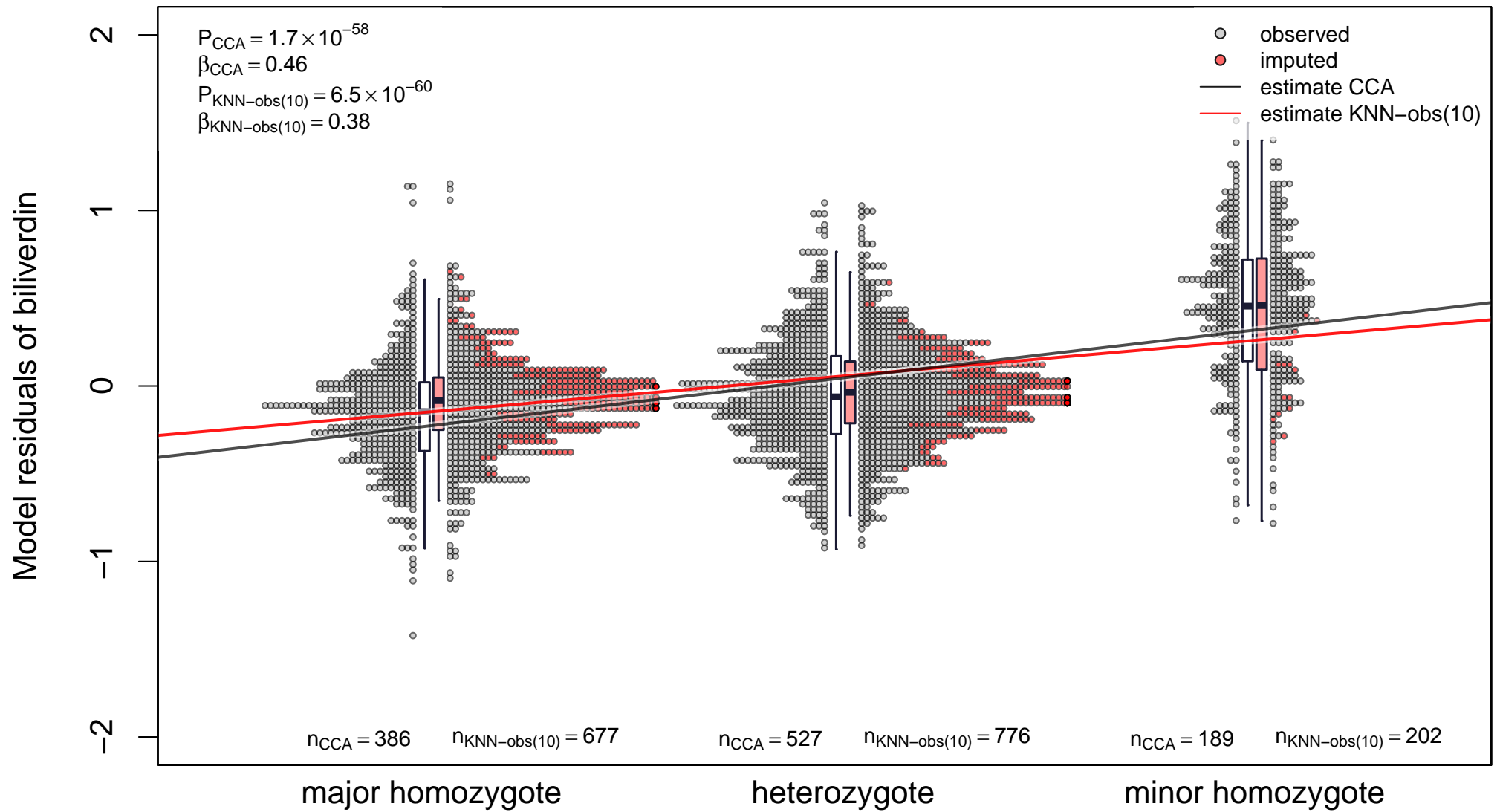
Genotype of SNP rs887829 (UGT1A1)

# KNN-obs(1)



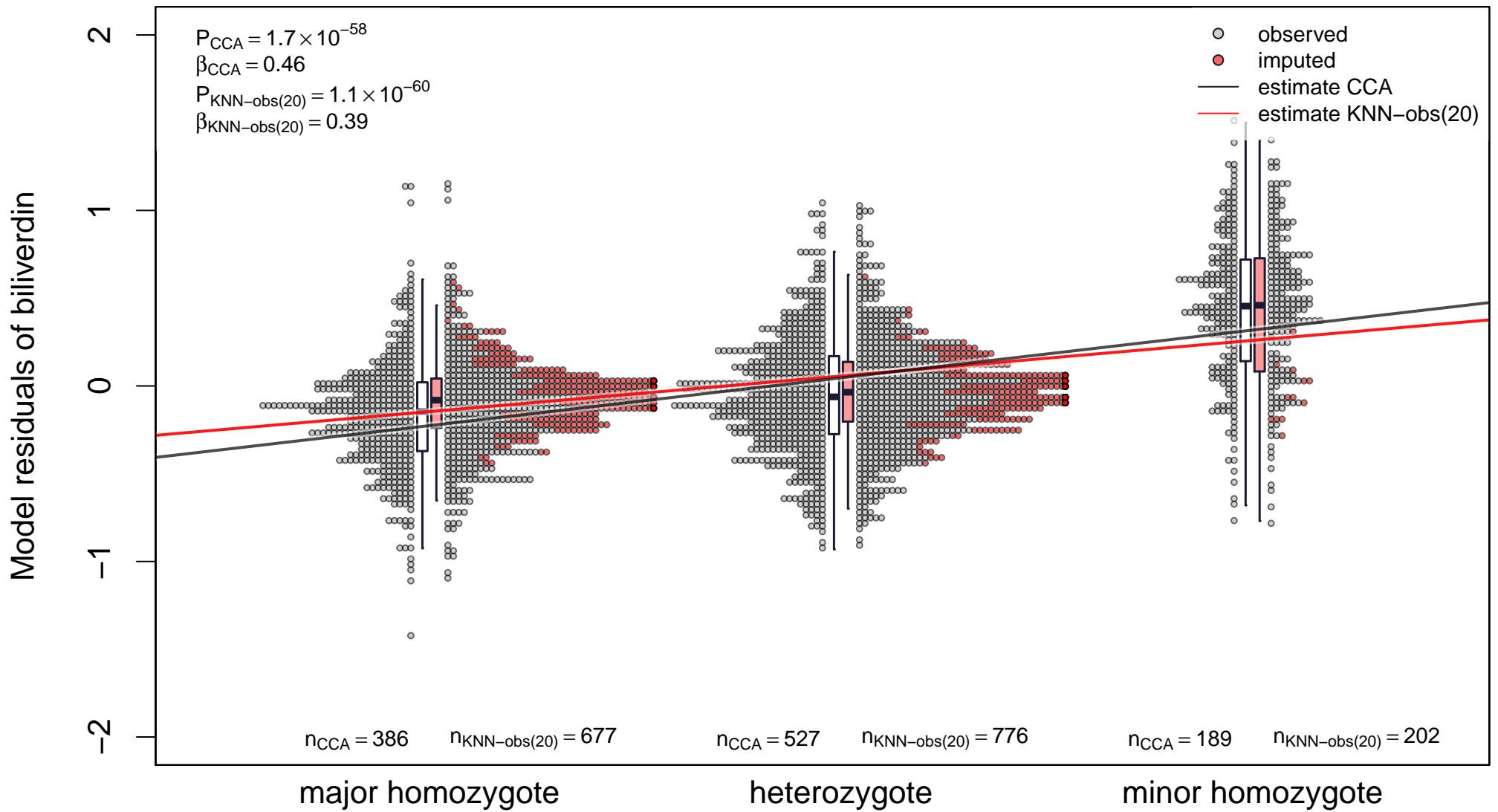
Genotype of SNP rs887829 (UGT1A1)

# KNN-obs(10)



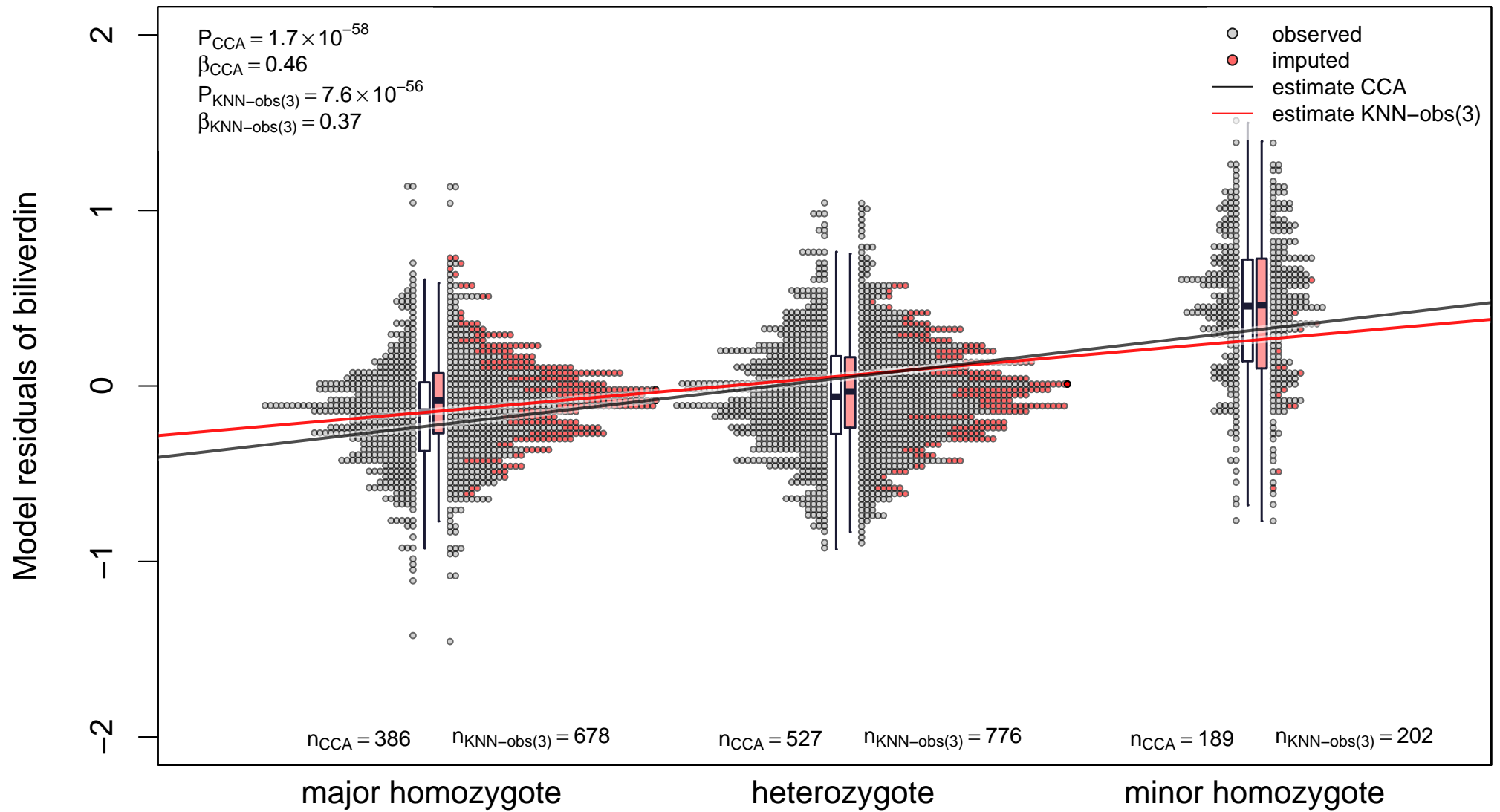
Genotype of SNP rs887829 (UGT1A1)

# KNN-obs(20)



Genotype of SNP rs887829 (UGT1A1)

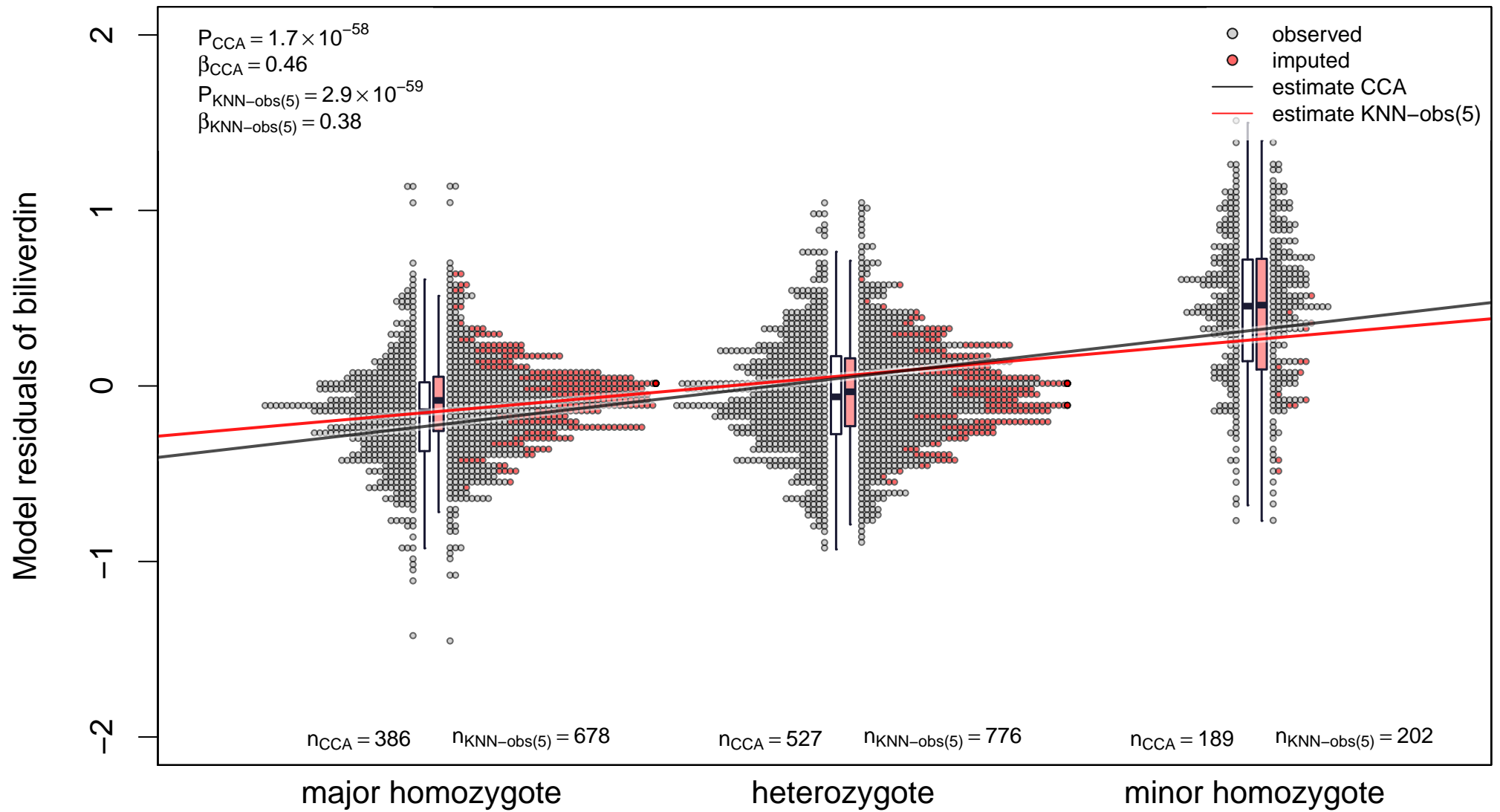
# KNN-obs(3)



Genotype of SNP rs887829 (UGT1A1)

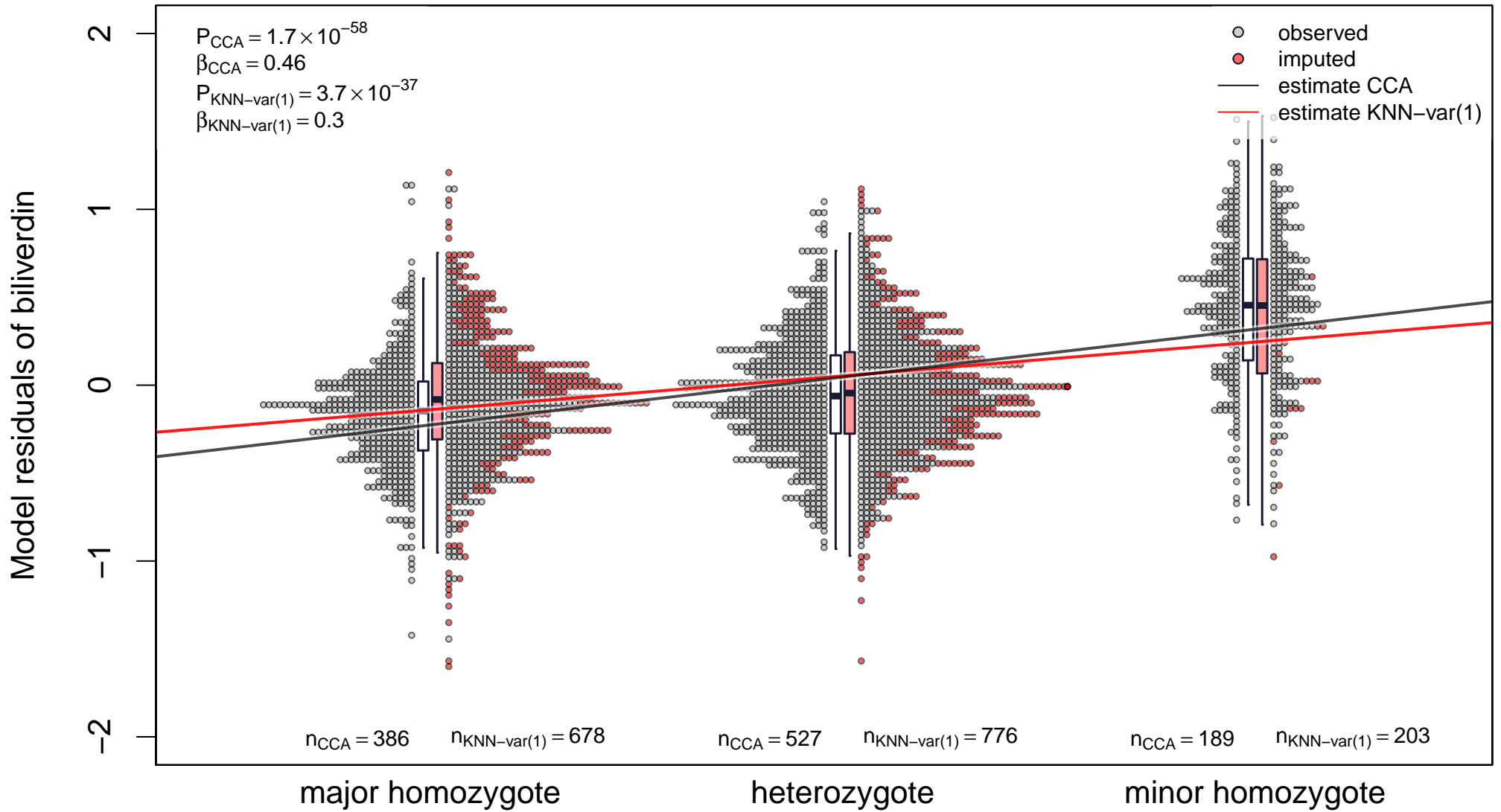


# KNN-obs(5)

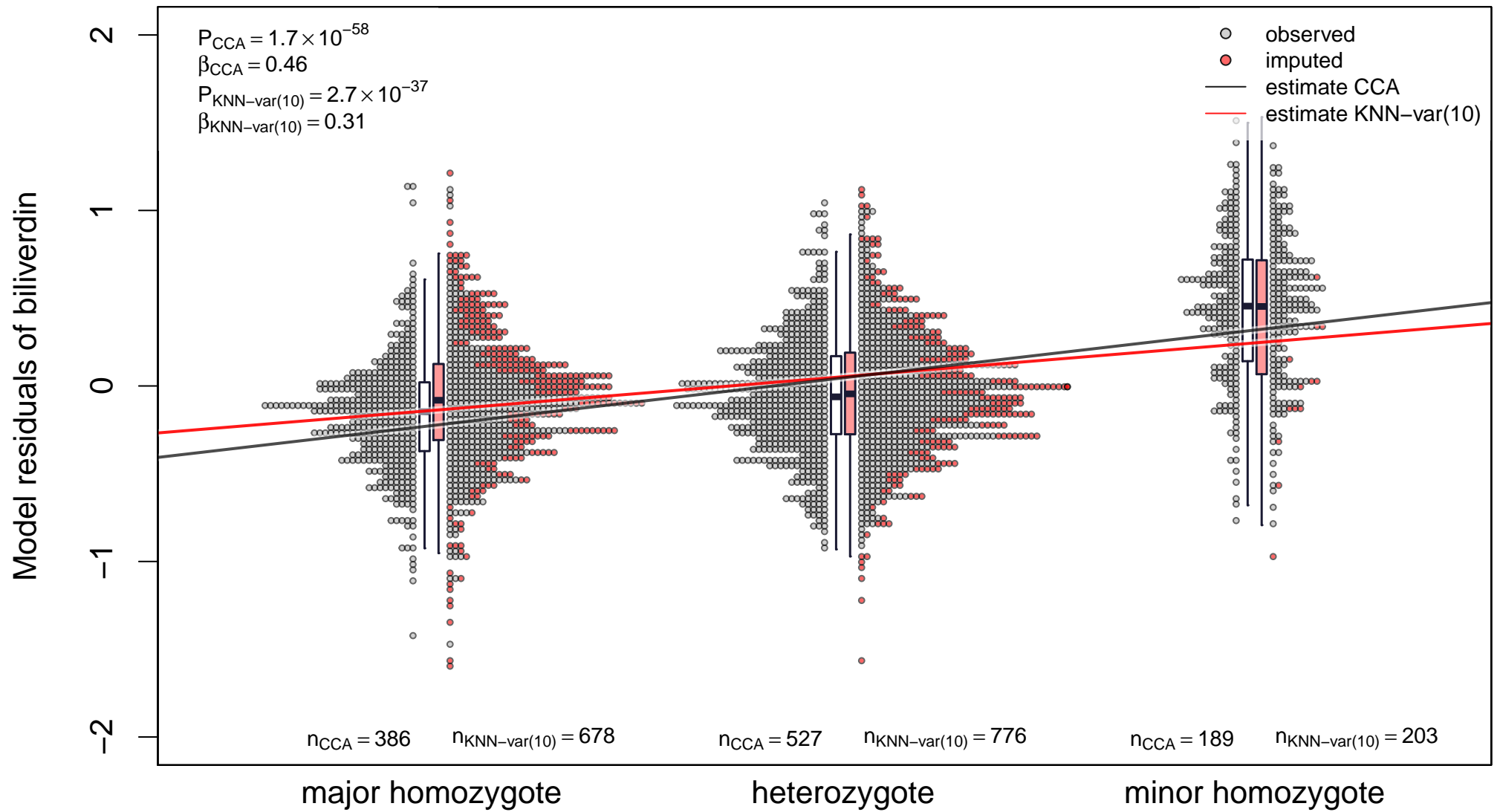


Genotype of SNP rs887829 (UGT1A1)

# KNN-var(1)

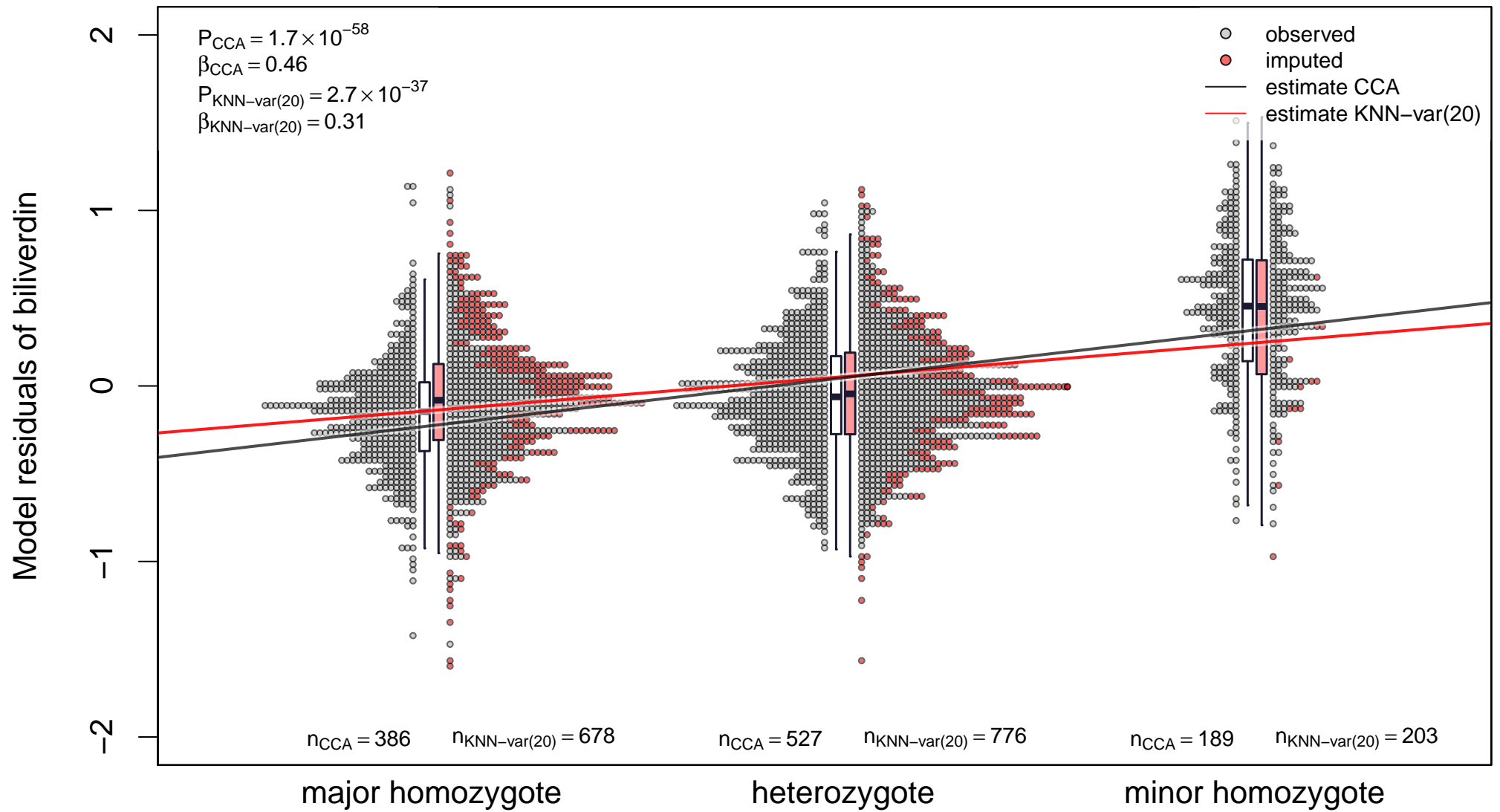


# KNN-var(10)



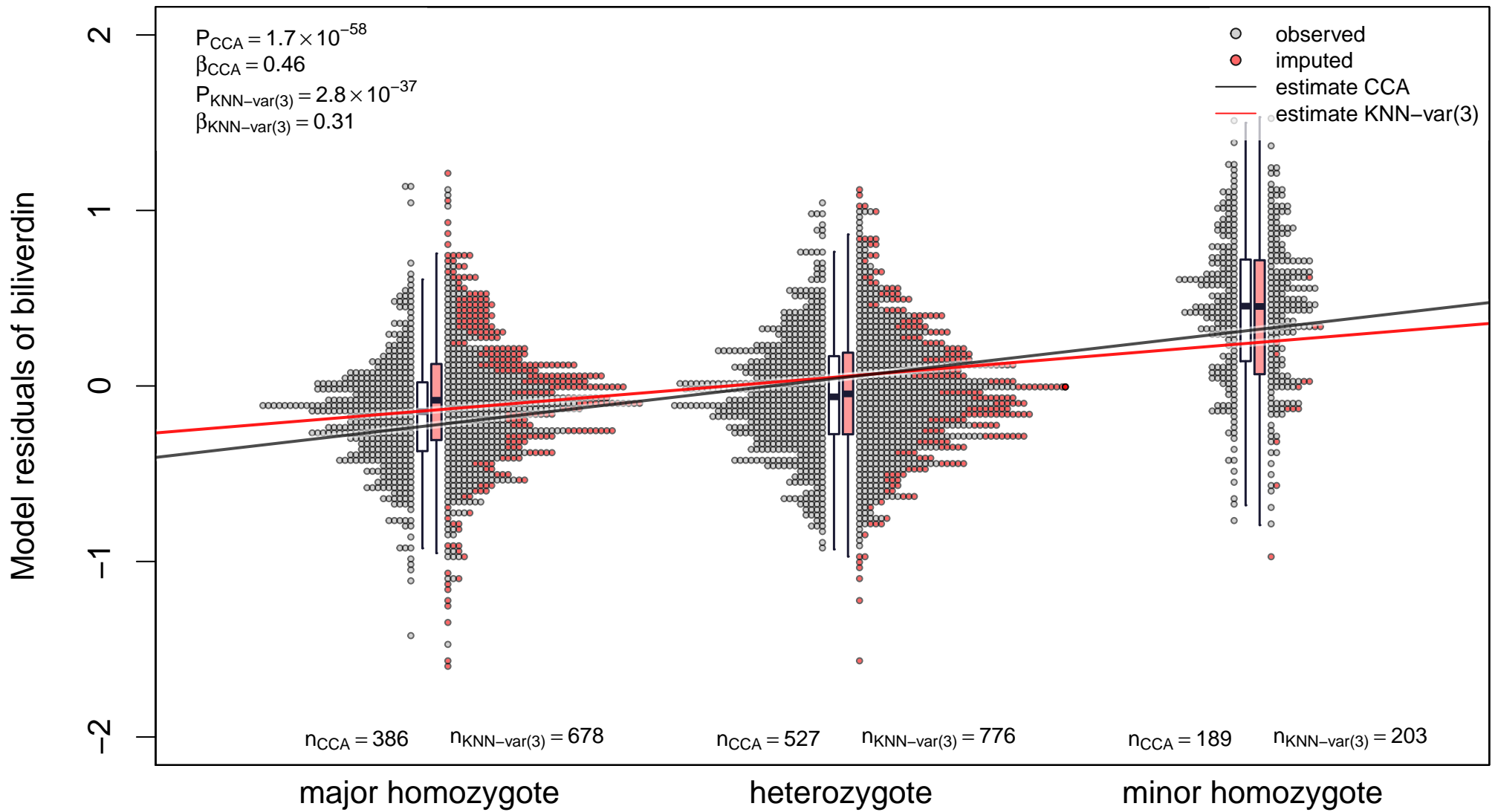
Genotype of SNP rs887829 (UGT1A1)

# KNN-var(20)



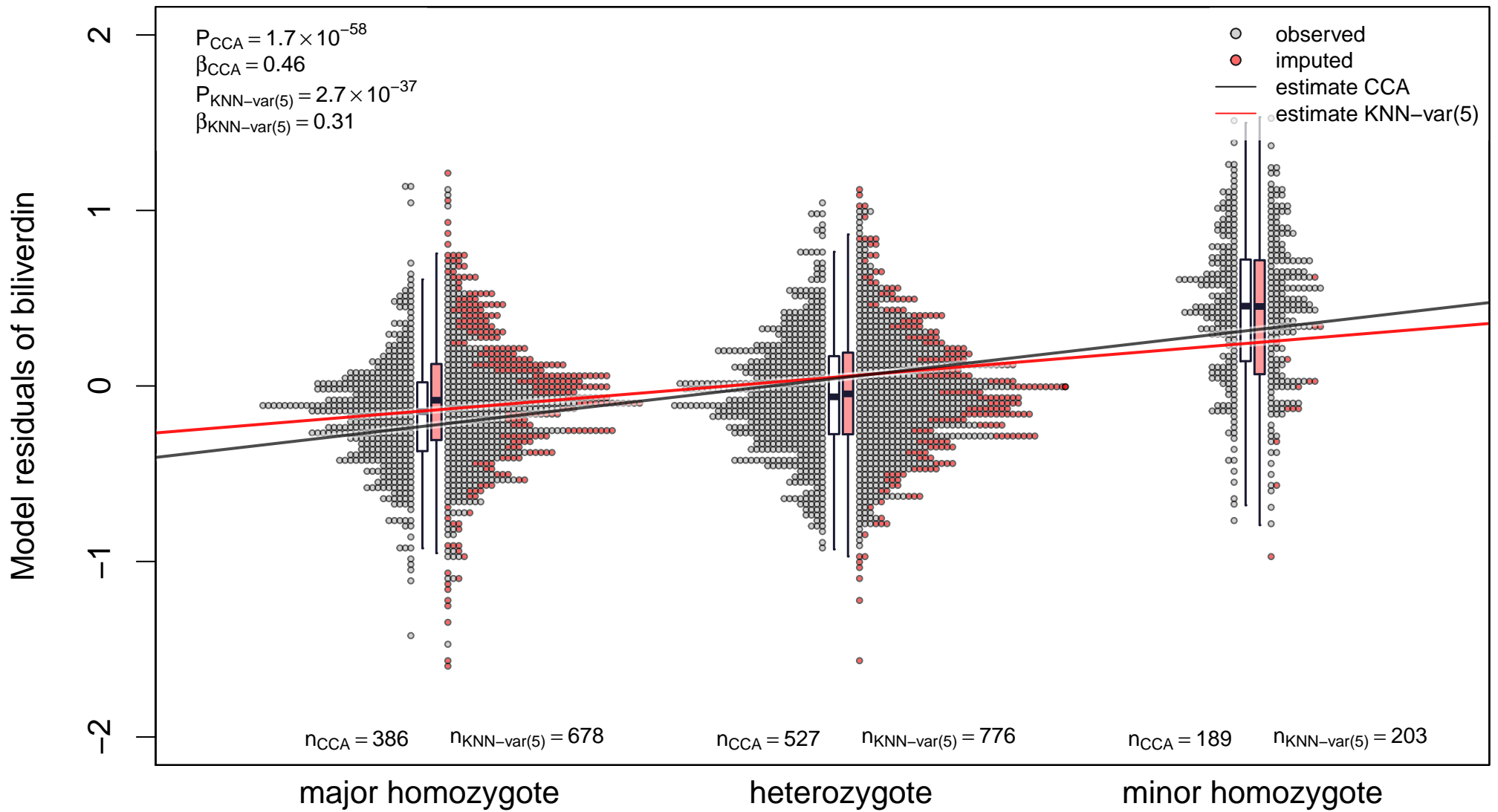
Genotype of SNP rs887829 (UGT1A1)

# KNN-var(3)



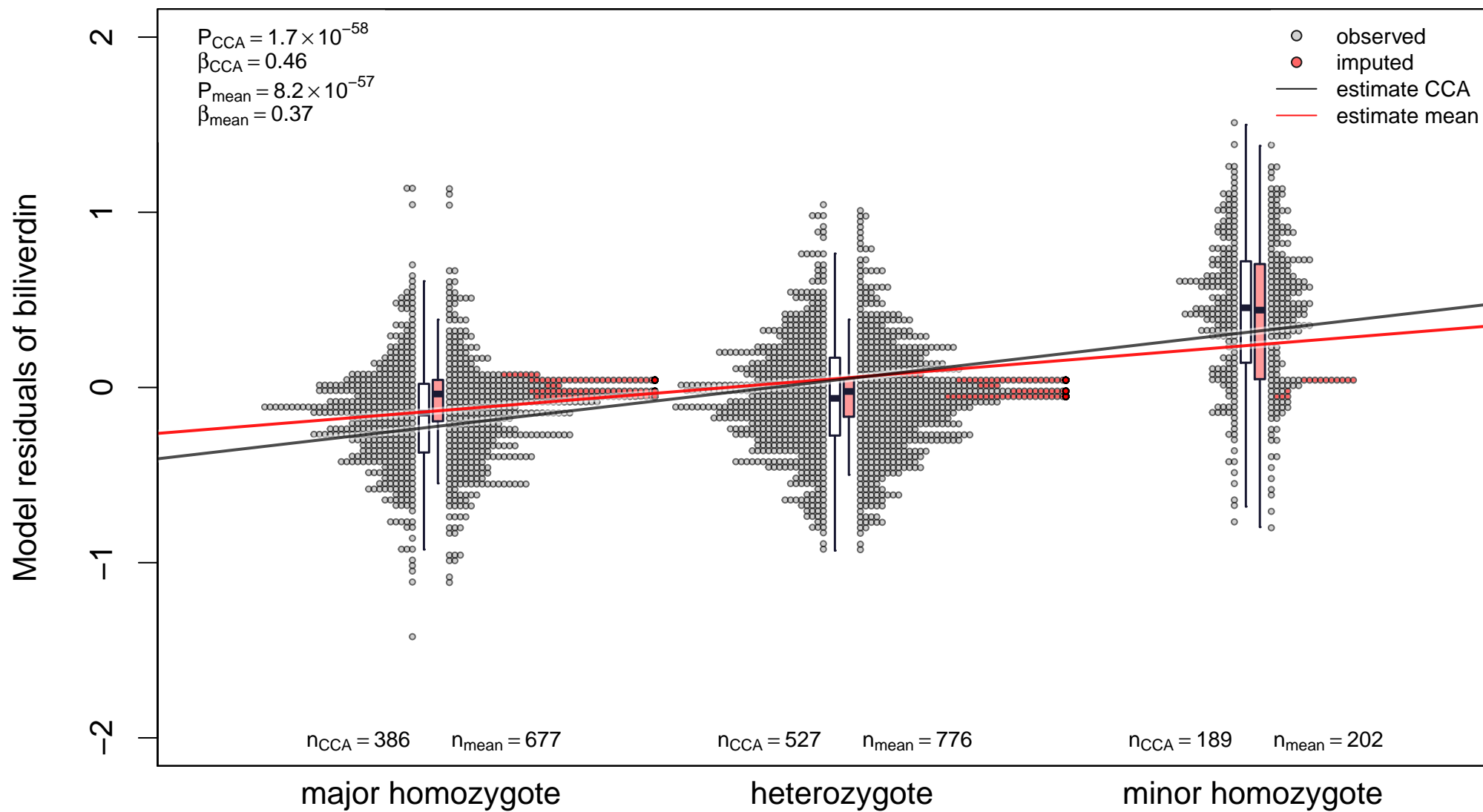
Genotype of SNP rs887829 (UGT1A1)

# KNN-var(5)



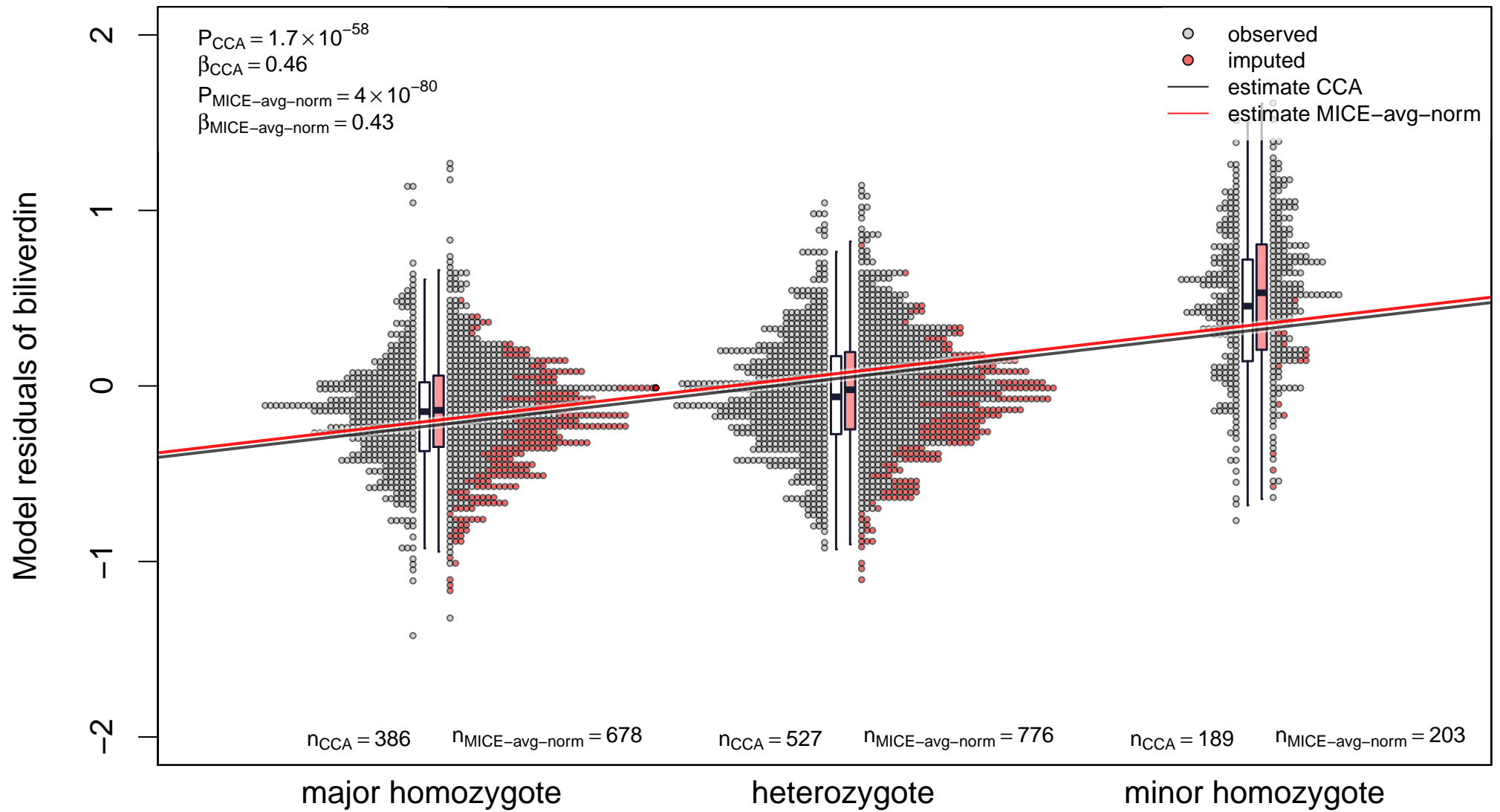
Genotype of SNP rs887829 (UGT1A1)

# mean



Genotype of SNP rs887829 (UGT1A1)

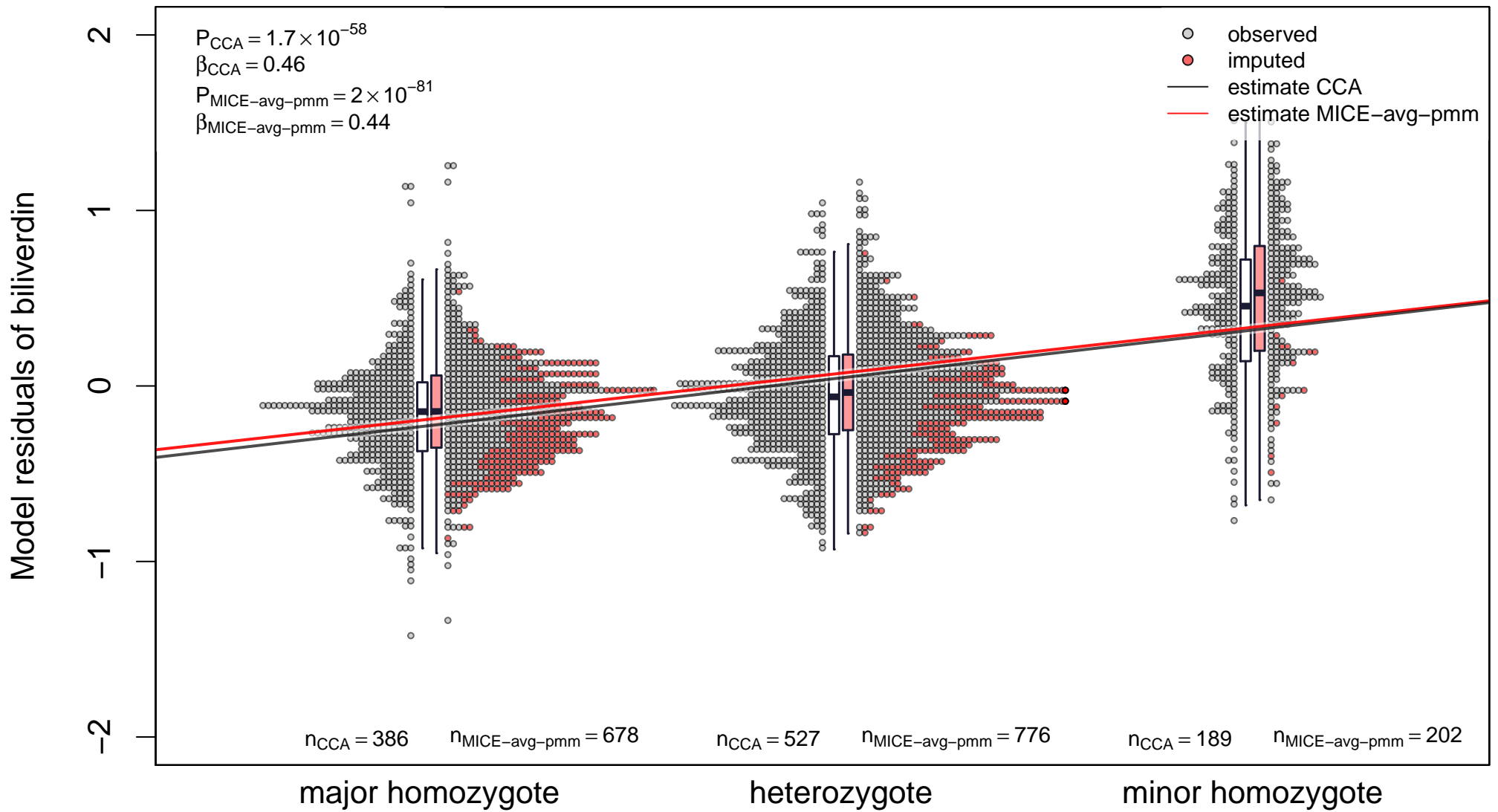
# MICE-avg-norm



Genotype of SNP rs887829 (UGT1A1)

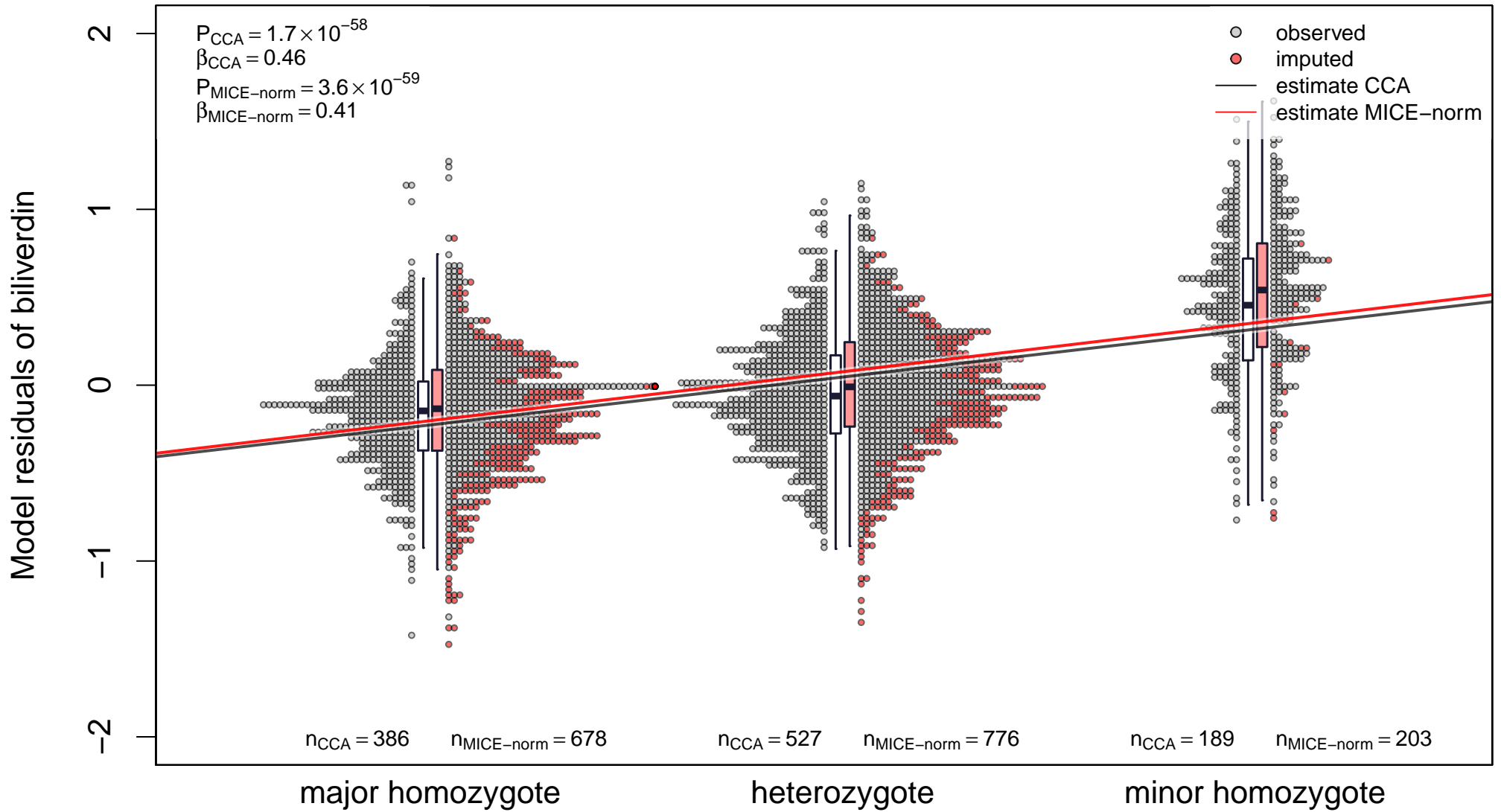


# MICE-avg-pmm



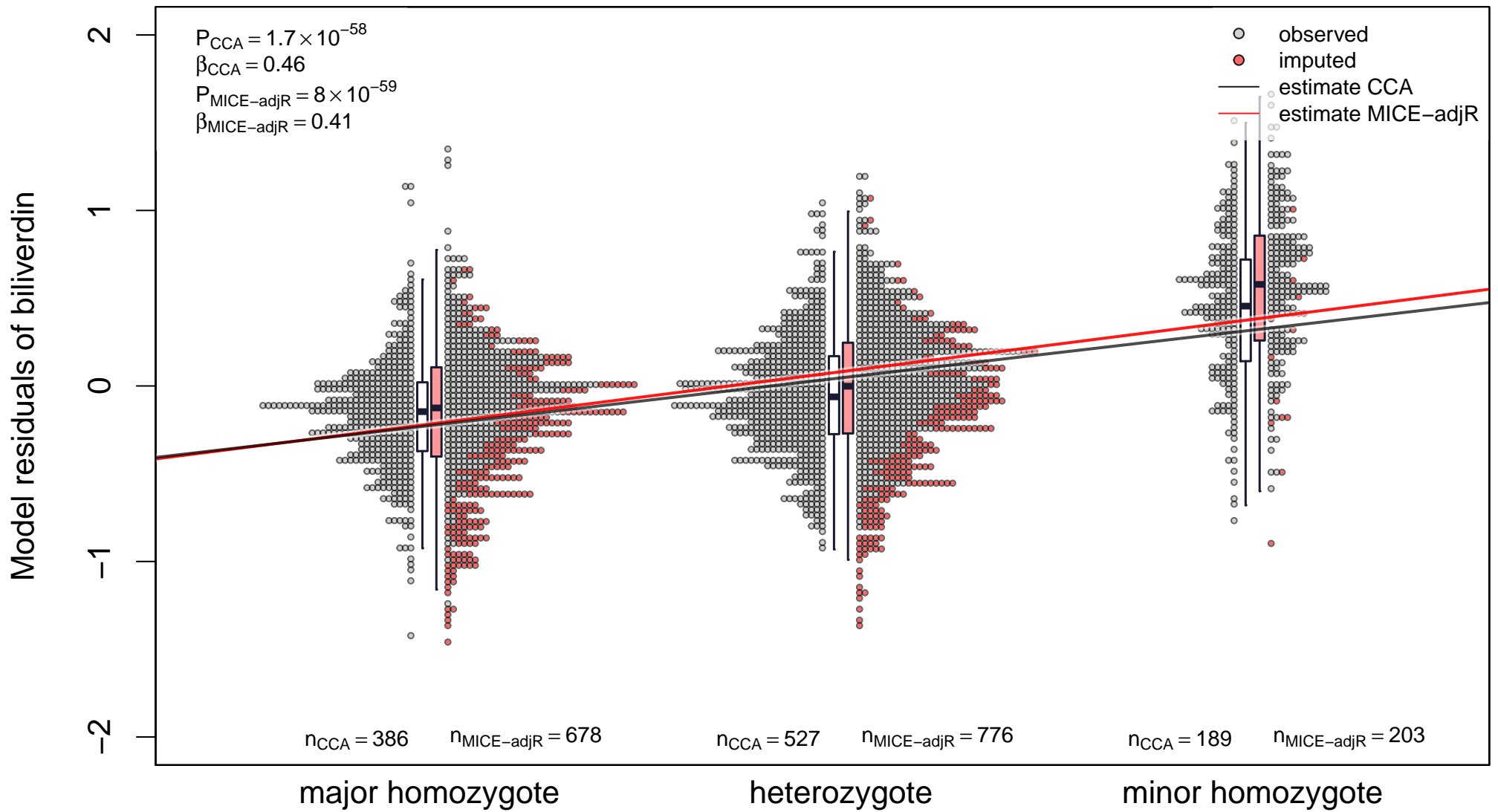
Genotype of SNP rs887829 (UGT1A1)

# MICE-norm

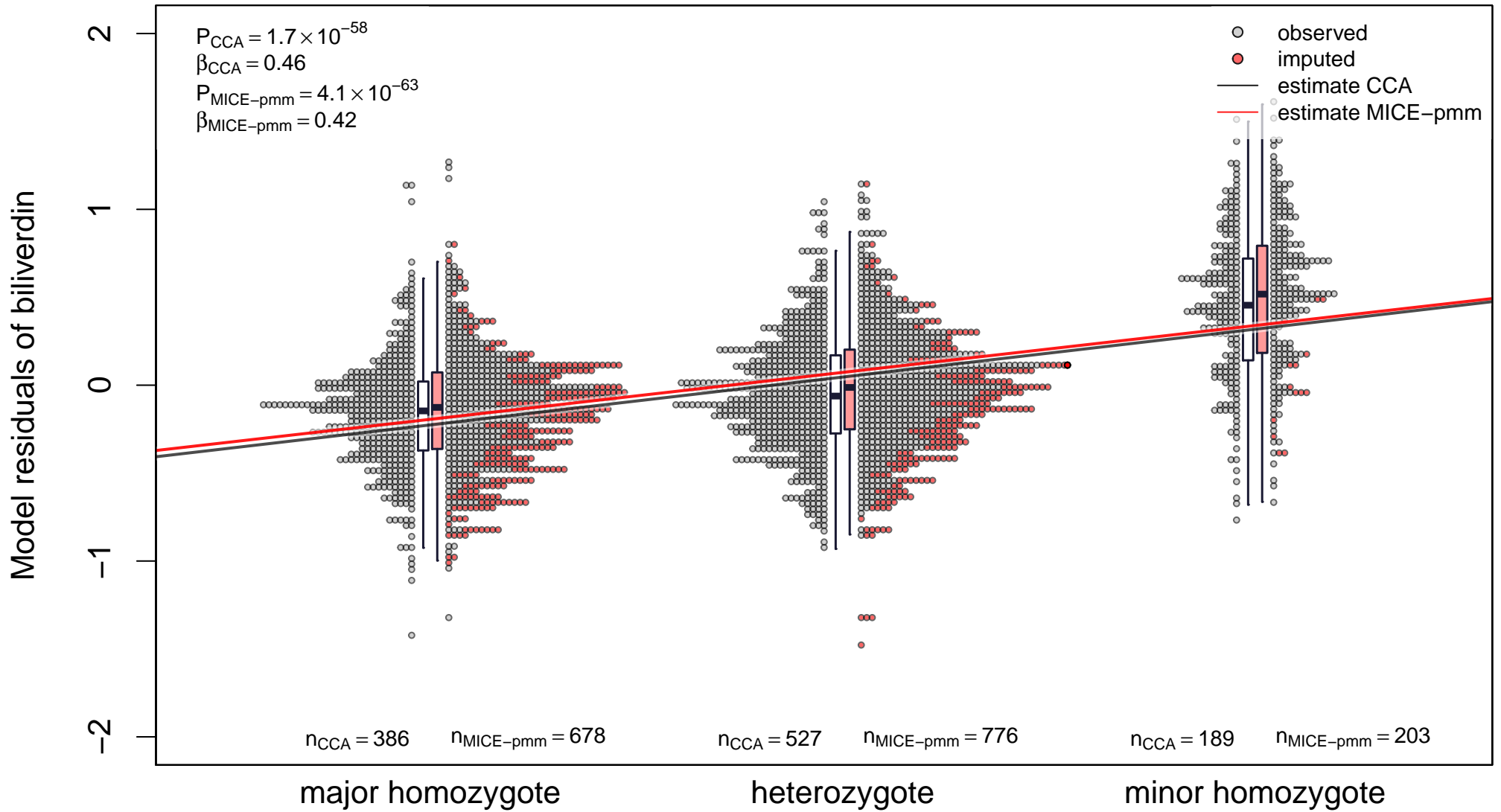


Genotype of SNP rs887829 (UGT1A1)

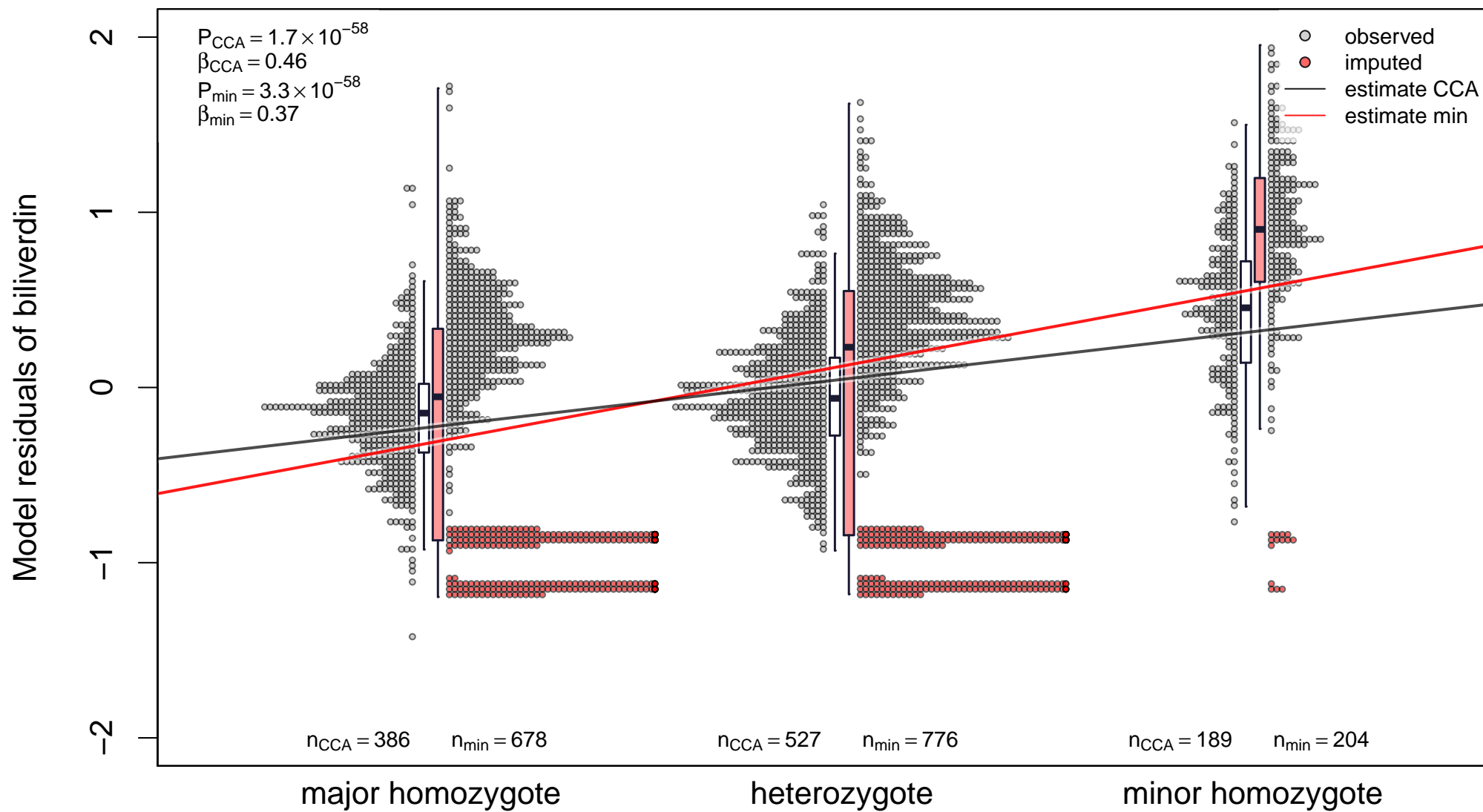
# MICE-adjR



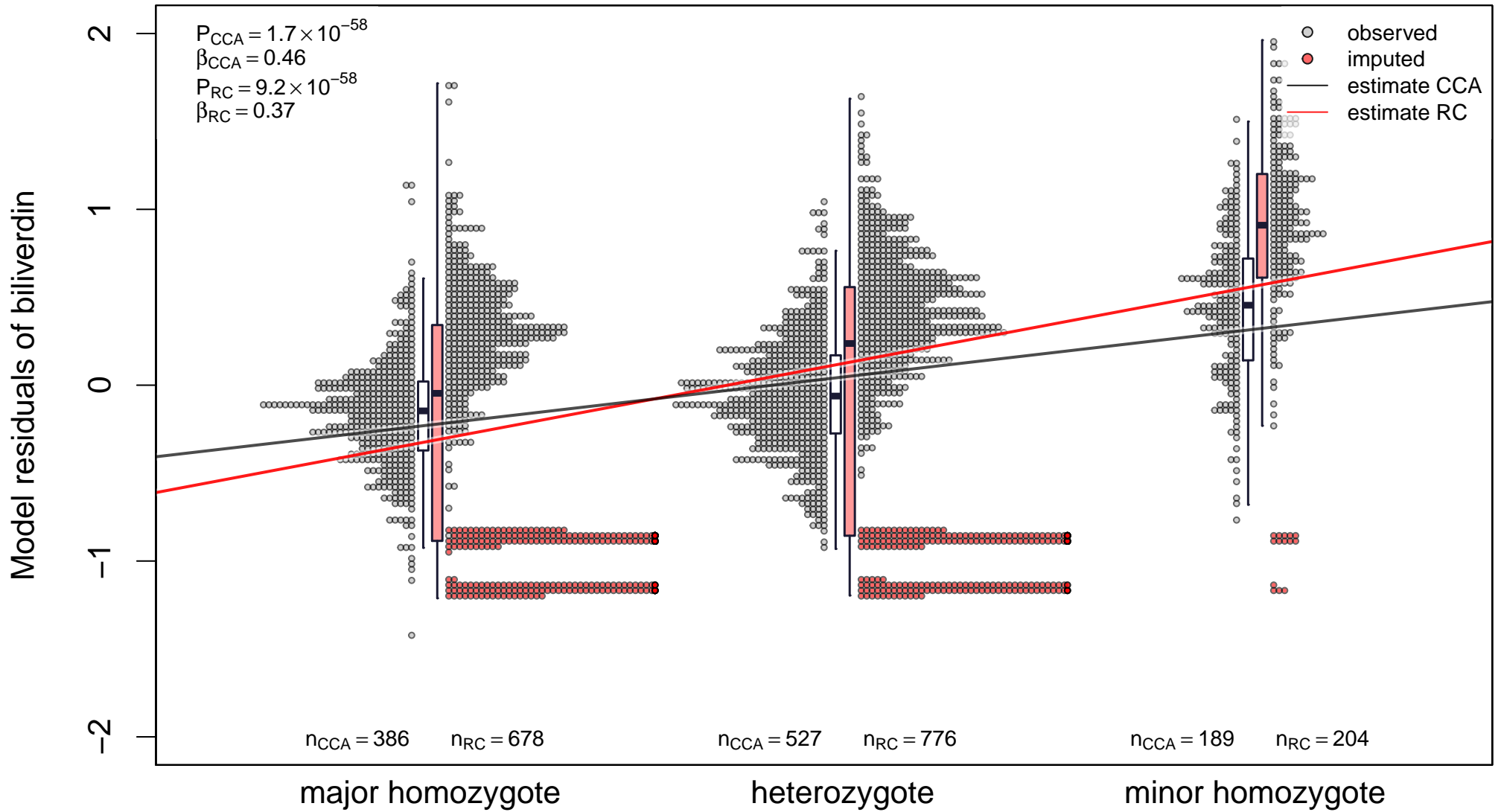
# MICE-pmm



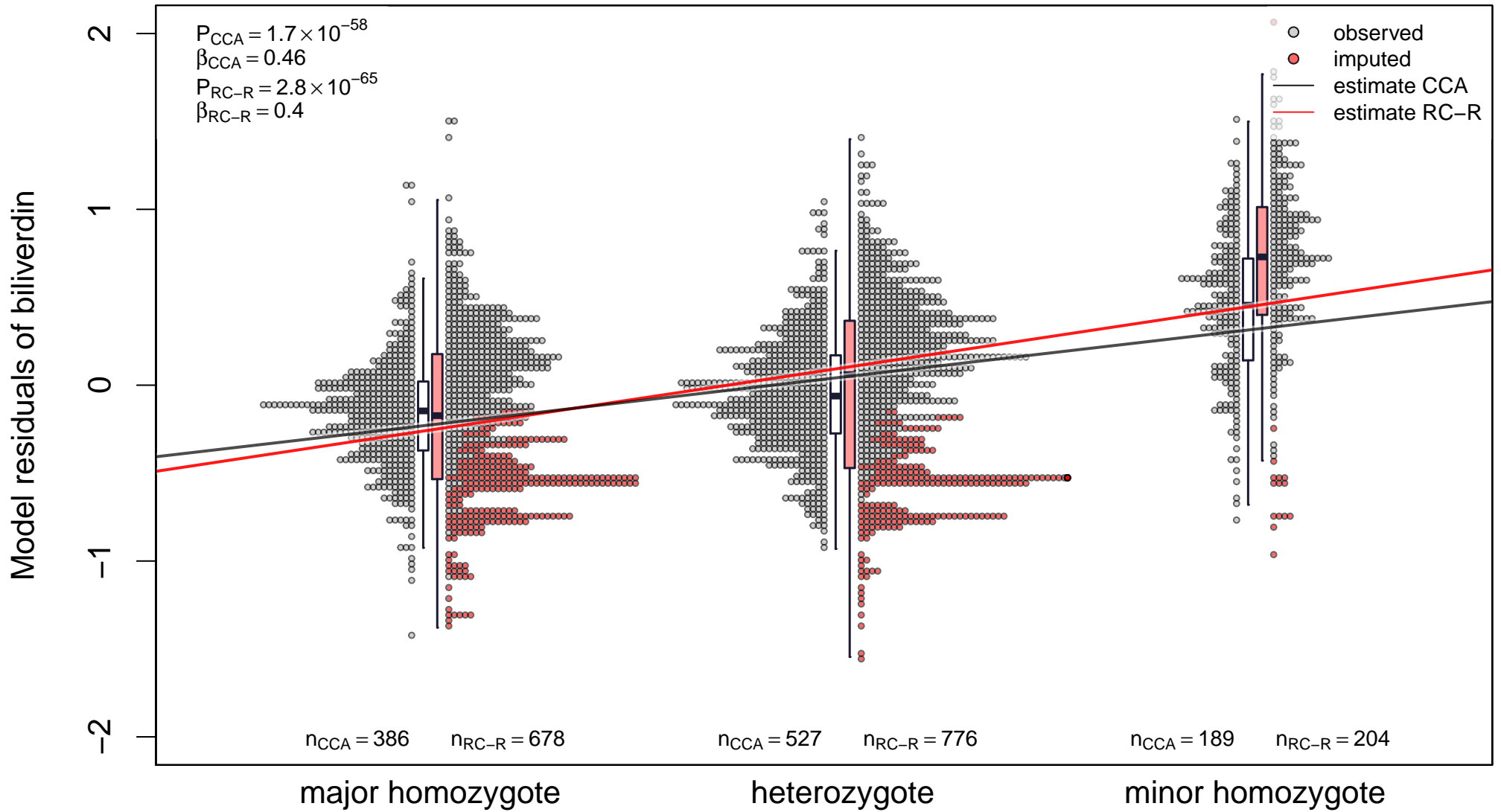
min



# RC

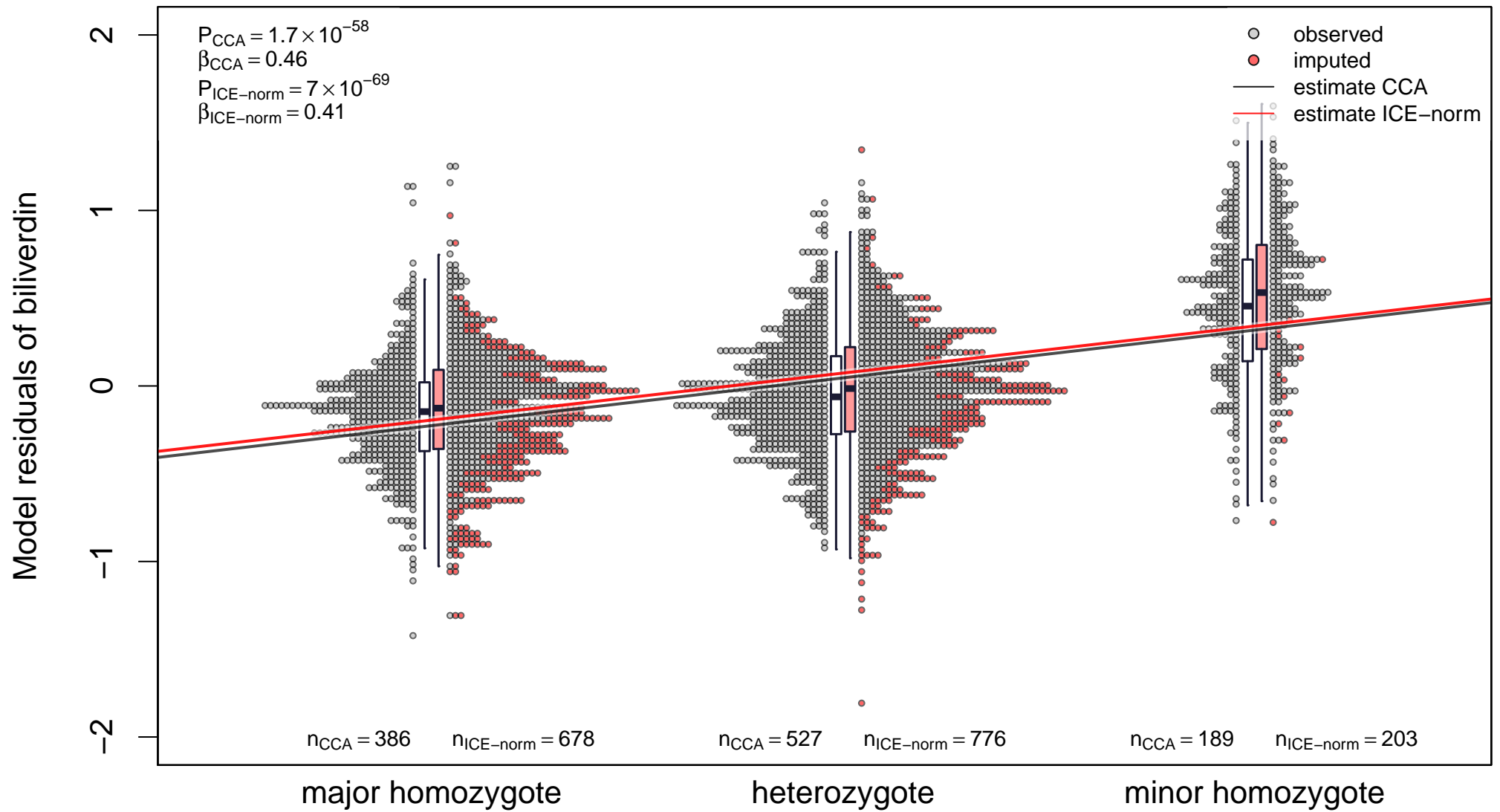


# RC-R



Genotype of SNP rs887829 (UGT1A1)

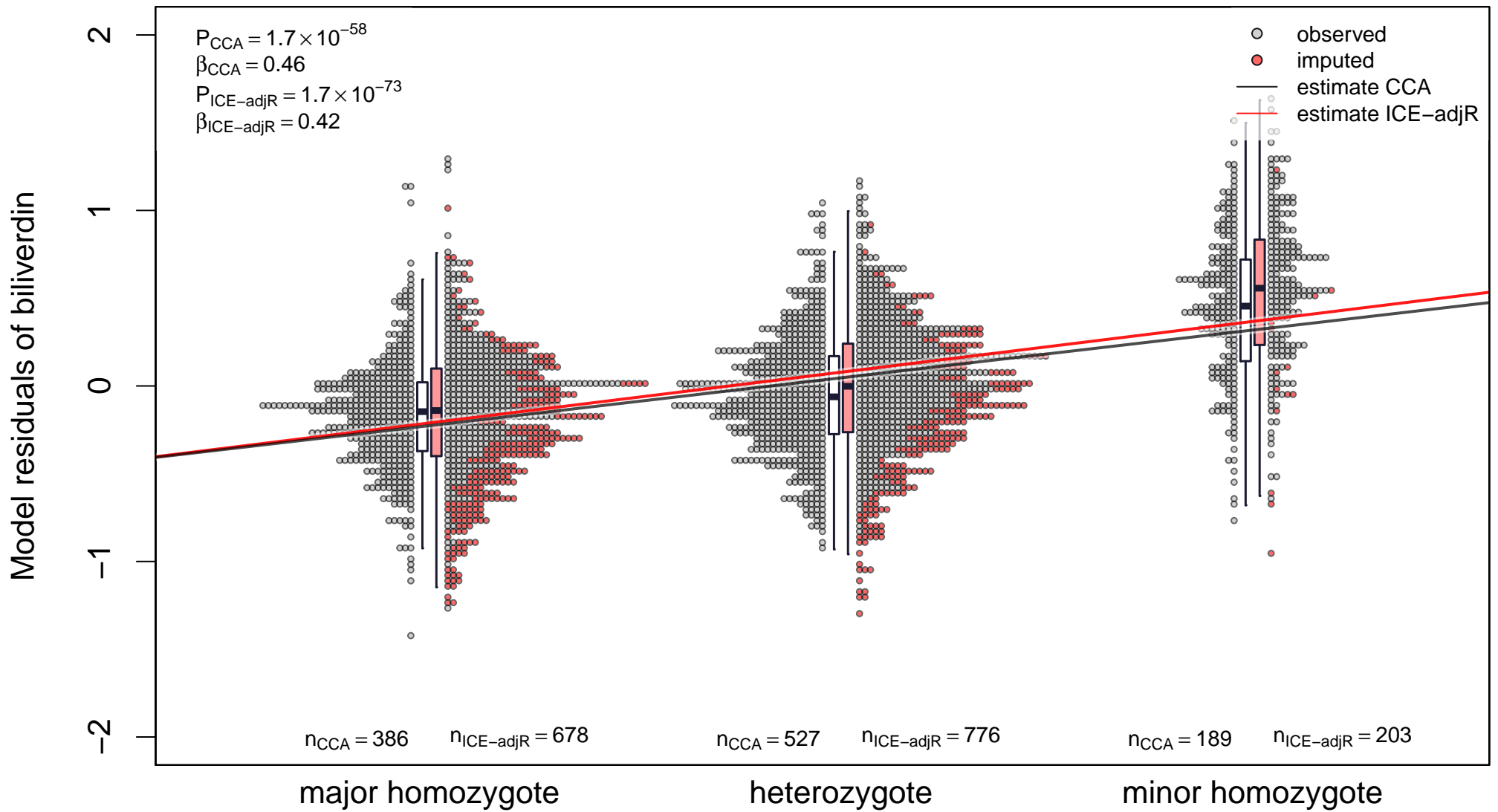
# ICE-norm



Genotype of SNP rs887829 (UGT1A1)

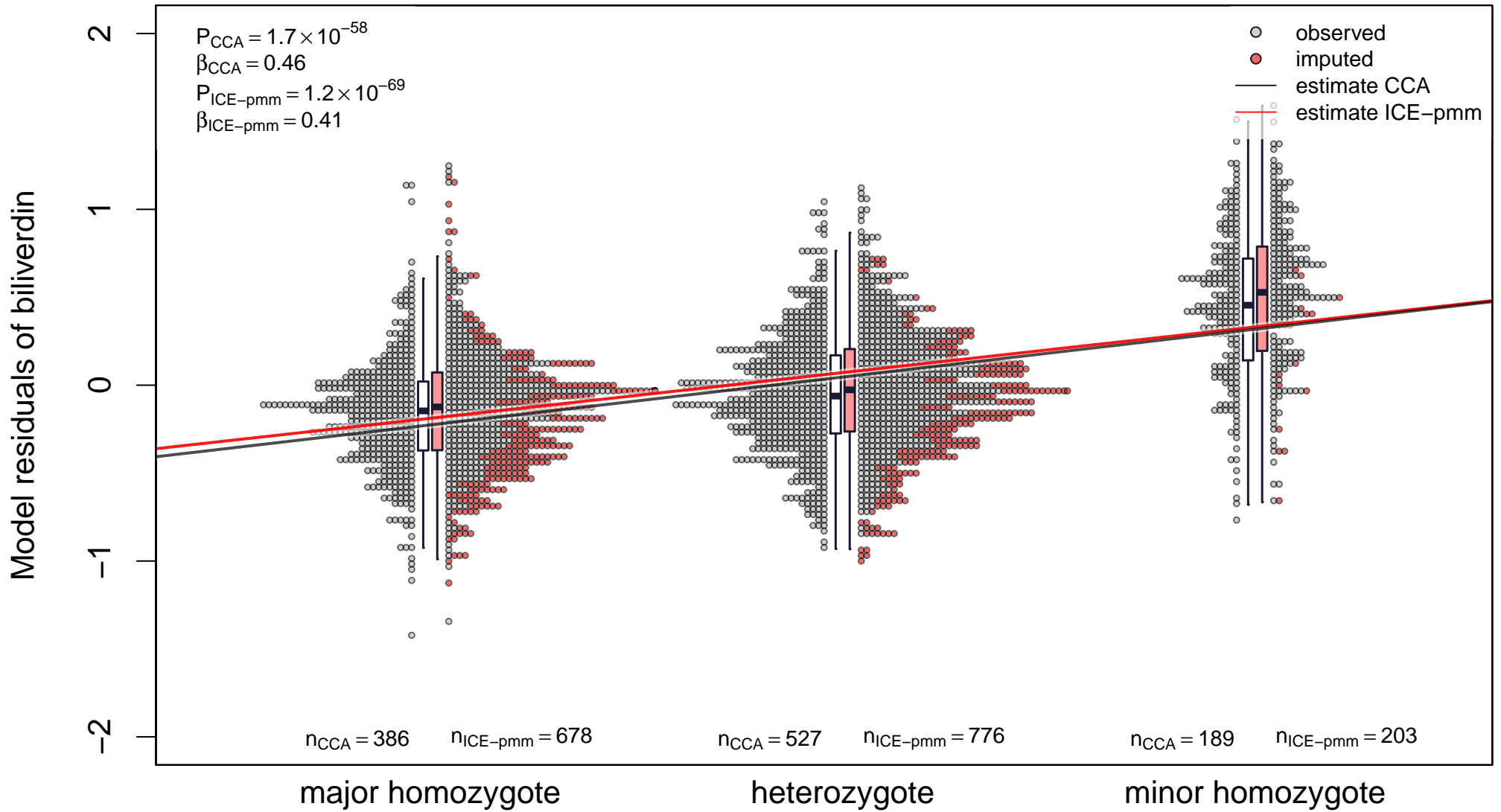


# ICE-adjR



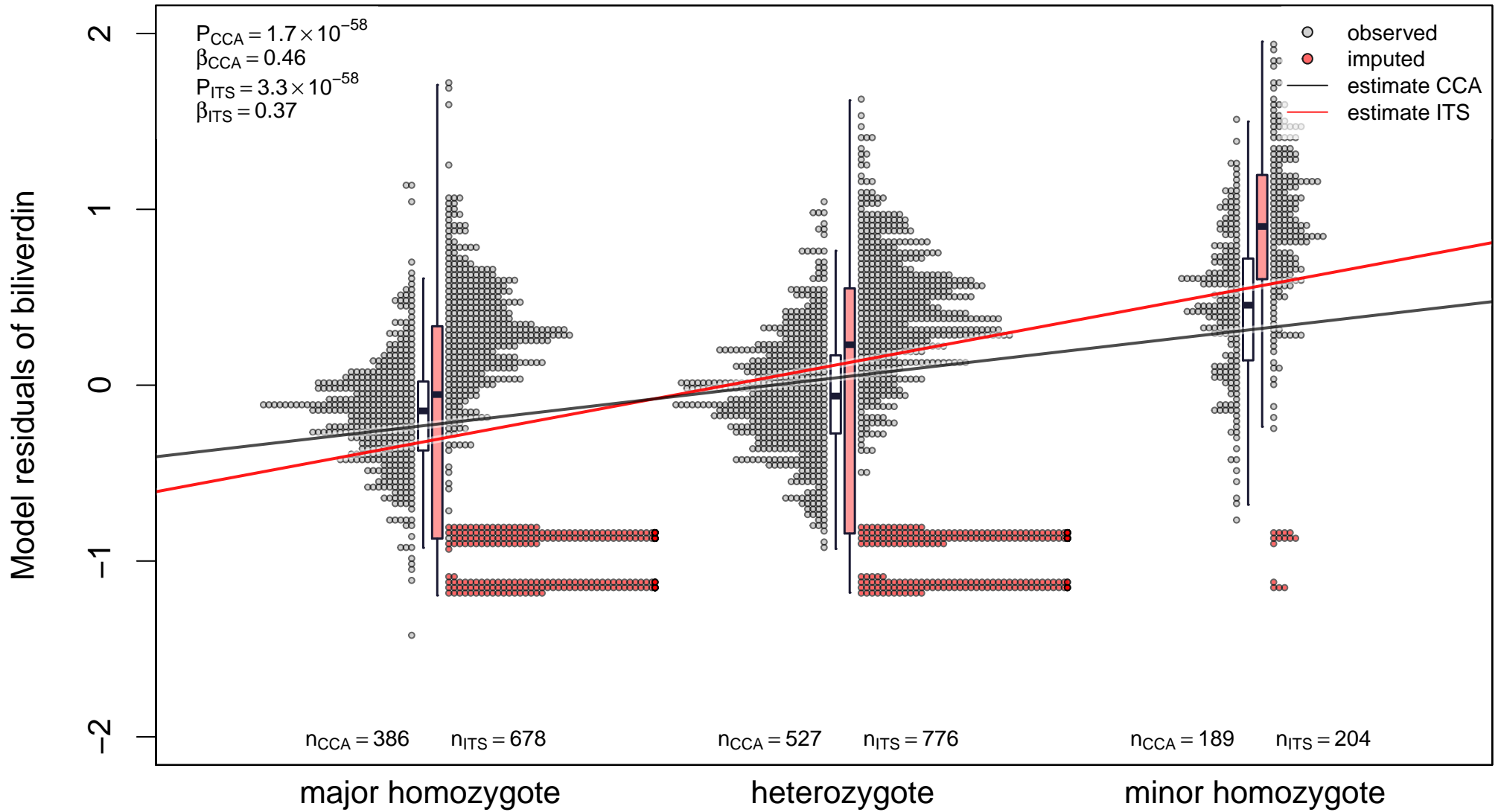
Genotype of SNP rs887829 (UGT1A1)

# ICE-pmm

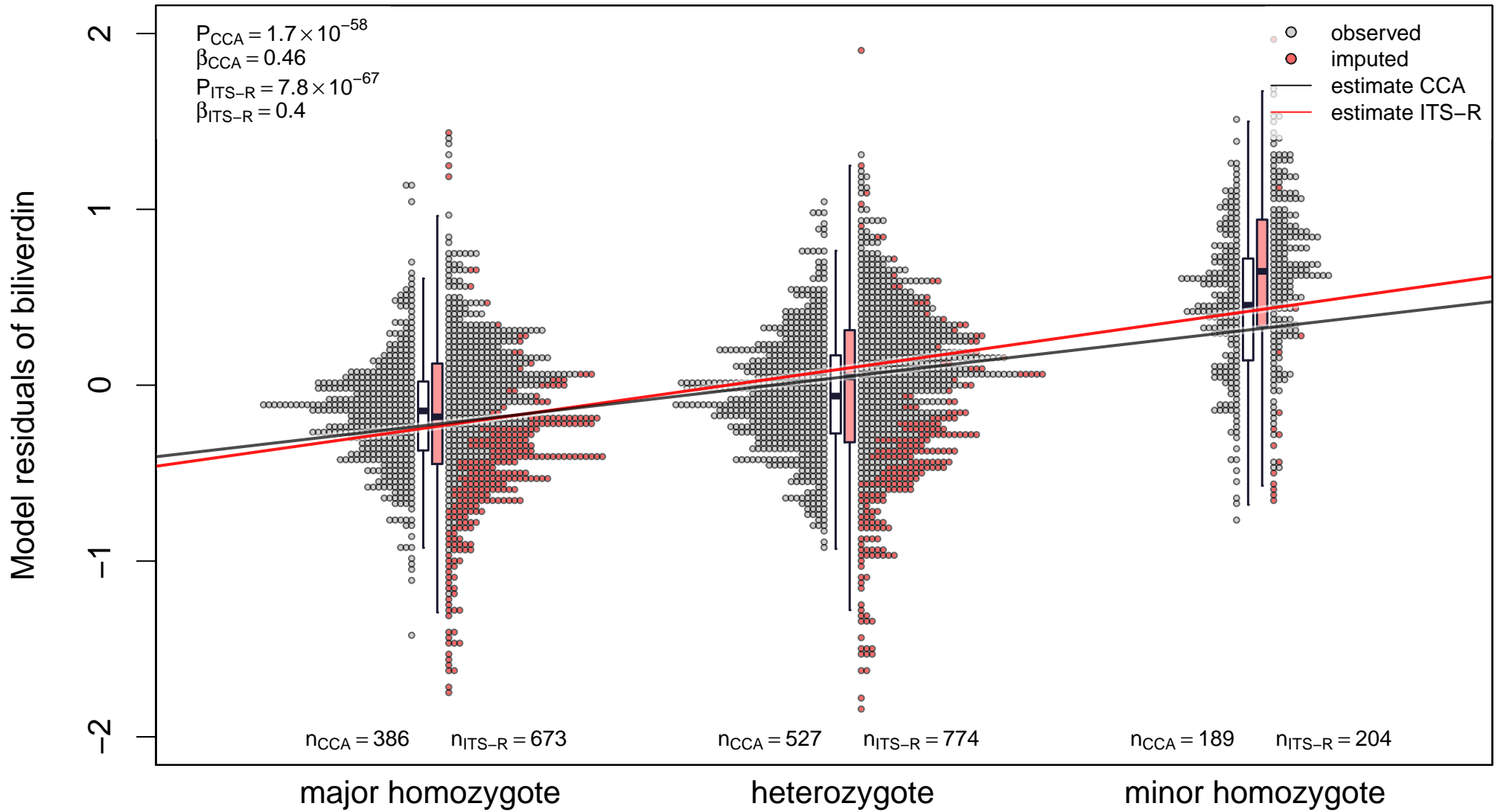


Genotype of SNP rs887829 (UGT1A1)

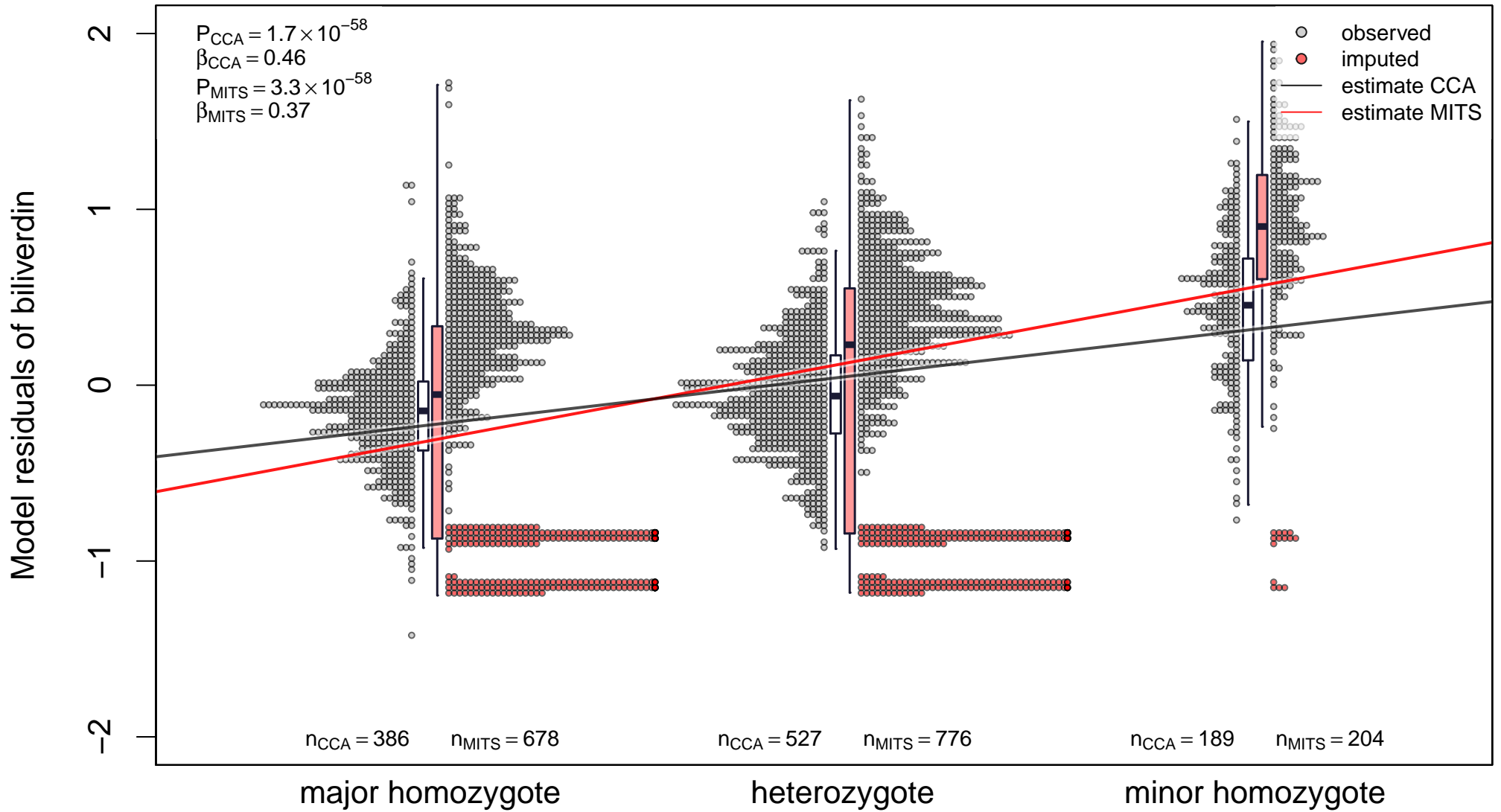
# ITS



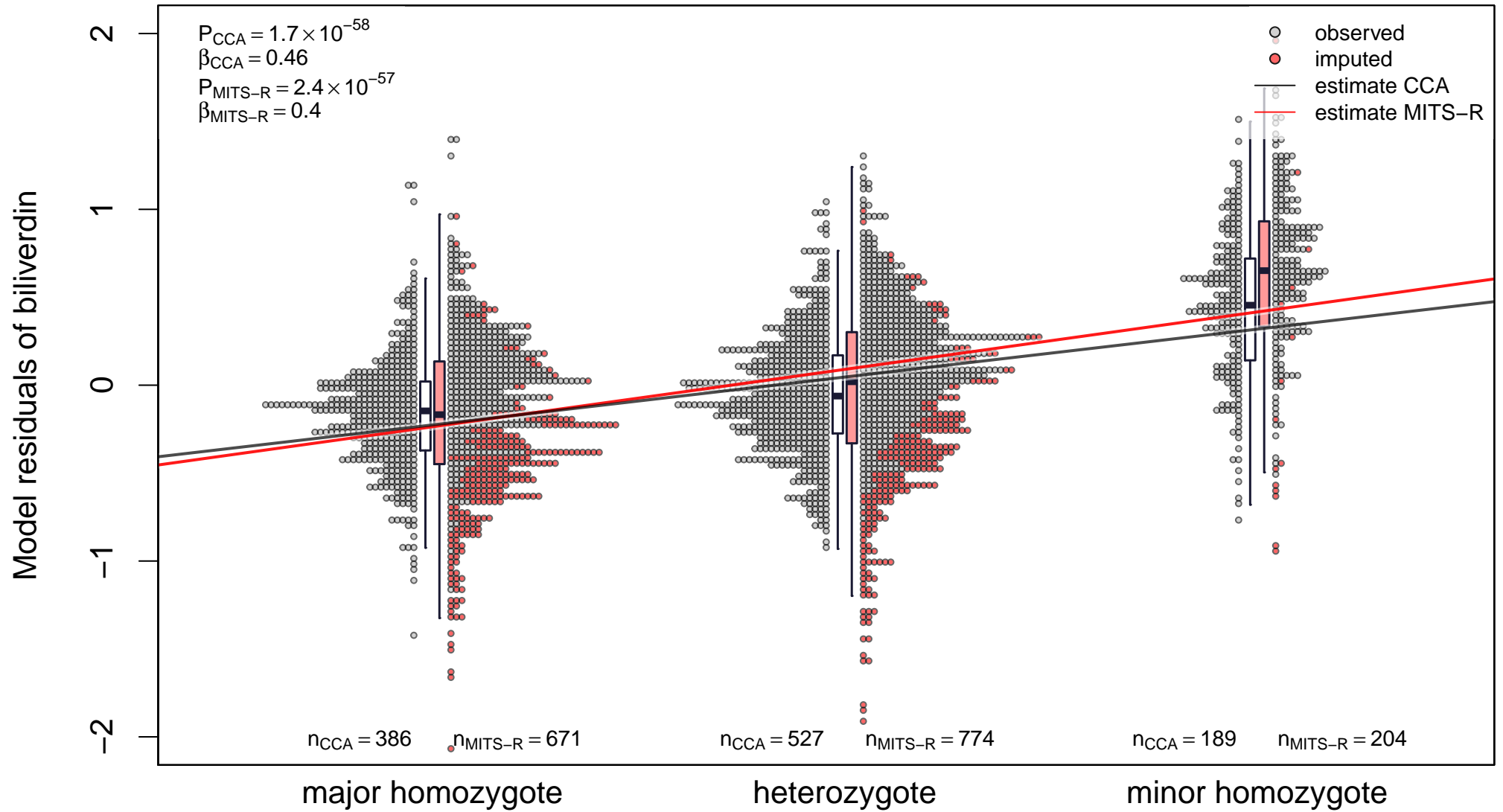
# ITS-R



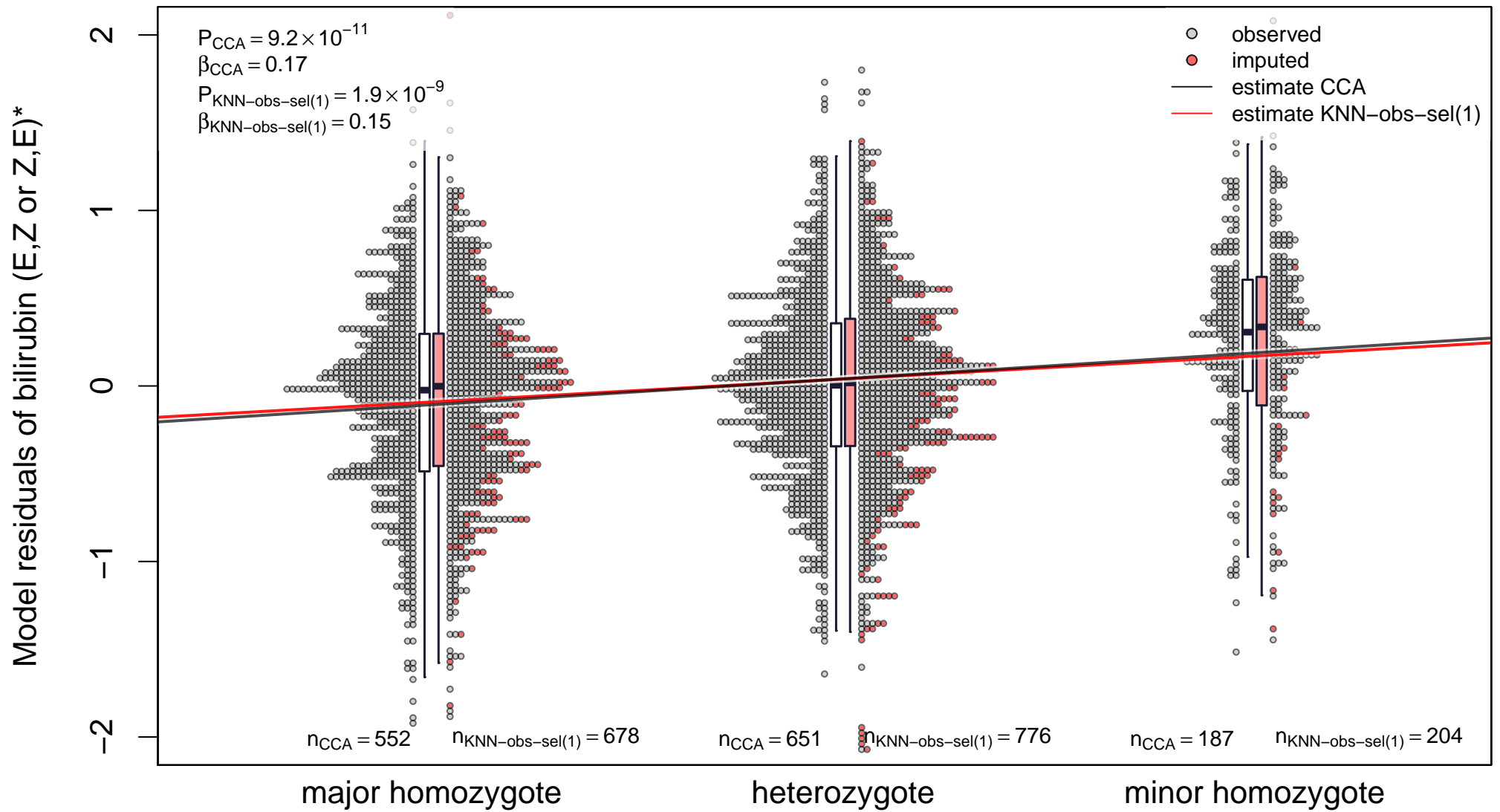
# MITS



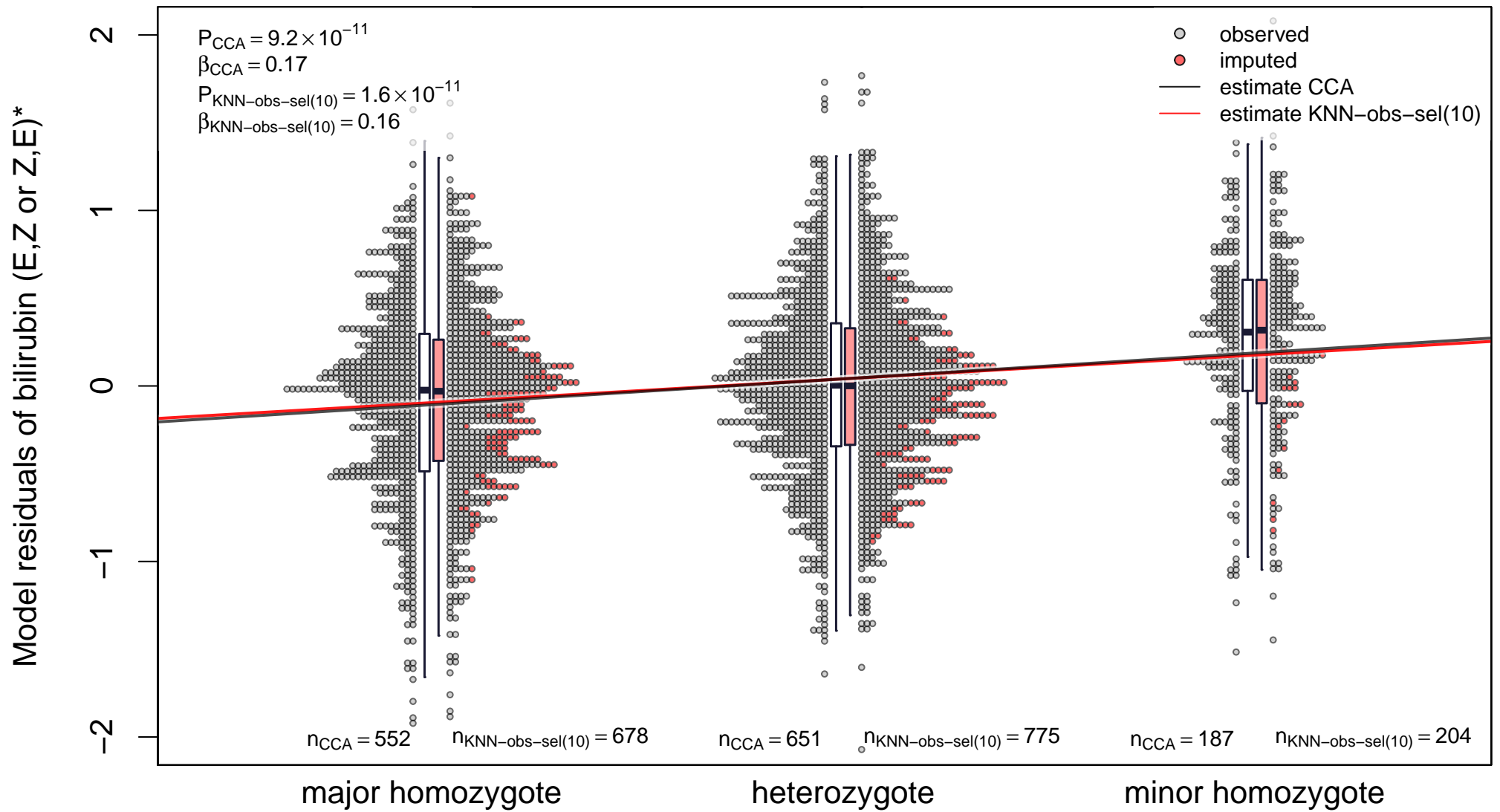
# MITS-R



# KNN-obs-sel(1)

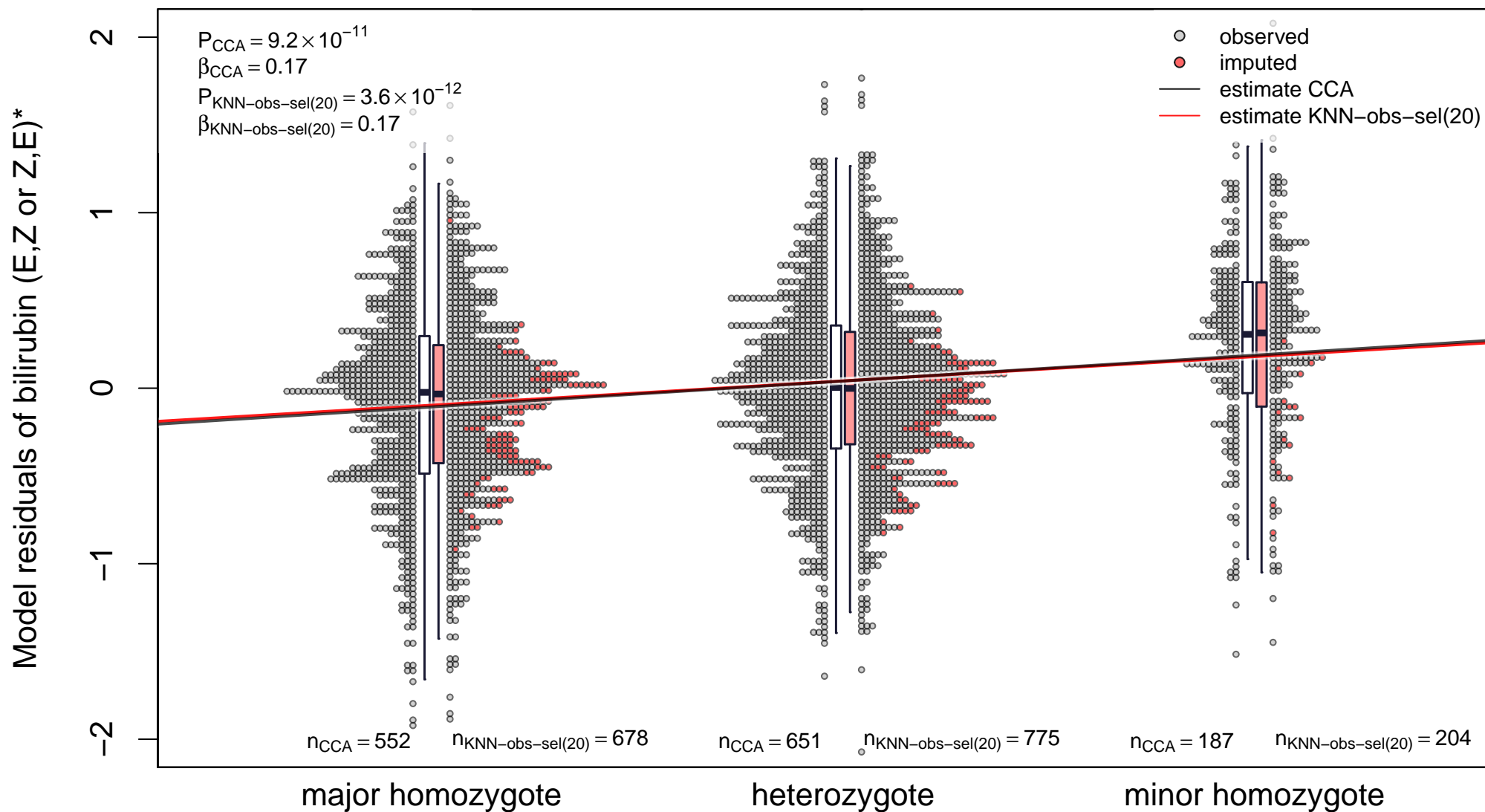


# KNN-obs-sel(10)

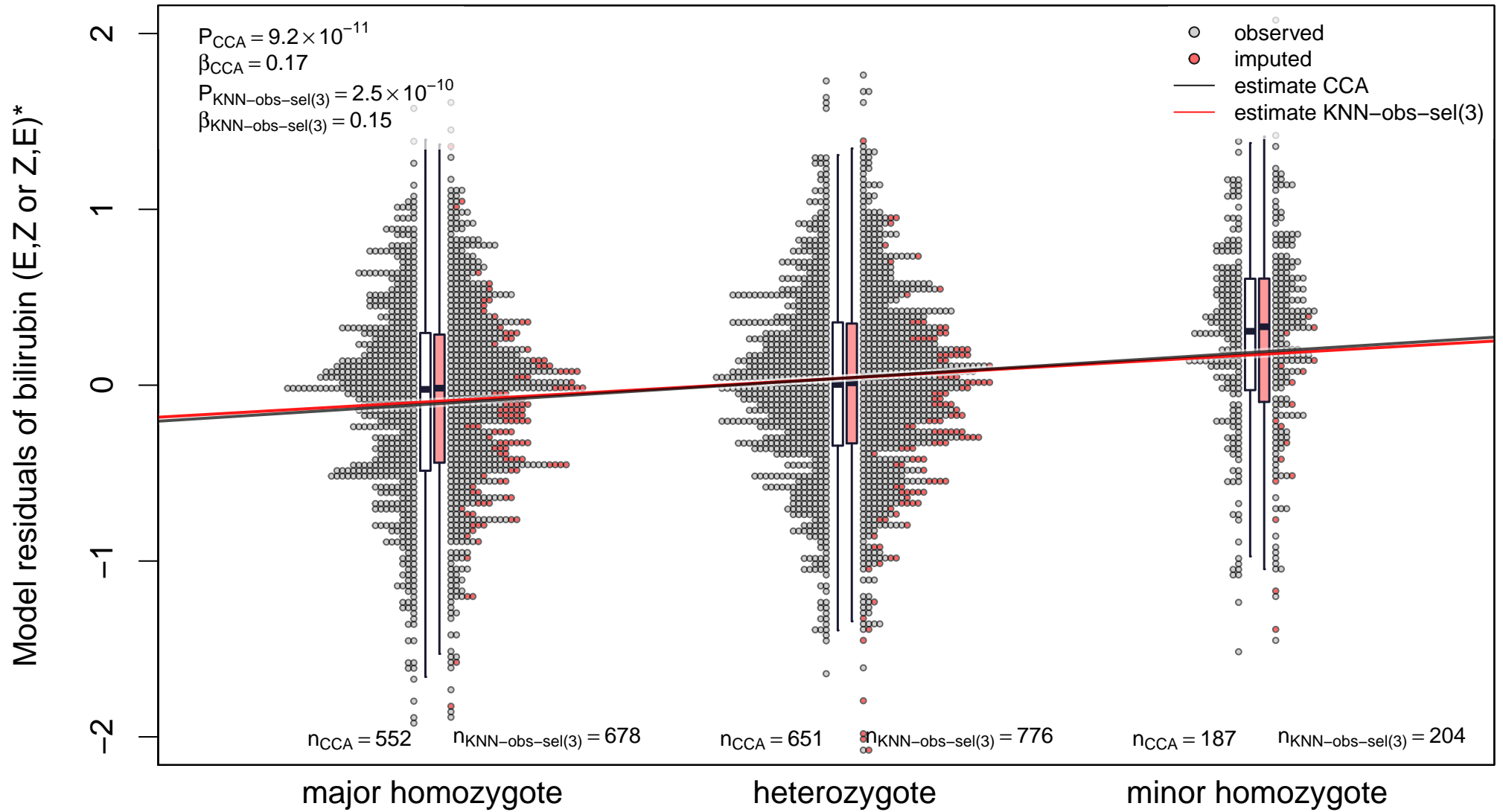




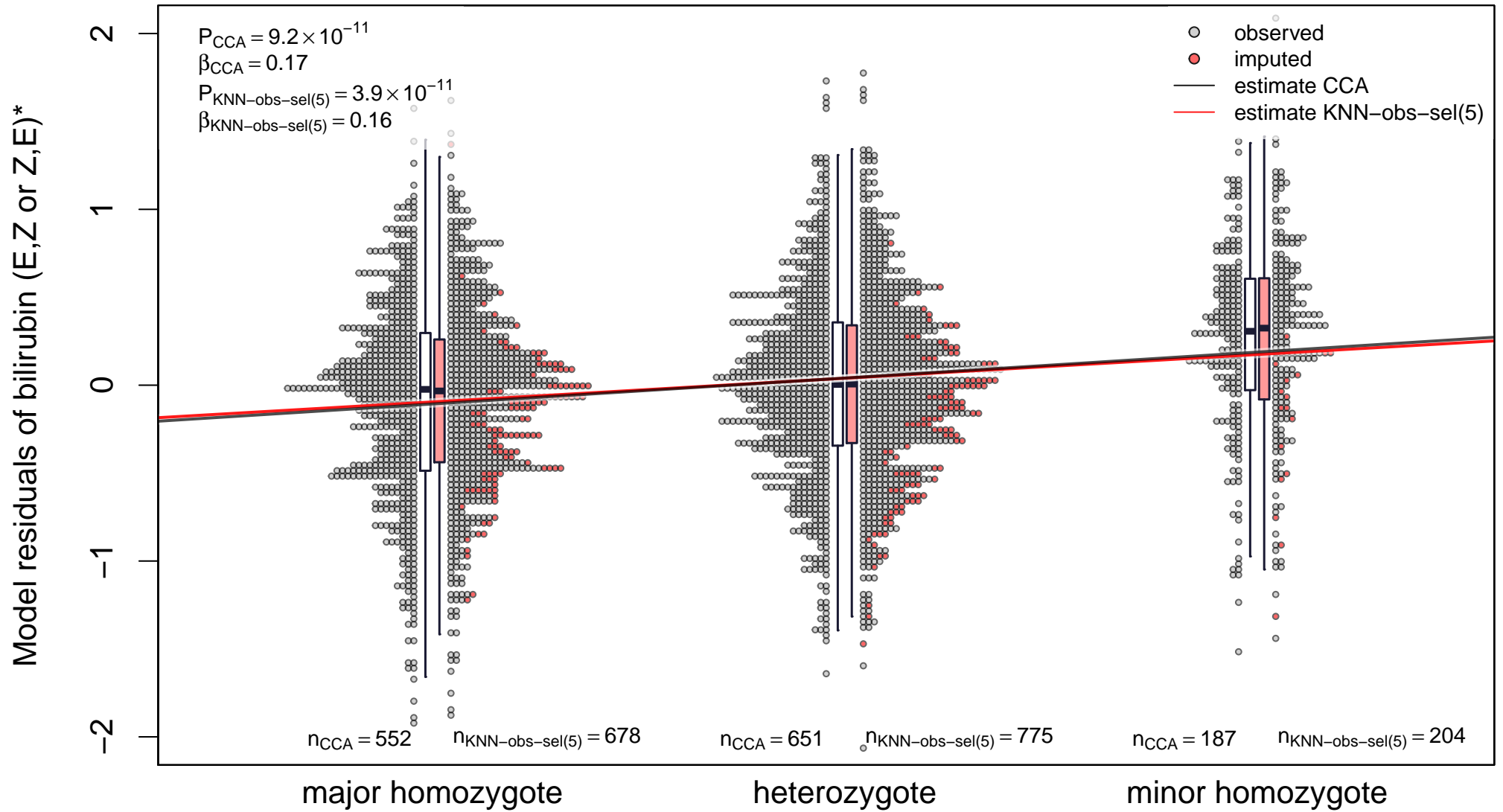
# KNN-obs-sel(20)



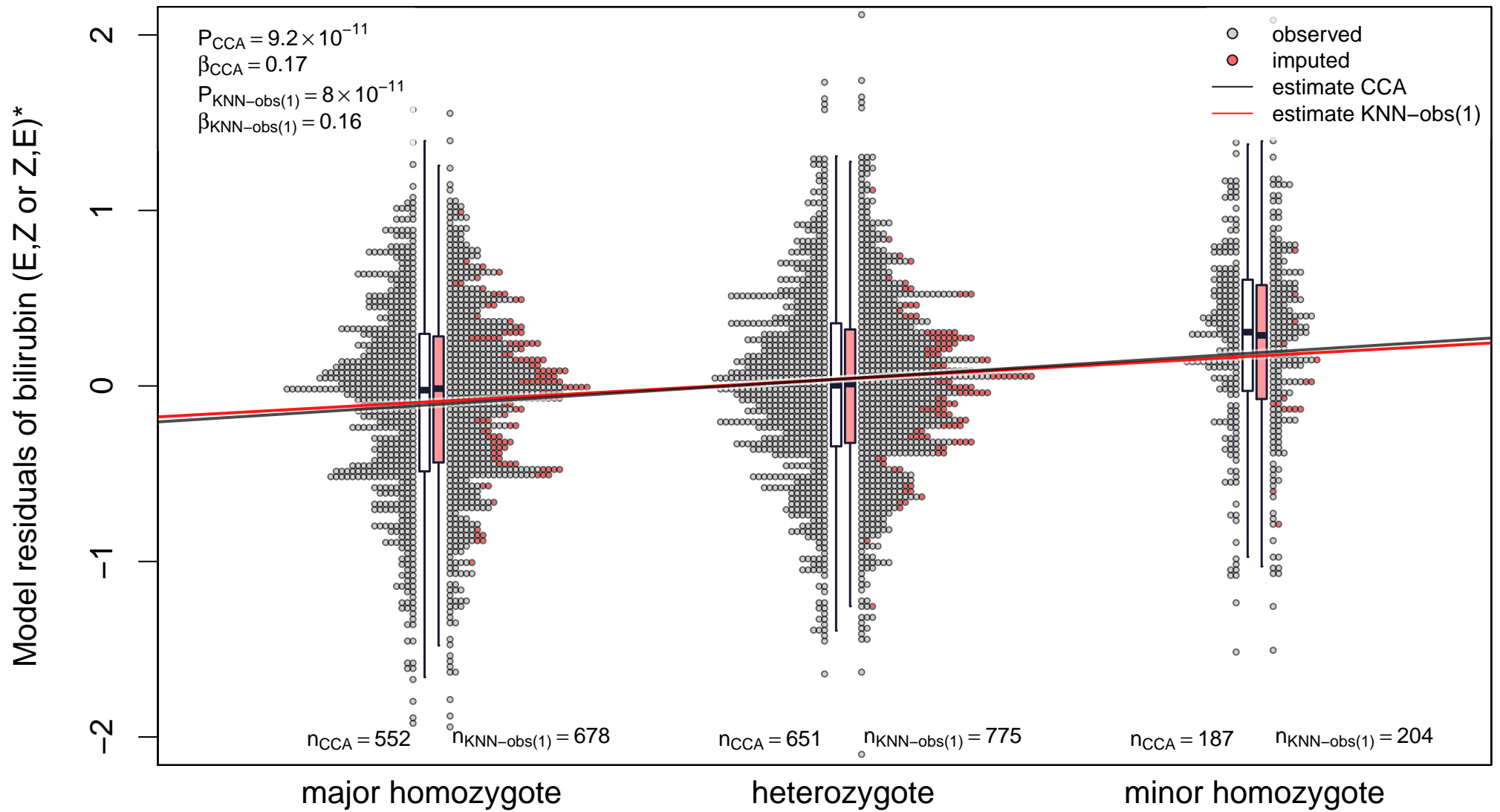
# KNN-obs-sel(3)



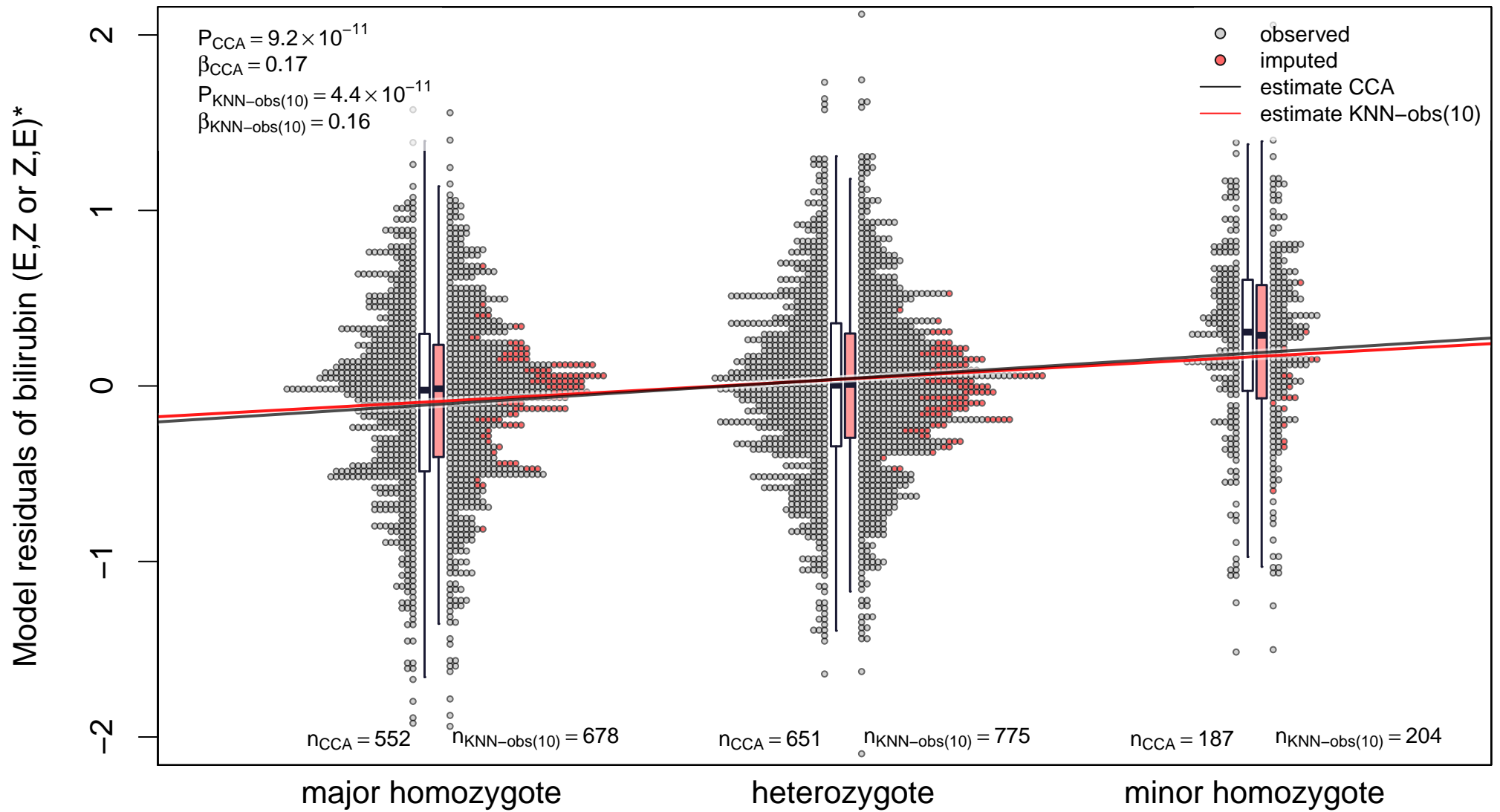
# KNN-obs-sel(5)



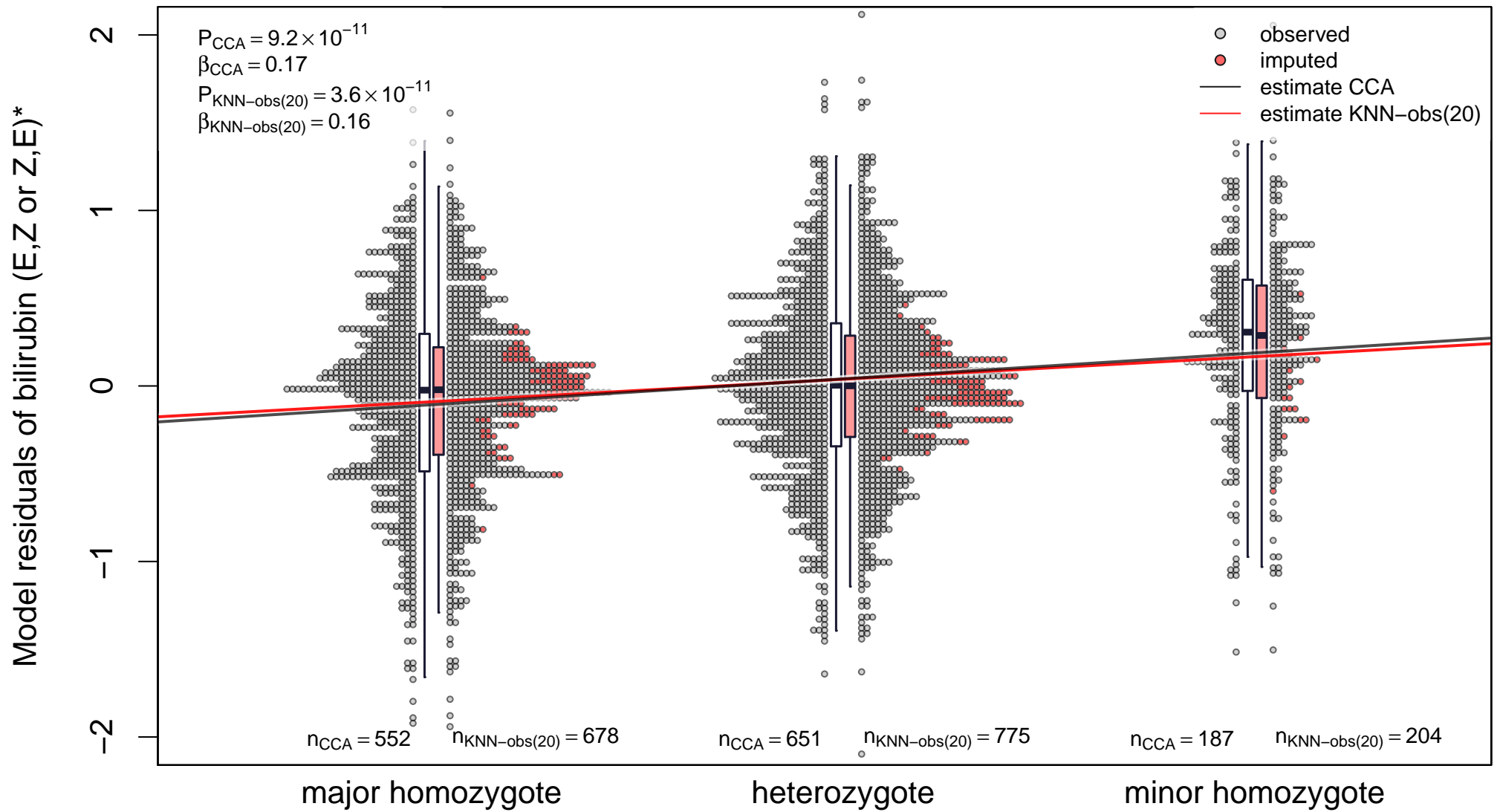
# KNN-obs(1)



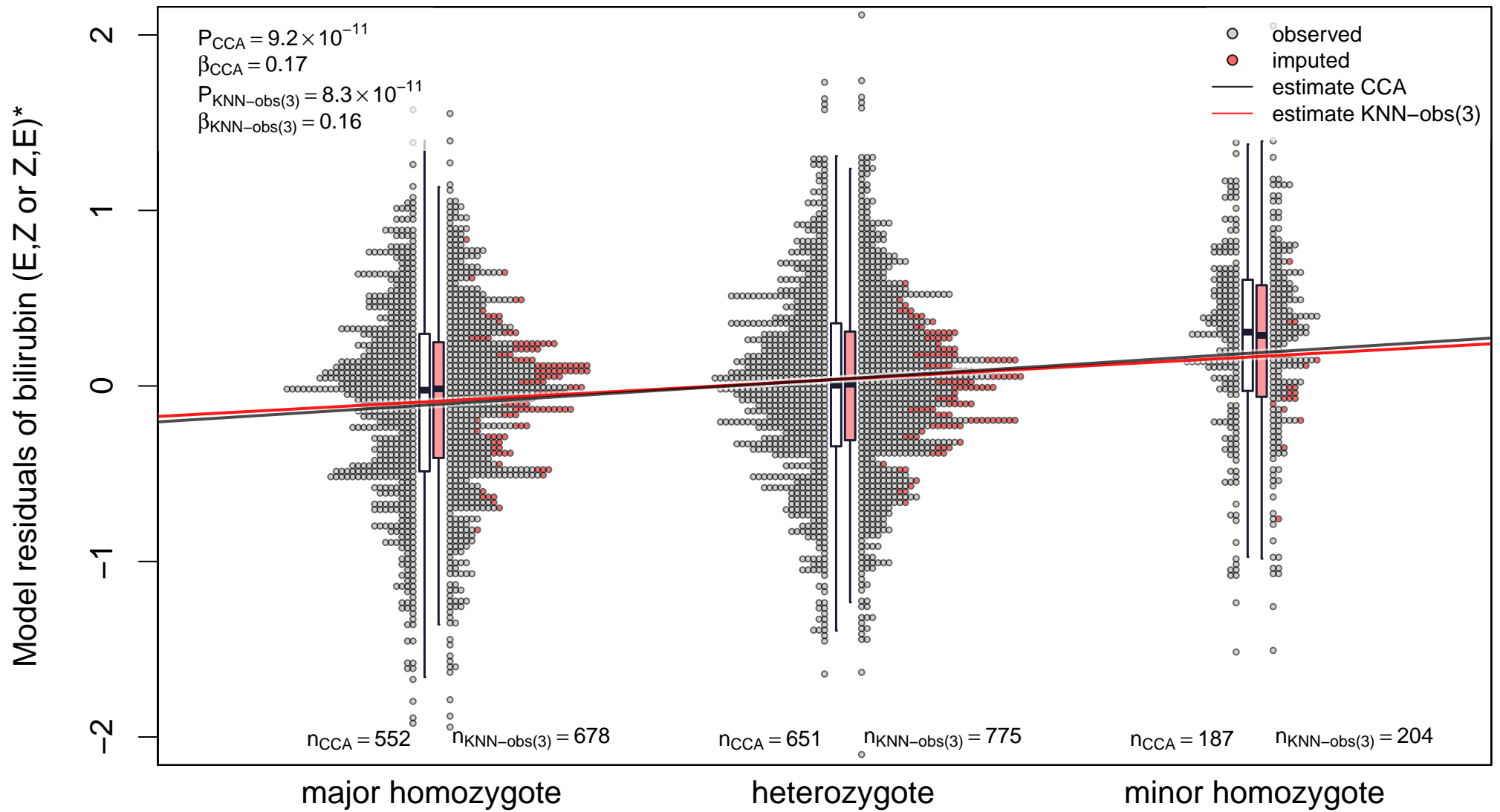
# KNN-obs(10)



# KNN-obs(20)

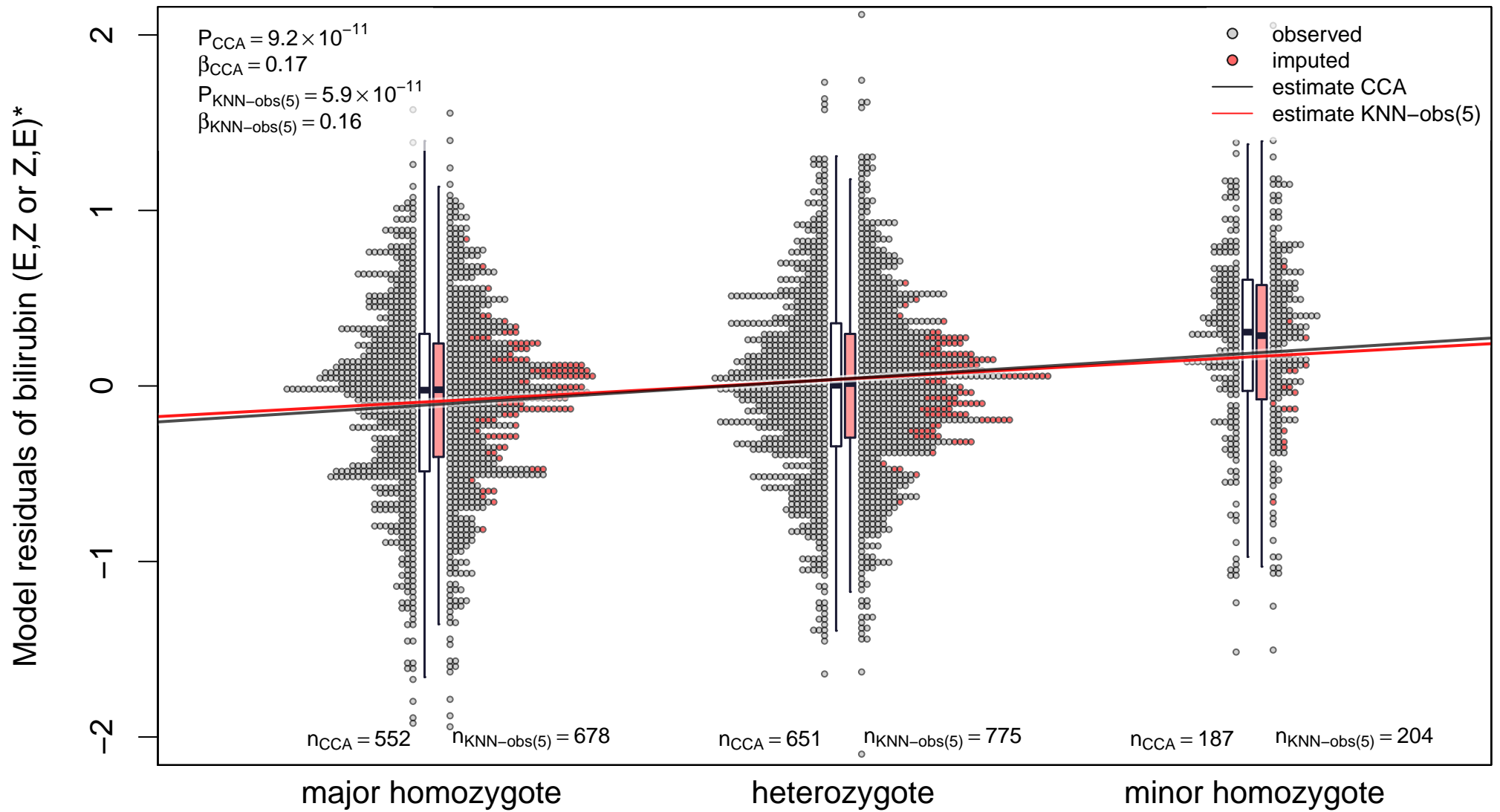


# KNN-obs(3)



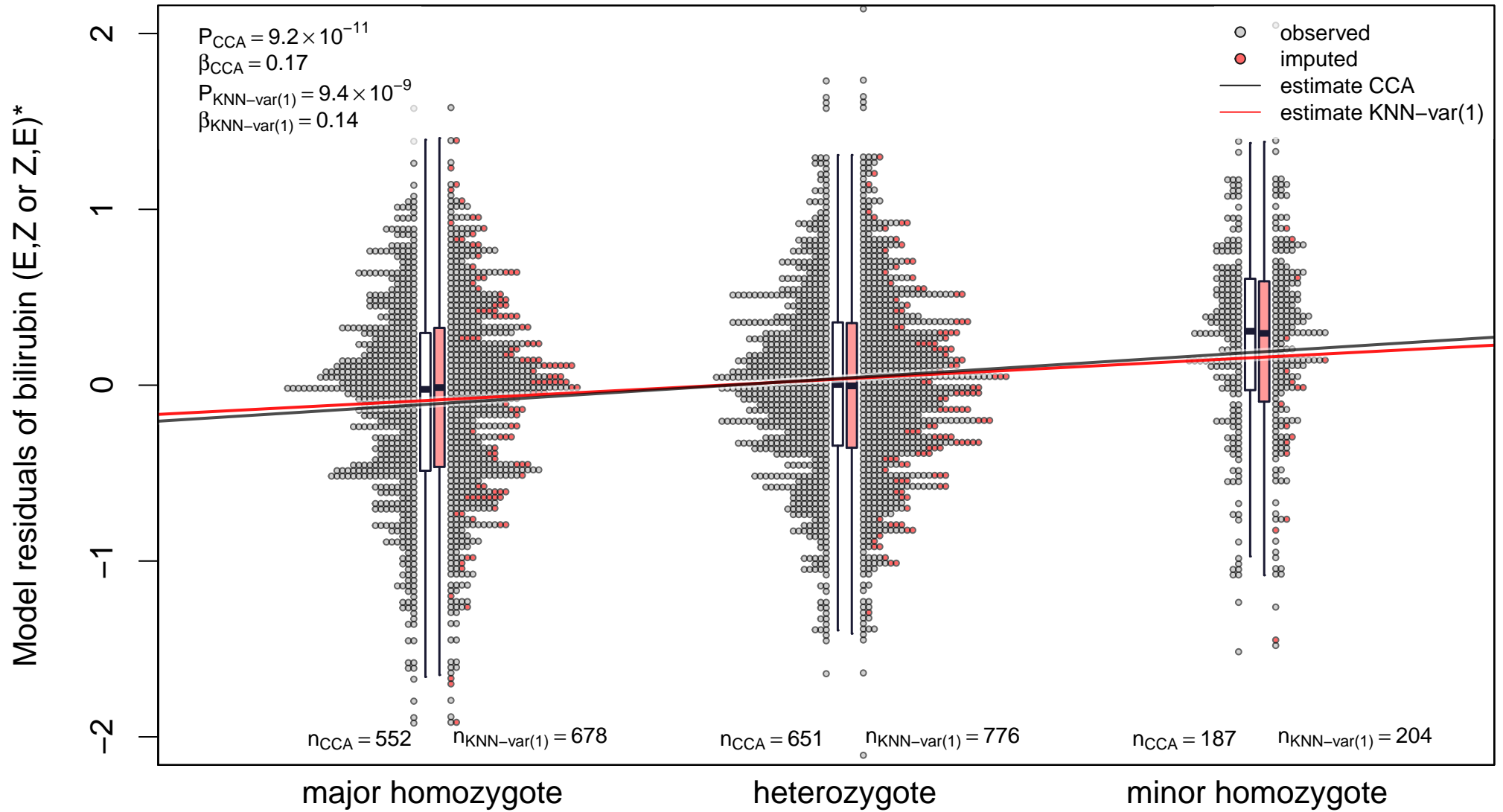


# KNN-obs(5)

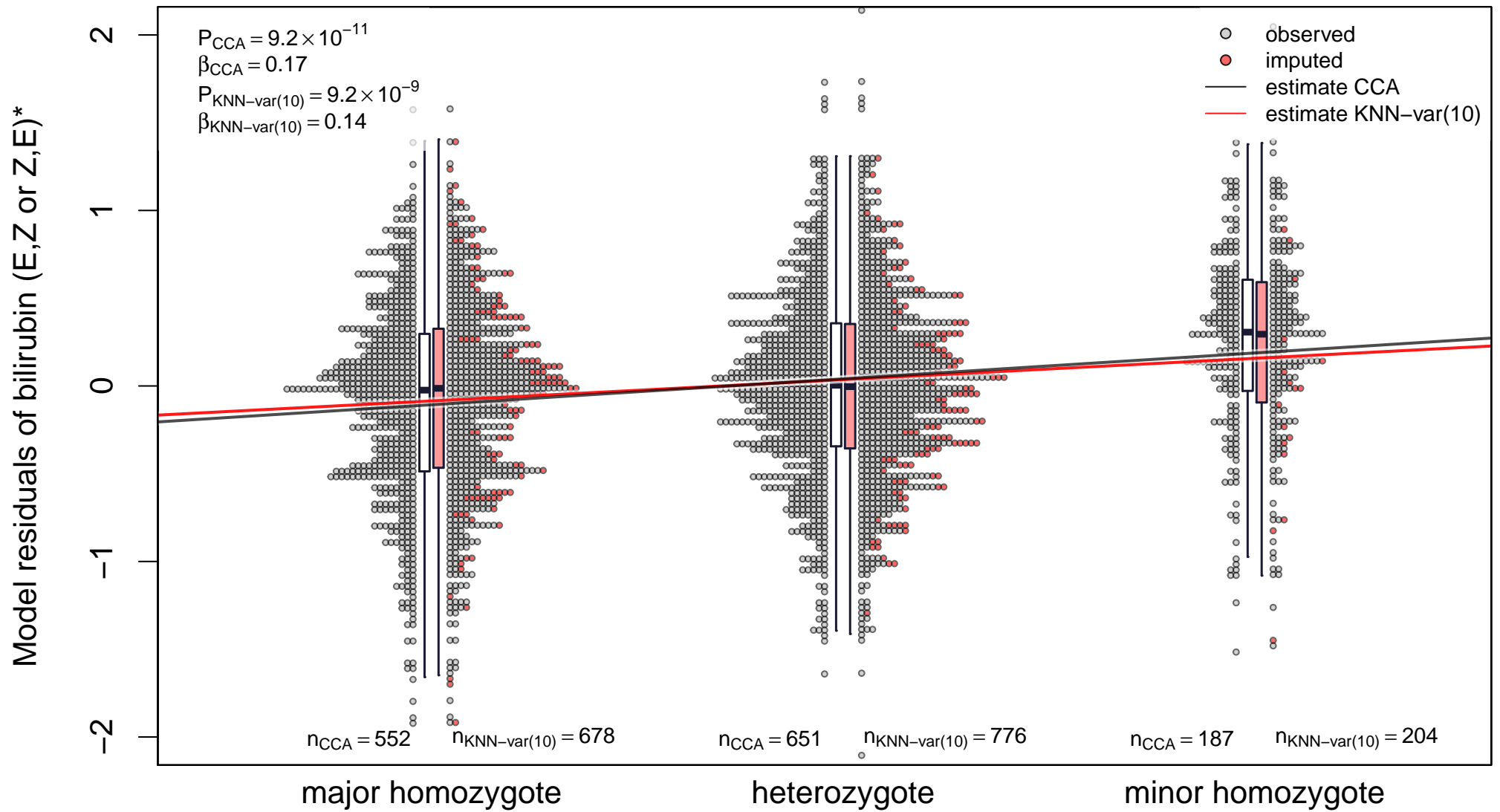




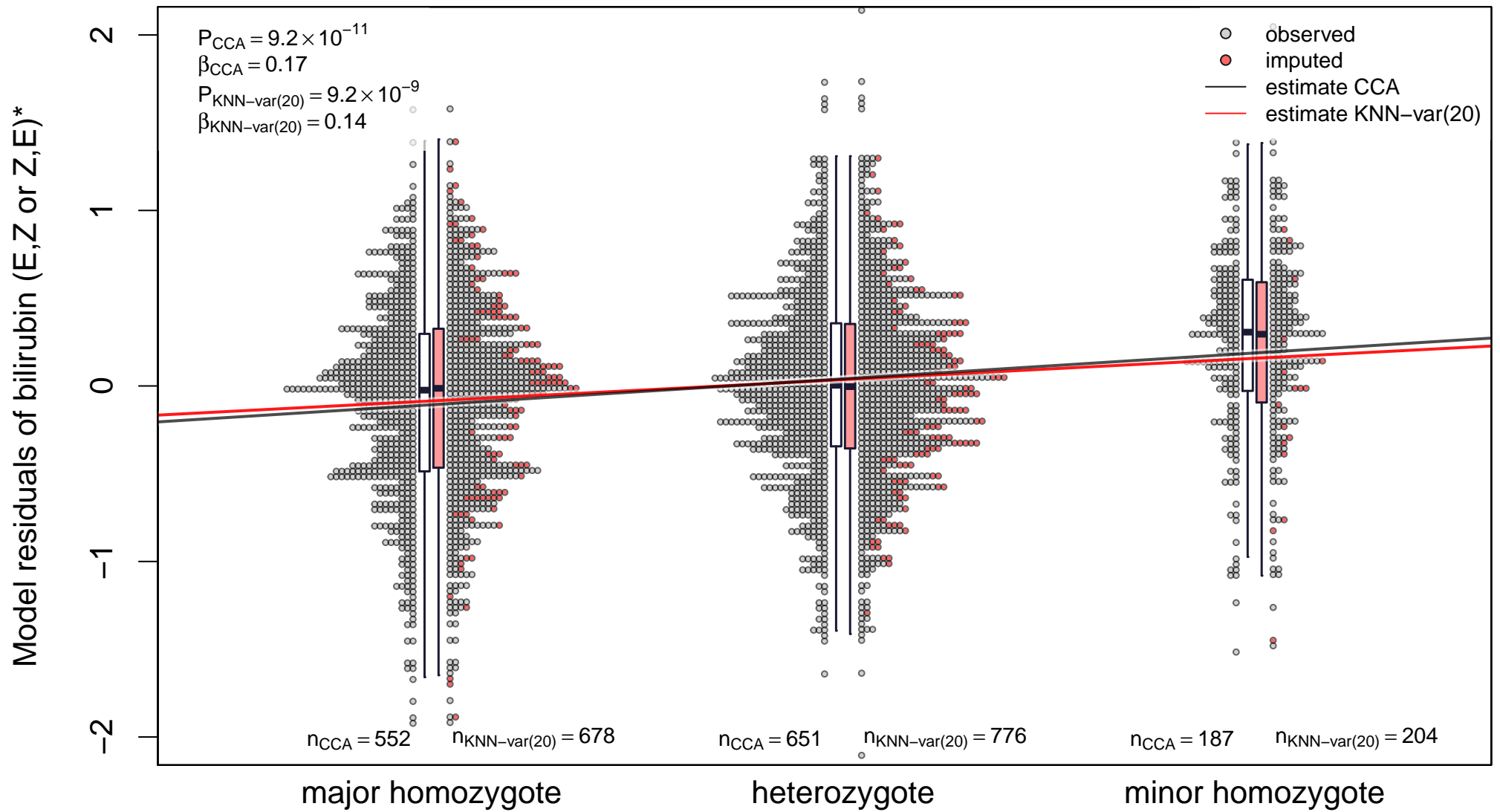
# KNN-var(1)



# KNN-var(10)

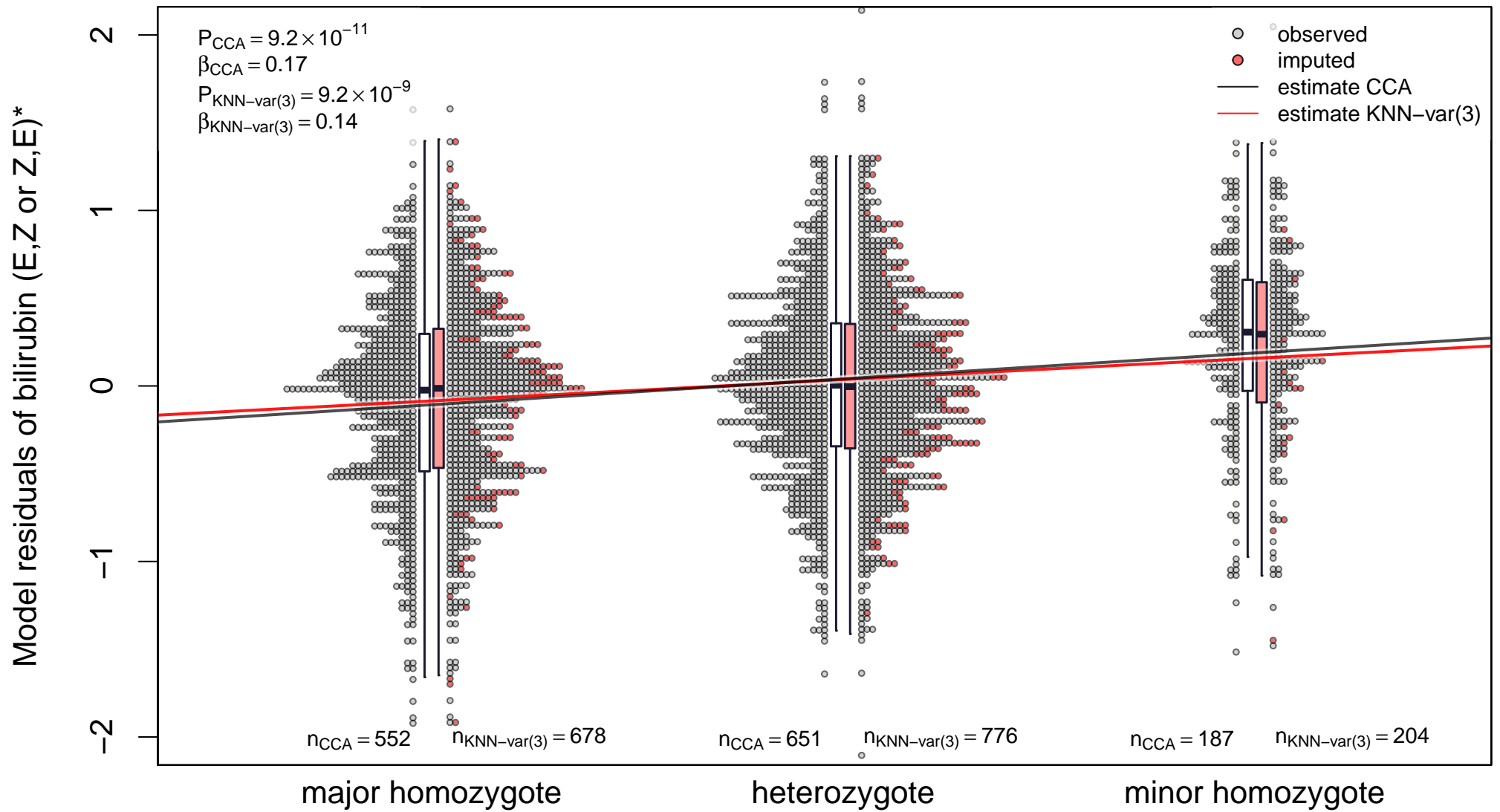


# KNN-var(20)

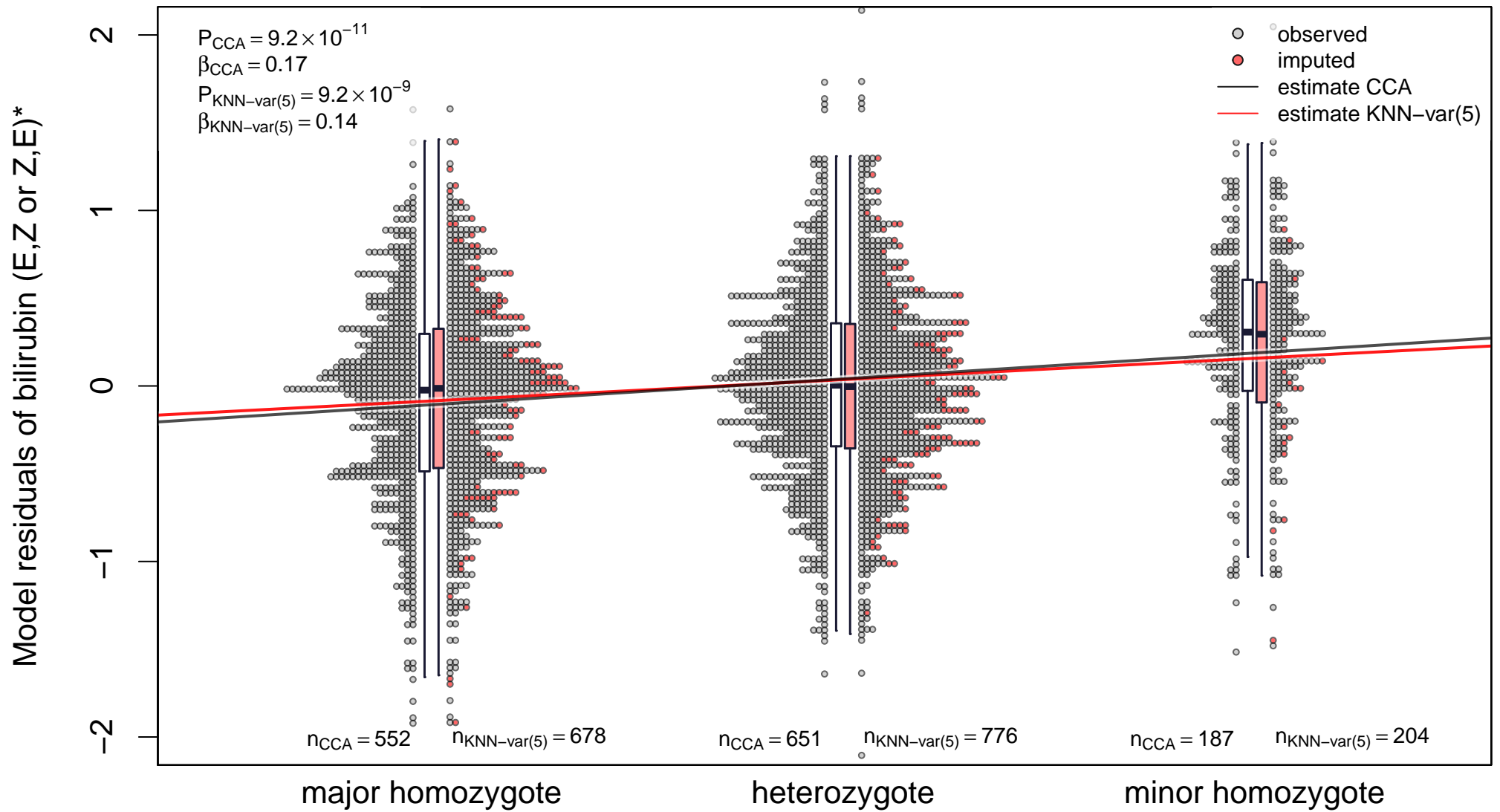


Genotype of SNP rs887829 (UGT1A1)

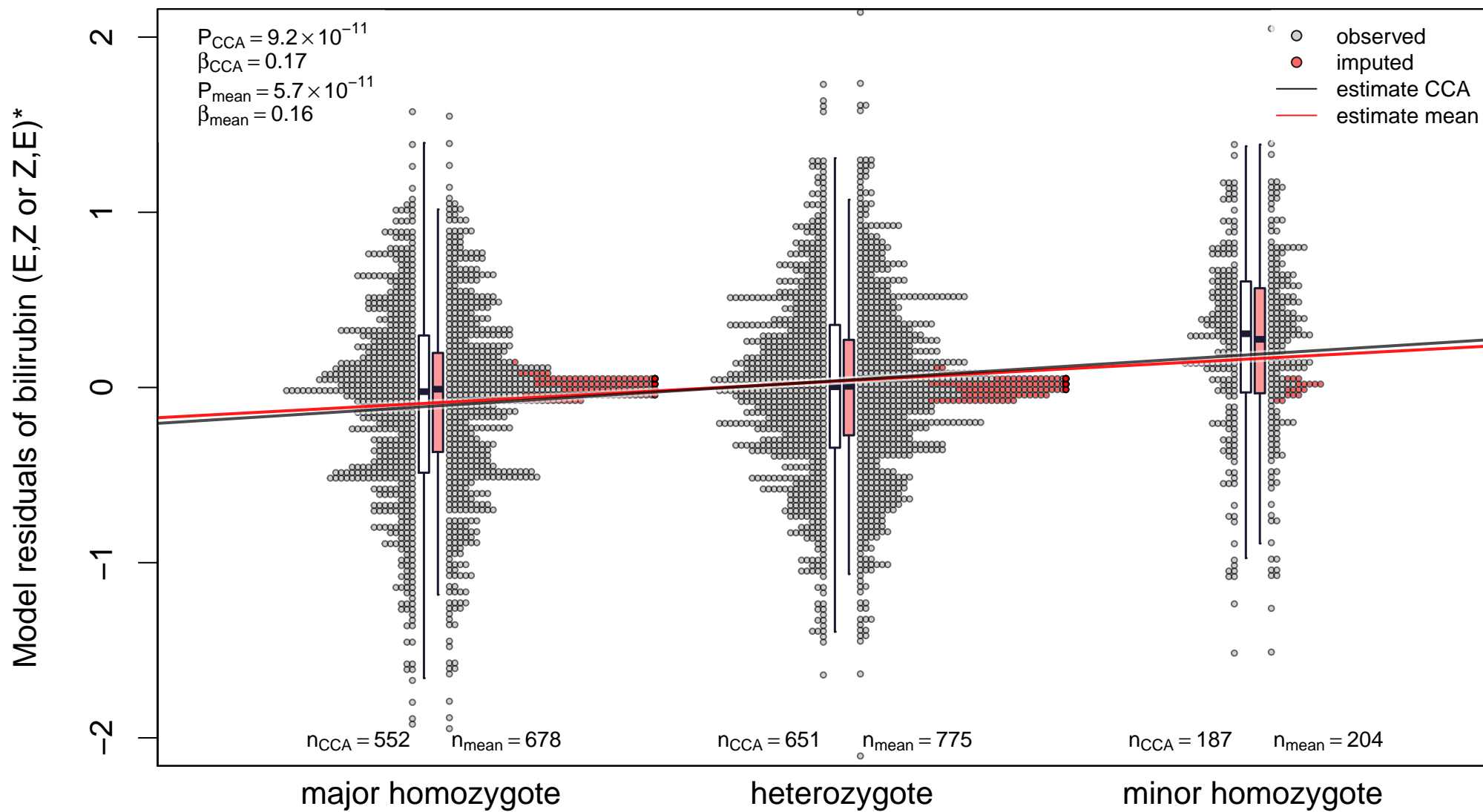
# KNN-var(3)



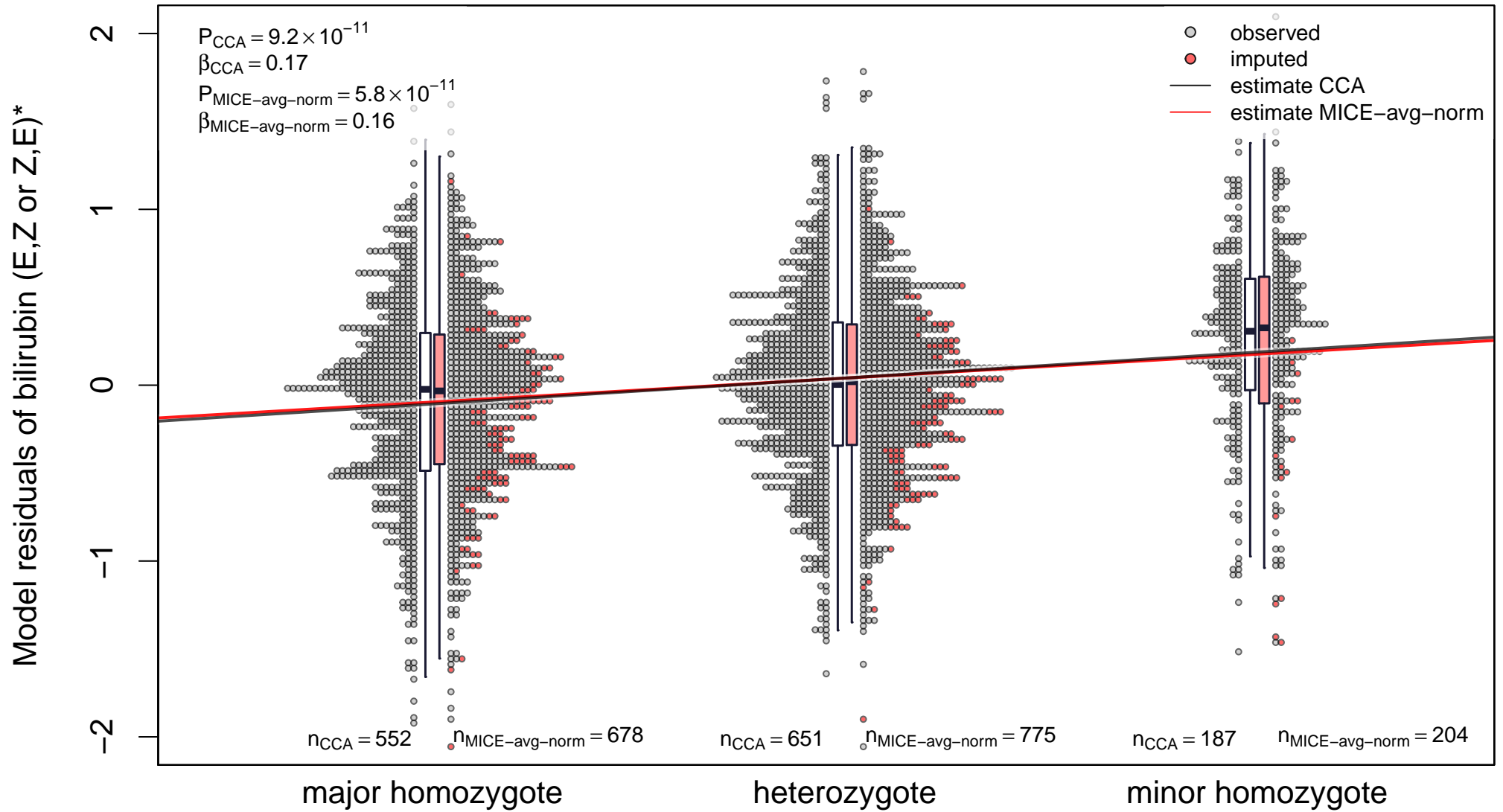
# KNN-var(5)



mean

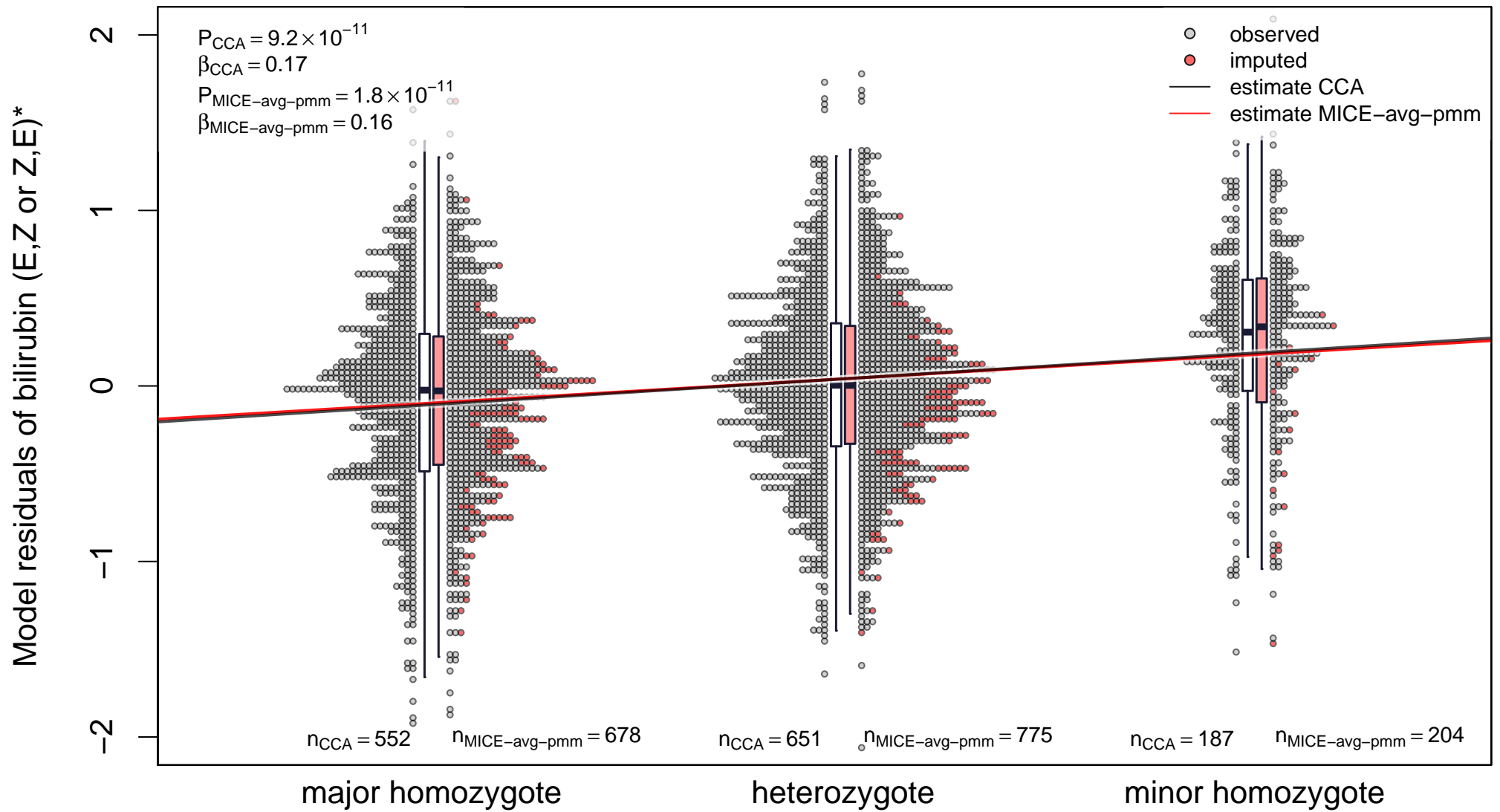


# MICE-avg-norm



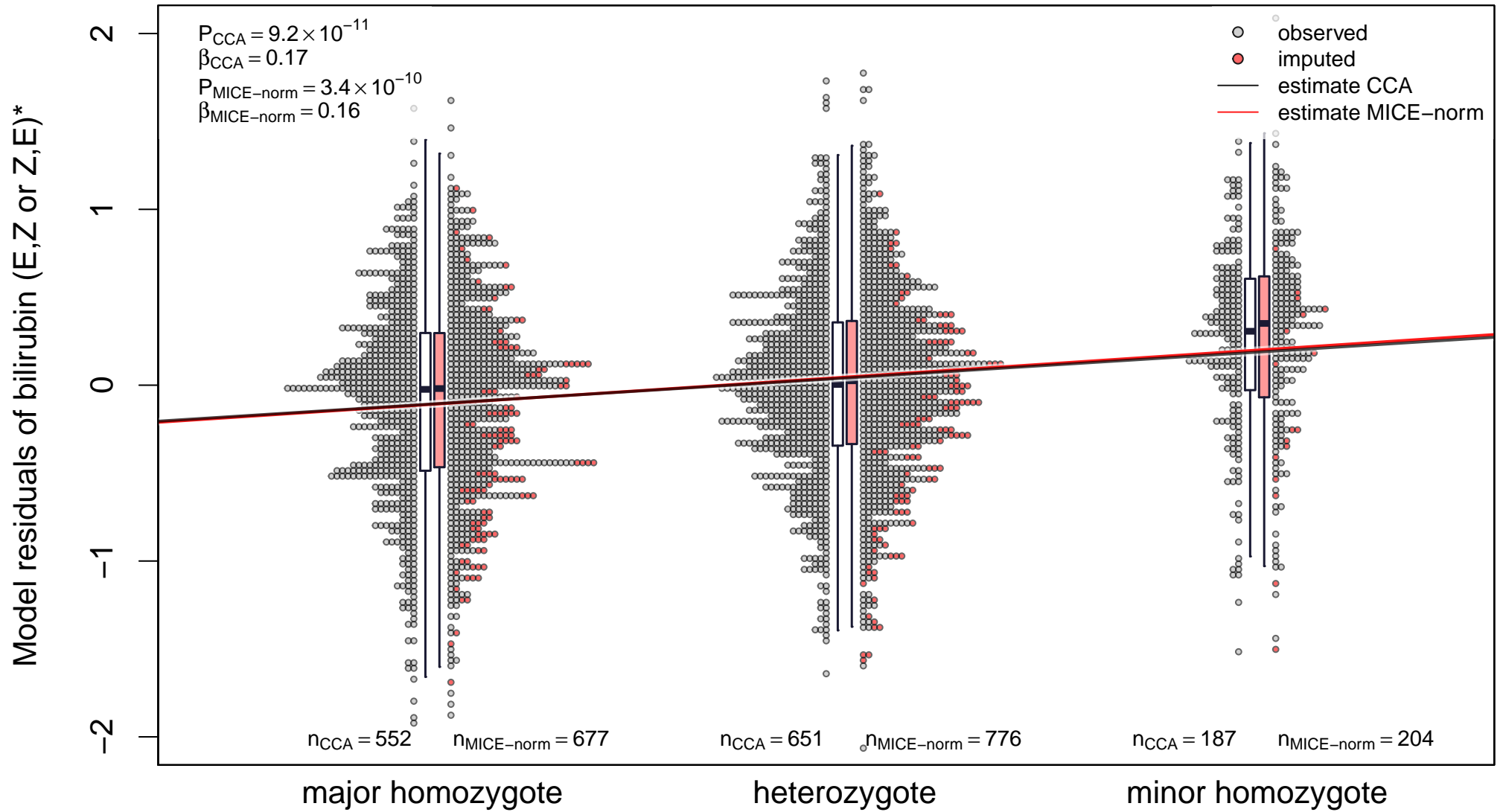


# MICE-avg-pmm

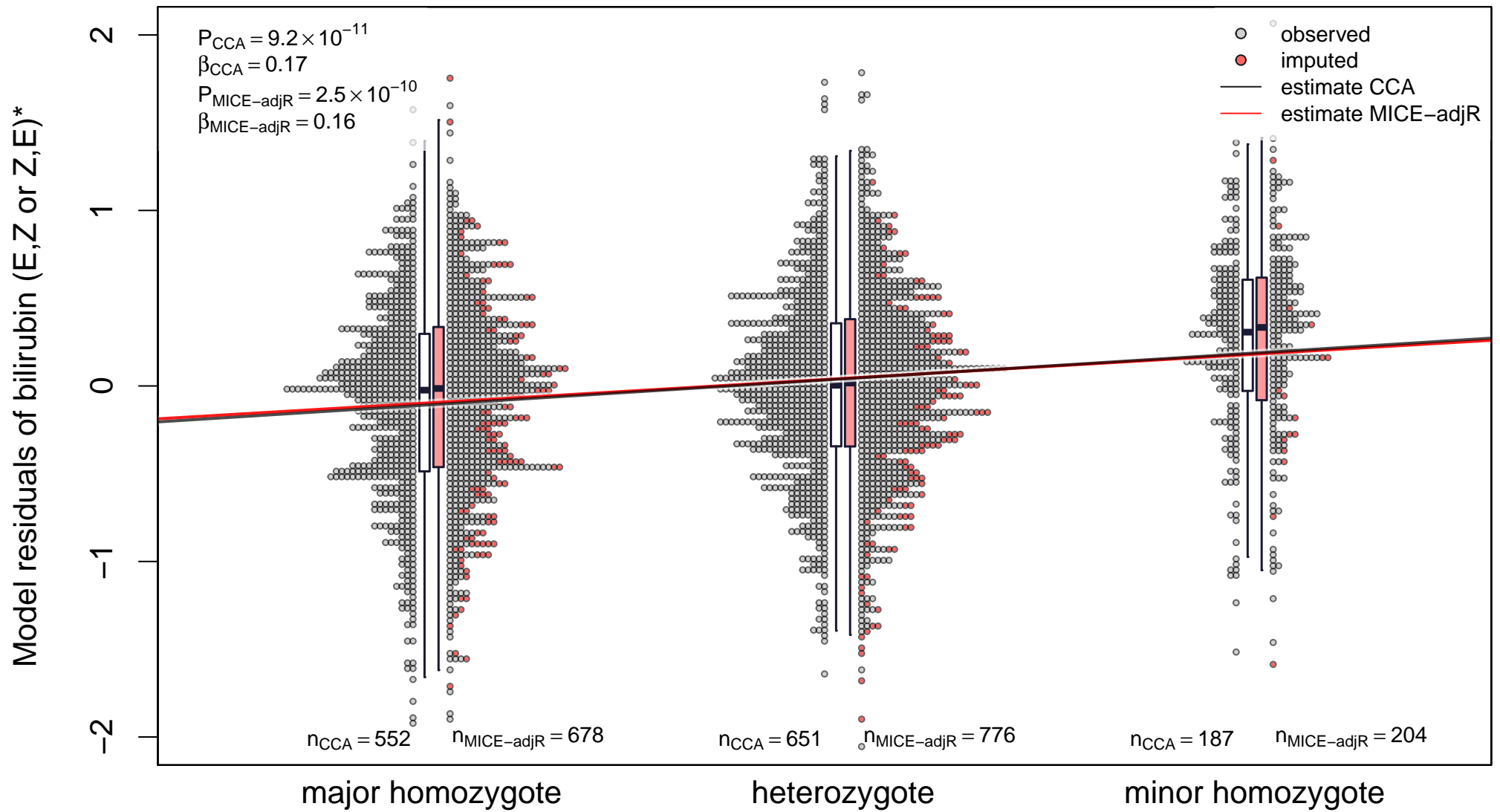




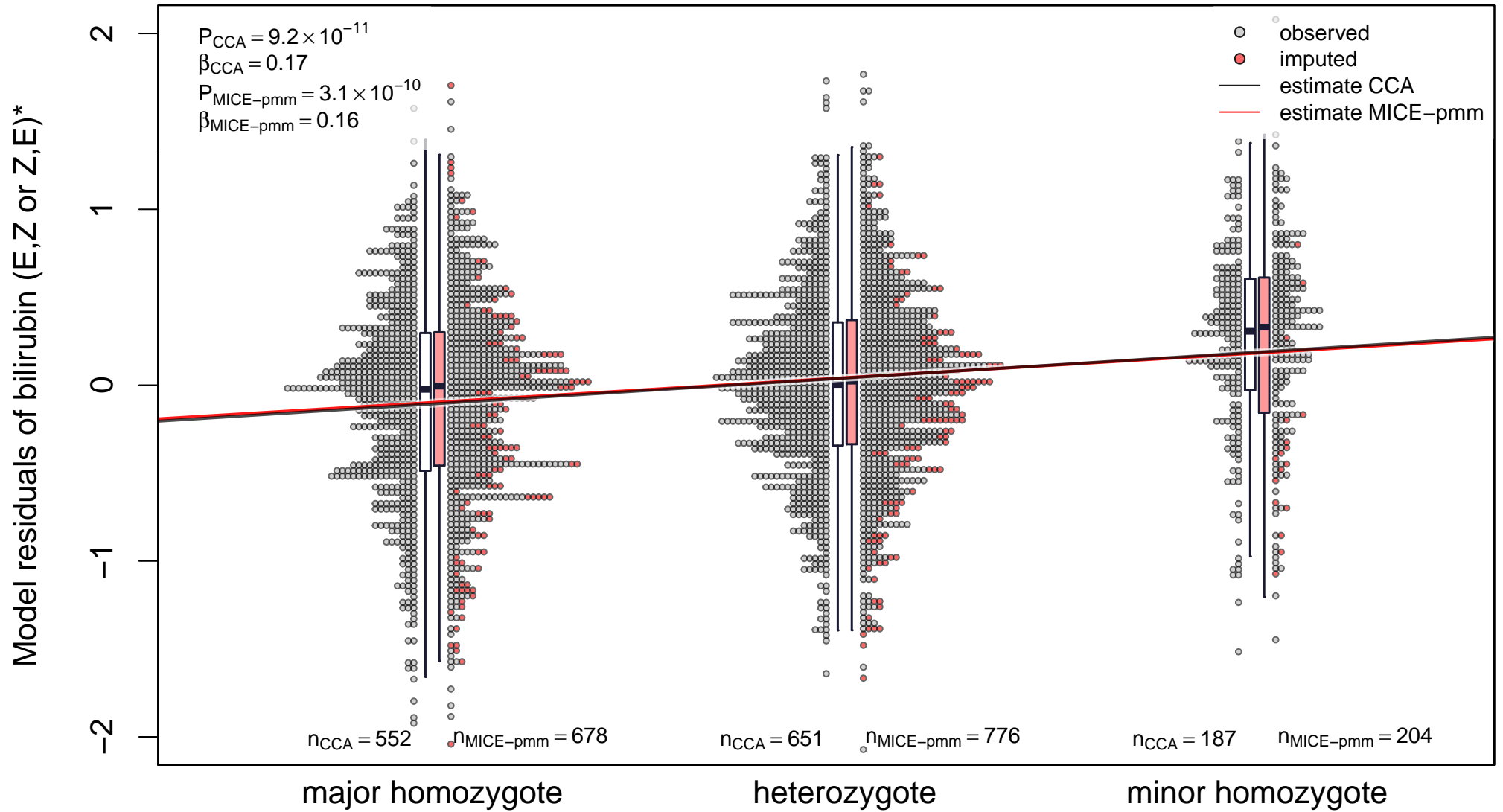
# MICE-norm



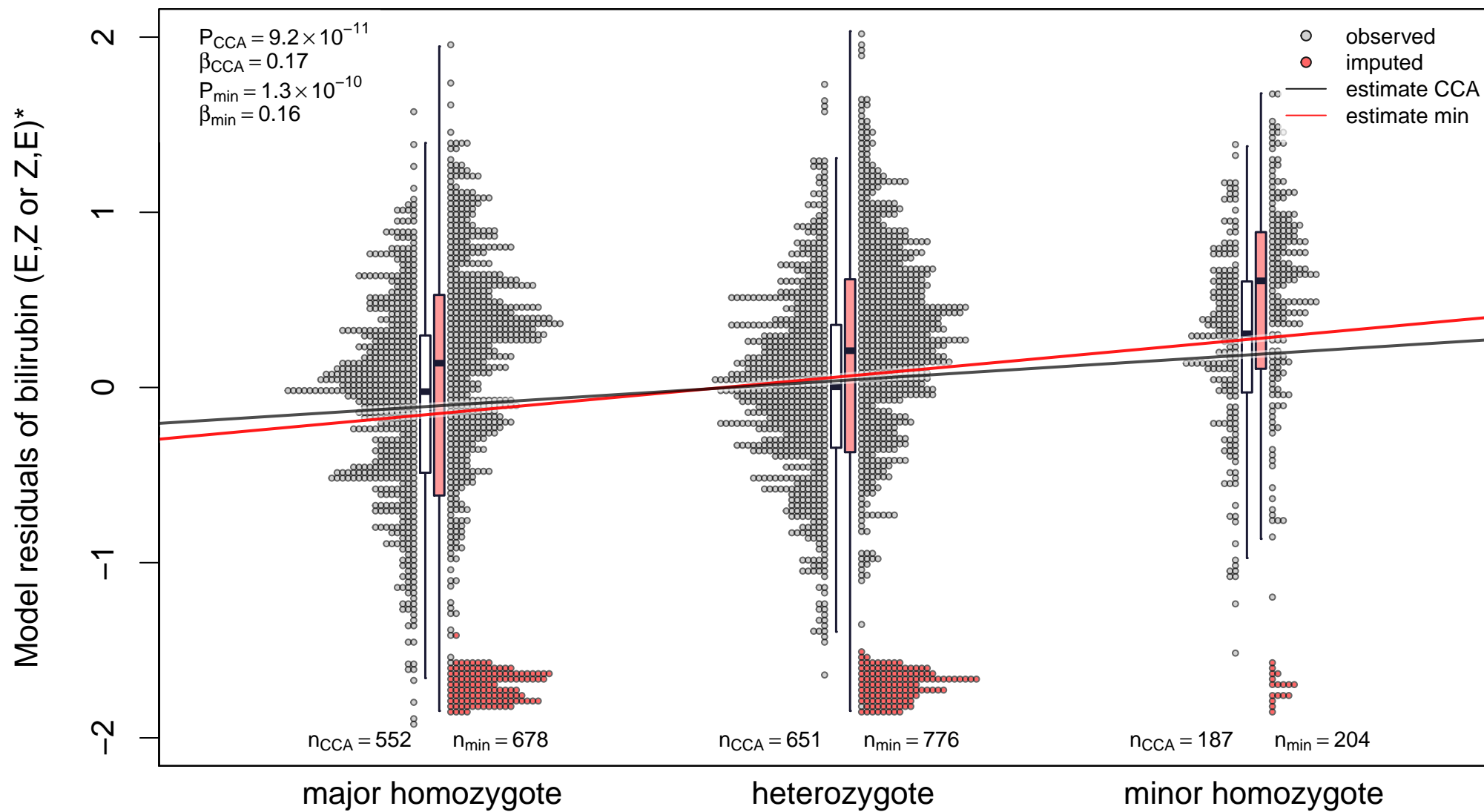
# MICE-adjR



# MICE-pmm

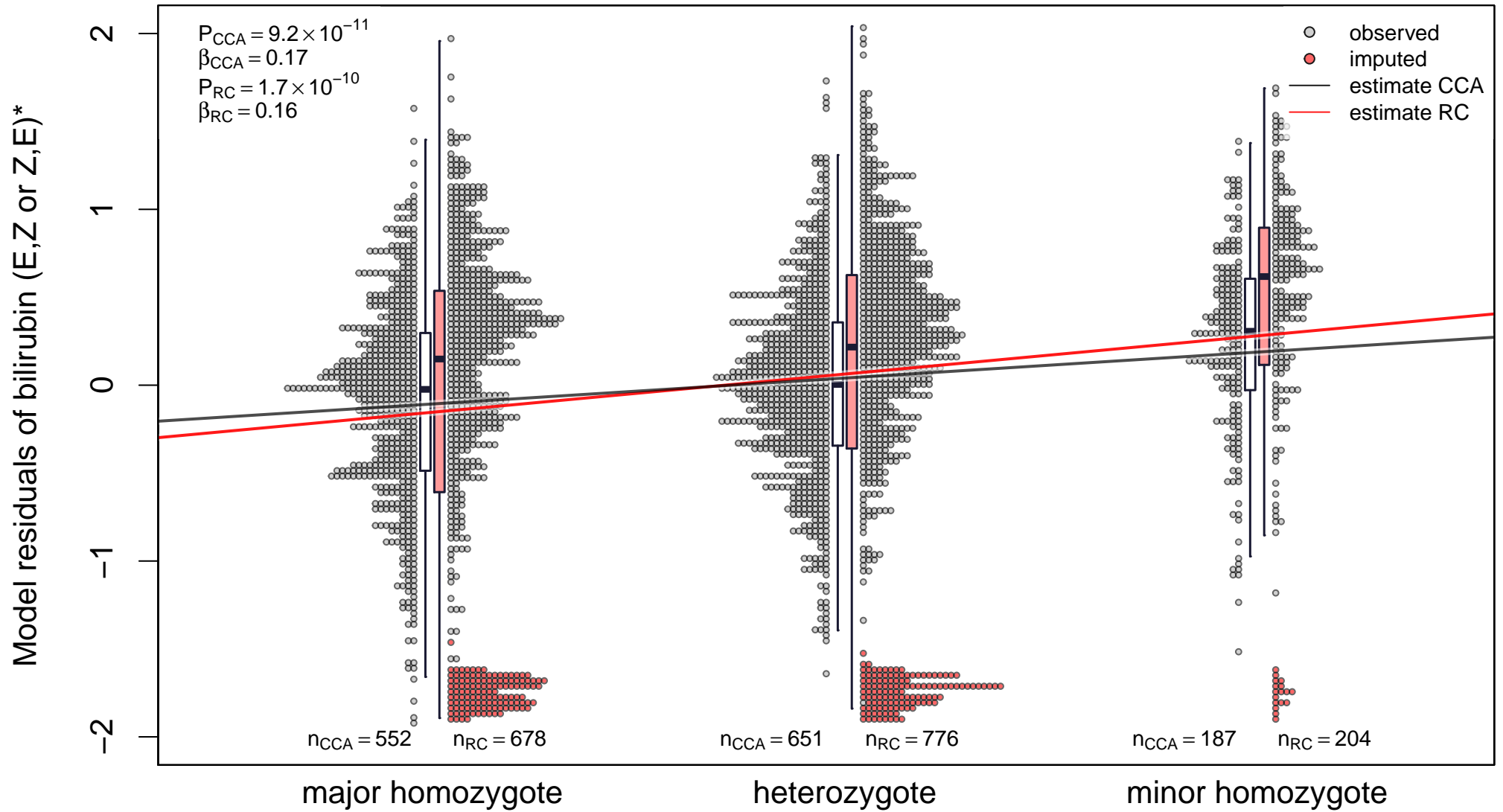


min

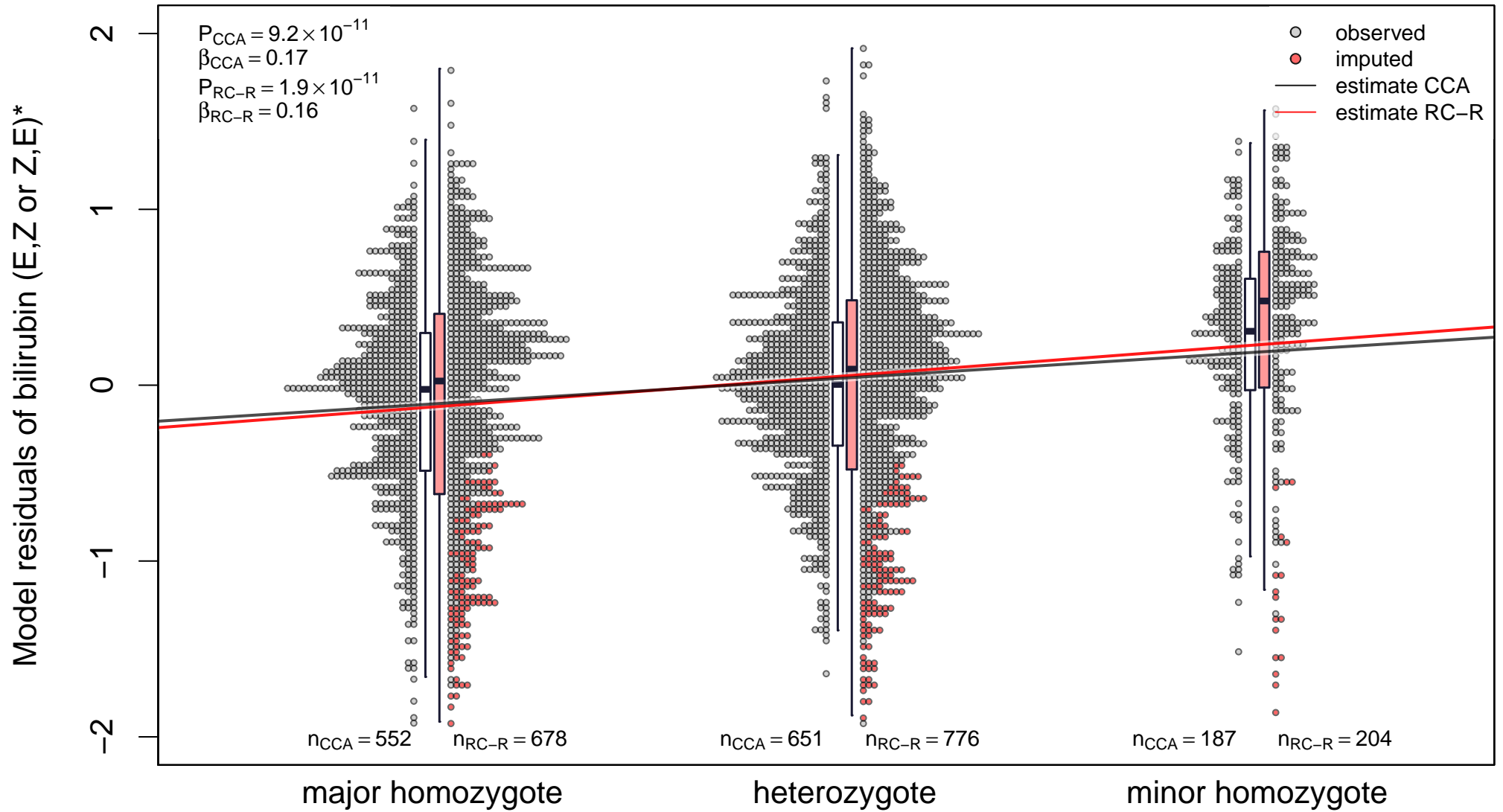


Genotype of SNP rs887829 (UGT1A1)

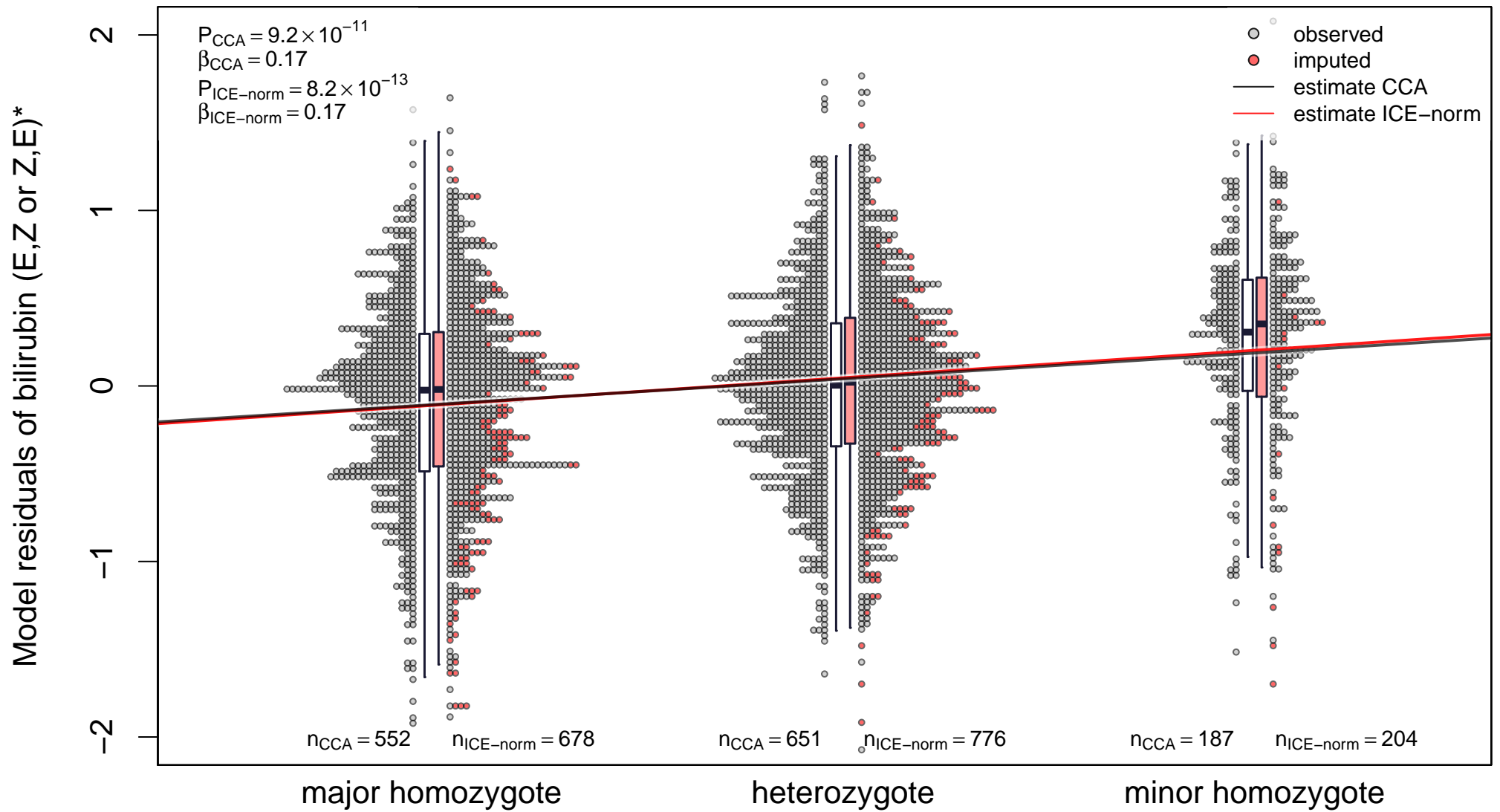
# RC



# RC-R

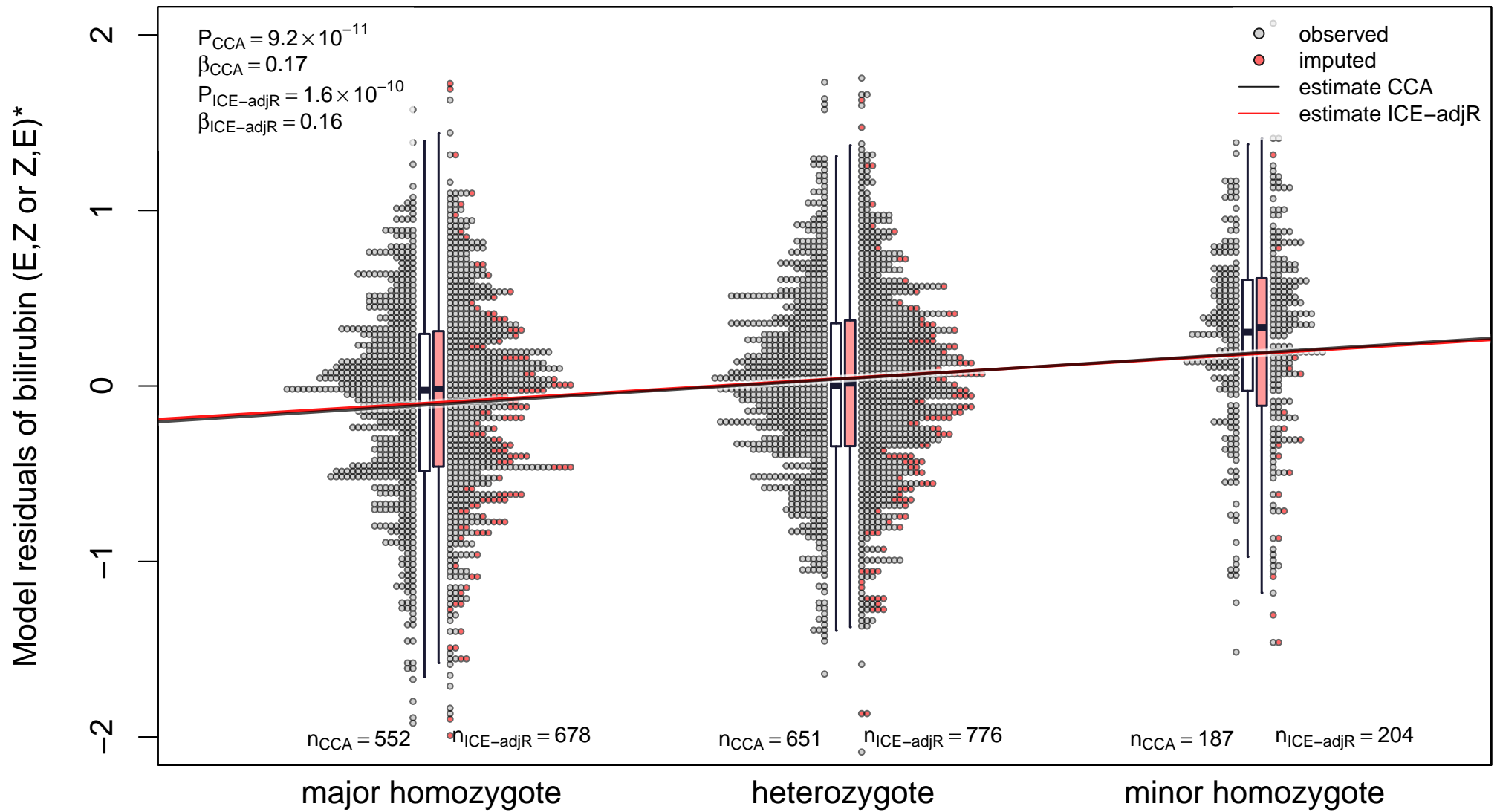


# ICE-norm



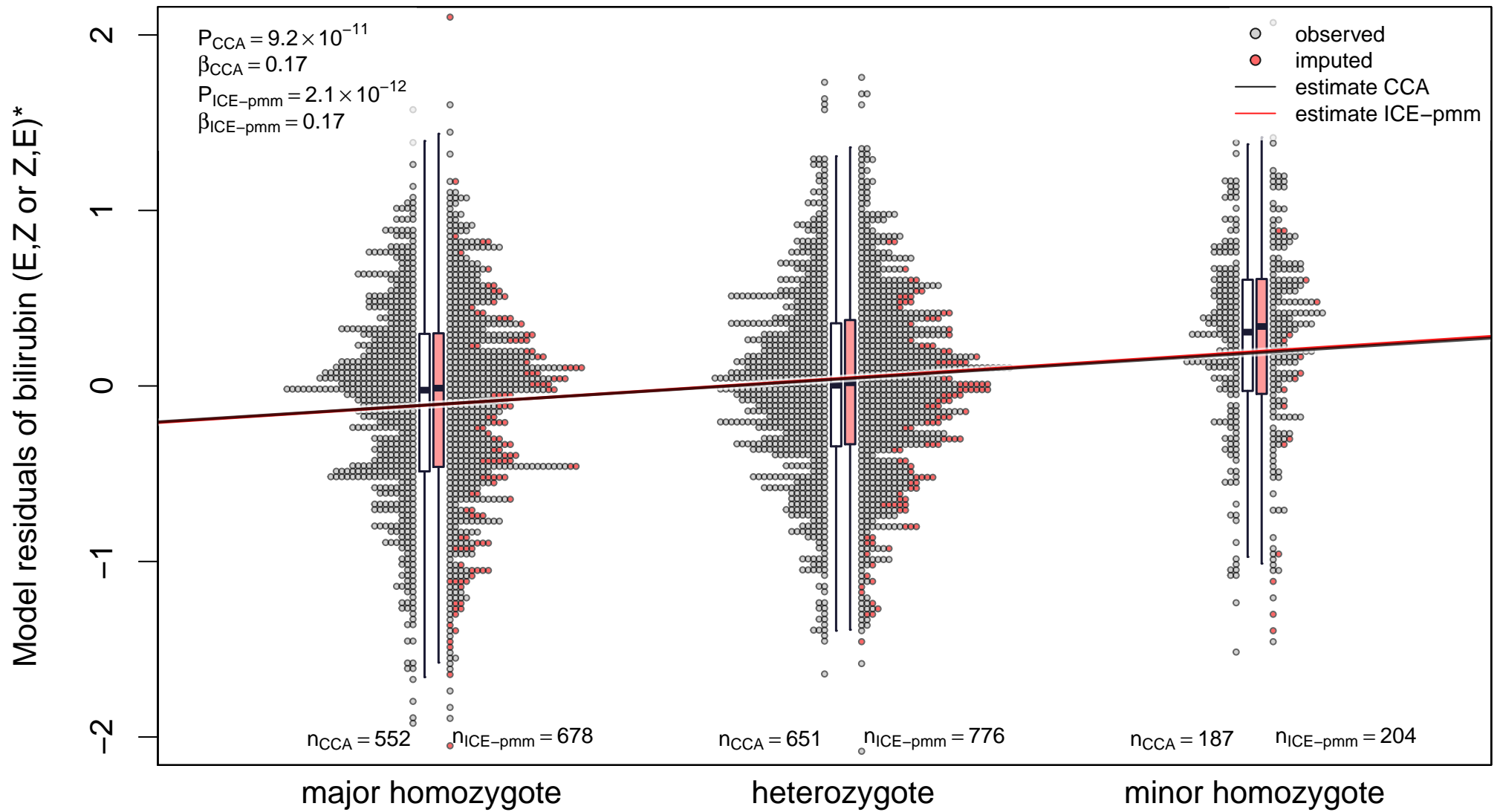


# ICE-adjR

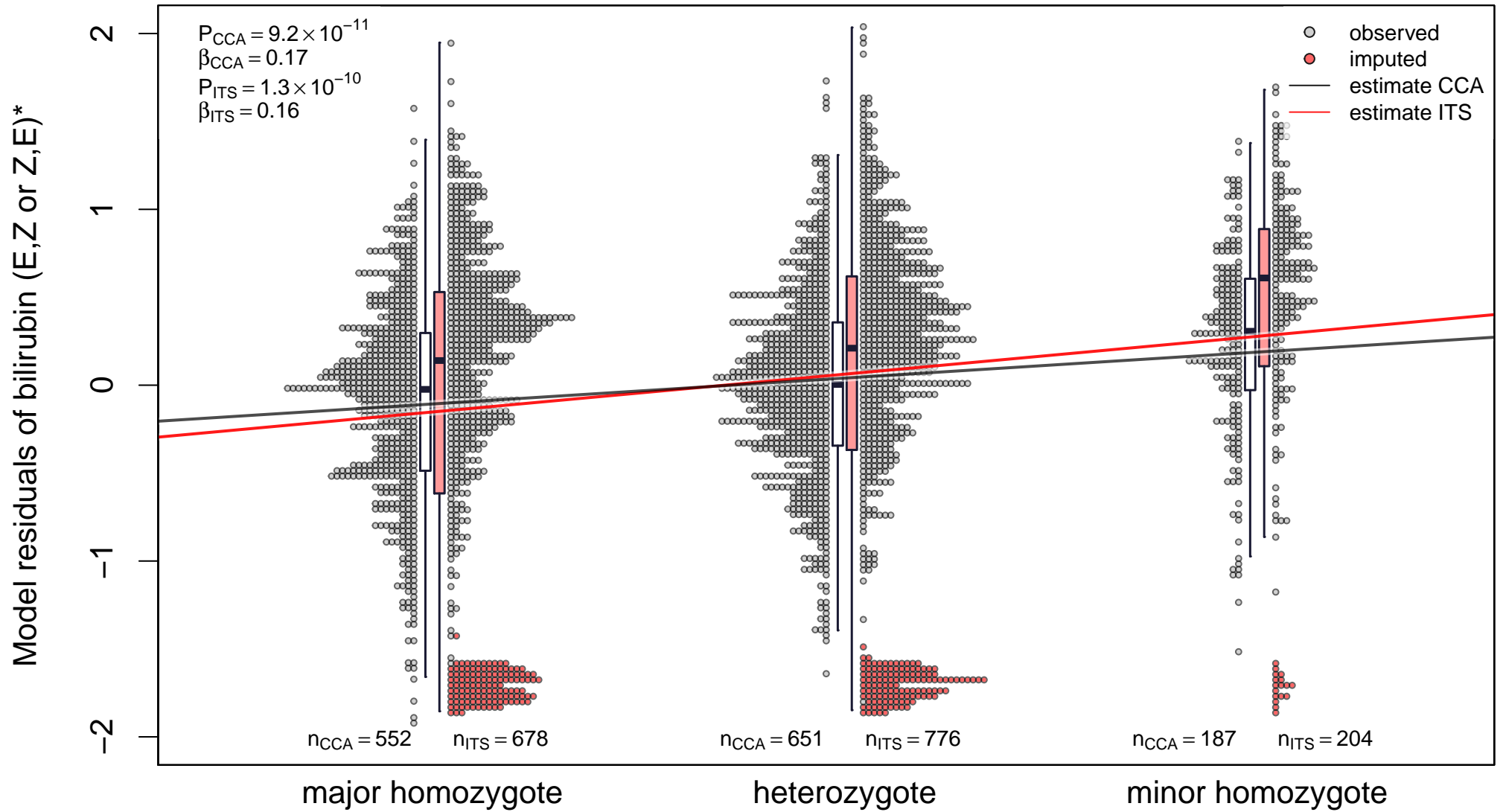




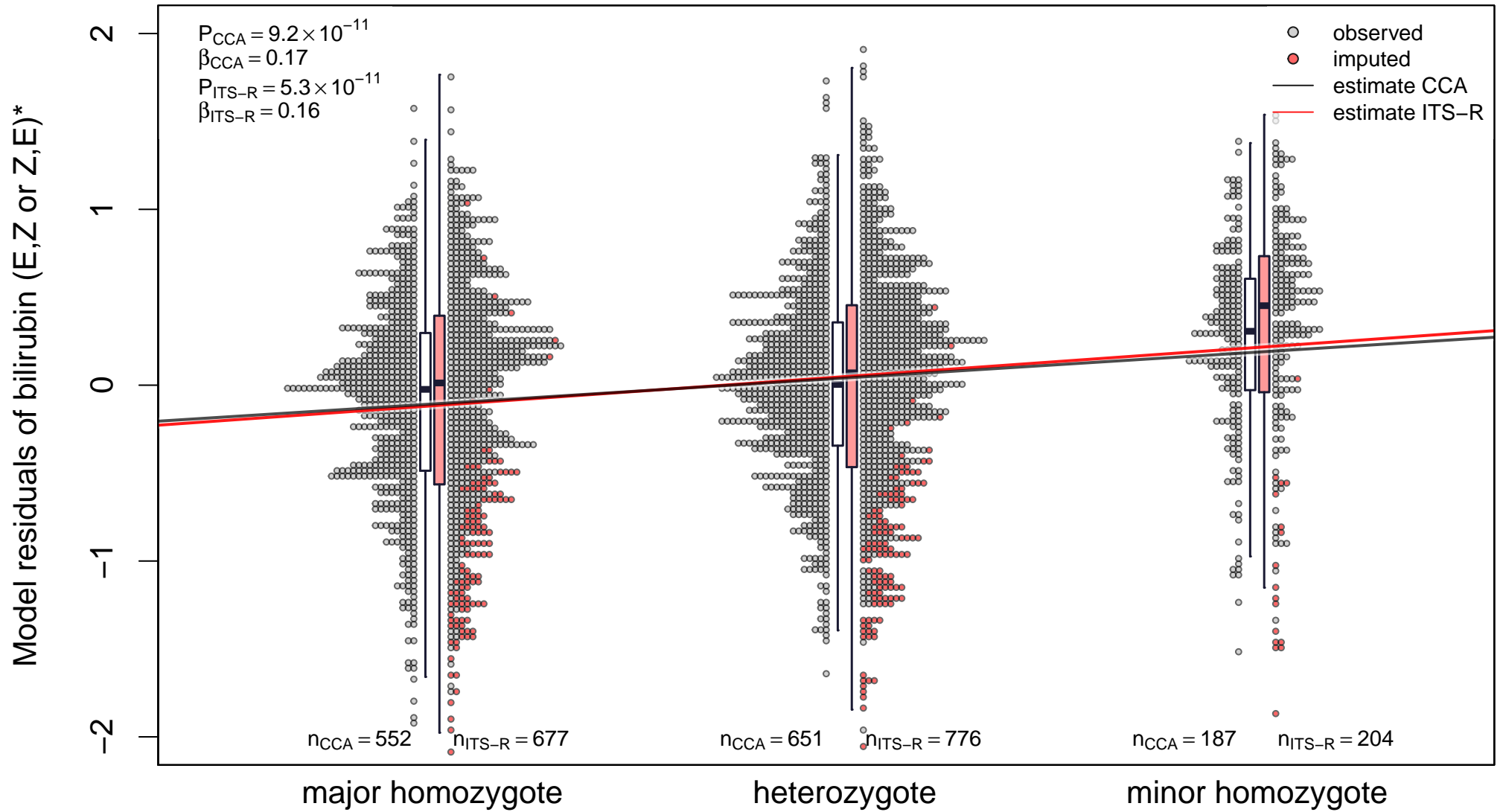
# ICE-pmm



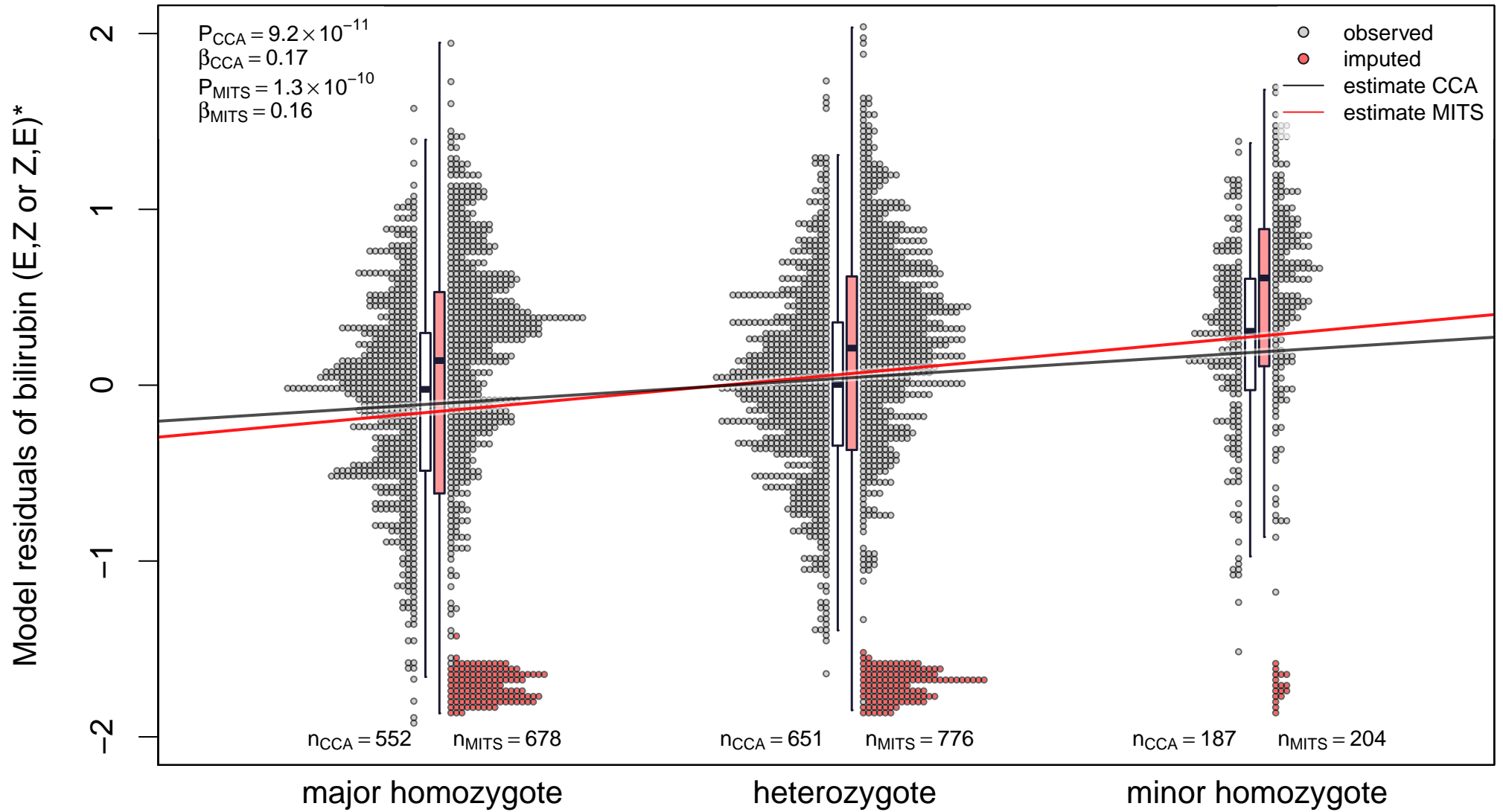
# ITS



# ITS-R



# MITS



# MIT-S-R

