Figure S4: Pairwise phenotypic Euclidian distances plotted against pairwise Euclidian genetic distances for all available traits. Genetic Euclidian distances were calculated based on the 100 most significantly associated SNP markers to the trait as given by the GWAS.

Pairwise phenotypic Euclidian distances plotted against pairwise Euclidian genetic distances for all available traits (one page for each trait). Genetic Euclidian distances were calculated based on the 100 most significantly associated SNP markers to the trait as given by the GWAS (Genome-Wide-Association-Study). A full description of the traits is available in File S1.
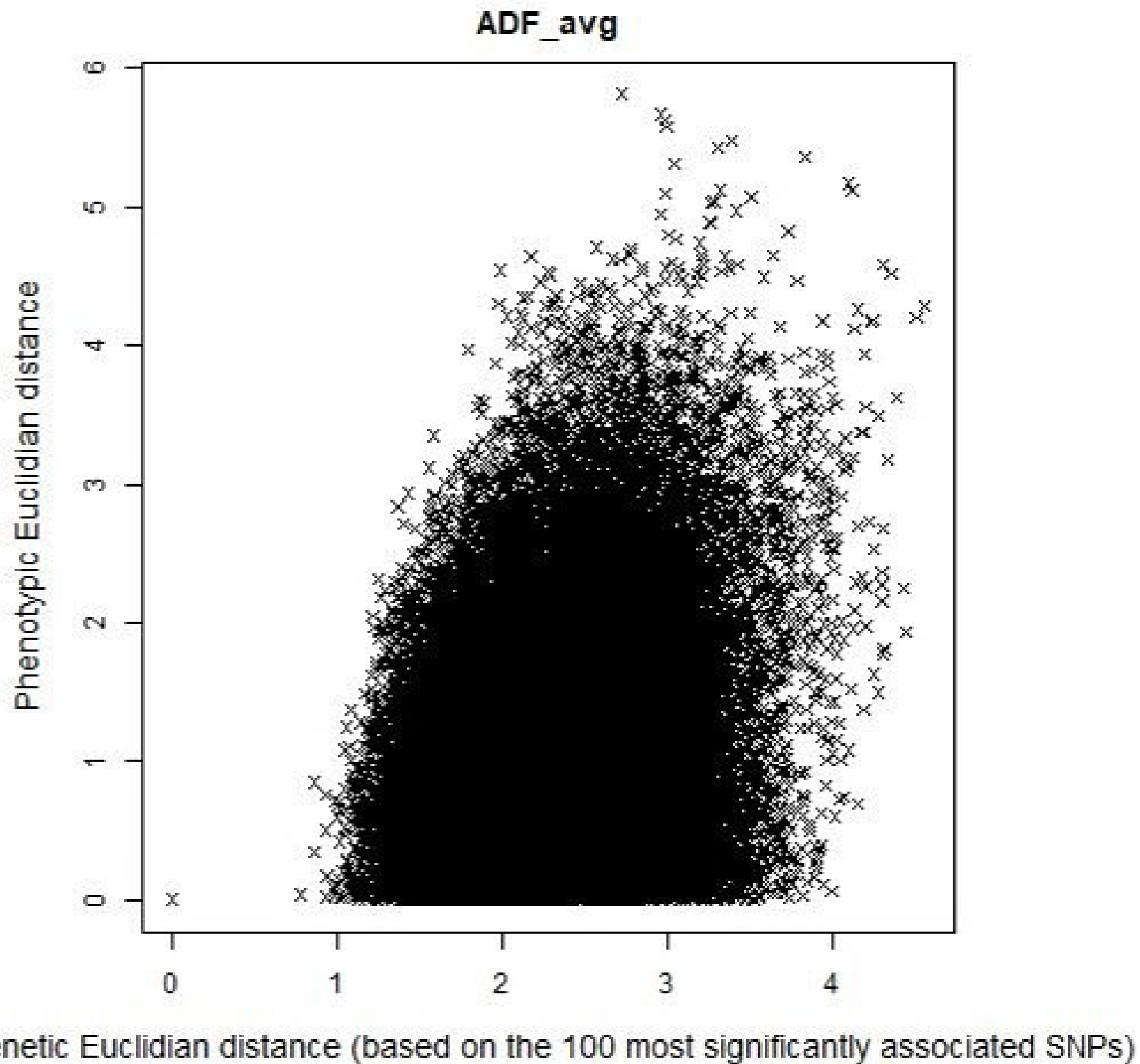
ADF_04_me17

Phenotypic Euclidian distance
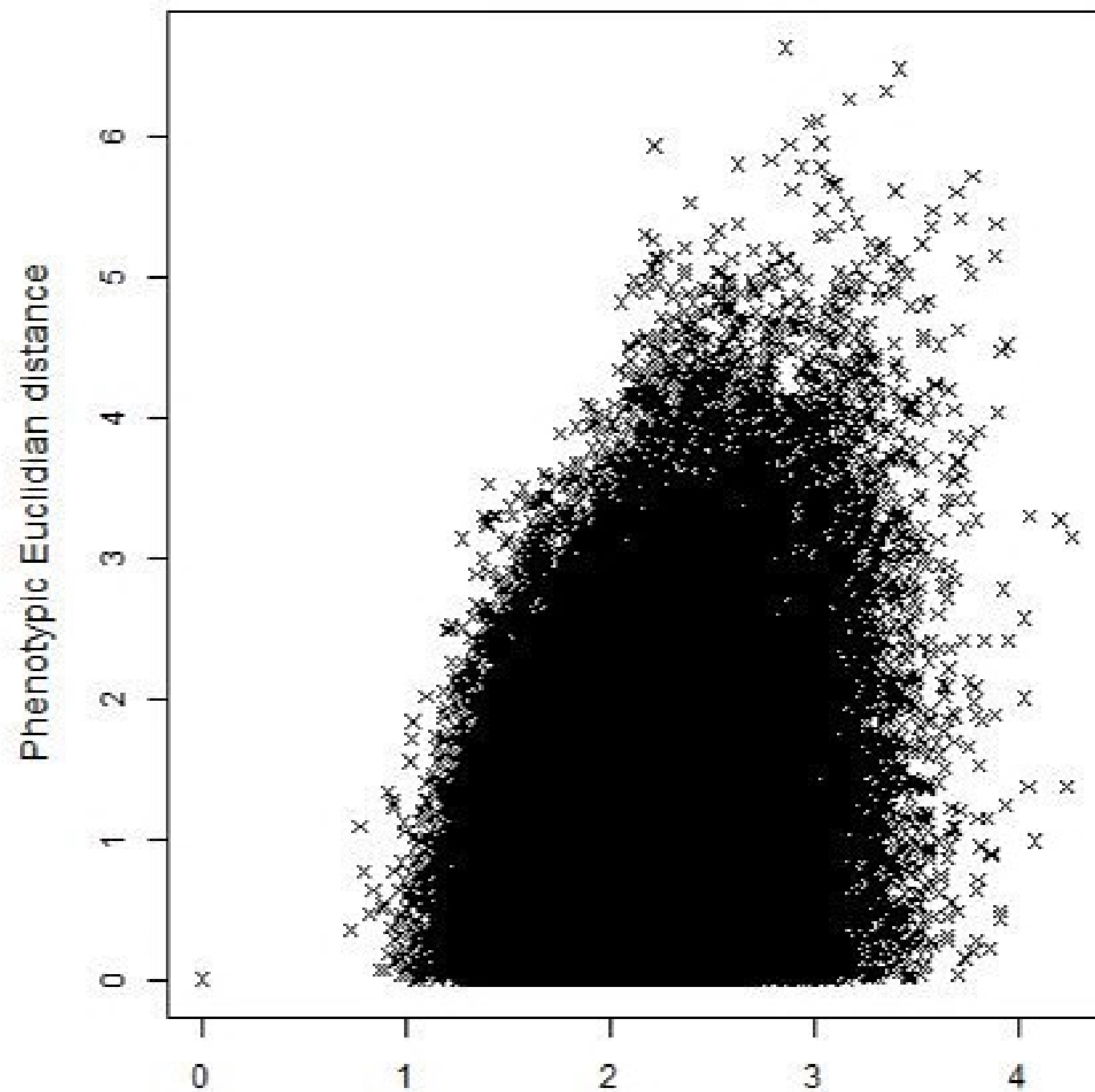
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
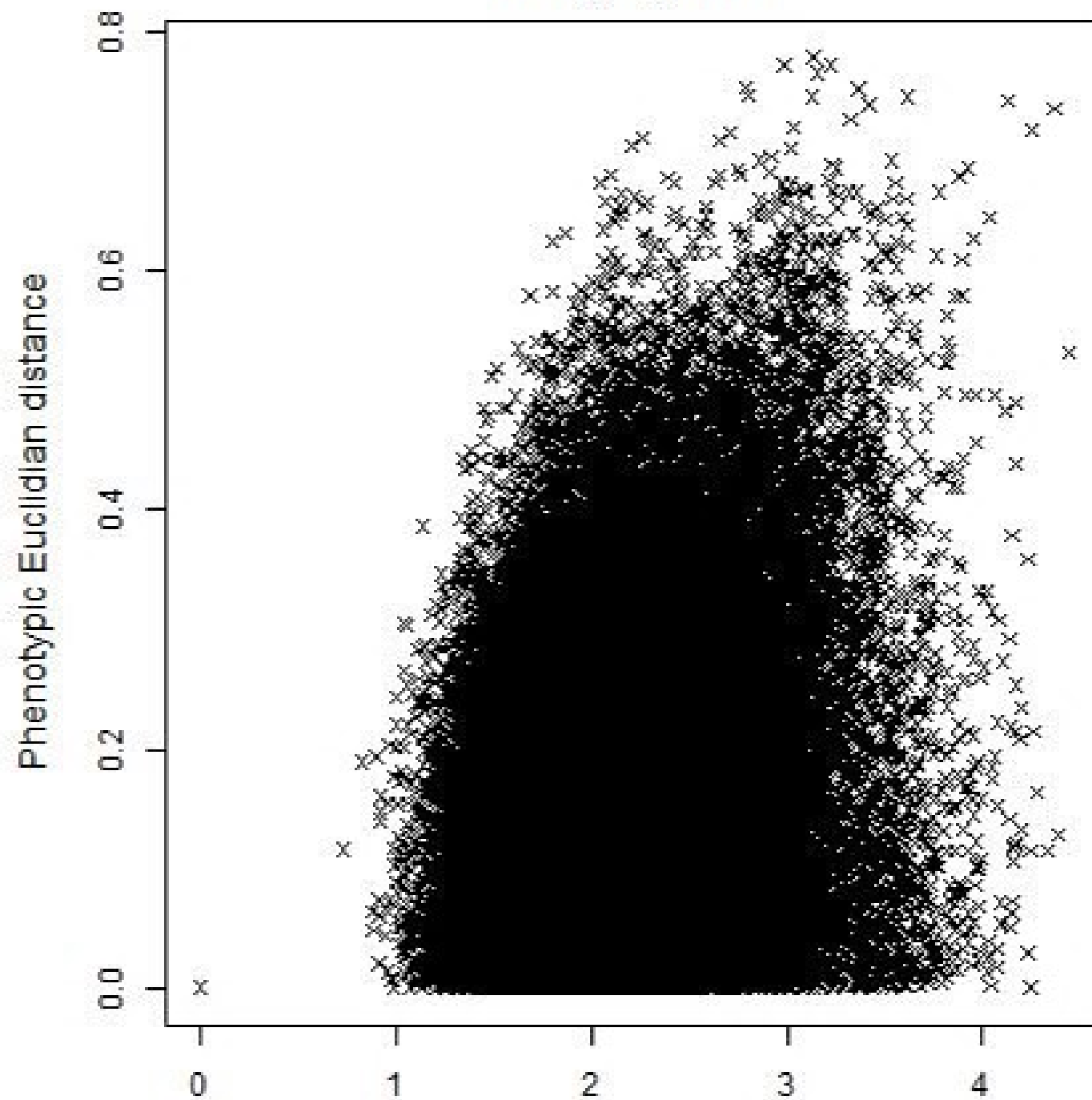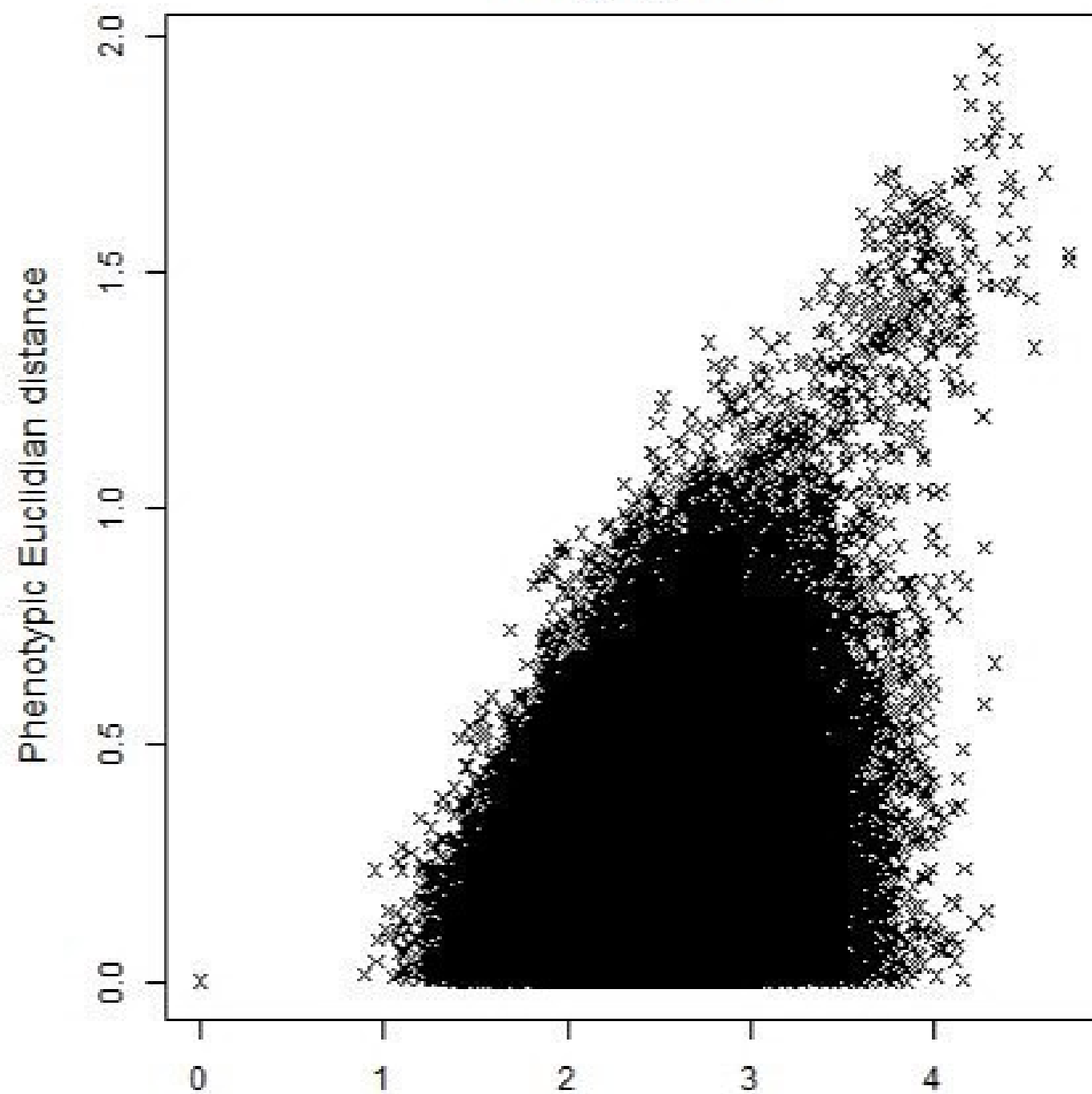
ADF_10_me17

ADF_avg

Phenotypic Euclidian distance
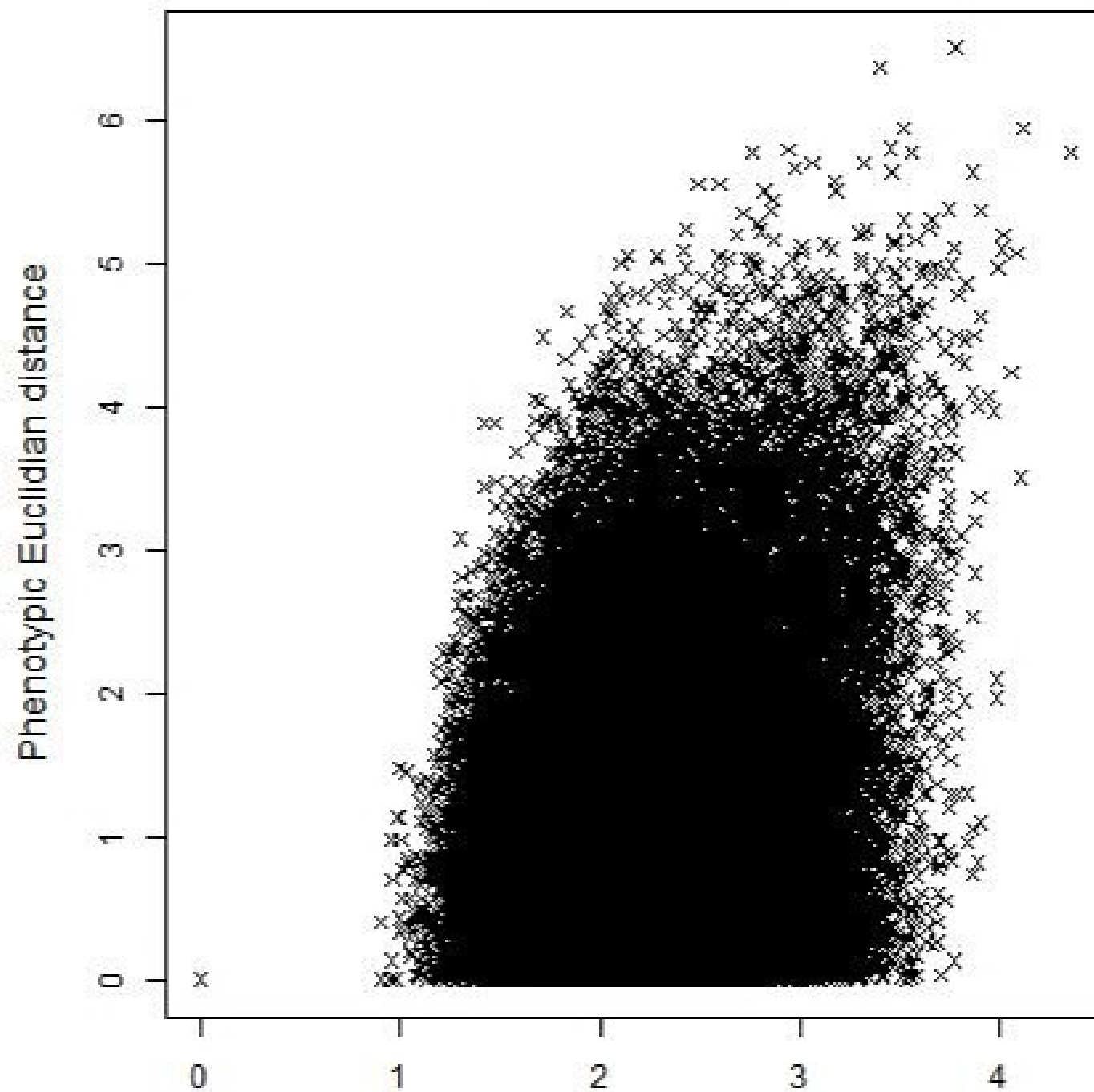
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

ADL_04_me17

Phenotypic Euclidian distance

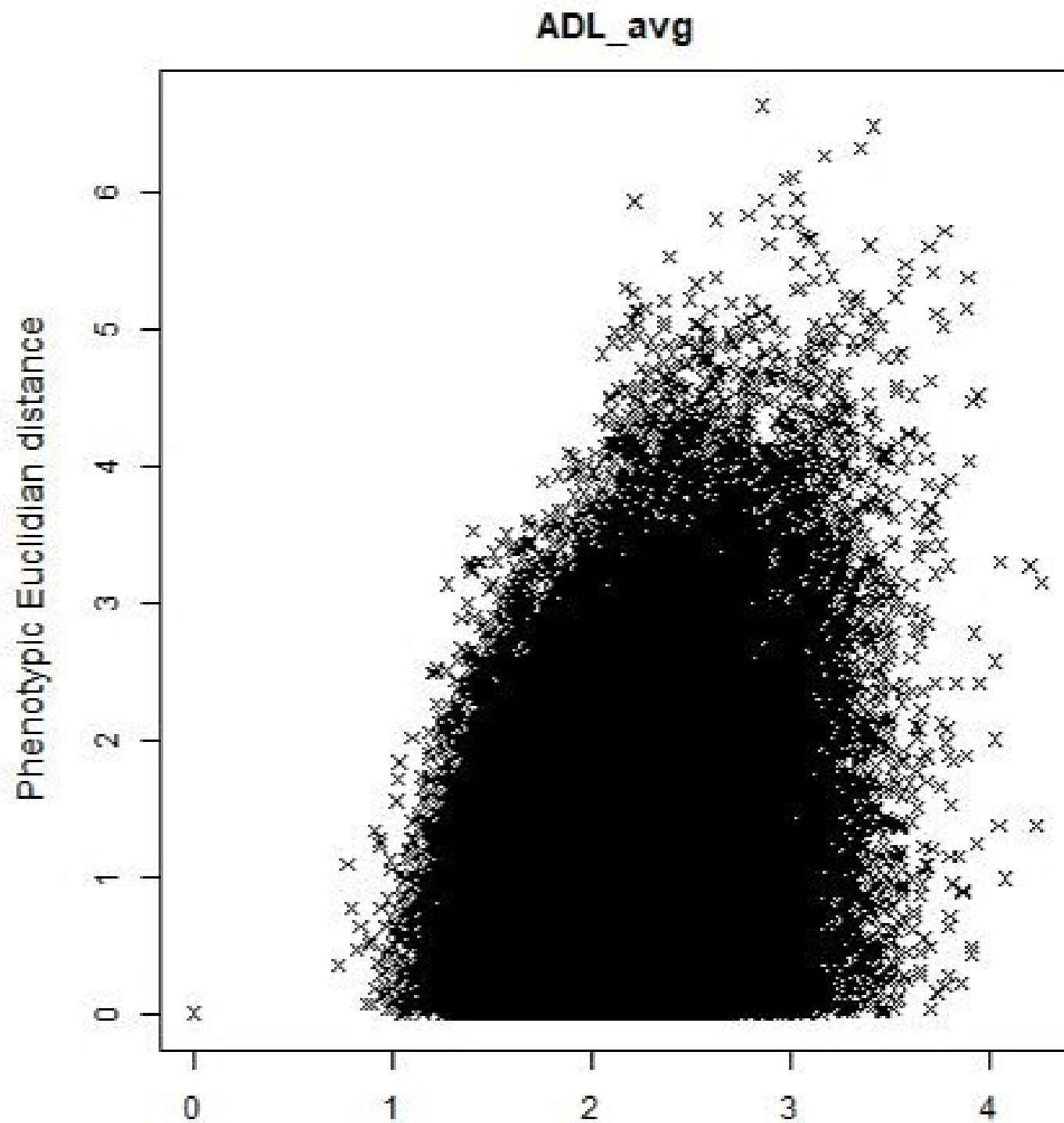Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

ADL_10_me17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

ADL_avg

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
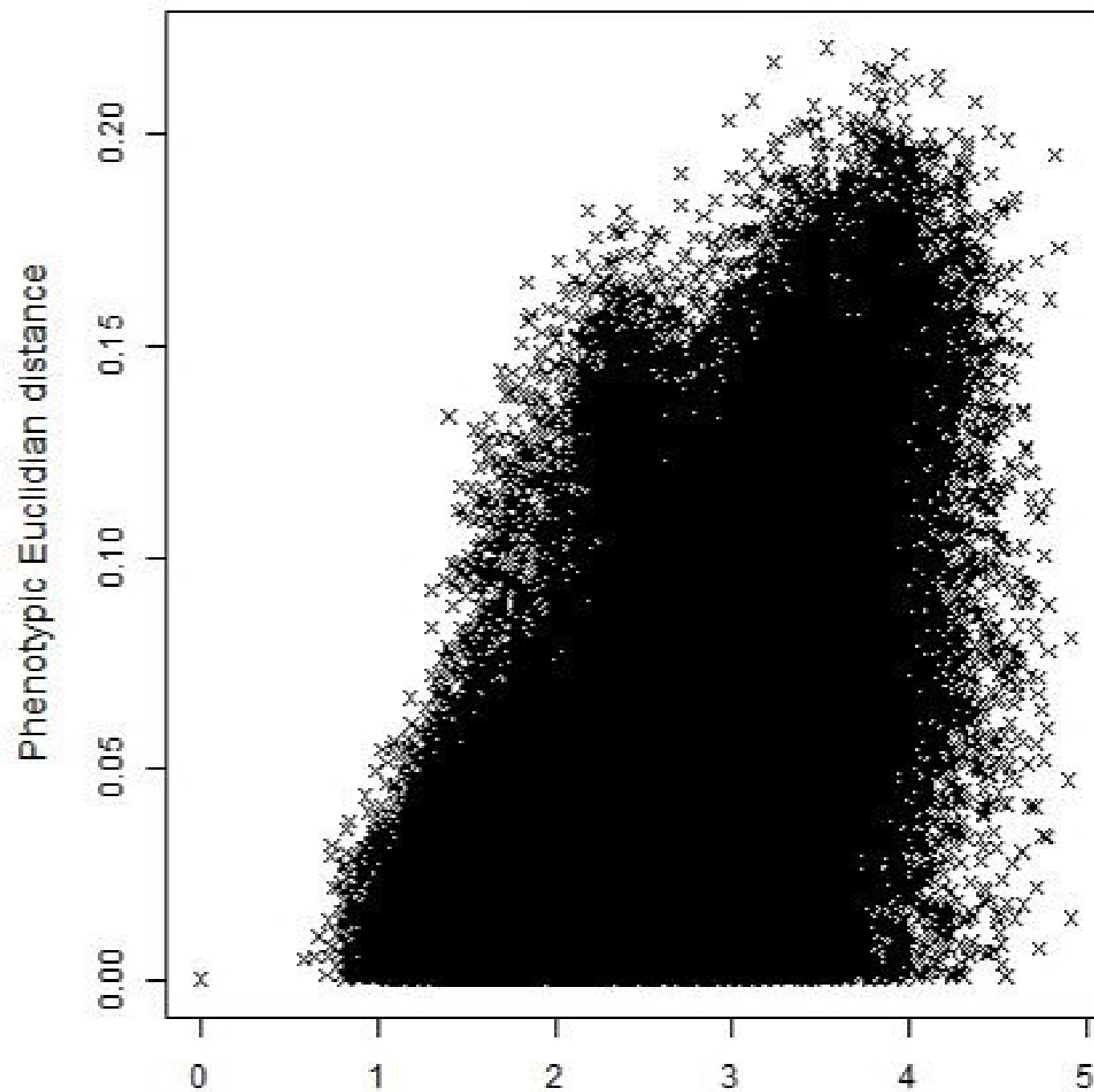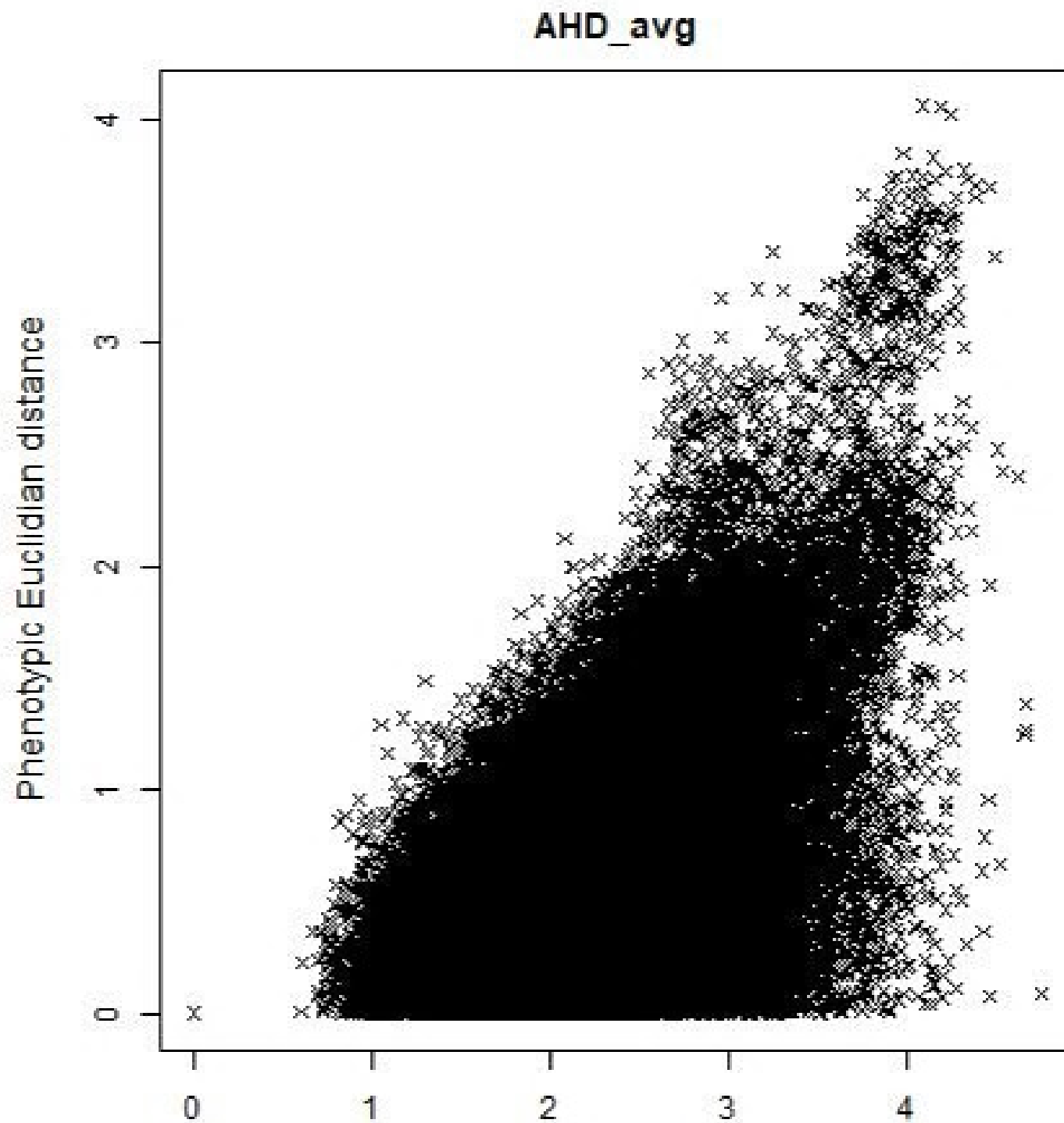
AGR_me17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

AGR_po17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
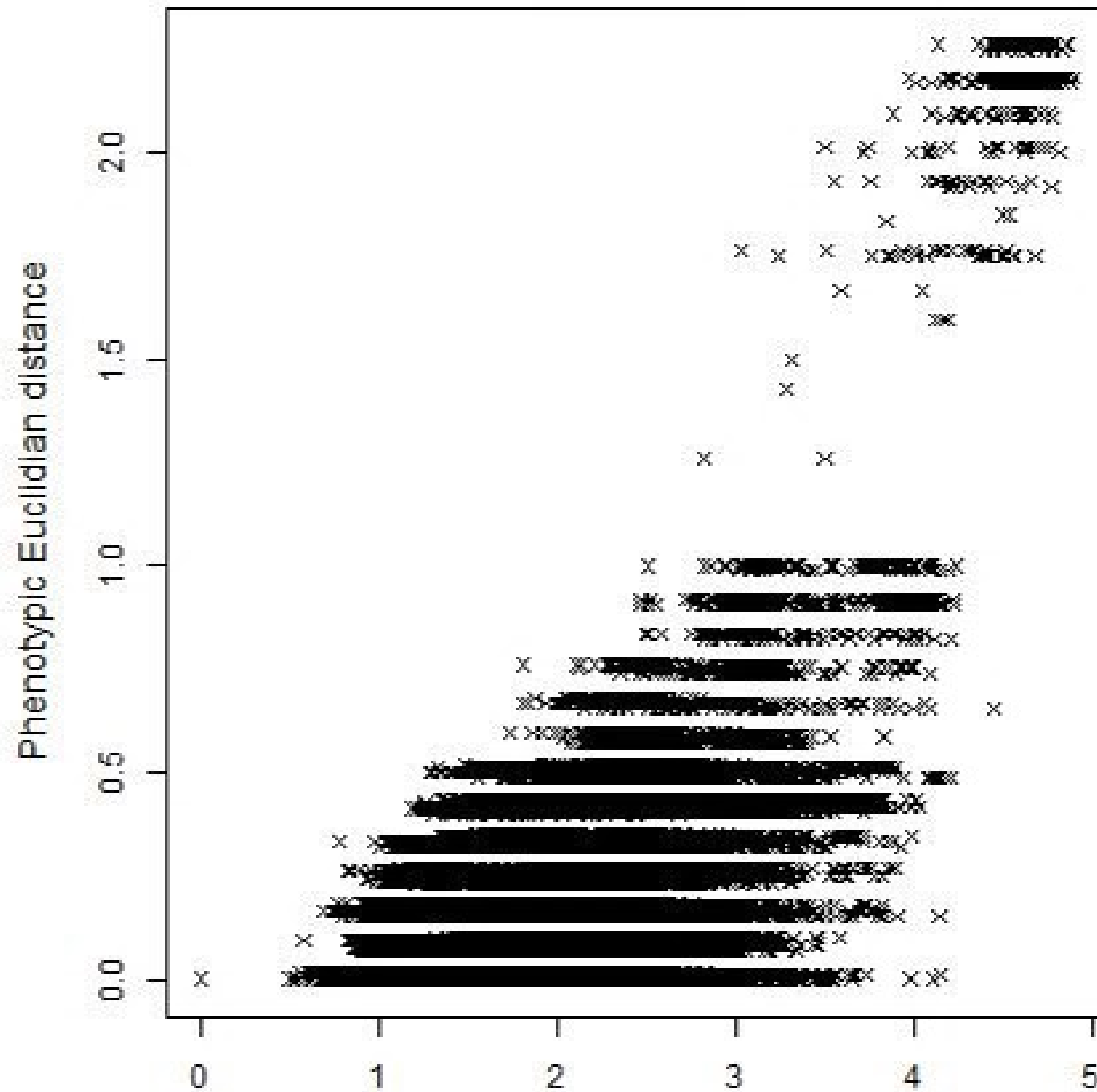
AHD_avg
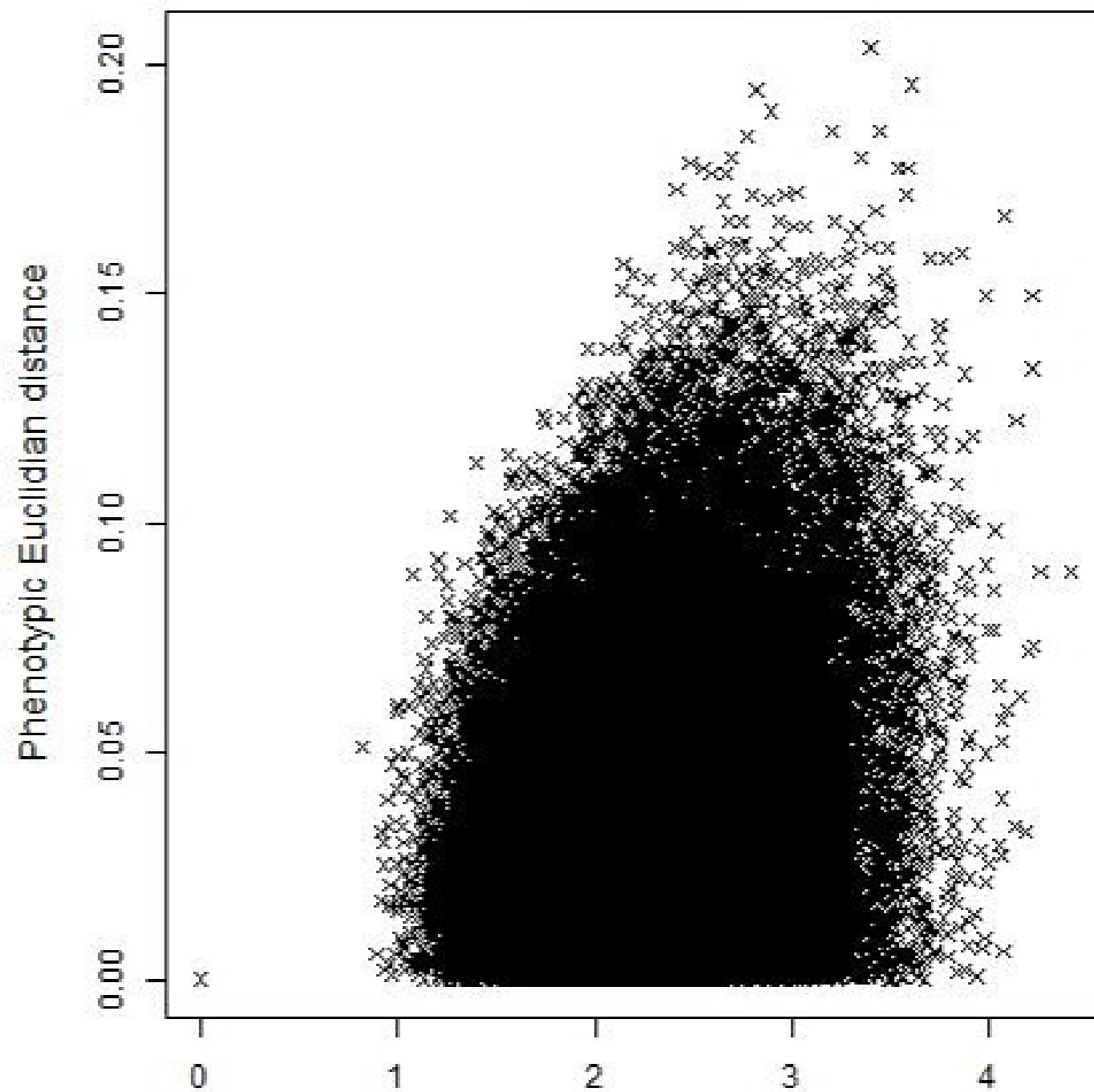
Phenotypic Euclidian distance

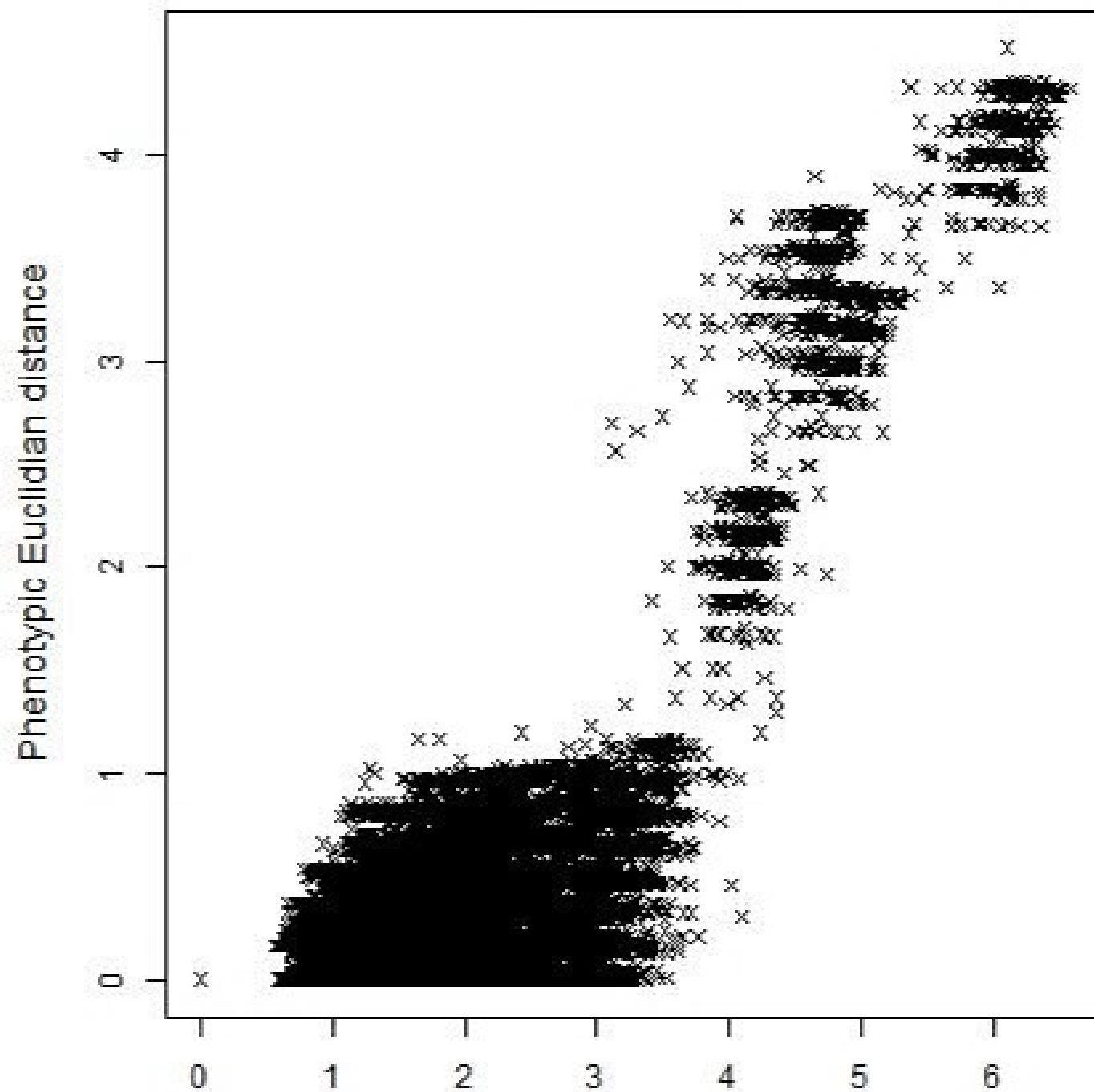Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

AHD_lu16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
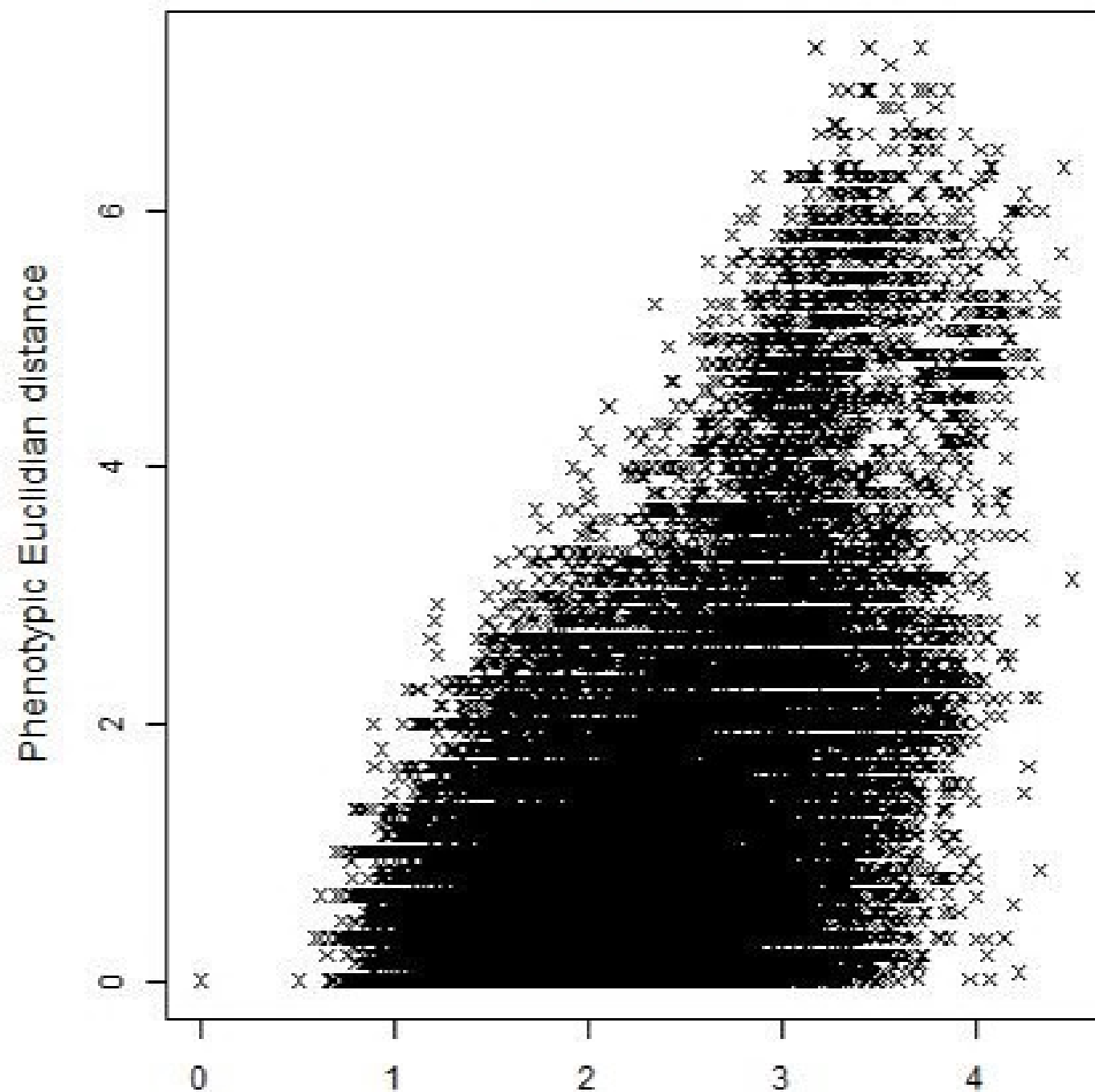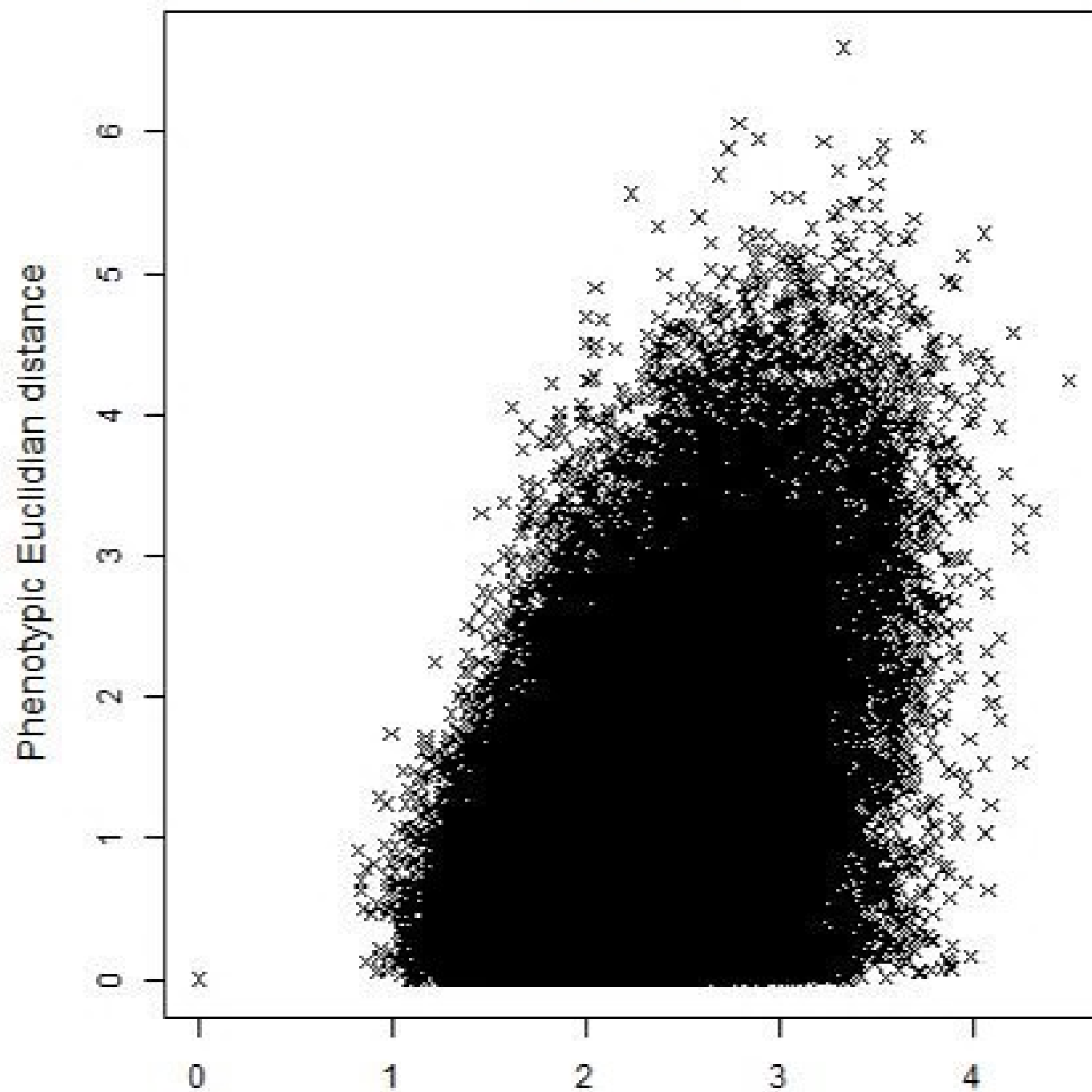
AHD_lu17

AHD_me16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

AHD_me17

Phenotypic Euclidian distance
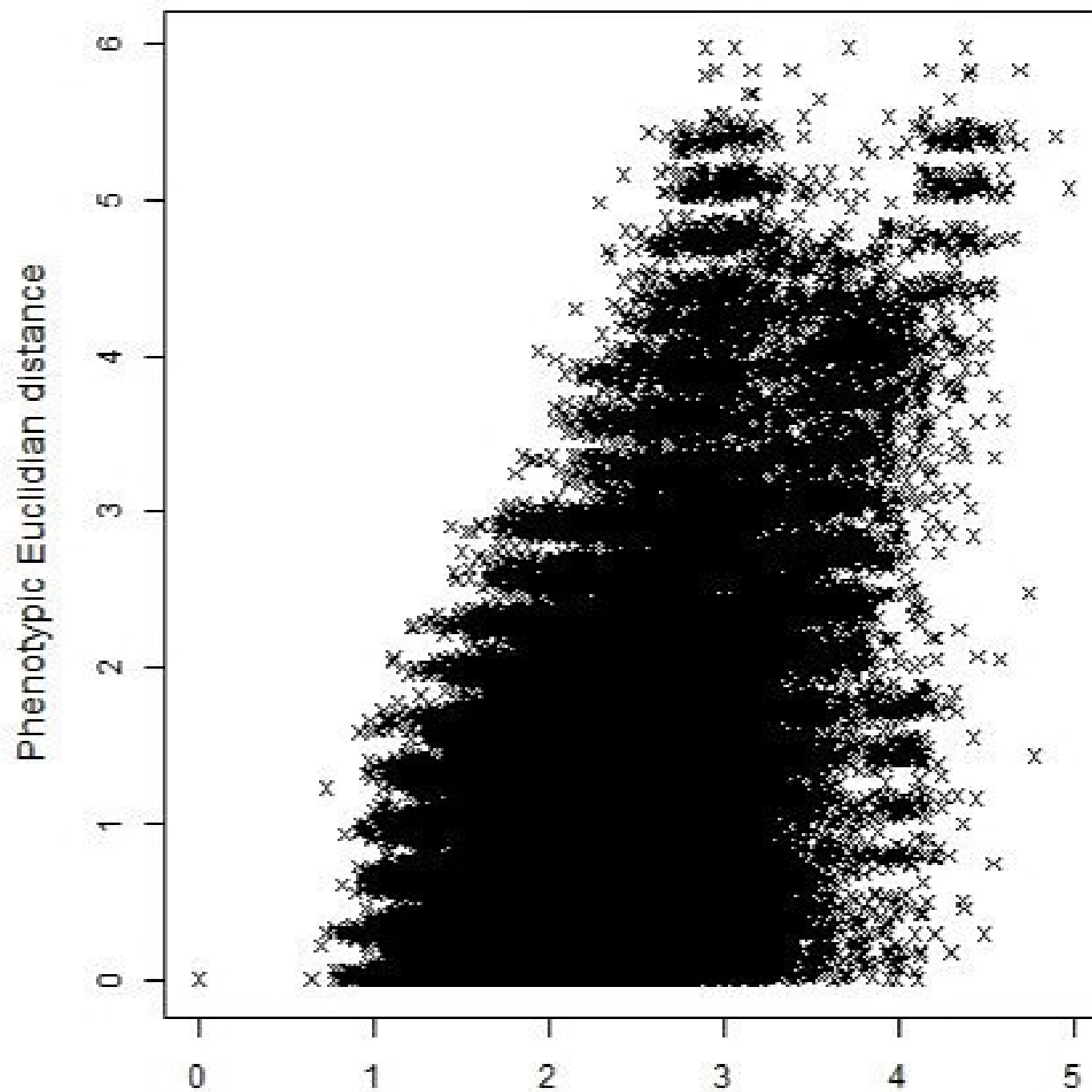
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

AHD_po16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

AHD_po17

AMH_me17

AMH_po17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

CH300h_lu16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
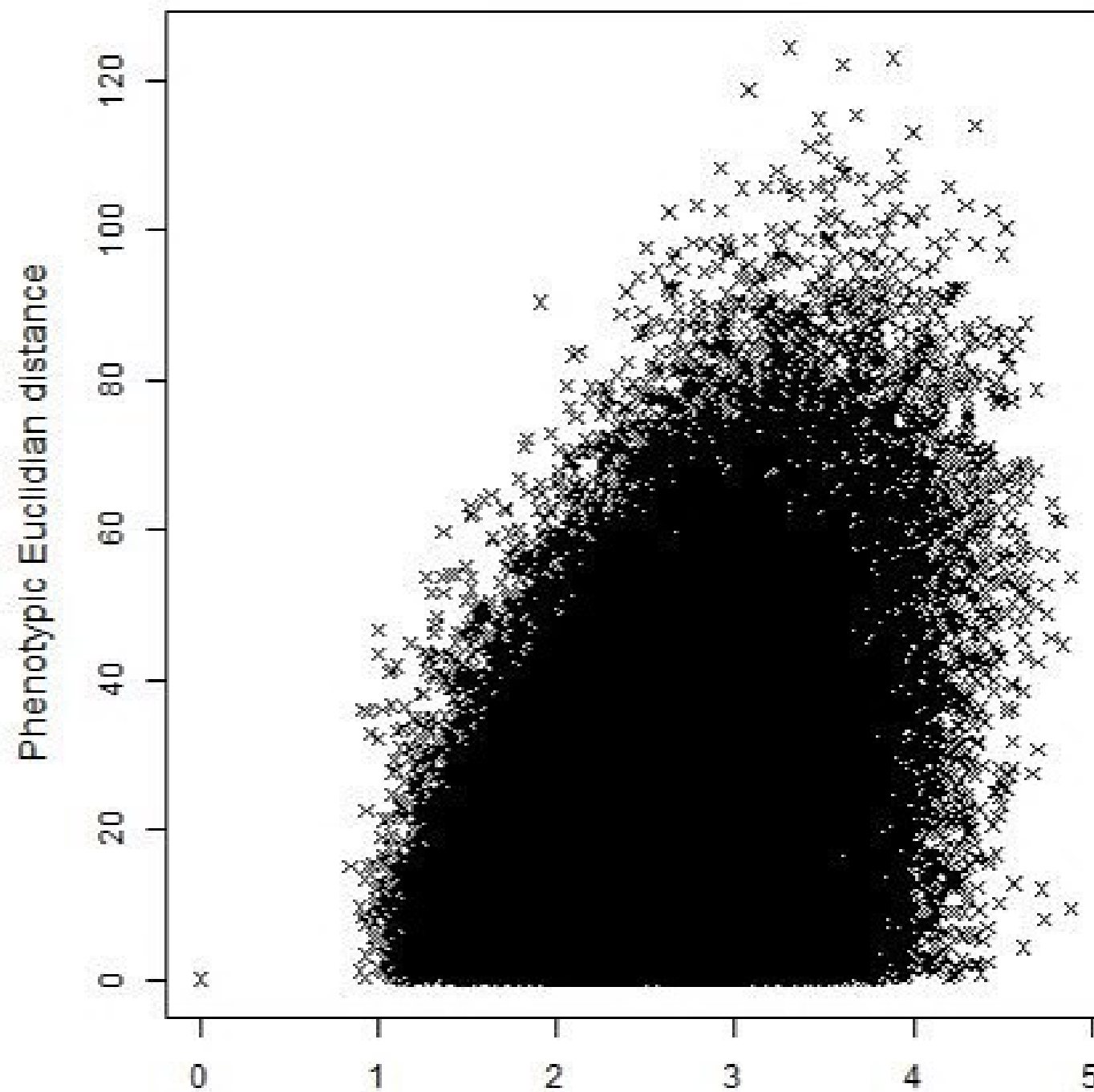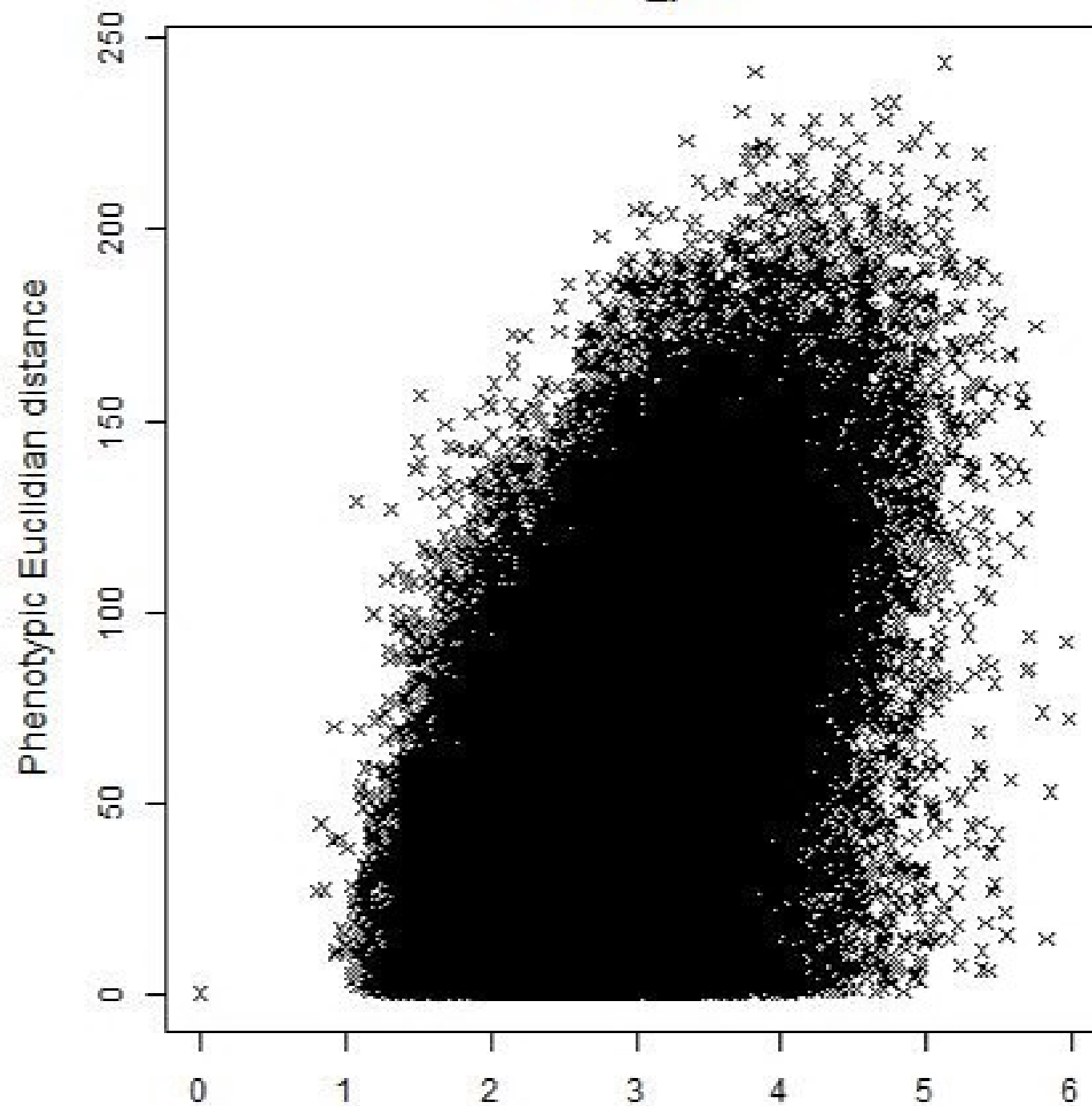
CH300h_lu17

Phenotypic Euclidian distance
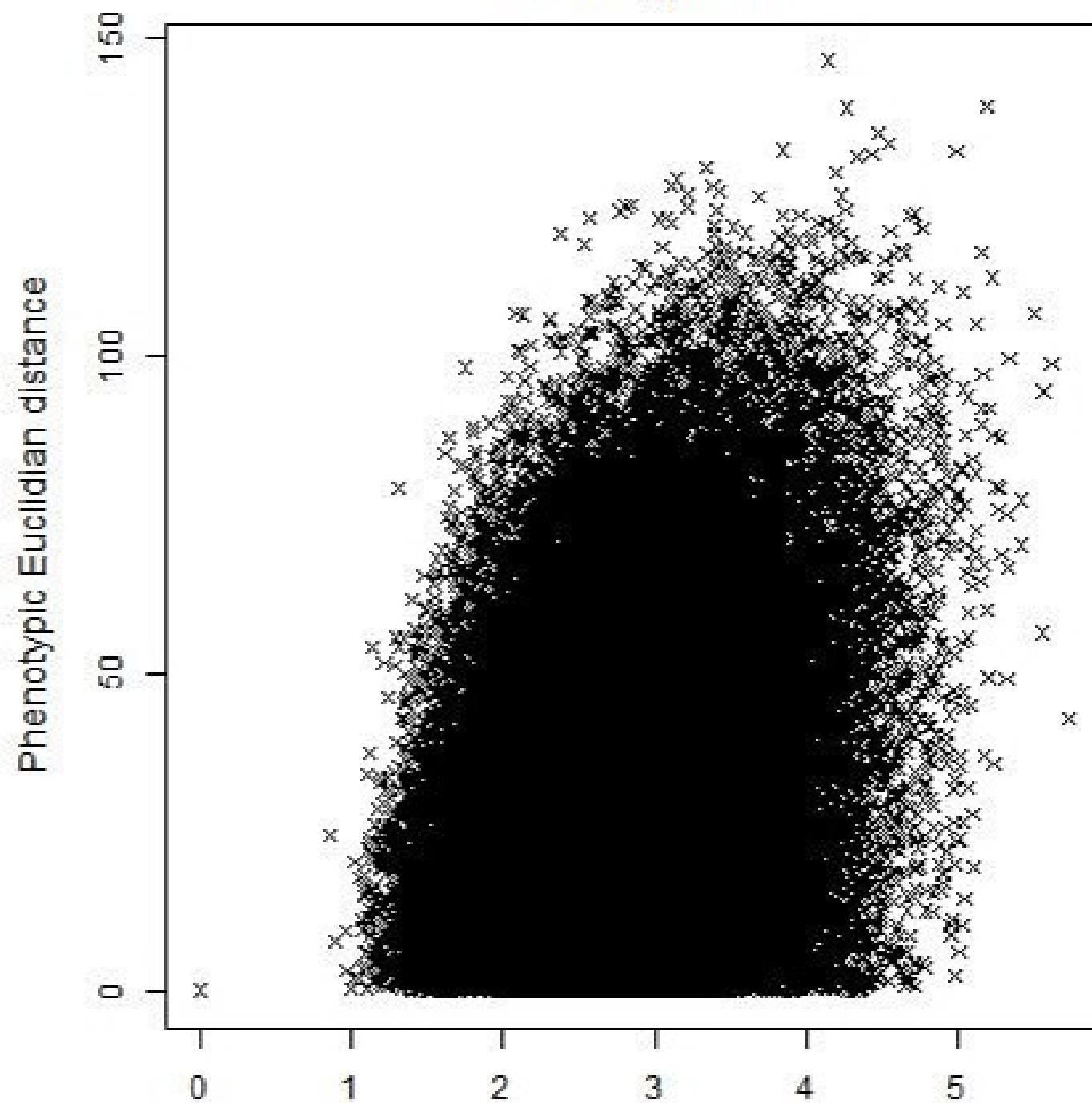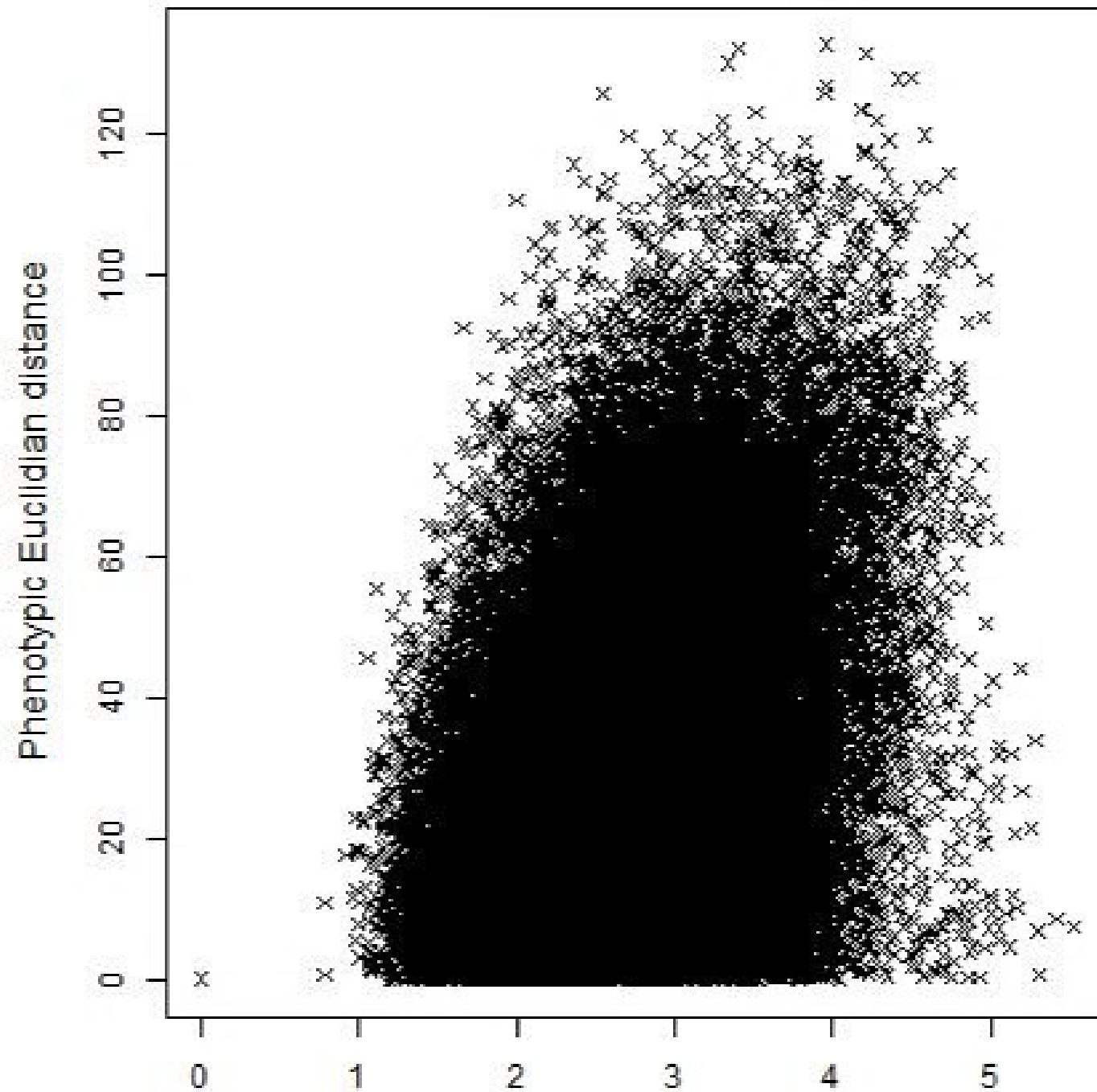
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

CH300h_po16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

CH300h_po17

CH400h_lu16

Phenotypic Euclidian distance
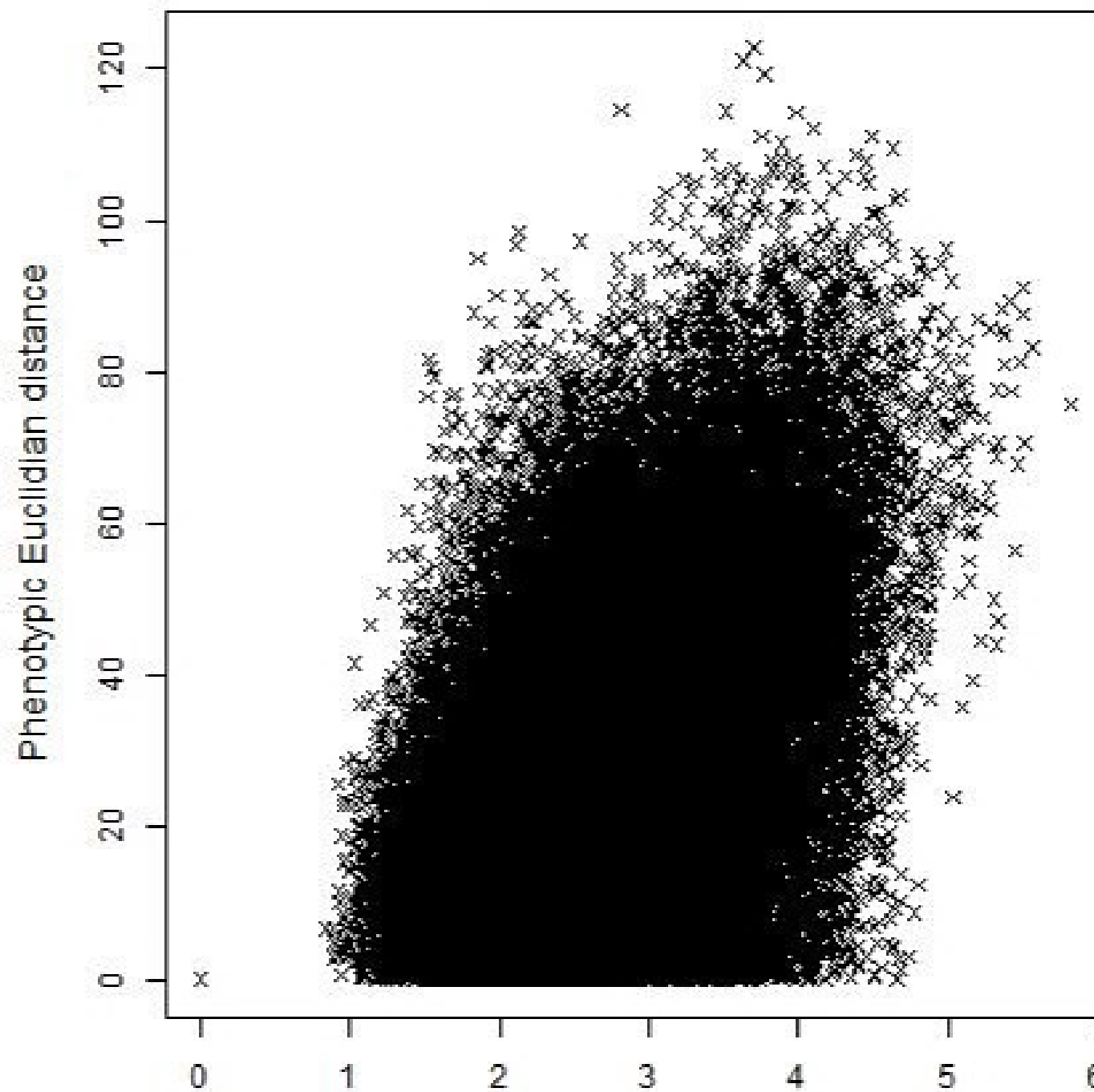
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

CH400h_lu17

Phenotypic Euclidian distance
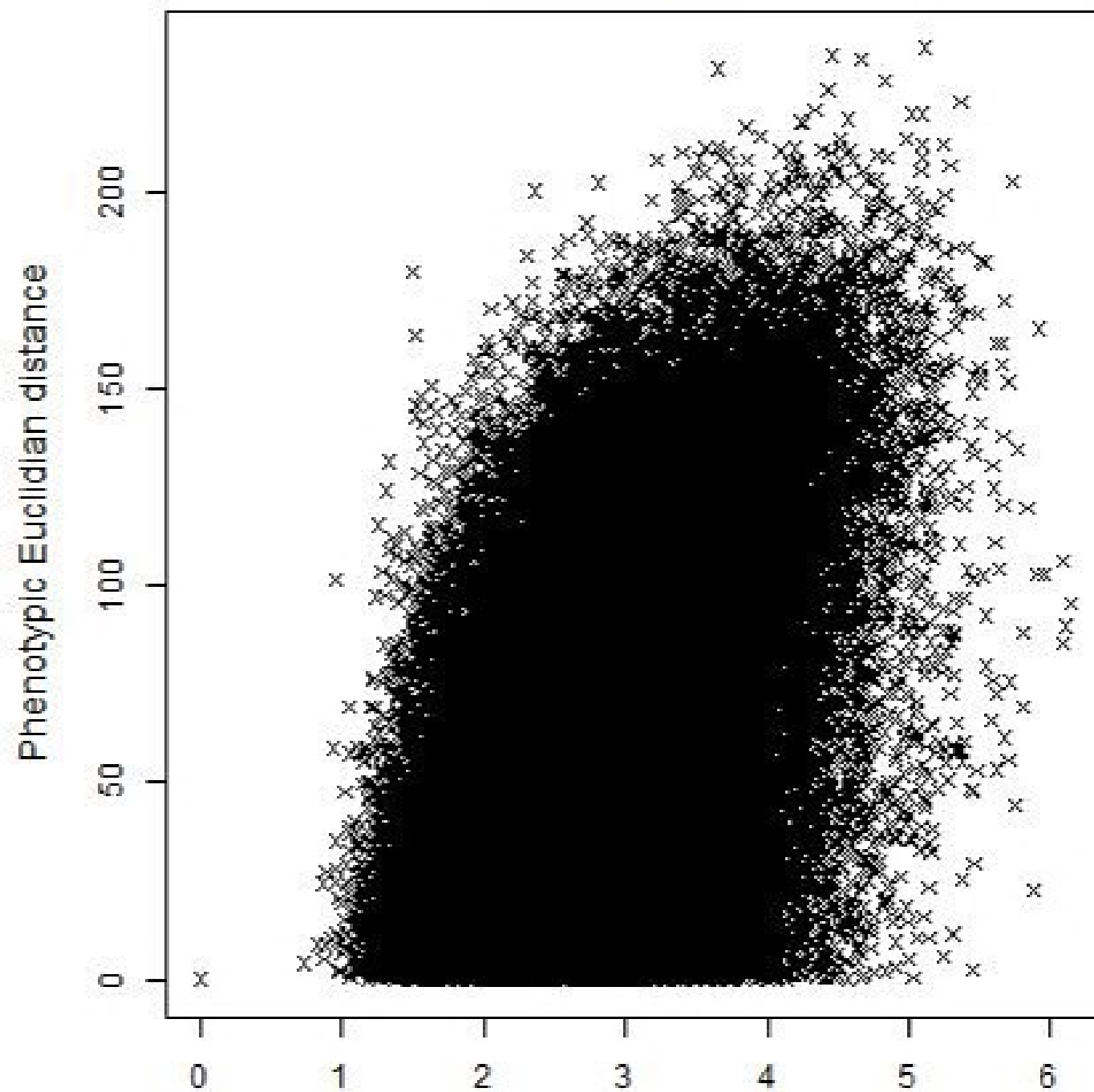
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

CH400h_po16

Phenotypic Euclidian distance
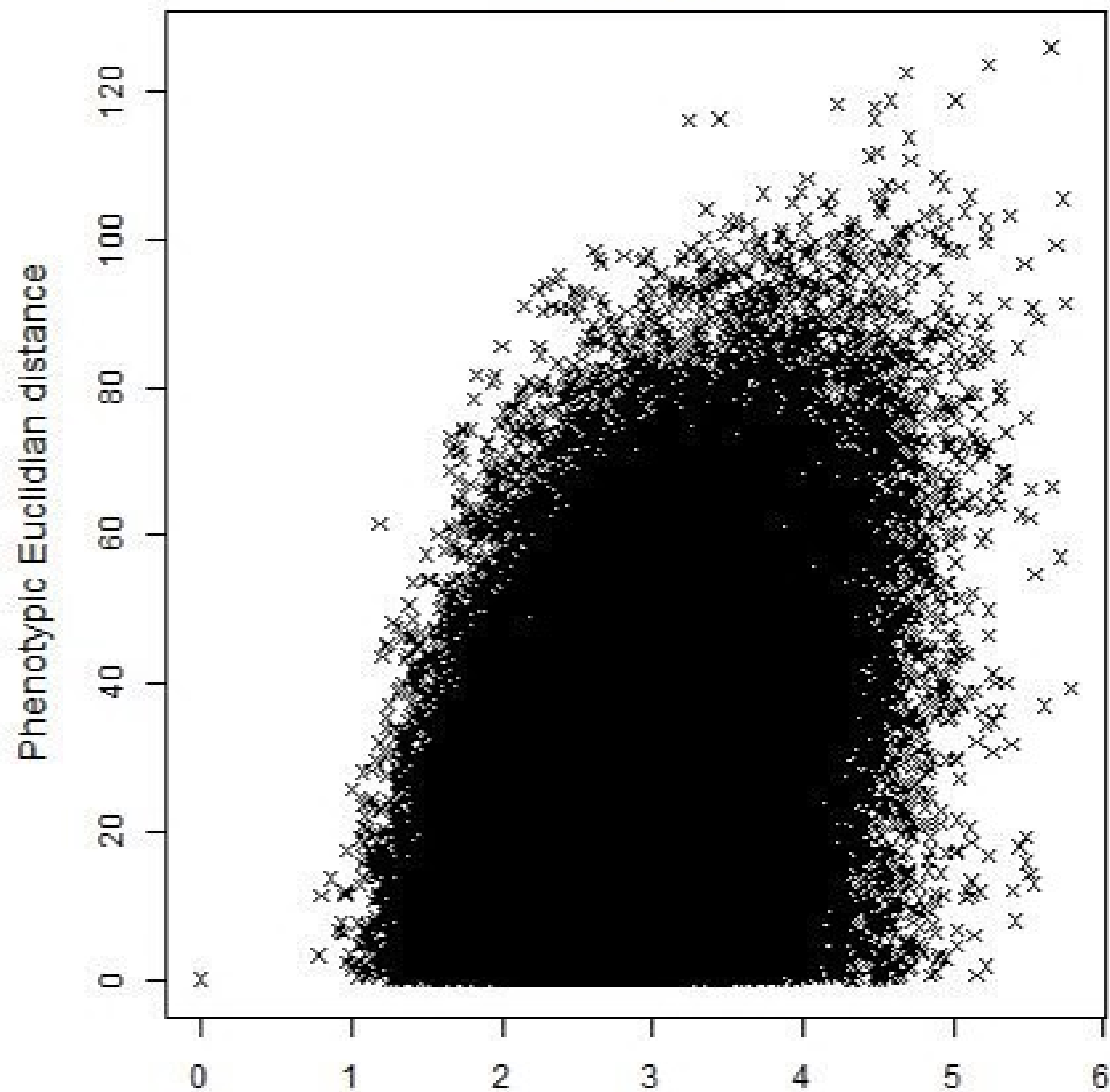
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

CH400h_po17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

CHs300_lu16

Phenotypic Euclidian distance
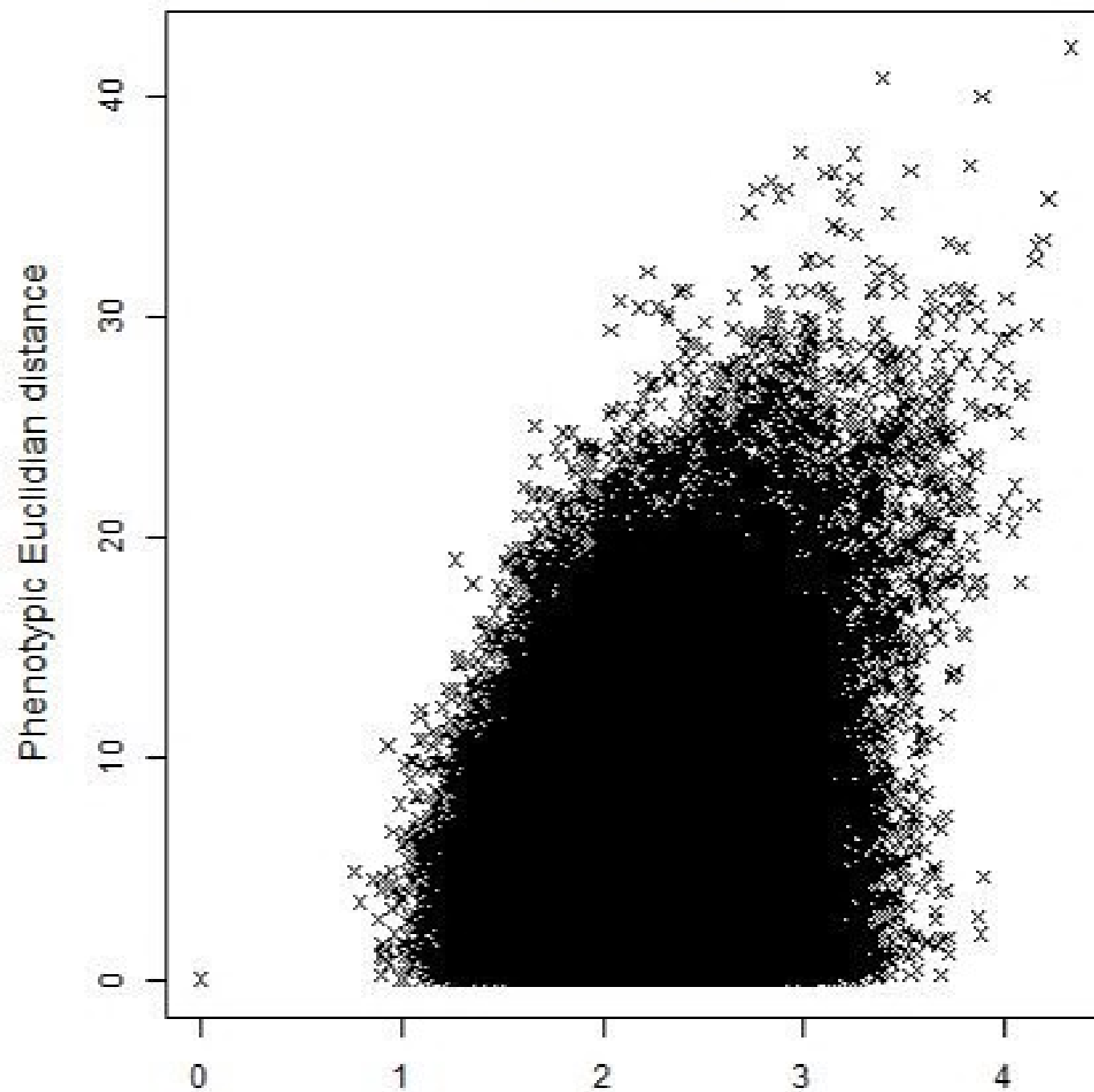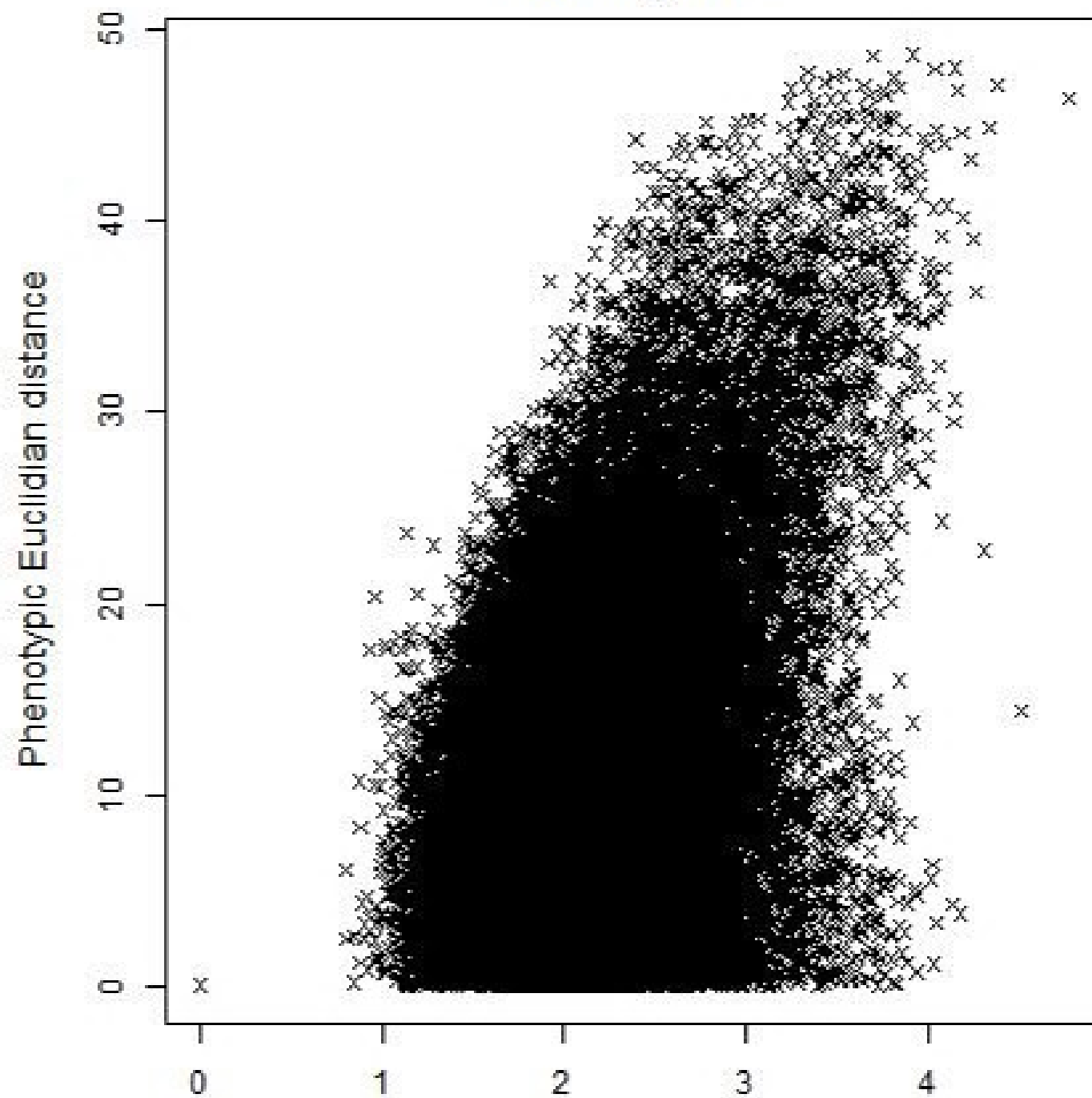
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

CHs300_lu17

Phenotypic Euclidian distance
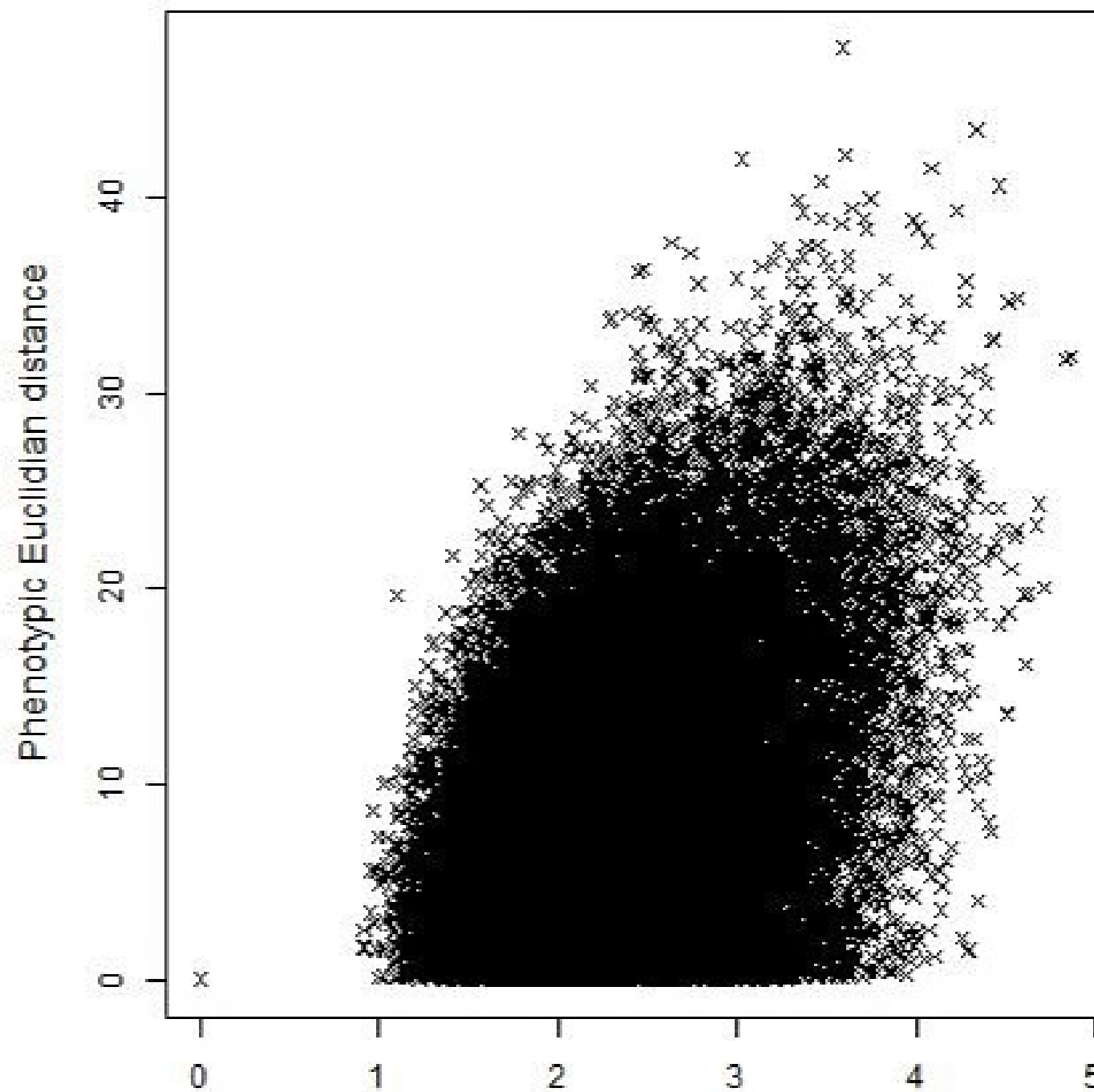
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

CHs300_me16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

CHs300_me17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

CHs300_po16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

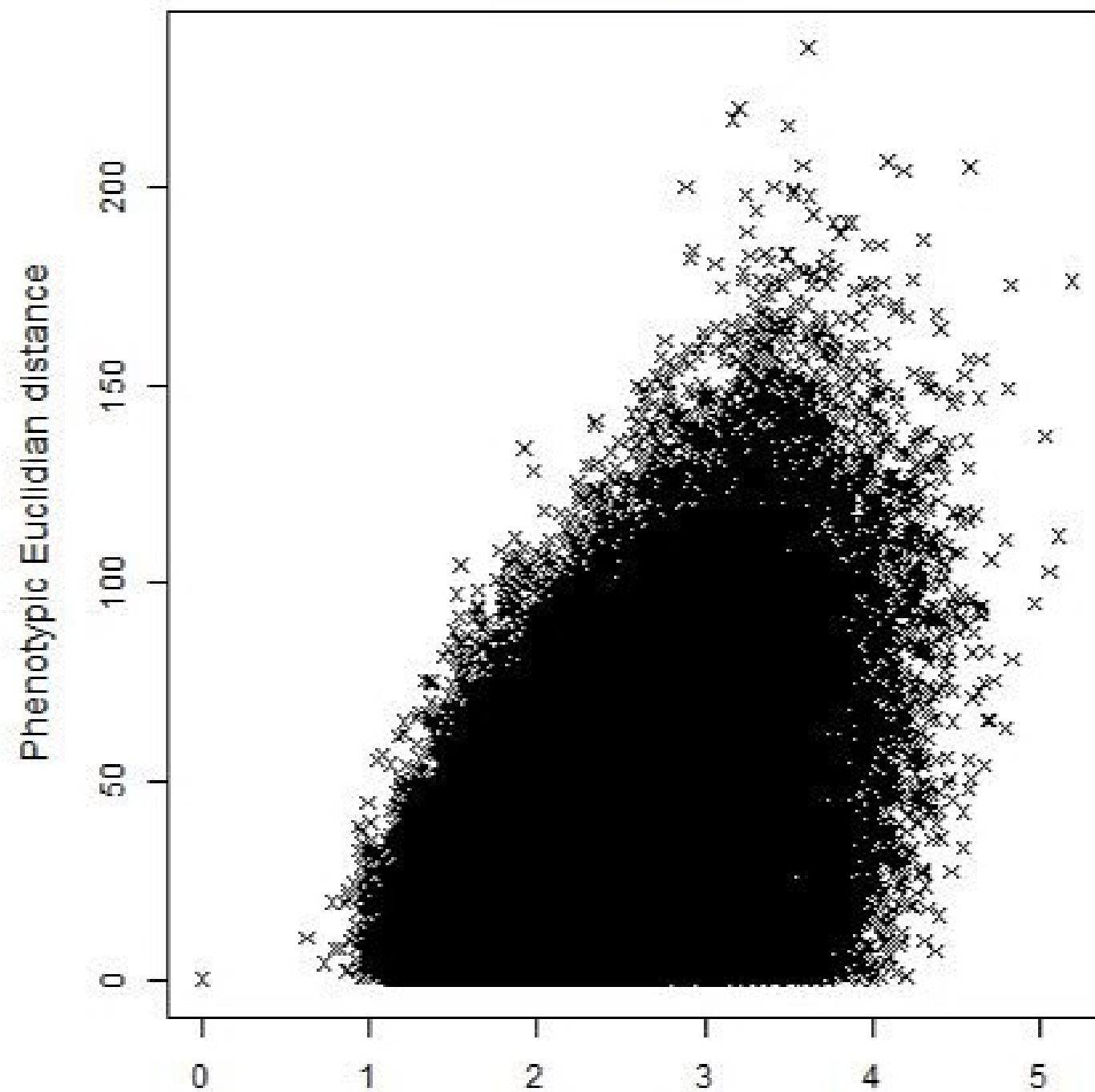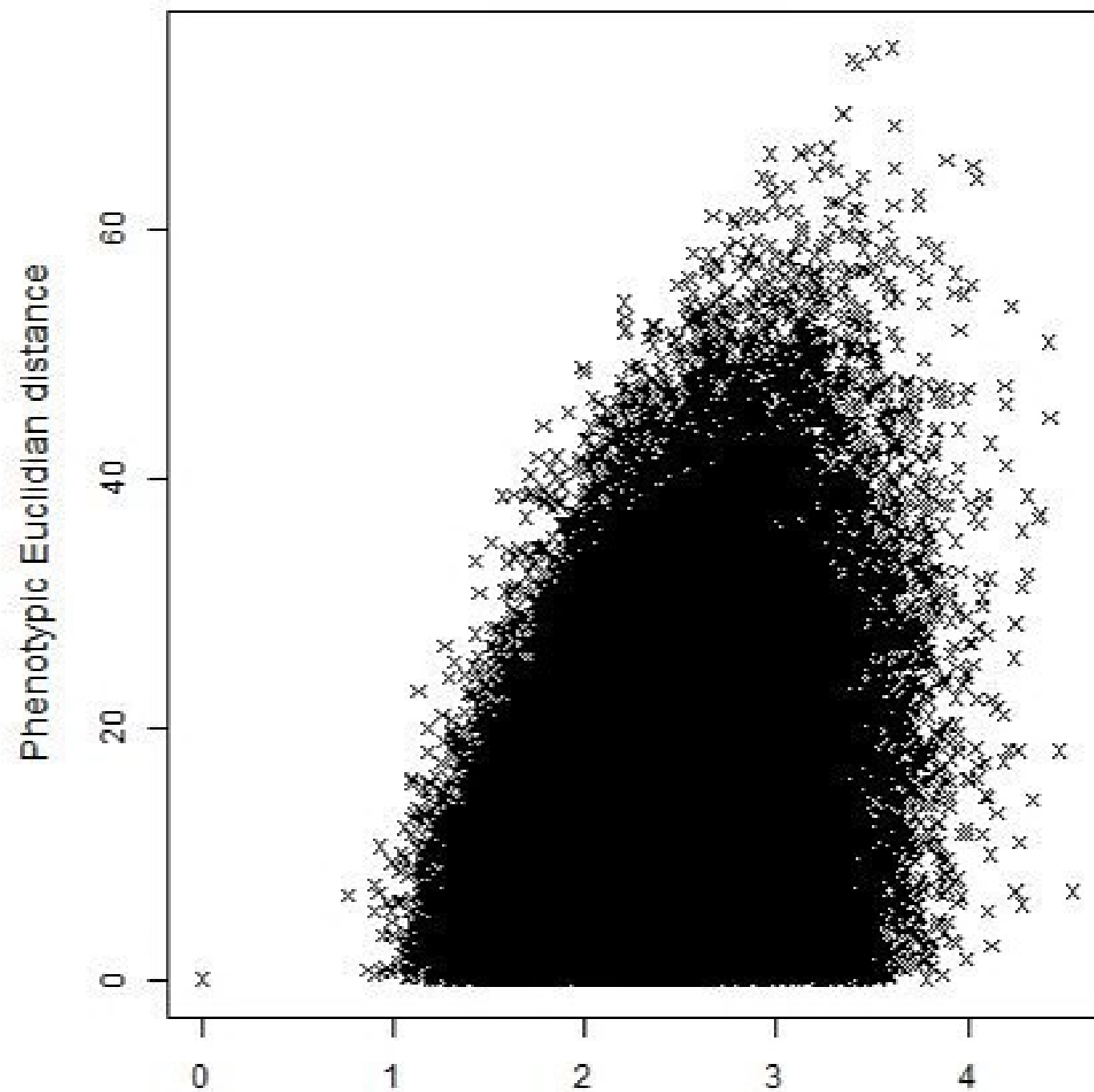**CHs300_po17**

Phenotypic Euclidian distance (y-axis)

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

CHs500_lu16

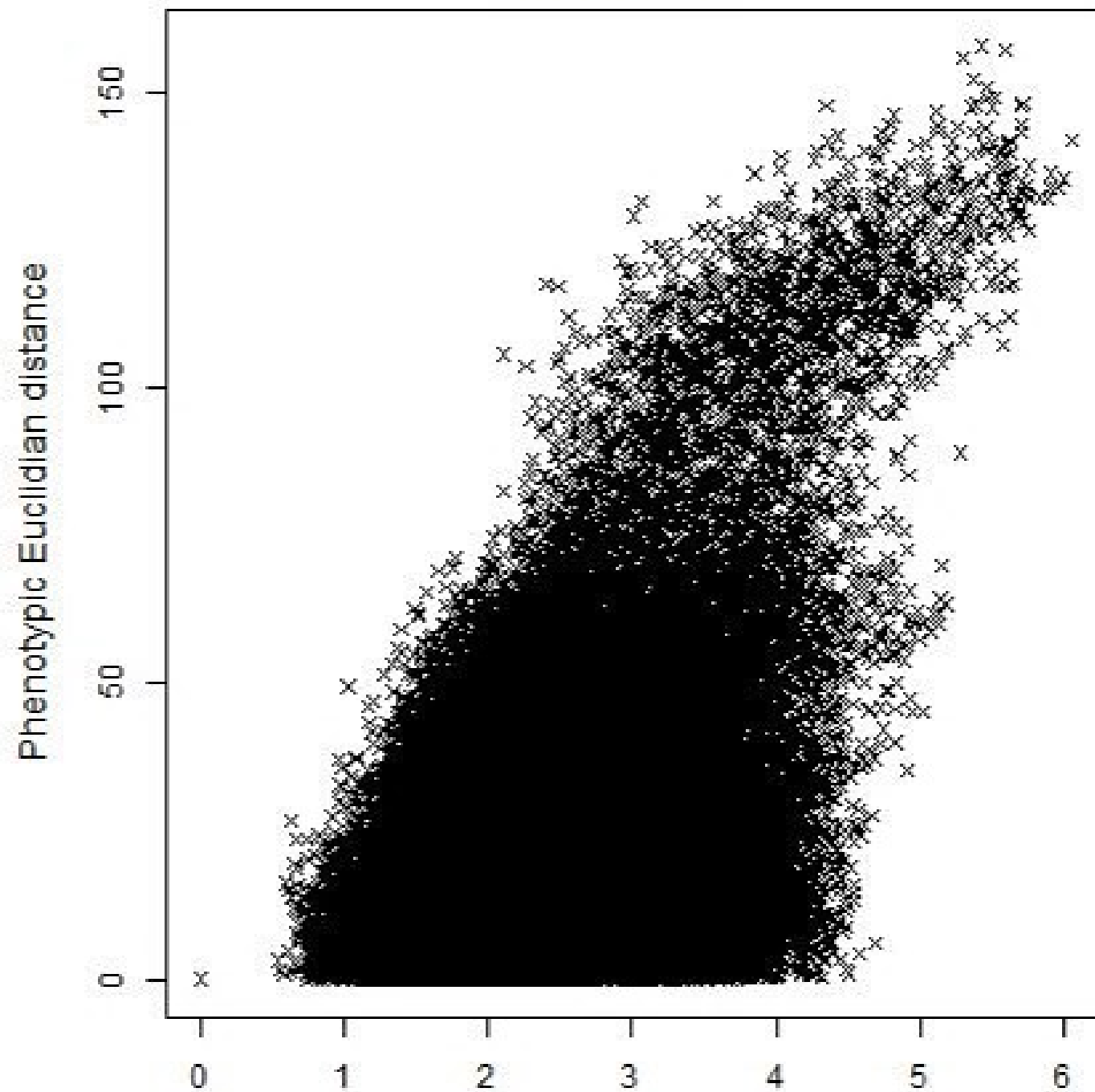Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
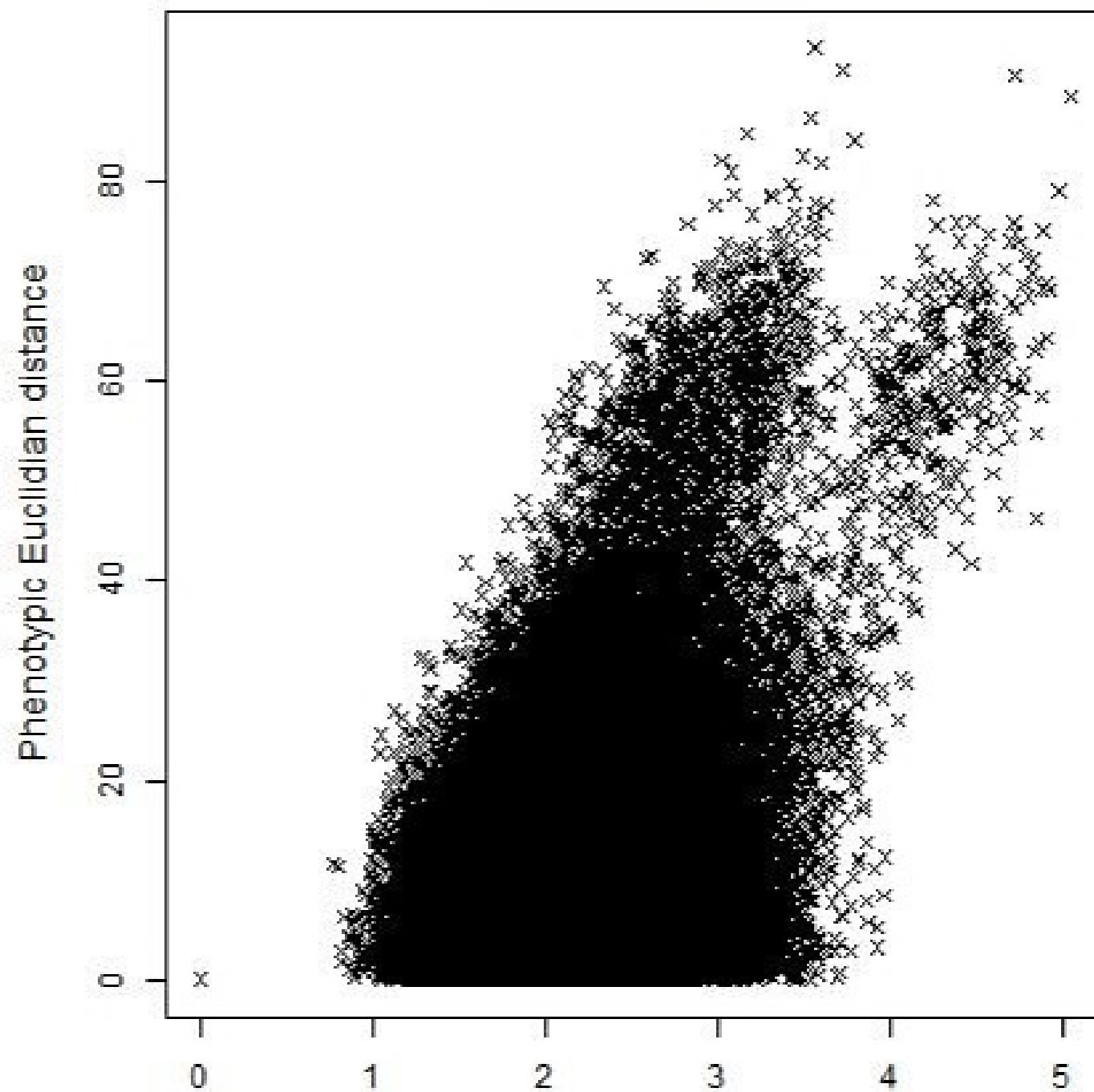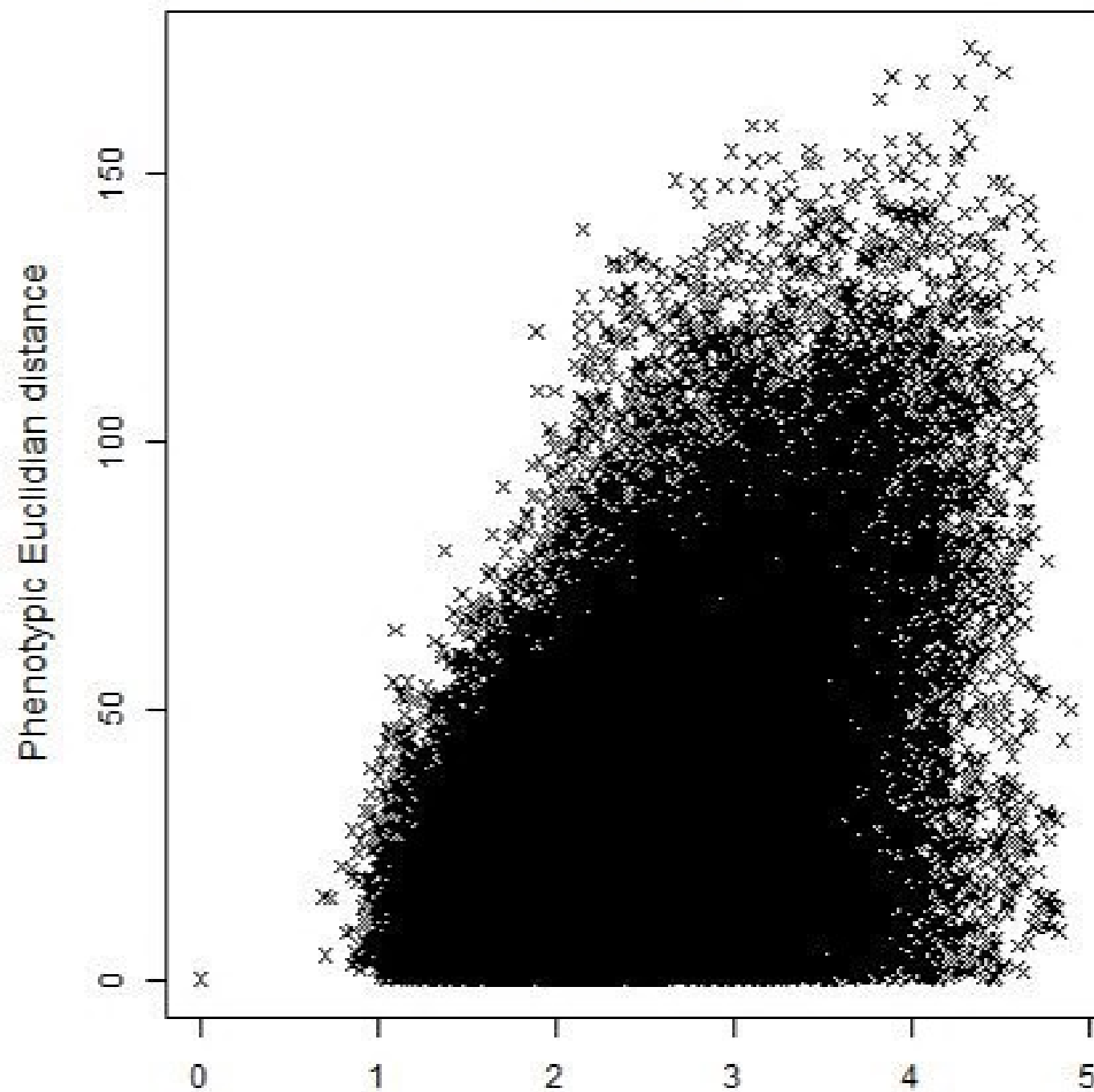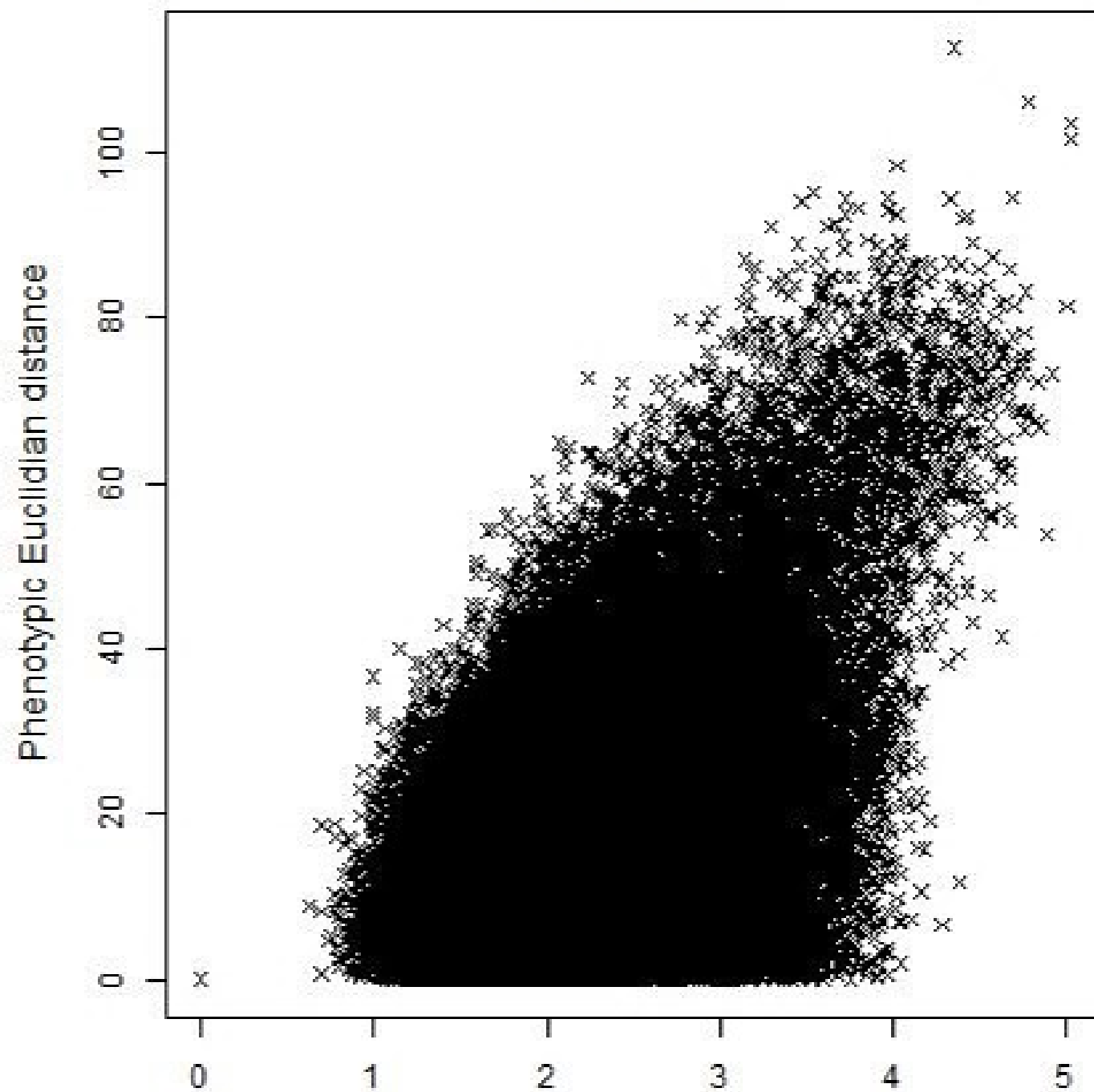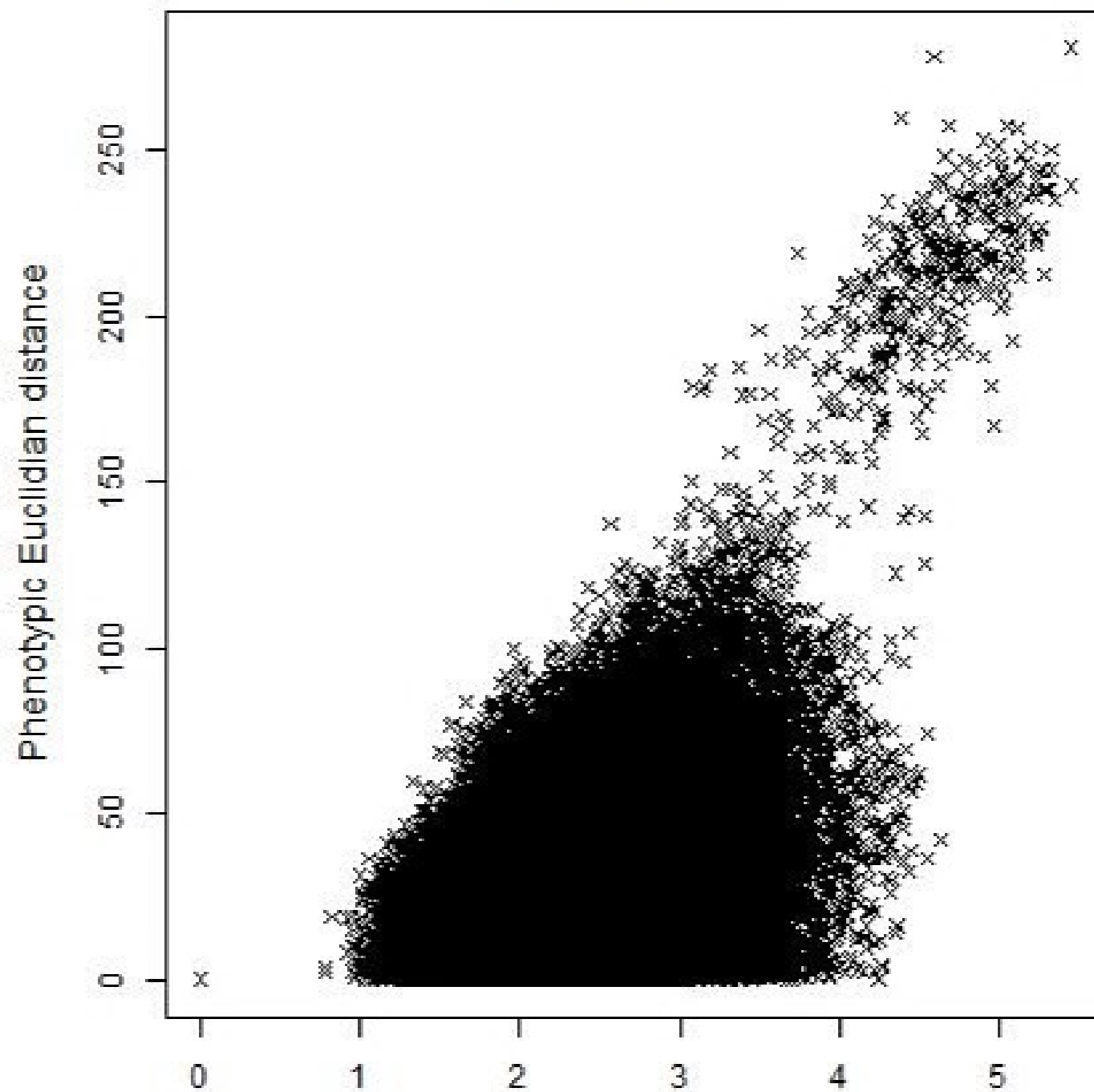
CHs500_Iu17
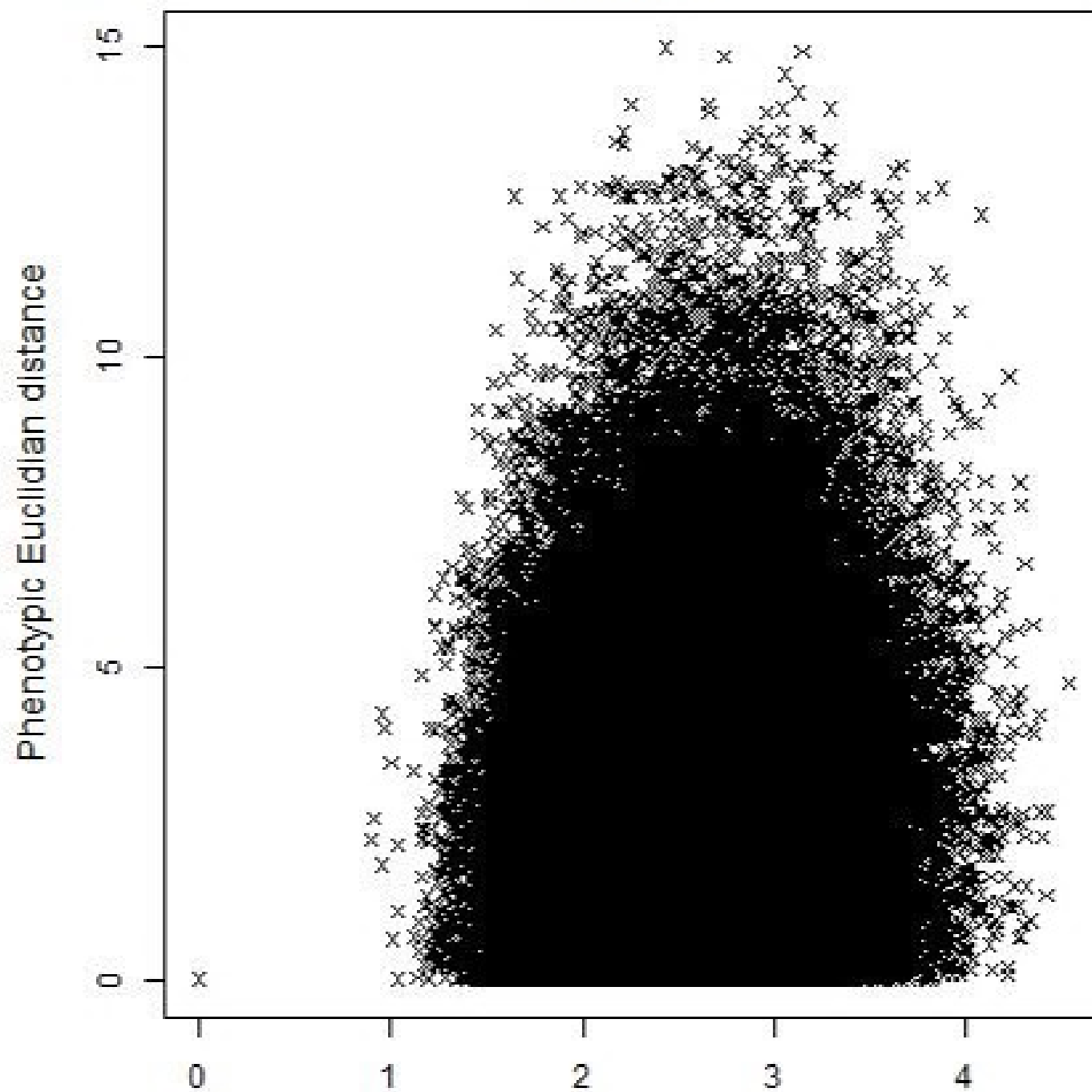
Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

CHs500_me16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

CHs500_me17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

CHs500_po17

Phenotypic Euclidian distance
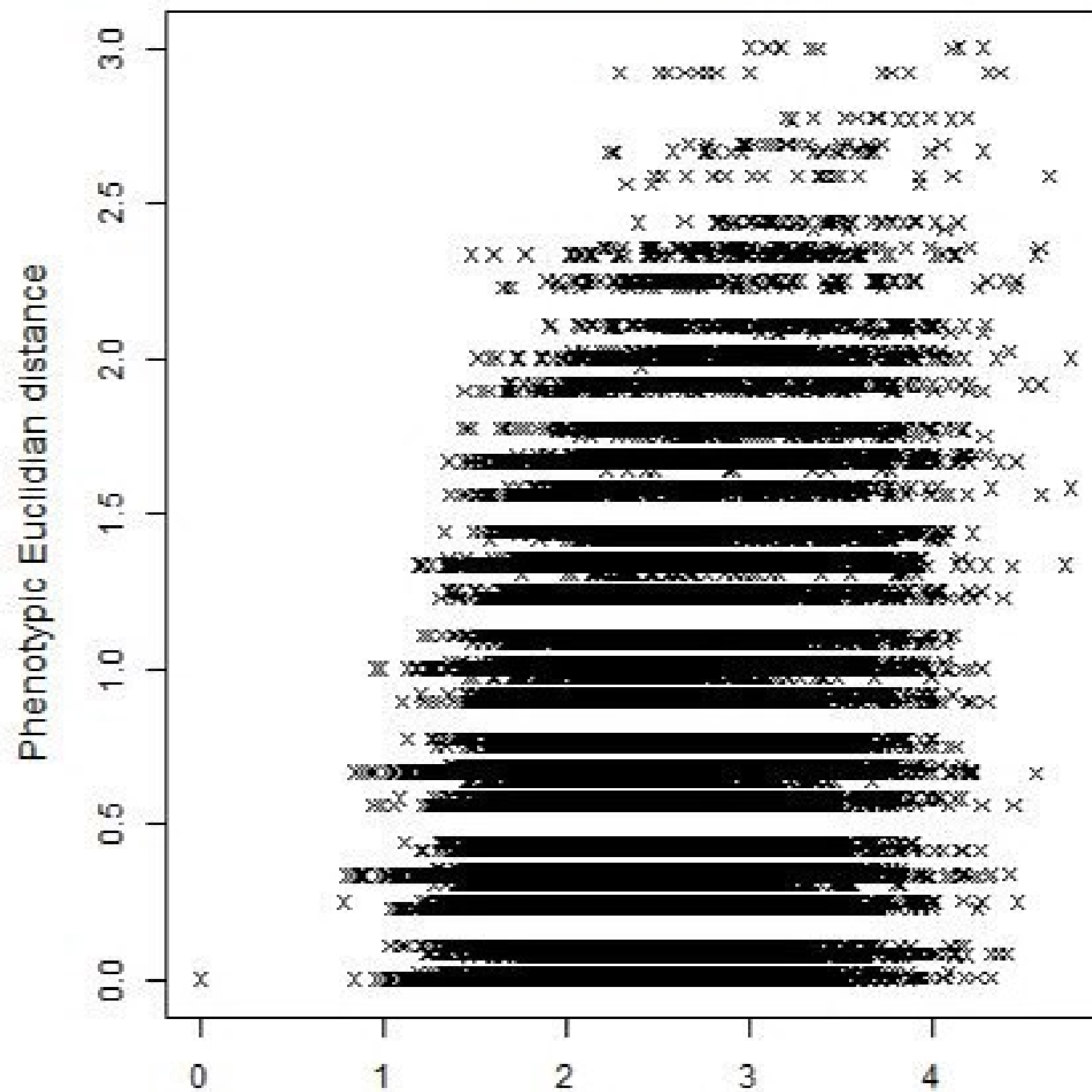
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DES_po15

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DHE_01_lu17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
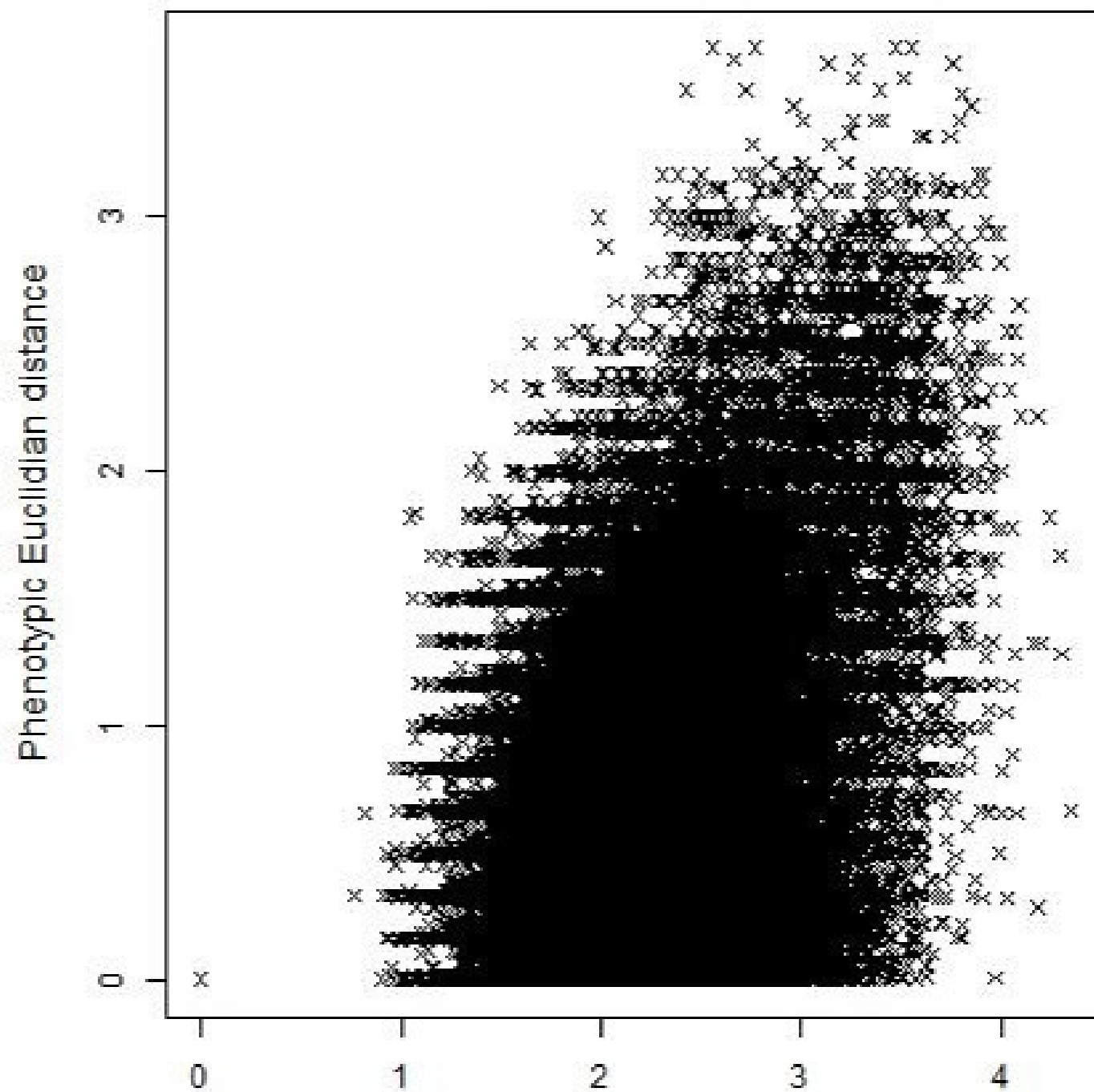
DHE_04_lu17

Phenotypic Euclidian distance
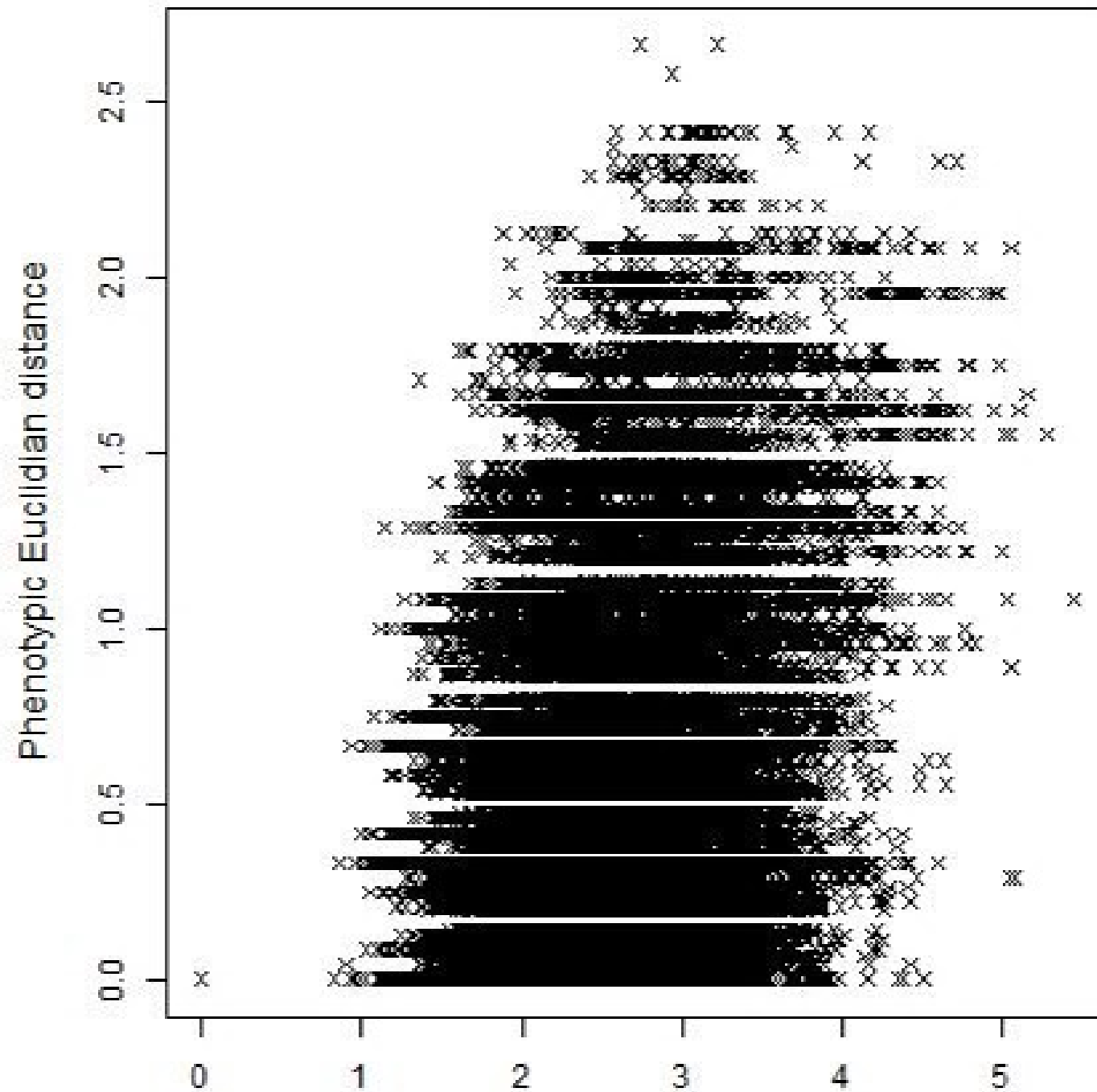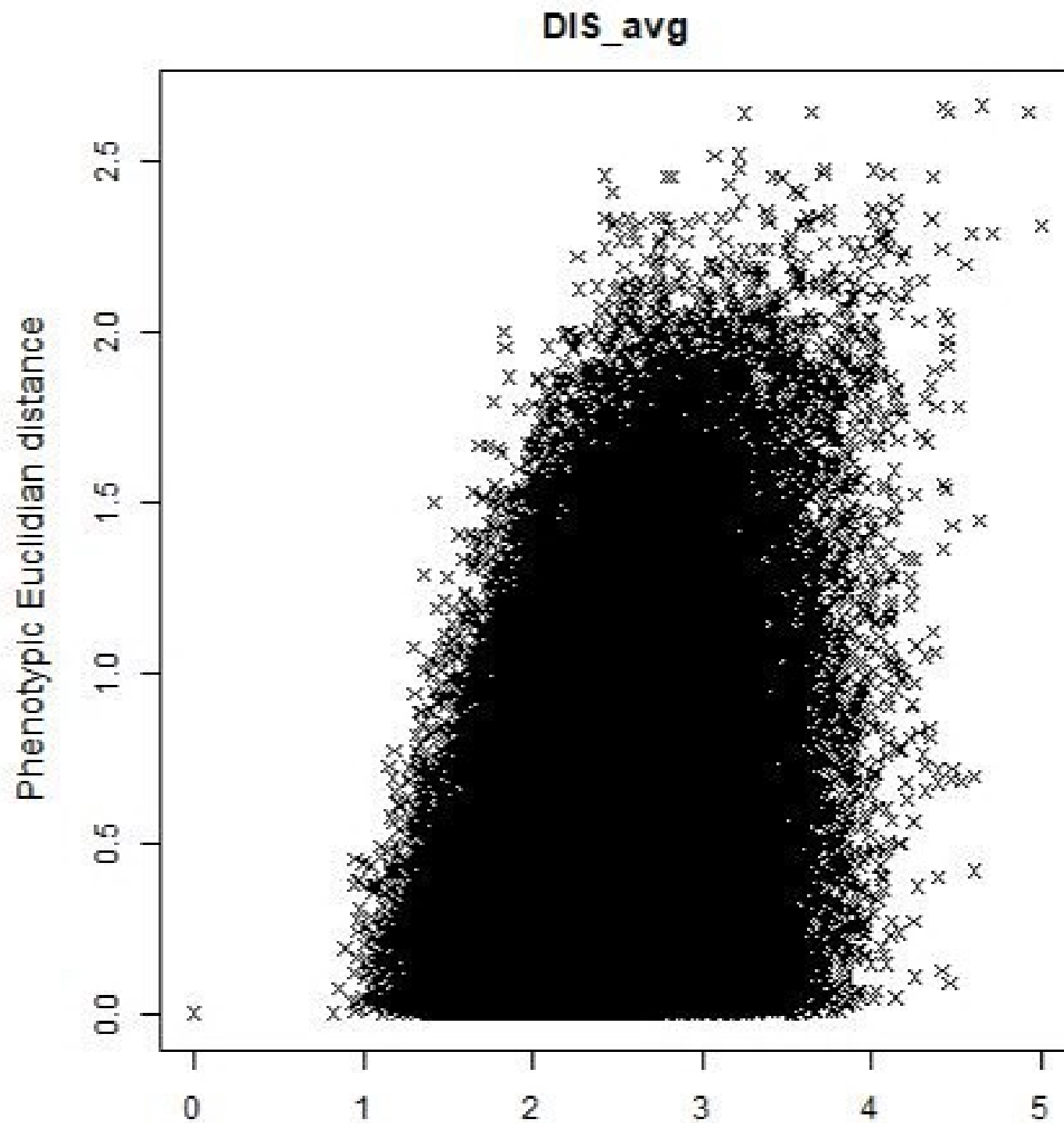
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DHE_07_lu16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DIS_avg

Phenotypic Euclidian distance
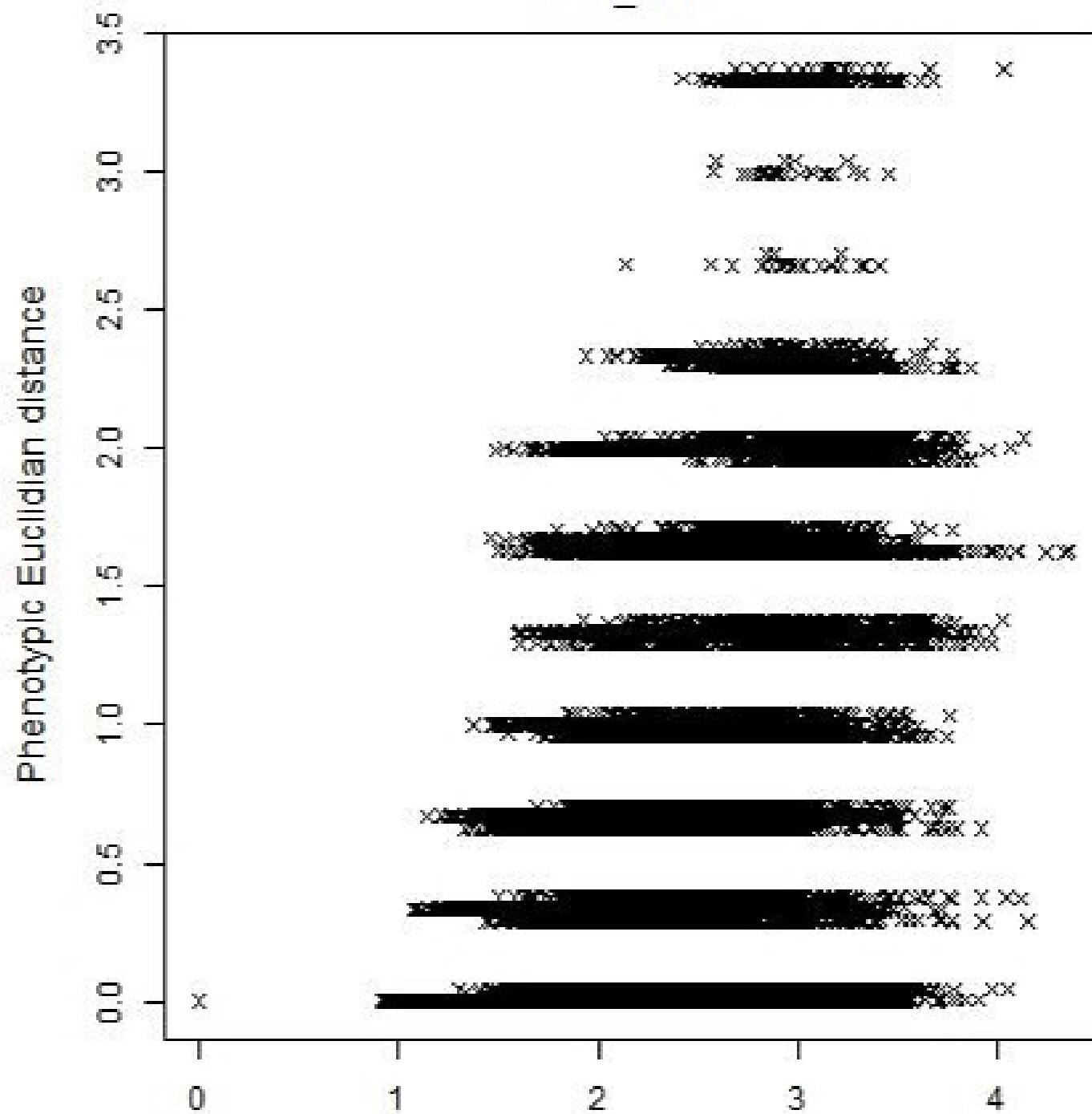
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DIS_lu15

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DIS_lu16

DIS_lu17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DIS_me16

Phenotypic Euclidian distance
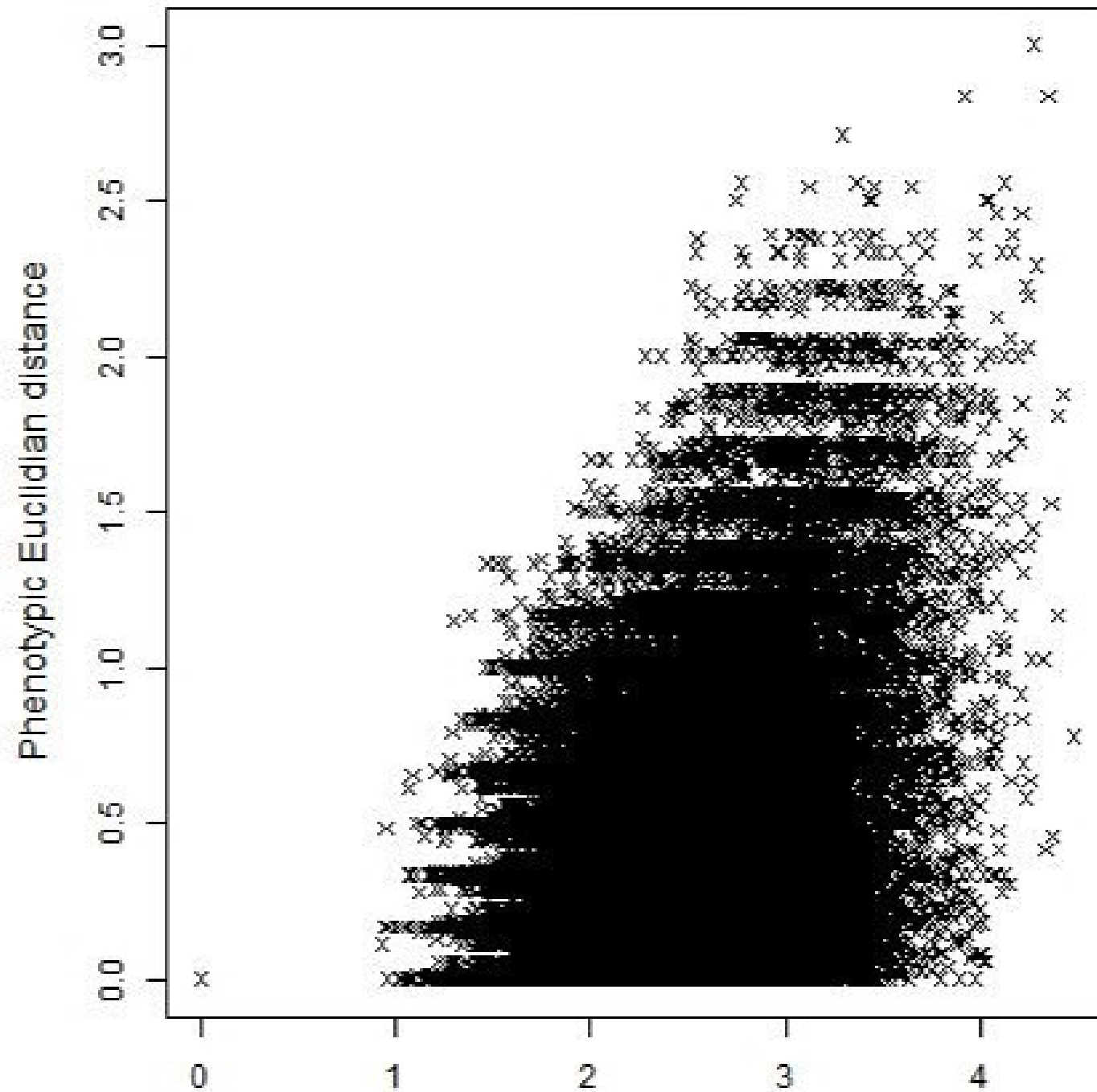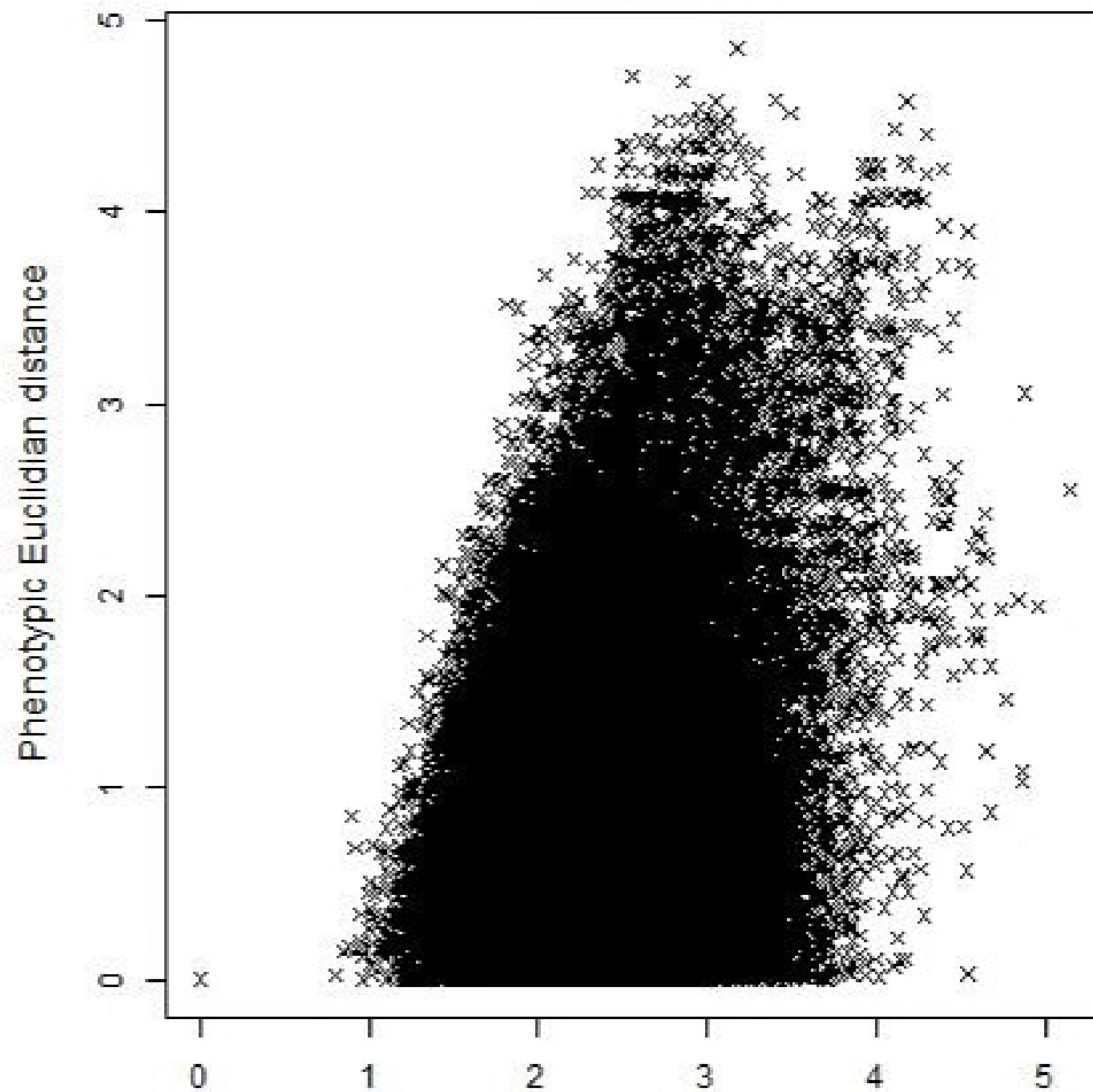
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DIS_me17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DIS_po15

Phenotypic Euclidian distance
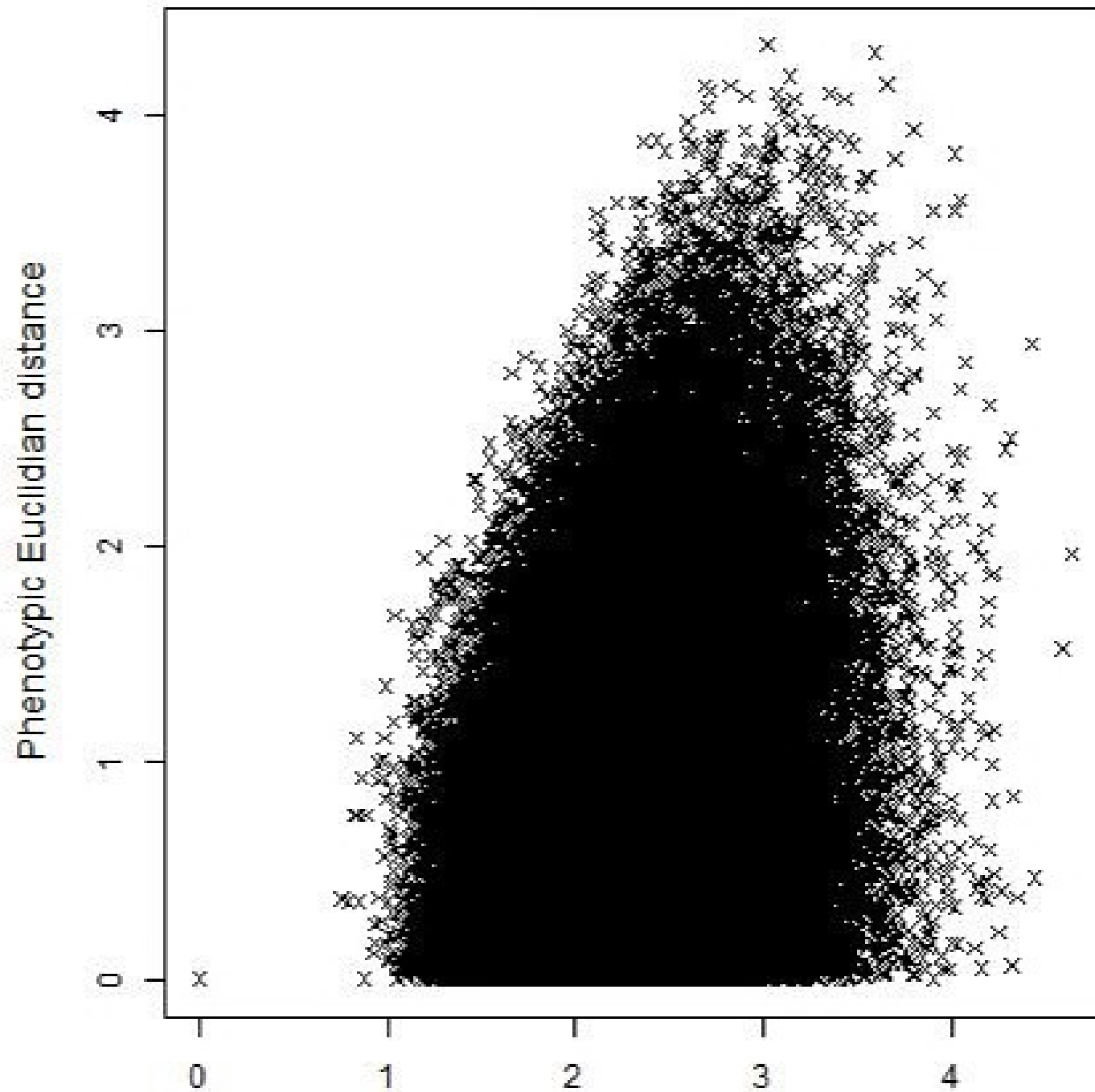
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DIS_po17

Phenotypic Euclidian distance
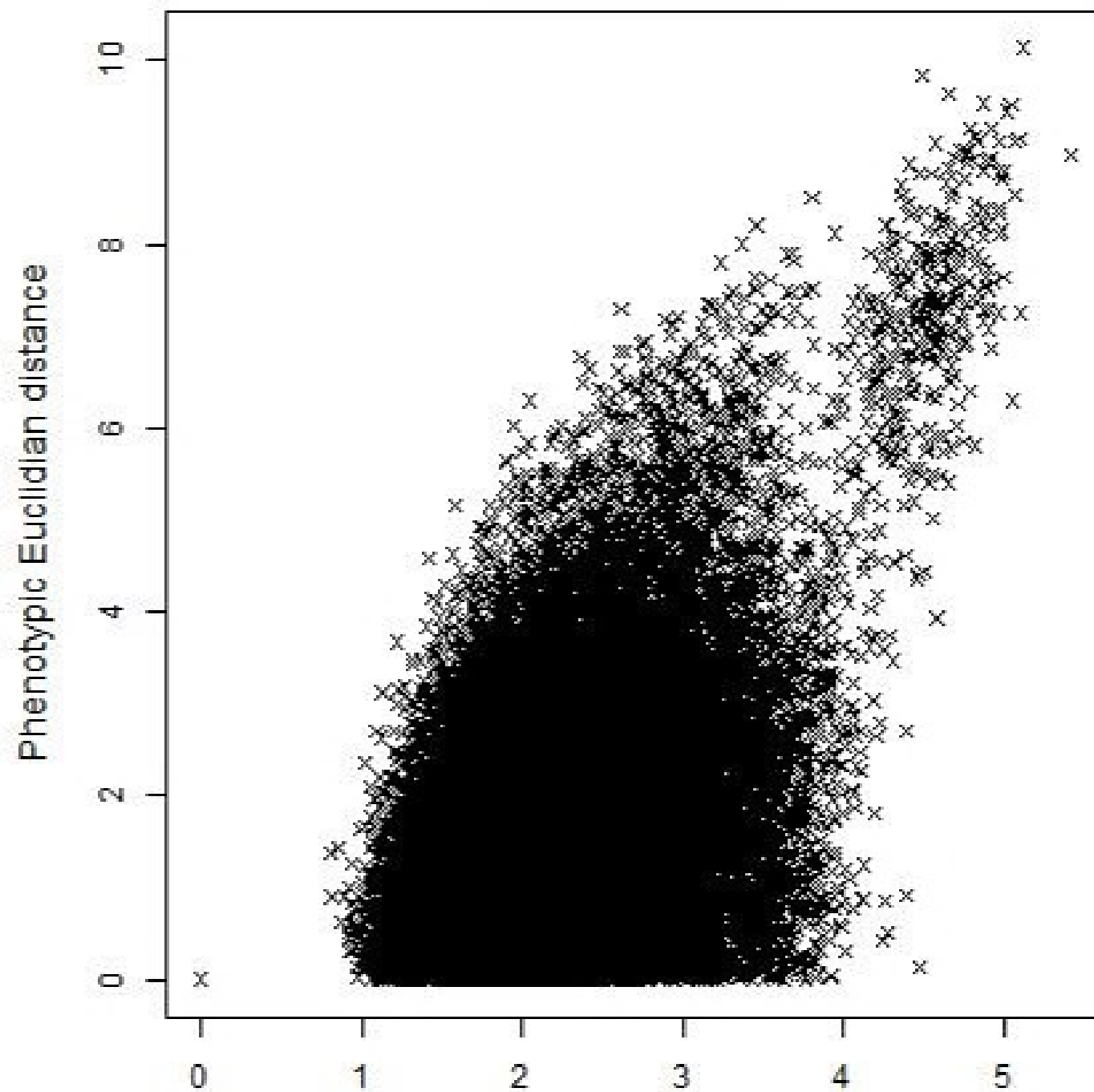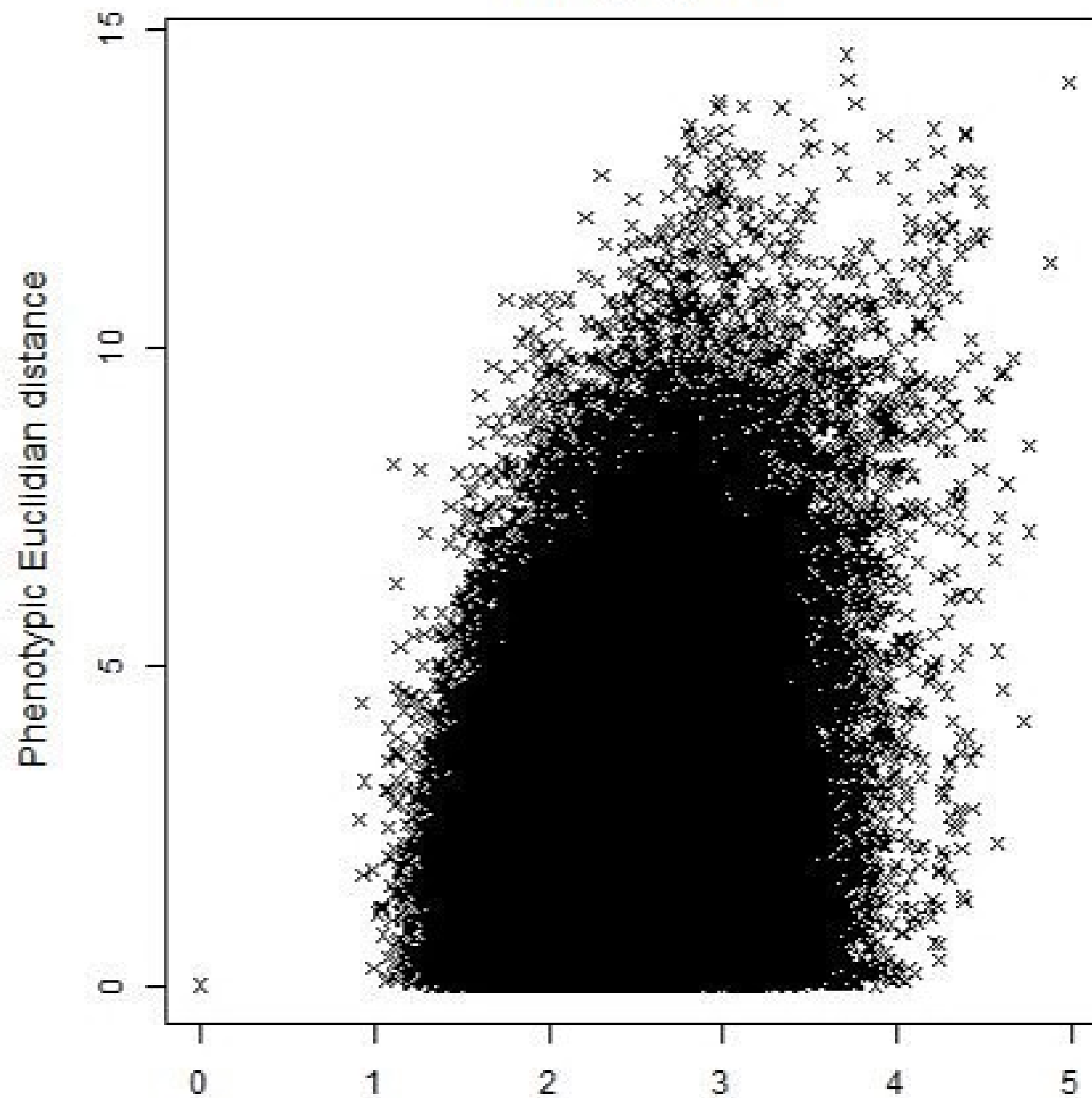
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DNDF_04_me17

Phenotypic Euclidian distance
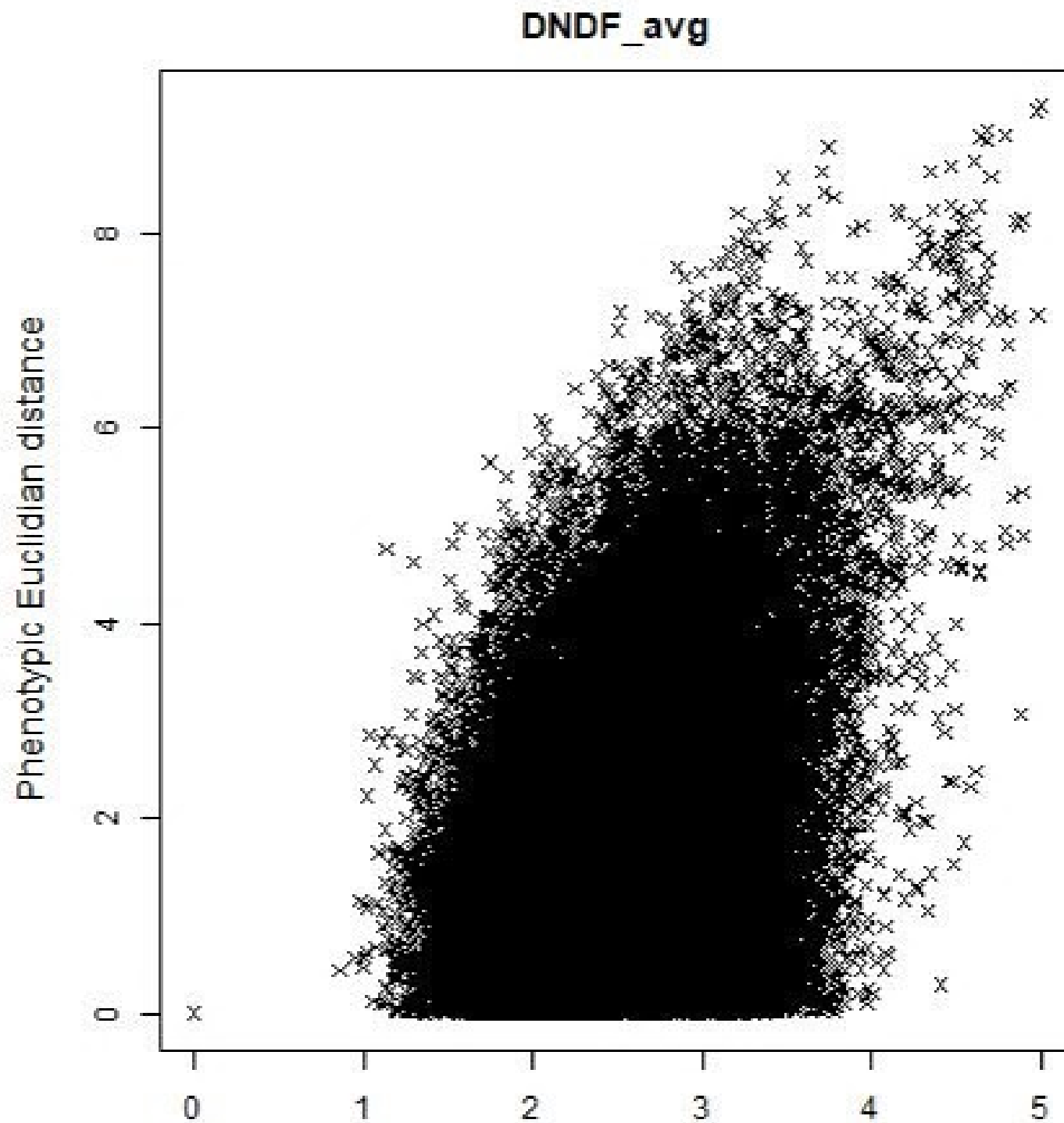
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DNDF_10_me17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DNDF_avg

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
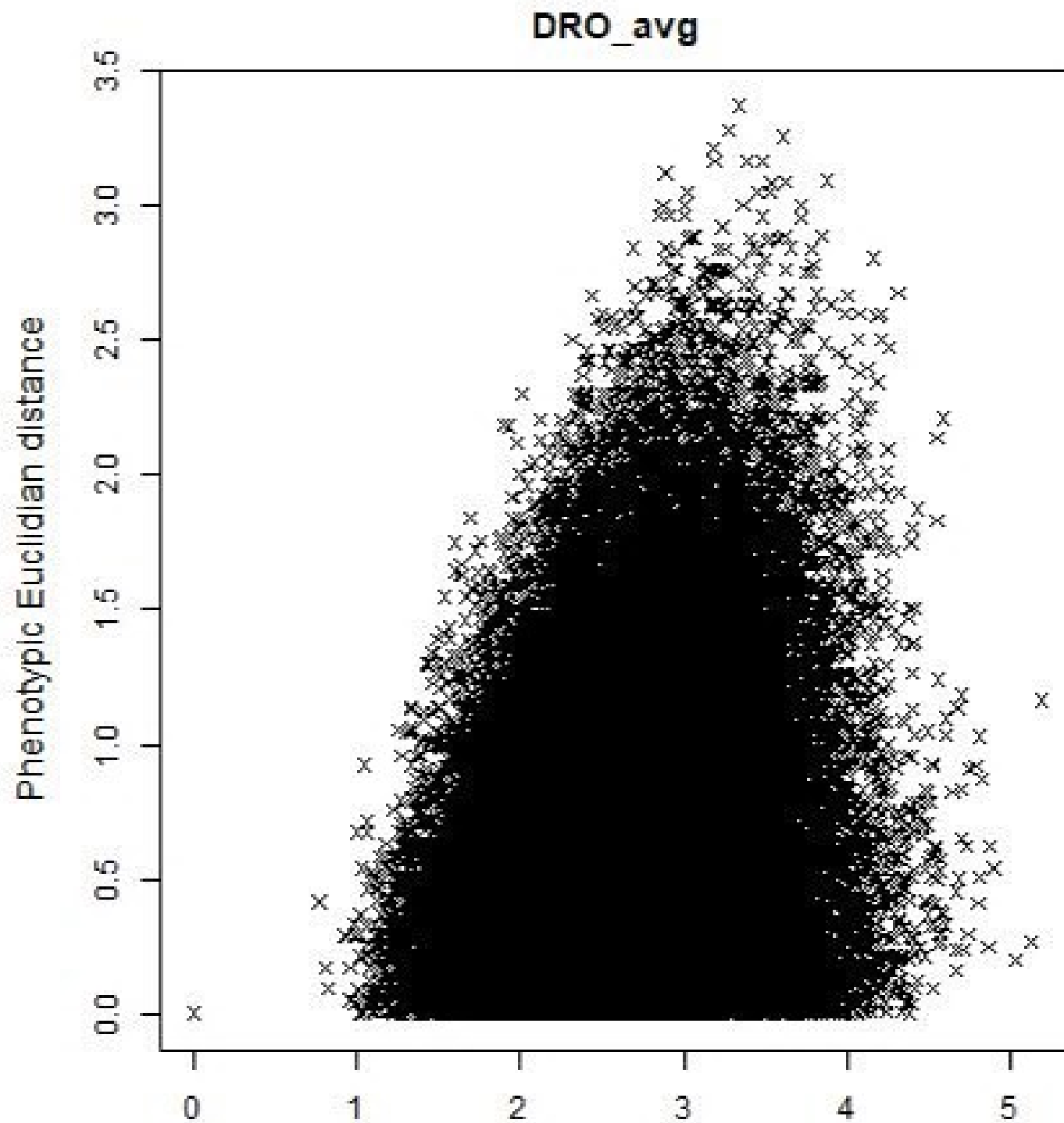
DRB_lu1516
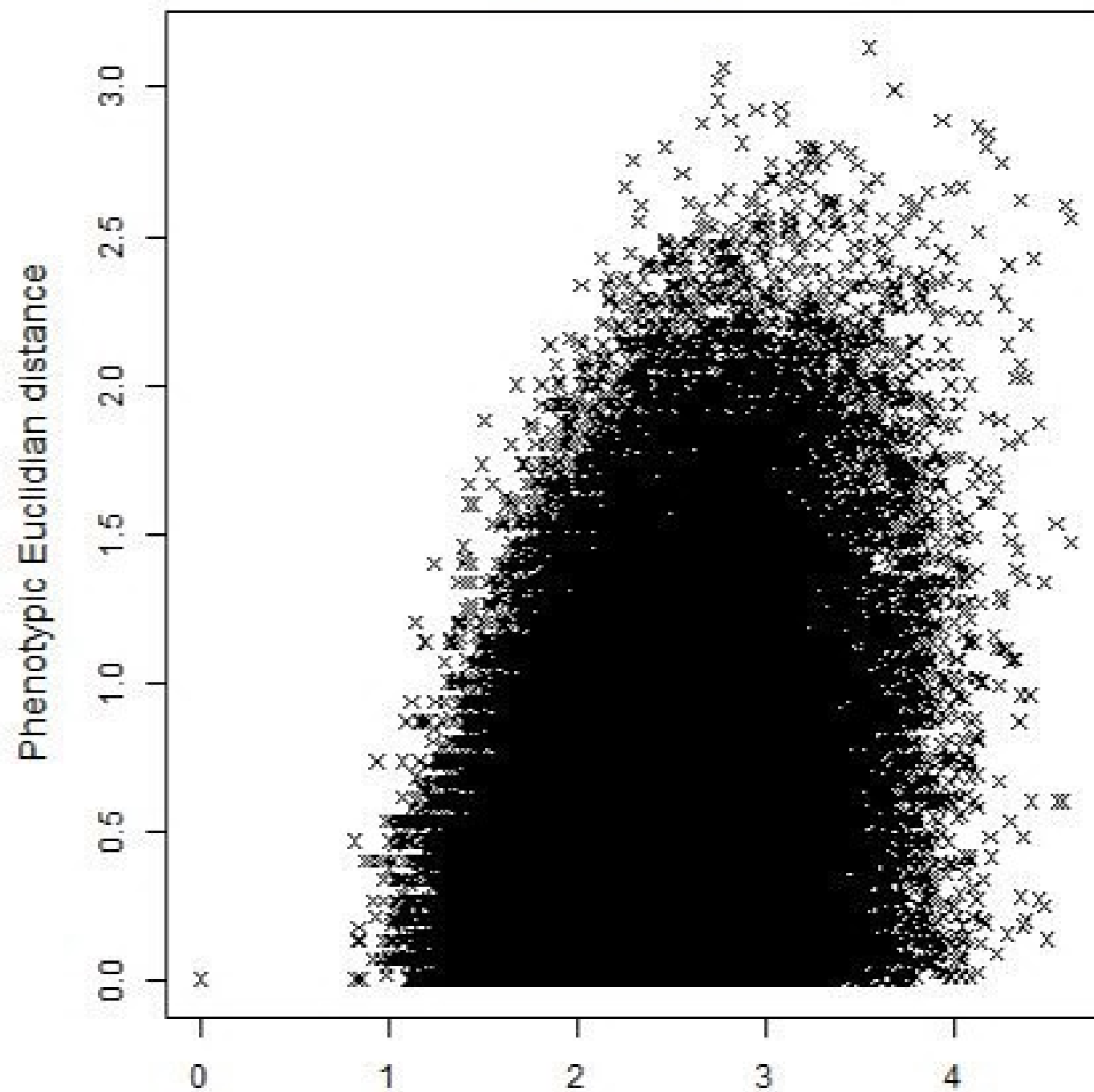
Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
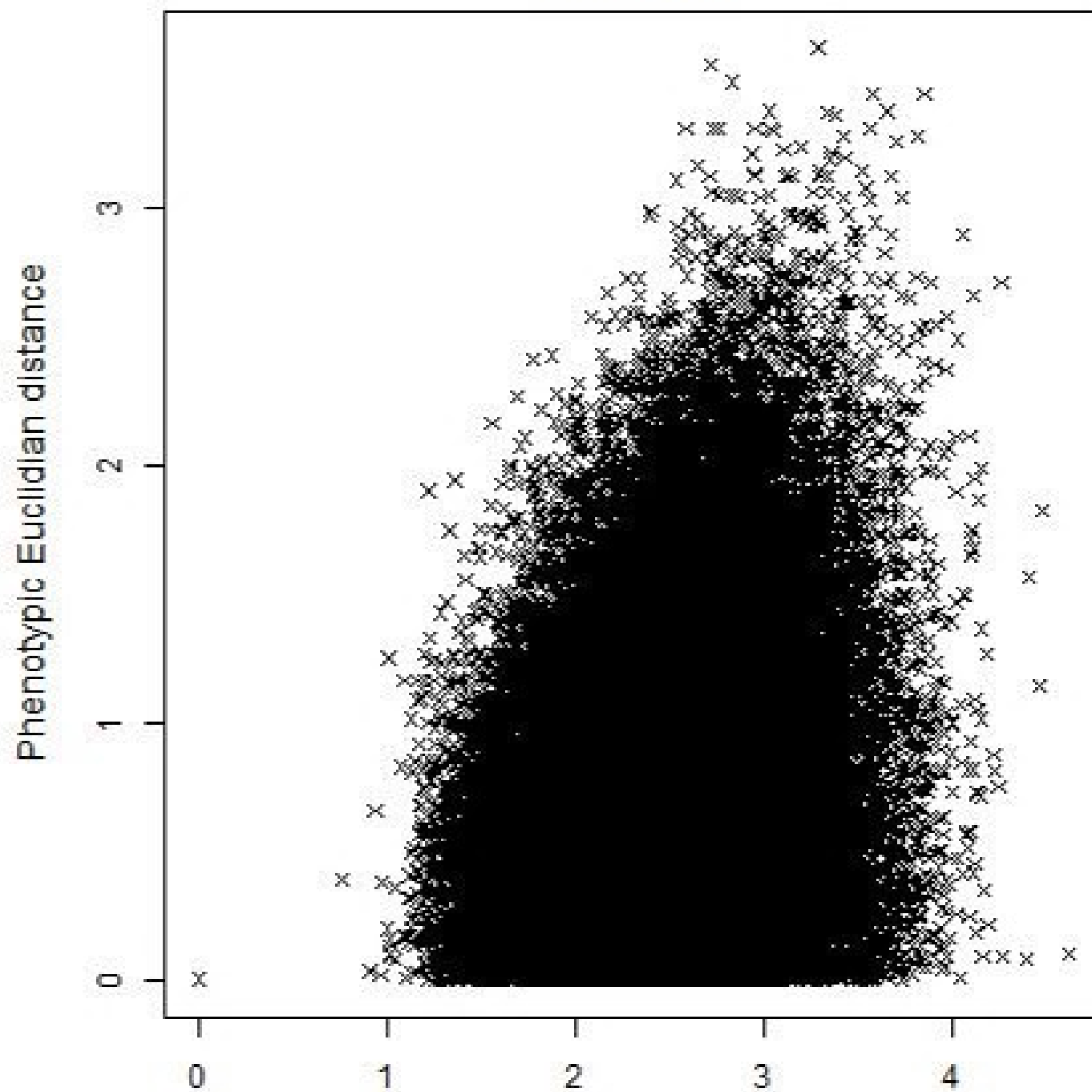
DRO_avg

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DRO_lu16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DRO_po16

Phenotypic Euclidian distance
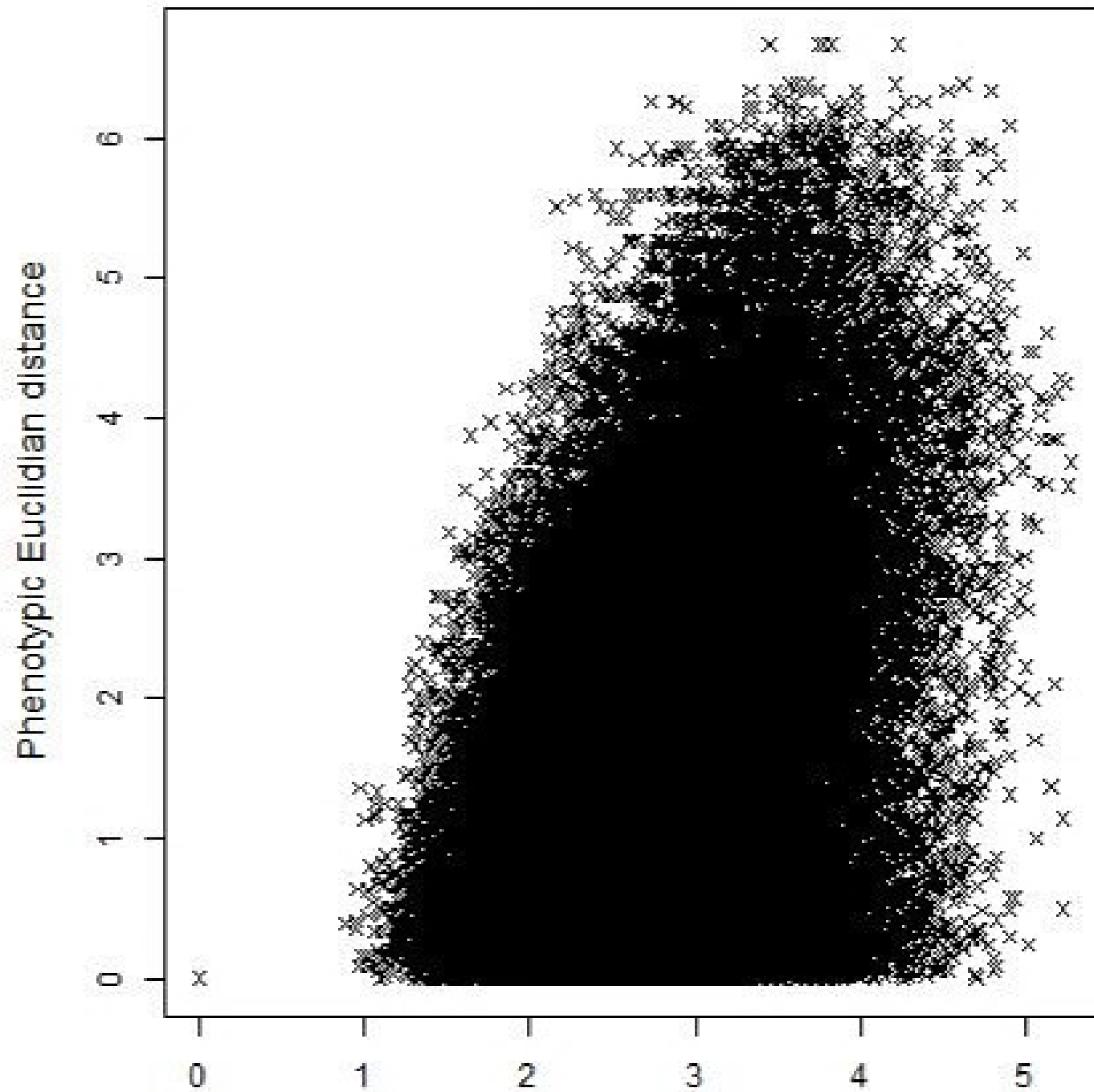
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DST_avg

Phenotypic Euclidian distance
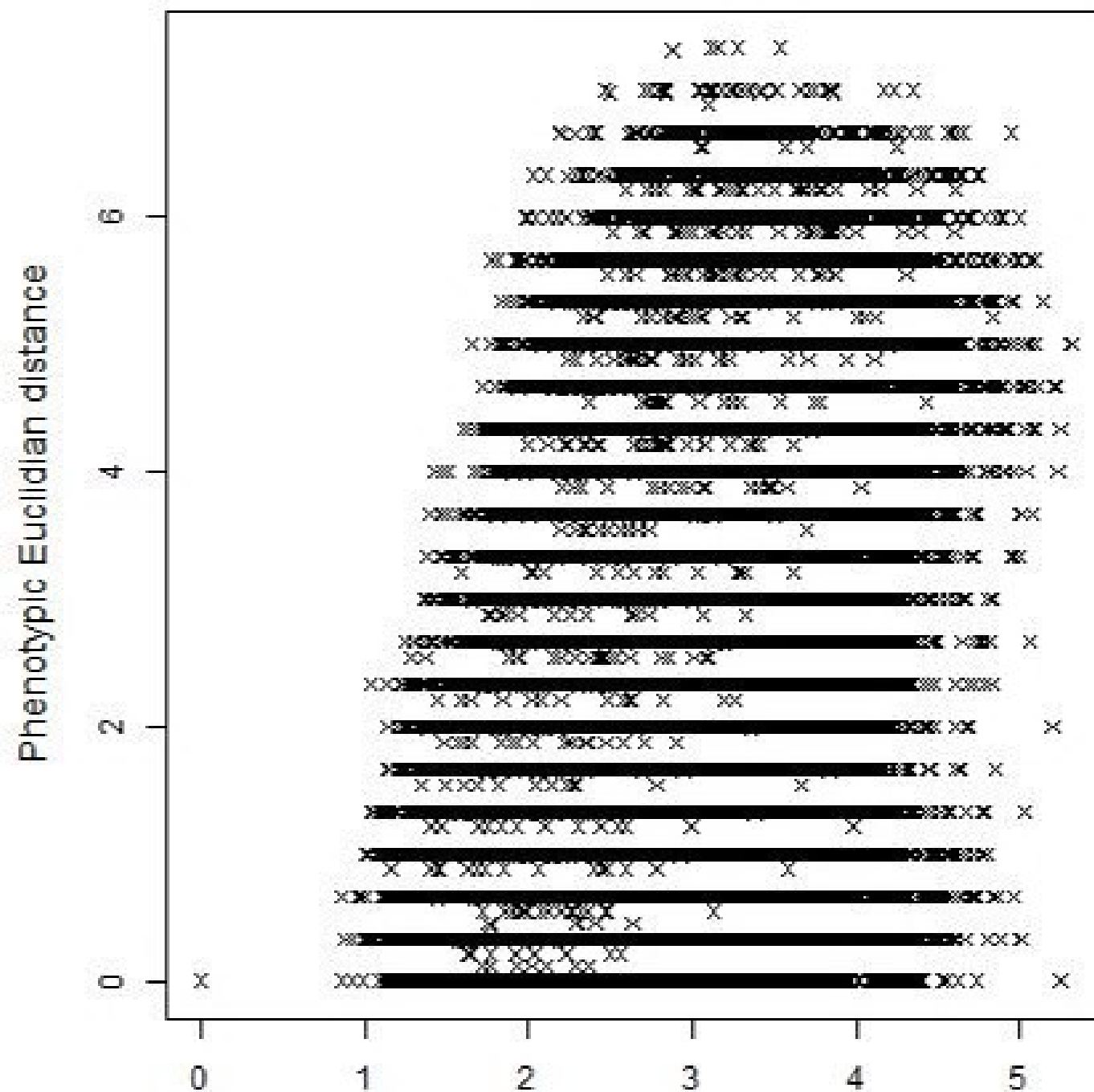
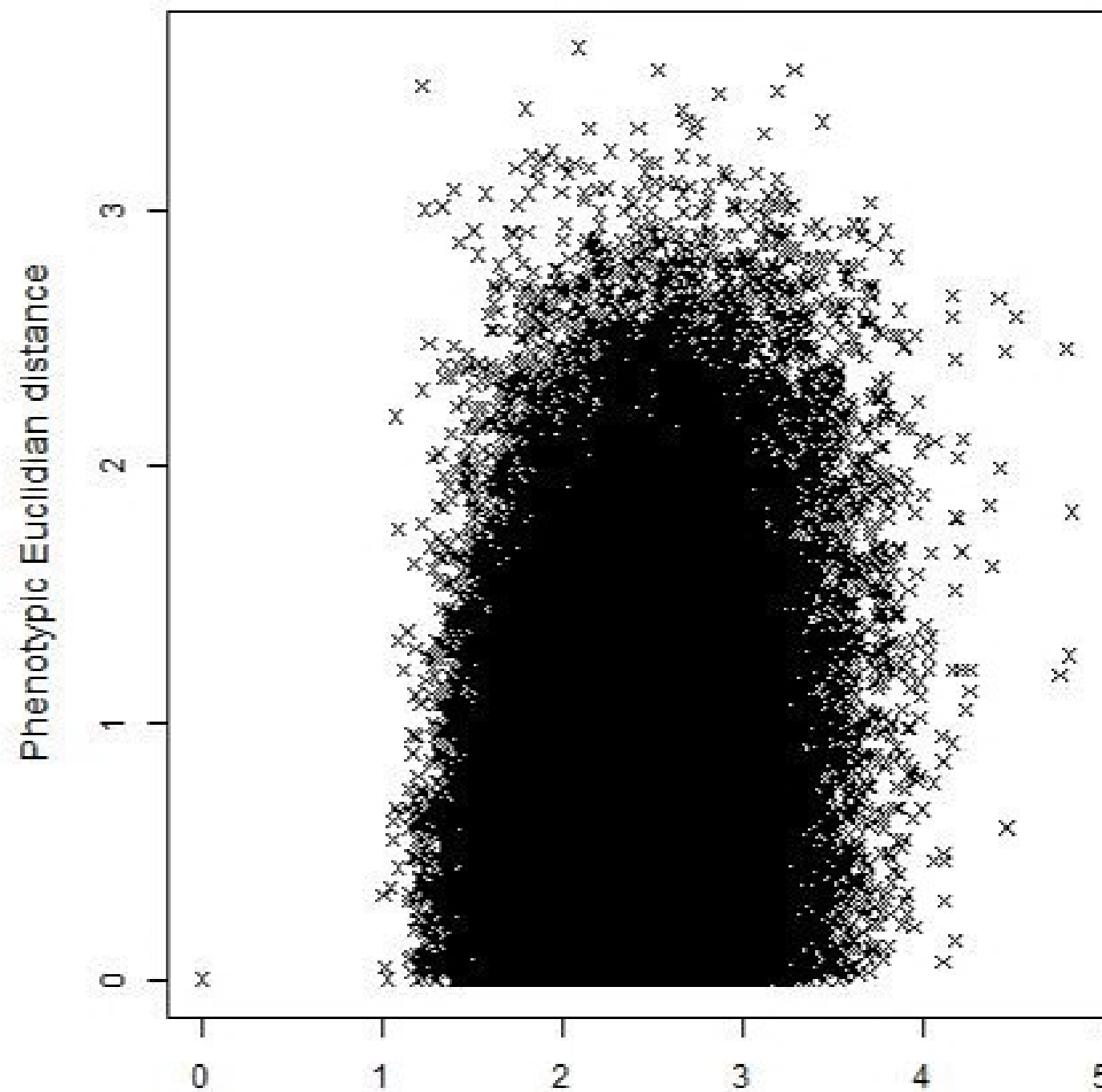Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DST_lu17

Phenotypic Euclidian distance

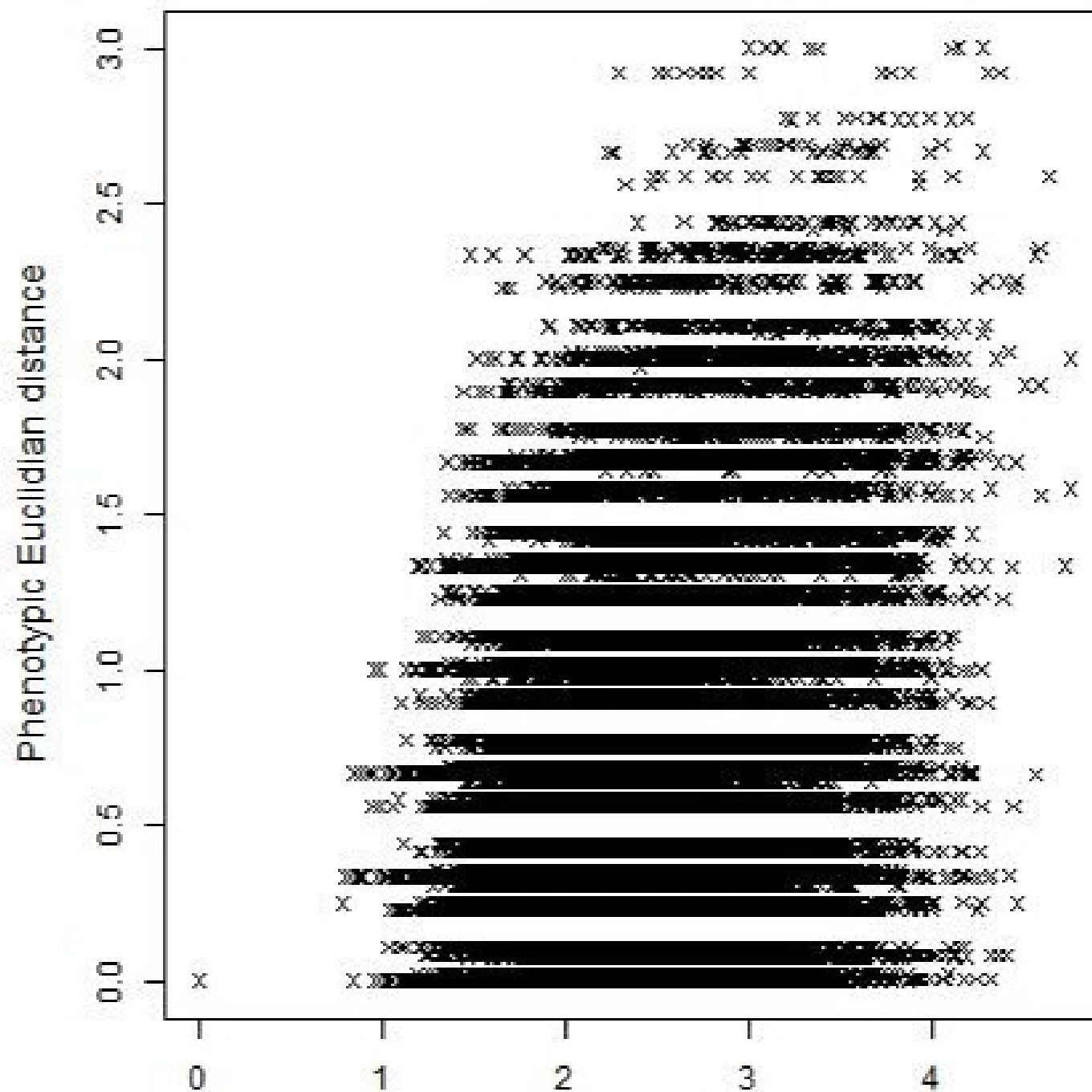Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DST_po17

Phenotypic Euclidian distance
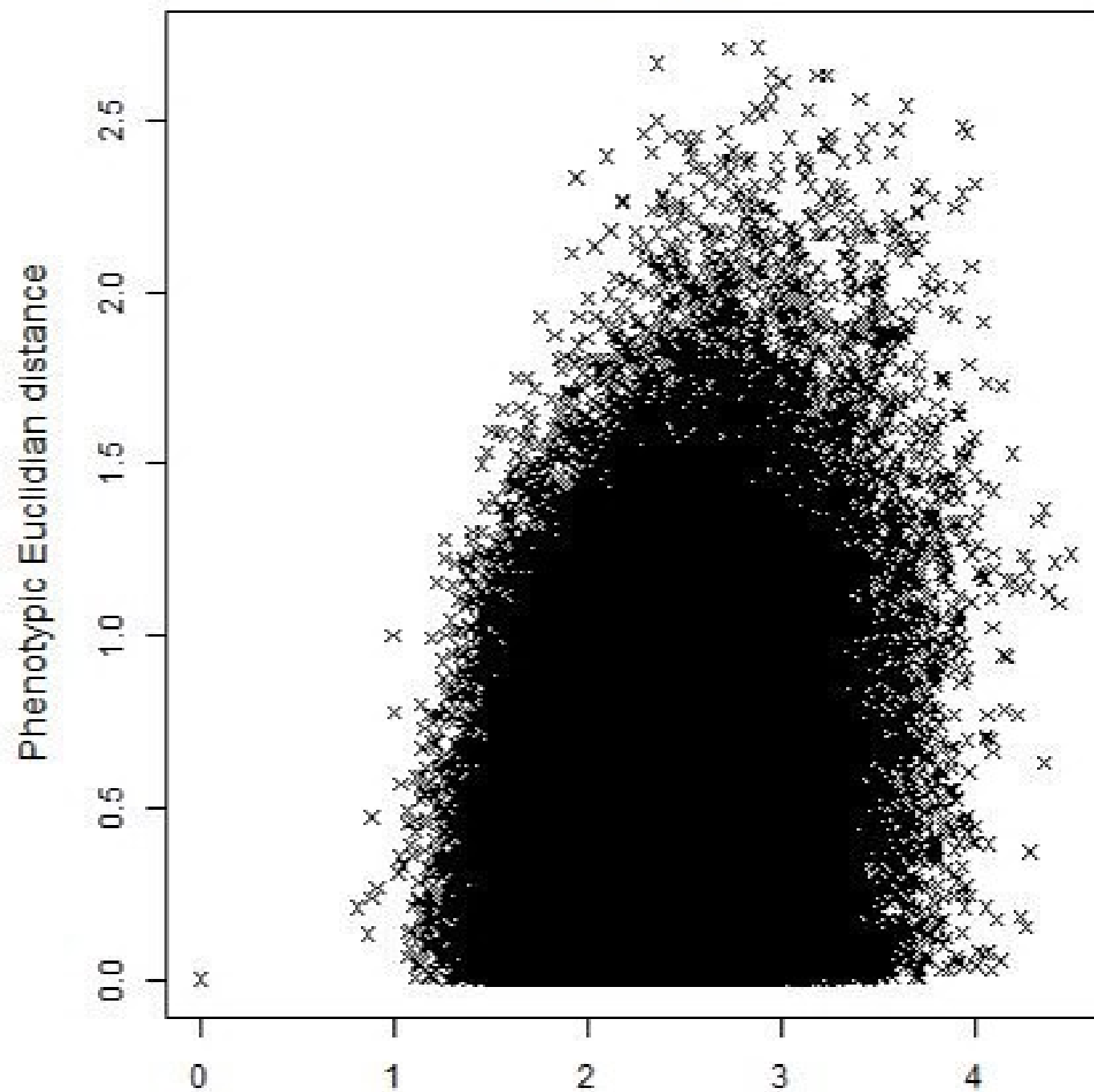
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

DVG_04_lu17

Phenotypic Euclidian distance

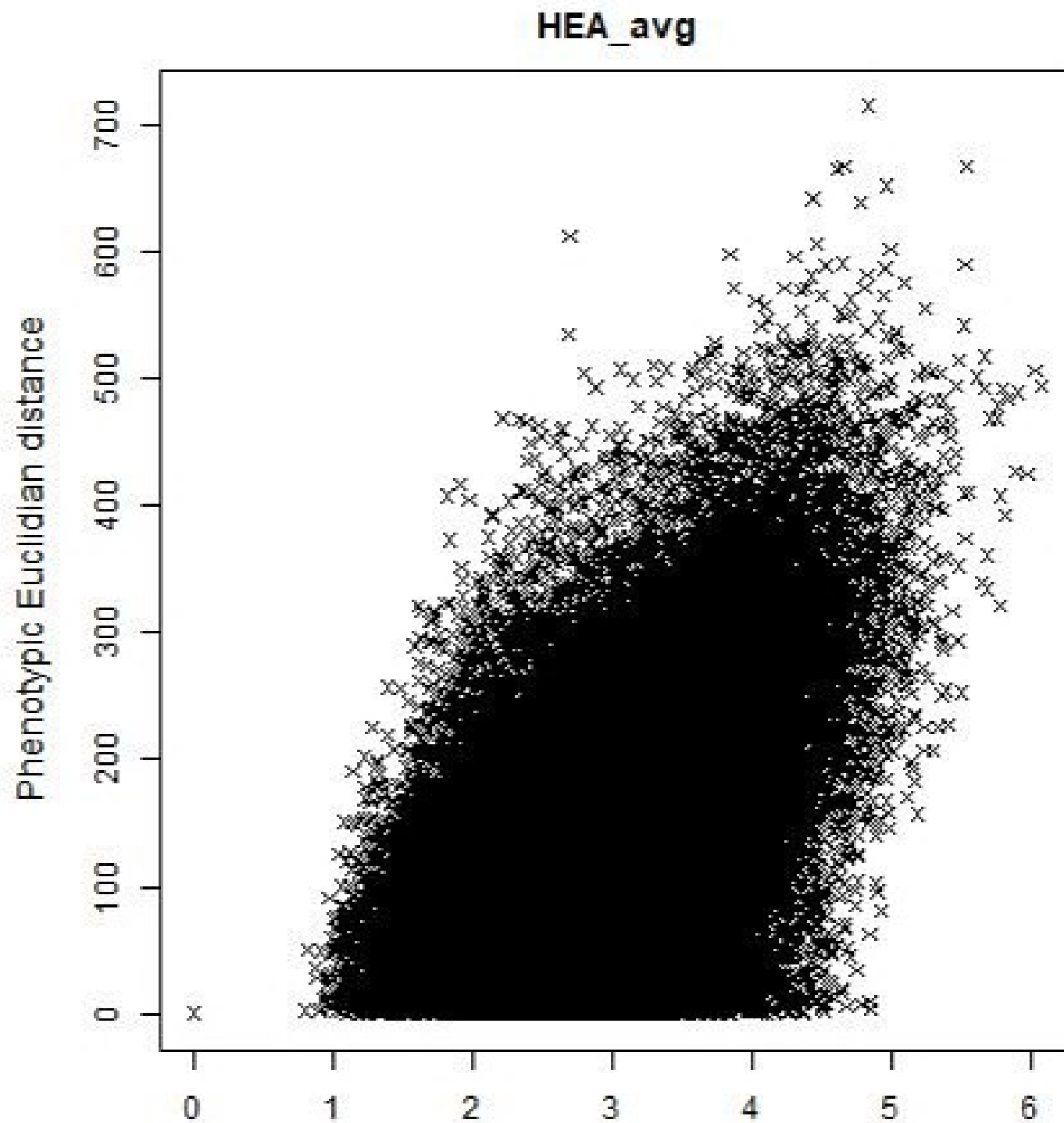Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

GRH_avg

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

HEA_avg

Phenotypic Euclidian distance (y-axis)

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
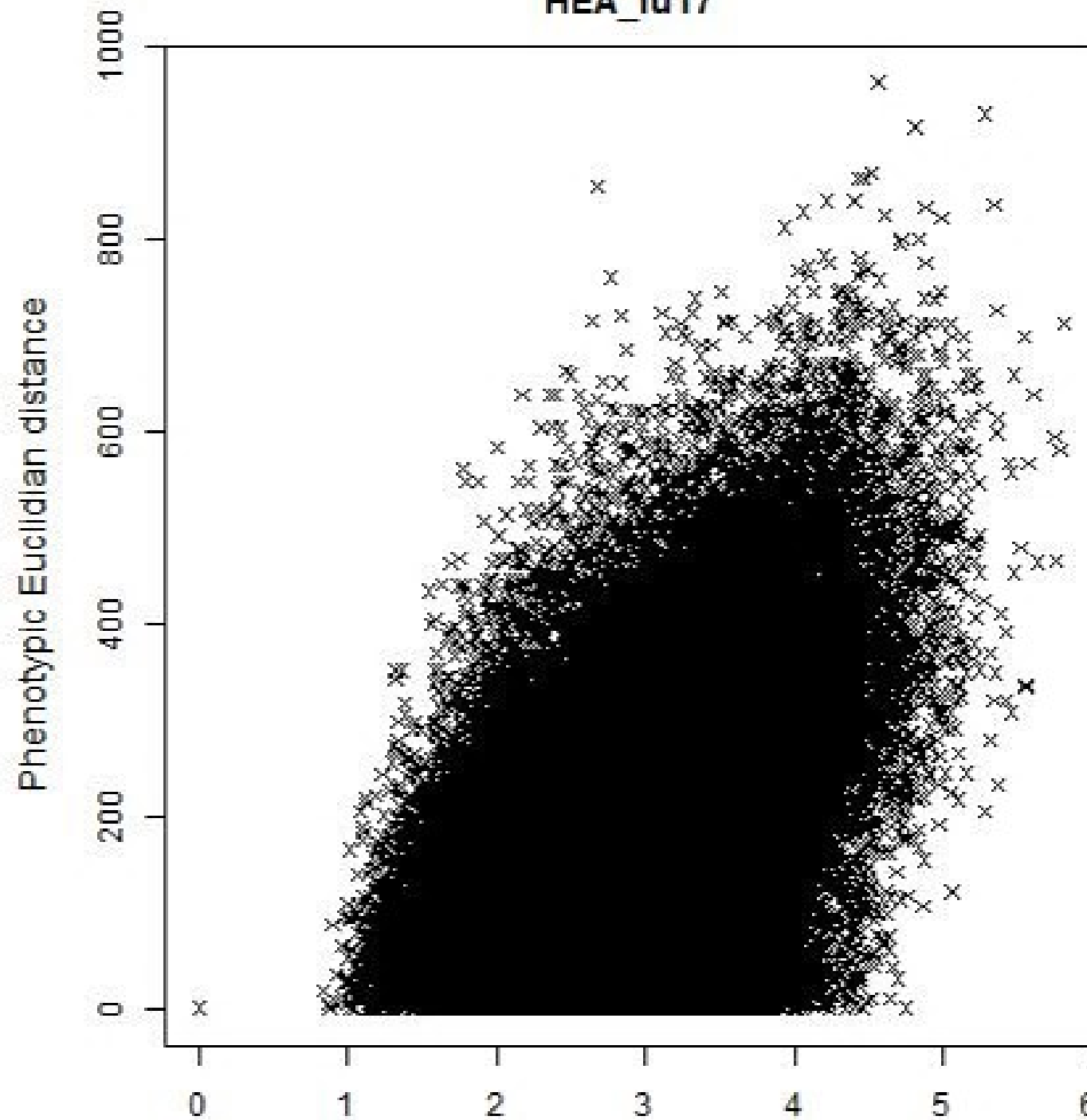
HEA_Iu16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
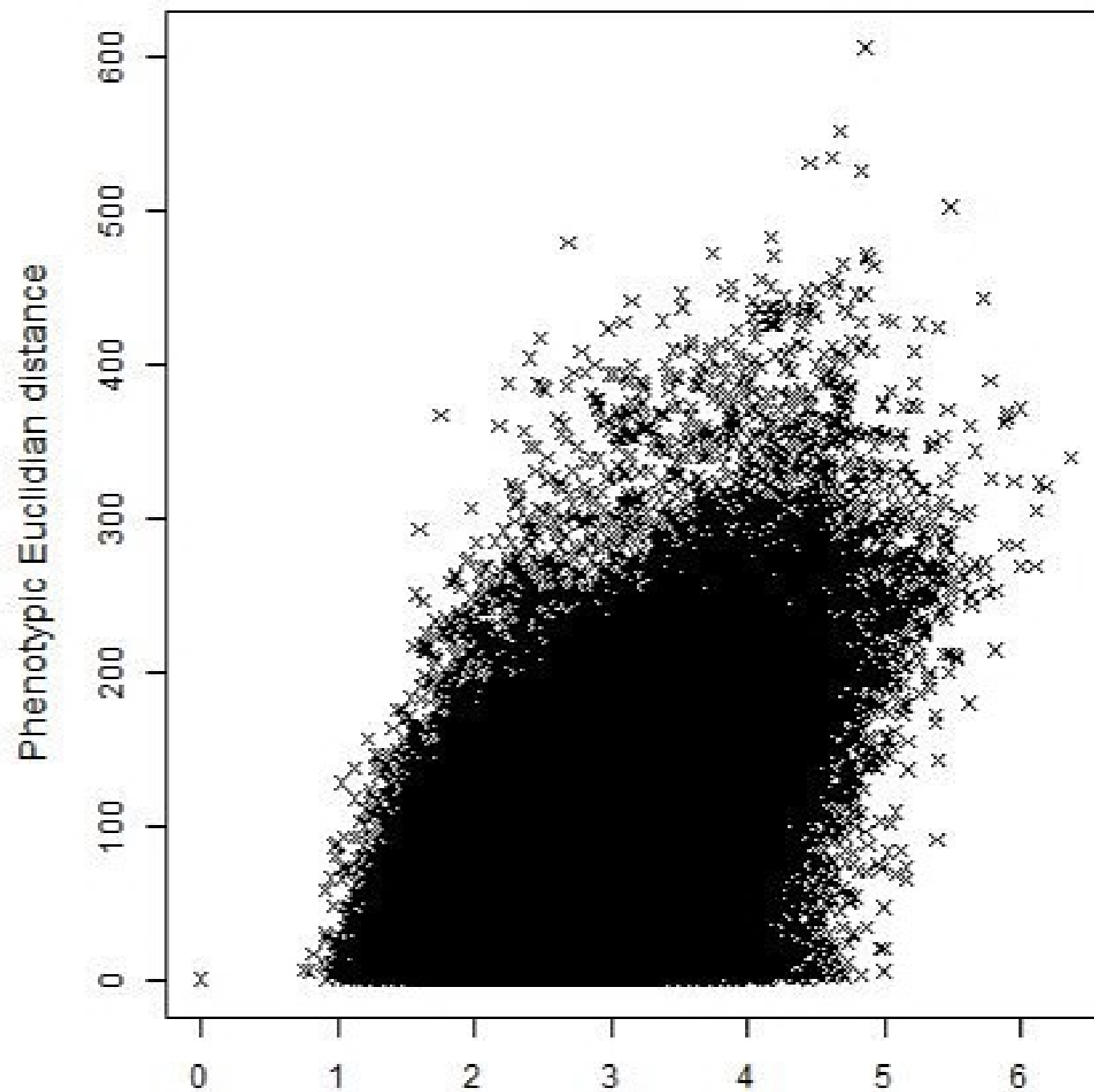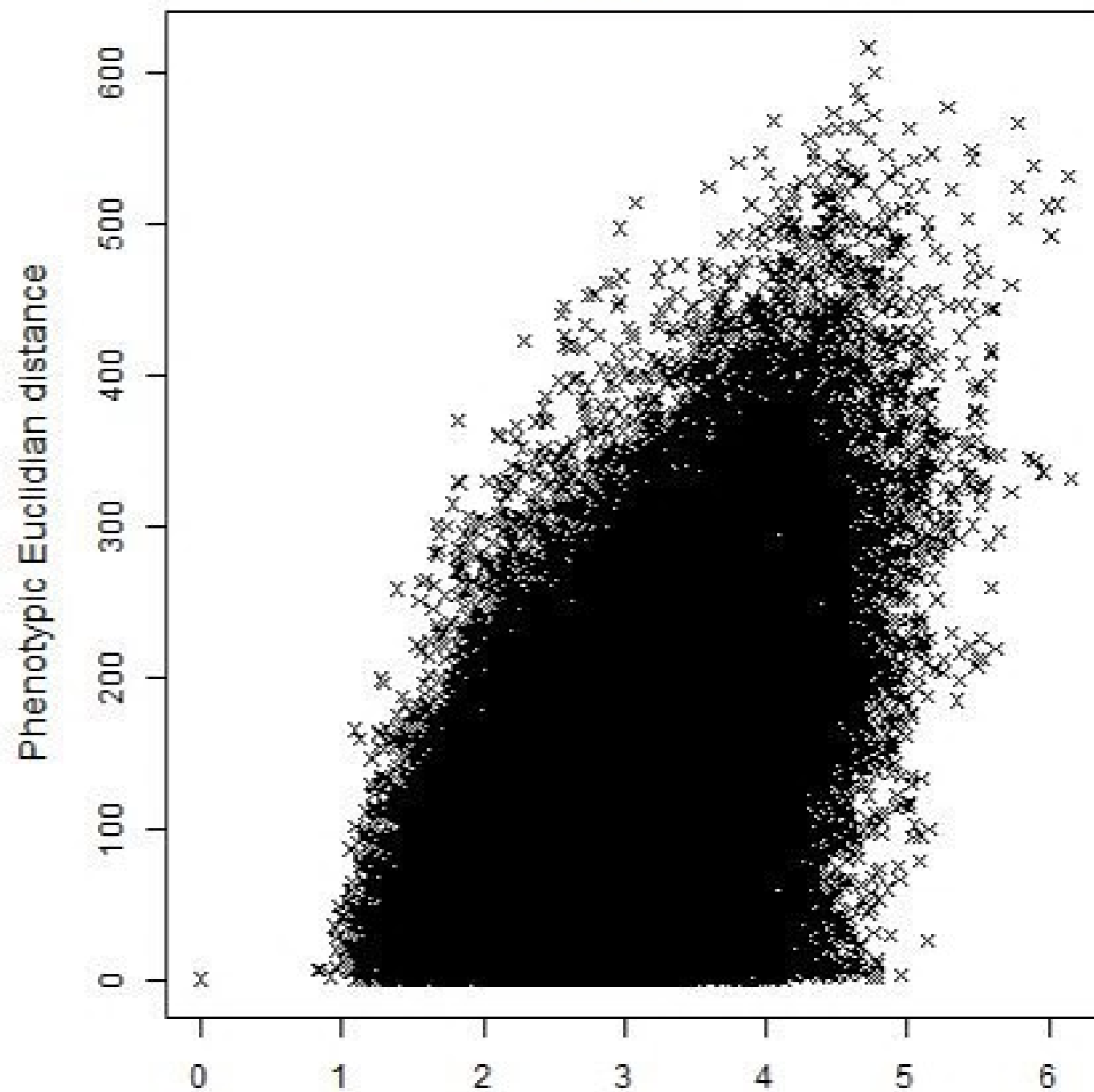
HEA_lu17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

HEA_po16

Phenotypic Euclidian distance
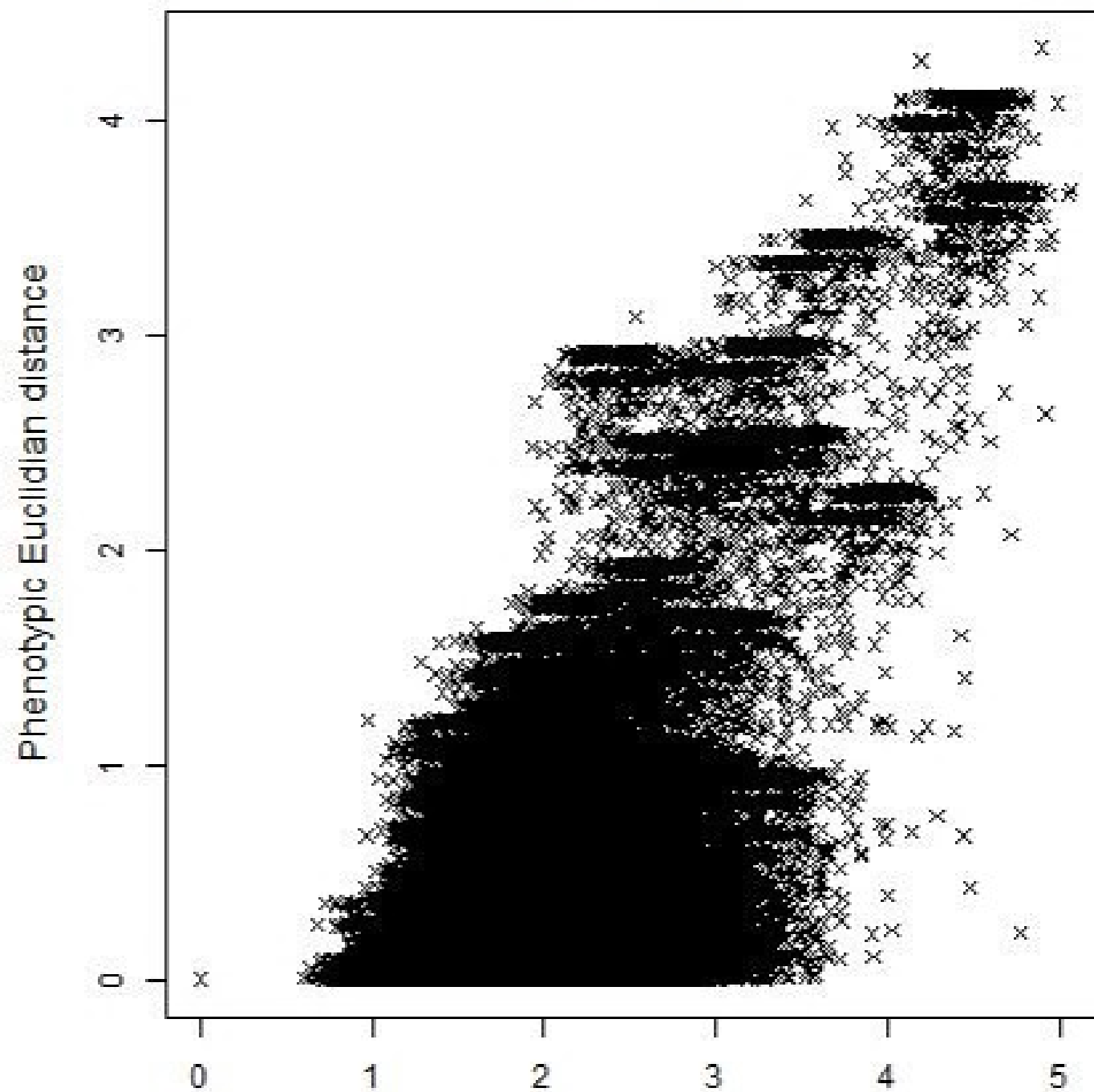
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

HEA_po17

Phenotypic Euclidian distance
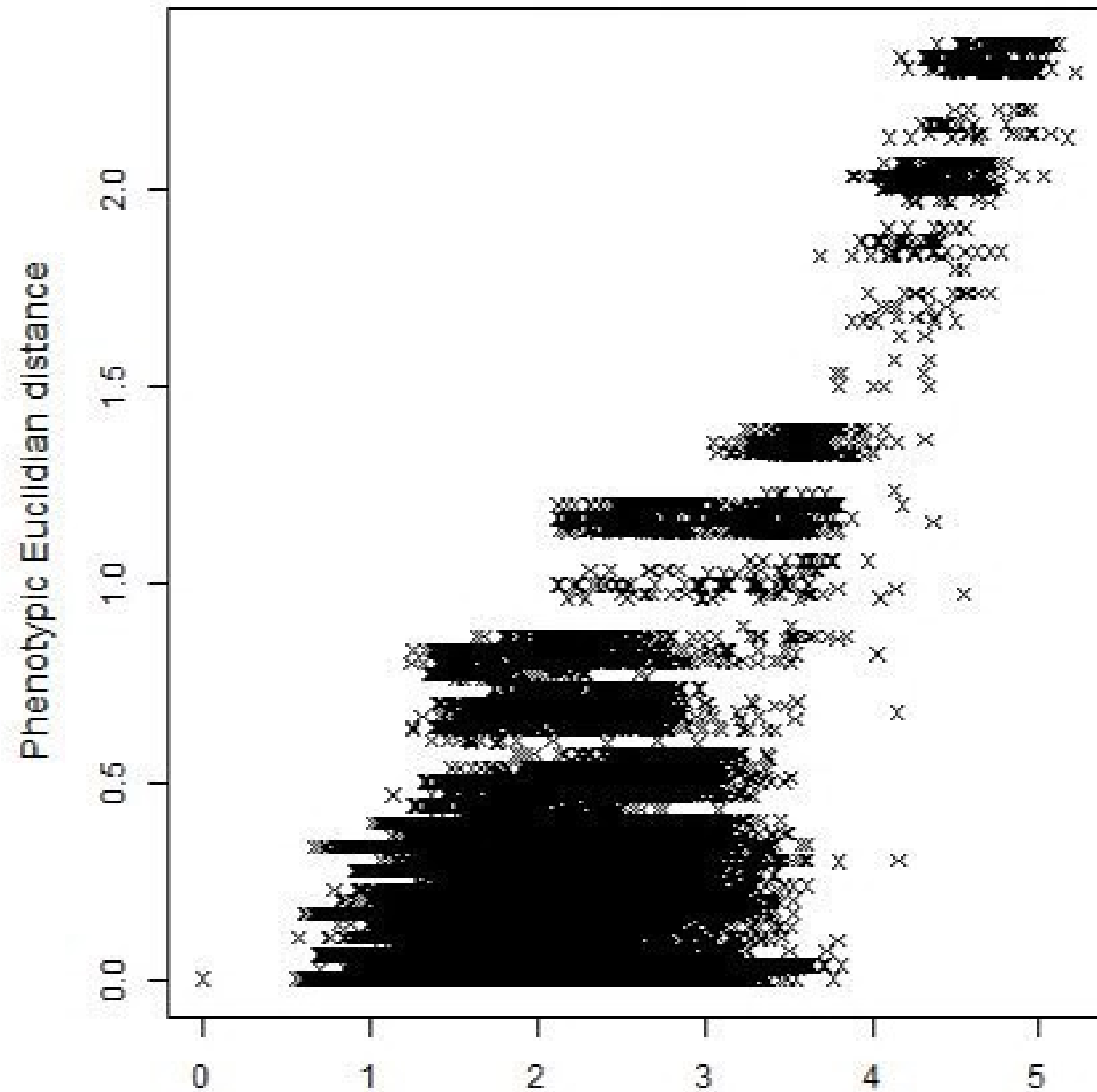
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

HFY_avg

Phenotypic Euclidian distance

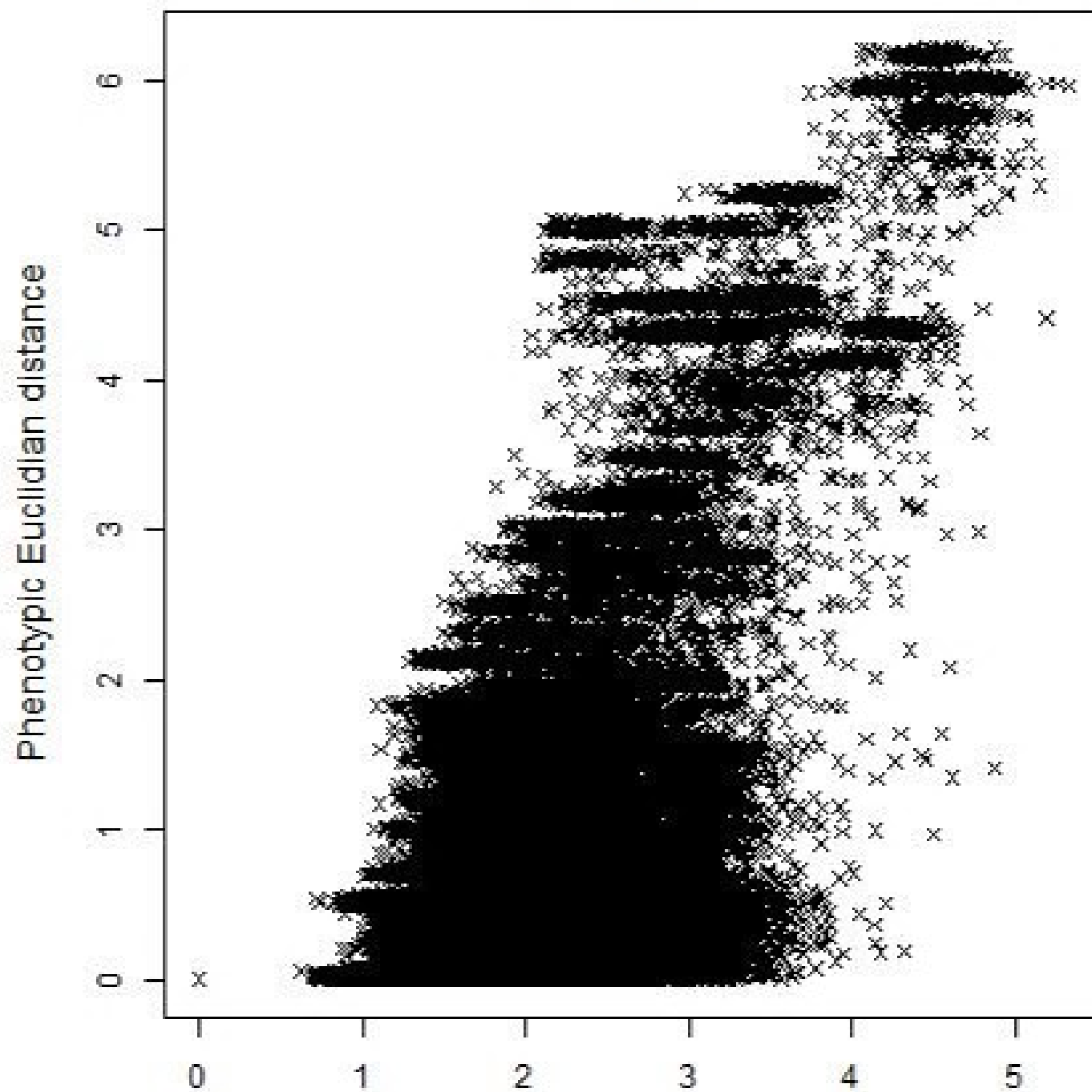Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

HFY_lu15

Phenotypic Euclidian distance

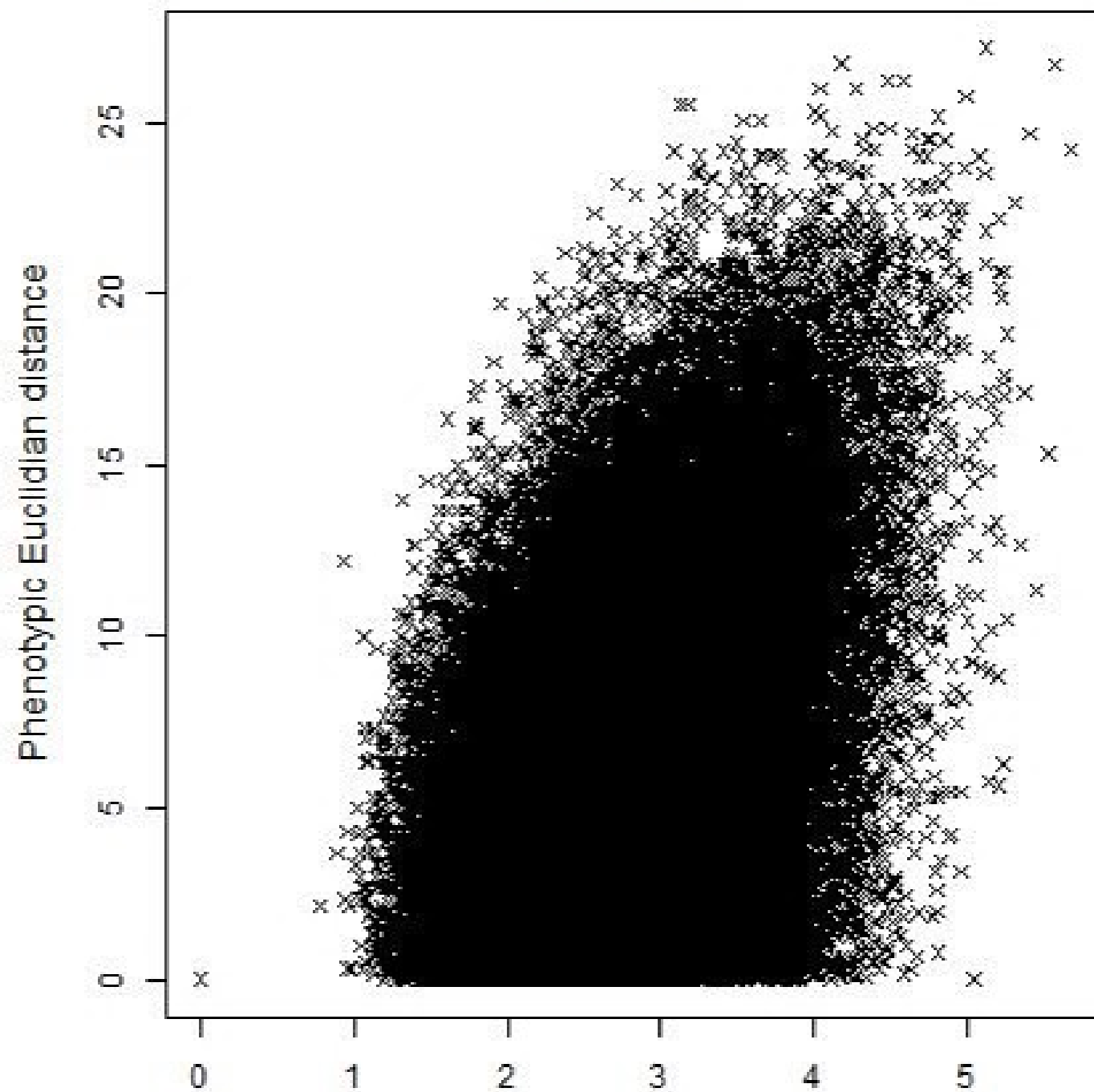Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

HFY_po15

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

HST_lu17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
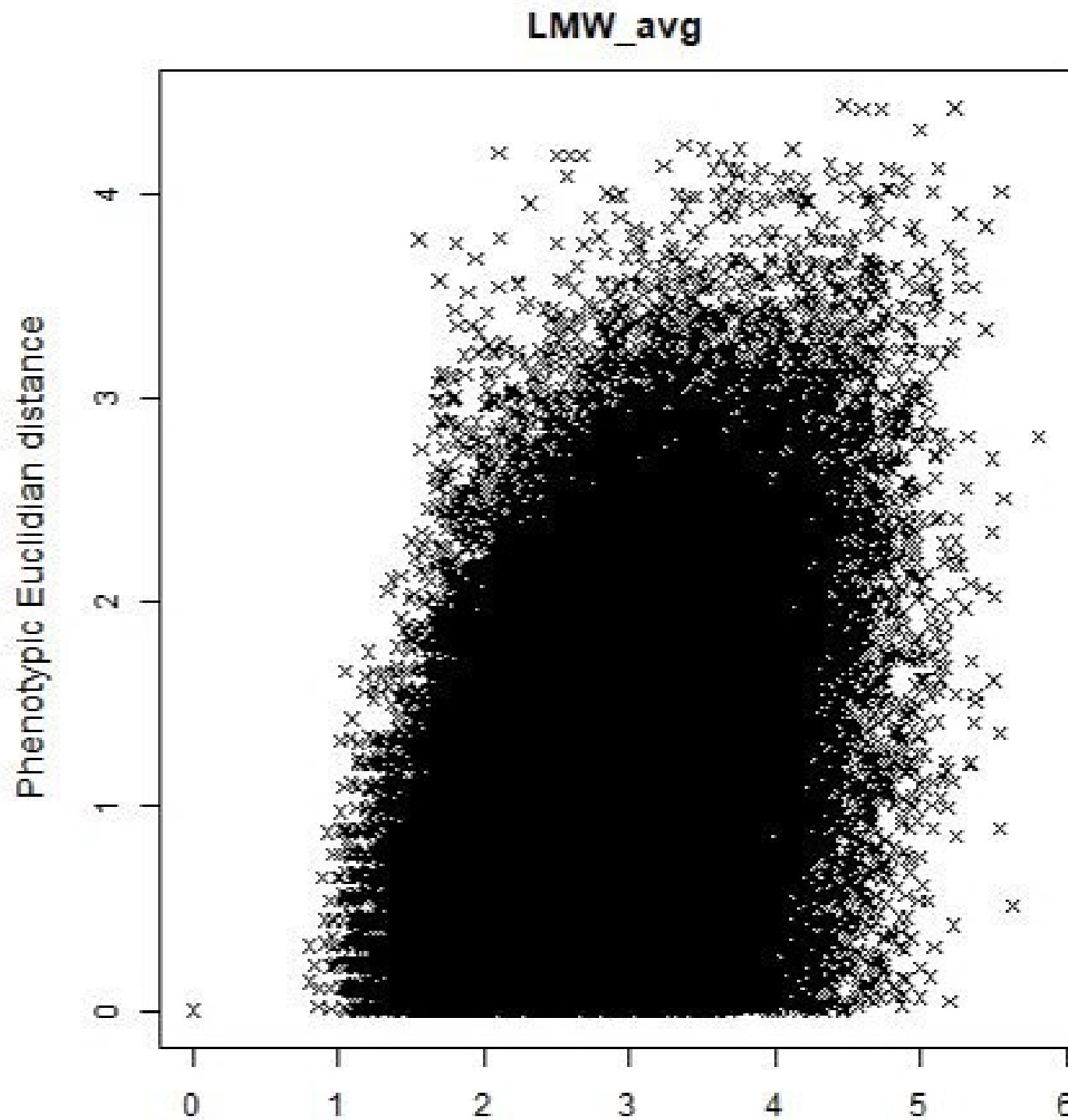
LMW_avg
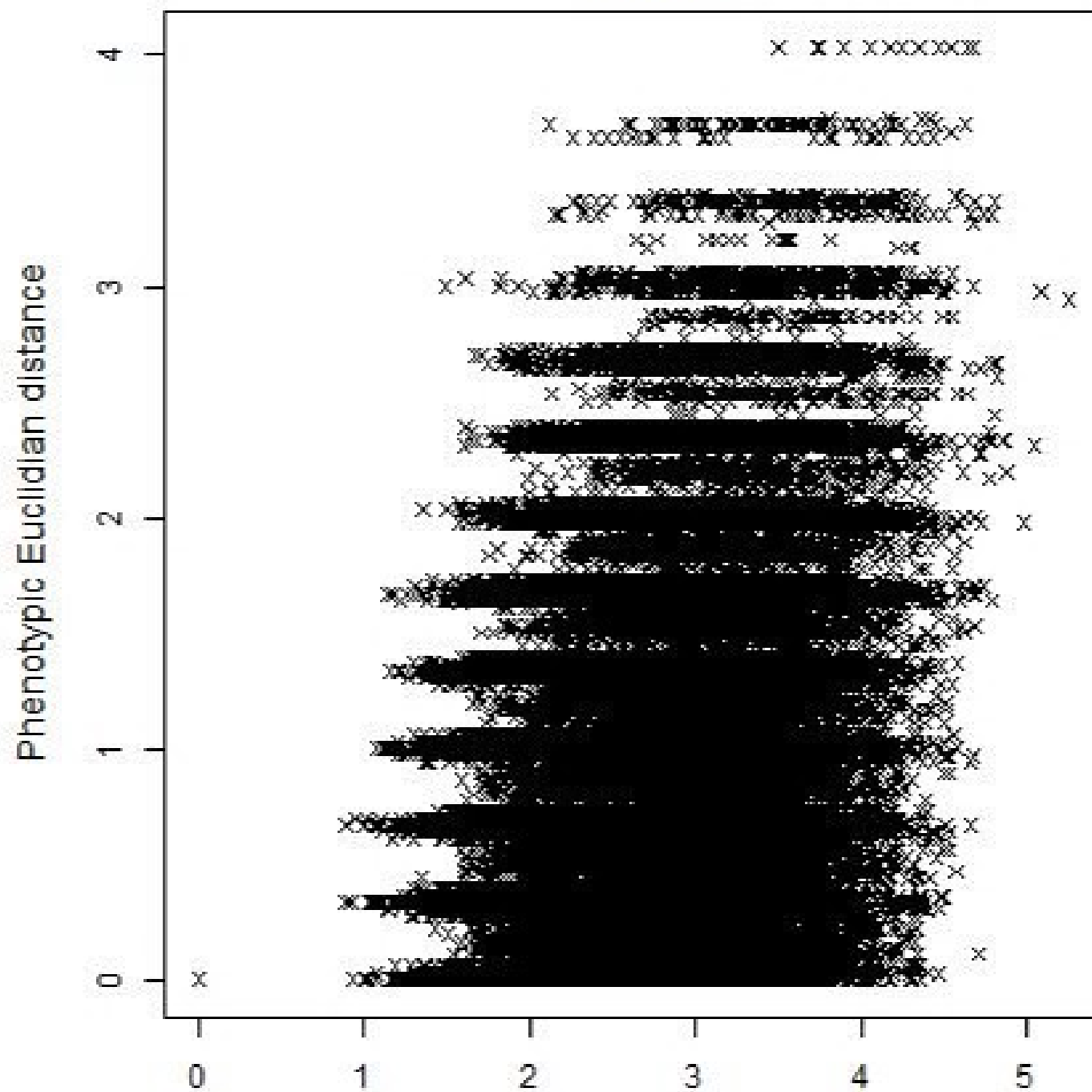
Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

LMW_lu17

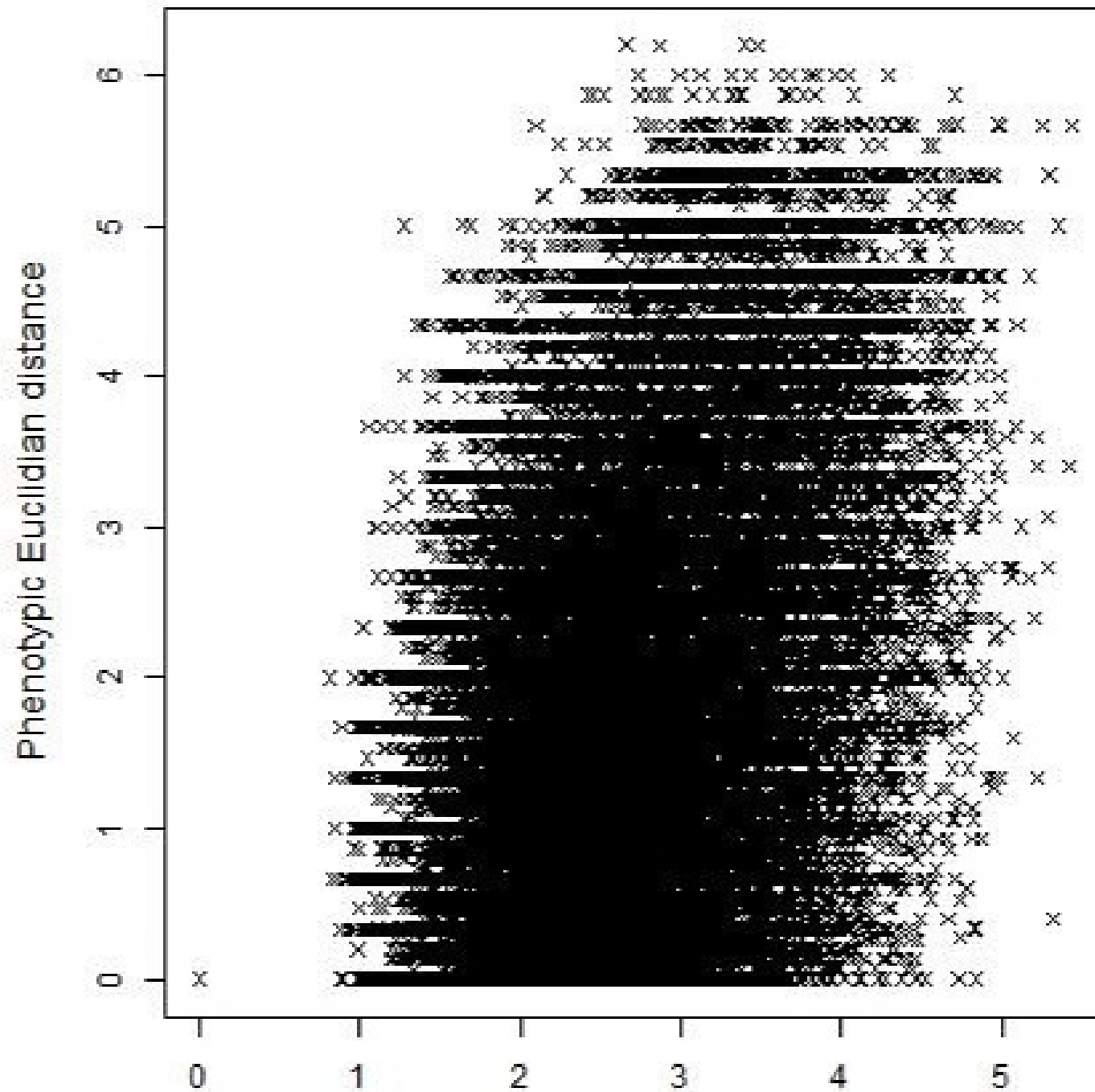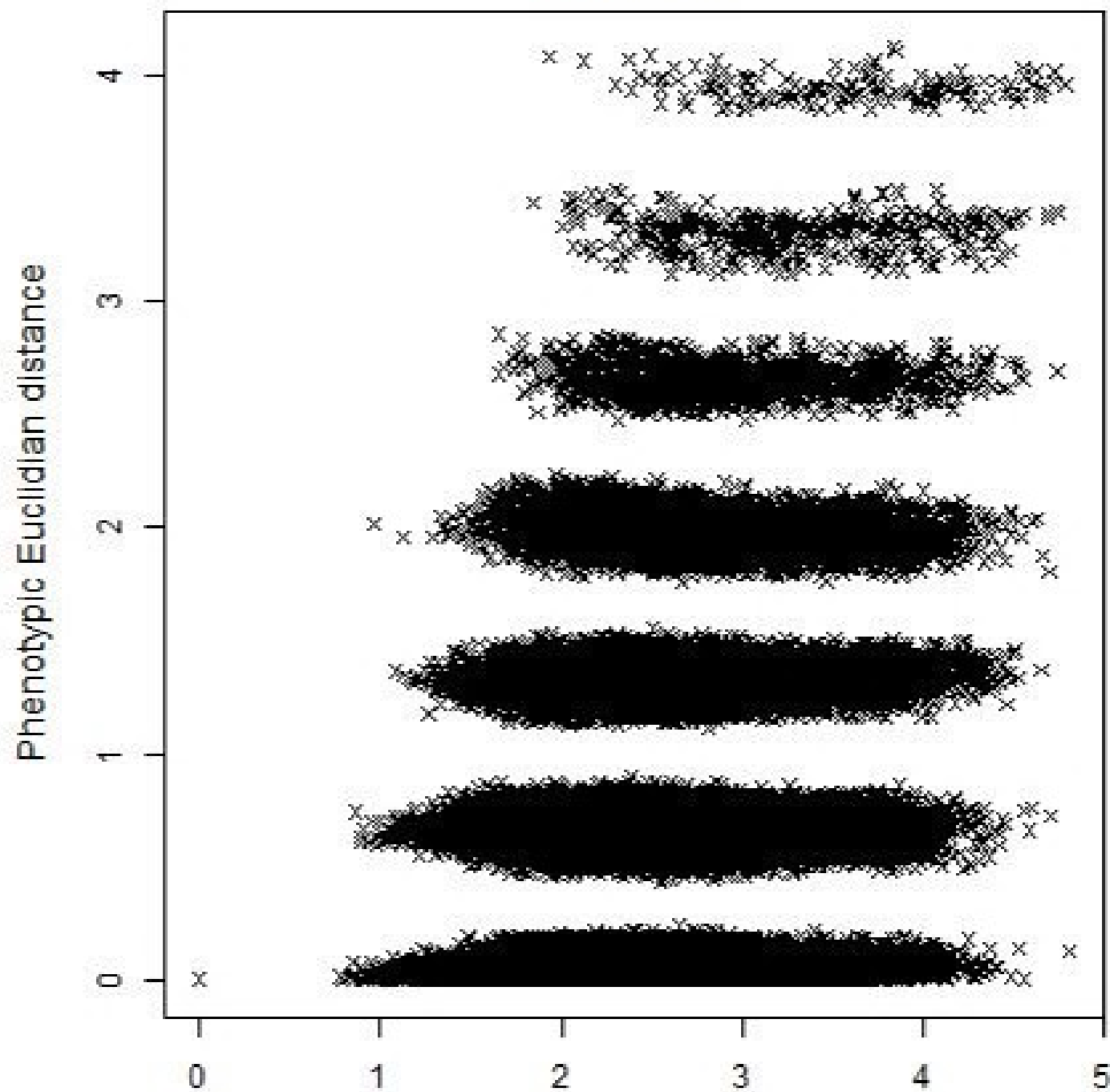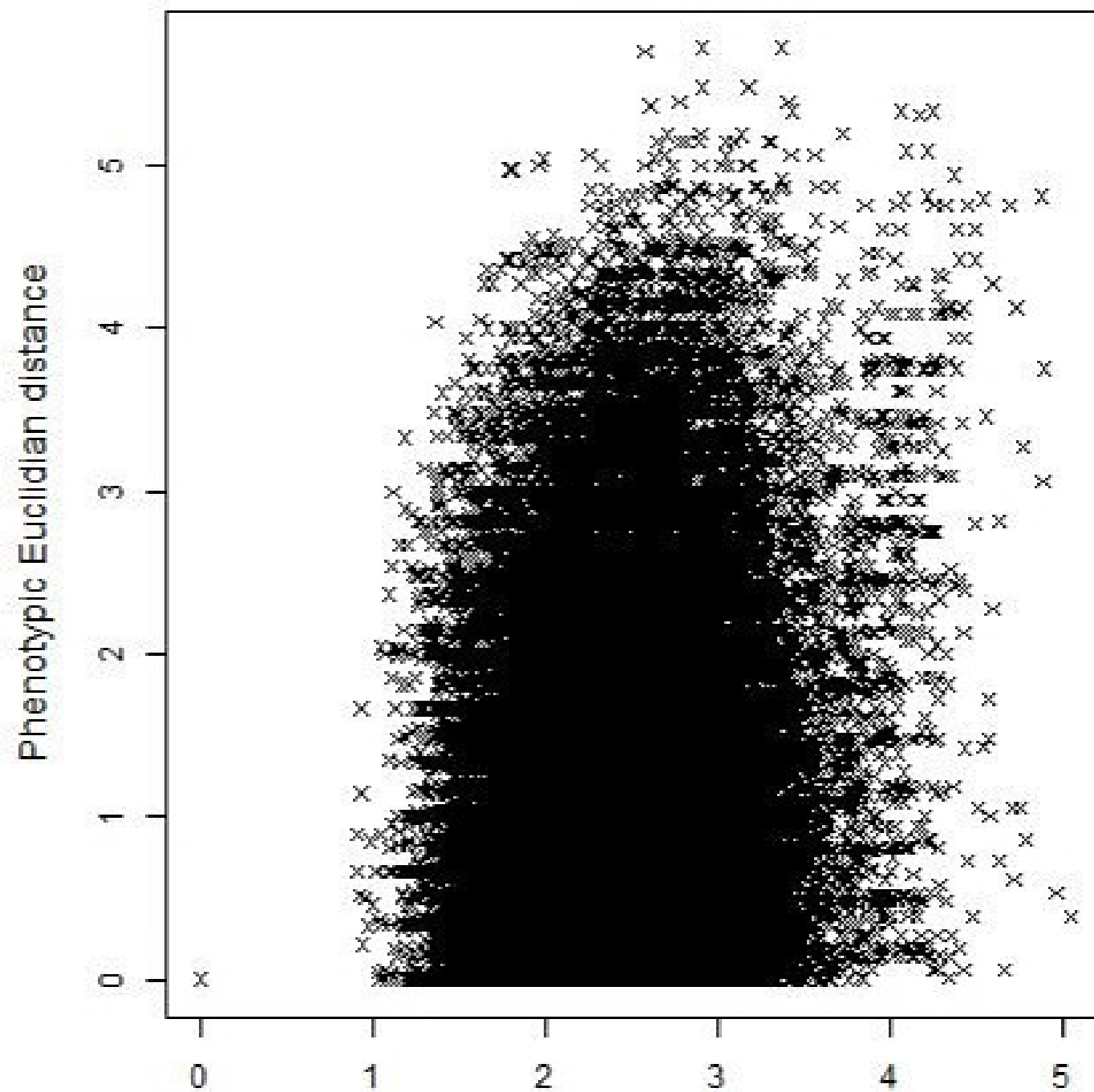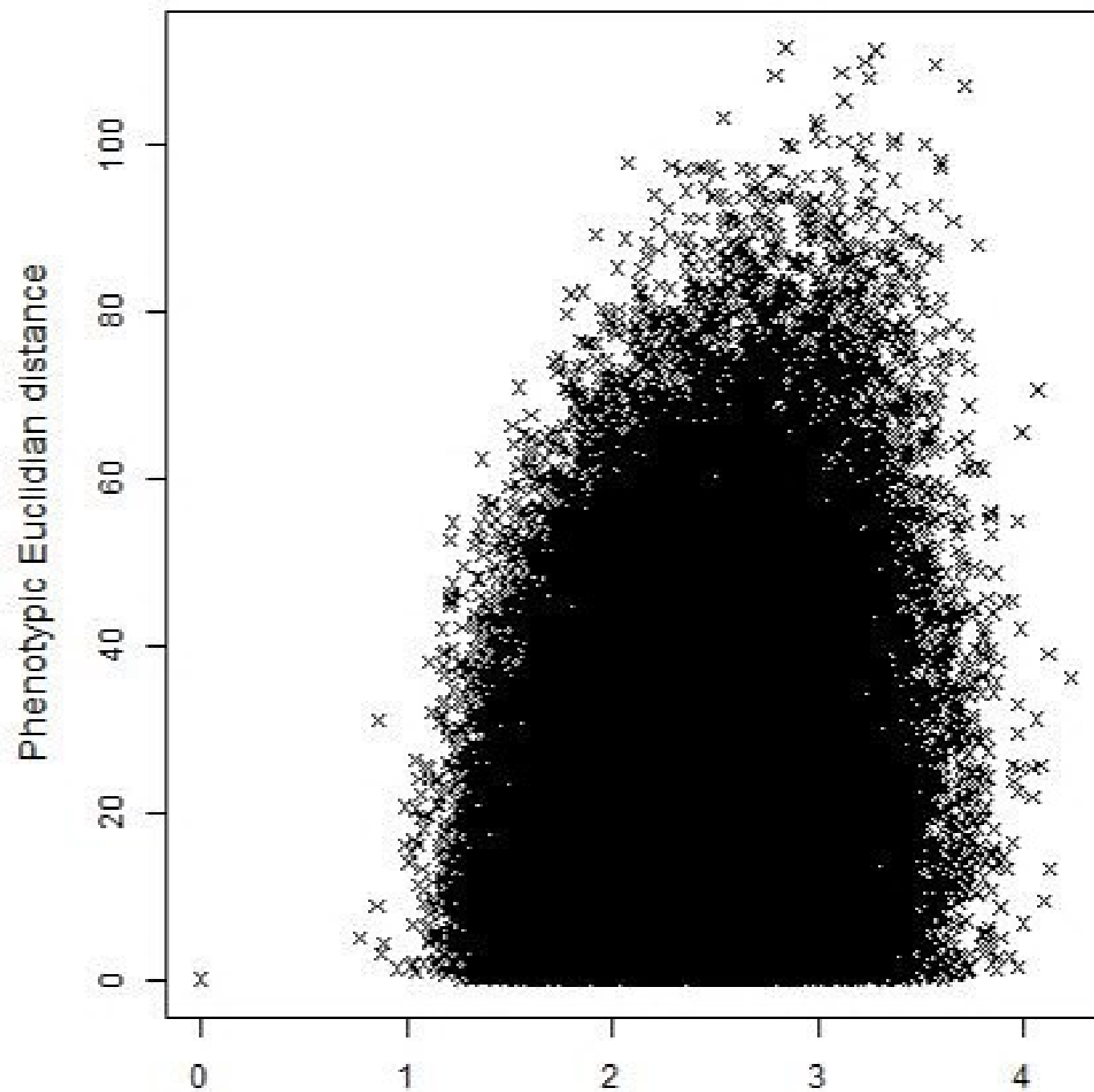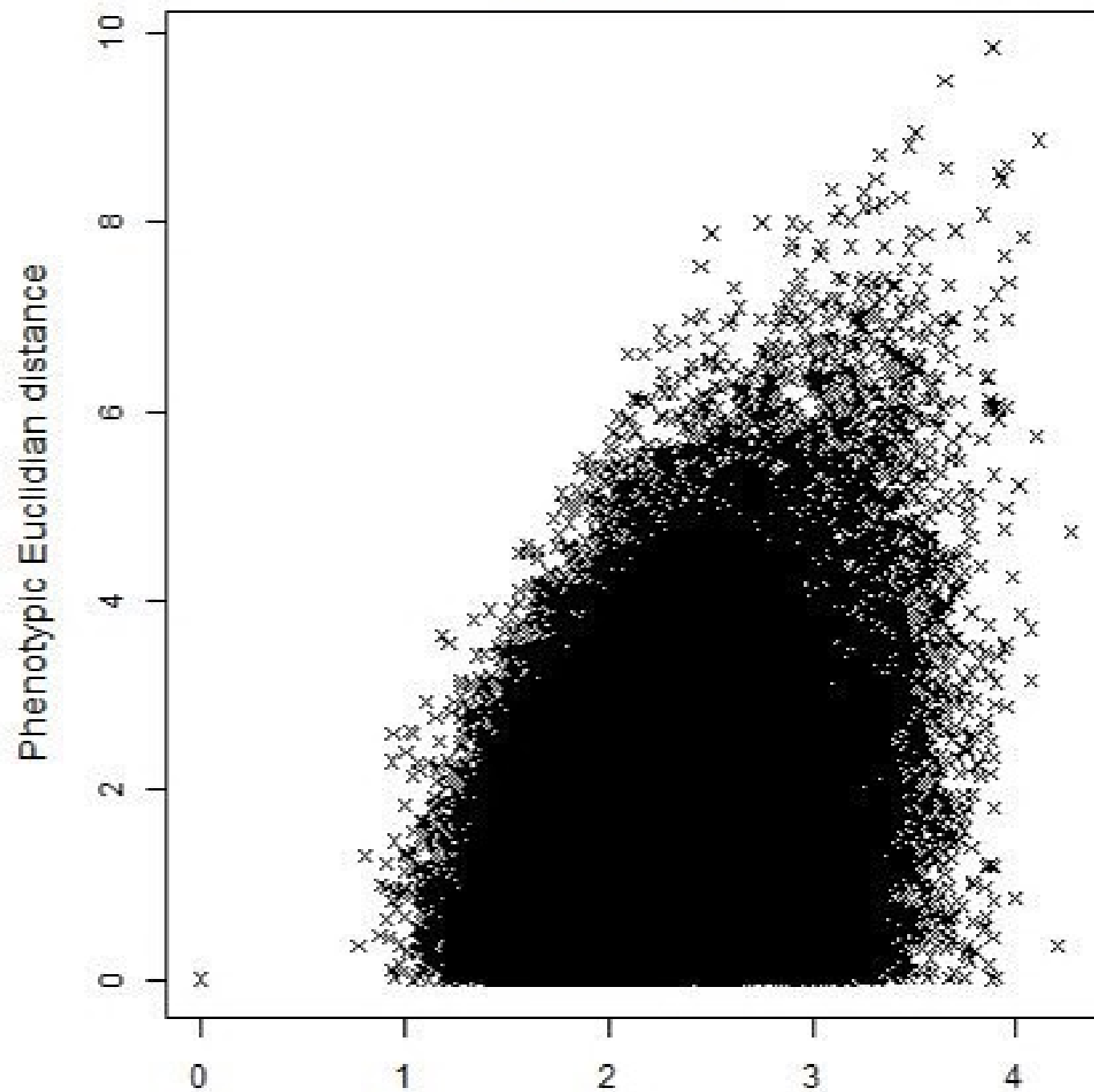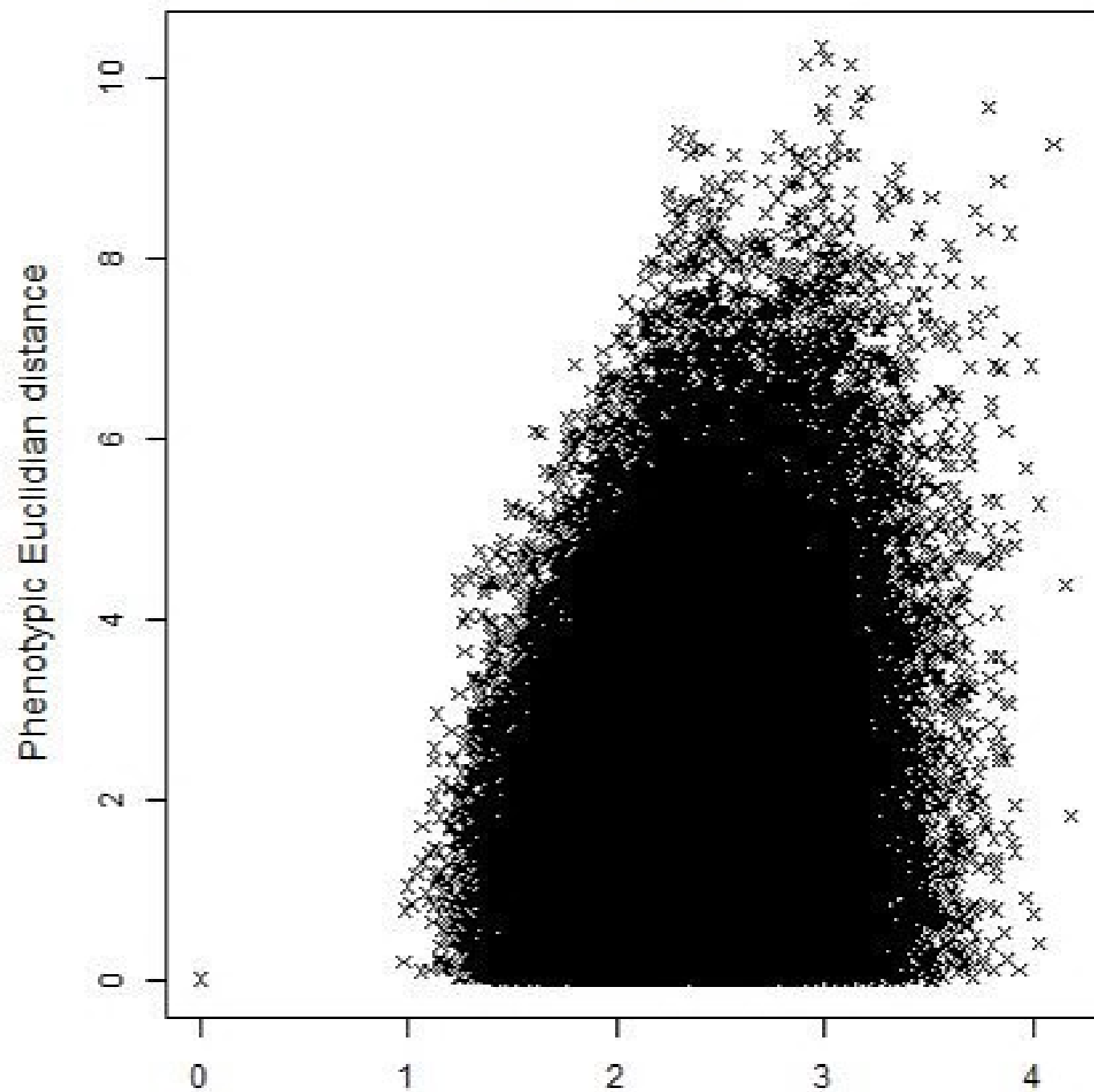Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

LMW_me16
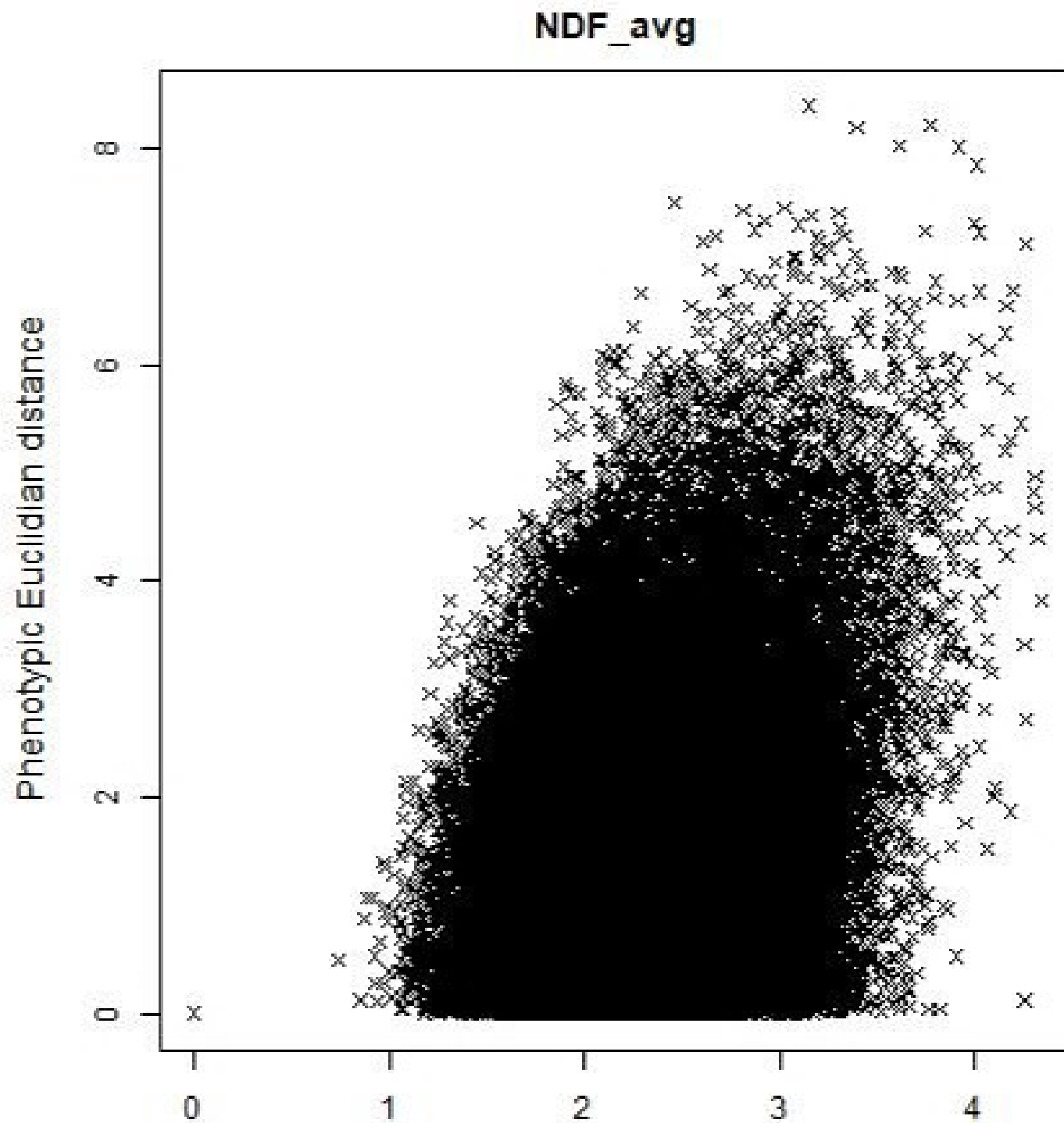
Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

LMW_po16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

LSL_lu17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

LSP_lu17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

NDF_04_me17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

NDF_10_lu17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

NDF_avg

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

NLI_lu16

Phenotypic Euclidian distance
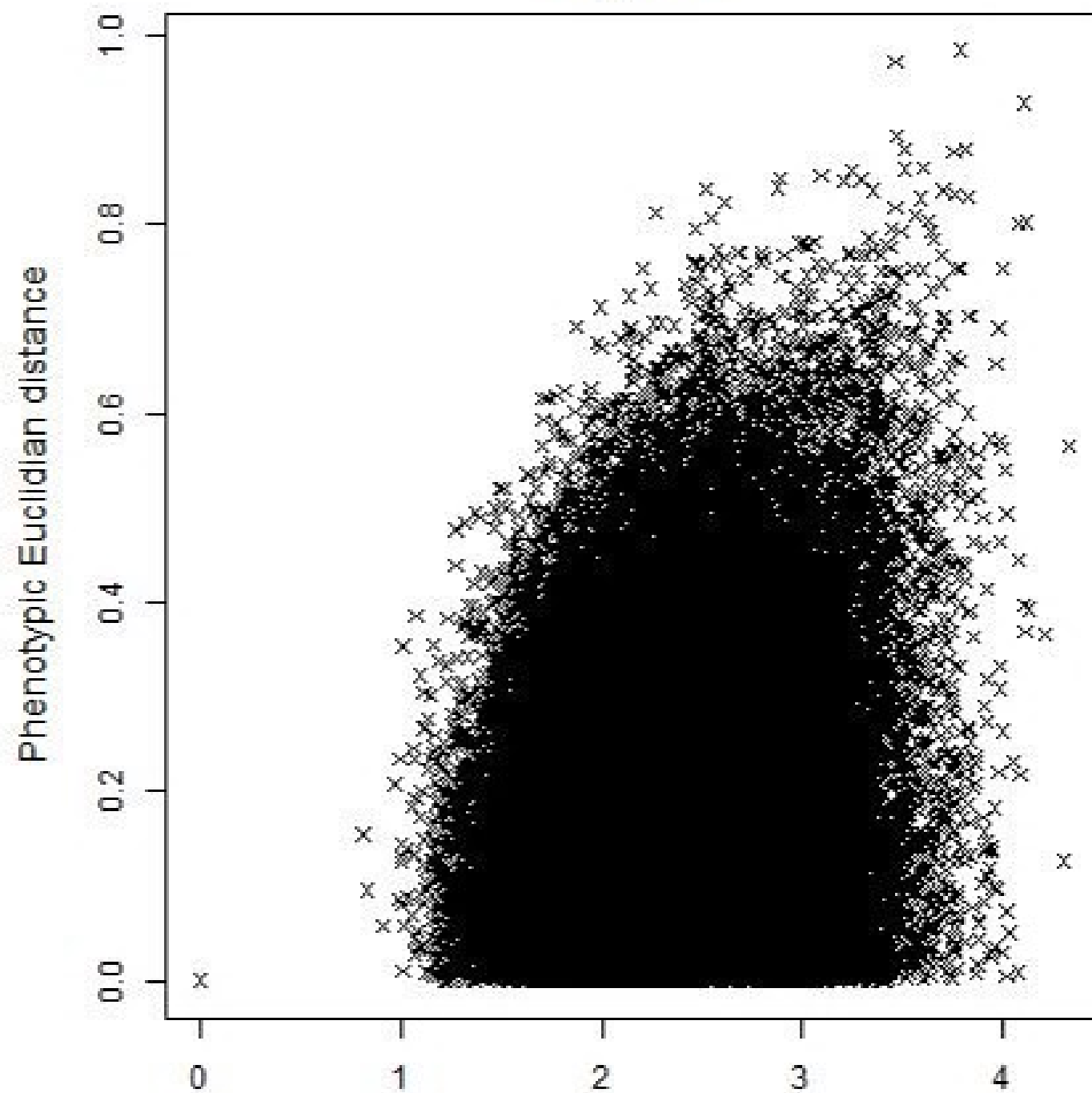
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
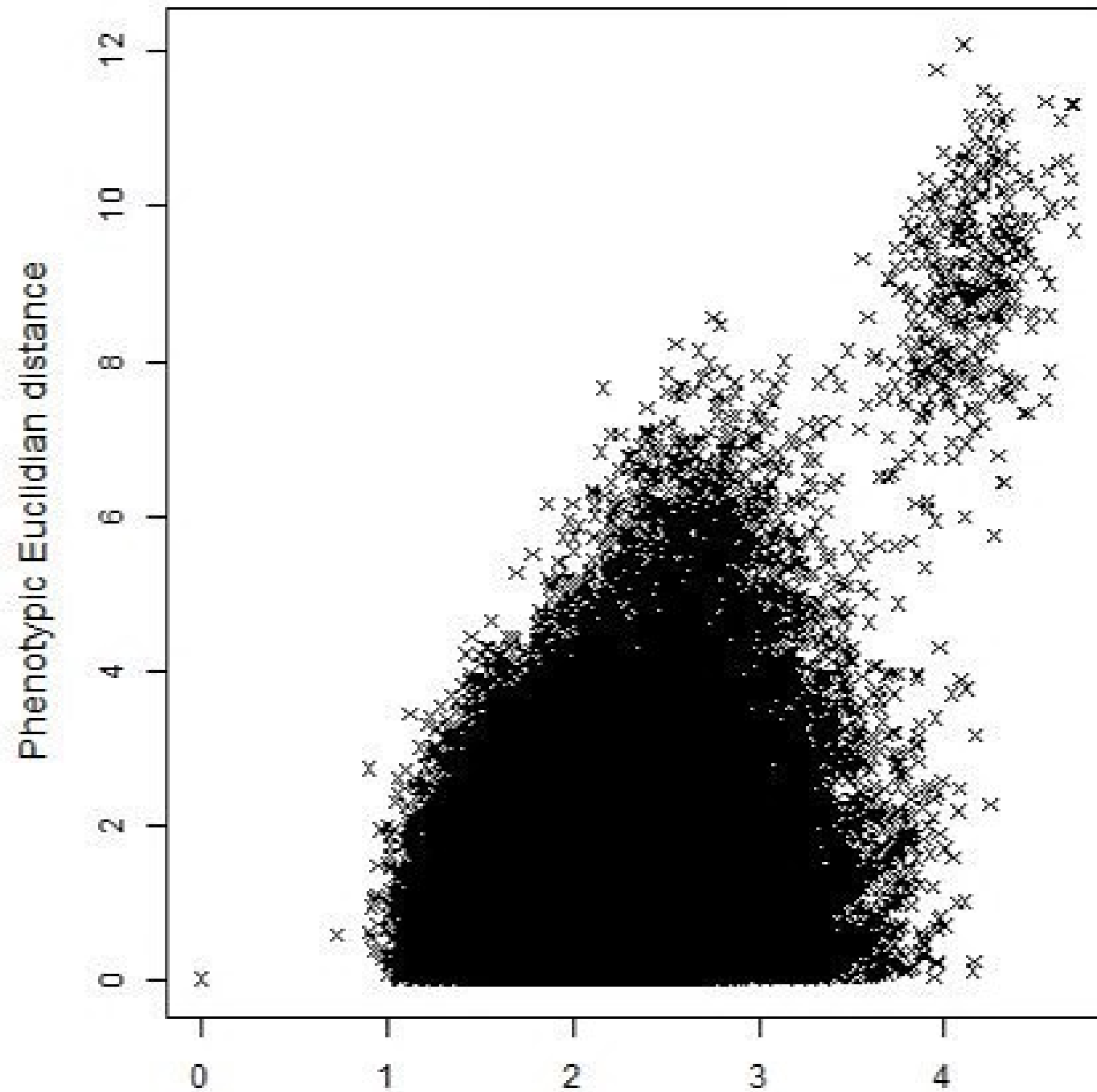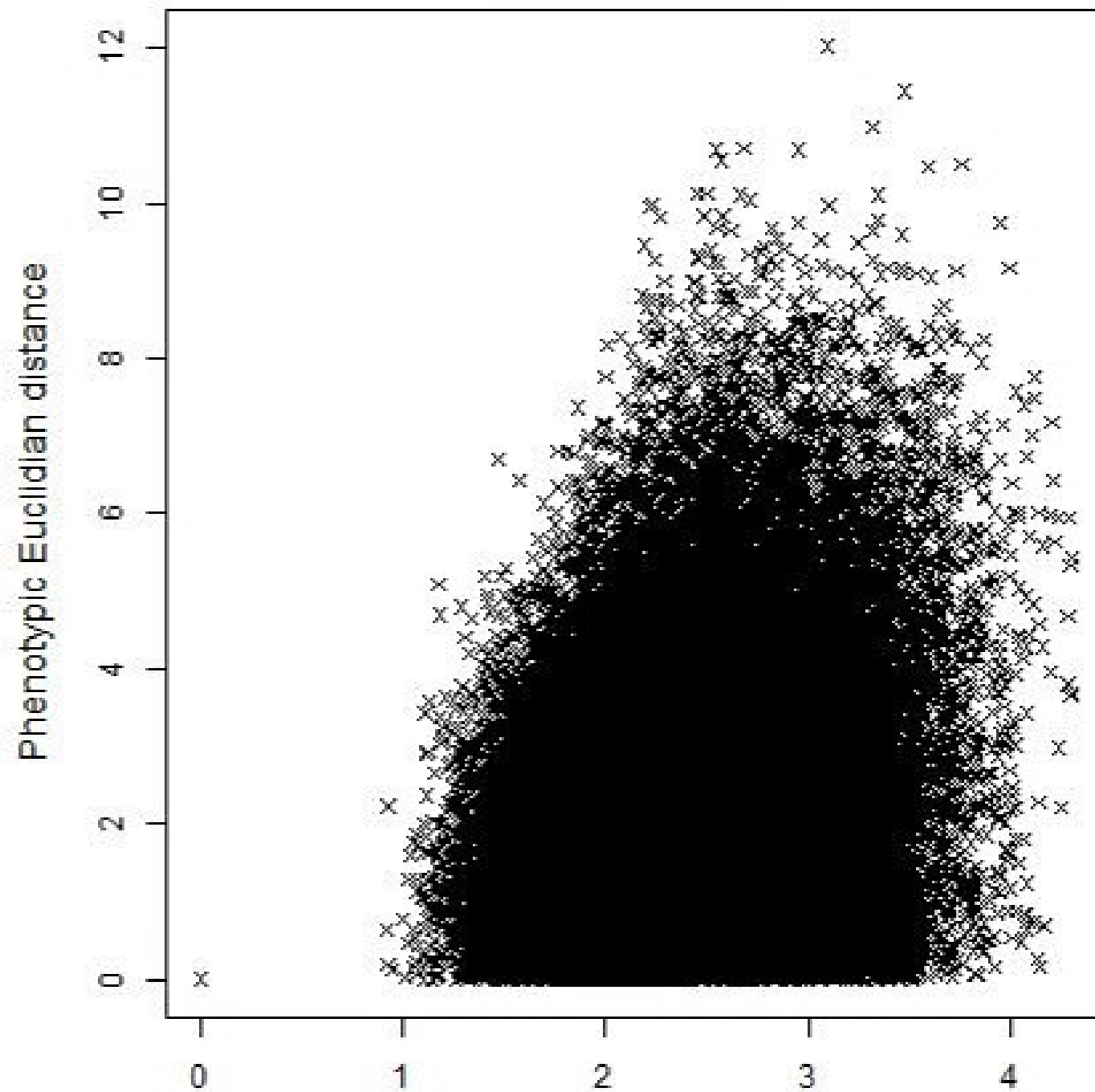
NSL_lu17

Phenotypic Euclidian distance
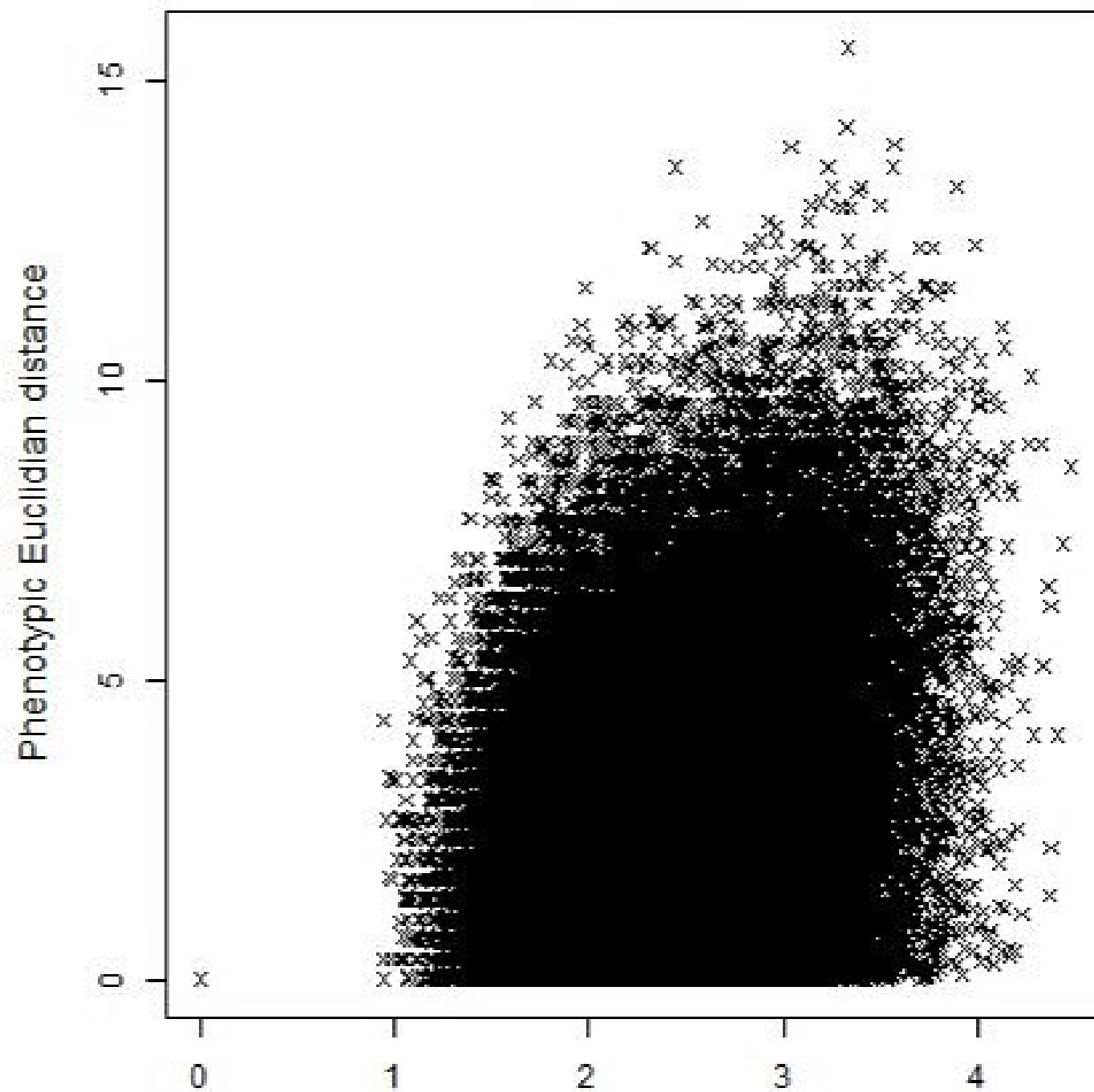
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
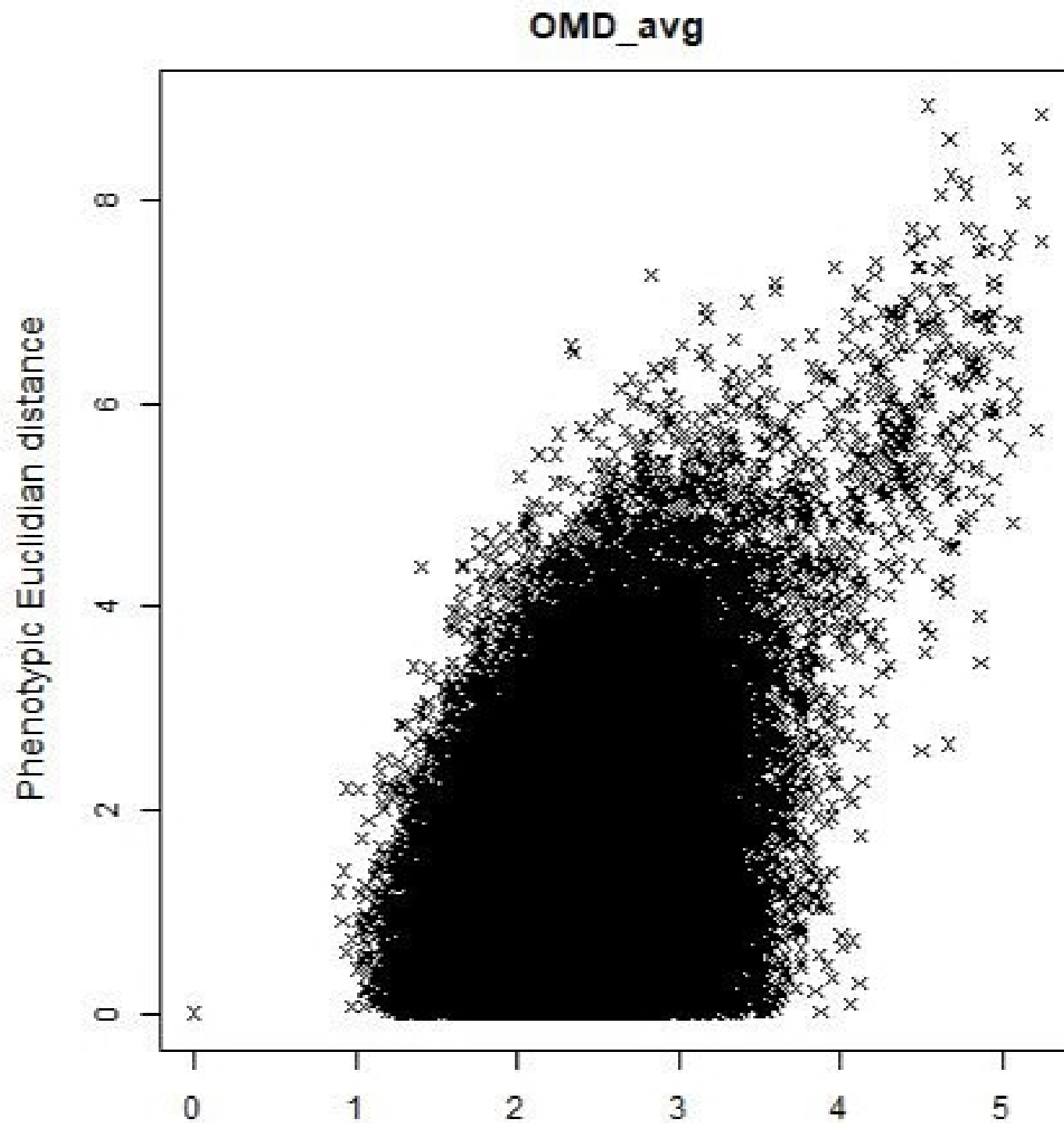
OMD_04_me17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

OMD_10_me17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
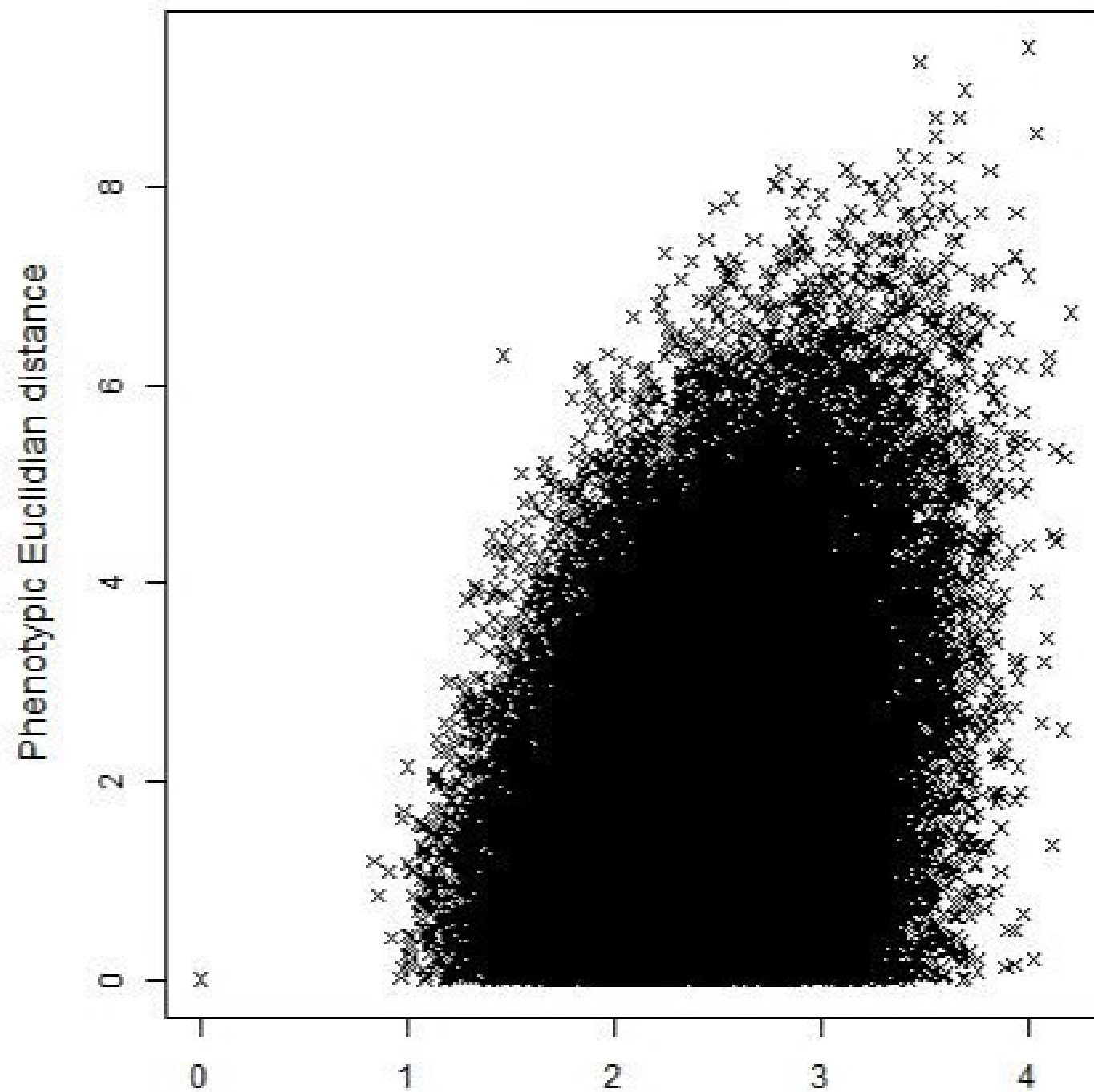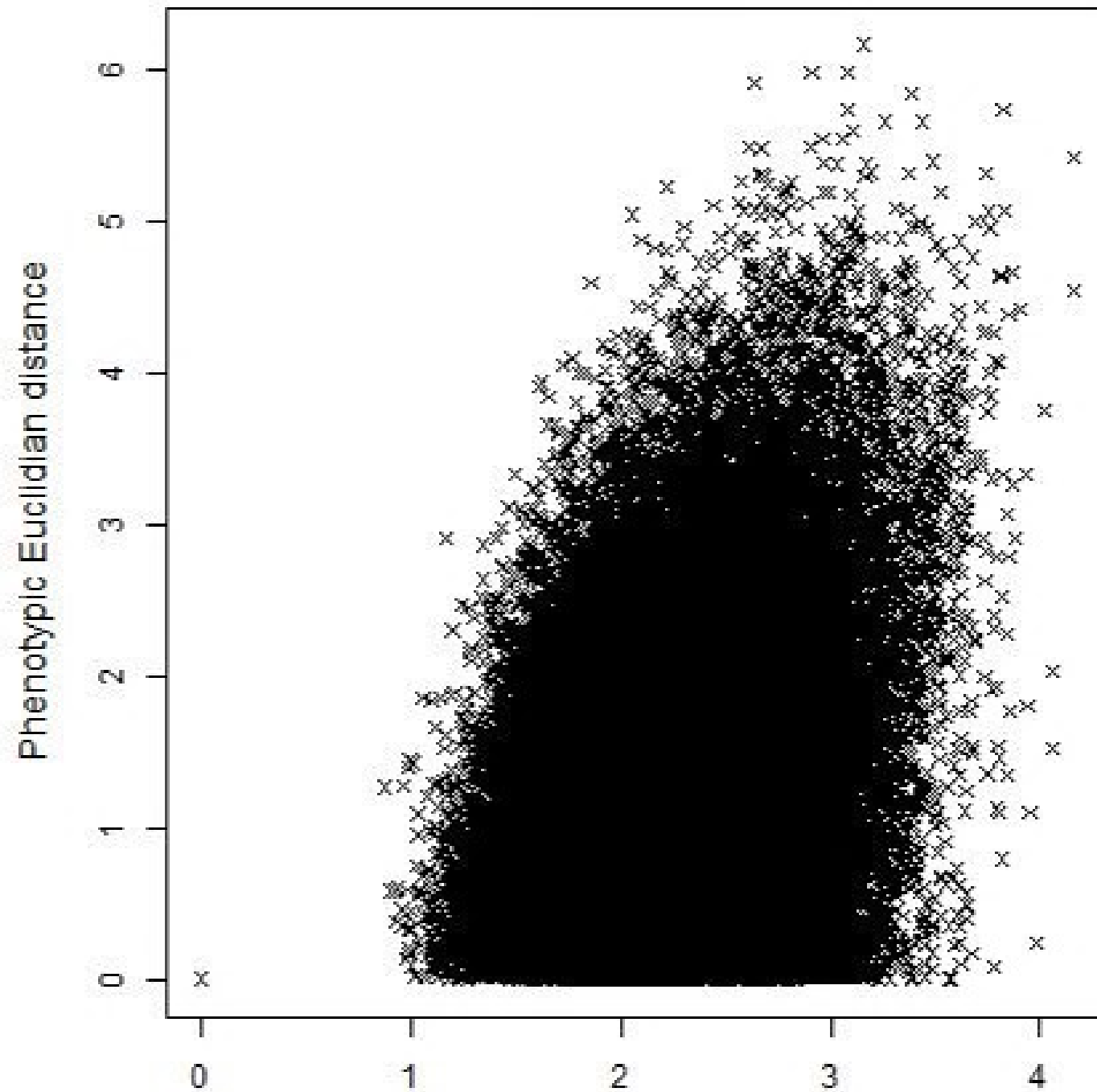
OMD_avg

Phenotypic Euclidian distance (y-axis)

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

PRT_04_me17

Phenotypic Euclidian distance
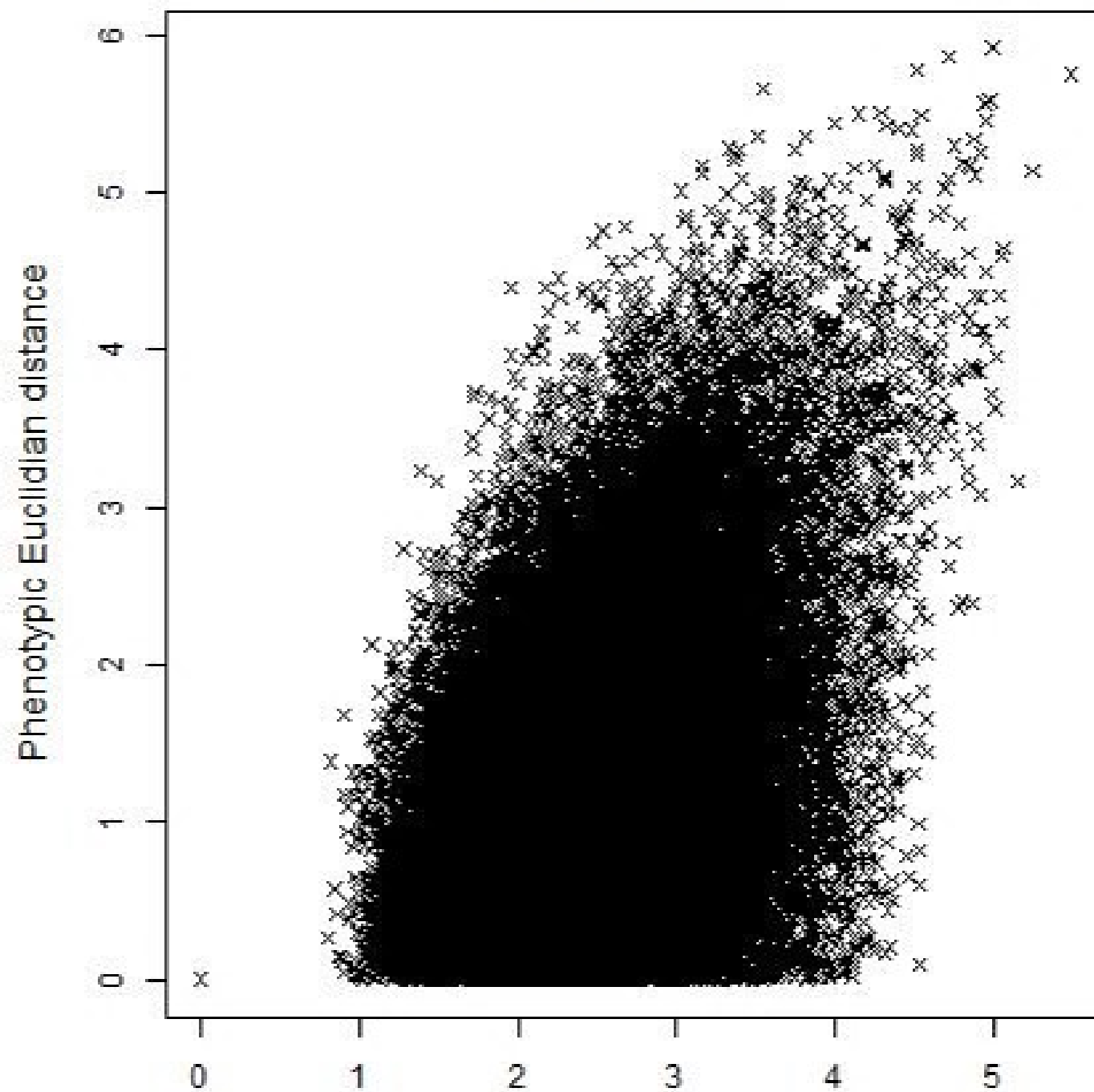
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

PRT_10_me17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

PRT_avg

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

RAS_avg

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
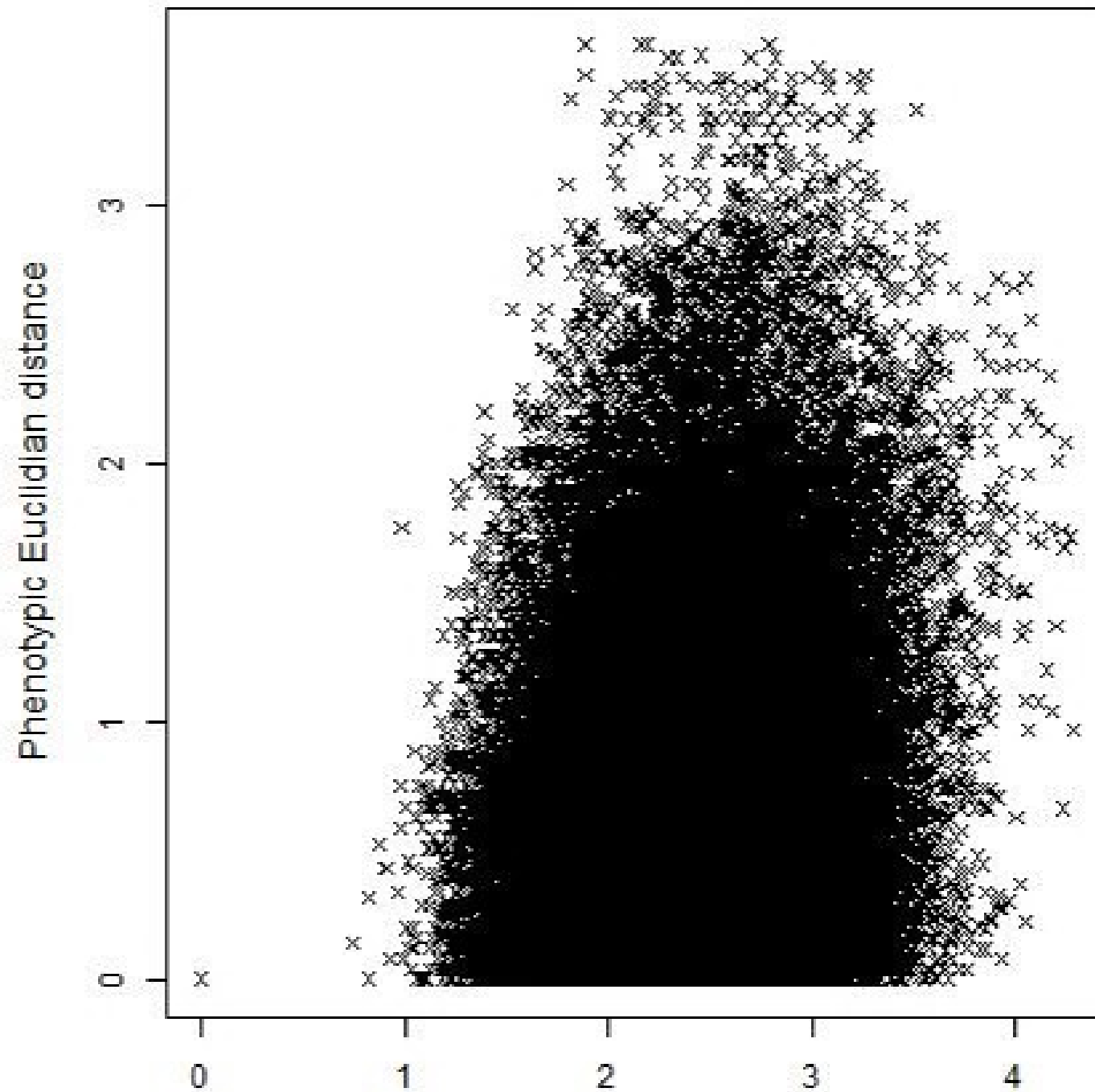
RAS_lu15

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
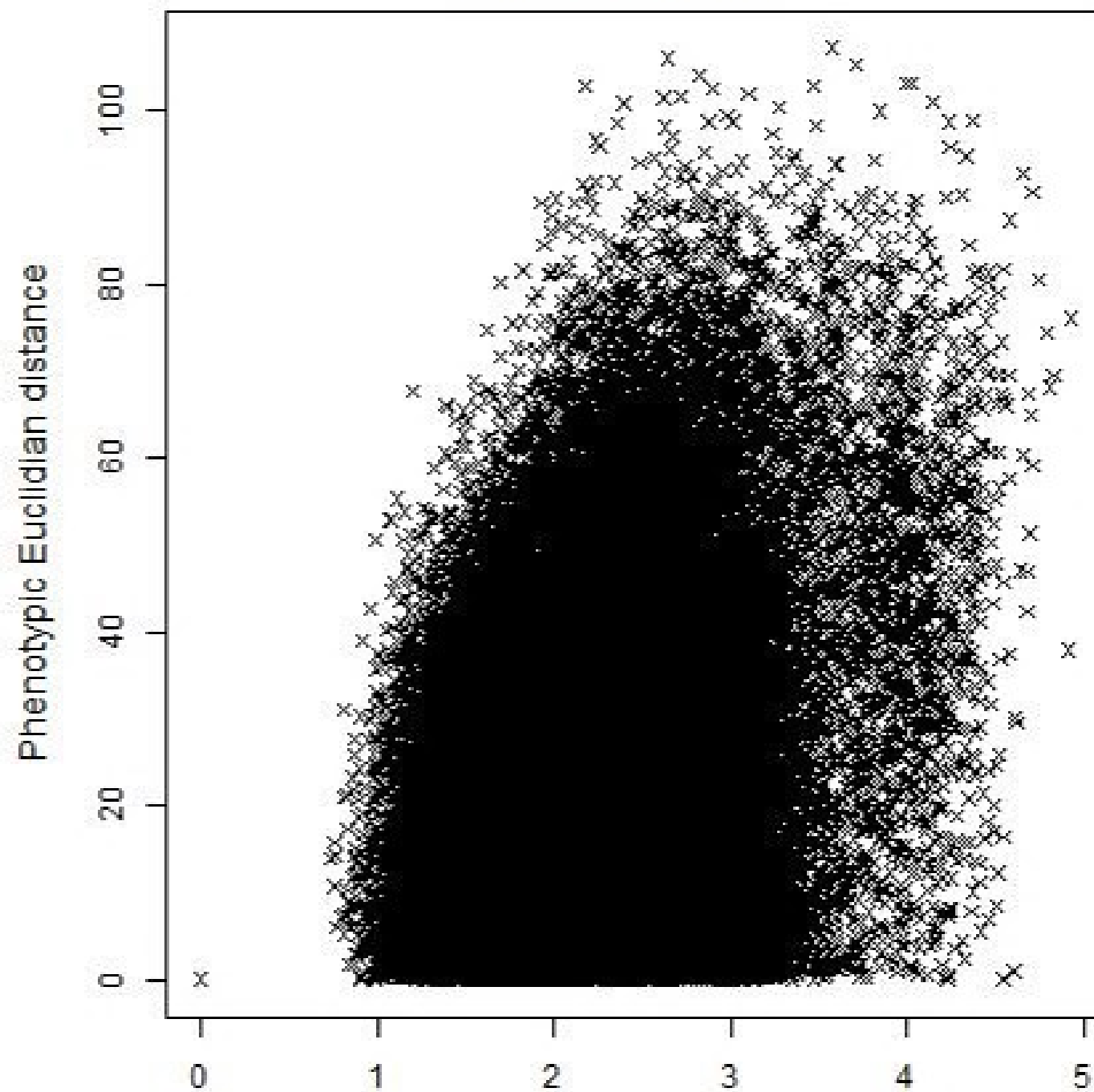
RAS_me15

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
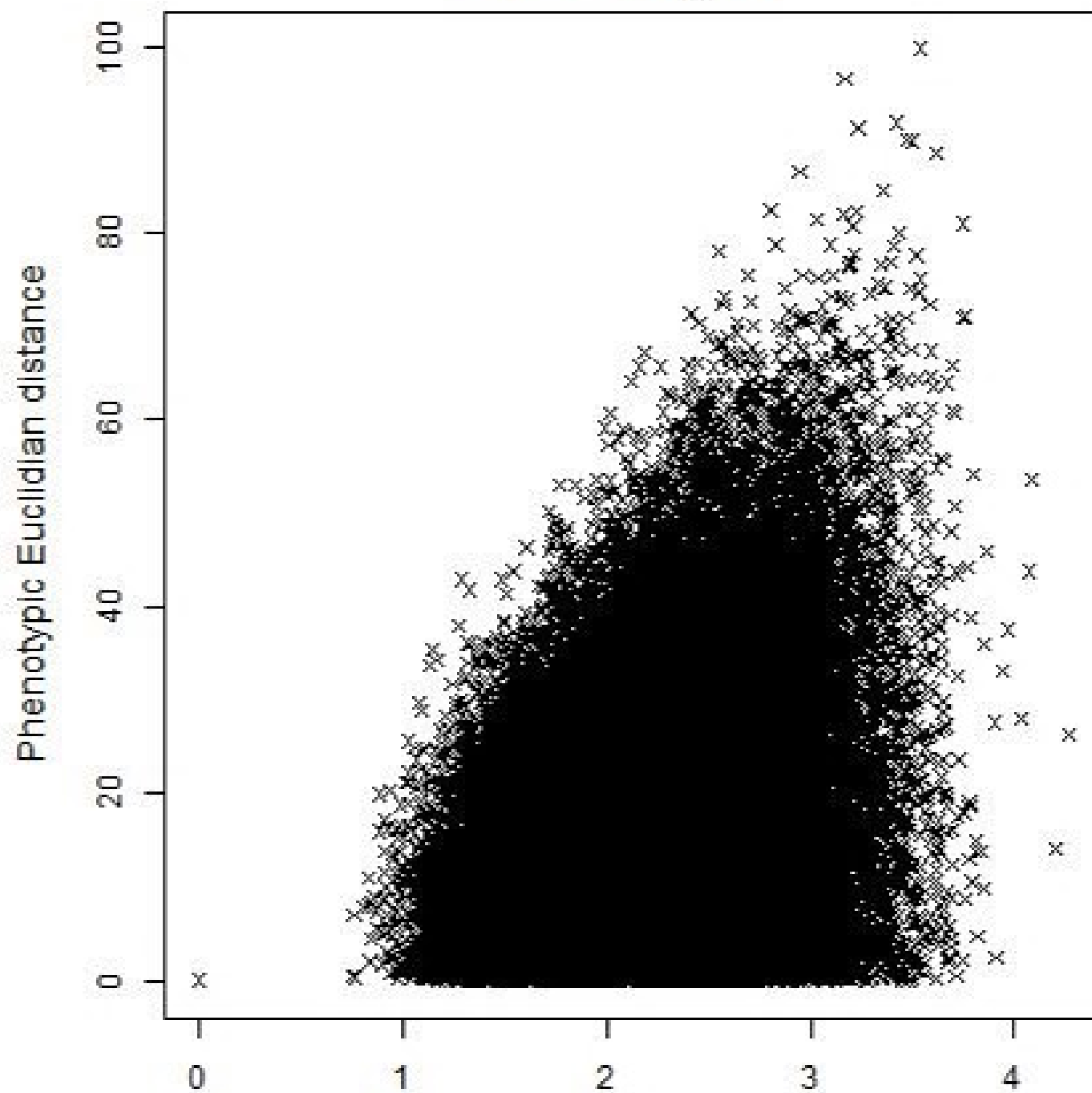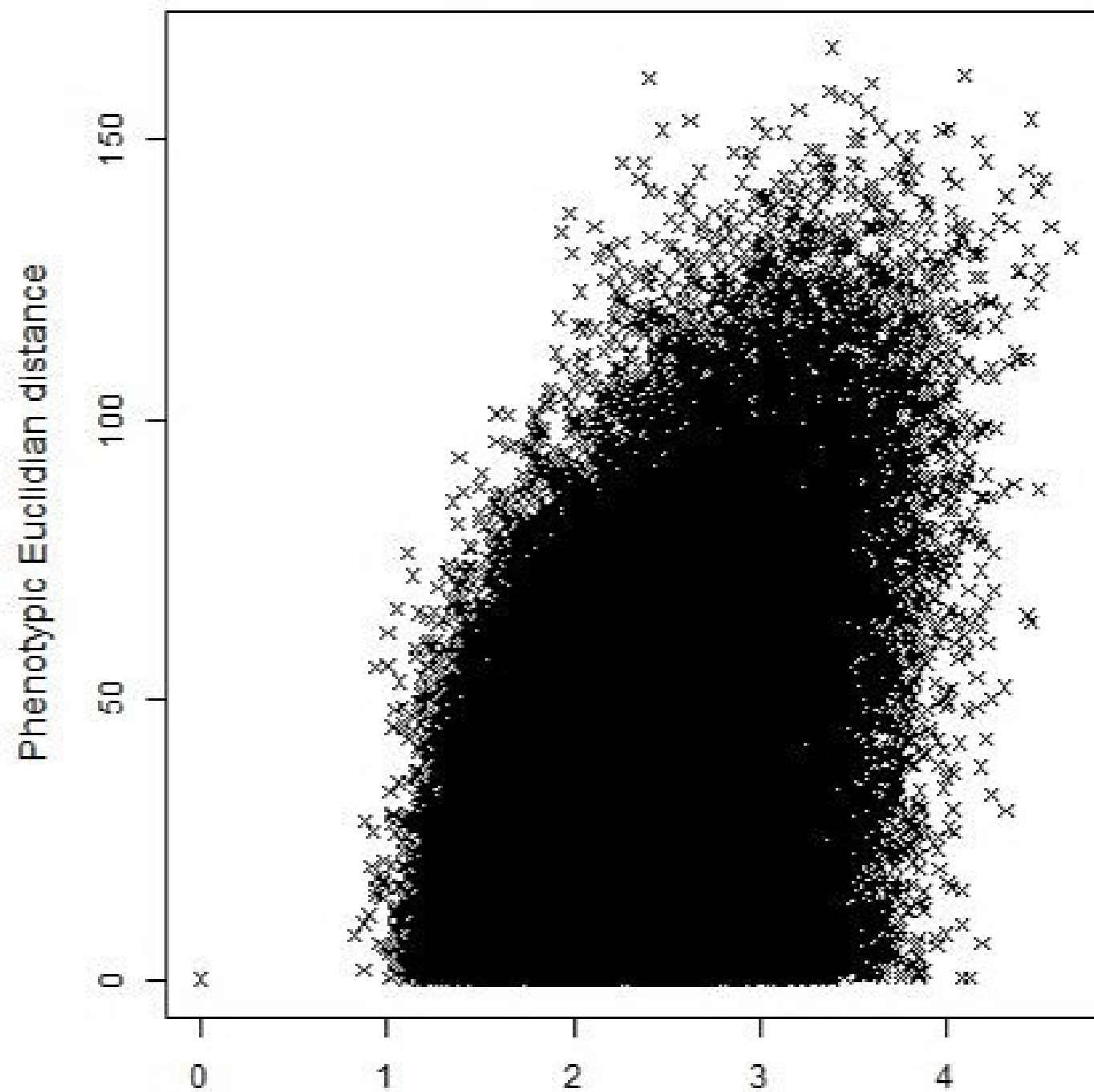
RAS_po15

Phenotypic Euclidian distance
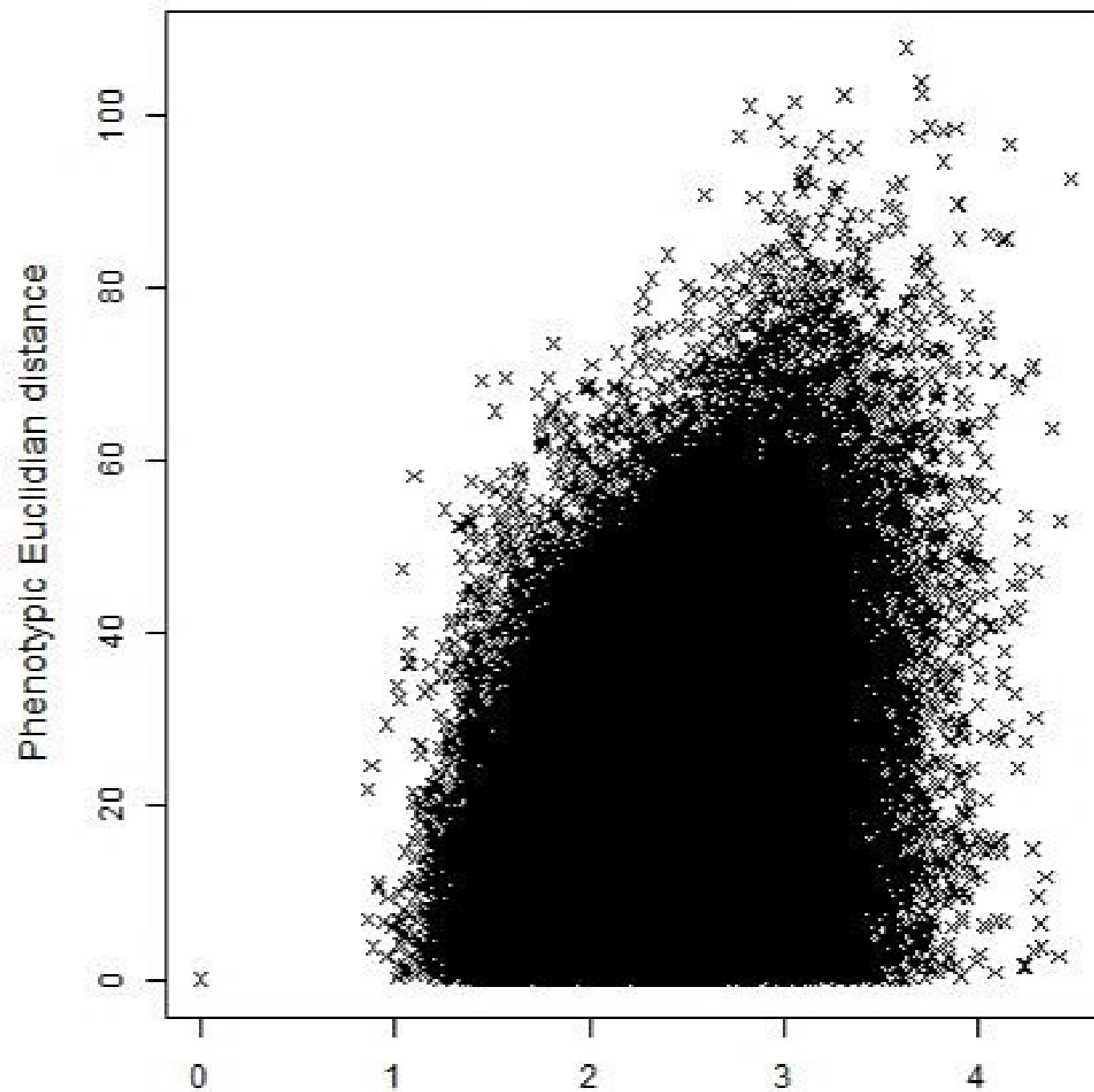
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
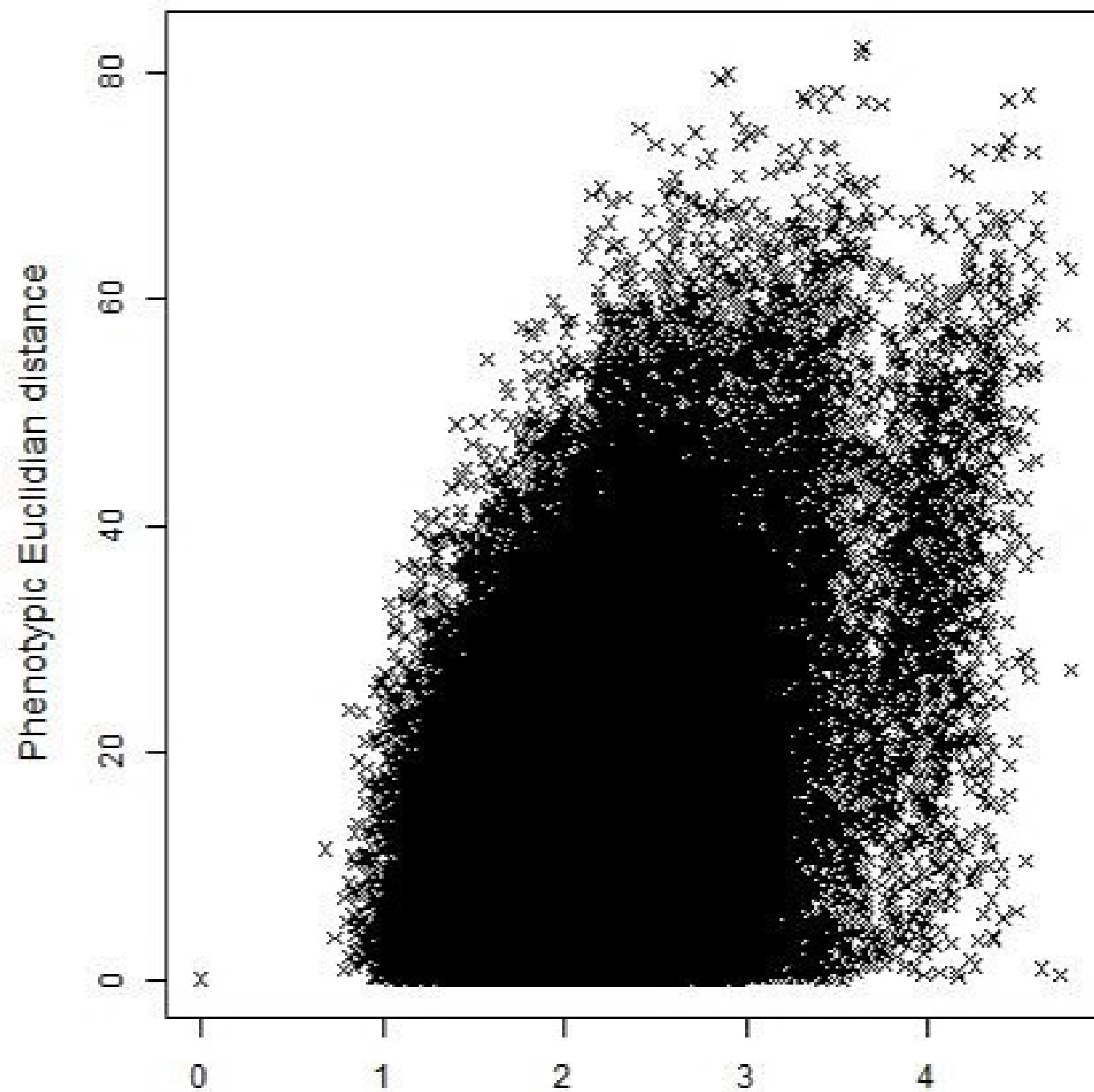
resCH300h_lu16

Phenotypic Euclidian distance
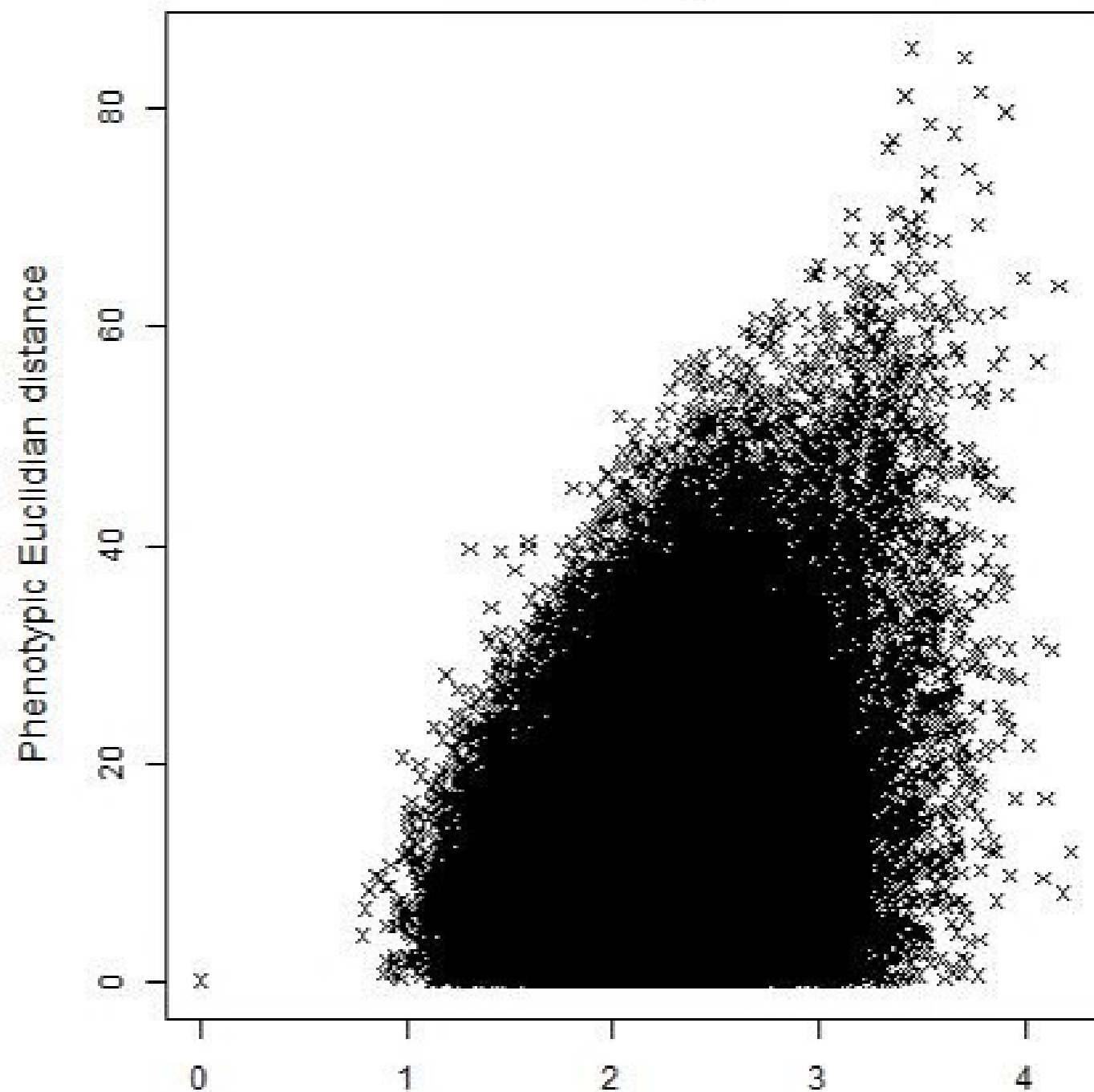
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

resCH300h_lu17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
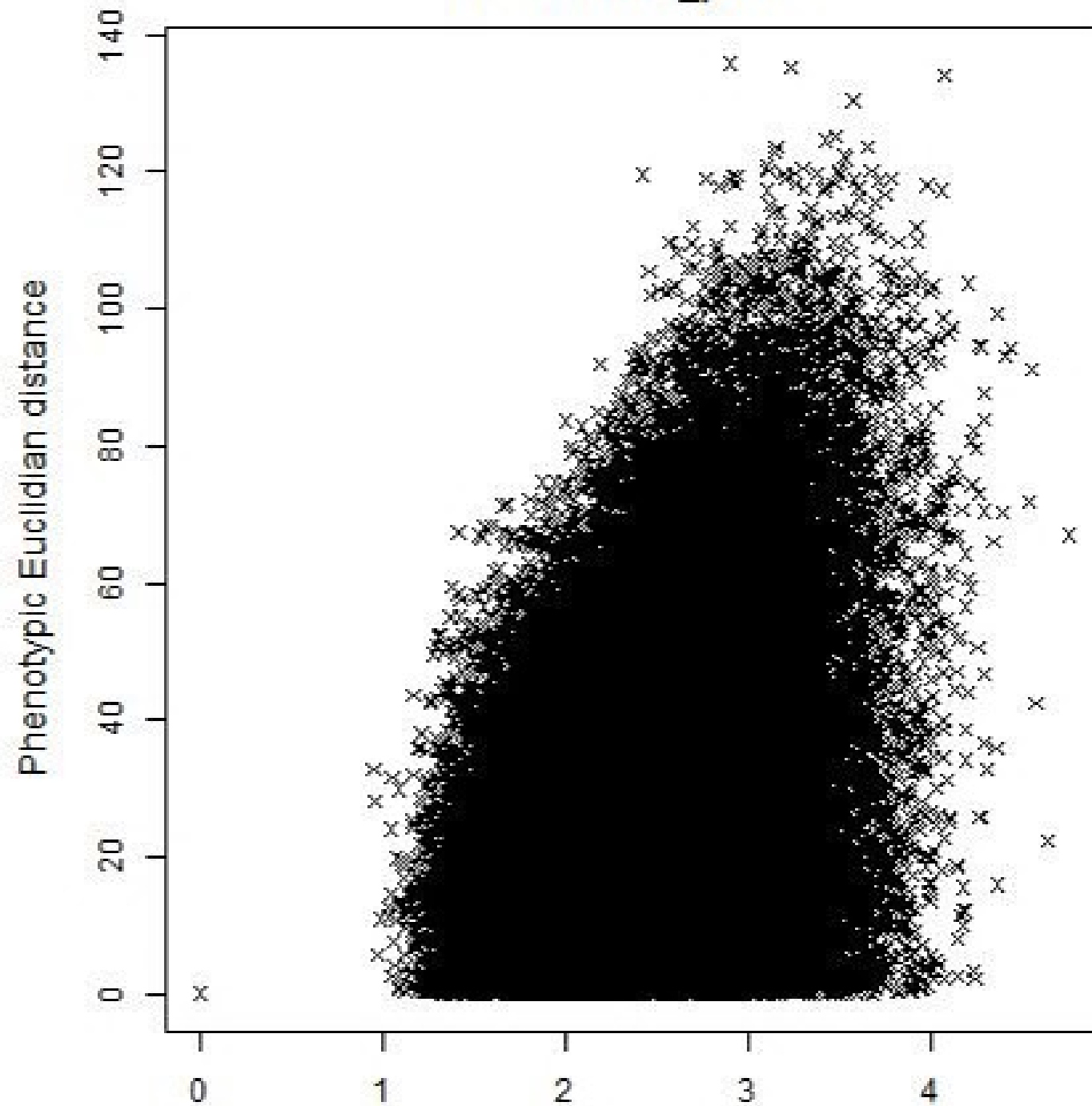
resCH300h_po16

Phenotypic Euclidian distance

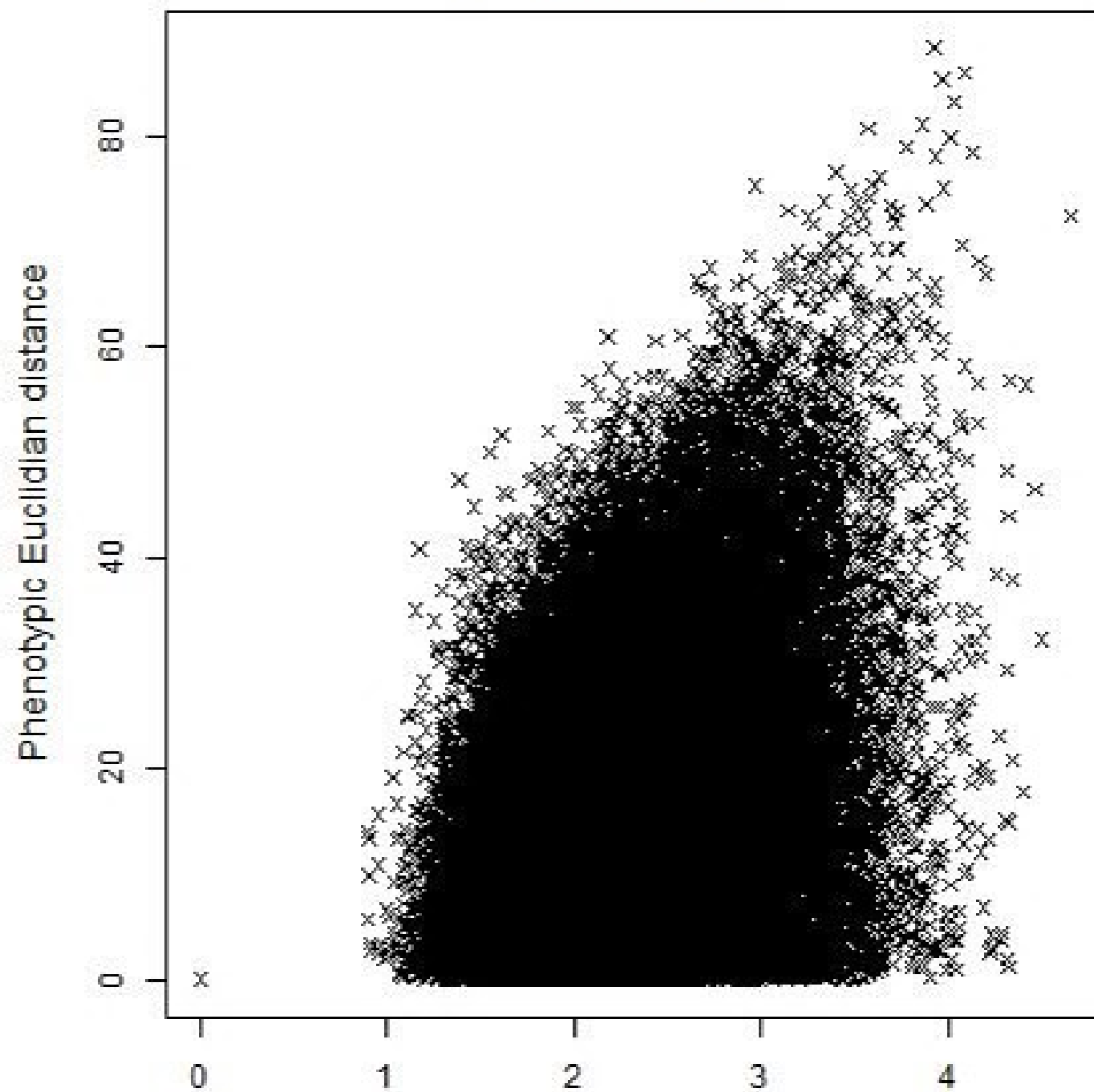Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

resCH300h_po17

Phenotypic Euclidian distance

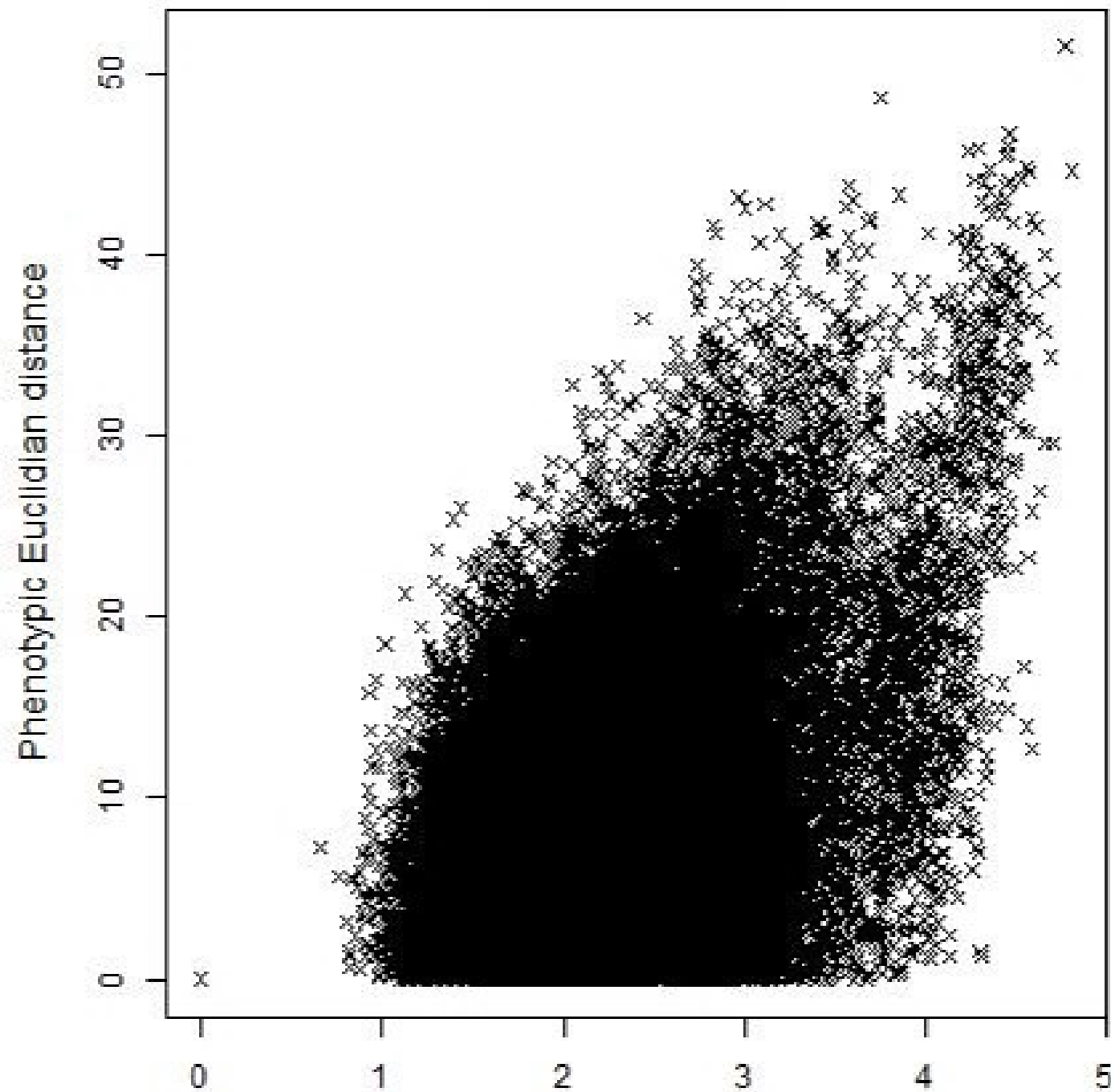Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

resCH400h_lu16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

resCH400h_lu17

resCH400h_po16

Phenotypic Euclidian distance

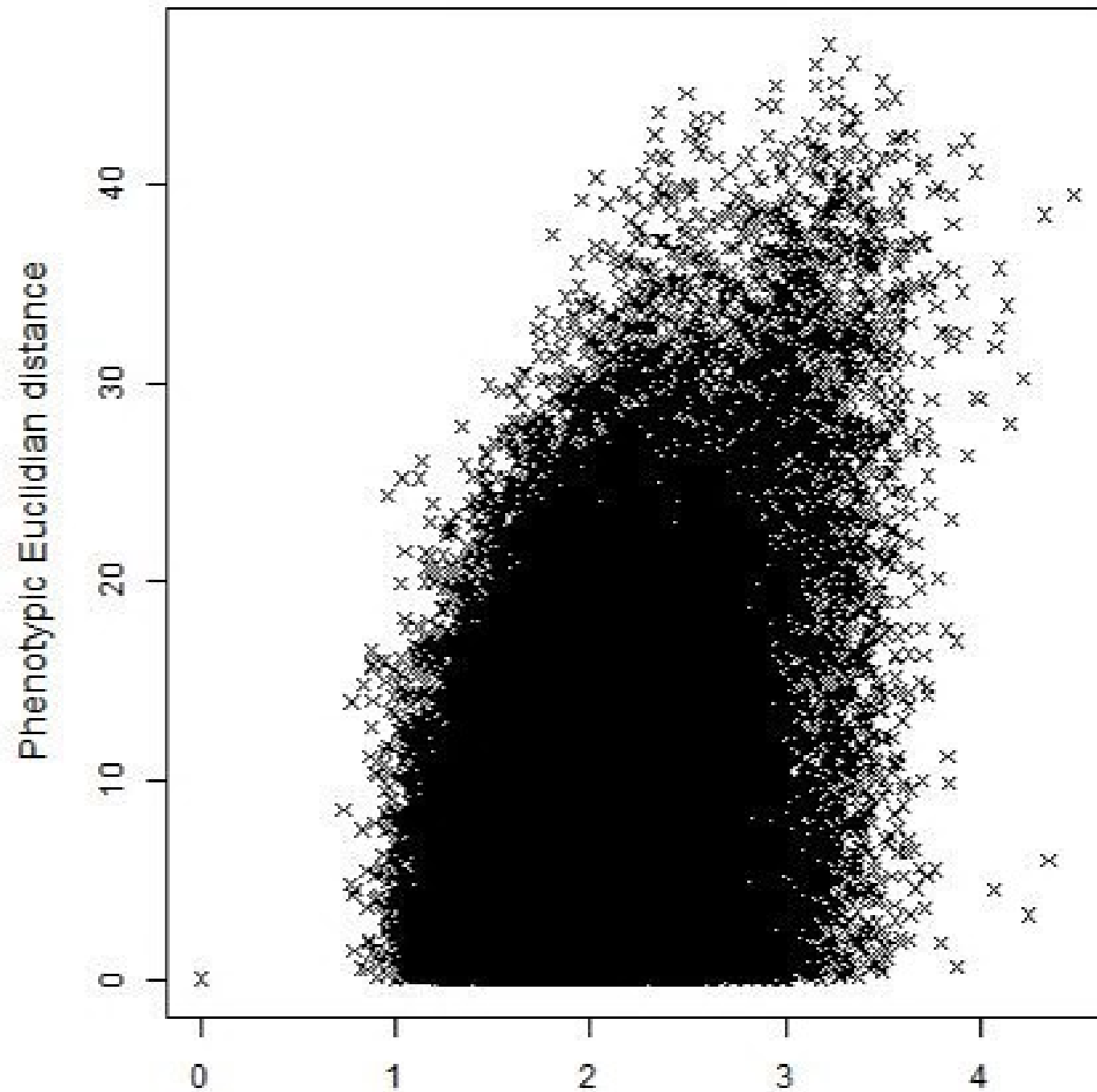Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

resCH400h_po17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

resCHs300_lu16

resCHs300_lu17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
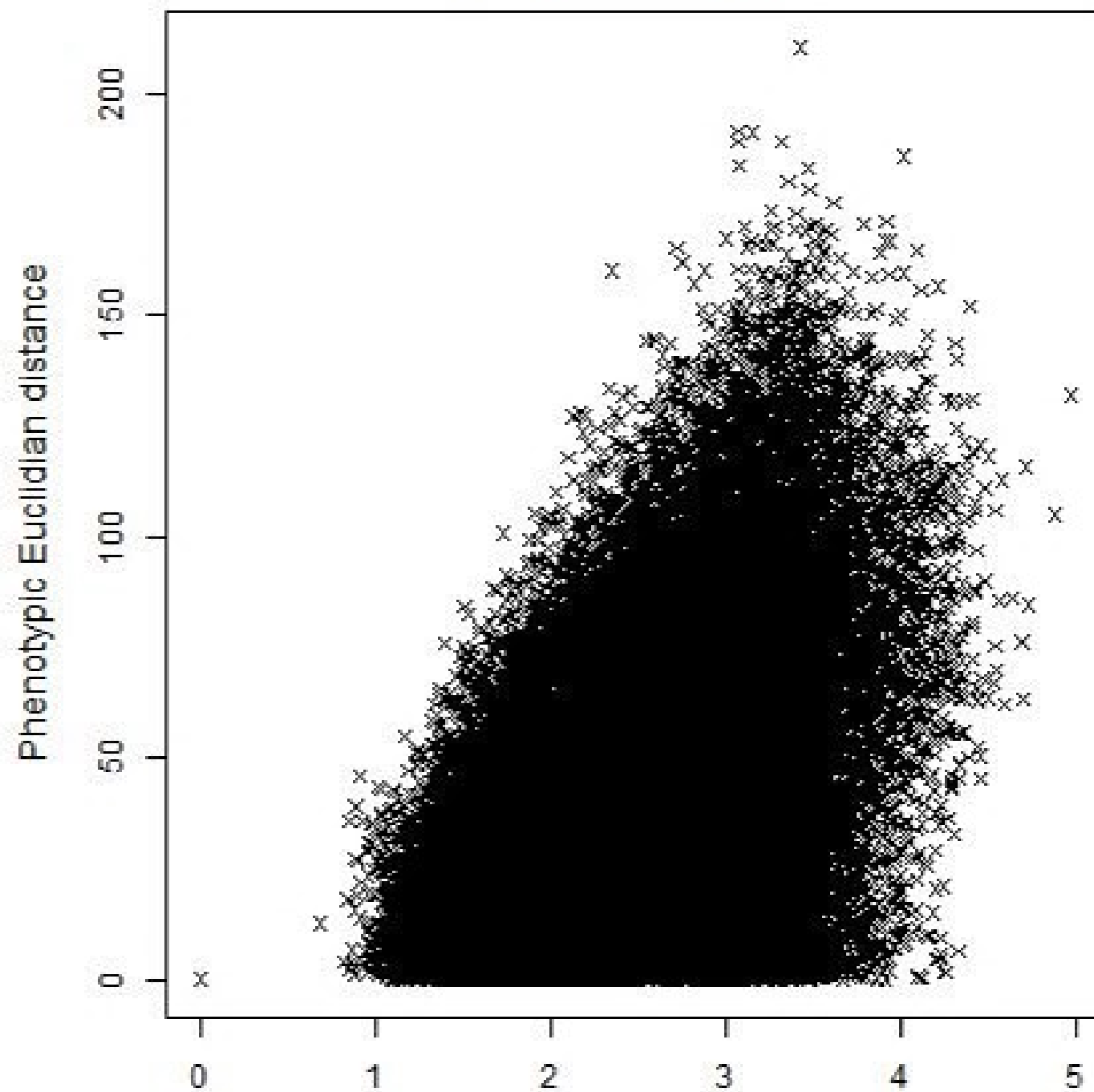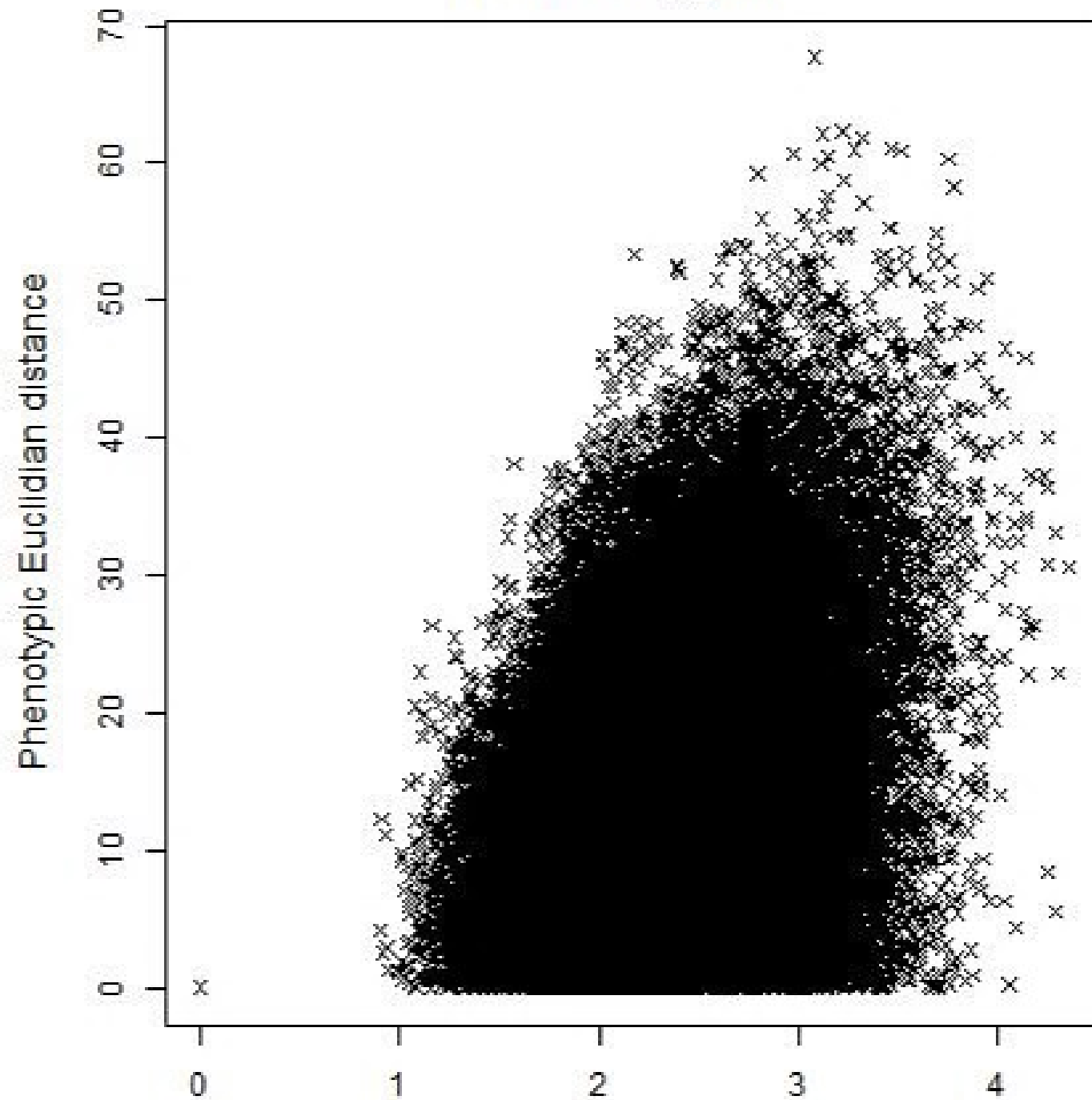
resCHs300_me16

Phenotypic Euclidian distance
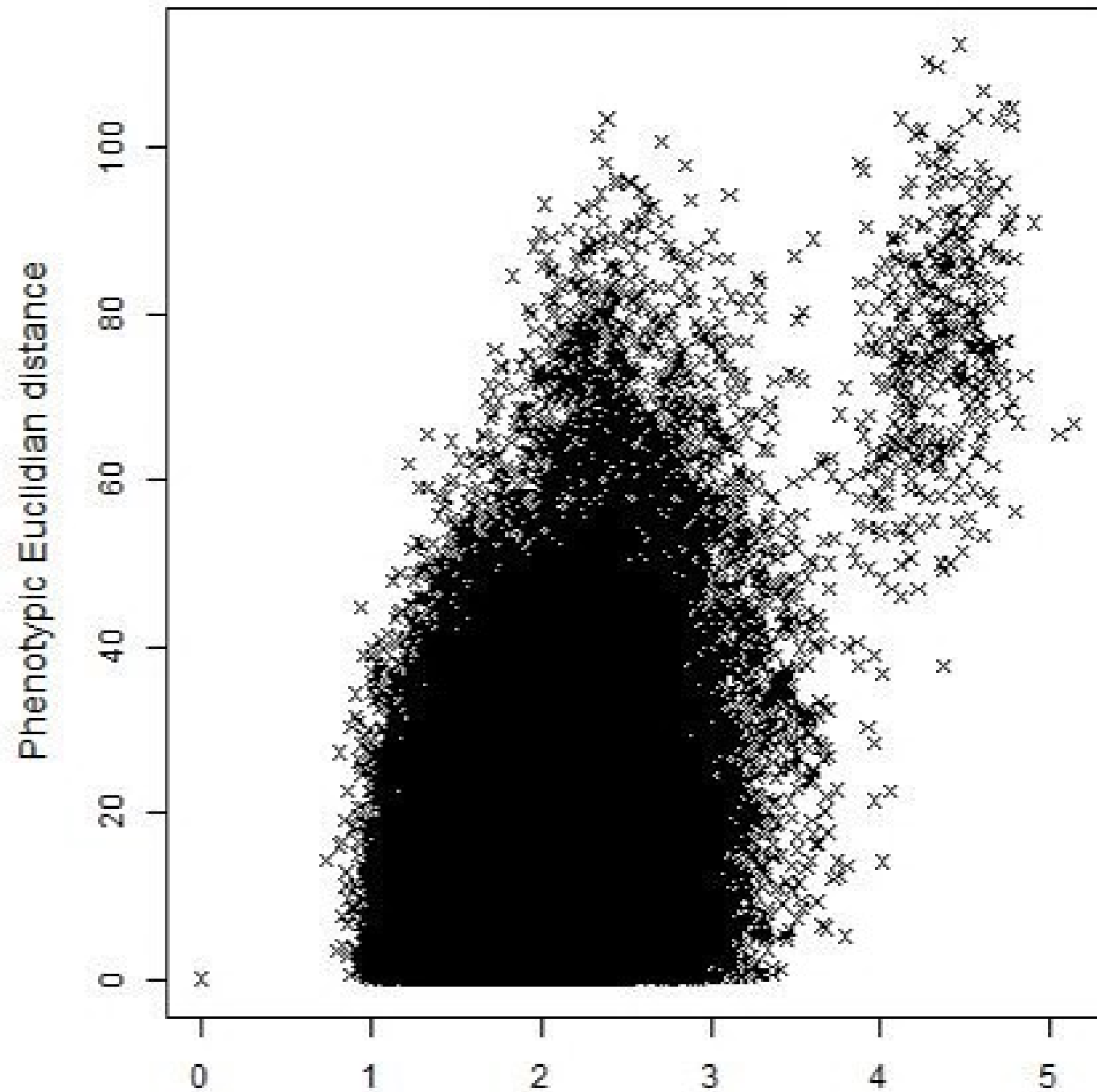
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
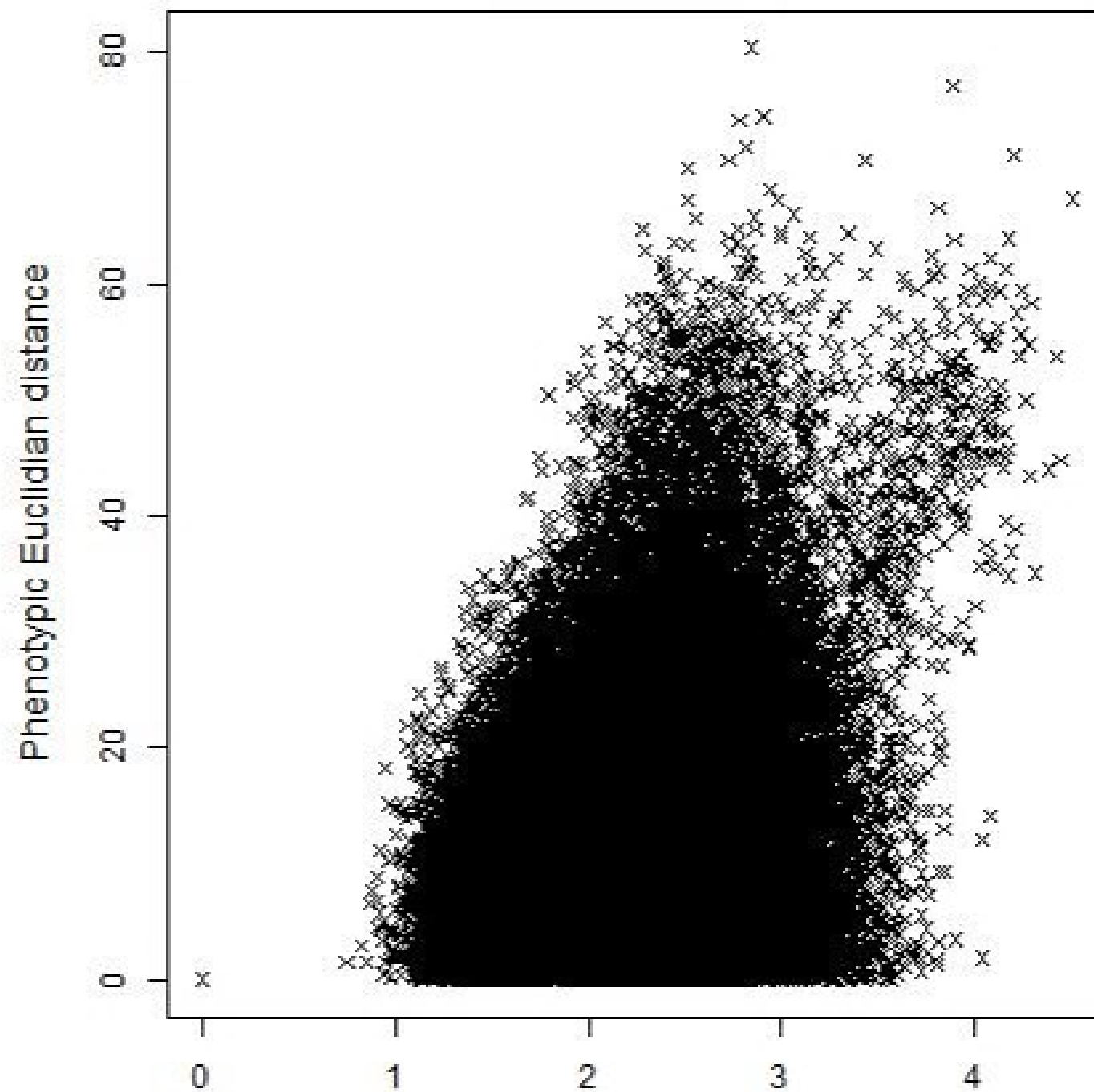
resCHs300_me17

Phenotypic Euclidian distance (y-axis)

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

resCHs300_po16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
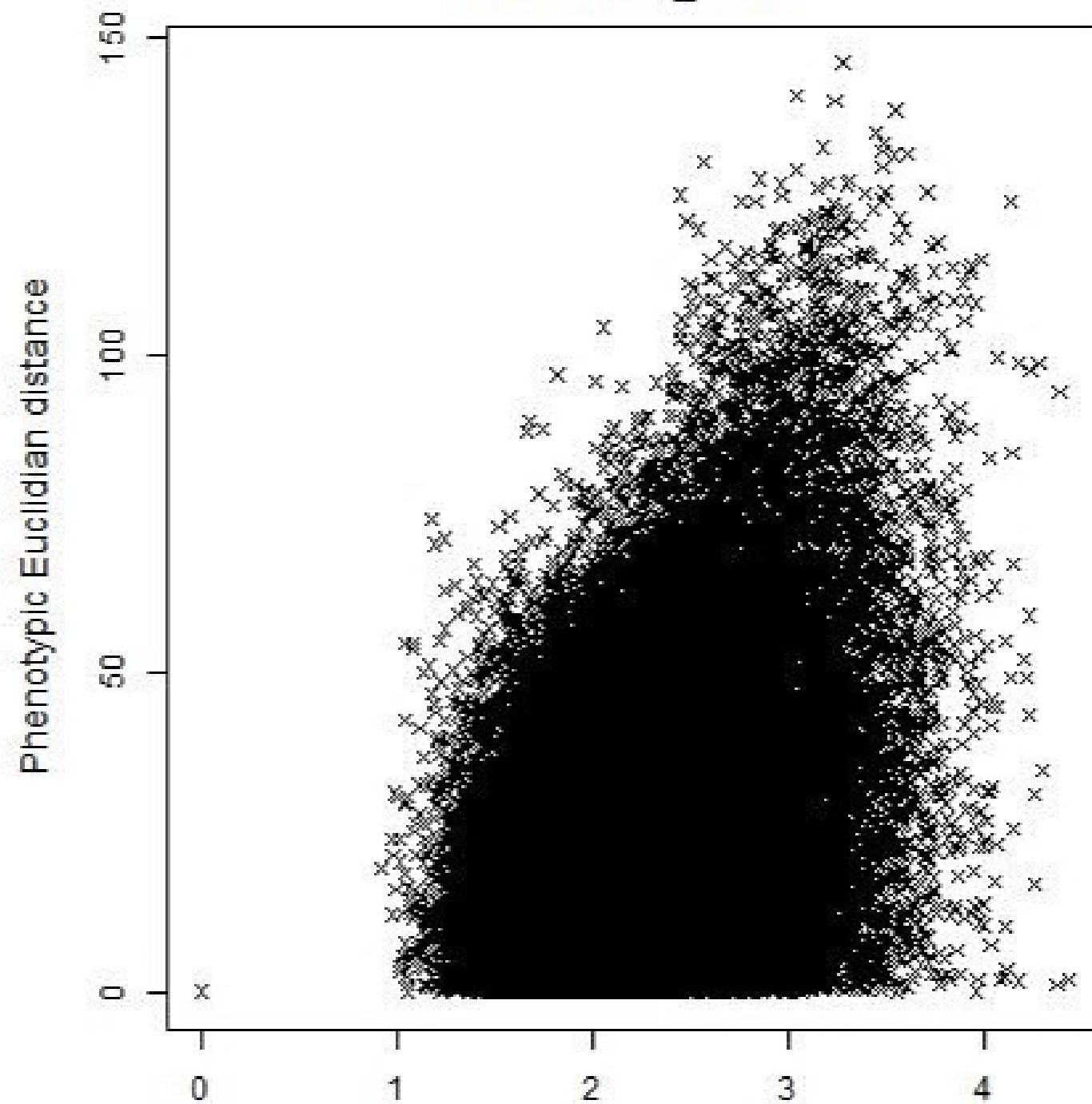
resCHs300_po17

Phenotypic Euclidian distance

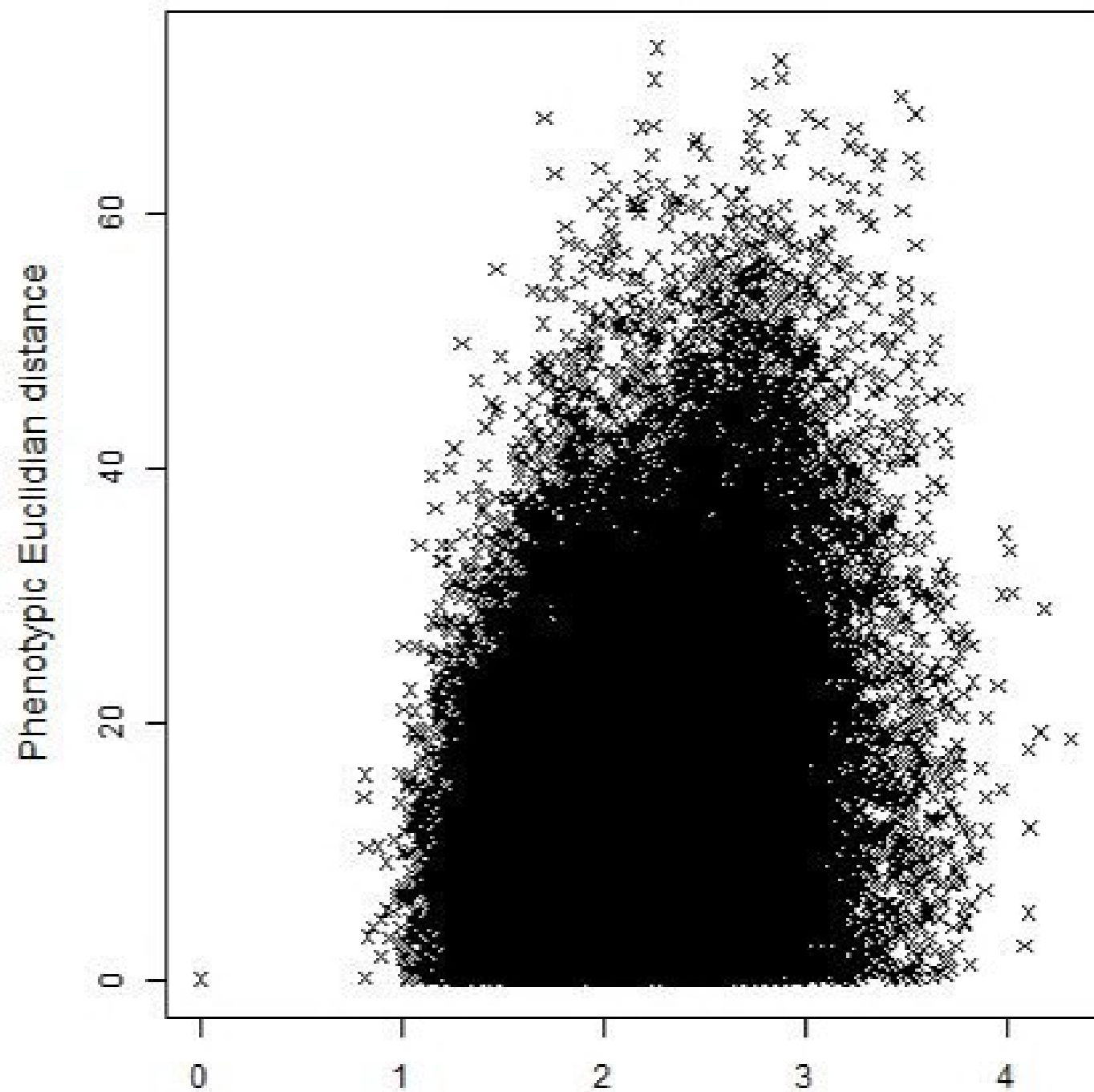Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

resCHs500_lu16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

resCHs500_lu17
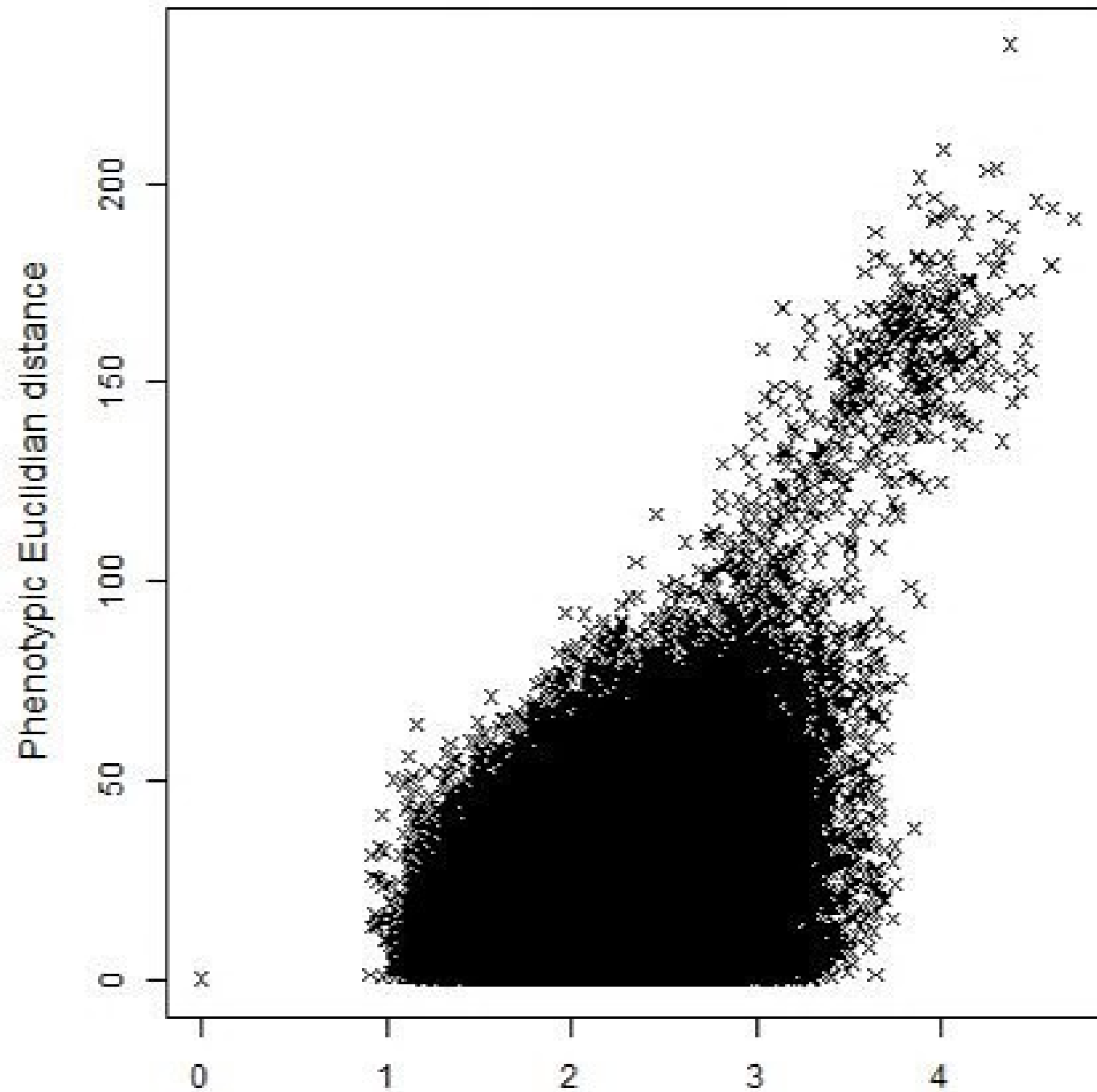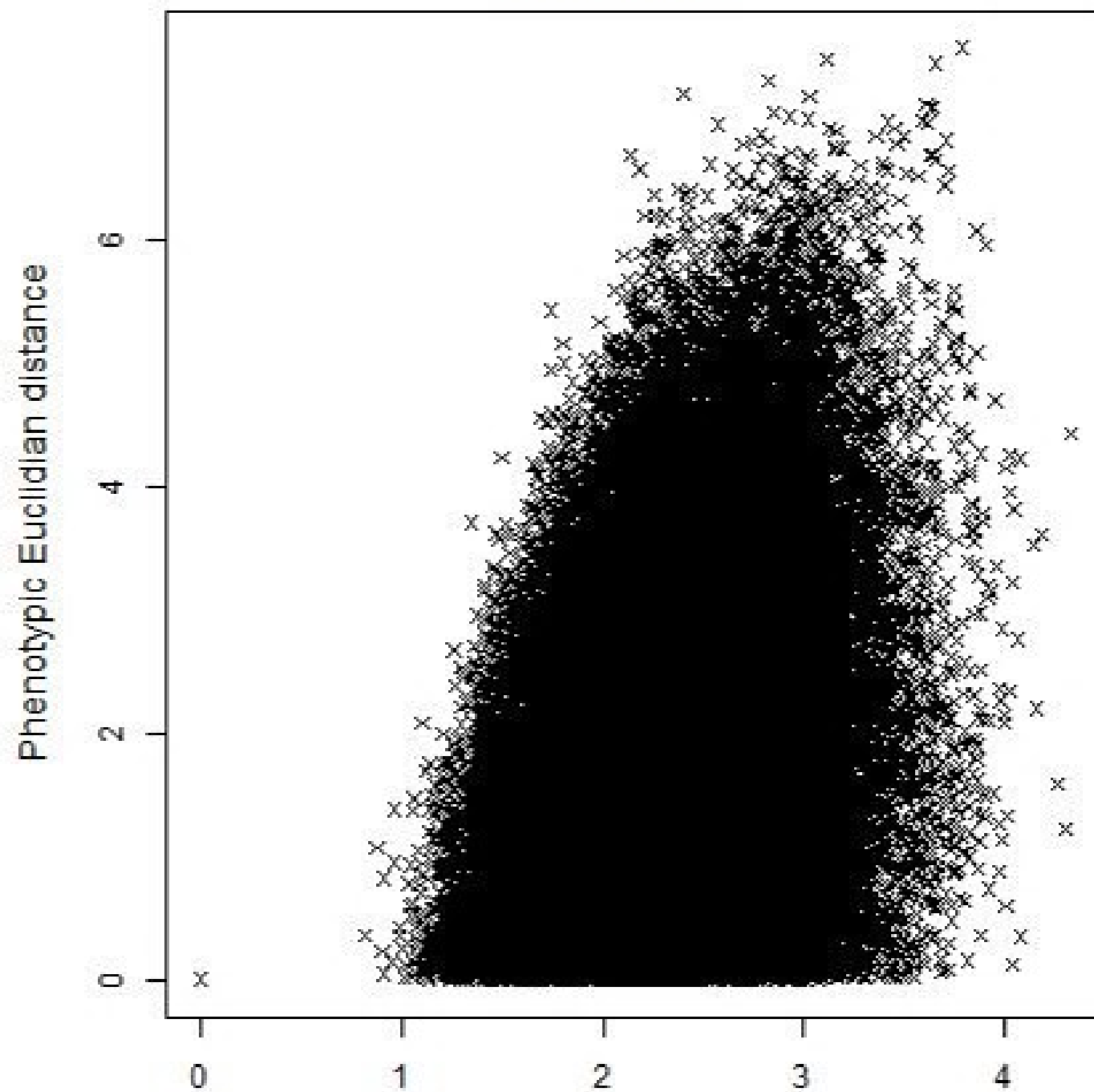
resCHs500_me16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

resCHs500_me17

Phenotypic Euclidian distance (y-axis)

Genetic Euclidian distance (based on the 100 most significantly associated SNPs) (x-axis)

resCHs500_po17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

resDST_lu17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

SCD_15to17_po
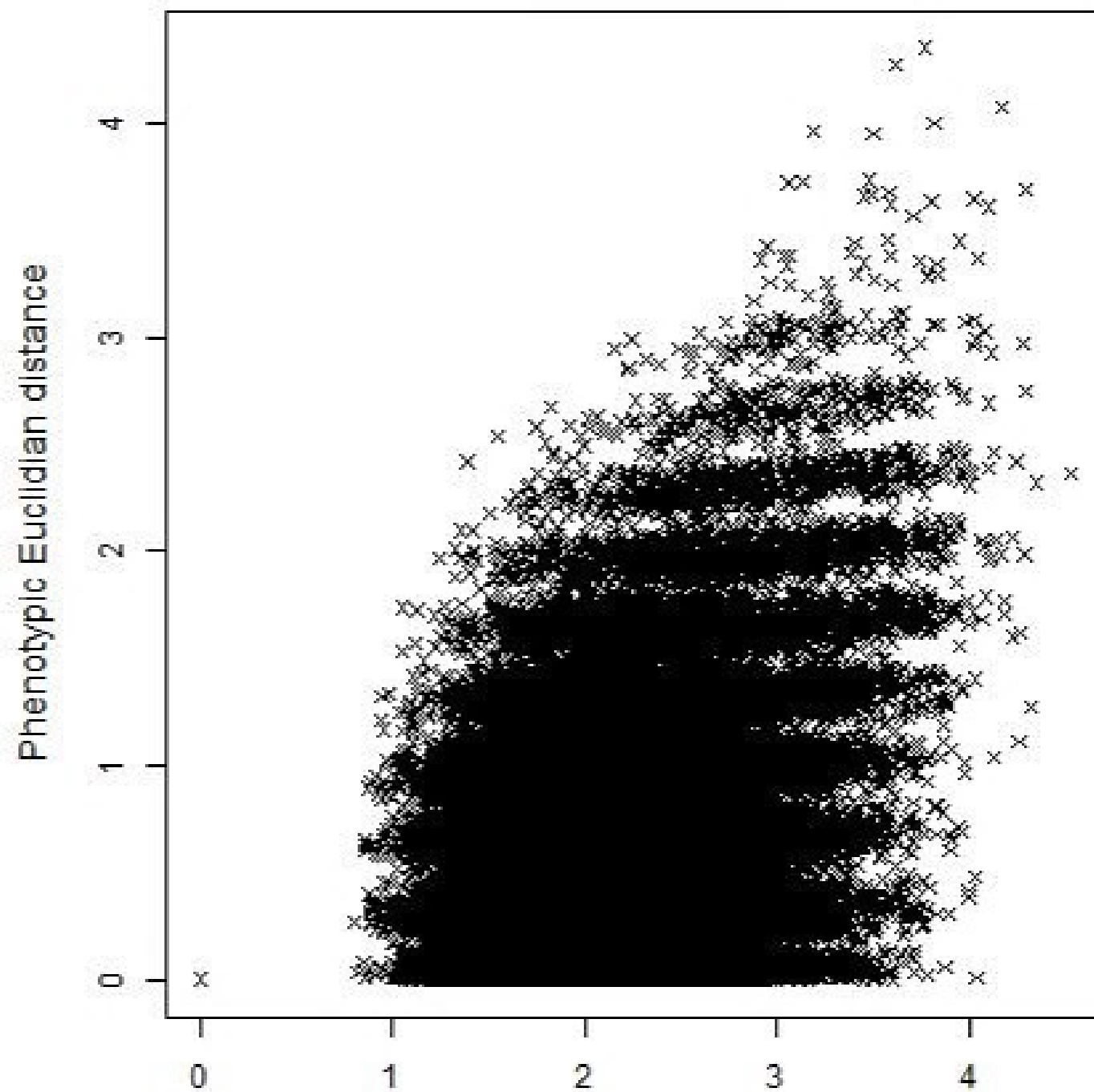
SCD_15to18_lu

Phenotypic Euclidian distance
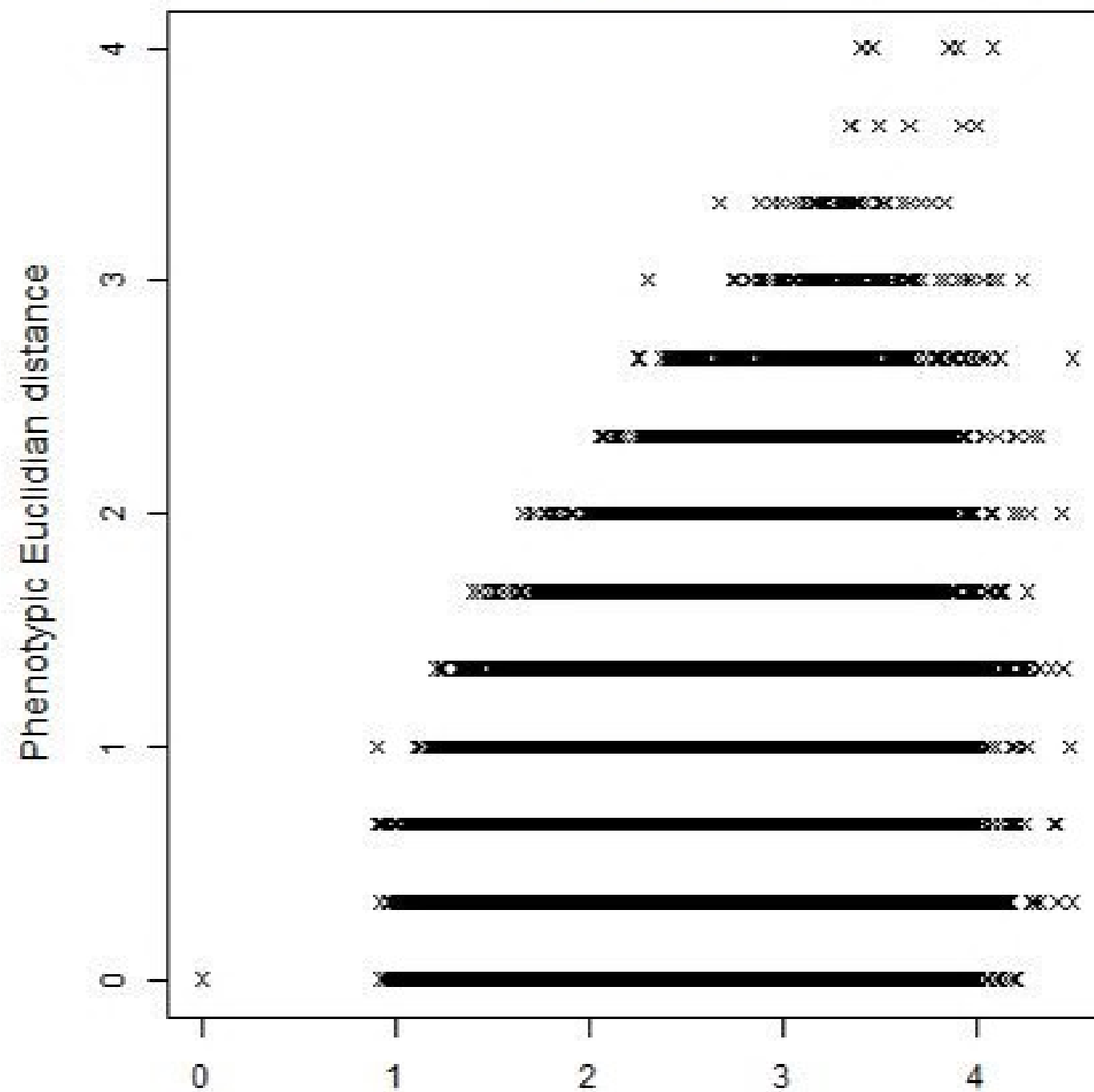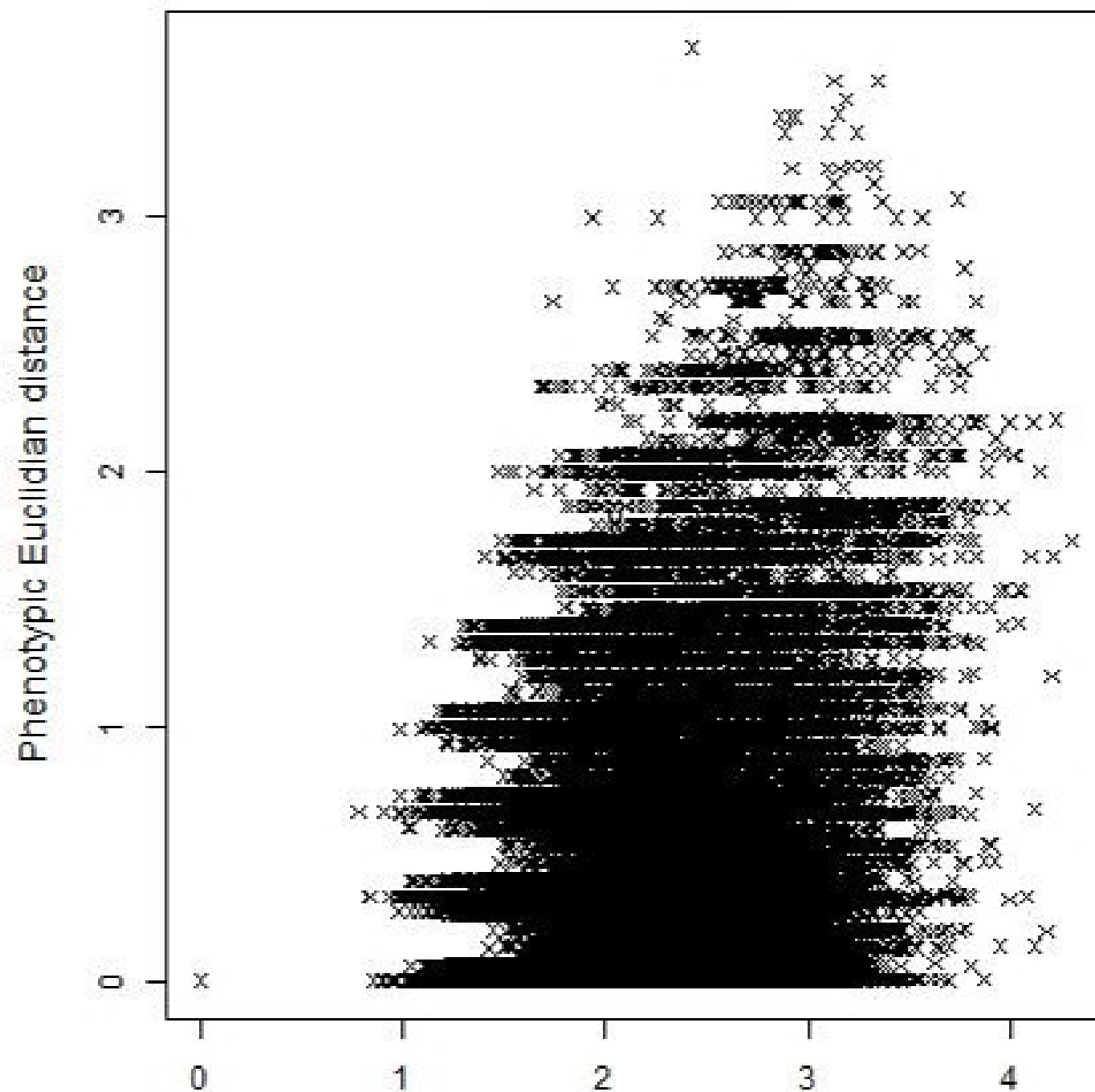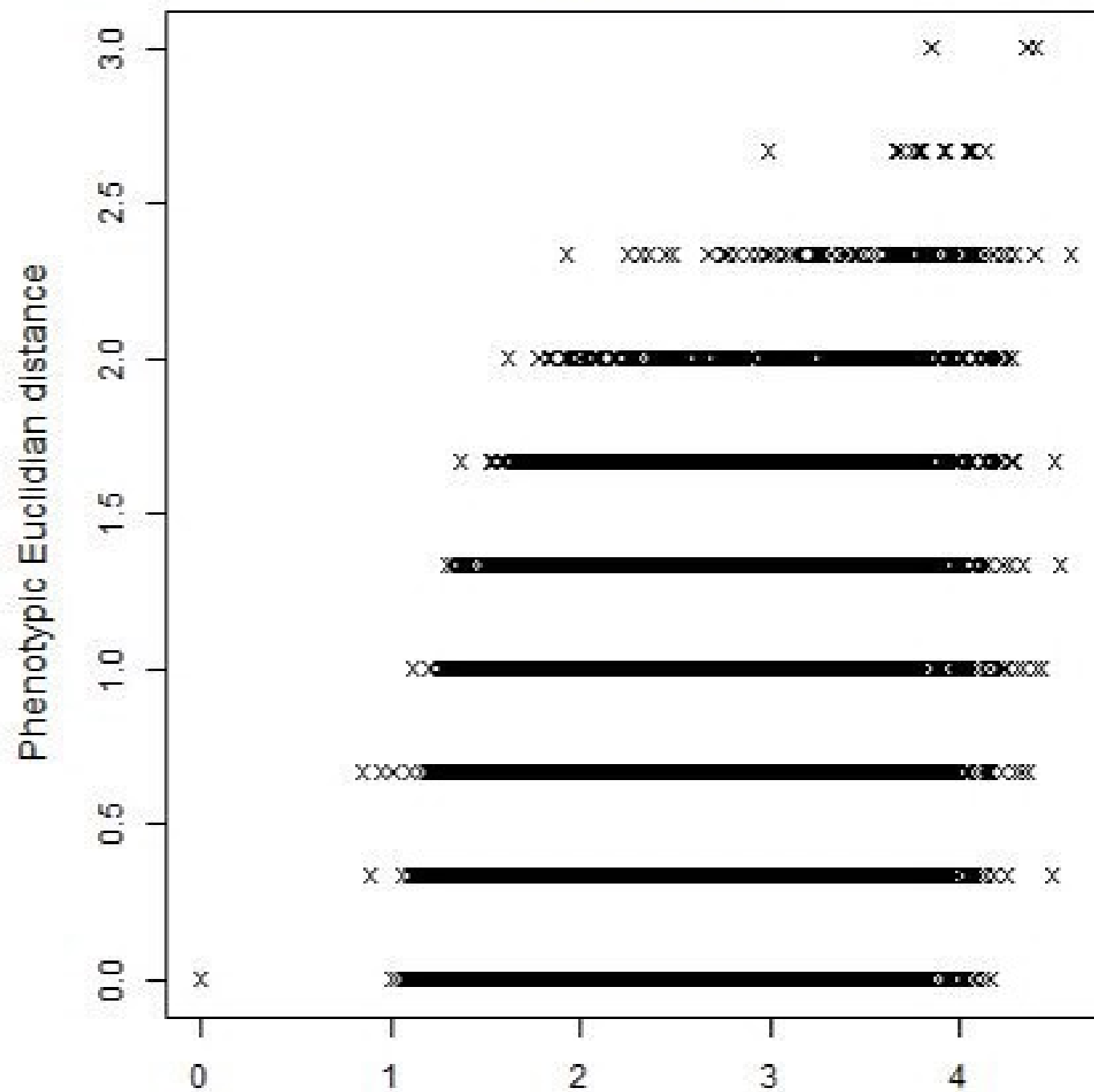
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
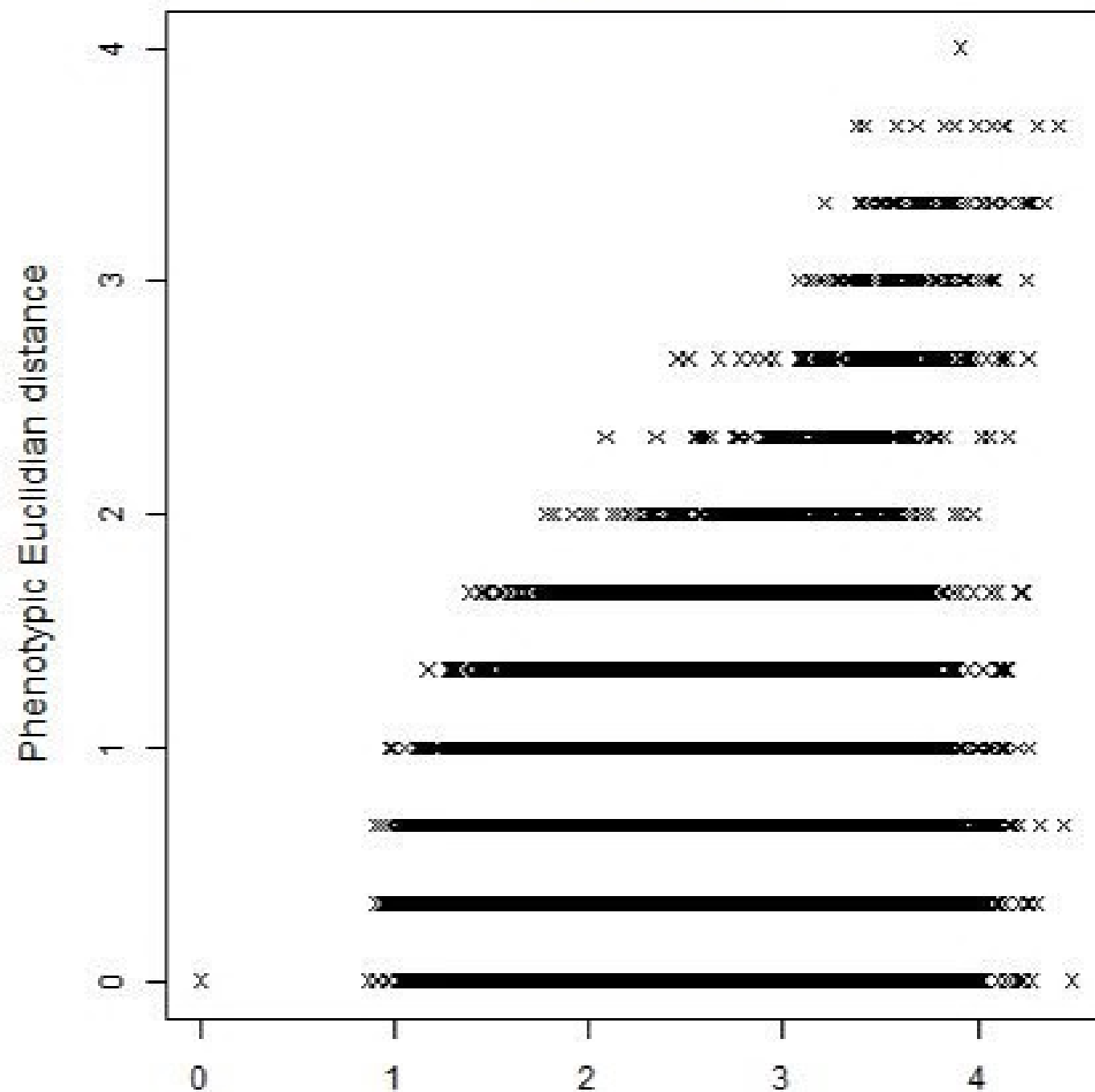
SCD_16to17_me

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
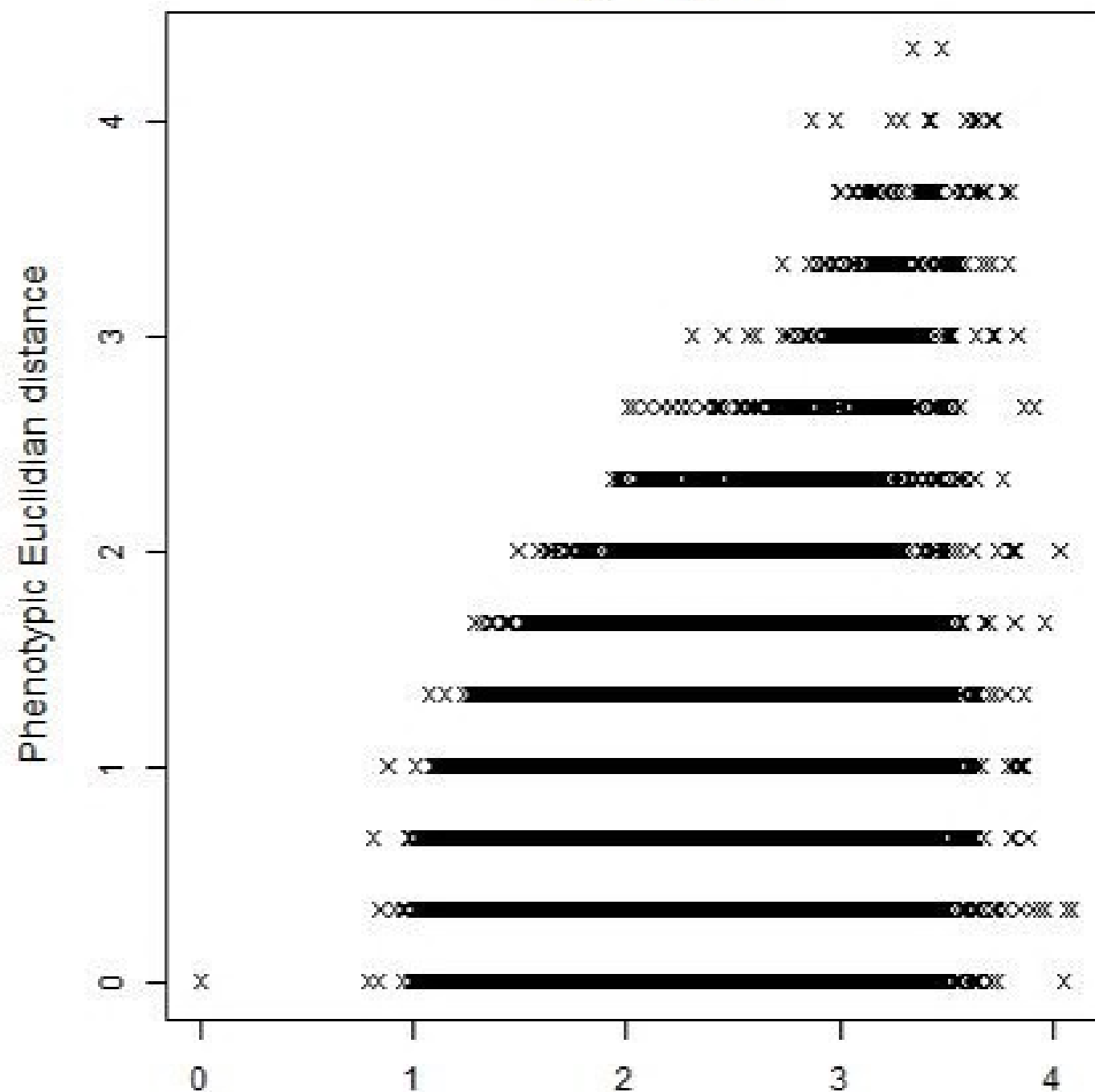
SCD_su15_lu

Phenotypic Euclidian distance
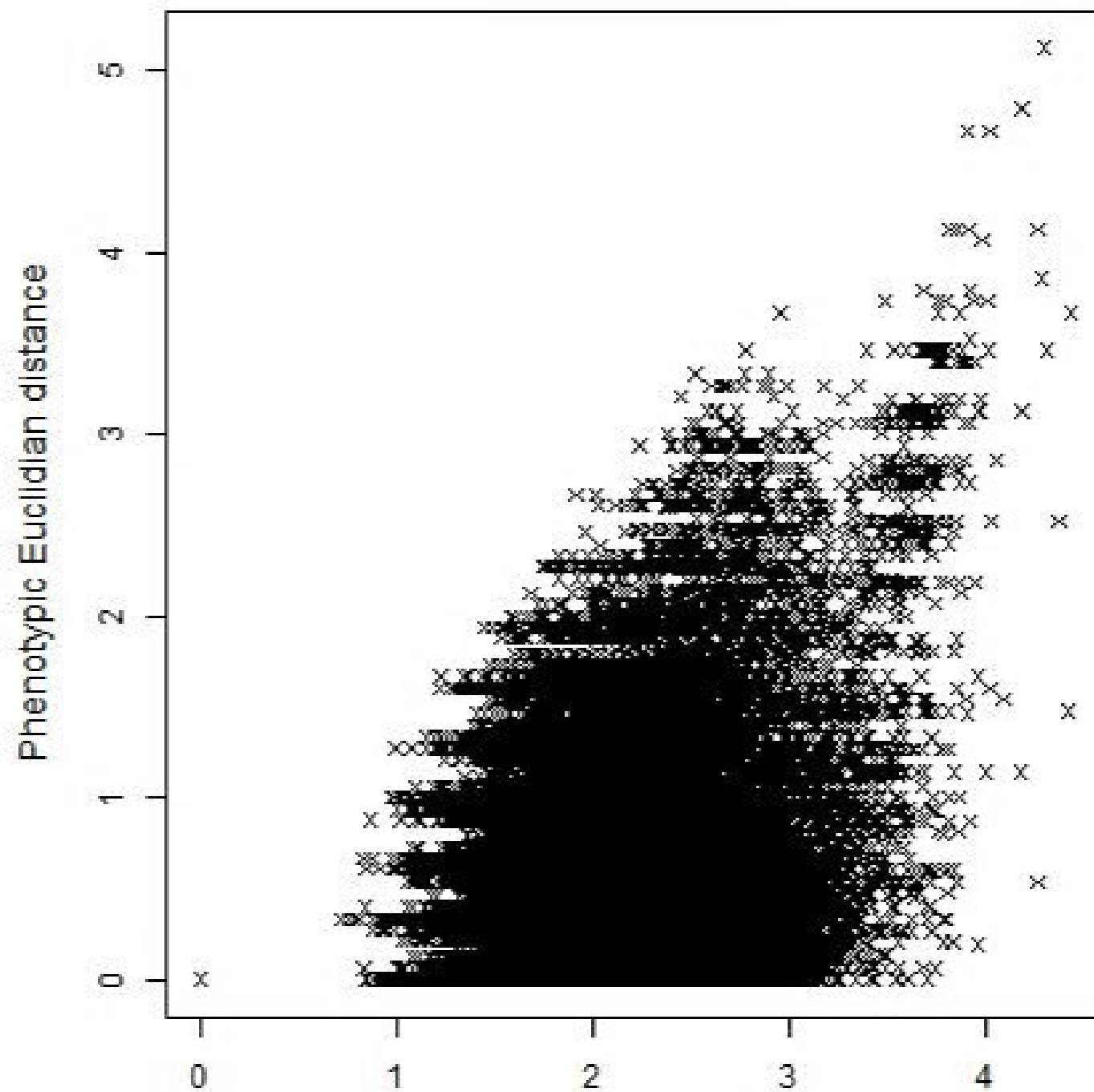
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

SCD_su16_lu

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

SCD_su17_lu

Phenotypic Euclidian distance
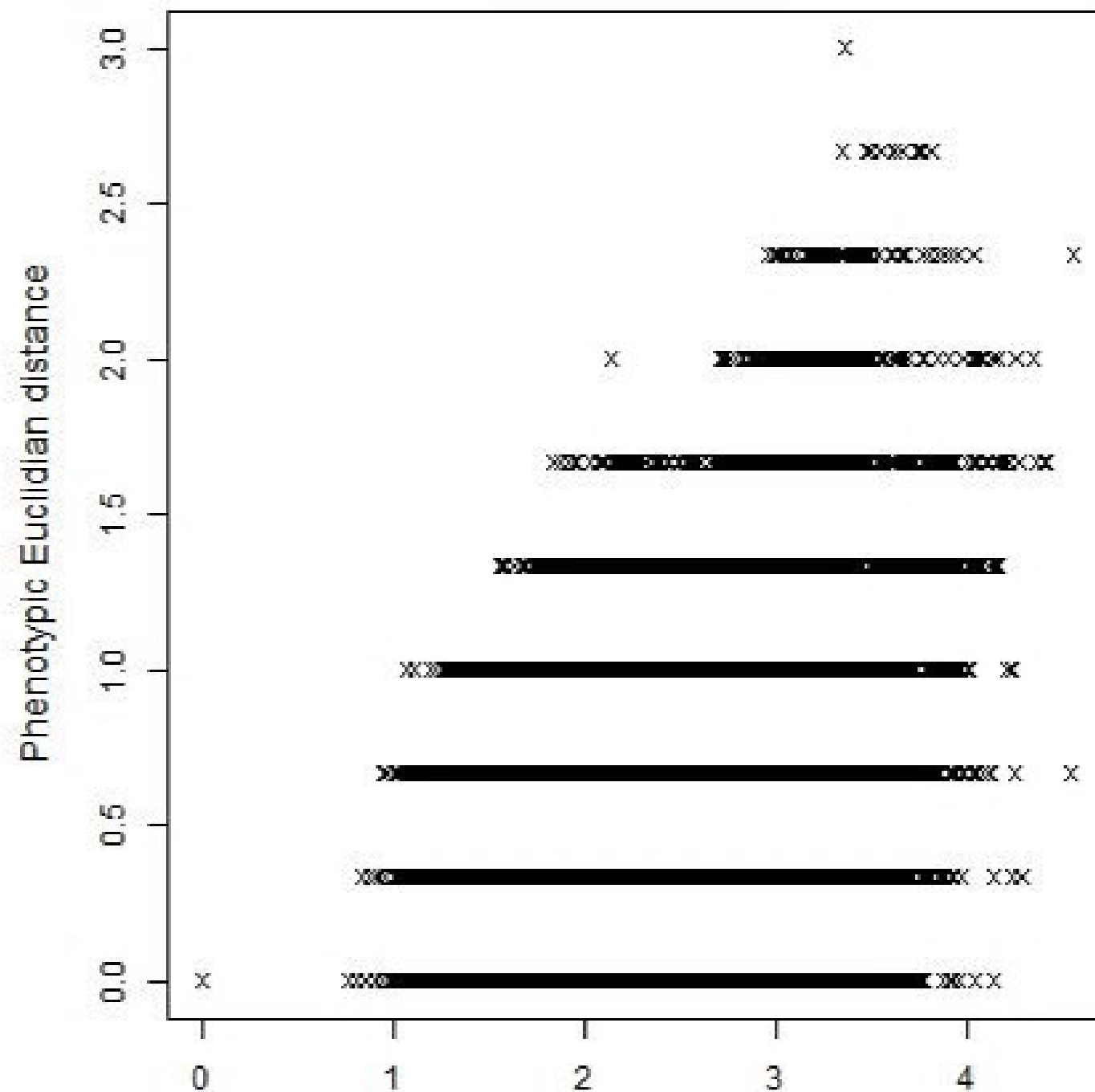
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

SCD_su17_me

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

SCD_wi1516_lu
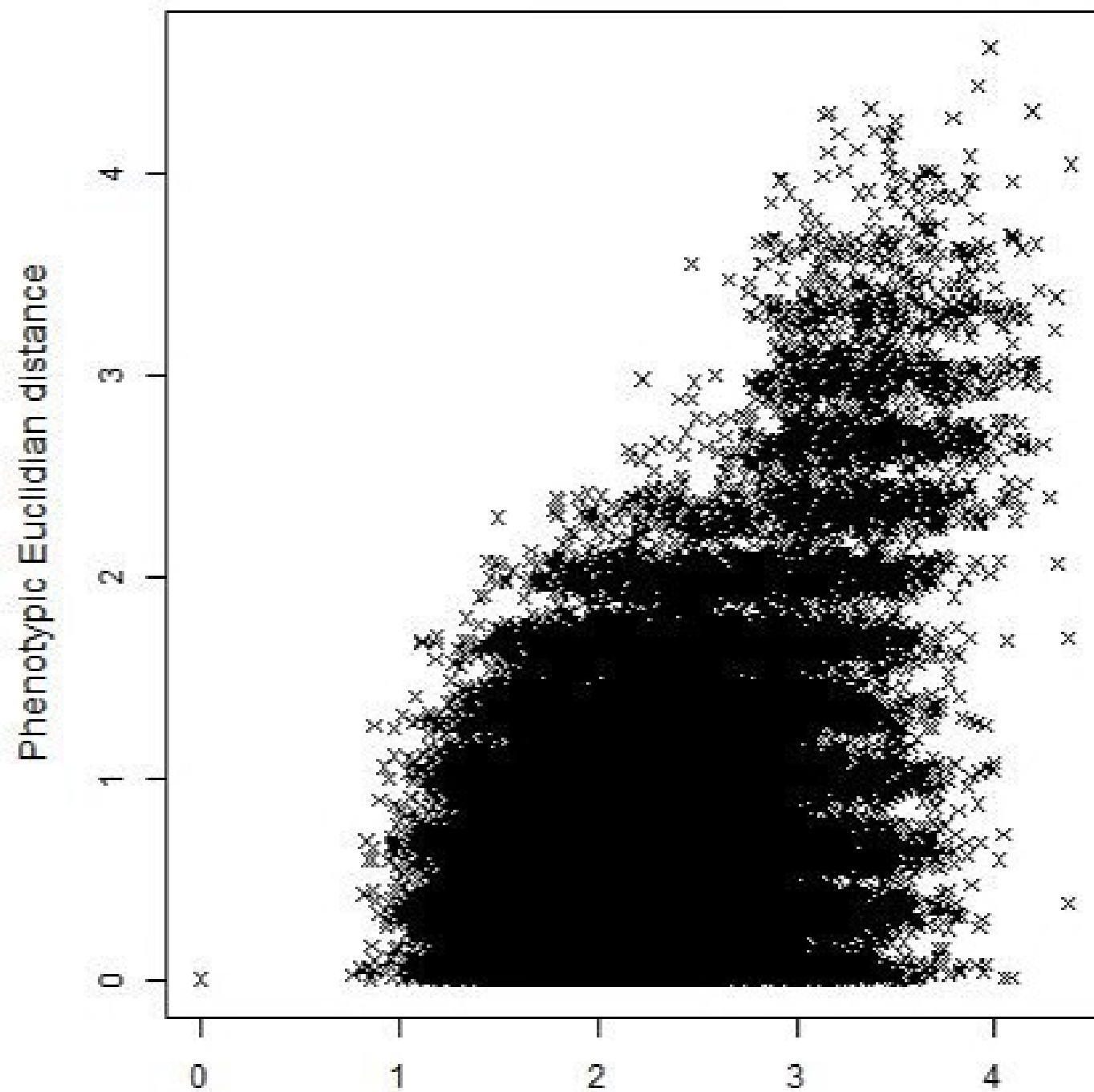
SCD_wi1516_po

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

SCD_wi1617_lu

SCD_wi1617_me

Phenotypic Euclidian distance
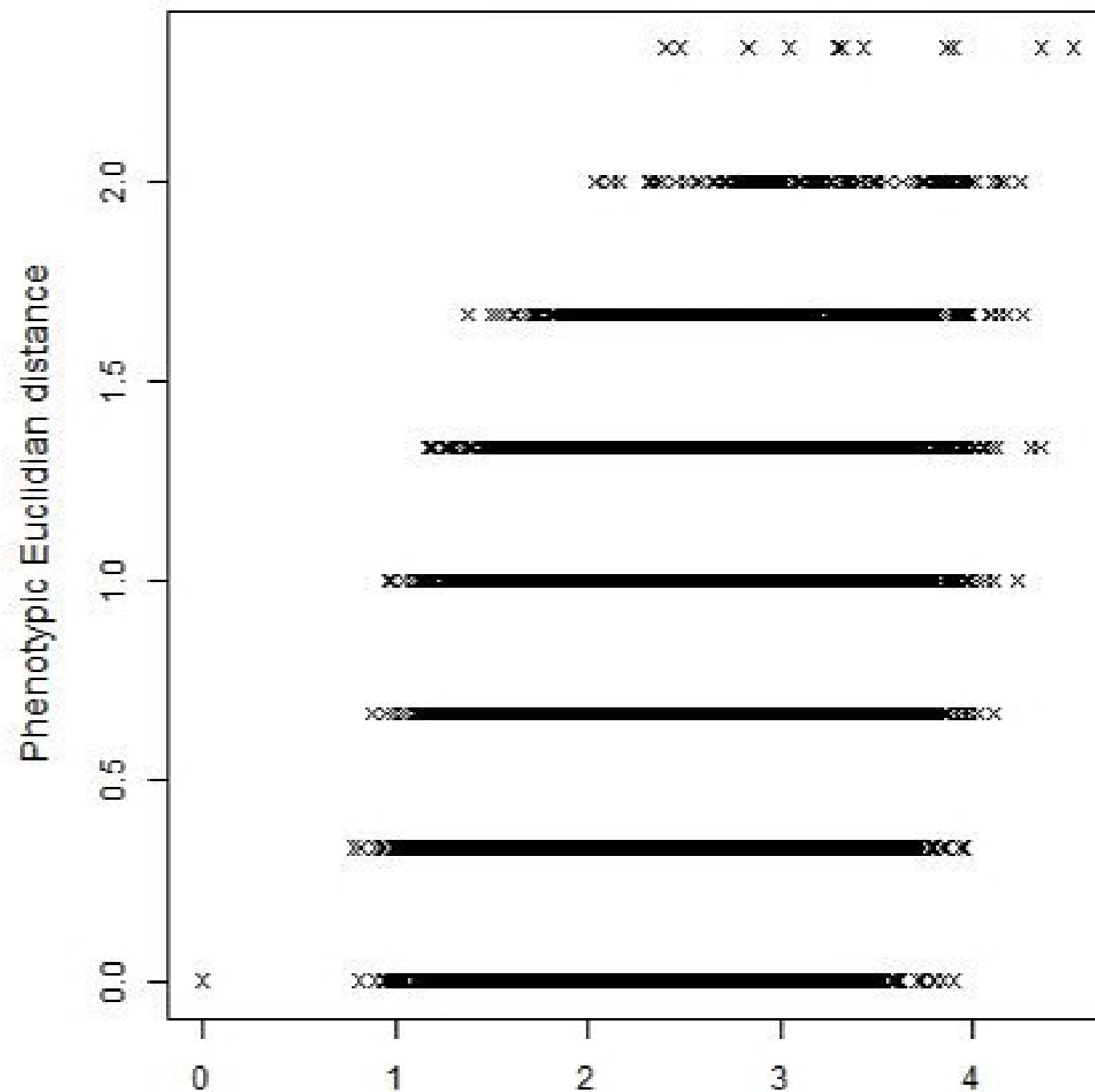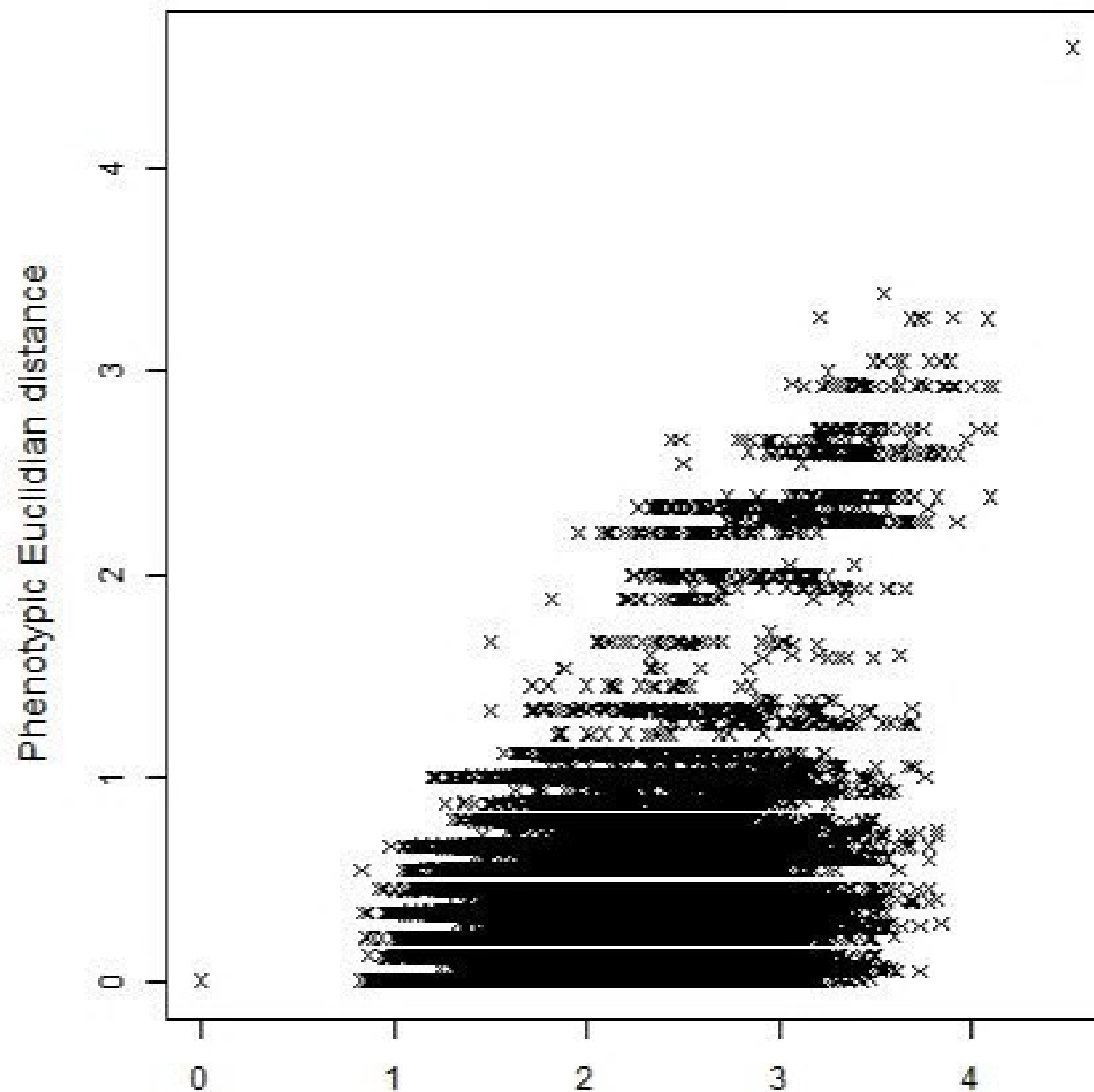
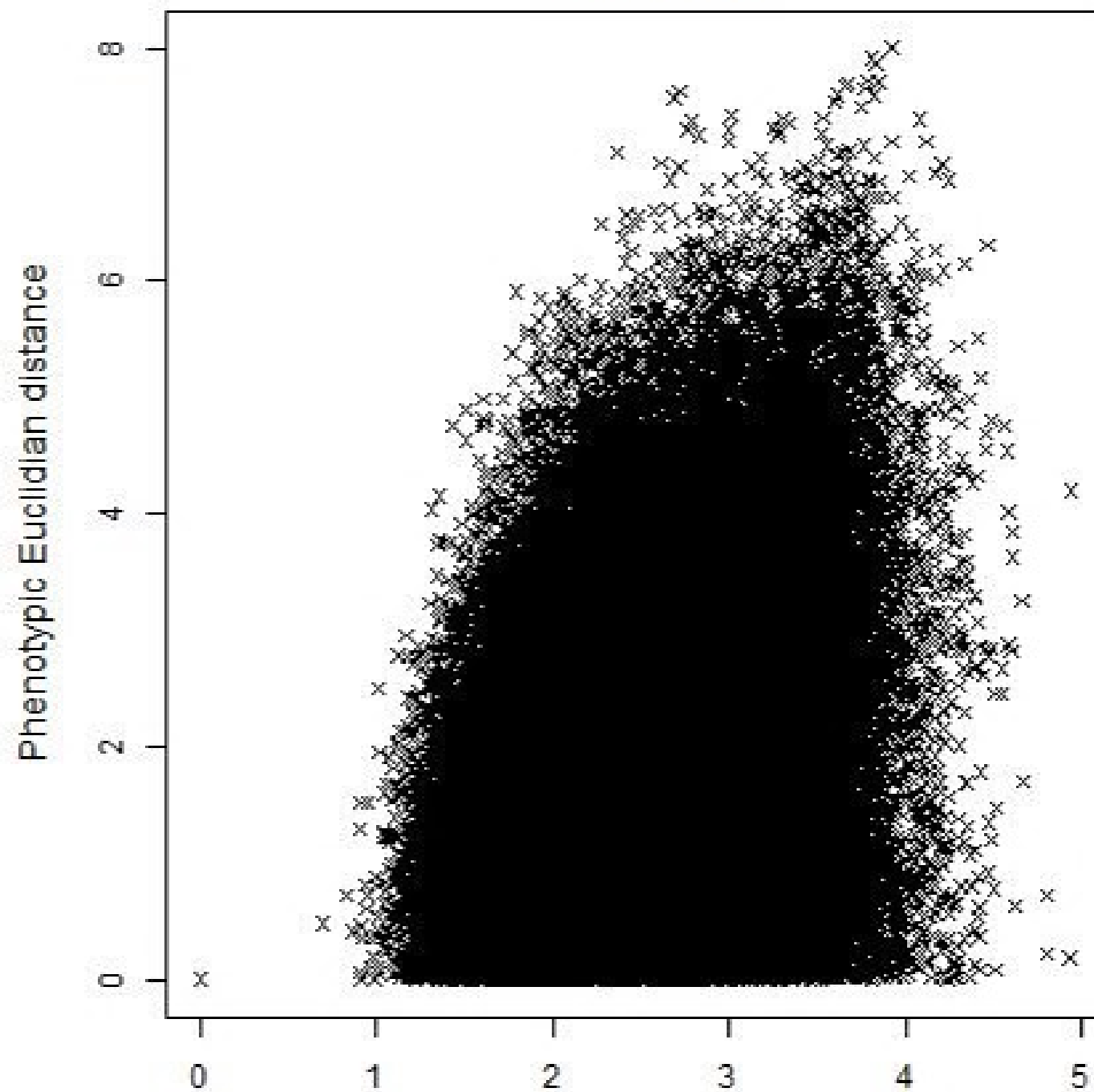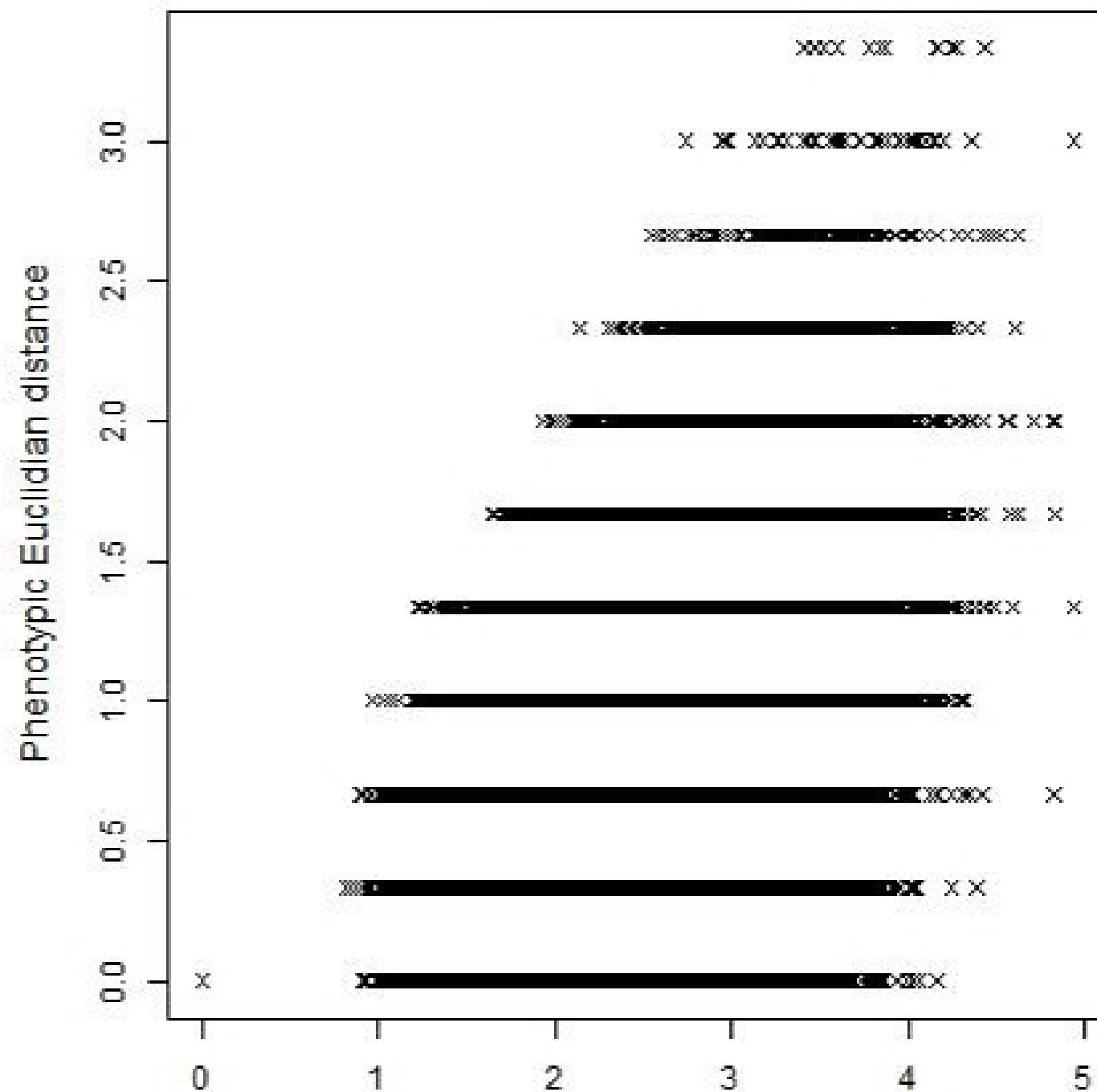Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

SCD_wi1617_po

Phenotypic Euclidian distance

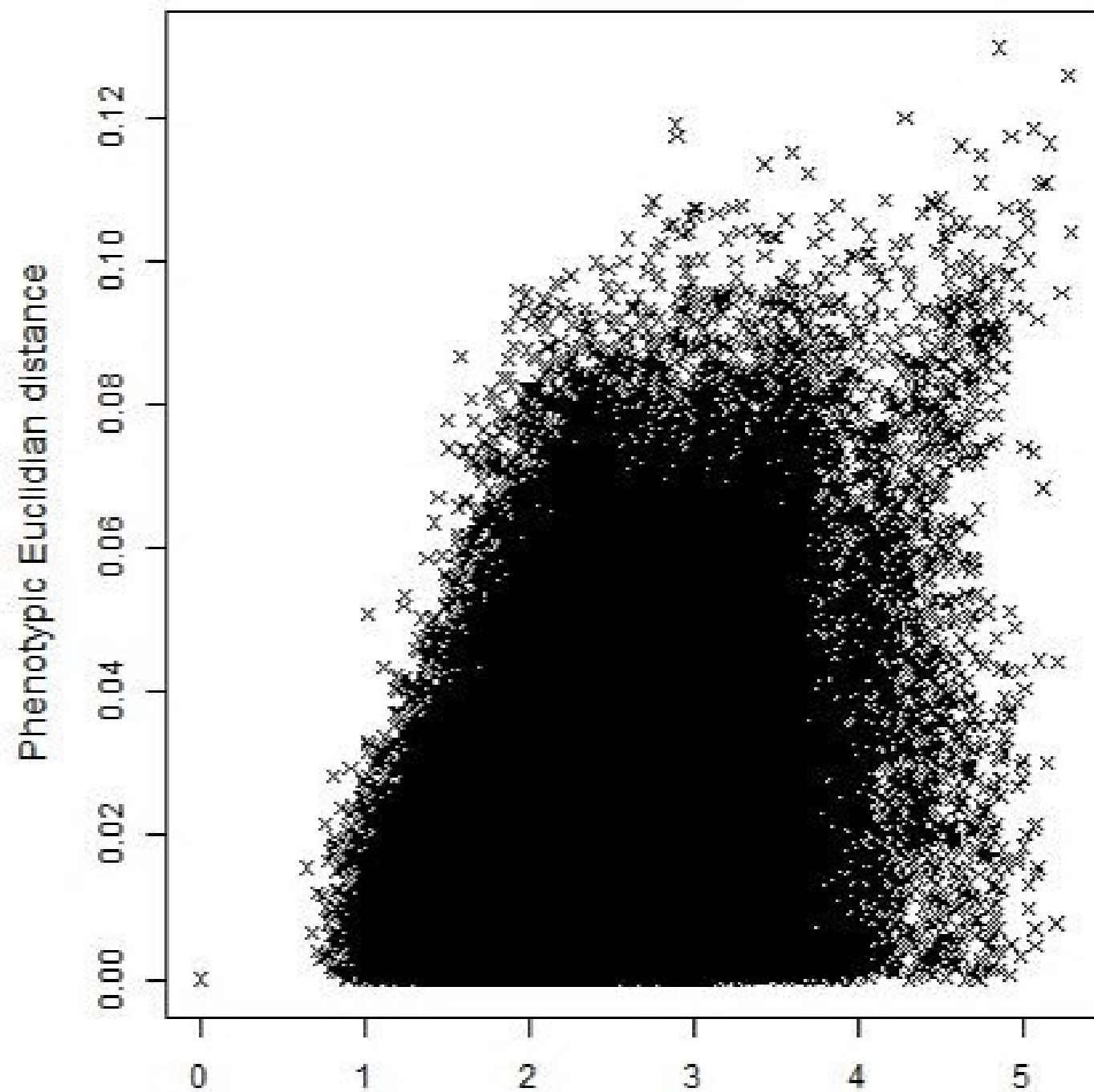Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

SCD_wi1718_lu

SGR_lu16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

SGR_me16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

SGR_me17

Phenotypic Euclidian distance (y-axis)

Genetic Euclidian distance (based on the 100 most significantly associated SNPs) (x-axis)
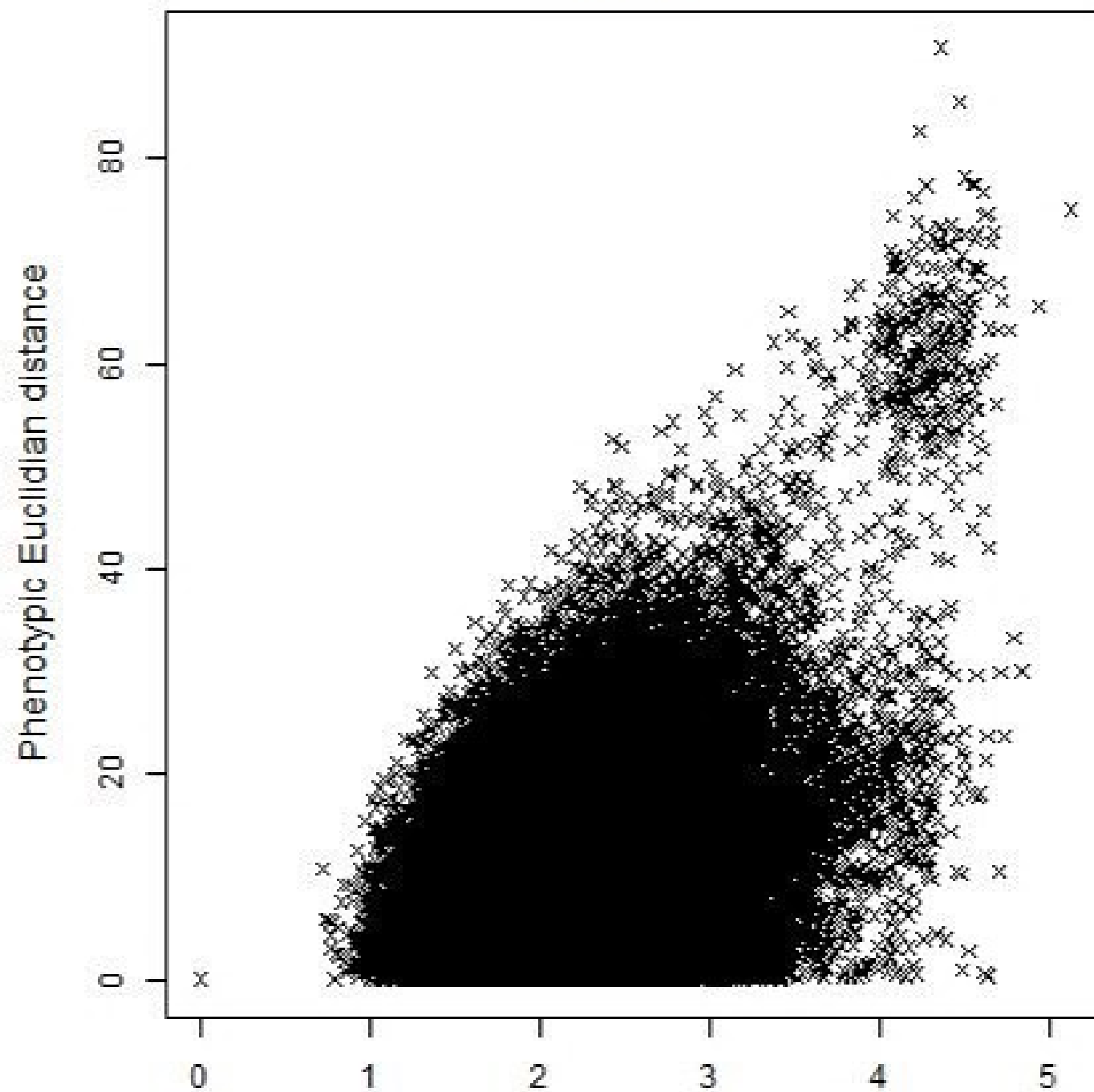
SGR_po17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)
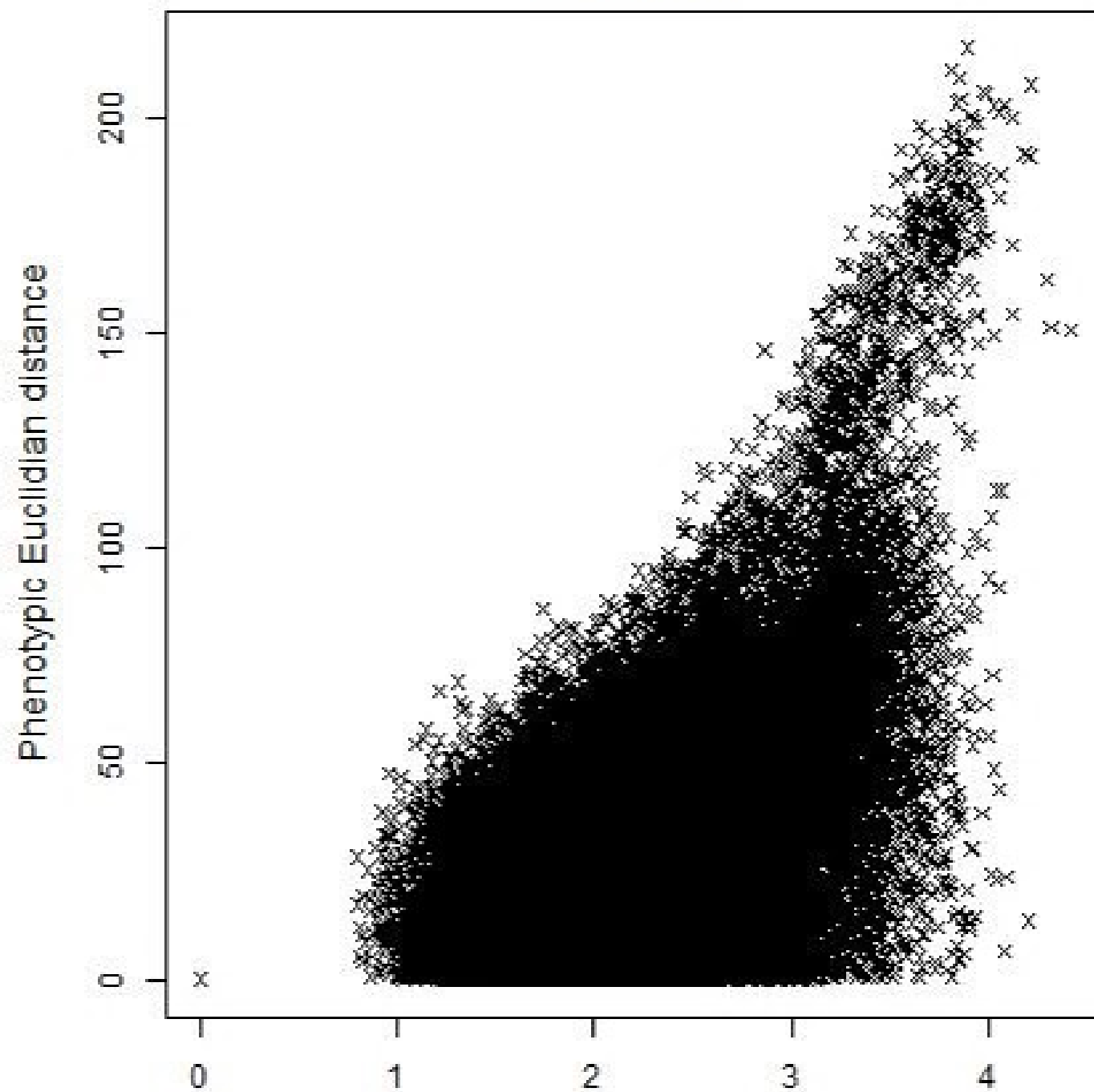
SMH_lu16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

SMH_me16

Phenotypic Euclidian distance
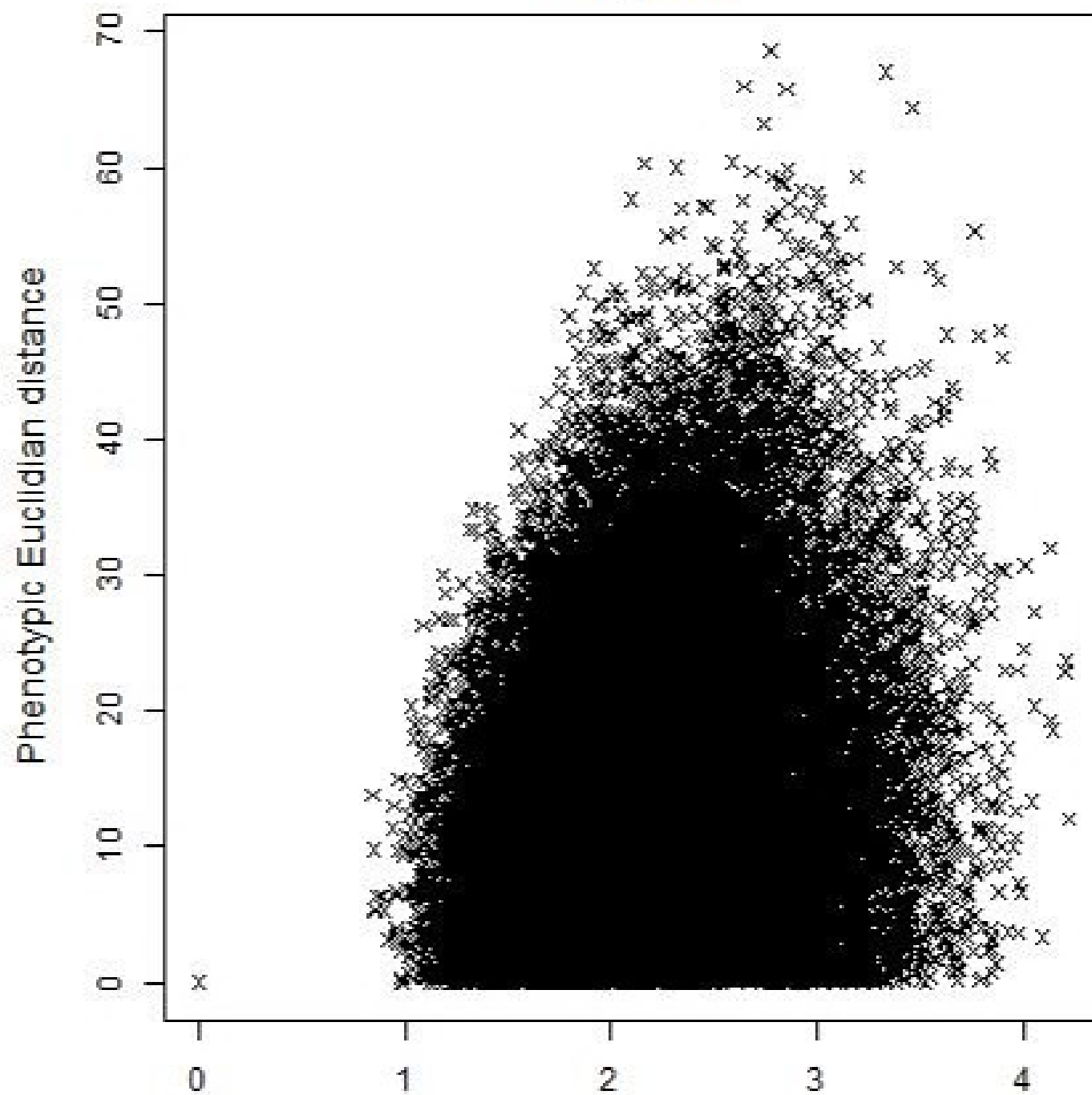
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

SMH_me17

Phenotypic Euclidian distance
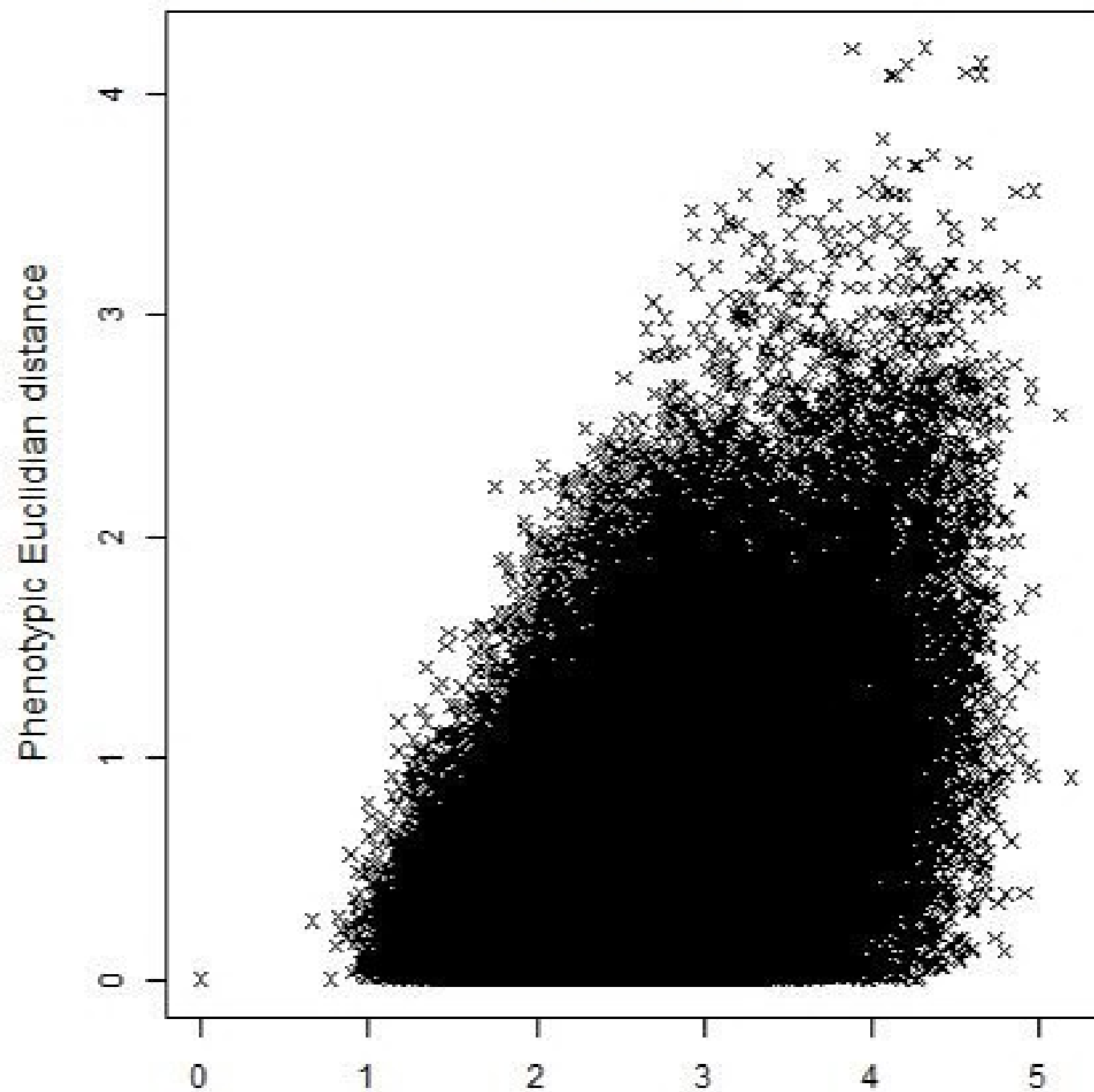
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

SMH_po17

Phenotypic Euclidian distance
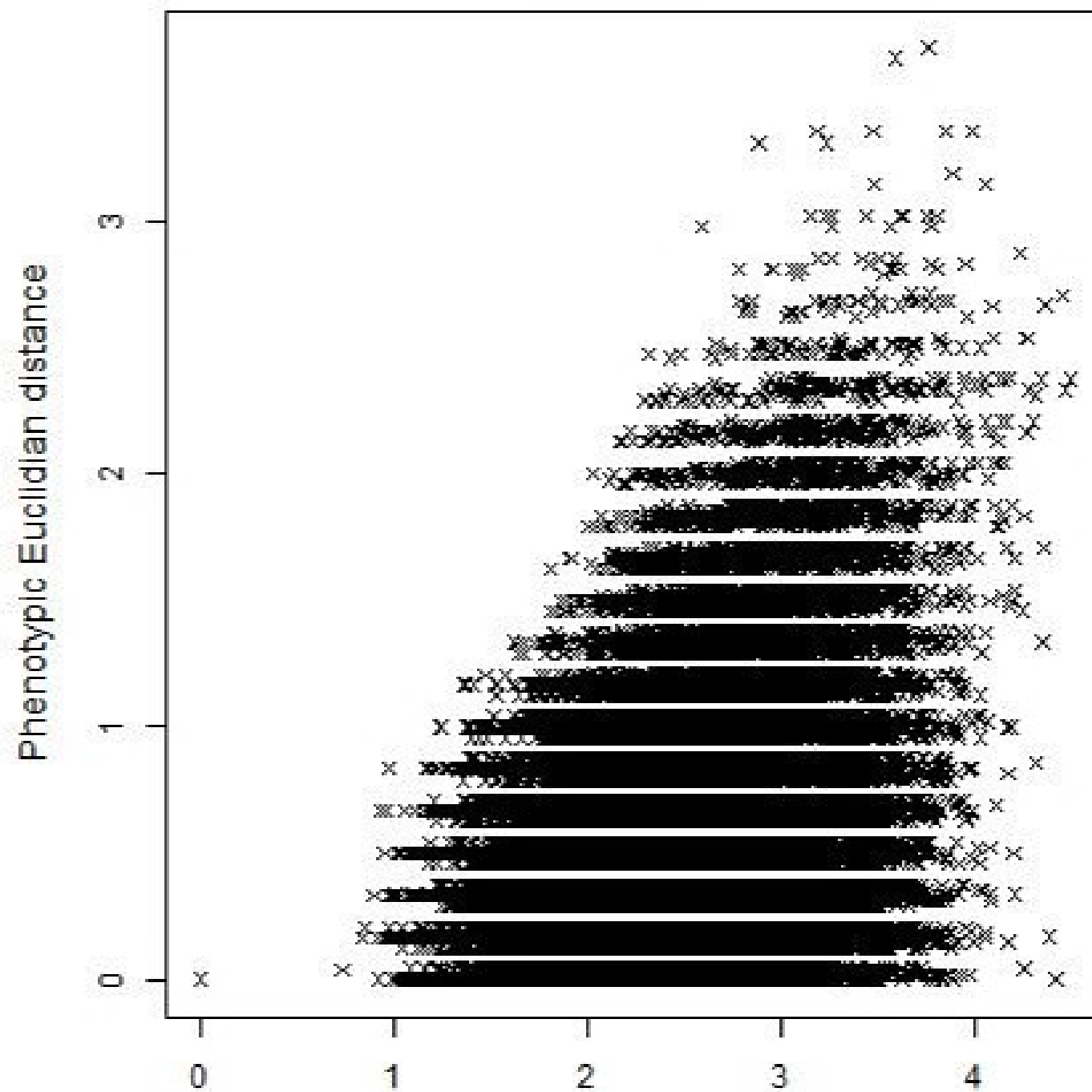
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

VAC_avg

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

VAC_lu16

Phenotypic Euclidian distance

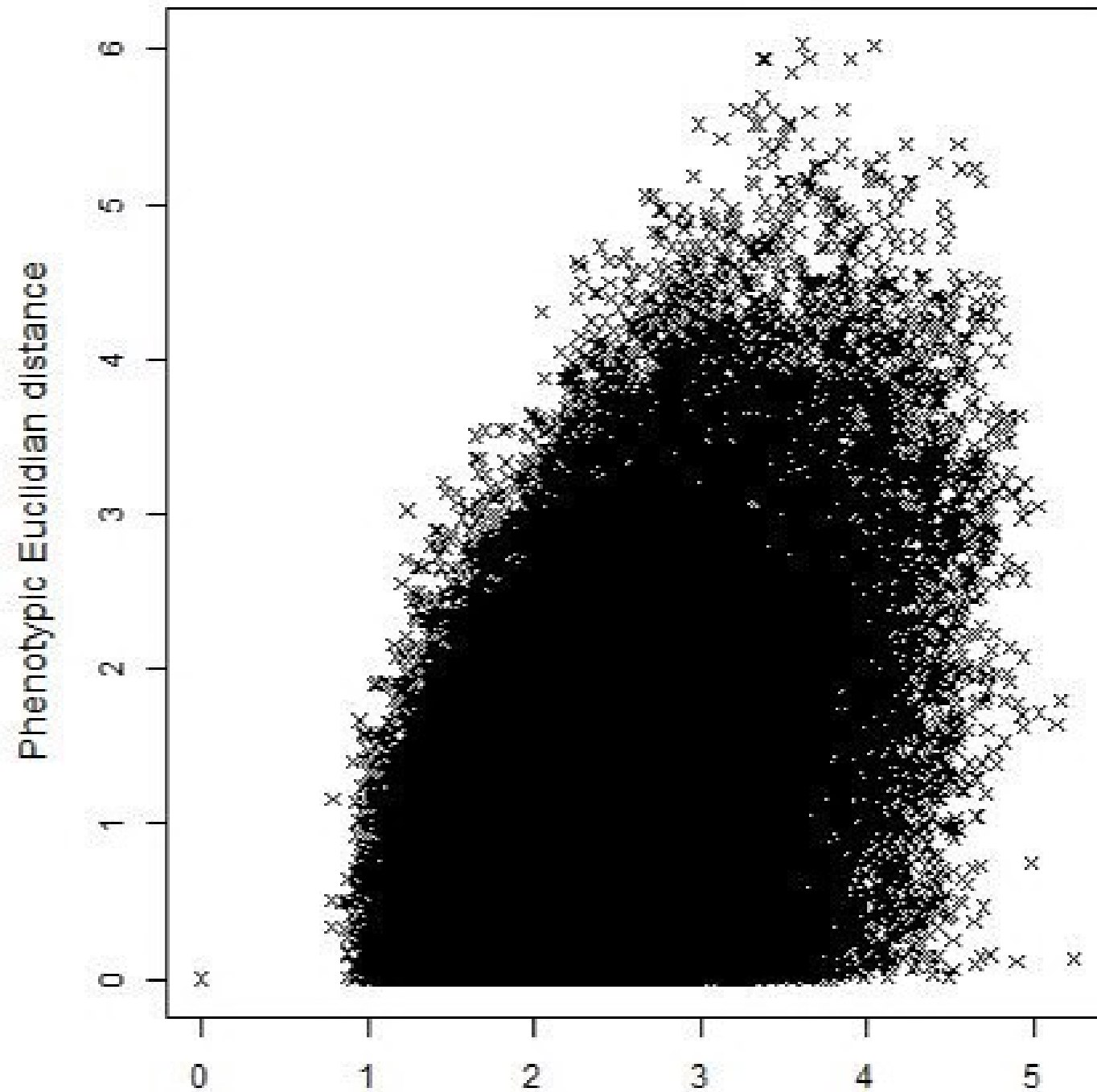Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

VAC_lu17

Phenotypic Euclidian distance (y-axis)
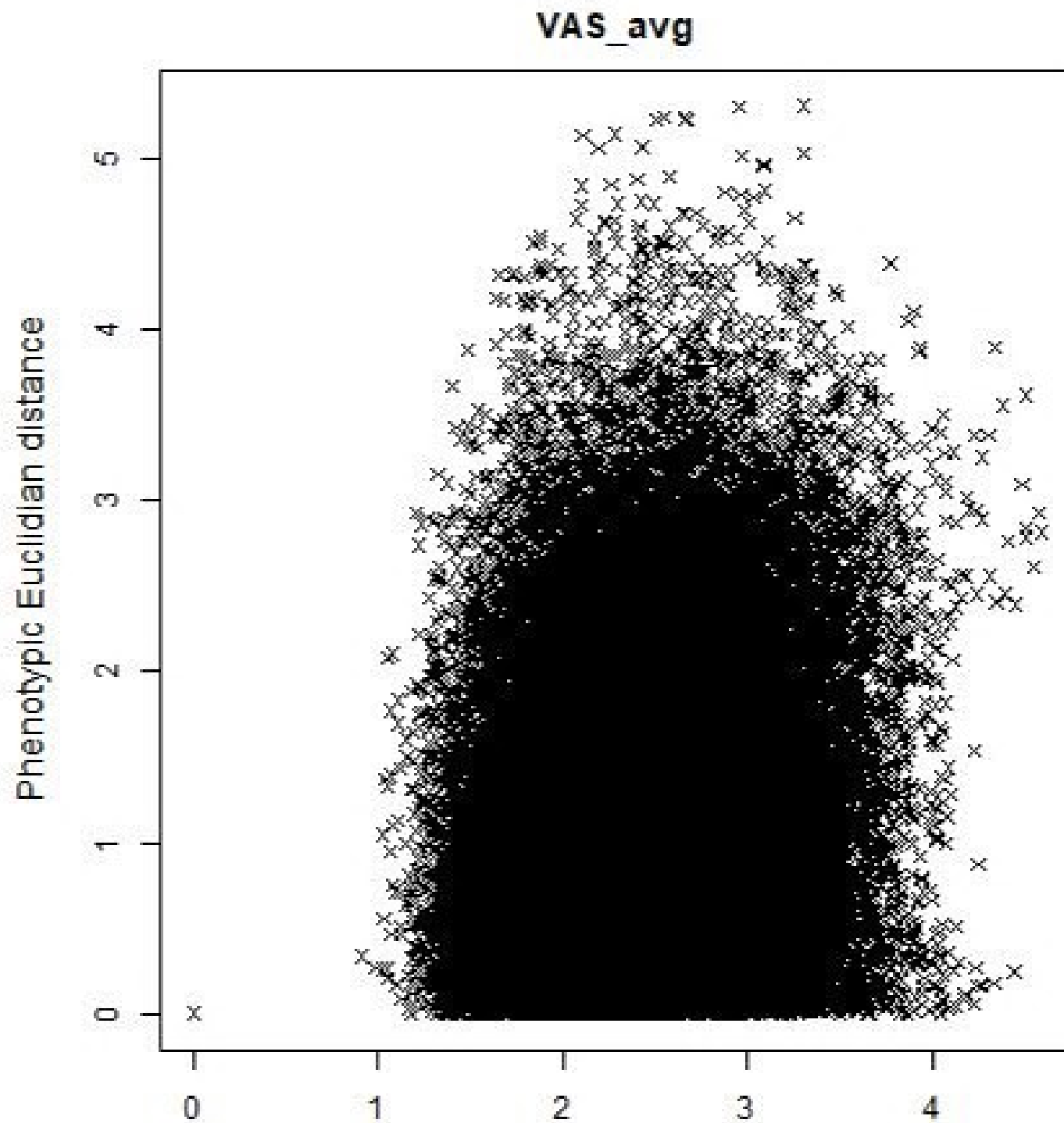
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

VAC_po17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

VAS_avg

Phenotypic Euclidian distance

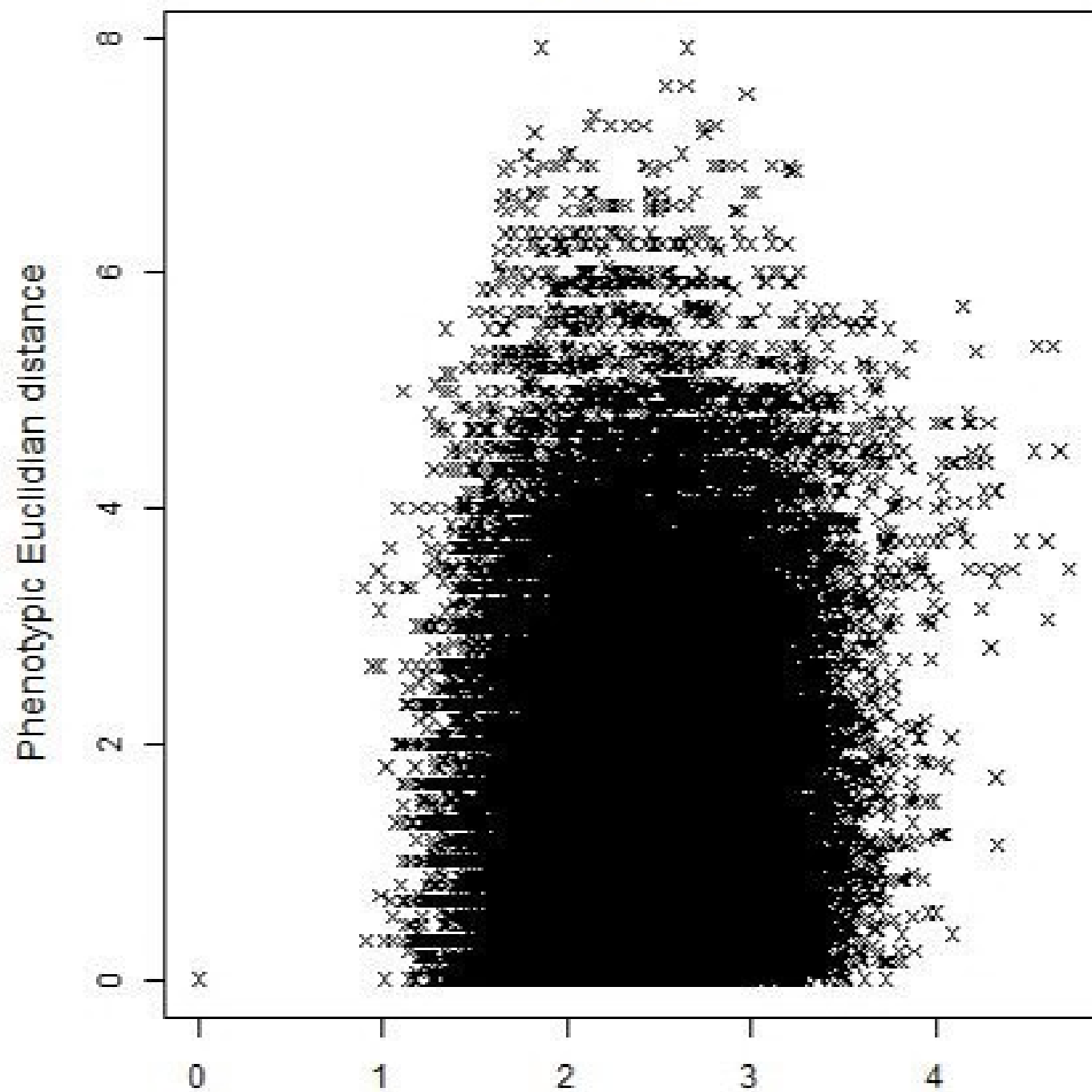Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

VAS_lu15

Phenotypic Euclidian distance
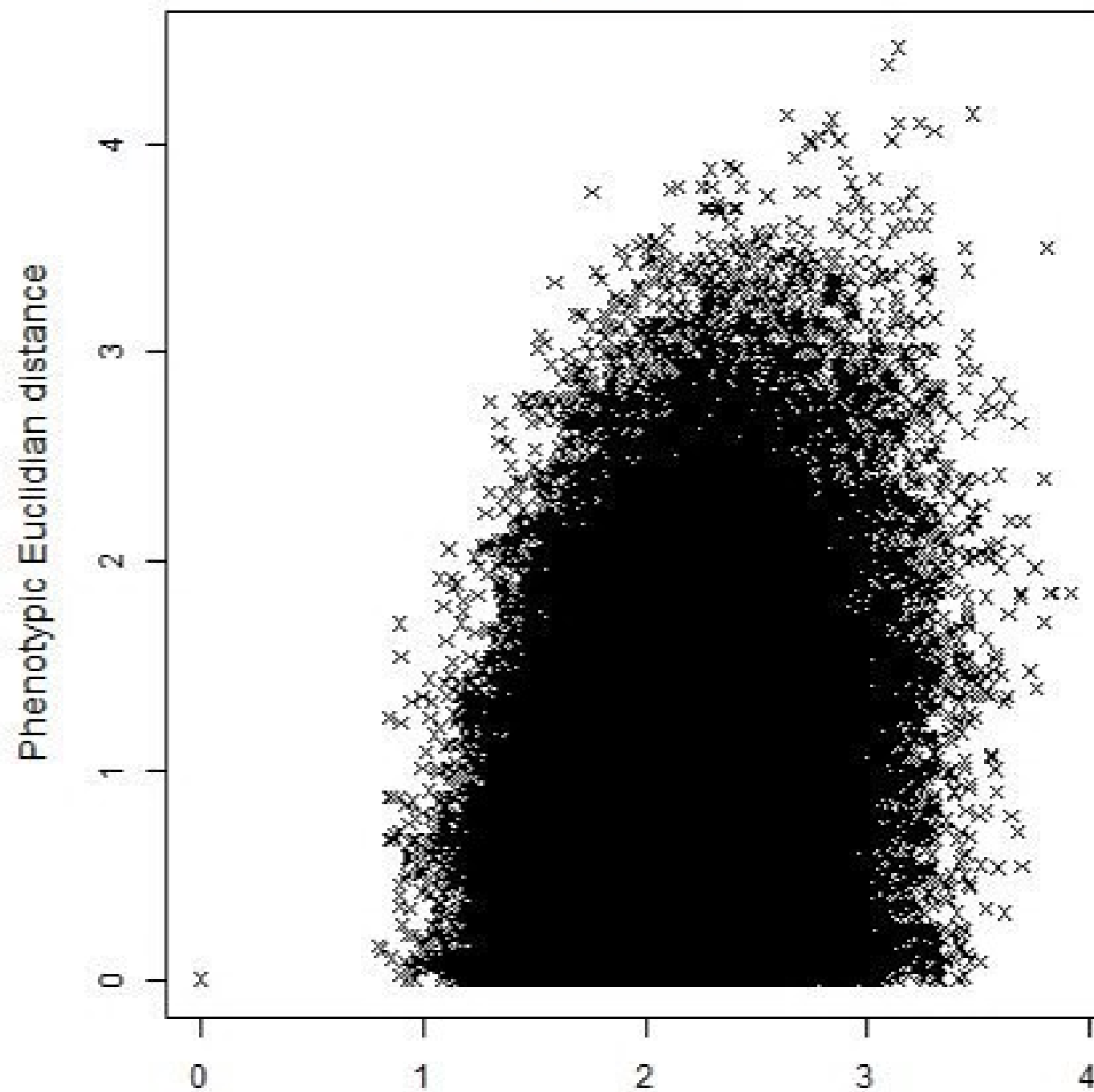
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

VAS_me15

Phenotypic Euclidian distance (y-axis)

Genetic Euclidian distance (based on the 100 most significantly associated SNPs) (x-axis)
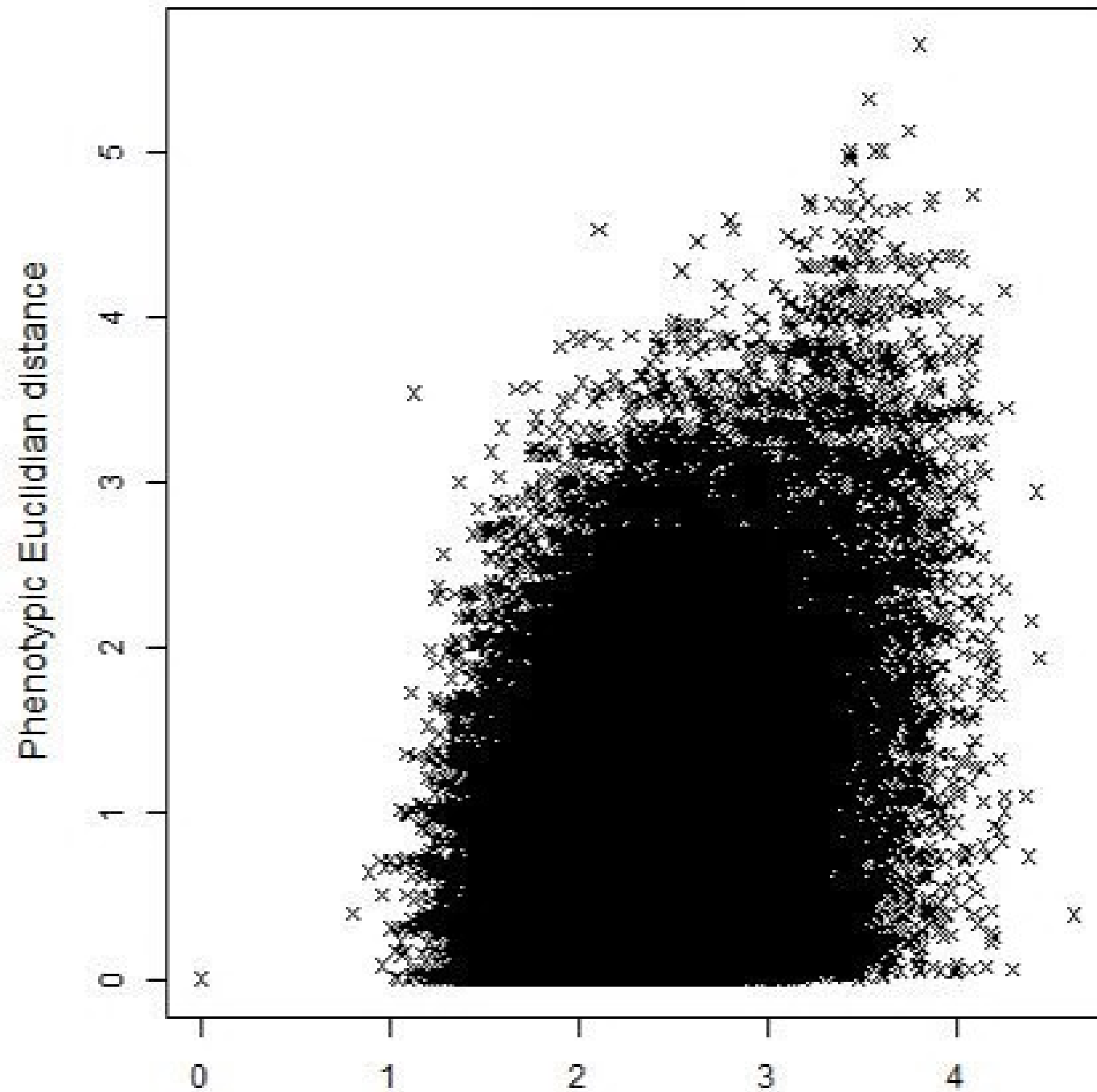
VAS_po15

Phenotypic Euclidian distance
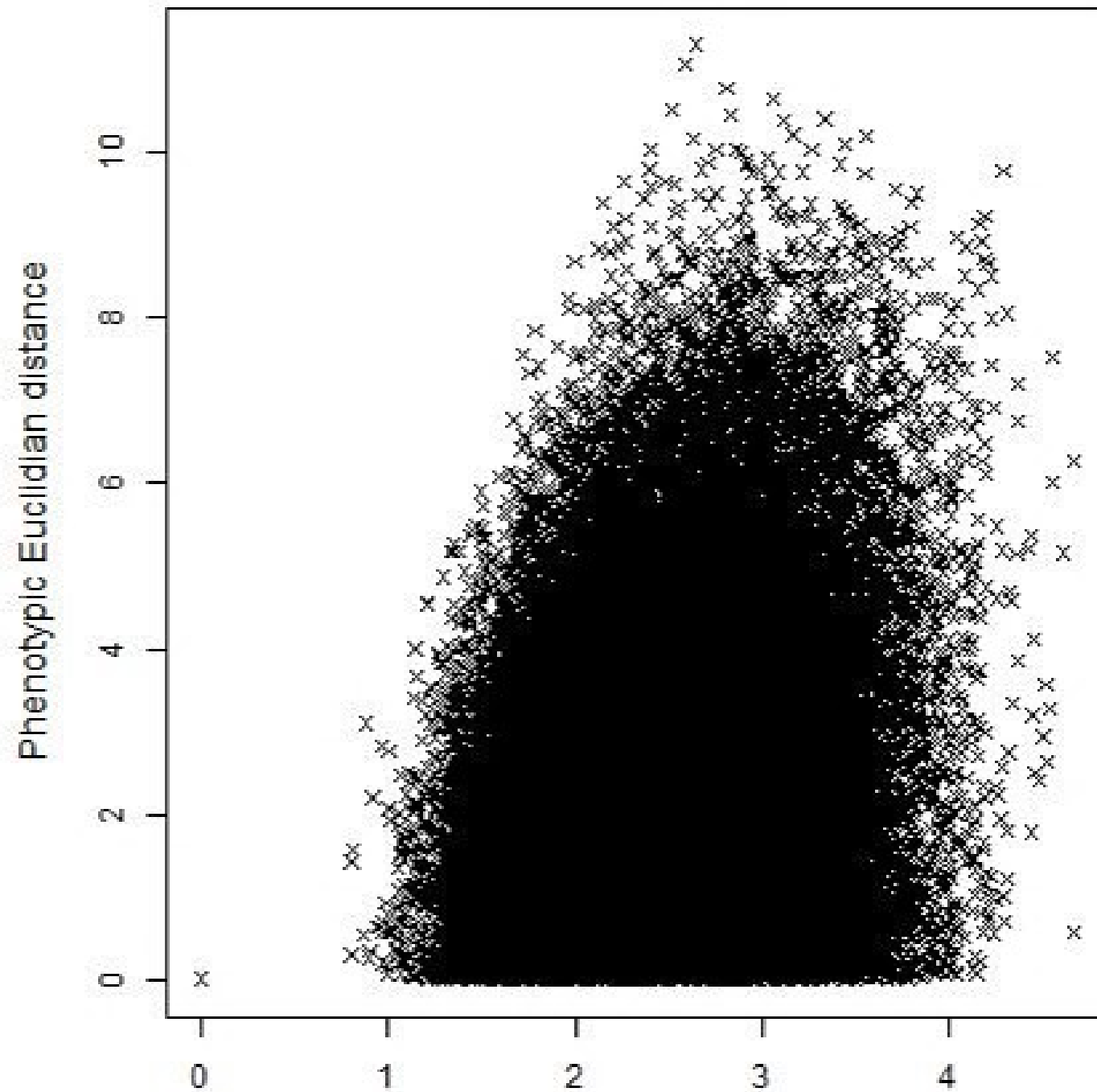
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

WID_po16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

WID_po17

WSC_04_me17

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

WSC_10_me17
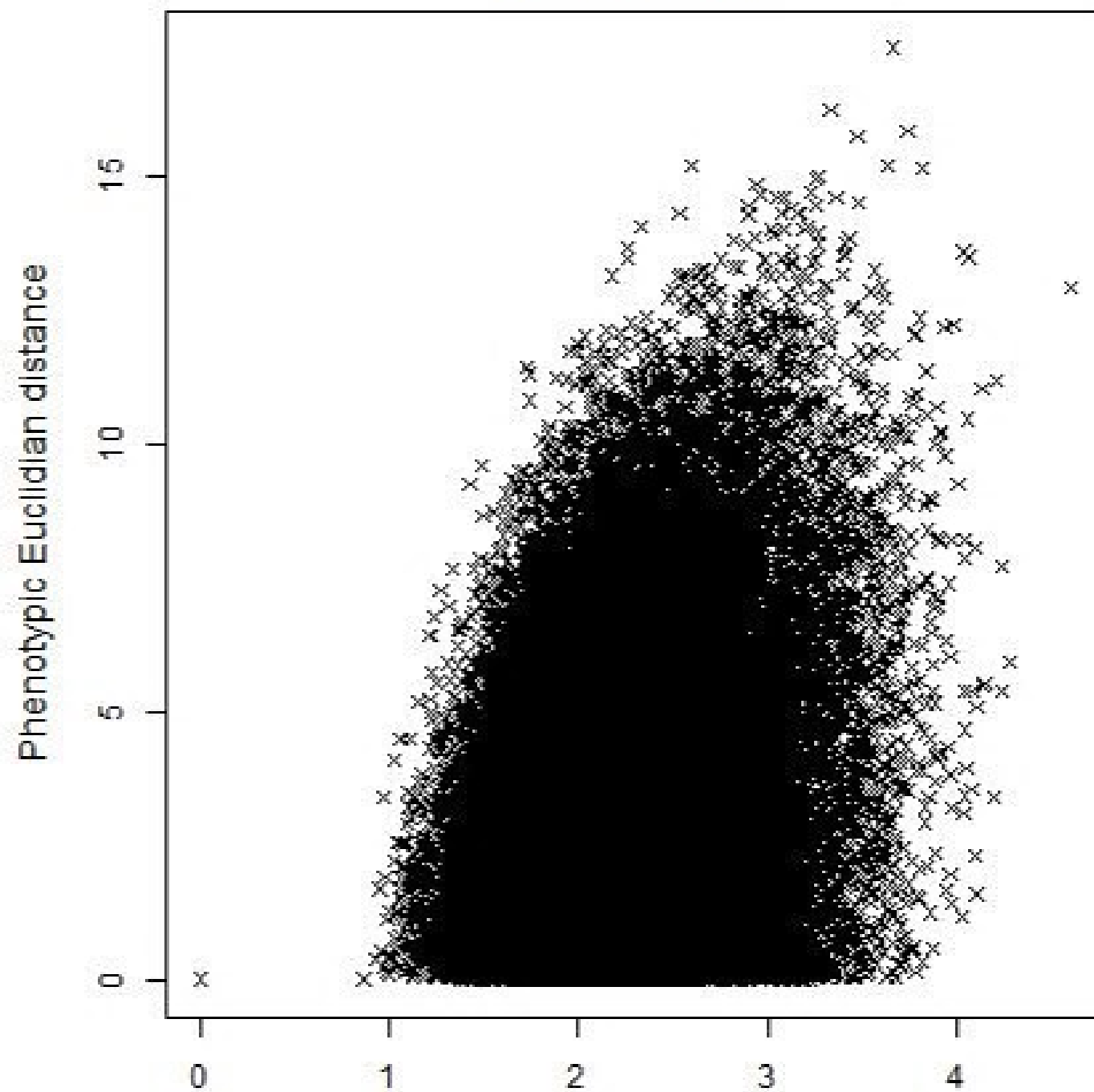
WSC_avg

Phenotypic Euclidian distance
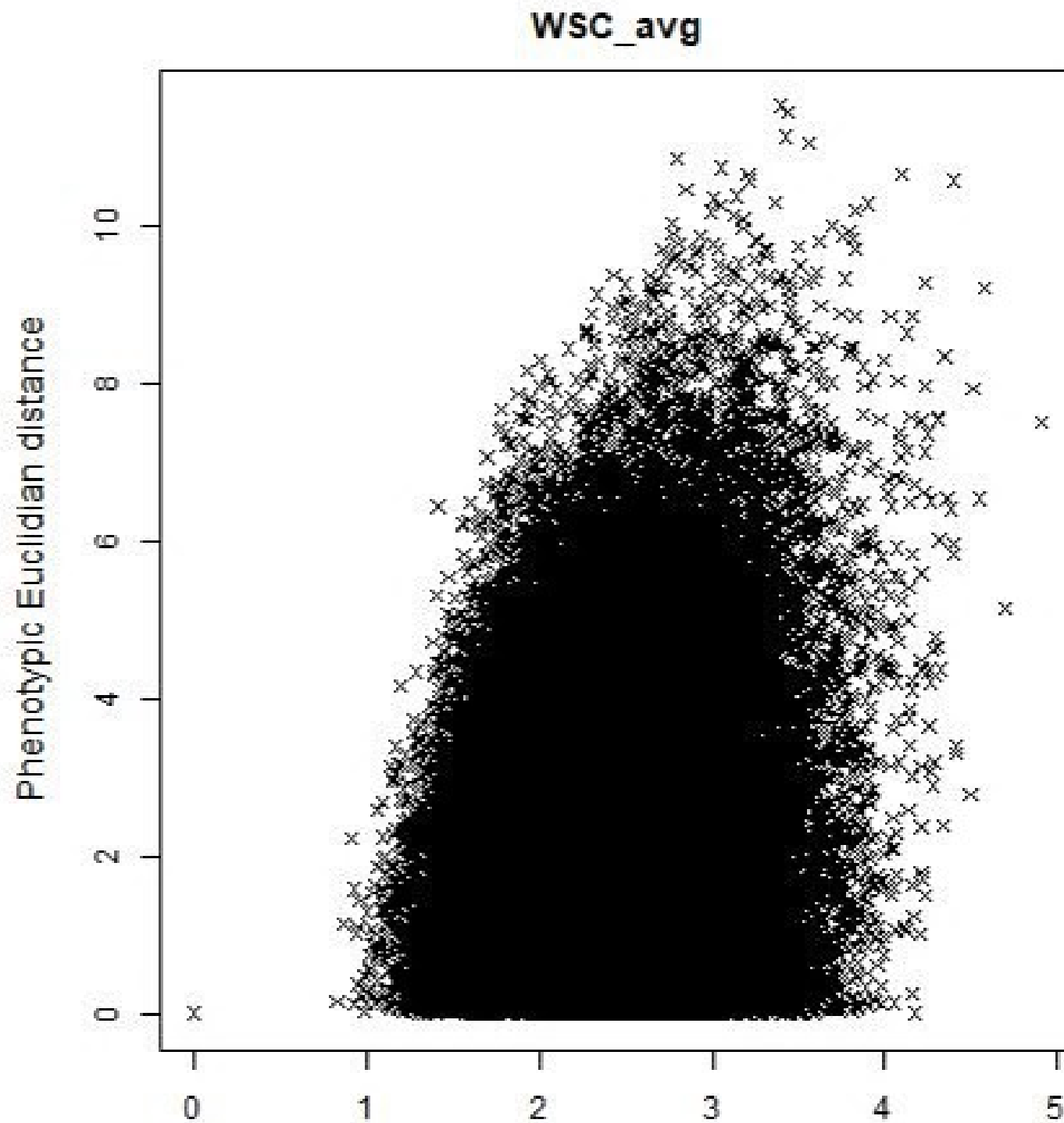
Genetic Euclidian distance (based on the 100 most significantly associated SNPs)

X.13C_lu16

Phenotypic Euclidian distance

Genetic Euclidian distance (based on the 100 most significantly associated SNPs)