



Supplemental Figure Regional association plots of variants linked with osteoarthritis lead variant rs12908498 on chromosome 15 and their respective methQTLs and eQTLs

A) AAGAB_IQCH_SMAD3.15/67366488_C_G.HipOA.cg09501821.mQTL.hg.merged.txt_rs1498506
Regional association plot with the enhancer variant rs1498506 highlighted for the lead phenotype (hip osteoarthritis) from Boer, Hatzikotoulas, Southam et al.³ (top right) and the methylationQTL (mQTL) for cg09501821 in high-grade cartilage (hg)⁴¹ (bottom right). Comparison of P values between the GWAS and methylation QTL are depicted on the left. Variants are annotated to the enhancer variant which is highlighted in purple. Linkage disequilibrium with the lead variant is depicted according to the colours in the legend.

B) AAGAB_IQCH_SMAD3.15/67366488_C_G.HipOA.cg09501821.mQTL.hg.merged.txt_rs1498507
Regional association plot with the enhancer variant rs1498507 highlighted for the lead phenotype (hip osteoarthritis) from Boer, Hatzikotoulas, Southam et al.³ (top right) and the methylationQTL (mQTL) for cg09501821 in high-grade cartilage (hg)⁴¹ (bottom right). Comparison of P values between the GWAS and methylation QTL are depicted on the left. Variants are annotated to the enhancer variant which is highlighted in purple. Linkage disequilibrium with the lead variant is depicted according to the colours in the legend.

C) AAGAB_IQCH_SMAD3.15/67366488_C_G.HipOA.cg09501821.mQTL.lg.merged.txt_rs1498506
Regional association plot with the enhancer variant rs1498506 highlighted for the lead phenotype (hip osteoarthritis) from Boer, Hatzikotoulas, Southam et al.³ (top right) and the methylationQTL (mQTL) for cg09501821 in high-grade cartilage (hg)⁴¹ (bottom right). Comparison of P values between the GWAS and methylation QTL are depicted on the left. Variants are annotated to the enhancer variant which is highlighted in purple. Linkage disequilibrium with the lead variant is depicted according to the colours in the legend.

D) AAGAB_IQCH_SMAD3.15/67366488_C_G.HipOA.cg09501821.mQTL.lg.merged.txt_rs1498507
Regional association plot with the enhancer variant rs1498507 highlighted for the lead phenotype (hip osteoarthritis) from Boer, Hatzikotoulas, Southam et al.³ (top right) and the methylationQTL (mQTL) for cg09501821 in high-grade cartilage (hg)⁴¹ (bottom right). Comparison of P values between the GWAS and methylation QTL are depicted on the left. Variants are annotated to the enhancer variant which is highlighted in purple. Linkage disequilibrium with the lead variant is depicted according to the colours in the legend.

E) AAGAB_IQCH_SMAD3.15/67366488_C_G.HipOA.SMAD3.eQTL.hg.merged.txt_rs1498506
Regional association plot with the enhancer variant rs1498506 highlighted for the lead phenotype (hip osteoarthritis) from Boer, Hatzikotoulas, Southam et al.³ (top right) and the expressionQTL (eQTL) for SMAD3 in high-grade cartilage³⁹ (bottom right). Comparison of P values between the GWAS and expression QTL are depicted on the left. Variants are annotated to the enhancer variant which is highlighted in purple. Linkage disequilibrium with the lead variant is depicted according to the colours in the legend.

F) AAGAB_IQCH_SMAD3.15/67366488_C_G.HipOA.SMAD3.eQTL.hg.merged.txt_rs1498507
Regional association plot with the enhancer variant rs1498507 highlighted for the lead phenotype (hip osteoarthritis) from Boer, Hatzikotoulas, Southam et al.³ (top right) and the expressionQTL (eQTL) for SMAD3 in high-grade cartilage³⁹ (bottom right). Comparison of P values between the GWAS and expression QTL are depicted on the left. Variants are annotated to the enhancer variant which is highlighted in purple. Linkage disequilibrium with the lead variant is depicted according to the colours in the legend.

G) AAGAB_IQCH_SMAD3.15/67366488_C_G.HipOA.SMAD3.eQTL.lg.merged.txt_rs1498506
Regional association plot with the enhancer variant rs1498506 highlighted for the lead phenotype (hip osteoarthritis) from Boer, Hatzikotoulas, Southam et al.³ (top right) and the expressionQTL (eQTL) for SMAD3 in high-grade cartilage³⁹ (bottom right). Comparison of P values between the GWAS and expression QTL are depicted on the left. Variants are annotated to the enhancer variant which is highlighted in purple. Linkage disequilibrium with the lead variant is depicted according to the colours in the legend.

H) AAGAB_IQCH_SMAD3.15/67366488_C_G.HipOA.SMAD3.eQTL.lg.merged.txt_rs1498507
Regional association plot with the enhancer variant rs1498507 highlighted for the lead phenotype (hip osteoarthritis) from Boer, Hatzikotoulas, Southam et al.³ (top right) and the expressionQTL (eQTL) for SMAD3 in high-grade cartilage³⁹ (bottom right). Comparison of P values between the GWAS and expression QTL are depicted on the left. Variants are annotated to the enhancer variant which is highlighted in purple. Linkage disequilibrium with the lead variant is depicted according to the colours in the legend.