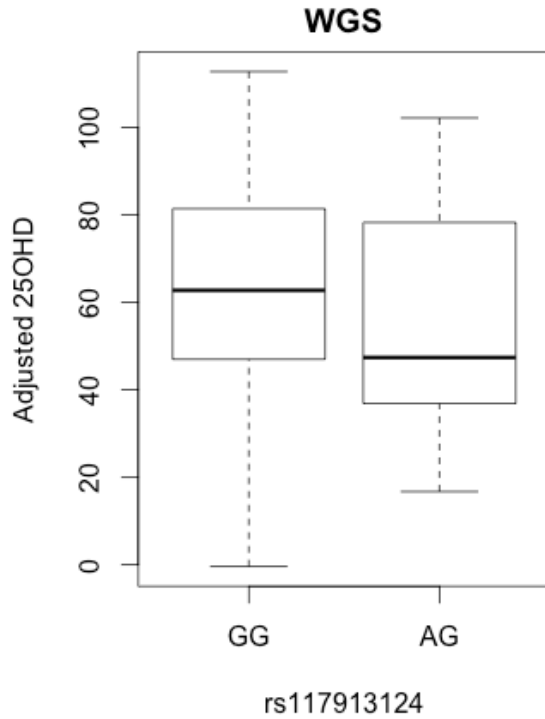


## Supplemental Data

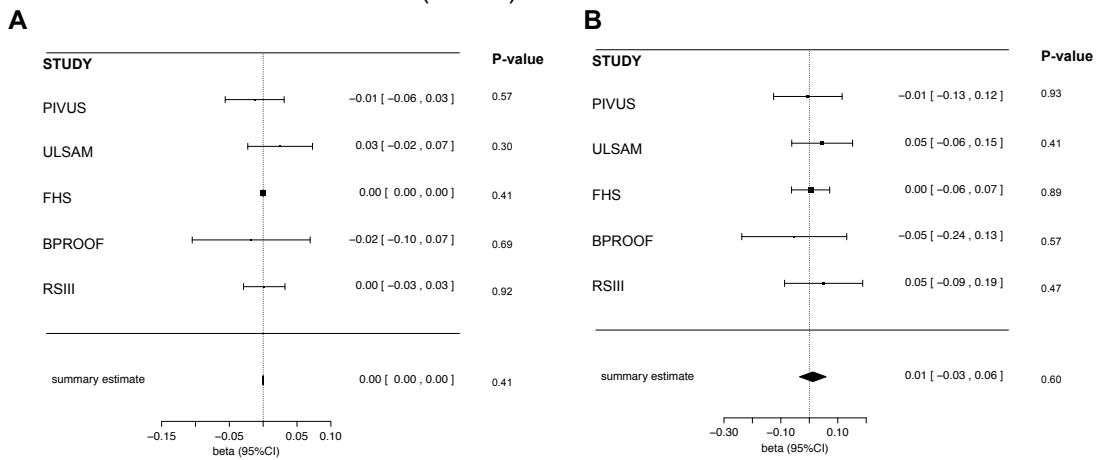
### Low-Frequency Synonymous Coding Variation in *CYP2R1* Has Large Effects on Vitamin D Levels and Risk of Multiple Sclerosis

Despoina Manousaki, Tom Dudding, Simon Haworth, Yi-Hsiang Hsu, Ching-Ti Liu, Carolina Medina-Gómez, Trudy Voortman, Nathalie van der Velde, Håkan Melhus, Cassianne Robinson-Cohen, Diana L. Cousminer, Maria Nethander, Liesbeth Vandenput, Raymond Noordam, Vincenzo Forgetta, Celia M.T. Greenwood, Mary L. Biggs, Bruce M. Psaty, Jerome I. Rotter, Babette S. Zemel, Jonathan A. Mitchell, Bruce Taylor, Mattias Lorentzon, Magnus Karlsson, Vincent V.W. Jaddoe, Henning Tiemeier, Natalia Campos-Obando, Oscar H. Franco, Andre G. Utterlinden, Linda Broer, Natasja M. van Schoor, Annelies C. Ham, M. Arfan Ikram, David Karasik, Renée de Mutsert, Frits R. Rosendaal, Martin den Heijer, Thomas J. Wang, Lars Lind, Eric S. Orwoll, Dennis O. Mook-Kanamori, Karl Michaëlsson, Bryan Kestenbaum, Claes Ohlsson, Dan Mellström, Lisette C.P.G.M. de Groot, Struan F.A. Grant, Douglas P. Kiel, M. Carola Zillikens, Fernando Rivadeneira, Stephen Sawcer, Nicholas J. Timpson, and J. Brent Richards

**Figure S1: Comparison of 25OHD levels in heterozygote carriers (AG) and non-carriers (GG) of the rs117913124 variant in the TUK WGS. 25OHD levels are adjusted for age, sex, BMI and season of measurement. 25OHD levels are expressed in nmol/L.**



**Figure S2: Interaction analysis forest-plots:** A: estimates for interaction between the rs117913124 and vitamin D intake (continuous) B: estimates for interaction between the rs117913124 and vitamin D intake (tertiles)



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### ***Other***

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ALSPAC: Ethical approval for the study was obtained from the ALSPAC Ethics and Law Committee and the Local Research Ethics Committees.

#### ***Author information***

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