

**Supplementary Table 2.** Odds ratio calculated from a logistic regression for models with HLA only and HLA+GRS\_26 using the derivation set.

Parameters	Model HLA only	Model HLA+GRS_26
	OR (95% CI)	OR (95% CI)
(Intercept)	0.04 (0.03-0.05)	0.03 (0.03-0.05)
Male	1	1
Female	1.69 (1.48-1.93)	1.71 (1.49-1.96)
UK	1	1
Italy	2.11 (1.77-2.51)	1.96 (1.64-2.35)
Netherlands	1.52 (1.27-1.83)	1.52 (1.26-1.83)
Poland	1.96 (1.53-2.50)	1.88 (1.46-2.42)
Spain1_Basque	1.91 (1.47-2.48)	1.96 (1.50-2.55)
Spain2_Madrid	2.37 (1.83-3.07)	2.343 (1.80-3.05)
Low HLA	1	1
Intermediate HLA	13.92 (11.31-17.13)	14.07 (11.40-17.37)
High HLA	89.12 (68.18-116.48)	91.34 (69.56-119.94)
p0-p20 (Quintile 1)	NA	0.44 (0.35-0.55)
p20-p40 (Quintile 2)	NA	0.91 (0.74-1.13)
p40-p60 (Quintile 3)	NA	1
p60-p80 (Quintile 4)	NA	1.30 (1.06-1.59)
p80-p100 (Quintile 5)	NA	2.00 (1.65-2.43)

OR of 1 indicates the reference group. OR odds ratio; CI confidence interval; NA not applicable.