No association of the CARD8 (TUCAN) c.30T>A (p.C10X) variant with Crohn's disease: a study in 3 independent European cohorts.

Background: A recent study reported that the c.30T>A (p.Cys10Ter; rs2043211) variant, in the CARD8 (TUCAN) gene, is associated with Crohn's disease (CD). The aim of this study was to analyze the frequency of p.C10X in 3 independent European (IBD) cohorts from Germany, Hungary, and the Netherlands. Methods: We included a European IBD cohort of 921 patients and compared the p.C10X genotype frequency to 832 healthy controls. The 3 study populations analyzed were: (1) Germany [CD, n = 317; ulcerative colitis (UC), n = 180], (2) Hungary (CD, n = 149; UC, n = 119), and (3) the Netherlands (CD, n = 156). Subtyping analysis was performed in respect to NOD2 variants (p.Arg702Trp, p.Gly908Arg, c.3020insC) and to clinical characteristics. Ethnically matched controls were included (German, n = 413; Hungarian, n = 202; Dutch, n = 217). Results: We observed no significant difference in p.C10X genotype frequency in either patients with CD or patients with UC compared with controls in all 3 cohorts. Conversely to the initial association study, we found a trend toward lower frequencies of the suggestive risk wild type in CD from the Netherlands compared with controls (P = 0.14). We found neither evidence for genetic
interactions between p.C10X and NOD2 nor the C10X variant to be associated with a CD or UC phenotype. CONCLUSIONS: Analyzing 3 independent European IBD cohorts, we found no evidence that the C10X variant in CARD8 confers susceptibility for CD.