Genetic variants tied to type 1 diabetes heterogeneity

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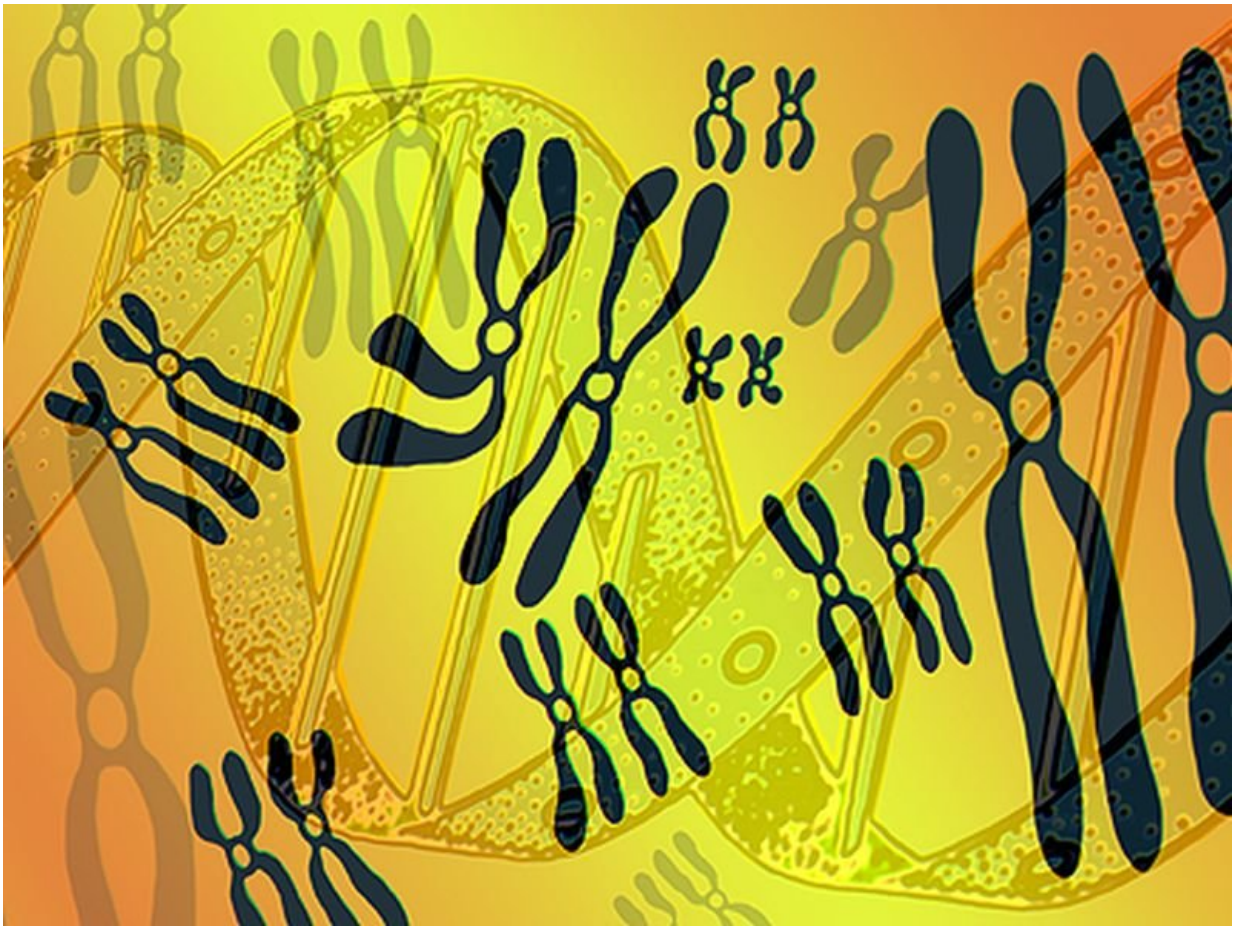

(HealthDay)—Transcription factor 7 like 2 (*TCF7L2*) genetic variants

contribute to phenotypic heterogeneity of type 1 diabetes, according to a study published online Oct. 12 in *Diabetes Care*.

Maria J. Redondo, M.D., Ph.D., from Texas Children's Hospital in Houston, and colleagues investigated the relationship between type 2 diabetes-associated *TCF7L2* single nucleotide polymorphisms and immunologic and metabolic characteristics at type 1 diabetes diagnosis among 810 patients with newly diagnosed autoimmune type 1 diabetes (median age, 13.6 years).

The researchers found that the rs4506565 variant was a significant independent factor for expressing a single autoantibody at diagnosis, instead of multiple autoantibodies (odds ratio [OR], 1.66; P = 0.024). This association was only significant in participants ≥12 years old (OR, 2.12; P = 0.003) compared to younger ones (P = 0.73). There was a significant association between the rs4506565 variant and both higher C-peptide area under the curve (P = 0.008) and lower mean glucose area under the curve (P = 0.0127). Similar results were seen for the rs7901695 variant.

"Carriers of the *TCF7L2* variant had a milder immunological and metabolic phenotype at type 1 diabetes diagnosis, which could be partly driven by type 2 diabetes-like pathogenic mechanisms," the authors write.

More information: Abstract/ Full Text (subscription or payment may be required)