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Endothelial Nitric Oxide Synthase Gene Variants and Susceptibility to Chronic Myeloid Leukemia (Ph+)

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ABSTRACT The aim is to study the relationship of Philadelphia positive (Ph+) - Chronic Myeloid Leukemia (CML) with endothelial nitric oxide (NOS3) gene variants (intron 4 VNTR and 894G> T). Two NOS3 gene variants were evaluated in 59 CML patients and 100 healthy controls. Variants for the NOS3 gene were detected by PCR and/or PCR-RFLP. When compared with the healthy control group (p: 0.000 and 0.011, respectively), the researchers found that NOS3 (894G>T) TT genotype and T allele were higher in the patients with CML. The researchers found that NOS3 (intron 4 VNTR) BB genotype and B allele were higher in the patients with CML in comparison with the healthy control group (p: 0.040 and 0.046, respectively). Regarding haplotype frequency, haplotypes 33, 32, 31 and 23 (BBTT, BBGT, BBGG and ABTT) were found to be existing in CML only. The researchers demonstrated that these two variants could play a role in the ethiopathogenesis of CML.