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Gene-Wide Association Study on the *TERT* Locus and PDAC Susceptibility. Results from the PANDoRA Consortium

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Context SNPs in the telomerase reverse transcriptase (*TERT*) *locus* were reported to be associated with pancreatic cancer risk in a genome-wide association study (GWAS). TERT is essential for maintaining telomere ends. Its over-expression in normal cells can lead to prolonged cell lifespan and transformation. While telomerase activity cannot be detected in most normal tissues, it is seen in approximately 90% of human cancers. **Objective** We attempted to replicate and expand the association with the *locus* in a series of PDAC and healthy controls of European ancestry within the PANcreatic Disease ReseArch (PANDoRA) consortium. **Methods** We genotyped 13 SNPs in 1,034 PDAC cases and 2,443 controls from the PANDoRA consortium. We tested each SNP for association with PDAC risk and also with survival of the patients. **Results** We replicated the association reported in the GWAS with rs401681 (OR=1.53; 95%C;I 1.22-1.92; P=0.0002) and found a novel association between rs2736098 and decreased PDAC risk (OR=0.75; 95%CI: 0.63-0.88; P=0.001). Another polymorphism (rs4246742) was associated with worse survival (HR=1.75, 95%CI: 1.15-2.67; P=0.009). **Conclusion** We report here two novel findings: an association with risk (rs2736098) and one with survival of the patients (rs4246742). These results further contribute to our understanding in the genetic etiology of pancreatic cancer and suggest a new marker for disease prognosis.