

## Truncating *TINF2* p.Tyr312Ter variant and inherited breast cancer susceptibility

### Supplementary data

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**Table S1** cDNA-specific PCR primers used for the amplification of short and long *TINF2* isoforms

	Short isoform	Long isoform
<b>Forward primer</b>	GACAATATGGTGTGGACATGG	GACAATATGGTGTGGACATGG
<b>Reverse primer</b>	GCAAGCAAAGAGGATAGGATG	GCCAGAAGGGGGTAGGTATT

**Table S2** Results from exome data analysis filtered for rare (MAF< 0.01) missense and protein truncating variants (PTV) in shelterin complex genes

	Genomic location (Hg19) <sup>a</sup>	PTV	Missense
<i>TINF2</i>	chr14:24,708,846-24,711,880	p.Tyr312Ter <sup>b</sup>	None
<i>TERF1</i>	chr8:73,921,099-73,960,358	None	p.Ala21Gly <sup>c</sup>
<i>TERF2</i>	chr16:69,389,470-69,419,910	None	None
<i>TERF2IP</i>	chr16:75,681,671-75,691,330	None	None
<i>ACD</i>	chr16:67,691,415-67,694,163	None	None
<i>POT1</i>	chr7:124,462,440-124,569,879	None	None

<sup>a</sup> Genomic coordinates from RefSeq<sup>b</sup> *TINF2* p.Tyr312Ter (c.936C>A, rs201677741)<sup>c</sup> *TERF1* p.Ala21Gly (c.62C>G, rs370999354)**Table S3** Family history of cancer in *TINF2* c.936C>A (p.Tyr312Ter) positive index cases

Index ID - Cancers/tumors (age at diagnosis)	Breast/ovarian cancer(s) in 1 <sup>st</sup> and/or 2 <sup>nd</sup> degree relatives (age at diagnosis)	Breast/ovarian cancer(s) in 3 <sup>rd</sup> degree relatives (age at diagnosis)	Other cancers in 1 <sup>st</sup> and/or 2 <sup>nd</sup> degree relatives (age at diagnosis)	Other cancers in 3 <sup>rd</sup> degree relatives (age at diagnosis)
<b>Her1 -Br (27)</b>	-	Br (u), Br + Ov (40)	-	Sto (u)
<b>Uns1 -Br (51)</b>	-	-	Lu (u), Csu (u), Csu (u)	-
<b>Uns2 -Br (64)</b>	Br (u), Ov (u)	-	Lu (56), Pro (65)	-
<b>Uns3 -Br (66)</b>	Br (u)	-	Pro (u), Es (60), Csu (u), Pro (u)	-
<b>Uns4 -Br (64)</b>	-	-	Mel <sup>a</sup> (u)	-

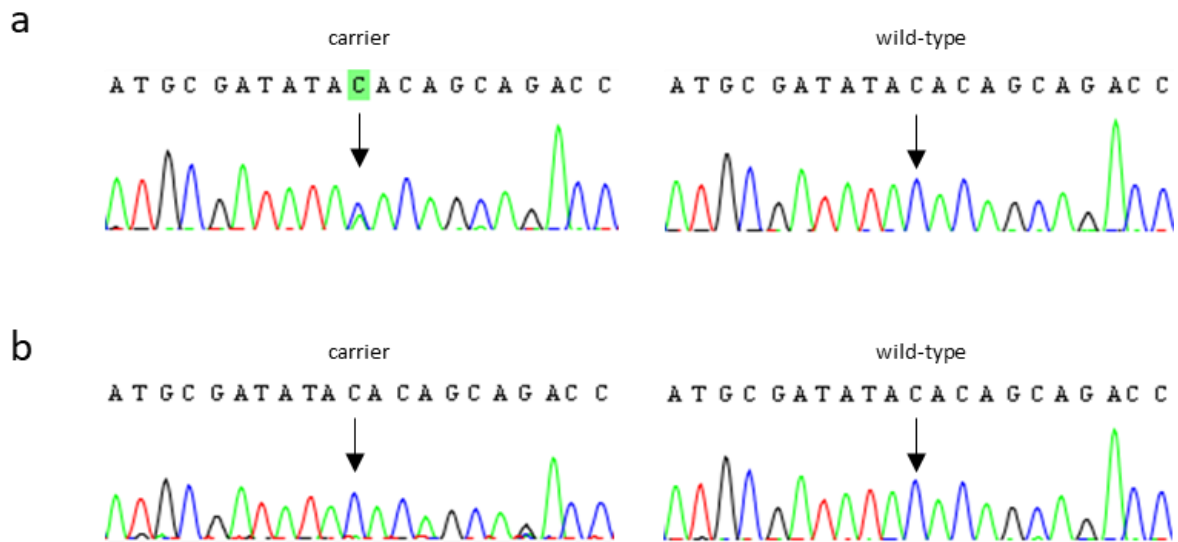
Br=Breast cancer, Csu=Cancer site unknown, Es=Esophagus, Her=hereditary cohort, Lu=Lung cancer, Mel=Melanoma, Ov=Ovarian cancer, Pro=Prostatic cancer, Sto=Stomach cancer, u=Unknown, Uns=unselected cohort.

<sup>a</sup> Sister of the index

**Table S4** Tumor characteristics of *TINF2* c.936C>A p.Tyr312Ter carriers

Index ID	Morphology	Receptor status (ER, PR, HER2)	TNM
Her1	Ductal	ER-, PR-, HER2+	T2N1M1
Uns1	Ductal	ER+, PR+, HER2-	T2N1M0
Uns2	Ductal	ER+, PR+, HER2-	T1N0M0
Uns3	Lobular	ER+, PR+, HER2-	T1N0M0
Uns4	Ductal	ER+, PR+, HER2-	T1N0M0

Her=Hereditary cohort, Uns=Unselected cohort, T=Tumor size, N=Nodal status, M=Primary metastasis, ER=Estrogen receptor, PR=Progesterone receptor.



**Fig. S1** Sequence chromatograms of *TINF2* c.936C>A (p.Tyr312Ter) variant carrier and wild-type in (a) the short isoform of *TINF2* cDNA and (b) the long isoform cDNA. Mutation site c.936C>A is pointed by black arrows.