

Variant: *NM_000059.4(BRCA2):c.8362T>C (p.Trp2788Arg)*

Version: 1.0

CA025602 [↗](#)

52563 (ClinVar) [↗](#)

Gene: BRCA2 ([HGNC:675](#))

Condition: BRCA2-related cancer predisposition ([MONDO:0700269](#))

Inheritance Mode: Autosomal dominant inheritance

UUID: e800f656-faa5-4b9f-b7b6-26b63b177603

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HGVS expressions

NM_000059.4(BRCA2):c.8362T>C (p.Trp2788Arg)

NM_000059.4:c.8362T>C

NC_000013.11:g.32370432T>C

CM000675.2:g.32370432T>C

NC_000013.10:g.32944569T>C

CM000675.1:g.32944569T>C

NC_000013.9:g.31842569T>C

NG_012772.3:g.59953T>C

ENST00000470094.2:c.8362T>C

ENST00000528762.2:c.8362T>C

ENST00000530893.7:c.7993T>C

ENST00000665585.2:c.8362T>C

ENST00000666593.2:c.8362T>C

ENST00000700202.2:c.8362T>C

ENST00000700202.1:c.829T>C

ENST00000380152.8:c.8362T>C

ENST00000544455.6:c.8362T>C

ENST00000614259.2:c.8370T>C

ENST00000665585.1:c.927T>C

ENST00000680887.1:c.8362T>C

ENST00000380152.7:c.8362T>C

ENST00000544455.5:c.8362T>C

NM_000059.3:c.8362T>C

Likely Pathogenic

Met criteria codes **3**

PS3

PP3

PM2_Supporting

Not Met criteria codes **2**

PP4

BP5

Evidence Links **0**

Expert Panel

ENIGMA BRCA1 and BRCA2 VCEP [↗](#)

Criteria Specification Information

[↗](#) **Criteria Specification:** ClinGen ENIGMA BRCA1 and BRCA2 Expert Panel Specifications to the ACMG/AMP Variant Interpretation Guidelines for BRCA2 Version 1.2.0

[↗](#) **Criteria Specification Approval History**

[↗](#) **Criteria Specifications for this VCEP**

ENIGMA BRCA1 and BRCA2 VCEP

The c.8362T>C variant in BRCA2 is a missense variant predicted to cause substitution of Tryptophan by Arginine at amino acid 2788 (p. (Trp2788Arg)). This variant is absent from gnomAD v2.1 (exomes only, non-cancer subset, read depth ≥25) and gnomAD v3.1 (non-cancer subset, read depth ≥25) (PM2_Supporting met). Reported by four calibrated studies to exhibit protein function similar to pathogenic control variants (PMIDs:38417439, 39779848, 39779857, 37713444) (PS3 met). This BRCA2 missense variant is within a key functional domain and the computational predictor BayesDel (noAF) gives a score of 0.32, above the recommended threshold of 0.30 for prediction of impact on BRCA2 function via protein change. A SpliceAI score of 0.01 predicts no impact on splicing (score threshold <0.10) (PP3 met). Multifactorial likelihood ratio analysis using clinically calibrated data produced a combined LR for this variant of 1.19 (based on Co-occurrence LR=1.03; Family History LR=1.16), which is above the ENIGMA BRCA1/2 VCEP threshold for BP5 (>0.48) and below PP4 (<2.08) (BP5 and PP4 not met; PMID: 31853058, Internal lab contributor). In summary, this variant meets the criteria to be classified as a Likely pathogenic variant for BRCA2-related cancer predisposition based on the ACMG/AMP criteria applied as specified by the ENIGMA BRCA1/2 VCEP (PM2_Supporting, PS3, PP3).

Met criteria codes

PS3			Reported by four calibrated studies to exhibit protein function similar to pathogenic control variants (PMIDs:38417439, 39779848, 39779857, 37713444) (PS3 met).
PP3			This BRCA2 missense variant is within a key functional domain and the computational predictor BayesDel (noAF) gives a score of 0.32, above the recommended threshold of 0.30 for prediction of impact on BRCA2 function via protein change. A SpliceAI score of 0.01 predicts no impact on splicing (score threshold <0.10) (PP3 met).
PM2_Supporting			This variant is absent from gnomAD v2.1 (exomes only, non-cancer subset, read depth ≥25) and gnomAD v3.1 (non-cancer subset, read depth ≥25) (PM2_Supporting met).

Not Met criteria codes

PP4			Multifactorial likelihood ratio analysis using clinically calibrated data produced a combined LR for this variant of 1.19 (based on Co-occurrence LR=1.03; Family History LR=1.16), which is above the ENIGMA BRCA1/2 VCEP threshold for BP5 (>0.48) and below PP4 (<2.08) (BP5 and PP4 not met; PMID: 31853058, Internal lab contributor).
BP5			Multifactorial likelihood ratio analysis using clinically calibrated data produced a combined LR for this variant of 1.19 (based on Co-occurrence LR=1.03; Family History LR=1.16), which is above the ENIGMA BRCA1/2 VCEP threshold for BP5 (>0.48) and below PP4 (<2.08) (BP5 and PP4 not met; PMID: 31853058, Internal lab contributor).

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