

# BRCA1 and BRCA2 Mutation

---

Science has established irrefutable proof that mutating of BRCA1 - BRCA2 is a primary cause of breast and ovarian cancer in women. A lesser known fact is the relationship of the mutation to male breast and prostate cancers.

The following examples are links provided to various studies and articles that confirm these facts.

## **Male Breast Cancer - BRCA**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4746828/>

<https://academic.oup.com/jnci/article/99/23/1811/993419>

<https://academic.oup.com/jnci/article/99/23/1811/993419>

[https://www.mskcc.org/cancer-care/types/breast-male?gclid=EAiaIQobChMIwZqKy42j5QIVJIVaBR2-nwV1EAMYASAAEgLIzvD\\_BwE](https://www.mskcc.org/cancer-care/types/breast-male?gclid=EAiaIQobChMIwZqKy42j5QIVJIVaBR2-nwV1EAMYASAAEgLIzvD_BwE)

## **Prostate Cancer - BRCA**

<https://www.ncbi.nlm.nih.gov/pubmed/30900310>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3720154/>

<https://www.mdedge.com/fedprac/avaho/article/107142/oncology/caring-patients-prostate-cancer-who-are-brca-positive>

<https://www.technologynetworks.com/cancer-research/news/drug-effective-in-80-of-men-with-brca-mutant-prostate-cancer-320348>

## **BRCA Activity - From Where and How**

Bioinformatic search and computational biology can correlate the use of TNF $\alpha$  medications as the first line strategy for treatment of rheumatoid arthritis (RA). Using this fact, the following illustration is provided for discussion relative to the verifiable epigenetic element composition of TNF $\alpha$  and BRCA1 - 3.

**Cell Alignment: For Explanation and Discussion**

**TNF-Alpha: TGF- Alpha (Calnexin) Density**

Calcium - threonine - magnesium (BRCA1)

Calcium - serine - magnesium (BRCA2)

Calcium - cysteine - magnesium (BRCA3)

**TNF-Beta: TGF-Beta (Calmodulin) Motility**

Calcium - phenylalanine - magnesium (HRas)

Calcium - tyrosine - magnesium (KRas)

Calcium - tryptophan - magnesium (NRas)

**TNF-Gamma: TGF-Gamma [VEGF] (Calcineurin)  
Modulatory Enzyme**

Iron - serine - Manganese

Iron - cysteine - Manganese

Iron - threonine - Manganese

These are examples of the "enzymes" that have evolved with various designations; e.g. AKT, mTOR, PTEN, NF-kB, and MYC.

## Summary

Following a verbal explanation, an individual can perform a DIY exercise to verify the fact that the difference between BRCA related cancers driven by TNF $\alpha$  mutation and RA is the mechanism of apoptosis (calreticulin) that prevents cancer formation as a result of excessive cell density.

Note: A common designation for BRCA3 (the factor for disruption of TNF $\alpha$ ) can be discussed with business partners of MCFIP for verification. These discussions will encompass bioinformatic search to verify the fact that instances of density of the stroma of the cervix is known to exist as well as instances of density of the prostate and male breasts.