

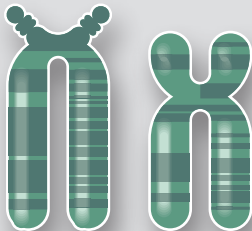
Inherited risk of breast cancer

Hereditary breast ovarian cancer (HBOC) syndrome is caused by a mutation of either of two genes – BRCA1 and BRCA2. An inherited mutation increases the risk of developing breast and/or ovarian cancer

Human cells: All have 22 pairs of chromosomes plus X and Y sex chromosomes

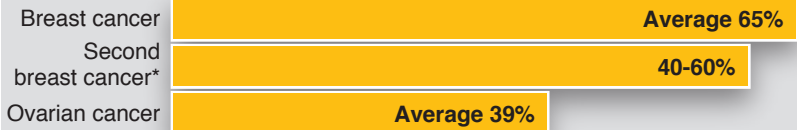


Chromosome 13
contains 924 genes
including BRCA2.
Both BRCA1 and BRCA2
are tumour suppressor
genes – they produce
proteins which prevent
uncontrolled cell growth



Chromosome 17
contains 1,672 genes
including BRCA1.
Everyone has two
BRCA1 and two BRCA2
genes. Both copies of
each gene must be
mutated to knock out
its function

BRCA1 mutation – lifetime HBOC risks for women



BRCA2 mutation

