Source: KBhBIO101Mutations

1 | Types of Mutations

1.1 | By Place

Germline mutations mutate the egg/cell's causes no/local problems but pass the mutated gene down to the children fully through cells.

Somatic mutations mutated somatic cell causes local mutations that does not influence much (cancer, but)

1.1.1 | By Method

Point mutations

Change one codon on the gene and potentially cause something.

- Slient mutation: has no effect on protein
- Missense: result in amino acid substitution
- Nonsense: substitutes a stop codon for an amino acid

Indel/Frameshift mutation

Shift by adding/substracting codons and shift the gene. Everything downstream to the point of mutation will be completely incorrect.

1.2 | Mutations in other places

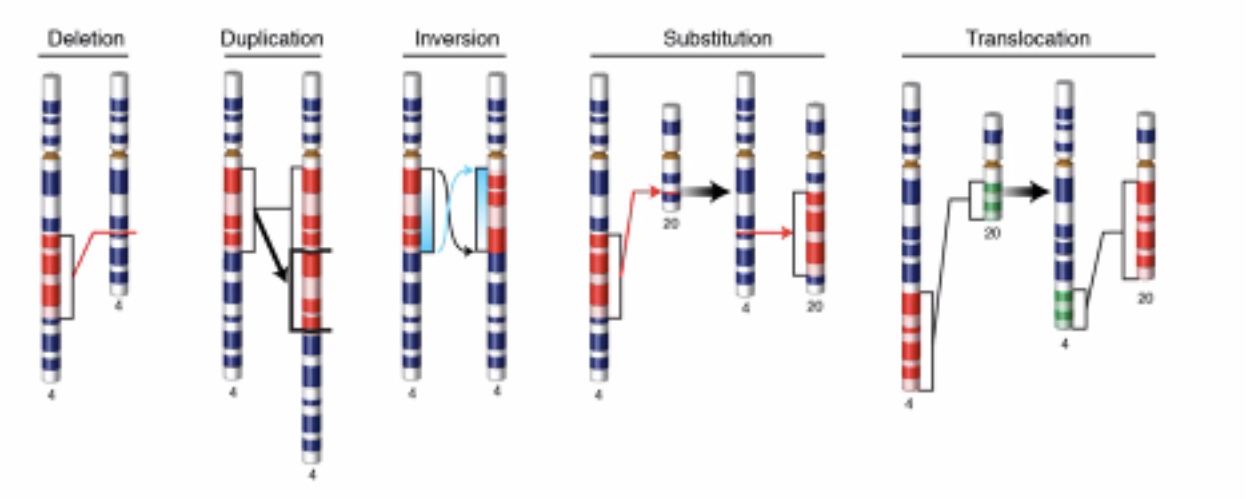
Promoter/Enhancer mutation: control the level of expression for genes, which could relate to cancer (over-activation) or a protein deficiency (lack of activation)

Splice donor and acceptor site mutation: including extra intron or cutting out required exon

Ribosome binding sites: prevents the ribosome from binding

1.3 | Large scale DNA changes

Taking whole chunks of DNA or swapping them; usually caused by your DNA wholly breaking (Radioactivity? Incorrectly functioning enzymes?) and then your repair machinary stitching it up wrongly.


Deletion
Duplication
Inversion
Substitution
Translocation
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