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 gametes.

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

1.2 | By Method

1.2.1 | 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

1.2.2 | Indel/Frameshift mutation

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

1.3 | Mutations in other places

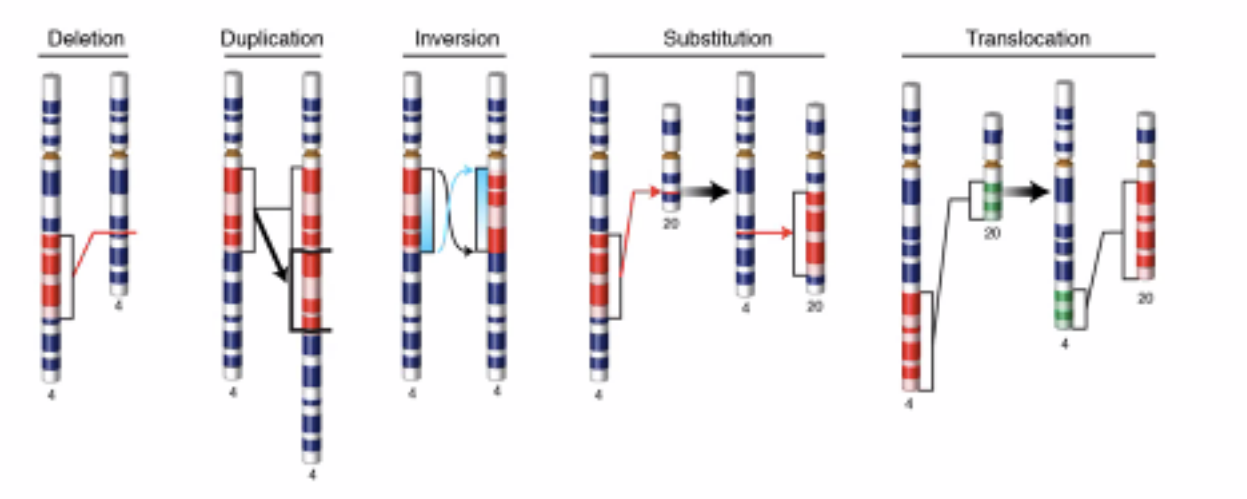
Promoter/Enhancer mutation: control the level of expression for genes, which could relate to cancer (over-activation) or a protein deficiency (lack of activation)

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

Ribosome binding sites: prevents the ribosome from binding

1.4 | 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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