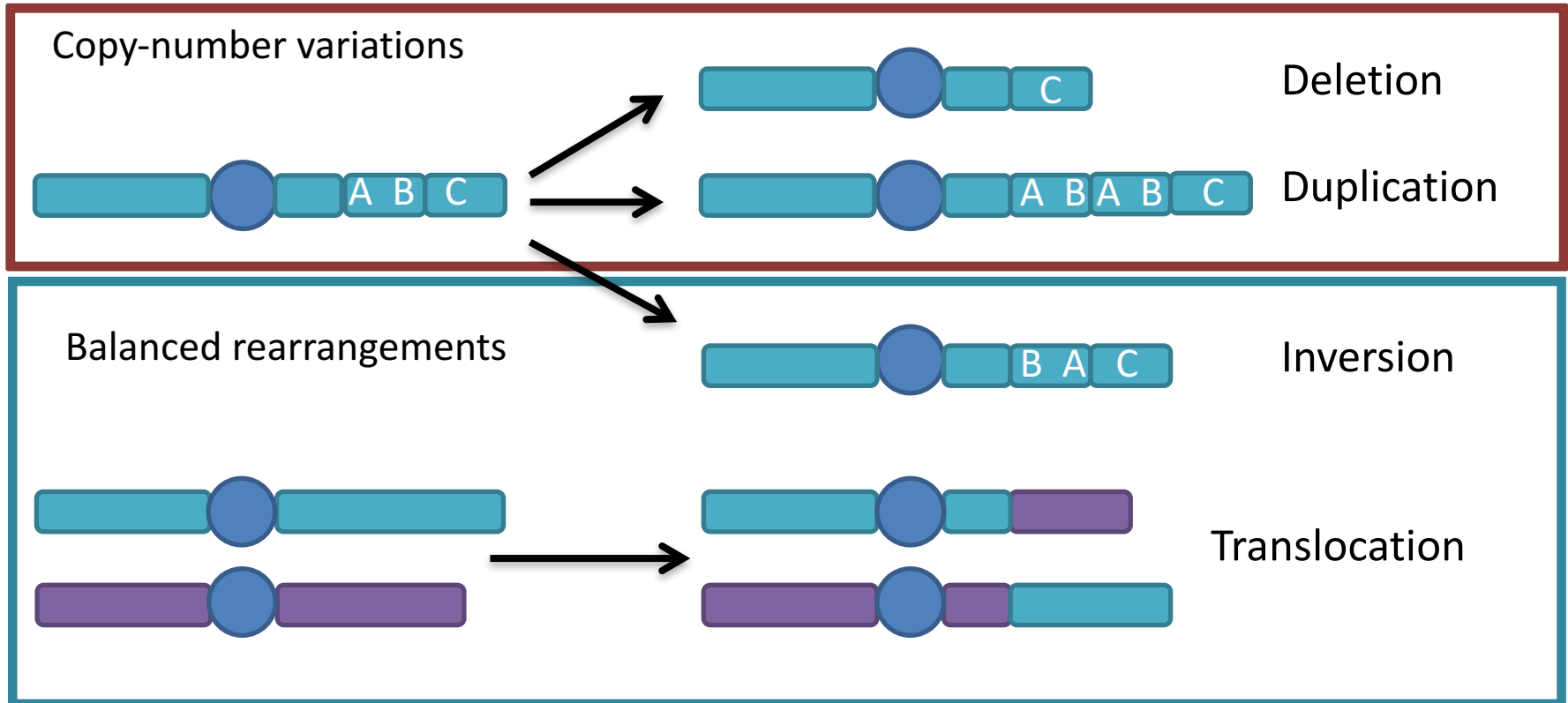


# Somatic structural variation (in short)

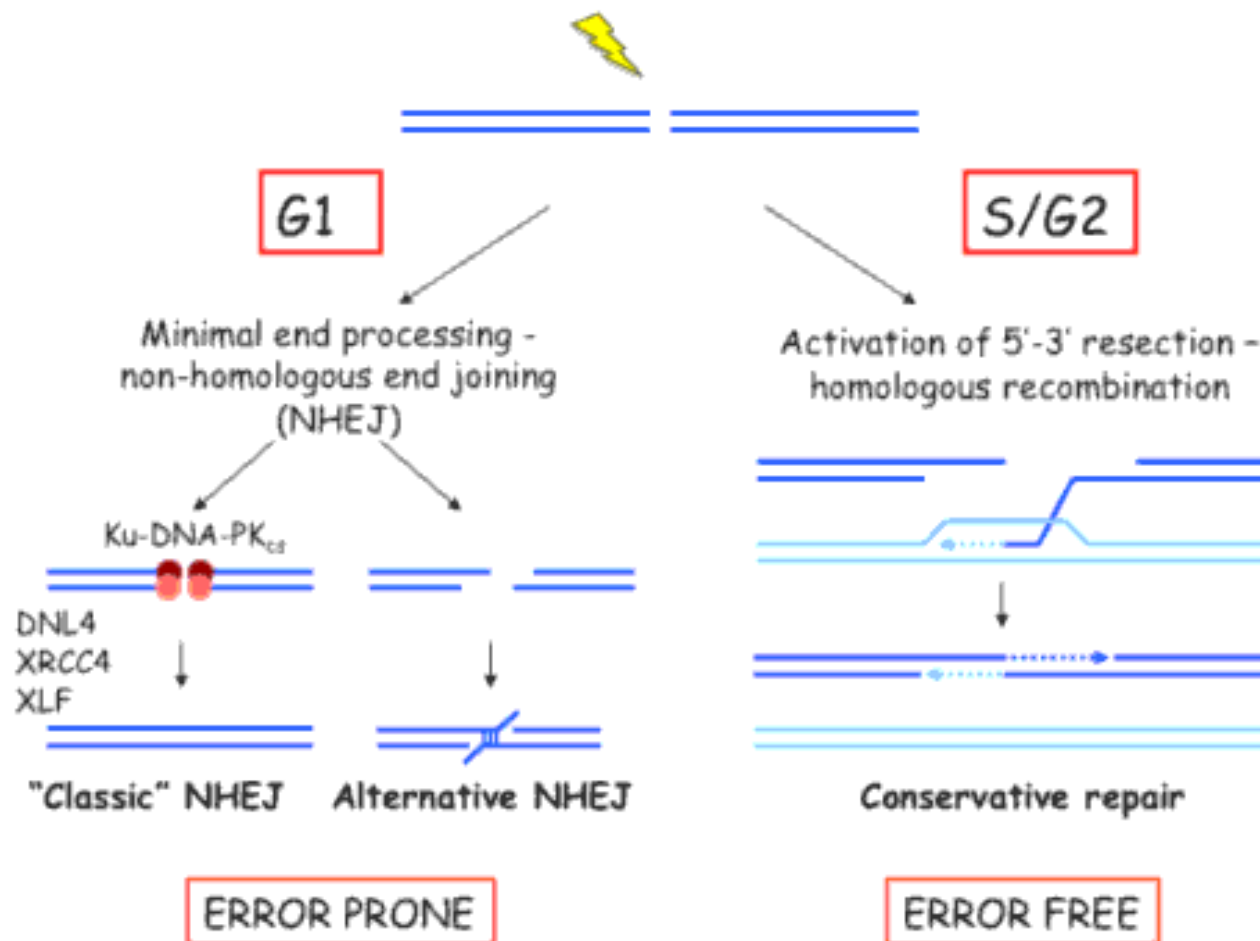
# Balanced versus unbalanced



# Repair mechanisms underlying SVs

- HR: homologous recombination
- NHEJ: non-homologous end joining
- NAHR: non-allelic homologous recombination
- MMEJ: microhomology-mediated end joining
- FoSTes: fork stalling and template switching
- MMBIR: microhomology-mediated break-induced replication

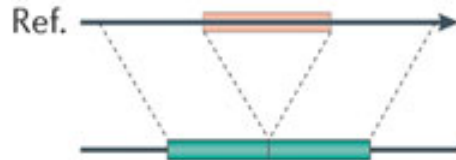
## Two mechanisms to repair DSBs



# **EXERCISE 1.1**

# Common types of structural variation

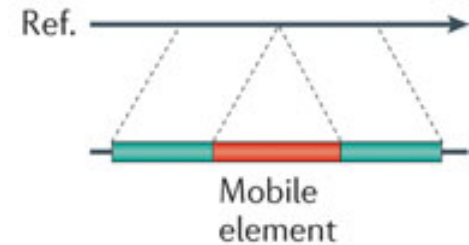
**Deletion**



**Novel sequence insertion**



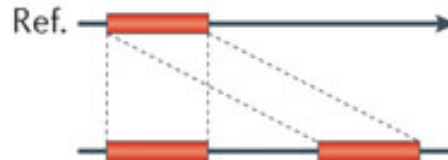
**Mobile-element insertion**



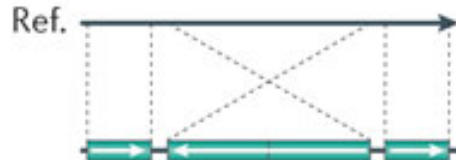
**Tandem duplication**



**Interspersed duplication**



**Inversion**



**Translocation**



## **EXERCISE 1.2**