

ACGTAGGTA CAGTAGCTAGAT reference
 | | | | | | | | | matches
 --- TAGGA G CAGTAGCT --- mapped read

SNP: One nucleotide in the mapped read differs from the reference.

ACGTAGGTA CAGTAGCTAGAT
 | | | | | | | | |
 --- TAGGA - AGTAGCT ---

Deletion: The mapped read misses one or more nucleotides that are present in the reference .

ACGTAGGAT CAGTAGCTAGAT
 | | | | | | | | |
 --- TAGGAT TT CAGTAGCT ---

Insertion: The mapped read has one or more nucleotides that are not present in the reference. Conversely, it is equivalent to a deletion in the reference.