Overlap

Read 1

. . .TCGTGTGT

Reference CCCTACGCCTTGACCCGCTTTCCTGCGTCTCTCAGCCTACCTGACCTT

TCGTGCGT. . .

Read 2

Position 12345678

Read 1 = Read 2
Position 3

Consensus: G
BQ_{cons}: $BQ_{r1} + BQ_{r2}$

Read 1 ≠ Read 2
Position 6

$BQ_{r1} > BQ_{r2}$

Consensus: T
BQ_{cons}: $BQ_{r1} - (BQ_{r2}/2)$

$BQ_{r1} < BQ_{r2}$

Consensus: C
BQ_{cons}: $BQ_{r2} - (BQ_{r1}/2)$

$BQ_{r1} = BQ_{r2}$

Consensus: C (ref)
BQ_{cons}: $BQ_{r1} - (BQ_{r2}/2)$