**Suppl 3.** When a mutation occurs in a certain genetic region within a cell, the value obtained by dividing the number of reads containing the variant sequence by the depth is called the variant allele fraction (VAF). The value of VAF is correlated with the proportion of mutant clones. Therefore, a VAF value of 50% indicates that the same variant is always present on one of the two chromosomes. In other words, a VAF value of 50% suggests germline mutation. Generally, in cancer genome gene panel tests, VAFs below 4% are rounded down to remove noise. Therefore, in cancer genome gene panel testing, it is preferable that the tumor cell content is at least 10% (with a 20% safety margin).