In gBRCA-mutated tumor cells, the loss of BRCA function may lead to an overreliance on PARP enzymes to repair damaged DNA.2

PARP and BRCA are important components of normal DNA damage repair, specifically the repair of SSBs and DSBs, respectively. Their repair functions are thought to enable DNA replication and normal cell survival.2,4

Unrepaired SSBs can lead to DSBs, which BRCA-mutated tumor cells are unable to repair. In the absence of BRCA1 or BRCA2 proteins, PARP enzymes continue to repair SSBs through the recruitment of DNA repair proteins. PARP repair of SSBs enables DNA replication and tumor cell survival.2,4