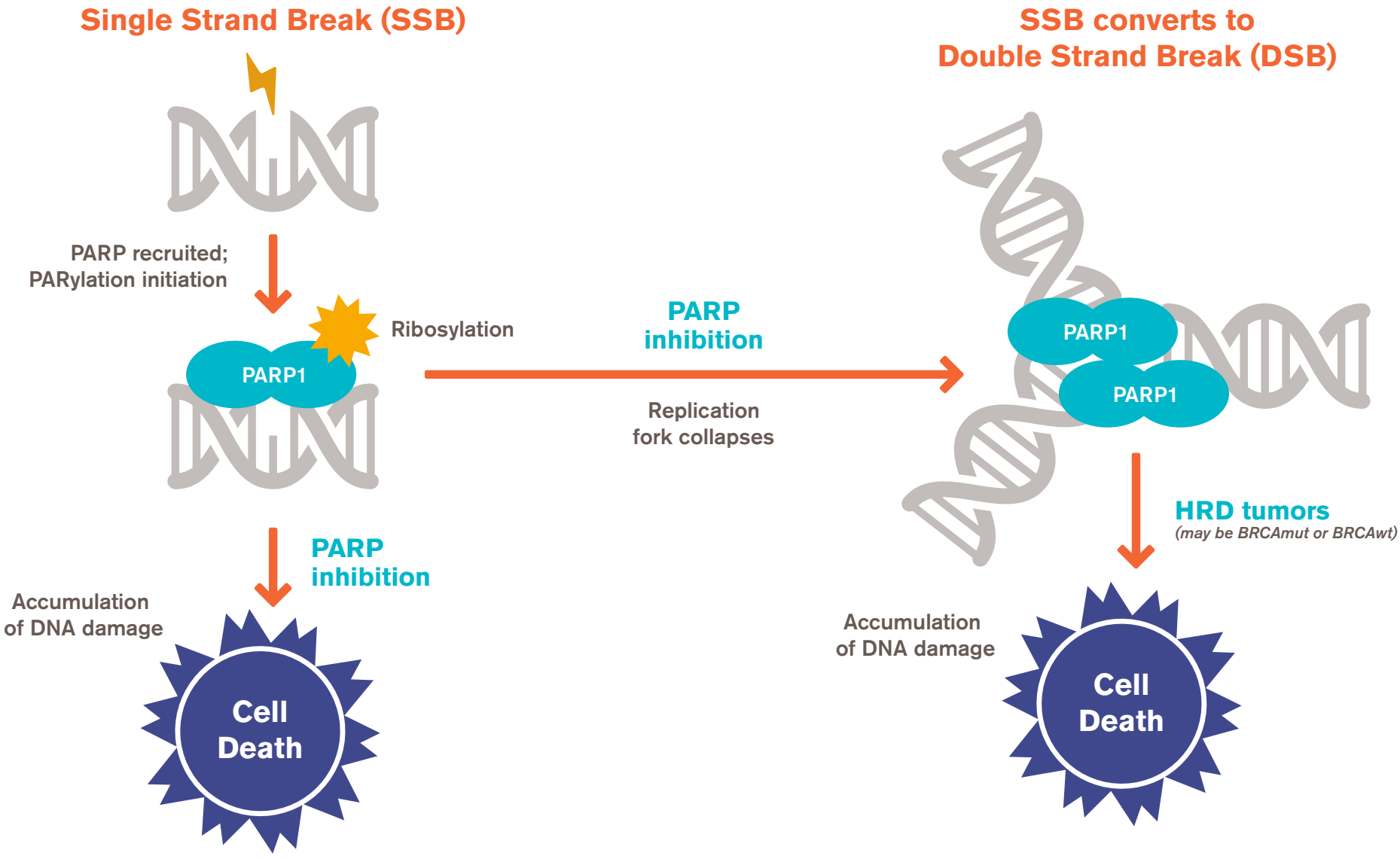
PARP Inhibitor

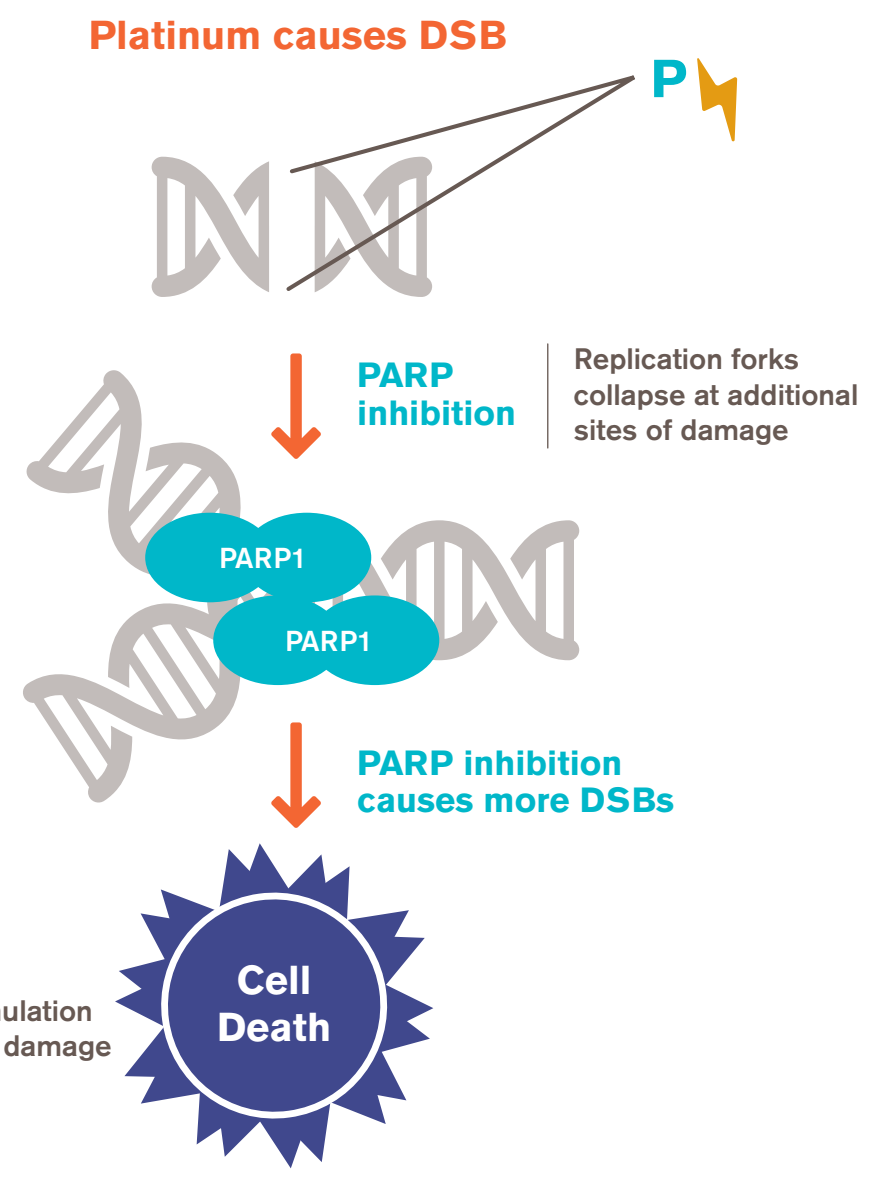
In healthy cells, DNA damage occurs and is repaired by proteins, such as poly ADP-ribose polymerase (PARP), so the cell can continue to function. This damage can be spontaneous or the result of environmental factors like radiation or some chemicals.[i]

Cancer cells also experience damage to their DNA, just like healthy cells, and use proteins such as PARP to repair the damaged DNA.[ii]

Mechanism of Action*



DSB: Double strand break
HRD: Homologous recombination deficiency
PARP: Poly ADP-ribose polymerase
PR: Partial response
SSB: Single strand break



PARP inhibitors block the PARP protein. That means the damaged DNA can't be repaired in the cancer cell, so the DNA accumulates more and more damage, turning from single-strand breaks to double strand breaks. This accumulation can lead to the death of the cancer cell.[ii]

*As understood through pre-clinical evidence.
Intended for US media audiences only.

References

[i] Davar D, Beumer JH, Hamieh L, Tawbi H. Role of PARP inhibitors in cancer biology and therapy. Curr Med Chem. 2012;19(23):3907-3921.

[ii] Jubin T, Kadam A, Jariwala M, et al. The PARP family: insights into functional aspects of poly(ADP-ribose) polymerase-1 in cell growth and survival. Cell Prolif. 2016;49(4):421-437.

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