

CLOPIDOGREL PLAVIX

2C19

*3*2

AVOID

<https://cpicpgx.org/guidelines/guideline-for-clopidogrel-and-cyp2c19/>

CYP2C19 likely intermediate metabolizer	Reduced clopidogrel active metabolite formation; increased on-treatment platelet reactivity; increased risk for adverse cardiac and cerebrovascular events	Consider an alternative P2Y ₁₂ inhibitor at standard dose if clinically indicated and no contraindication	Moderate ^d	Alternative P2Y ₁₂ inhibitors not impacted by CYP2C19 genetic variants include ticagrelor and ticlopidine. Prasugrel is contraindicated in patients with a history of stroke or TIA ^e
CYP2C19 intermediate metabolizer	Reduced clopidogrel active metabolite formation; increased on-treatment platelet reactivity; increased risk for adverse cardiac and cerebrovascular events	Consider an alternative P2Y ₁₂ inhibitor at standard dose if clinically indicated and no contraindication	Moderate	Alternative P2Y ₁₂ inhibitors not impacted by CYP2C19 genetic variants include ticagrelor and ticlopidine. Prasugrel is contraindicated in patients with a history of stroke or TIA ^e
CYP2C19 likely poor metabolizer	Significantly reduced clopidogrel active metabolite formation; increased on-treatment platelet reactivity; increased risk for adverse cardiac and cerebrovascular events	Avoid clopidogrel if possible. Consider an alternative P2Y ₁₂ inhibitor at standard dose if clinically indicated and no contraindication	Moderate ^d	Alternative P2Y ₁₂ inhibitors not impacted by CYP2C19 genetic variants include ticagrelor and ticlopidine. Prasugrel is contraindicated in patients with a history of stroke or TIA ^e
CYP2C19 poor metabolizer	Significantly reduced clopidogrel active metabolite formation; increased on-treatment platelet reactivity; increased risk for adverse cardiac and cerebrovascular events	Avoid clopidogrel if possible. Consider an alternative P2Y ₁₂ inhibitor at standard dose if clinically indicated and no contraindication	Moderate	Alternative P2Y ₁₂ inhibitors not impacted by CYP2C19 genetic variants include ticagrelor and ticlopidine. Prasugrel is contraindicated in patients with a history of stroke or TIA ^e

Predicted phenotype	Genotype	Examples of CYP2C19 diplotypes ^a
CYP2C19 ultrarapid metabolizer	An individual carrying two increased function alleles	*17/*17
CYP2C19 rapid metabolizer	An individual carrying one normal function allele and one increased function allele	*1/*17
CYP2C19 normal metabolizer	An individual carrying two normal function alleles	*1/*1
CYP2C19 likely intermediate metabolizer ^b	An individual carrying one normal function allele and one decreased function allele or one increased function allele and one decreased function allele or two decreased function alleles	*1/*9, *9/*17, *9/*9
CYP2C19 intermediate metabolizer	An individual carrying one normal function allele and one no function allele or one increased function allele and one no function allele	*1/*2, *1/*3, *2/*17, *3/*17
CYP2C19 likely poor metabolizer ^b	An individual carrying one decreased function allele and one no function allele	*2/*9, *3/*9
CYP2C19 poor metabolizer	An individual carrying two no function alleles	*2/*2, *3/*3, *2/*3
Indeterminate metabolizer	An individual carrying one or two uncertain function alleles	*1/*12, *2/*12, *12/*14