Table 1. Proposed pharmacogenetic test reporting for CYP2C19-clopidogrel (Plavix) interaction, and suggested interpretation and recommendation

Genotype	Interpretation/Recommendation/Report
CYP2C19*1/*1	1. The subject is a normal metabolizer (effective activator of clopidogrel). 2. The subject will effectively convert clopidogrel to its active metabolite. 3. Start clopidogrel at 300 mg (loading dose) and continue with 75 mg daily (maintenance dose). 4. Avoid using clopidogrel with omeprazole, a CYP2C19 inhibitor. 5. Patient care and other standard therapies as appropriate.
CYP2C19*1/*2 or CYP2C19*1/*3	1. The subject is an intermediate metabolizer (intermediate activator of clopidogrel). 2. The subject will convert clopidogrel to its active metabolite. 3. Consider clopidogrel at 300 mg (loading dose) and continue with 75 mg daily (maintenance dose). Some reports indicate that intermediate metabolizers may need a larger dose of clopidogrel. 4. Consider using platelet aggregation assay (or other platelet function assessment) to monitor the effect of clopidogrel. If the effect of 75 mg (daily maintenance dose) is not sufficient, consider using a larger daily maintenance dose (150 mg). 5. Avoid using clopidogrel with omeprazole, a CYP2C19 inhibitor. 6. Patient care and other standard therapies as appropriate.
CYP2C19*2/*2 or CYP2C19*2/*3 or CYP2C19*3/*3	1. The subject is a poor metabolizer (poor activator of clopidogrel). 2. The subject will *not* effectively convert clopidogrel to its active metabolite. 3. The pharmacological effect of clopidogrel should be monitored closely. 4. Consider starting clopidogrel at 600 mg (loading dose) and continue with 150 mg daily (maintenance dose). 5. Consider using platelet aggregation assay (or other platelet function assessment) to monitor the effect of the clopidogrel in the poor metabolizer patient. 6. Avoid using clopidogrel with omeprazole, a CYP2C19 inhibitor. 7. Consider starting the patient on a different drug. 8. Patient care and other standard therapies as appropriate.

Other alleles associated with absent or reduced metabolism of clopidogrel are less common and include, but are not limited to, CYP2C19*4, *5, *6, *7, and *8. A patient with poor metabolizer/activator status has two loss-of-function alleles with implications similar to that of a poor metabolizer as indicated in the table.