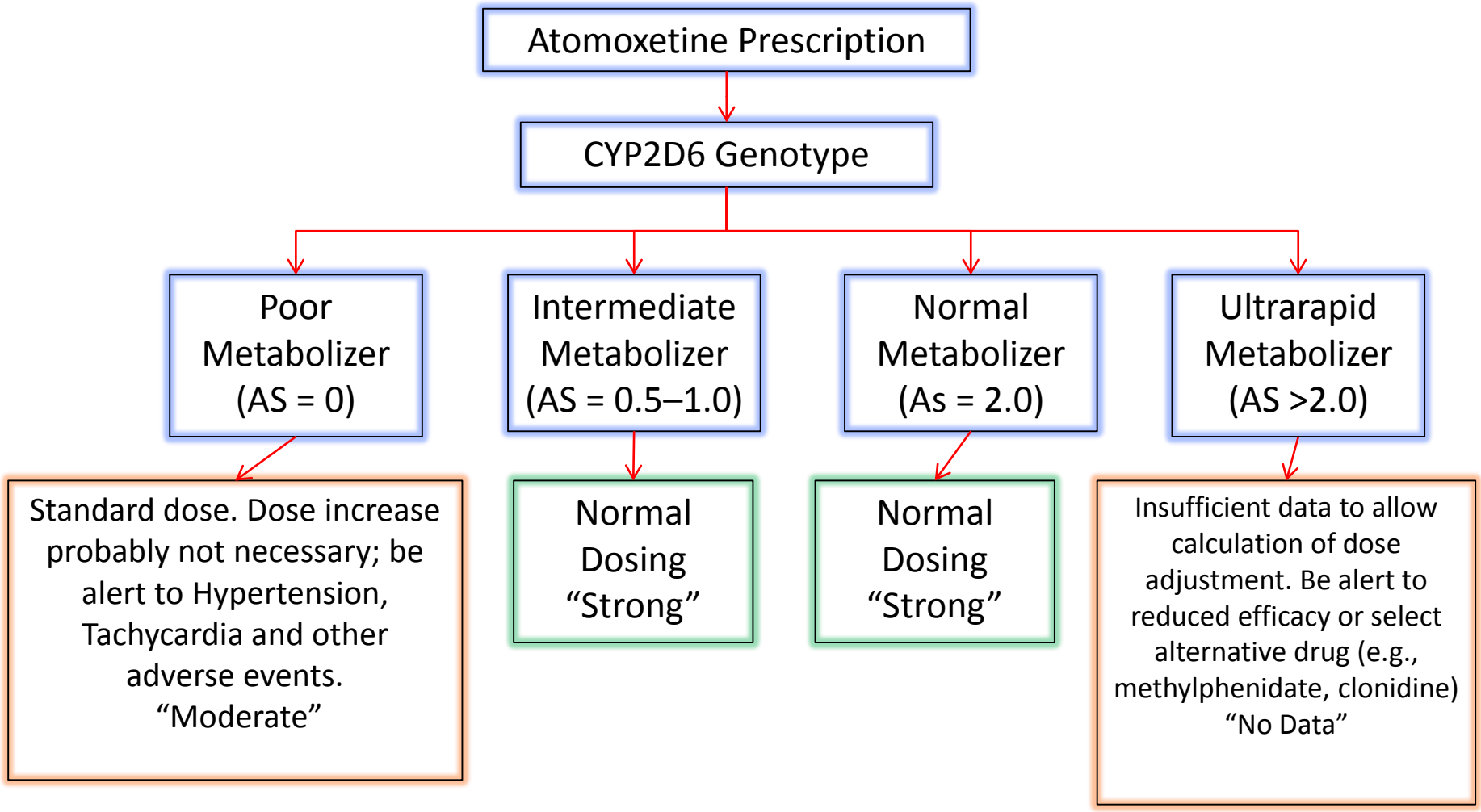
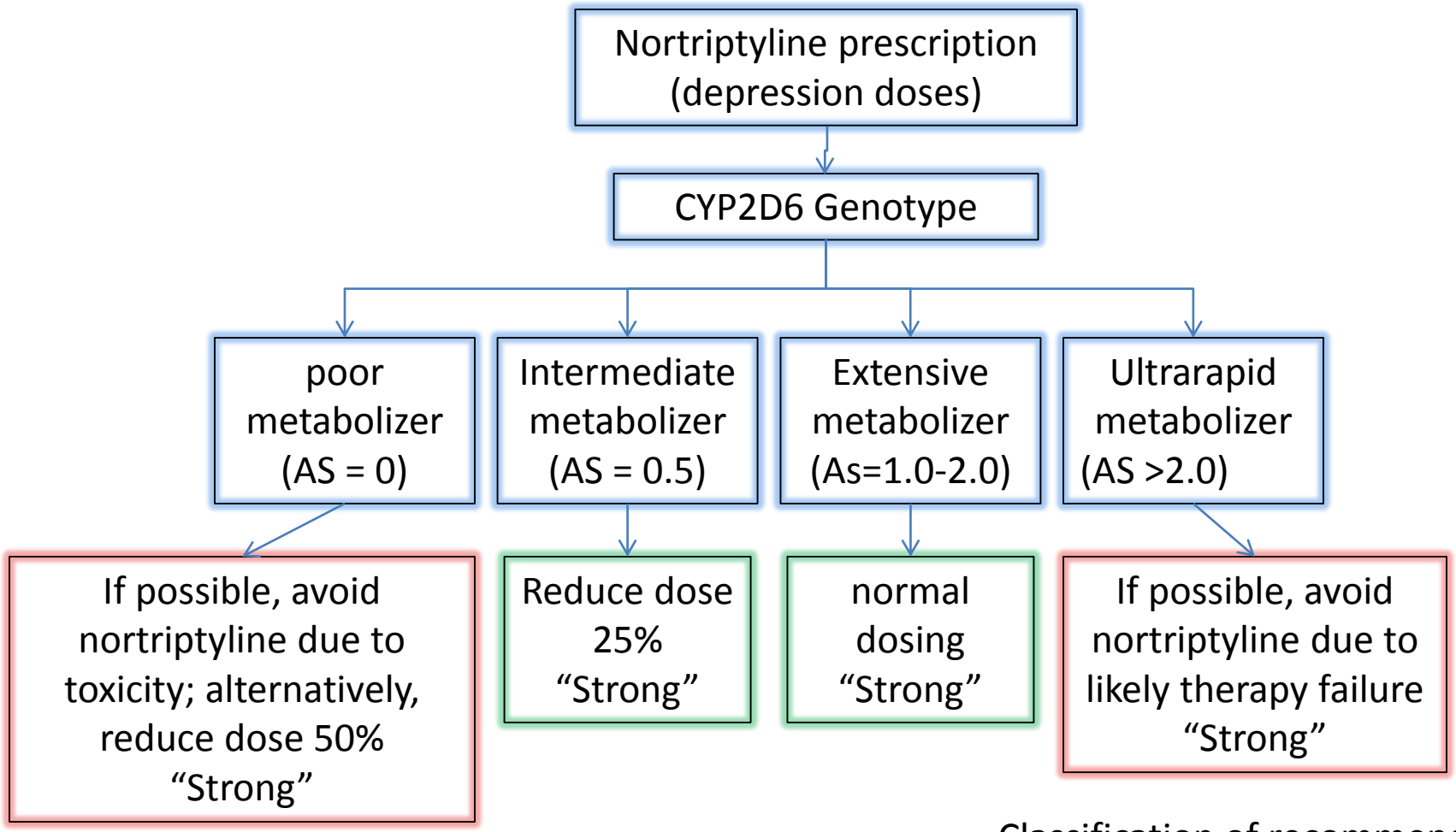
INDIANA UNIVERSITY
SCHOOL OF MEDICINE

INGenious
INdiana GENomics Implementation an Opportunity for the UnderServed
A Program of Indiana University and Eskenazi Health

Pharmacogenomics Gene/Drug-Pair Decision Flow Charts 2017

May 2017

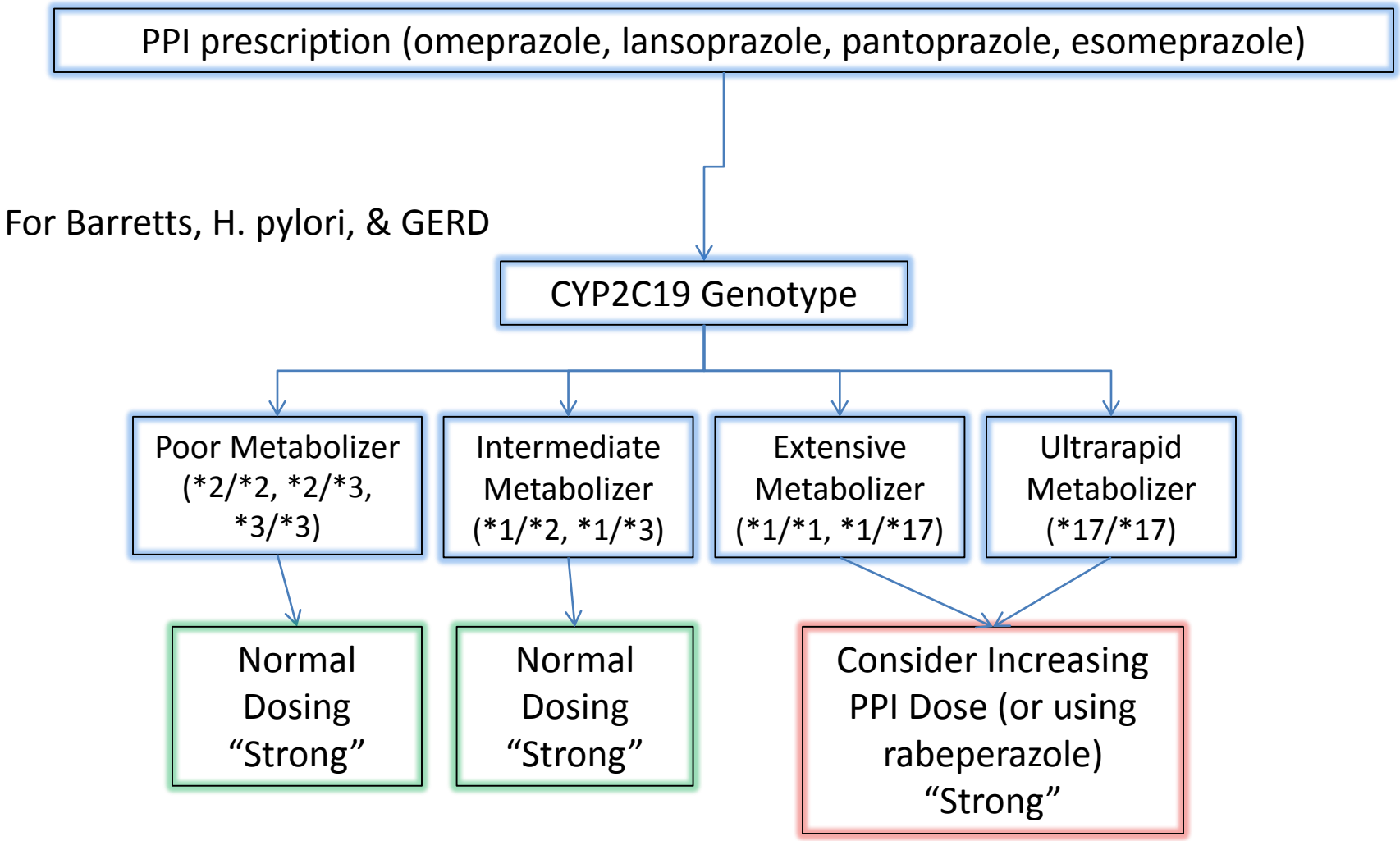

Atomoxetine Prescription
CYP2D6 Genotype
Poor Metabolizer (AS = 0)
Intermediate Metabolizer (AS = 0.5–1.0)
Normal Metabolizer (As = 2.0)
Ultrarapid Metabolizer (AS >2.0)
Standard dose. Dose increase probably not necessary; be alert to Hypertension, Tachycardia and other adverse events. "Moderate"
Normal Dosing "Strong"
Normal Dosing "Strong"
Insufficient data to allow calculation of dose adjustment. Be alert to reduced efficacy or select alternative drug (e.g., methylphenidate, clonidine) "No Data"



AS = Activity Score:

0 = two nonfunctional alleles
0.5 = one nonfunctional and one partial function alleles
1.0 = two partial function or one full function and one nonfunctional alleles
1.5 = one functional and one partial functional alleles
2.0 = two full functional alleles
>2.0 more than two alleles

Classification of recommendation: based on the strength of the literature base:
Strong, moderate, or weak.



Ref: Pharmacogenomics. 2007 Sep;8(9):1199-210.
Nagoya J Med Sci. 2011 Feb;73(1-2):25-31.

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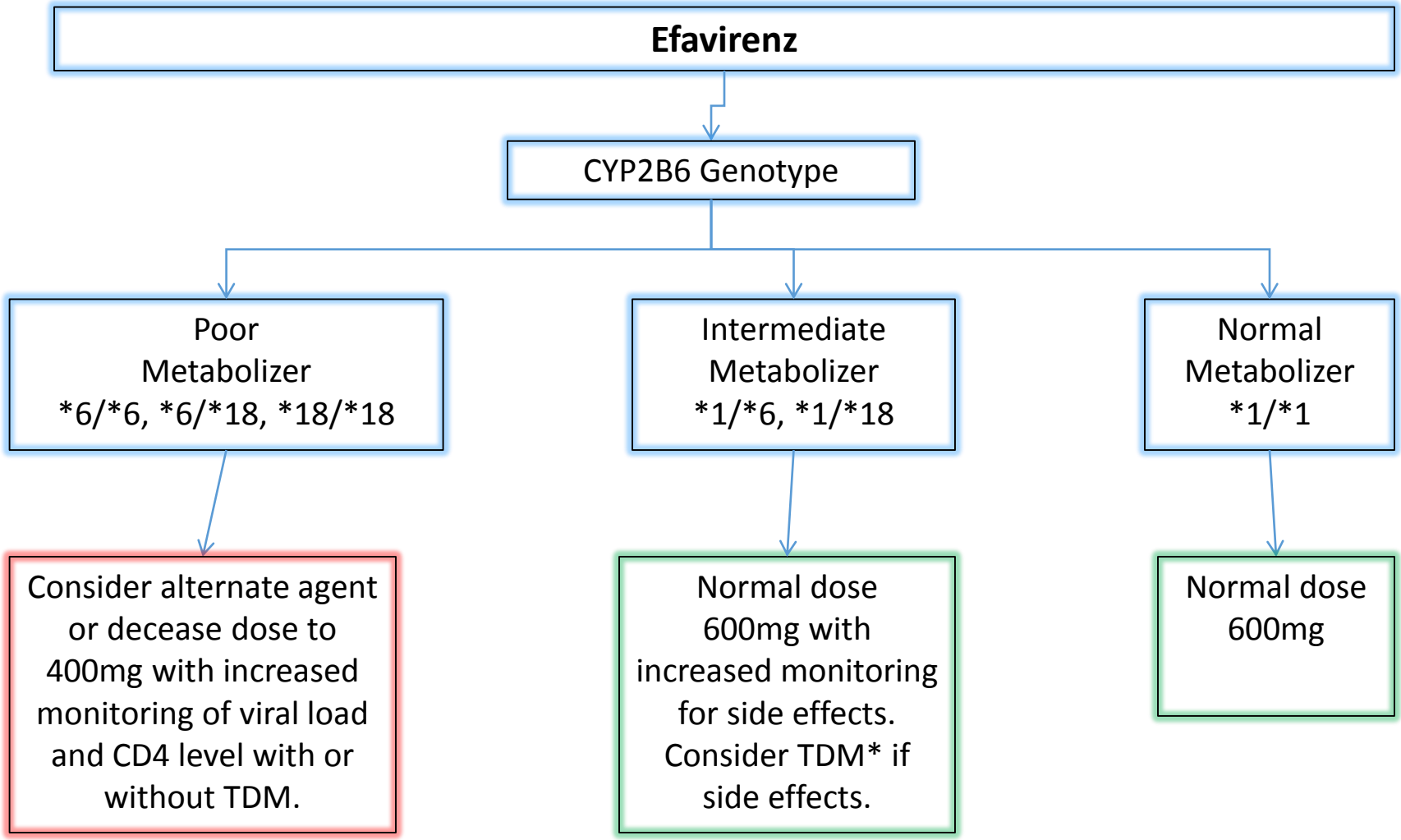

Ref: ENCORE1 Study Group; Lancet 2014

**TDM: Measuring the concentration of a prescribed medication in the blood*

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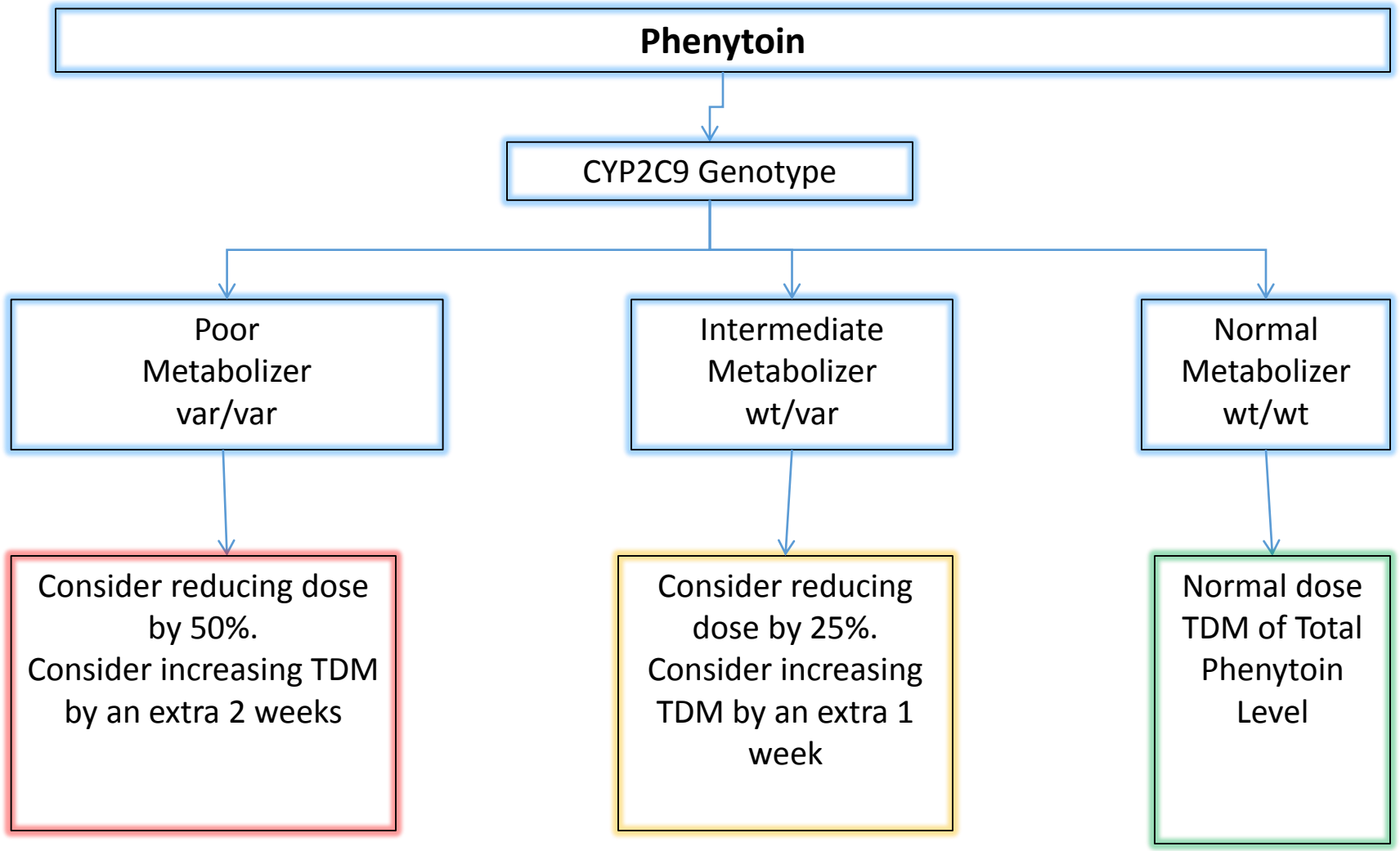

Ref: 2014 CPIC guideline for phenytoin and CYP2C9 and HLA-B

*Var/var to * alleles. Also consider genotyping for HLA*1502*

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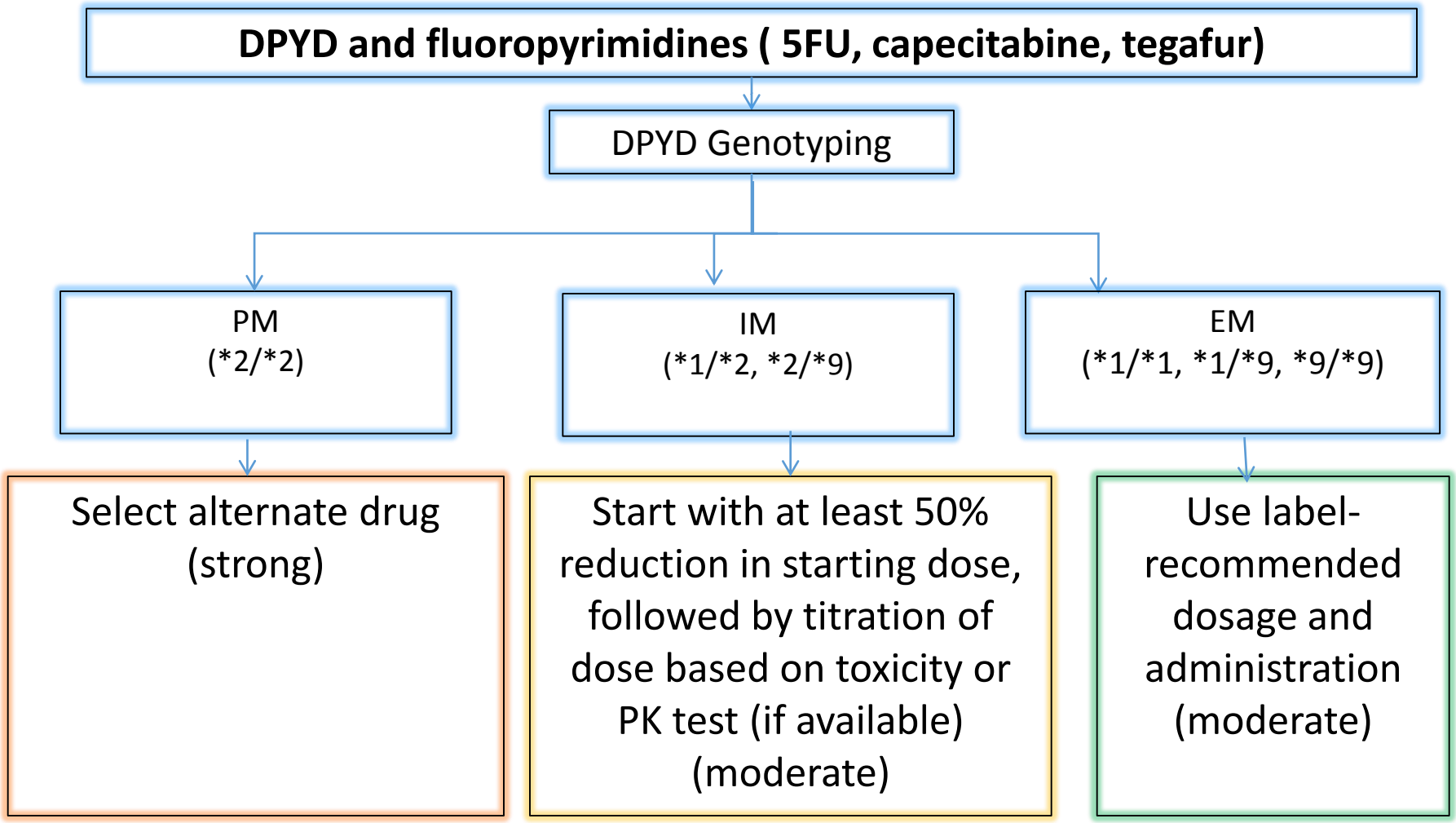

Ref: CPIC Dosing Guideline for DPYD and fluoropyrimidines
http://www.pharmgkb.org/guideline/PA166122686

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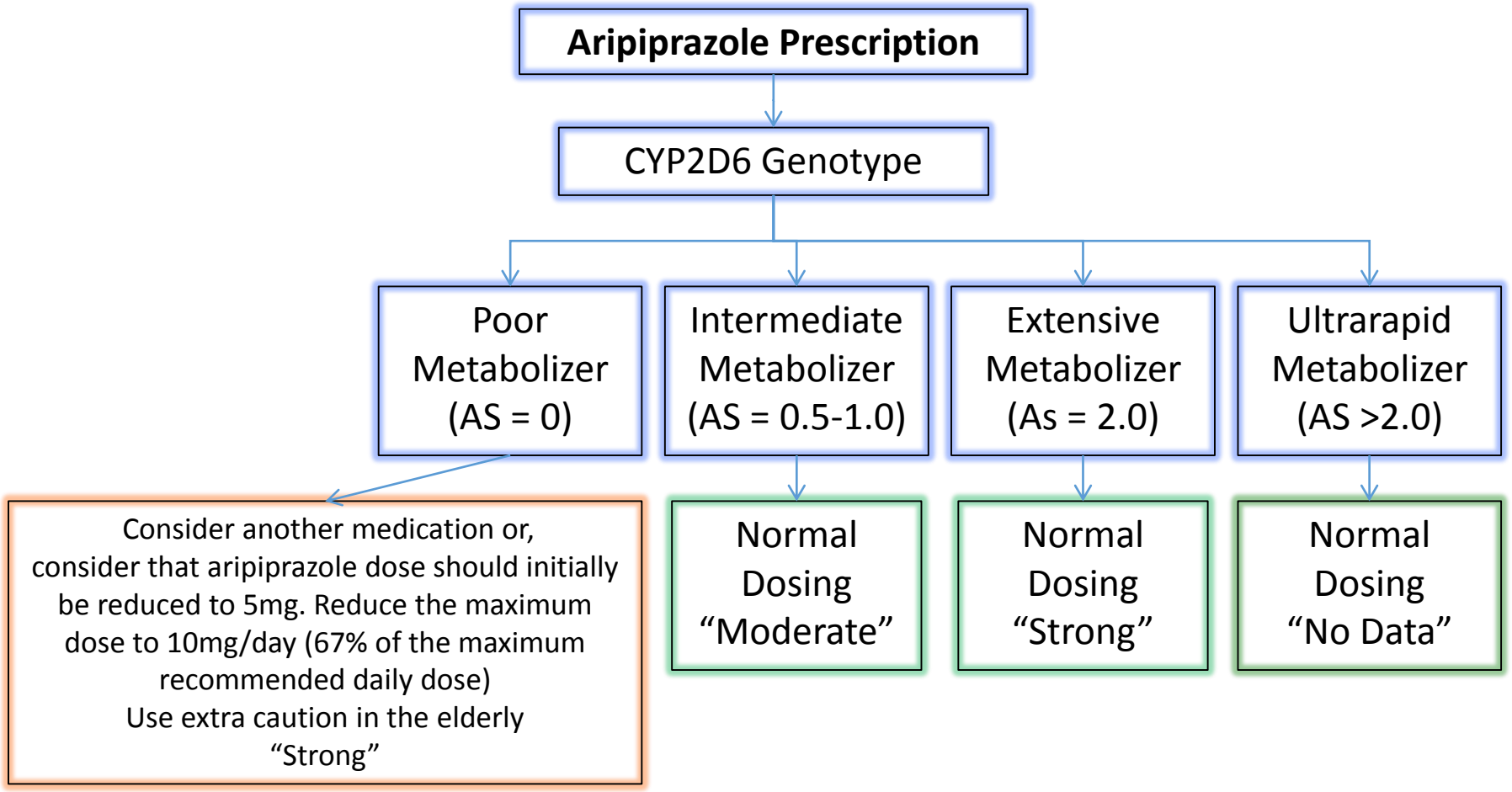

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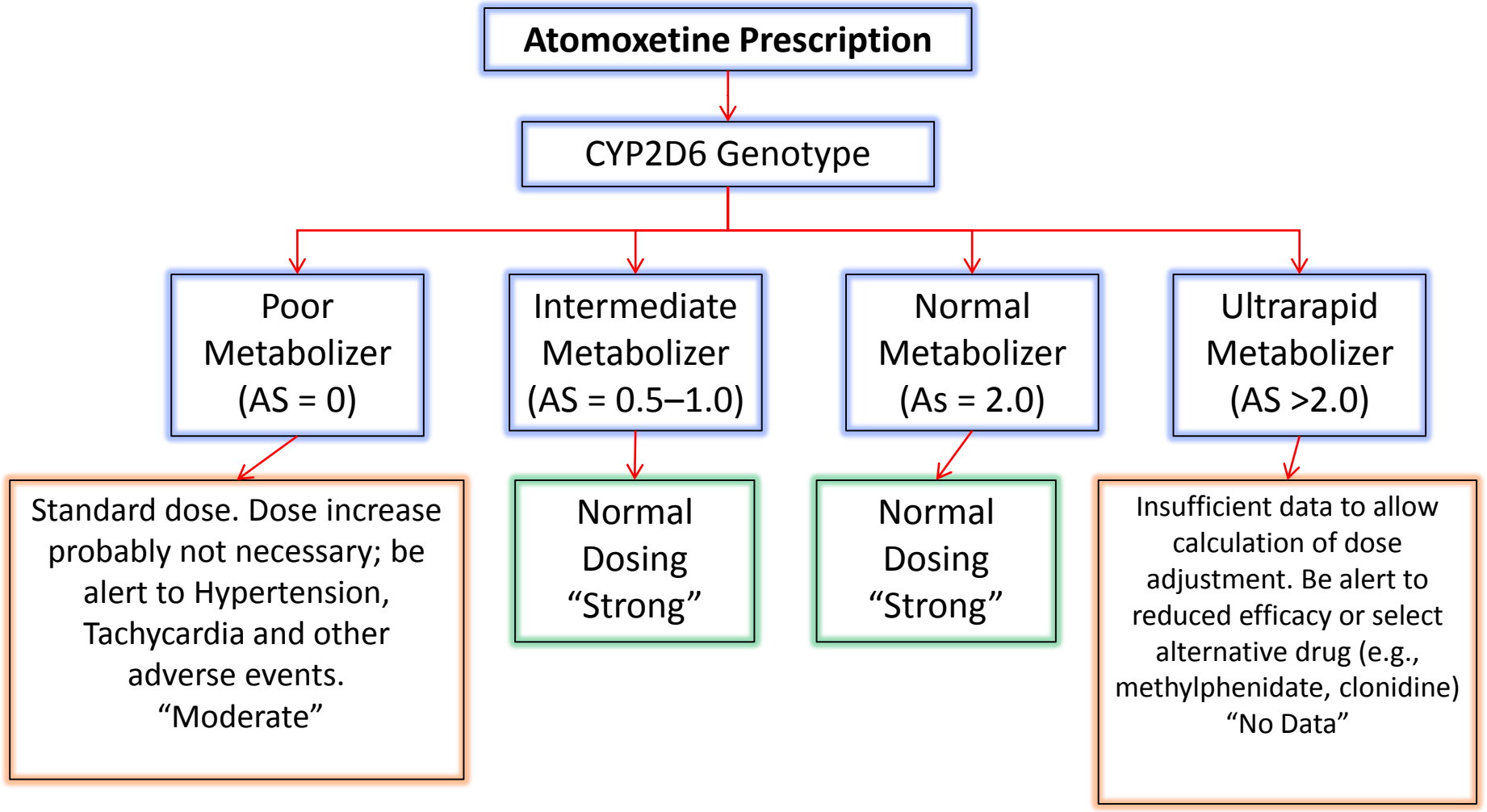

Ref: The Royal Dutch Pharmacists Association - Pharmacogenetics Working Group has evaluated therapeutic dose recommendations for atomoxetine based on CYP2D6 genotypes [Article:21412232]

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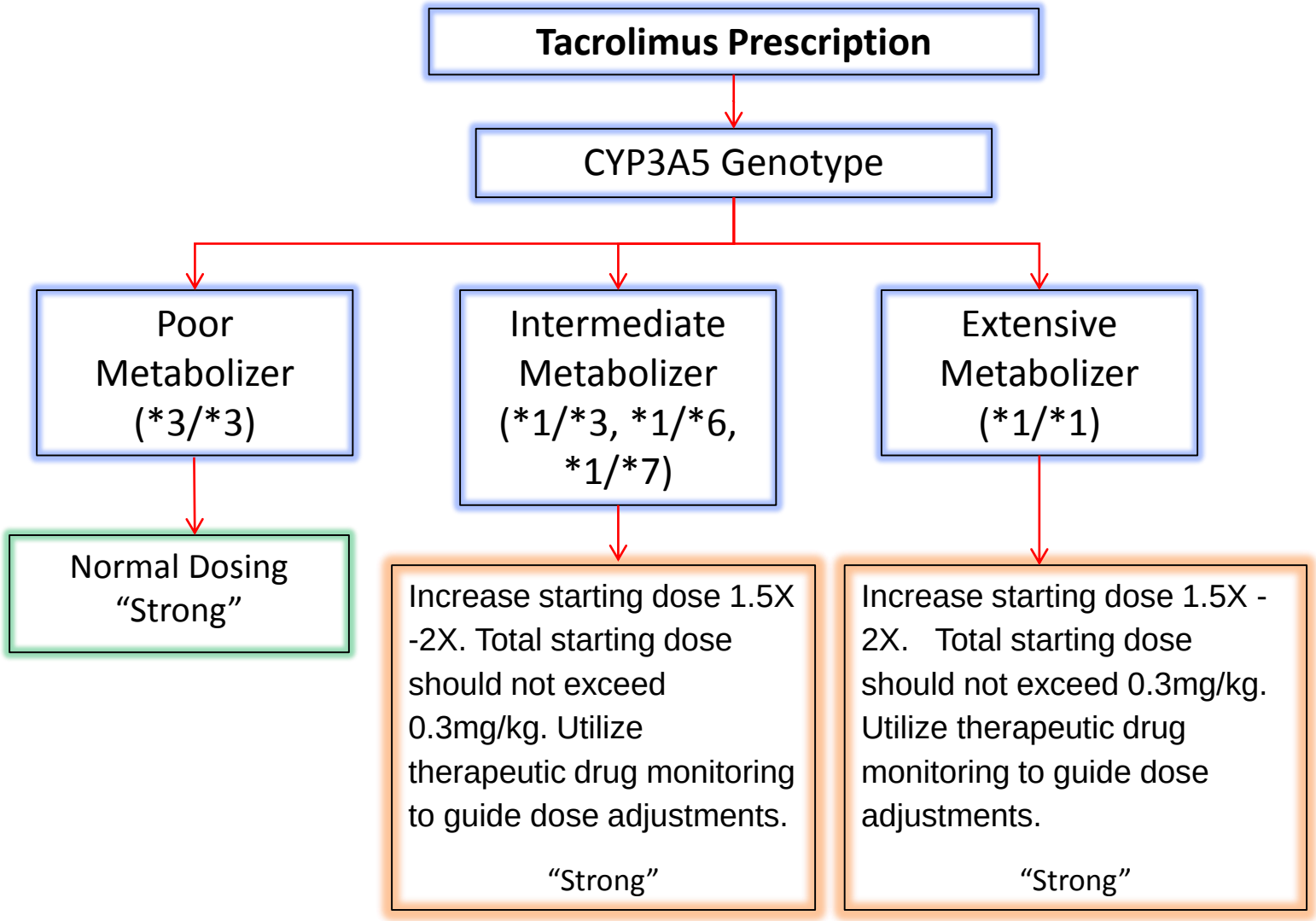

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