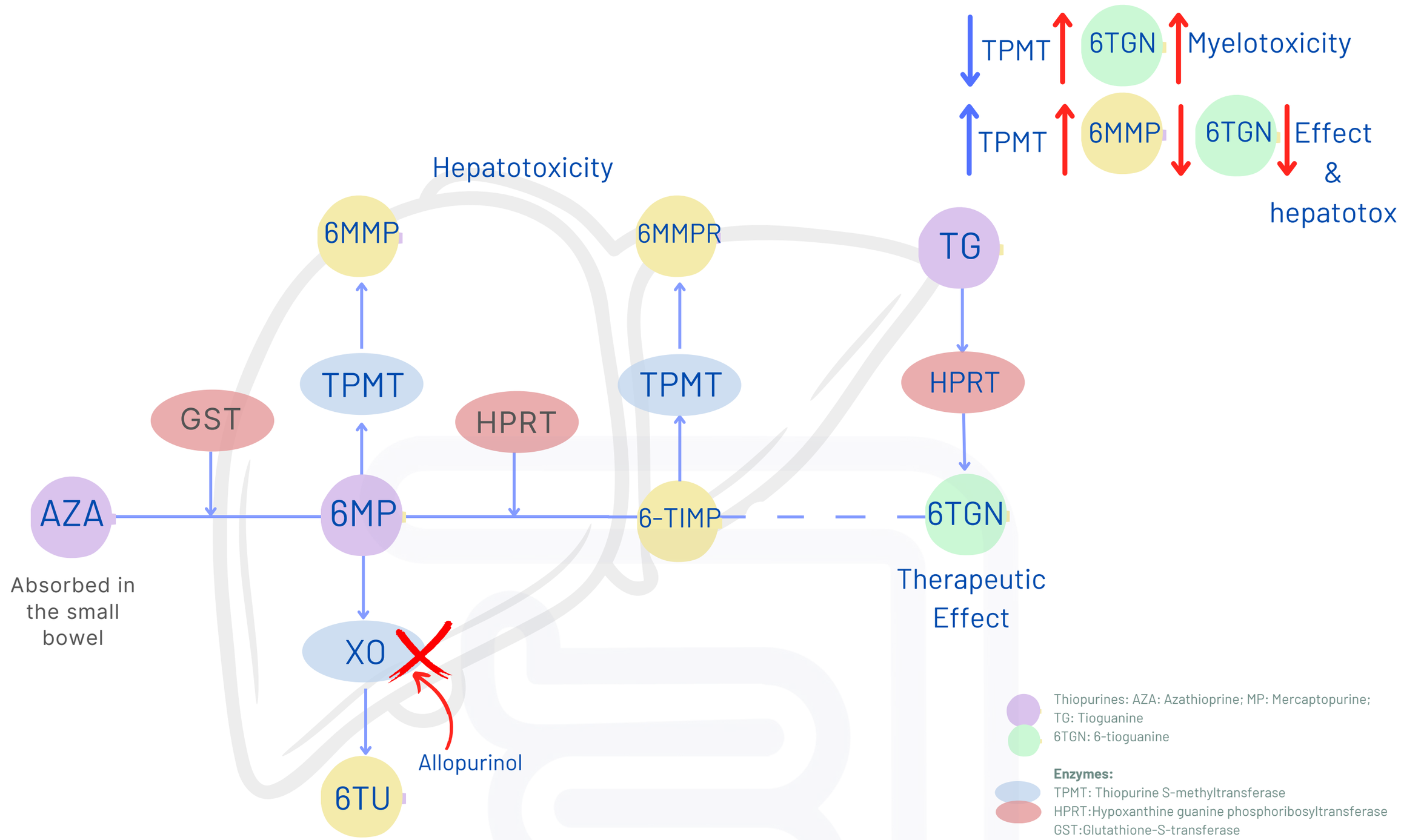
THIOPURINE METABOLISM & METABOLITES



6-TGN [pmol/8×10⁸ RBC]	6-MMP [pmol/8×10⁸ RBC]	Dose-dependent adverse event	Interpretation	Action needed
Low <230	Normal <5700	-	Under-dosing or low compliance	Increase compliance or thiopurine dose as appropriate
Low <230	High ≥5700	Hepatotoxicity and others	TPMT hyper-metaboliser	Consider allopurinol co-treatment & thiopurine reduction to 25–30% of standard dose, or change medication
Therapeutic 230–450	Normal or high	-	-	If clinically resistant, change medication
High >450	Normal	Myelotoxicity	Low TPMT activity [heterozygote or homozygote]	Change drug category if homozygote, or reduce dose to half if heterozygote
High >450	High ≥5700	Hepatotox & myelotox	Overdosed	Reduce dose or change therapy

ESPHGAN guideline 2020
Yakushi TR et al. Translational Biomedicine. 2022; 13 (12): 271 .

NOTE: Please be aware of some authors using slighly different cutoff limits to define the reference range