A = Active Alert, N = No Alert

Medication	Alert Type	Gene	Phenotype	Alert Language
azathioprine	N	**TPMT + ITPA**	Ultrarapid Metabolizer	
	N		Ultrarapid Metabolizer	
	N		Normal Metabolizer	
	A		Normal Metabolizer of TPMT (ITPA reduced metabolizer)	Based on this TPMT genotype, start with a normal starting dose of azathioprine and adjust doses based on disease-specific guidelines. However, the ITPA reduced metabolizer status predicts a higher likelihood of drug intolerance. Level of evidence: **Moderate.**
	A		Reduced Metabolizer of TPMT	Consider an alternate agent or a 50% dose reduction of azathioprine. Level of evidence: **STRONG.** The TPMT reduced metabolizer status predicts a higher likelihood of myelosuppression.
	A		Reduced Metabolizer of TPMT and ITPA	Consider an alternate agent or a 50% dose reduction of azathioprine. Level of evidence: **STRONG.** The TPMT and ITPA reduced metabolizer status predict a higher likelihood of myelosuppression and other adverse effects.
	A		Poor Metabolizer of TPMT	Consider alternative agents. If using azathioprine, reduce daily dose by 10-fold and dose thrice weekly instead of daily. Level of evidence: **STRONG**. The TPMT poor metabolizer status predicts a high likelihood of myelosuppression.
	A		Poor Metabolizer of TPMT and ITPA	Consider alternative agents. If using azathioprine, reduce daily dose by 10-fold and dose thrice weekly instead of daily. Level of evidence: **STRONG**. The TPMT and ITPA poor metabolizer status predict a high likelihood of myelosuppression and other adverse effects.

A = Active Alert, N = No Alert

Medications	Alert Type	Gene	Phenotype	Alert Language
mercaptopurine	N	**TPMT + ITPA**	Ultrarapid Metabolizer	
	N		Ultrarapid Metabolizer	
	N		Normal Metabolizer	
	A		Normal Metabolizer of TPMT (ITPA reduced metabolizer)	Based on this TPMT genotype, start with a normal starting dose of mercaptopurine and adjust doses based on disease-specific guidelines. However, the ITPA reduced metabolizer status predicts a higher likelihood of drug intolerance. Level of evidence: **Moderate.**
	A		Reduced Metabolizer of TPMT	Consider an alternate agent or a 50% dose reduction of mercaptopurine. Level of evidence: **STRONG.** The TPMT reduced metabolizer status predicts a higher likelihood of myelosuppression.
	A		Reduced Metabolizer of TPMT and ITPA	Consider an alternate agent or a 50% dose reduction of mercaptopurine. Level of evidence: **STRONG.** The TPMT and ITPA reduced metabolizer status predict a higher likelihood of myelosuppression and other adverse effects.
	A		Poor Metabolizer of TPMT	Consider alternative agents. If using mercaptopurine, reduce daily dose by 10-fold and dose thrice weekly instead of daily. Level of evidence: **STRONG**. The TPMT poor metabolizer status predicts a high likelihood of myelosuppression.

A = Active Alert, N = No Alert

Medication	Alert Type	Gene	Phenotype	Alert Language
thioguanine	N	**TPMT + ITPA**	Normal Metabolizer	
	A		Normal Metabolizer of TPMT (ITPA reduced metabolizer)	Based on this TPMT genotype, start with a normal starting dose of thioguanine and adjust doses based on disease-specific guidelines. However, the ITPA reduced metabolizer status predicts a higher likelihood of drug intolerance. Level of evidence: **Moderate.**
	A		Reduced Metabolizer of TPMT	Consider an alternate agent or a 50% dose reduction of thioguanine. Level of evidence: **STRONG.** The TPMT reduced metabolizer status predicts a higher likelihood of myelosuppression.
	A		Reduced Metabolizer of TPMT and ITPA	Consider an alternate agent or a 50% dose reduction of thioguanine. Level of evidence: **STRONG.** The TPMT and ITPA reduced metabolizer status predict a higher likelihood of myelosuppression and other adverse effects.
	A		Poor Metabolizer of TPMT	Consider alternative agents. If using thioguanine, reduce daily dose by 10-fold and dose thrice weekly instead of daily. Level of evidence: **STRONG**. The TPMT poor metabolizer status predicts a high likelihood of myelosuppression.
	A		Poor Metabolizer of TPMT and ITPA	Consider alternative agents. If using thioguanine, reduce daily dose by 10-fold and dose thrice weekly instead of daily. Level of evidence: **STRONG**. The TPMT and ITPA poor metabolizer status predict a high likelihood of myelosuppression and other adverse effects.