

# AZATHIOPRINE FOR AUTOIMMUNE HAEMOLYTIC ANAEMIA

## INDICATIONS

- Warm autoimmune haemolytic anaemia relapsed or refractory disease

Available as 25mg and 50mg tablets

## TREATMENT INTENT

Warm AIHA: 60% at least partial remission; no good data on long-term remission rates

## PRE-ASSESSMENT

1. Blood tests – FBC, blood film, reticulocyte count, U&E, LFT, LDH, hepatitis B core antibody, hepatitis B surface Antigen, hepatitis C IgG, HIV antigen/antibody, TPMT levels.
2. Record height and weight.
3. Consent - ensure patient has received adequate verbal and written information regarding their disease, treatment and potential side effects. Document in medical notes all information that has been given.
4. Treatment should be agreed with a consultant experienced in the management of autoimmune haemolytic anaemia

## DRUG REGIMEN

	Starting dose
<b>AZATHIOPRINE</b>	1 to 3 mg/kg once a day

Dosing once a day

Dosing should be individualized for each patient depending on haemoglobin response and side effects. If no response after 3 months, stop azathioprine.

## SPECIAL PRECAUTIONS

- TPMT levels must be checked (and found to be normal) before starting azathioprine. Patients with inherited little or no TPMT activity are at increased risk of severe azathioprine toxicity. Patients with heterozygous TPMT deficiency can tolerate recommended azathioprine doses, but some may require dose reduction.
- Azathioprine interacts with allopurinol and several other drugs. Consult the summary of product characteristics for full list.
- Avoid live vaccines such as 'live' vaccines such as rubella (German measles) and yellow fever.
- Limited information is available in renal and hepatic impairment. Consider lower starting doses if severe renal/hepatic impairment and monitor patients closely for dose-related adverse effects.

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## INVESTIGATIONS

All Doses	FBC, U&E and LFTs: weekly for first 4 weeks, thereafter, reduce frequency of monitoring to at least every 3 months
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## ADVERSE EFFECTS / REGIMEN SPECIFIC COMPLICATIONS

Nausea, vomiting, diarrhoea, loss of appetite, hair loss, skin rashes, anaemia, thrombocytopenia, neutropenia, risk of infections, liver impairment.

Diarrhoea and nausea are common in the first few weeks of treatment and usually settle, but can be managed further by dividing the doses and taking the doses after food.

## REFERENCES

- Hill et al. The diagnosis and management of primary autoimmune haemolytic anaemia. Br J Haematol 2017;176:395-411
- Worledge et al. Immunosuppressive drugs in the treatment of autoimmune haemolytic anaemia. Proceedings of the Royal Society of Medicine, 1968; 61: 1312–5.
- Aspen. Azathioprine (Imuran®) 50mg Summary of Product Characteristics. Last updated: 09 Sep 2021. Available at: <https://www.medicines.org.uk/emc/product/508/smpc#gref>
- Renal Drug Database. Azathioprine drug monograph. Updated: 30/10/17. Accessed on 07/02/2022 via [www.renaldrugdatabase.com](http://www.renaldrugdatabase.com)

## REVIEW

Name	Revision	Date	Version	Review date
Michael Desborough, Consultant Haematologist. Yen Lim, Haematology Pharmacist.	New protocol	Feb 2022	V1.0	Feb 2024
Tejal Gorasia, Haematology Pharmacist. NSSG Immunohaematology Group.	Annual protocol review day	May 2022	V1.1	May 2024
Michael Desborough, Consultant Haematologist.	Protocol review	Feb 2024	V1.2	Feb 2027

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