

MEDICATION NAME: **CYCLOPHOSPHAMIDE**
BRAND: CYTOXAN, NEOSAR

HOW IS IT GIVEN:	Intravenous injection (IV) or oral tablet.
HOW DOES IT WORK:	Interferes with the proliferation of cells involved in (auto)immune responses.
COMMON DOSING REGIMENS:	1-2 mg/kg/day (oral) or 1000 mg/m ² (intravenous) are typical doses. Dose intensity and frequency are based on response and blood counts.
COMMON SIDE EFFECTS:	Bone marrow suppression. Mouth sores and ulcers can occur if severe neutropenia (low white blood cell counts) develops. Hemorrhagic cystitis (irritation and bleeding from the bladder), hair loss, nausea and vomiting have also been reported. May cause infertility.
RARE BY SERIOUS SIDE EFFECTS:	Serious infection and bleeding. Secondary malignancy (e.g. bladder cancer and secondary leukemia) have been reported with long-term use.
TYPICAL TIME TO RESPONSE:	2-10 weeks.
LIKELIHOOD OF INITIAL RESPONSE:	24-85%
LIKELIHOOD OF LONG-TERM RESPONSE (3-5 YEARS):	The prevalence of sustained response off treatment has not been established.
OTHER CONSIDERATIONS:	Long-term use is not advised to limit the risk of malignancy. May cause harm to the developing fetus and should not be used in pregnancy.

References:

1. Matzdorff, A., Meyer, O., Ostermann, H., Krefeld, V., Eberi, W., Kuhn, T., Pabinger I., and Rommel, M. (2018). Immune Thrombocytopenia – Current Diagnostics and Therapy: Recommendations of a Joint Working Group of DGHO, OGHO, SGH, GPOH, and DGTI. *Oncology Research Treatment*. 41(suppl 5):1-30.
2. Platelet Disorder Support Association <https://www.pdsa.org/chemotherapy.html>
3. Reiner, A., Gernsheimer, T., and Slichter, S.J. (1995). Pulse cyclophosphamide therapy for refractory autoimmune thrombocytopenic purpura. *Blood*, Jan 15; 85(2):351-358.
4. Stasi, R., and Provan, D. (2004). Management of Immune Thrombocytopenic Purpura in Adults. *Mayo Clinic Proceedings*. April 79:504-522.