MADISON NEUROLOGY LLC

608 403 0000

Neurology Care 7 days a Week. Because Your Brain Matters.

Generic (cyclophosphamide)

Cyclophosphamide (IV)

COMPLETE CLINICAL PROTOCOL: PRE-TREATMENT CHECKLIST • ORDER SET • FOLLOW-UP • HOLD/DISCONTINUE CRITERIA

GENERIC NAME	cyclophosphamide (IV)
BRAND	Generic (cyclophosphamide)
MEDICATION CLASS	Alkylating cytotoxic immunosuppressant (OFF-LABEL neurologic use)
PRESENTATION	500 mg, 1 g, and 2 g vials for reconstitution
ROUTE	IV infusion — monthly pulse dosing
US INDICATION (FDA)	OFF-LABEL: severe or refractory neuroimmune disease — CNS vasculitis, refractory autoimmune encephalitis, refractory NMOSD, and other fulminant neuroinflammatory conditions.

Class context.
Cyclophosphamide is an INDUCTION tool, not maintenance — define the planned cycle count (commonly 6 monthly pulses) and the maintenance transition at initiation, and track the cumulative dose. Gonadal toxicity is dose-cumulative and can be permanent; bladder and hematologic malignancy risk accrues with exposure.

Section 1 — Pre-Treatment Checklist

A. Required screening labs

☐ CBC with differential — REQUIRED before EVERY dose (hold thresholds in the pause table).

☐ Urinalysis — before EVERY dose (hemorrhagic cystitis surveillance).

☐ Renal and hepatic function — baseline; dose-adjust for renal impairment.

☐ HBV/HCV and TB screening per institutional immunosuppression standards.

☐ Pregnancy test — REQUIRED for females of reproductive potential (teratogenic; contraindicated in pregnancy).

- ☐ FERTILITY counseling and preservation referral BEFORE the first dose — offer sperm/oocyte/embryo preservation; gonadotoxicity is dose-cumulative and may be permanent.
- ☐ Document the indication, prior failed steroid-sparing/biologic therapy, and specialist (neuroimmunology/rheumatology) concurrence.

B. Vaccinations

- ☐ No live vaccines during or shortly after treatment; complete needed vaccinations BEFORE initiation (response is blunted once immunosuppressed).

C. Clinical assessments & counseling

- ☐ Confirm the target cycle count and the response endpoint BEFORE cycle 1.
- ☐ Counsel on the myelosuppression calendar (nadir ~days 8–14), alopecia, nausea, and infection vigilance.

D. Exclusion / hold criteria — do not start

CRITERION	RATIONALE / REQUIRED ACTION
Pregnancy or breastfeeding	Contraindicated.
Active serious infection	Hold until resolved.
Baseline cytopenias below institutional thresholds	Hold; evaluate.
Urinary outflow obstruction	Urology review first (cystitis risk).

Section 2 — Order Set

Premedication

- ☐ MESNA IV — uroprotection against hemorrhagic cystitis; dose/schedule per the alkylator protocol (commonly split doses bracketing the infusion, e.g., portions at 0/4/8 hours).
- ☐ Antiemetic: ondansetron 8–16 mg IV/PO (± dexamethasone per antiemetic protocol).
- ☐ Hydration: IV fluids before and after; encourage frequent voiding on treatment day.

Dosing schedule

Monthly pulse (typical)	500–1,000 mg/m² IV once monthly — common neuroimmunology practice centers on ~750 mg/m² — for a specialist-defined number of cycles (often 6).
Dose adjustments	Reduce for renal impairment, prior nadir cytopenias, or frailty per the supervising specialist.
Response endpoint	Define before starting (clinical scale ± MRI/CSF per condition); review against it at every cycle.

Standing orders — every infusion

- ☐ Verify day-of CBC and urinalysis results are REVIEWED BEFORE drug administration — every cycle, no exceptions.
- ☐ Continue mesna and hydration per protocol; document output counseling.

☐ Infection screen at every visit; consider PJP prophylaxis (e.g., TMP-SMX) during the pulse series per institutional practice, especially with concomitant steroids.

Missed or delayed dose

Delay the next pulse until counts recover (see thresholds); never compress the monthly interval.

Contraception & pregnancy

Effective contraception during treatment and for the label-specified interval after the last dose (females — up to 1 year; males with partners of reproductive potential — months after; verify current label); fertility preservation offered before cycle 1.

Section 3 — Follow-Up Protocol

ITEM	FREQUENCY / TIMING	ACTION / THRESHOLD
CBC with differential	Before every dose; add a nadir check (~days 10–14) during early cycles	ANC below threshold (commonly <1,500/µL) or platelets <100,000/µL → delay until recovery; nadir informs next dose.
Urinalysis	Before every dose	Hematuria → hold; urology evaluation.
Renal/hepatic function	Periodically	Adjust dose; evaluate injury.
Disease-activity assessment	Every cycle	No response by the pre-defined checkpoint → stop and rethink (do not drift past the planned cycle count).
Long-term malignancy counseling	At completion	Bladder and hematologic malignancy risk accrues with cumulative dose; document counseling.

Section 4 — Pause vs. Stop Criteria

A. Pause or delay (resume when resolved)

CRITERION	REQUIRED ACTION
ANC <1,500/µL or platelets <100,000/µL (typical thresholds)	Delay until recovery.
Hematuria	Hold pending urology evaluation.
Active infection	Hold until resolved.

B. Discontinue permanently

CRITERION	REQUIRED ACTION
Hemorrhagic cystitis despite mesna	Discontinue.
Prolonged cytopenias or treatment-emergent malignancy	Discontinue.

Adequate disease control achieved	Stop induction; transition to maintenance immunosuppression per the specialist plan.

Section 5 — Notes & Practical Points

- ☐ Off-label use anchored in specialist practice; payer authorization typically requires documented failure of labeled alternatives.
- ☐ Cumulative-dose discipline: track the running total across the series — it drives both gonadal and malignancy risk counseling.

Prepared November 2026 by Madison Neurology LLC.

This document is an educational compilation and does not reproduce the complete prescribing information. Verify every element against the current FDA label and applicable REMS requirements before clinical use.

- Current U.S. prescribing information via NIH DailyMed — https://dailymed.nlm.nih.gov/dailymed/
- FDA Drugs@FDA database — https://www.accessdata.fda.gov/scripts/cder/daf/
- FDA drug safety and availability updates — https://www.fda.gov/drugs/drug-safety-and-availability

Questions about infusion referrals: call 608 403 0000. Neurology Care 7 days a Week. Because Your Brain Matters.