Description: Cyclosporine is a potent cyclic polypeptide immunosuppressant that inhibits some humoral and many cell-mediated reactions, e.g. allograft rejection. Its mechanism of action is not known.

Brand Names: Neoral, Gengraf, Sandimmune (note that these are bioequivalent and cannot be used interchangeably).

Authorization Criteria: Prophylaxis of organ rejection in kidney, liver and heart transplants (in conjunction with azathioprine and/or corticosteroids); rheumatoid arthritis refractory to methotrexate; adult, non-immunocompromised patients with severe (i.e., extensive and/or disabling), recalcitrant, plaque psoriasis who have failed to respond to at least one systemic therapy (e.g., PUVA, retinoids, or methotrexate) or in patients for whom other systemic therapies are contraindicated, or cannot be tolerated.

Off-Label: acute graft-versus-host disease (prophylaxis); chronic graft-versus-host disease (treatment); focal segmental glomerulosclerosis; idiopathic thrombocytopenic purpura (adults); interstitial cystitis (bladder pain syndrome); lupus nephritis; psoriasis (children); ulcerative colitis, severe refractory; uveitis (adults); juvenile idiopathic arthritis

Dosing:  
IV: 5-6 mg/kg once a day
Oral: approximately three times the IV dose
How Supplied: 50mg/5 mL; 25, 50,100 mg capsules

Contraindications/Warnings: Only physicians experienced in management of systemic immunosuppressive therapy for the indicated disease should prescribe cyclosporine. At doses used in solid organ transplantation, only physicians experienced in immunosuppressive therapy and management of organ transplant recipients should prescribe cyclosporine. Patients receiving the drug should be managed in facilities equipped and staffed with adequate laboratory and supportive medical resources. The physician responsible for maintenance therapy should have complete information requisite for the follow-up of the patient. Cyclosporine should be administered with adrenal corticosteroids but not with other immunosuppressive agents. Patients should be specifically advised not to consume grapefruit juice and to check with their doctor and/or pharmacist before starting additional medications, including herbal medications.

Major Adverse Reactions: Hepatotoxicity and nephrotoxicity when used in high doses which may be difficult to differentiate from organ rejection; micronagiopathic hemolytic anemia/thrombocytopenia and resultant graft failure; increased risk of lymphoma and other malignancies (especially of the skin); increased susceptibility to serious infections; anaphylaxis (rare; approximately 1 in 1000)

Major Drug Interactions: Any drug which inhibits or induces CYP34A (see product literature); NSAID levels may increase; decreased clearance of digoxin, colchicine, statins, prednisolone; vaccinations may be less effective (avoid live vaccines)

REFERENCES
2. Gengraf (cyclosporine) [prescribing information]. North Chicago, IL: AbbVie Inc; February 2013.
8. www.uptodate.com: Cyclosporine (systemic): Drug Information

Revision History:
Date Approved by P&T Committee: 10/28/14; QAC 11/25/14
Date Reviewed/No Updates: 1/13/15 by C. Sanders, MD
Date Approved by P&T Committee: 1/27/15
Date Reviewed/Updated: 2/17/15 by C. Sanders, MD; R. Sterling, MD
Date Approved by P&T Committee: 1/26/16
Date Reviewed/No Updates: 1/24/17 by C. Sanders, MD; R. Sterling, MD
Date Approved by P&T Committee: 1/24/17
Date Reviewed/Archived: 1/1/18 by C. Sanders, MD; R. Sterling, MD

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