UNC HEALTH CARE GUIDELINE

IVIG Clinical Guideline

The information included in this guideline is specific to Privigen®, which is the only IVIG product available on the UNC Drug Formulary. Gammagard® S/D is available non-formulary for patients with documented low IgA levels and a true clinical need for a low IgA IVIG product. Table 1 below includes Privigen®-specific drug properties.

Table 1: Privigen® Drug Properties

Brand	Osmolality	Sugar	Preparations	Infusion Rate
Privigen® 10% (CSL Behring)	240-440 mOsmol/kg	0 (L-proline stabilized)†	Liquid (latex-free) 5 g/50 mL, 10 g/100 mL, 20 g/200 mL	Initial: 0.3 mL/kg/hr Maximum: ITP: 2.4 mL/kg/hr PID: 4.8 mL/kg/hr

†All IVIG products stocked by UNC Medical Center are now sucrose-free.

DOSE RECCOMENDATIONS

- Dosing recommendations vary based on the indication for use. Consult approved references for disease-state specific dosing.
  - Primary humoral immunodeficiency (PI): 200 - 800 mg/kg every 3-4 weeks
  - Chronic immune thrombocytopenic purpura (ITP): 1 g/kg daily for 2 days
- The pharmacist will round the dose ordered to the nearest 5 g for adults and nearest 1 g for children (within 10% of ordered dose).

PREMEDICATION

- Pre-medication is strongly encouraged. IVIG therapy plans include options for pre-medication. Recommended pre-medications include the following:
  - Adult patients – diphenhydramine 25 mg PO and acetaminophen 650 mg PO 30 minutes prior to start of infusion.
  - Pediatric patients – diphenhydramine 0.5 mg/kg (max 25 mg) PO and acetaminophen 15 mg/kg (max 650 mg) PO 30 minutes prior to start of infusion.

ADVERSE EVENTS

To reduce the risk of acute renal failure or thrombosis, those patients at risk may benefit from receiving at a slower infusion rate.

Risk factors for acute renal failure or thrombosis secondary to IVIG administration include:

- Age > 60 years
- Elevated serum creatinine (pediatrics > 0.3 mg/dL above normal limit for age, adults > 1.7 mg/dL)
- New York Heart Association class III or IV heart failure
- Diabetes
- History of coronary artery disease, atherosclerosis, or venous thromboembolism

ADMINISTRATION INFORMATION

- Table 2 and Table 3 outline recommended infusion rate escalation steps that can be considered when infusing IVIG.
- Individual patient response should be taken into consideration when escalating; slow or stop the infusion if adverse reactions occur. If symptoms subside promptly, the infusion may be resumed at a lower rate that was previously tolerated.
- For patients at risk of renal dysfunction or thrombosis, administer at the minimum dose and infusion rate practicable.
    - For patients with underlying renal disease, the infusion rate should not exceed 1.2 mL/kg/hr

Table 2. Initial Infusion - Recommended Rate Escalation Steps

Titration Directions	Rate
Initiate infusion at	0.3 mL/kg/hr
Increase infusion after 15 minutes to:	0.5 mL/kg/hr
Increase infusion after 30 minutes to:	1.0 mL/kg/hr
Increase infusion after 30 minutes to final rate	2.4 mL/kg/hr

Table 3. Subsequent Infusions - Recommended Rate Escalation Steps

Titration Directions	Rate (as tolerated)
Initiate infusion at	0.3 mL/kg/hr
Increase infusion after 15 minutes to:	1.0 mL/kg/hr
Increase infusion after 30 minutes to:	2.0 mL/kg/hr
Increase infusion after 30 minutes to final rate	4.8 mL/kg/hr*****

***** Patients receiving chronic IVIG infusions (eg, outpatient use) may tolerate infusion rates up to a maximum of 8 mL/kg/hr. Additional titration steps are required in this setting.

SPECIAL CONSIDERATIONS

- IVIG infusions administered in the NCCC should follow unit specific recommendations of 0.25 g/kg/hr over 2-4 hours.